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THE HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE,

BOSTON MEDICAL LIBRARY ASS MAR 8 1893

DEVOTED TO

HYGIENIC MEDICATION, BODILY DEVELOPMENT, AND THE LAWS OF LIFE.

JULY, 1866.

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General Articles.

[Written for The Herald of Health.]

A Health to Water.

BY ALFRED B. STREET.

WATER! purest gem of earth!
From the rock it has its birth;
Blossoms from its cradle sweet;
In the fern it finds retreat;
Down it flashes, loud it sings
From its pure and secret springs;
Wine, with its hot, scarlet gleam,
Bears swift death within its stream;
But, sweet water! health it wafts
In its cool and silvery draughts.
Here's a health to water, then,
Diamond of the darkling glen!

In the blue and breezy lake
Now its floods their pathway take;
In the river now it flows,
In the breaking foam it glows—
Dew-drop in the blossom's bell
Pearled within the rosy shell;
In the rainbow's braid it twines,
In the swift, streaked rain it shines.
What were earth without its light
But a desert parched and white?
Here's a health to water, then,
Diamond of the darkling glen!

[Written for The Herald of Health.]

The Turkish Bath.

A LECTURE BY "ORIENT."

WE have lectures on Russia and the Russians, Ireland and the Irish, America and the Americans, and I seriously thought of entitling this lecture Turkey and the Turks; but, recollecting that Turkey and Greece are questions very frequently discussed at our dinner-tables, I have determined to strike out a new path, and present a subject of vast importance to all who value health and happiness. I regard disease as a foul and dangerous enemy, shortening human life, and making that short life wretched and undesirable. Sickness is an interdiction on human happiness—it is a prolongation of suffering, and he who can give to the world a cure or a preventive confers a blessing on the community, and deserves to be hailed as a benefactor of the race.

He who suggested Hydropathy as a cure for "many of the ills that flesh is heir to," is worthy of a high place in the group of great men whose names will be conspicuous in the future history of Hygiene. Water is the first element, and we should hail it as a sovereign remedy.

The principle involved in the practice of Hydropathy is not new, save in some of its applications. Water has been regarded as a curative agent for many centuries, but it was not known as a grand panacea until within a recent period. It was not recognized as a great remedy until the present age developed its healing resources. Too many of our dealers in drugs and their unfortunate patients were unwilling to accept a cure so simple and so abundant as to be within the reach of all—the rich and the poor, the wise and the ignorant. They halted and hesitated and suffered, acting like the simpleton who refused to venture into the water until he had learned to swim. Why, it is a fact clear as the sun in a cloudless sky, that truth, which has been likened to the hydropathic similie of a jewel at the bottom of a well, is always plain. Is it

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at all strange that water, the first element created by the Architect and Builder of the universe, should be the first remedy? It is pure, and its cleansing power is visible whenever it rains and wherever it rolls in streams.

When I speak of Hydropathy I intend to embrace bathing in all its phases, for the science has been steadily advancing from doubt to conviction, from suggestion to investigation, from experience to the happiest results, and now we have hundreds and thousands of witnesses who hasten to the court of public sentiment to swear in their testimony. They avow with emphasis that water will not only cure disease, but prevent it, and among those witnesses are men and women whose word is a bond—men and women of great intelligence and unquestioned sincerity. They come from the learned professions and from the posts of high official station. Not a few of them are persons of superior social rank. I could name men like Bulwer, who are considered persons of that peculiar force and foresight which we call genius; and were I not speaking to men who live in a land where every man is a king and every woman is a queen, I would say that some of the crowned heads have had their heads under water. We have had much to contend with, for many who conceded that water-drinking was beneficial to the sick, have sent their patients to the unpalatable springs which are impregnated with minerals, and thus rendered somewhat like their diluted drugs.

Vast numbers of the violaters of the physical laws eat like gluttons and drink like topers nine months of the year, and then devote the remaining three months to rinsing their stomachs at the fashionable watering-places—perhaps I should say brandy-and-watering-places.

Having thus introduced the subject, I will now proceed to make a few points in relation to one peculiar phase of the Water-cure—I mean the Turkish Bath. I shall divest my subject of all technicalities and endeavor to speak the plain truth to the popular ear, and shall not, like Sam Weller in Dickens, stop every now and then and ask: "Does it hurt you now, sir?"

I hold that the Turkish Bath, in proper and skillful hands, will promote health and prolong life; that it can cure and prevent disease, and that it confronts even the cholera with defiant power. It has been more than a match for the scrofula, and in countries where it is customary to use it consumption is scarcely known. In the East it is regarded as a pleasure and a luxury. It embraces the two great conservative and curative agents—air and water; and *I propose first to speak of its influence on the skin.*

Spread over the neat network of the human form are many millions of pores—open mouths, miniature lungs—the closing of which is sure to produce the most fatal consequences. It is possible to choke a victim to death without closing the mouth and nostrils; indeed, great numbers of victims are constantly sacrificed on the altar of uncleanness. These silent pores are choked by the army of the unwashed, and they die before their time. It is an important desideratum to get rid of effete matter from the system by excretion. But you can not remove this impediment to health and long life so long as the pores of the surface are corked up; digestion, respiration, circulation and secretion are all hindered in the performance of their functions by the unclean condition of the skin.

Fourecaulet, the famous physiologist, made a series of careful experiments to show the absolute necessity and importance of keeping the cuticle in a healthy condition. By a healthy condition I do not mean the mere washing of the surface. No tidy housewife would consider that her house was clean when the floors were scrubbed, if the pipes leading to the sewers were filled with filth, and stopped up so that neither air nor water could penetrate. It is a fact, that in the body of a man of ordinary size there are seven millions of pores, and that the ducts leading to them, if stretched in a continuous line, would reach a distance of twenty-eight miles. Just imagine what a delicate and beautiful piece of mechanism the human body is, how fearfully and wonderfully it is made, and how carefully it should be preserved. The experimenter whose name I just mentioned covered the skins of several animals with varnish, and they all died of suffocation. The blood lost its red and healthy hue and became dark, the healthy heat was reduced gradually to the chill of death. The same authority, speaking of the "child that died at Florence," says it was a sacrifice to the vanity and ignorance of the time—for the little one was covered completely with gold leaf to represent the golden age when Leo the Tenth was raised to the pontificate. Sages were puzzled for centuries to find out the cause of that child's death; but our philosopher solved the problem. He says, "I have gilt several Guinea pigs and they all died like the child at Florence." How many children in the city and in the country are varnished and painted over with matter which exudes from the skin, and with filth which accumulates from other sources, and they die like the child at Florence, not shining in gold, nor the representatives of a golden age, but the victims of uncleanness. Even the chil-

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dren of some of our nabobs are sacrificed in *guilt*, like the golden Guinea pigs.

The Turkish Bath will remove this effete matter by inducing perspiration and then washing the perspiration from the surface. All medical practitioners admit that perspiration is one of the chief preservatives of health, and that it is also a principal source of cure both in chronic and acute diseases, and when Nature fails to produce the relief of perspiration, they use their sudorifics and diaphoretics to bring it on. They however choose to work through the medium of the stomach, which is very much like building a fire in the diaphragm to warm the cuticle. They go into a man to do the work which should be done outside of him. Nature, abhorring drugs, actually gets into a sweat in its effort to throw them off. The patient, in such cases, is like Munchausen's wolf that swallowed the horse so voraciously, he found himself in the harness dragging the chariot. Not only the effete matter is thrown from the pores, but the drug also. Now, the bath does this work naturally, pleasantly, effectually, operating on the skin as the seasons and the elements do—thus air and water, wind and rain, summer and winter, spring and autumn are beautifully blended in an hour. It is far superior to the practice of tying a patient in a bundle of flannel, or sweating him between feather-beds, or melting him with perspiration. In these cases he is nothing but an inert rag-baby; he does not escape from the poisonous matter washed through the ducts to the surface; besides, the skin is enfeebled and can not perform its healthy and normal functions. The process in its results is of a mixed nature, partly good and partly bad. The perspiration is good; the poison which is bandaged to the skin is bad. The bath whose advantages I uphold produces perspiration without exhaustion, and washes away all the impurities, and it yields not only cooling relief, but affords air which has not lost its oxygen. The pure heated air of the bath-room is constantly renewed in a well-regulated and well-ventilated suite of rooms, hence the patient does not pass through a painful ordeal; perspiration is easily and fully obtained while the pulse is scarcely increased beyond its natural movement. This is a grand consideration since it insures perfect safety.

I do not intend to get into hot water by drawing invidious contrasts, but I insist that the Turkish Bath, without the tobacco, comports with the highest civilization. I consider its practice one of the arts of conferring happiness. Look at the philosophy of it. Hot water can not be used with safety and comfort at a higher temperature than 104 degrees of heat, then the pulse rises and the blood rebels. In a vapor bath 115 degrees may be endured ten or fifteen minutes, but the system is pretty sure to show signs of opposition to the treatment if continued even a few minutes longer. In a Turkish Bath the temperature may be increased and continued longer without any symptoms of discomfort. The pulse rarely rises in 200 degrees of heat, when the patient has been in it two hours. This bath then prepares the body for the changes of the seasons and the vicissitudes of the weather, by the changes from heat to cold and from cold to heat, and really educates the physical nature, so that it is no longer liable to take cold.

Permit me now to call your attention especially to the influence of heat on human life. Heat indicates life; cold is the precursor of death. I do not intend to say that every degree of heat is inducive to health and longevity; a sun-stroke, for instance, is very unhealthy; a blistering in the fire, a hot-water scald are not promotive of health and happiness. I will say here, in parenthesis, that the bath is an excellent cure for these afflictions, or accidents, if you prefer that word. Mr. Urquhart states that he was cured of a sun-stroke at Scio by going into a Turkish Bath and remaining in it until perspiration broke out. He was placed in the hottest part of the bath and remained there six hours. The people of the city of Scio took him to the bath with considerable reluctance, because they were impressed with the idea that it would prove fatal; they did not recognize the bath as a remedial agent, only as a luxury. It is a luxury, the indulgence of which renders medication unnecessary. If it were generally brought into use, many of our doctors would have such small practice that it would be no uncommon thing to see two of them riding one horse.

It has been stated that there was a period of five hundred years when there was not a medical man in Rome, but then the bath was the most popular place of resort. There were nearly nine hundred baths in that city at one time. Some of them were symmetrical and durable in design, and finished in the most elaborate and artistic manner. They were built on a scale of great magnificence and decorated with taste and elegance. No marble was too white for their columns, no workmanship too costly in their erection. The skill of the best sculptors and painters was employed for their ornamentation. Agrippa had baths built of brick and coated with enamel. Those of Nero were supplied with salt as well as fresh water. The baths of Caracalla were a mile in circumference and

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could accommodate two thousand persons. With such a bath and our present health bill in New York, it strikes me the cholera would make but very little progress. No wonder doctors were scarce in Rome. If the people would only wash and be clean, they would find that cleanliness is next to godliness—one saves the body, the other saves the soul. The fact that the Egyptians worshiped the sun, affords evidence of their appreciation of the value of heat. It was not alone that the sun gave light and color, but because it gave heat, that it became an object of worship. Every chemist, every physiologist, every man who has studied dietetics, knows something of the value of caloric. Now food is the fuel which keeps the fires burning, but there are few persons who know how to, or, if they know, care to choose the food best suited to their wants. Few eat to live; many live to eat. What Garrick said of Goldsmith's love of praise applies to their love of food:

"Of praise, a mere glutton, he swallowed what came;
The puff of a dunce was mistaken for fame;
Till his palate grown calloused almost to disease,
Who peppered the highest was surest to please."

This tickling of the palate, the gratification of a miseducated appetite, leads to the introduction of dangerous, not to say poisonous substances into the stomach and into the system and they must be sifted out of the system, mainly through the skin, and, if heat is used, washed out by the overflowing perspiration.

Do you ask if the extreme heat of the bath will not exhaust the vigor of the body—is perspiration weakening? A fair question, and it shall have a fair answer. Heat, I mean the heat of the bath, produces perspiration, and perspiration only carries off impurities from the system. Our glass-blowers, sugar-refiners, and men who work in our foundries and furnaces perspire almost constantly at their work, but are they reduced to feebleness? Are they not stouter and healthier than the men who live high and labor lightly—men whose exercise seldom brings on what is called a good healthy sweat?

The greatest enemy that a man has is himself—his stomach, into which he throws too much and too great a variety of food. The bath regulates him, removing his overdose, abstracting his excess by opening its millions of ducts through which it pours out the poison that would otherwise hurry him to his grave.

Facts are stubborn things. In Sir John Fife's Manual of the Turkish Bath, among other interesting cases on record, is one of a doctor, who was bent nearly double and who was unable to help himself at the table, owing to a contraction of his fingers. After two hours and shampooing in the Turkish Bath, he stood erect and helped himself at the dinner-table.

Perhaps you will inquire, If heat is such a benefactor, why do we dread fevers? I answer fever is the fire kindled by Nature to remove the disease, and is not of itself a disease. Again you ask, Does not heat tend to parch the skin, and inflame the blood?—in a word, will it make a mere mummy of a man, baking all the juices out of his system, and finally reducing him to a cinder, human charcoal, fit only for the use of that man in black who is supposed to be engaged principally in keeping a great fire down below somewhere, a fire where there is heat without health, or happiness, or a bath?

I answer this question by repeating what I have said before, that heat as applied in the Turkish Bath, operates directly upon the skin, and the blood brought to the surface, opens the valves and allows the filth of the system to flow out in streams of perspiration; the juices lost by the invalid are not the juices of health and vitality, but the poisoned waters which pollute the entire organism of man. Our city will not part with its vitality when our Health Commissioners cleanse the pipes and sewers, and bone-boiling, fat-boiling, and slaughter-house nuisances. It will lose a vast deal of effete matter, will receive a sweating which will reduce its adipose, but it will be cleaner, sweeter, stronger, and better for the application of the remedy. Would that some kind of measures could be applied to the body politic as well as the city. It needs cleaning; it is covered with putrifying sores. If it is worth saving, it should be saved.

What the health bill proposes to do for the city, the bath will do for its citizens. It will aid powerfully in the removal of the poisons which have accumulated in the system. It will wash away the gout, wash away scrofula, wash away consumption, and make life not only desirable but a pleasure. Do I over-estimate the advantages of the bath? I call upon witnesses whose words have never been disputed. Among them are those who were considered incurable cases; but I leave this point, and hasten to touch with brevity a few other points, for I can not, in a single lecture, exhaust a subject which deserves a volume. I shall speak plainly, and not follow the example of old Isaac Walton, who carried a frog in his mouth for bait, and bit it tenderly for fear of doing it injury. Neither will I perform the hydraulic operation of shedding tears over voluntary victims of appetite and passion, when shedding light will have a better effect.

I have spoken of the virtues and the blessings

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of the bath; it is now proper that I should give you a sketch of the Turkish Bath, and the manipulations usually practiced upon its patrons. Of course, the practice varies somewhat to suit the age, temperament and condition of the parties who receive its advantages. I am indebted to a gentleman who has visited Constantinople, for a sketch of a bath in that city. I shall take the liberty to condense the description, and change the language even, for I am pressed for space and time. The bath is a large building, with a domed roof—a square, massive body, from which minarets spring up, and against which wings abut, containing side apartments. The principal apartments are three in number—a great hall, a middle chamber, and an inner chamber. A curtain is lifted, and you find yourself in a chamber whose walls are a hundred feet high, spanned with an arched roof open in the centre to the blue vault of heaven. In the centre of the floor is a basin of water, four feet in height, in the middle of which a fountain plays, and about it are sweet and beautiful flowers. Around the hall is a low platform devoted to couches and dressing-rooms; here the bather disrobes and puts on his bathing suit. A long towel is wound about his head, a second around his hips, and a third is thrown, like a scarf, upon his shoulders. Two attendants shield him behind a sheet when he undresses, they assist him to fasten wooden pattens on his feet and lead him to the middle apartment; the doors are pushed open, and he enters the region of steam in the second chamber; it is low and dark, and paved with white marble. On each side of it is a platform, about a foot and a half in height; there the bather reclines on a mattress, and soon the warm temperature brings on a flow of perspiration. In the mean time a boy chafes the feet of the bather, and performs various manipulations tending to bring on the flow of perspiration. By-and-by the bather is ushered into the inner apartment, a space like the centre dome of a cathedral. The former was the *tepidarium*, this is the *calidarium* of the Romans. Here a steam is raised by throwing water on the floor.

Here the bather is subjected to the process of shampooing. Lying on his back, on a platform, his muscles are pressed and squeezed, his joints are bent and stretched, all of which is done in the most agreeable and artistic manner, for your attendants are artists in their way. When this process is over, the bather is taken to the hall, around which are basins of hot and cold water. The attendant, having put on his camel's hair gloves, commences at the nape of the neck, and, with long sweeps, down the back starts the scarf skin, striking it away as it accumulates under his hands. In the course of his manipulations he pours water over the skin to wash away impurities. In the next place he takes a bowl of soap and a wisp of palm, covers the body with lather, and then dashes warm water over the entire person. Then comes an attendant with warm napkins, hip-cloth or *cummerbund*; these are applied, and the bather is led to his box in the outer hall; he drops his pattens, stretches his limbs on the couch, a boy drives the cool air upon him with a fan, and he reposes beneath a roof open to the heavens, remaining there from two to four hours. There are five acts in the scene—the seasoning of the body, the shampooing, the removal of the scarf-skin, the soaping and rinsing, and the cooling and drying of the skin. The effect produced can be imagined after reading the following experiences of eminent travelers. Dr. David Urquhart says:

"When the cooling is complete, the body has come forth shining like alabaster, fragrant as the cistus, sleek as satin, and soft as velvet. The touch of the skin is electric. At the conclusion of the process, the crispness of the skin returns, the fountains of strength are opened; you seek again the world and its toils; and those who experience these effects for the first time, exclaim, 'I feel as if I could jump over the moon!'"

Bayard Taylor remarks:

"No man can be called clean till he has bathed in the East. Let him walk directly from his accustomed bath and self-friction with towels, to the Turkish Bath, and the attendant will exclaim: 'O Frank, it is a long time since you have been bathed!'

"Thus we lie in perfect repose, till mind and body are drowned in delicious rest, and we no longer remember what we are. Gently, sleep lies upon our senses. As gently the clouds dissipate, and we are born again into the world. We rise, put on our garments and walk forth into the streets, instinct with new and more perfect life.

"As the Rose of the East has a rarer perfume than in other lands, so does the bath bestow a superior purification and impart a more profound enjoyment.

"The bath is at an end. We rise and put on our garments, and walk forth into the sunny streets of Damascus. But as we go homeward we involuntarily look down to see whether we are really treading upon the earth, wondering perhaps that we should be content to do so, when it would be so easy to soar above the house-tops."

Dr. Andrew Combe observes:

"It *increases* instead of *exhausts* the strength, and by exciting the vital action of the skin, gives rise to a power of reaction which enables it to resist cold much better than before."

The bath is a great civilizer, a power which tends to equalize the race; it is, in the broad sense, a democratic, a republican institution. It

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is designed to renovate and improve society. It would do away utterly with that great class of persons, the unwashed, by washing them, and, on the score of cleanliness, put them on a level with those who have ignored them because they were not personally clean. It lifts the poor man and the rich man from the dirt, and washes the seeds of sickness and disease off them, and they see that manliness, and not money, is the guinea-stamp or eagle-stamp of true aristocracy. In the East, where the bath is common and the servant is as clean as his master, they often sit at the same table. Dickens, when in this country, drank a toast, in which he expressed the wish that there might be nothing but cold water between the United States and England. At that time he did not dream of Alabamas on the water, lighting up a hundred horizons with the torch of piracy. There is really cold and hot water between the castes and classes of society; if they will both make the plunge, they will come nearer each other.

A clean skin suggests a clean character—dirt and vice are often closely allied. In our large towns and cities it is a noted fact that those who live nearest the water are the dirtiest citizens. Now then let the poor and the unlettered cultivate the habits of cleanliness suggested by the bath, and they take a step upward. Water is cheap, and no man is so poor he can not afford to wash himself. Cleanliness is a better passport to what is called good society than money with filth. What man or woman of taste and culture and nice sensibility can really welcome the society of a man, be he rich or poor, who has the sickening odor of filth upon his person. Water seeks a level, and it levels society upward. It was the sculptor which modeled the earth into symmetry, and it will model society into a form of republican simplicity. Society, like a river, is apt to lean a little on one side, sunning itself on one bank, and shading itself on another, and is often deepest on the darkest side; when moving in a broad and generous channel, it yields gracefully to the inequalities and convolutions through which it flows.

The water reflects the face that looks upon it; so does society. When you look into its clear, calm depths, you see a beautiful representation of the overarching foliage and the magnificent dome of the star-lighted or sun-lighted sky. So when you look into the depths of society, you will discover, here and there, images of beauty and glory; the heart that is clean and pure reflects whatever is beautiful on earth, or glorious in heaven. The river pulsing to the sea is a rosary, gleaming with beaded stars; and moon, and sun, and the good hearts of the world are beads as bright as the stars. We kiss them with our spirit lips, and look up from them to the Allfather in heaven. The bright, clear, beautiful water, whether it unwinds from the hills, or expands in lakes, or bubbles in fountains, or falls in showers, is a teacher and a promoter of health. It was in words of water and sunshine that God wrote his promise in the sky, that he would never again destroy the world with a flood.

[TO BE CONCLUDED IN THE AUGUST NUMBER.]

SWEET APPLES.—Why is it that sweet apples are so little noticed and planted. We have sixteen acres of orchard, about twenty years planted, and we find, for family use, sale in New York market, stock, and cider, they are full as valuable as acid apples. We have them on the table (except the present year) baked nearly every meal, and are of good kinds. They are excellent to eat as a dessert. Put them in the stove oven when cooking the dinner, and they require no peeling or coring, no sugar, and are a good substitute for pies and pastry, and far more healthy. We have the Summer Bough, succeeded by Golden Sweeting, Jersey Sweet Corlies, Fall Bough, and Willis Sweeting, the best of all. Pound Sweeting, Ladies' Sweeting, Moore's Sweeting, and Talman's are good for winter use. Fine baked apples, eaten with pure rich milk, is about the best supper we have among farmers. We find no difference in the market price, if they are only handsome and in good order. An easy and a good way to cook sub-acid apples is to cut them in two, put about a tea-spoonful of sugar to a large apple, put them in a dish after cutting out the blossom and stem, put another layer on these same as before, and then cover with a dish or cover that fits close, and cook until done. The taste of the fruit imparted by the skin and seeds is very fine. Baldwin and H. Nonsuch are especially nice cooked by this method. A correspondent inquired a few weeks past about planting an orchard around his house. We like to have an orchard as near to the house, especially the summer varieties, as may be; but other shade trees are better in close proximity. Give the apple, cherry, and pear trees a field by themselves, and give them the proper care, and they will repay for the attention, but they make poor lawn trees, and, as they require to be cultivated, and sometimes get full of weeds, as young orchards are prone to, would present an unsightly object in front.—*Exchange.*

HON. RUFUS CHOATE in his address once said: "Happy is he who has laid up in youth, and held steadfast in all fortune, a genuine and passionate love of reading; the true balm of hurt minds, of surer and more healthful charm than poppy or mandragora, or all the drowsy syrups of the world; by that single taste, by that simple capacity, he may be bound in a moment into the still regions of delightful study, and be at rest."

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[Written for The Herald of Health.]

Beauty of the Lips.

BY "CRAYON."

SWINBURNE, the most sensuous of modern poets, refers frequently to the mouth and lips, and furnishes text enough for a volume of criticism. Here are a few specimens of his passionate utterance: "And lips no kiss of love could bring to flower;" "lean lips together;" "I think the air and face of things here North, puts snow, at flower time, in the blood, and tears between the sad eyes and the merry mouth, in youth's time;" "a kiss that plucks the heart out, with the lips;" "a scrupulous fair traitor with clean lips;" "the delicate men, with delicate feet, that went curling their small beards Agay fashion, yea, pruning their mouths to nibble words behind with, keeping at God's skirts;" "mouth of fire, and Paphian breath;"

> "And rose, touched with blood since Adam bled,
> From her fair color filled their lips with red."

I could fill this paper with quotations of similar import, from the writings of ancient and modern poets; but the above must suffice for the present. These quotations show that the language of the lips, whether silent or vocal, speaks directly to the brain and heart. In a work on Ethnology published by Fowler & Wells, I find the following:

"The open mouth shows the present moment of habituality. A calm, uncontracted, unconstrained mouth, with well-proportioned lips, under a characteristic, retreating, mild, tender, easily-movable, finely-lined, not too sharply-pointed forehead, should be revered as sacred. Every countenance is stupid, the mouth of which is so broad that the distance of the eye, measuring from the upper eyelid to the extreme corner of the mouth is only twice that breadth. . . . When the under lip, with the teeth, projects horizontally the half the breadth of the mouth, expect—allowing for other gradations—either stupidity, rudeness, malignity or avarice. . . . Whoever trembles with his lips, especially the one-half of the upper lip, and endeavors to conceal that trembling, though his satirical ridicule may be instructive, will be sure to wound. All disproportion between the upper and under lip is a sign of folly or wickedness; the wisest and best men have well-proportioned upper and under-lips. Very large, though well-proportioned lips always denote a gross, sensual, indelicate, and sometimes a stupid or wicked man. He who has contempt on his lips, has no love in his heart. He, the ends of whose lips sink conspicuously and obliquely, has contempt on his lips, and no love in his heart, especially when the under lip is larger and more projecting than the upper. . . . A small, narrow mouth, under a small nostril, with a circularly-arched forehead, is always easily intimidated, fearful, feebly vain and ineloquent. If accompanied by large, projecting, dull eyes, and an oblong, bony chin, the signs of imbecility, especially if the mouth be open, are still more decisive."

These extracts are taken from a philosophical work, giving a view of the mouth, from the stand-point taken by the student of physiognomy. The commonest observer knows that men and women form their opinions of each other by the lines of the face, and especially by that most expressive feature, the mouth. The opinions thus formed are sometimes erroneous, but they are generally correct. We see firmness indicated by the compressed lips; indecision by the parting of the lips; timidity, by their tremulous motion. It is well for cowards that fashion favors the full beard, for the hair may conceal the poltroon, as a clean glove may conceal an unwashed hand. While it is true that appearances are not always trustworthy, we all instinctively judge of the value of what we see by its outward form. Sick men do not have a well look, feeble men do not appear to be stout, fools have not the physique of philosophers. A man whose head is like a cannon ball, and whose fist is as large as a leg of mutton, and whose mouth matches his head and hands, could not pass himself off for a man of taste and genius and culture, though he added ever so many titles to his name. The tailor could not disguise him in broadcloth so that he would not be recognized; the banker might assure us of his financial standing, but that would not place him alongside of the truest and noblest types of the highest civilization and culture. Hear what our own gifted Emerson has to say on the subject:

"Neither Aristotle, nor Leibnitz, nor Champolion has set down the grammar-rules of this science, older than the Sanscrit, but they who can not yet read English can read this. Men take each other's measure when they meet for the first time, and every time they meet. How do they get this rapid knowledge, even before they speak of each other's power and disposition? One would say that the persuasion of their speech is not in what they say, or that men do not convince by their argument, but by their personality."

Theodore Parker, speaking of the grandeur and beauty of man, says:

"Man is the jewel of God who has created this material universe as a casket to keep his treasure in. All the material world is made to minister to man's development, a cupboard of food for a cabinet of pleasure. . . . . The comely face of the comet is far less glorious than the rustic lover, who thinks of those dear eyes which are watching those two stars that every evening so sweetly herald the night."

Having devoted this sketch mainly to the opinions of poets, philosophers and preachers, men whose opinions are authority, I will conclude with a word of advice. The mouth is not

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ornamented when a pipe or a cigar is appended to it. He who smokes may be very wise, or he may be otherwise. He who rolls the quid as a very sweet morsel under his tongue certainly does not add great attractiveness to his person—the stream of saliva flowing in miniature Mississippis from the corners of his mouth into miniature lakes on his shirt bosom do not make him kissable nor beautiful. Tobacco does not whiten the teeth, nor redden the lips, nor sweeten the breath, nor improve the wardrobe. The use of intoxicating liquors was not referred to when the inspired writer said, "Not that which goeth in, but that which cometh out defileth the man." It goes in poison and comes out profanity, and lies, and slander, and obscenity. Meershaums (mere shams), cigars, rum, should be scrupulously excluded from the mouth of the man who desires his lips should be like those spoken of by Solomon—lips that spoke the truth and kissed each other. As for the snuff-dippers, they can not read, and it is useless to waste words with them in relation to the unwomanly habit which deprives them of health and beauty, and renders their approach an infliction, their society a misfortune, to be avoided by all cleanly persons. Contrast the snuff-dipper with the pure, sweet country or city girl! Let the following lines, which I wrote in relation to a real character, take the place of argument:

ANNIE OF ALLEGANY.

Clasped in the blue arms of the air,
Which sighs as fondest lovers do,
The sunbeams tangled in her hair,
I saw a maiden sweet and fair,
Whose eyes were touched with heavenly blue.

Her voice was low and soft and sweet,
A halo round her features shone;
The flowers she pressed beneath her feet
Sprang up as though their pulse did beat
And kissed the soft winds o'er her blown.

Oh, then I knew a treasure rare
Some lover to his heart would press,
And prize the soft, sunlighted hair,
And face symmetrical and fair,
Whose lips now tempt the fond caress.

But sweeter than the face so fair,
And lovelier than the eyes so blue,
And richer than the golden hair
Is the pure heart pulsing there,
Which beats with love when love is true.

The teeth have, perhaps, as much to do with adding to or detracting from the beauty of the mouth as any other part of its structure. A row of beautiful white pearls studding the entrance to this organ make even the worst mouth beautiful, while decayed teeth, or ill-formed ones, spoil the most beautiful mouth. A full set of teeth round out the cheeks and lips to their proper outline, allow a graceful use of the muscles of the face which are concerned in talking and laughing, make the voice smooth and whole, and indicate a fine state of health and good digestion. It is a great disgrace to the civilization of the age that we have more decayed teeth than sound and beautiful ones, but in the new era that is coming, when physical Christianity shall take its place beside morality and virtue, decayed teeth will be found in the museums and exist only as curiosities. It becomes parents who would keep their children's teeth sound to commence early and keep them from being drugged; to keep their stomachs sweet and healthy and their blood pure; to teach them to clean their teeth daily with pure, soft water and a good brush, and to keep out of their mouths every thing that defiles them.

[Written for The Herald of Health.]

Anæsthetics.

BY E. P. MILLER, M. D.

ANÆSTHETICS are those agents which, being introduced into the living system, prevent feeling and induce that condition of body which renders the person insensible to pain. They are usually administered by inhalation in the form of vapor or gas; they thus mingle with the blood, and are carried by it to the brain and nerves upon which their peculiar effects are produced.

A person fully under the influence of an anæsthetic is said to be in a state of anæsthesia. The substances commonly used to produce this state are nitrous oxide, sulphuric ether, chloroform, and chloric ether. There are other agents that will produce this condition, but not so easily, safely or successfully, and consequently are not much in use for this purpose; among these are chlorohydric and nitric ether, bisulphide of carbon, chloride of olifiant gas, benzaline, aldehyde, naphtha, etc.

Ether and chloroform are the agents most extensively used, and with what effect a further consideration of the subject will more clearly show. They are now very extensively employed, not only in all important surgical operations, but in many cases of severe and painful parturition; also in many diseases where there is intense suffering that can not readily be relieved by other means, such as cramp, spasms, convulsions, hysteria, neuralgia, and other nervous diseases.

Although it is less than a quarter of a century since the discovery of anæsthetics, yet they are now freely used in almost every civilized country in the world, and the discovery is regarded by many as one of the greatest boons ever conferred upon man for the relief of human suffering.

To the great value of anæsthetics for surgical

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purposes there are but few dissenting voices; even the leading Hygienic physicians, those most bitterly opposed to drugs in every other form, consider them useful for the relief of pain caused by the scalpel and amputating knife.

If diseased and mangled limbs are to be amputated, if broken bones are to be set, if dislocated joints are to be reduced, if wounds are to be probed and tumors excised, it would certainly seem to be an invaluable art to be able to lock up the brain so it could not think and to benumb the nerves so they could not feel, and completely destroy all consciousness till the operation could be performed, and then allow the subject to awake with the grateful assurance that his sufferings were over and no injury was to follow the effects of such a process.

But can this actually be done and no injurious effects follow? Is it possible to take into the human system any substance that will so completely depress the life-powers and so effectually destroy all consciousness—that will so entirely benumb the nervous sensibilities that the body can not realize the severest tortures to which it may possibly be subjected; so that limbs can be cut off, eyes plucked out, and the person remain entirely insensible to the whole process, without danger to life and health?

It is a subject deserving careful examination as to whether the human system can be safely subjected to the effects of agents so powerful as to cause insensibility, paralysis and unconsciousness, without receiving more harm than good; and whether in the end it is not better to endure the pain and suffering inflicted by the surgeon, in the full possession of all our faculties and feelings, regarding ether and chloroform as poisons to be avoided, rather than be subjected to their influence.

There are a few of the leading minds in the medical profession that are now very strongly opposed to the use of chloroform and ether, regarding them as a curse rather than a blessing. Medical journals are constantly reporting deaths caused by their use, and doubtless many thousands of lives have been destroyed by them upon the operating-tables in our Army and public hospitals, to say nothing of those lost by the use of these agents in private practice, some of these being persons who were submitting to minor operations. Nor have we any means of estimating the injury to body and mind of those who survived.

There is such a complete derangement of all the functions of life, such prostration of the nervous system, such a total suspension of thought and feeling, that it is sometimes months and even years before the whole system recovers its tone and healthfulness.

It has been observed that patients who have taken chloroform and ether do not recover so quickly from wounds received, or from surgical operations, as they do from the same conditions when neither of these agents have been employed. The recuperative powers of the system seem to be materially depressed by them, the appetite is impaired, digestion deranged, and nausea and vomiting almost invariably produced; the action of the mind is interfered with, the nervous system prostrated, the circulation of the blood enfeebled, the muscles rendered weak and flabby, and the functions of every organ of the body are disturbed.

Dr. Frank Hamilton, a Military Director in the Army of the Potomac, a gentleman who has had a very extensive experience in army and hospital practice, in his work on Military Surgery has published some of his observations on the effects of ether and chloroform, which are so much to the point that we make a few quotations.

"In the military practice, as observed by us in the American field and hospital service, *'union by first intention'* is one of the most rare events. We have many times had occasion to notice the appearance presented by the limb immediately after an amputation made upon a patient completely narcotized by chloroform.

"The muscles hang out; they never quiver nor retract, nor, in some cases, is the retraction of the muscles completely accomplished until after several hours or even days. It bleeds freely, but it is seldom we find any lymph deposited upon the surface, even when it has been allowed to remain open for an hour or more. We have noticed also the prostrated condition of the patient, consequent plainly upon the action of the anæsthetic, and continuing several hours or days, accompanied with loss of appetite, and not unfrequently by nausea and vomiting; the pulse being feeble and rapid, the surface of the body pale, and the mind irritable; and in civil practice not only fewer *'unions by first intention,'* but more suppuration, purulent infection, and pyæmia are sure to follow. [The last of these difficulties is the most formidable the surgeon has to contend with.] In many cases which have come under our observation, the nausea and vomiting have continued for many days."

Dr. Z. Pitcher, surgeon in St. Mary's Hospital, at Detroit, Mich., says:

"Regarding ether and chloroform as poisons of a sedative class, which, when introduced into the blood, produce cerebral exhaustion and cardiac syncope if they do not change the physical and vital proportions of the blood itself, I feel obliged to remonstrate against their use in cases of syncope and nervous exhaustion."

McLeod, a surgeon in the Crimean war, where chloroform and ether were used, says:

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"I never saw one case in our most numerous amputations in which primary adhesions took place through the whole surface of the wound, yet before the injuries were received every man was in health and vigor and actually rejoicing n his strength."

In one branch of the British army, in the same campaign, where chloroform and ether were not used, amputations of both shoulder and thigh were known to heal kindly by primary union. In the United States Army Hospital at Vera Cruz, after a fair trial of ether and chloroform, they were entirely given up, and the surgeon in charge states: "It may well be questioned whether anæsthetics are not calculated to produce injurious effects in all important amputations; they certainly do in operations performed for gunshot wounds."

Velpeau says: "Chloroform evidently depresses the nervous system, and as great prostration always exists in patients who have received gunshot wounds, it is advisable to refrain from any anæsthetic."

Dr. Guthrie says: "Anæsthetics poison the blood and depress the nervous system, and in consequence hemorrhage is much more apt to occur, and union by adhesion is prevented."

The mortality from surgical operations in the New York City Hospital has increased more than ten per cent. since anæsthetics were introduced, and it is a noted fact that erysipelas and hospital gangrene have greatly increased in all parts of the world, since chloroform and ether have been used.

Dr. Cole, an English surgeon, regards "chloroform as a highly pernicious agent, and desires that it should be entirely excluded from field and from hospital practice."

Judging from the expressed opinions of the superintendents in charge of asylums for the insane, the effects of ether and chloroform upon the brain and nervous system are fully as pernicious as upon bodily conditions, being a frequent cause of imbecility and insanity.

At a meeting of an association of Superintendents of Asylums for the Insane, Dr. W. S. Chepley stated that "cases of serious and permanent impairment of mind frequently occur from a single exhibition of chloroform."

Dr. Bell mentioned at the same meeting a case of insanity resulting from chloroform administered by a dentist to a lady who, after being under his care for a year, committed suicide.

Dr. Kirkland reported two cases that had been under his care, whose insanity was caused by ether and chloroform.

Dr. Walker stated "that he could cite cases of persons who had used sulphuric ether for the purpose of having teeth extracted, and in six or eight cases he had been assured by the friends of the parties that this had been the cause of their insanity."

Dr. De Wolf had one patient "whose insanity was known to be caused by having six teeth extracted while under the influence of chloroform."

Dr. Tyler had also had under his care several cases of this kind, although he thought such effects only followed the use of chloroform, and not ether.

Dr. Kirkbridge said "he would never use anæsthetics, because he regarded them as dangerous, and thought that but little benefit could be derived from their use."

The New York Medical Journal not long since reported six cases of insanity, of from one to six years' standing, as the result of inhaling these poisons.

In fact, so many serious and fatal accidents have occurred to patients from the influence of ether and chloroform, and such a long train of unpleasant symptoms have followed their use, that a serious doubt has arisen in the minds of some as to whether it is safe to use them for any purpose.

But must all anæsthetics be ranked with ether and chloroform, and be discarded because the pernicious effects more than outweigh the benefits?

The experiments that have thus far been made with the nitrous oxide, give a hope of far better results than those obtained from any other anæsthetic.

At a recent meeting of the New York Polytechnic Institute, Prof. G. Q. Colton stated that he had administered the nitrous oxide gas to twelve thousand two hundred and fourteen persons for the purpose of extracting teeth, and from some of these he had taken out from twelve to twenty teeth at one sitting, and all of these persons were so completely unconscious as to be entirely insensible to pain, yet he had never known any one to be in the least injured by the gas. He had never known but five or six persons to be even nauseated by it, and those had, while having a number of teeth taken out, swallowed blood sufficient to cause the nausea.

Injurious effects have never been known to follow the inhaling of nitrous oxide, except when it was mixed with other poisonous gases. Some accidents have been reported from its use; but investigations have shown that it was administered by those who did not know how properly to make and apply it.

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Nitrous oxide was the first substance ever used as an anæsthetic, and from the investigations now being made, there are indications that it will eventually be the only one deemed safe to use.

This gas was first discovered by Dr. Priestley, more than half a century ago. Not long after its discovery Sir Humphrey Davy thought, from the similarity of its chemical constituents to those of the atmosphere, that no harm could arise from inhaling it, and consequently made the experiment, which he found to be attended with a very agreeable sense of exhilaration. From the numerous experiments which he afterward made with this gas upon different persons, he found that most of them were affected with pleasurable sensations, and would laugh and skip about as if in a state of partial intoxication. The excessive laughter it occasioned gave it the name of "Laughing Gas."

Some persons under its influence manifest a pugnacious disposition, and will strike, kick and destroy whatever is within their reach.

It is supposed that when persons are under its influence they will manifest the most prominent trait in their character, whatever that may be. Sir Humphrey Davy observed that a state of stupor was produced in some, and was on the verge of the discovery of its anæsthetic properties; this, however, was reserved for one of our own countrymen.

The discovery of the power of nitrous oxide to produce anæsthesia for surgical purposes was made by Dr. Horace Wells, a practicing dentist in the city of Hartford, Conn., on the 10th of October, 1844.

At the time of the discovery Prof. G. Q. Colton was giving a course of chemical lectures, and administering the gas to different persons for the amusement of his audience. At one of these exhibitions a young man was brought under its influence, and while performing various gyrations about the room hit one of his legs against a bench, causing the blood to flow.

Dr. Wells who saw that the young man took no notice of this, asked him, when he came to full consciousness, if the bruise he had received did not pain him; the reply was, he did not know before that he was bruised. In an instant the idea was suggested to the mind of Dr. Wells that this agent might be employed to prevent pain during a surgical operation, and on his way home from the entertainment he told his wife of these impressions and that he meant to have the experiment tried upon himself while a tooth was being extracted. The next morning he saw Prof. Colton, revealed his impressions, and made arrangements to have the gas administered to himself, while a brother dentist should try to extract a defective tooth. The next day they met at the office of his fellow dentist, and when things were in readiness, Dr. Wells placed himself in the operating-chair. Prof. Colton administered the gas, and while he was under its influence a large molar tooth was extracted. As soon as Dr. Wells recovered consciousness enough to know what he was about, he leaped from his chair, and exclaimed: "*A new era in tooth-pulling; it did not hurt more than the prick of a pin!*" This was the first time an anæsthetic was ever given to prevent pain during the performance of a surgical operation, and to Dr. Horace Wells of Hartford, Conn., is due the honor and gratitude of mankind for this discovery.

Dr. Wells learned of Prof. Colton how to make and administer this gas, and a few weeks after went to Boston to make his discovery known to the medical profession.

[TO BE CONTINUED IN THE AUGUST NUMBER.]

INFLUENCE OF THE SUN ON LIFE.—How grand and beautiful is the theory that *all* material blessings here below come to us entirely and alone from the sun! Its simplicity and unity are completely consistent with the attributes of the Maker. Given motion, and given matter, all the rest follows as an inevitable consequence. All nature, from the simplest fact to the most complex phenomenon, is nothing but a work of destruction or reconstruction, a displacement of force from one point to another, according to laws which are absolutely general.

With this much said about might, let us look at the question of magnitude. From the foregoing statements, it may be easily conceived that the more an organized being is capable, in consequence of its physiological structure, of assimilating a given amount of aliment, the more effective force it will set at liberty, or, in other words, the more strength it will have at its own disposal.

TOWN SCHOOL HOUSES.—God in the country is generous to children. They have all outdoors except the grain field and the tall grass. But in the city, has there been any city provision for their wants? If none has been made for them, then the children must become either trespassers or sufferers.

This, then, is the reason why every city schoolhouse ought to have a large lot around it. A city boy's farm—where he can carry on with a clear conscience. A four acre lot where every spectator will say, "Go it boys, I like to see you."

A post-mortem examination of an officer at Tournay, France, recently, disclosed a complete reversion of the internal organs, the heart being on the right side, the liver on the left, etc.

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[Written for The Herald of Health.]

National Health and Longevity.

BY GEORGE W. BUNGAY.

THE war is ended, patriotism has triumphed over treason, and we have tested and vindicated our loyalty, our courage, our physical force, and our power of endurance. We, the people, are the occupants and owners of the broad, free land where liberty and justice have clasped hands over vast battle-fields—a land whose resources are inexhaustible, whose soil yields the products of every clime, and whose boundary lines must soon sweep a continent. Without a spirit of boasting, we may say that the United States stands among the nations as Saul did among the Hebrews, a head and shoulders the tallest; and we may add, without egotism, that many of the men who create and control public sentiment here are directing their steps along the channel which is worn deep by the footsteps of reform.

Among other questions which arise to the inquisitive mind is: Are we endowed with that sound physical health which insures strength and long life? Can we solve the problem of self-government satisfactorily and prove that we are the people to shape the destiny of our new nation? We have the mineral wealth, the territory, the system of government favorable to the growth and development of national greatness; but have we physical power and endurance to turn these advantages to good account?

National health and longevity depend upon our individual habits, our inherent organization, our occupations, and last, but not least, on climate. Intemperance, gluttony and vice, in all its varied forms, are the assassins of health and life. No nation can live long and be a great power on the earth, if the great mass of individuals of which it is composed indulge in the excessive use of stimulating drinks. Feebleness, deformity, idiocy and insanity, follow inevitably in the shadow of intemperance. Poverty pinches its victims with want, packs them in unventilated rooms, and compels even childhood to stultify and dwarf itself in the factory, when it should be developed on the play-ground and in the school-house. What a sad spectacle it is to see old heads and old faces on young shoulders, old heads filled with chaff on young stalks, boys and girls laborers before they reach their "teens." Can hale and hearty, athletic offspring come from parents whose stature has been lowered, and whose heads have been pinched into littleness by the poverty which comes of intemperance and kindred vices?

That I do not put too much stress on this point, the following extract from a work just published by M. Simon, is my witness. He says:

"Even in France there are towns where women rival men in the habits of intoxication. At Lille, at Rouen there are some so saturated with it that their infants refuse to take the breast of a sober woman. In the mountains at the Vosges infants drink *eau-de-vie*. On Sunday in the churches the air is literally infected with the smell of *eau-de-vie* made from potatoes. In those mountains there are no more frequent causes of idiocy and imbecility, for in general the dwellings are healthy and the water is excellent. The great misfortune is that the children of habitual drunkards are idiots, so that the punishment follows from generation to generation, from the guilty and degraded father to the innocent children. In the manufacturing towns the mayors are obliged to take measures against the *cabarets* that supply *eau-de-vie* to chidren, for there are drunkards of fifteen as there are laborers at eight; and morally and physically, they present a melancholy spectacle. Can it be this precocious debauchery, and the consequence of it which oblige the War Department to lower the regulation height for the service? No one can believe, no one will venture to say, that the wretched people who haunt the public house to ruin and to poison themselves, have any excuse for so doing. Yet think of the twelve hours that these men spend in their workshops—twelve long and wearisome hours without any recreation—without even the pleasure of seeing their work finished under their hands; for the artizan is a mere piece of machinery, and feels no interest in what he produces. After those twelve hours, so exhausting, so monotonous, follow him, in the snow and frost, when he quits his shop. Mount the crazy and rotten staircase leading to his room. Enter with him into the frightful dog-hole where his meal is scarcely ever ready, for his wife is at work like himself; where he never tastes wine, because wine is too dear; where he can not breathe, because air fit for breathing is dearer still than wine; where he has no furniture, for during illness and stoppage of work his furniture is sent to the pawnbroker; and where he finds neither fire, nor covering, nor sleep! Do you know many men, even among those who are most eloquent on drunkenness, who would resist the attraction of the pleasant tap-room, well lighted, well warmed, with its glittering pots, its dusty bottles, its gay companions, and all the semblance of happiness, which hides from him the want of real happiness?"

Notwithstanding the fact, that we have vigorous organizations for the suppression of drunkenness, and laws for the punishment of those who violate the regulations of excise, and pledges with uncounted signatures, and tracts which have been scattered like the leaves of Vallambrosa, intemperance prevails to a fearful, to an alarming extent; it is fast becoming a national vice. Young men who were not born, or who were in their cradles at the time of the great Temperance revivals in this country, ha-

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bituate themselves to the daily use of the dram. They drink at weddings, at funerals, at parties, on holidays, on working-days, at home and abroad; when they are sick, when they are well, when they work, when they play, and the habit grows with their growth and strengthens with their appetite, and the appetite becomes a passion; hence, we see, in the procession of the street, men who would otherwise be straight, symmetrical and handsome, bowed, mis-shapen, and having "the mark of the beast on their foreheads." Step into Broadway any hour of daylight and you will see men of all ages and of every phase of social life, with the fires of alcohol in their faces and with the odor of poison in their breath. Their gait, their language, their countenances, their associations, and not unfrequently their clothing, indicate their vicious habits. How often do they make night hideous with their attempts at song and speech, as they reel home in the small hours, to alarm and perhaps abuse their best friends. They are clerks, students, apprentices, professional men, merchants, office-holders—little dreaming that they are in the circle which leads to the police-station, to the Tombs, to the penitentiary, to the untimely and dishonored grave. This dreadful vice, which seems to be the prolific parent of all other vices, is not confined to great cities. The country copies the usages of the metropolis, and young men of the village smack their lips over logwood and whisky, for which they pay the price of wine, because they have seen city snobs do the same thing at the St. Nicholas and the Astor House. Not less than one hundred thousand victims of intemperance perish annually in this country, and the bright lads in our schools and colleges, and offices, and shops, and factories, and on our farms, will keep the ranks full, unless we bestir ourselves and snatch them as brands from the fire. Can we at this crisis of our history, having lost so many able-bodied men in battle, afford to lose an army of one hundred regiments every year? We want their active brains, their generous hearts, their skillful hands to help to pay our national debt, to work our waiting soil, to develop the vast resources of the nation. If that number of men, women and children were shot down in cool blood every year, we should feel the shock, and the power of Congress would be invoked to put a stop to the cruel butchery. There is nothing on earth so sacred, so valuable as a human being, and while we encourage emigration, because we need the laborer and appreciate his importance as a help to national growth and power, let us spare no laudable exertion, to save our people from the fate of drunkenness.

Without hesitating to elaborate opinions in relation to over-work, undue excitement, insufficient sleep, lack of ventilation, gluttonous eating, improper diet, unhealthy employment, private vices and connubial excesses, and inherent diseases, etc., I will proceed at once to offer a few suggestions in regard to the effect of climate on health. Nations, like individuals, have their infancy, their maturity, and their old age, and old age, in the language of the poet Holmes, is *endemic, epidemic and sporadic*, and all who live long enough, are sure to catch it. We, as a nation, are in our infancy. We have not yet "made the circuit of a century," and no nation named in history ever came to its close before it had attained the age of one hundred years.

The United States, though a giant in stature and a giant in strength, is only a child in years, but the child can not continue to grow unless the supply of life-material be equal to the waste. If an individual must eat and drink to make up the loss caused by the *effete* matter, which has been removed, so a nation must in some way, either by birth or emigration, be supplied with material to make up the loss caused by war, by intemperance, by pestilence. The death of an individual is to the nation what the loss of a particle of matter is to the individual. It seems that very much of life in the vegetable and in the animal kingdom depends on the atmosphere. The plant absorbs its vitality from the air; the ox eats the plant, we eat the ox, and breathe out the gases not needed for life. These gases are absorbed again by the plants. As the moon lifts the ocean from its bed and carries the tides in its white arms, so the sun moves the atmosphere. It is the great source of power which governs the law of vegetation, carpeting the regions of the tropics with the richest vegetation and leaving the polar regions locked up in "eternal ice." Flocks of wild fowl, schools of fishes and herds of beasts are moved in their migration by the influence of the sun—a strong proof of the great power of climate on animated as well as on inanimate nature. The sun's light "out of inorganic material constructs the molecules that are organized, and with them composes the myriads of vegetables destined to support animal life." Its heat divides the surface of the earth into climates, volatilizes the water of the ocean, starts the wind on its mission, gives shape and movement to the clouds, regulates the laws of drouths and storms, compensating with abund-

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ance in one place the loss occasioned by famine in another. The withdrawal of the sun's favors is followed by disaster to the vegetable and to the animal kingdom. Man, however, having the power of locomotion, is not so directly affected by the influence of heat and light. Besides, he has a head to contrive and a hand to execute and he can make light and heat by kindling a fire; he can change and regulate his clothing, and, in a degree at least, he tempers the climate to suit his convenience. He can light a planet in his own house, and line his own jacket with sunshine. He can lengthen his day with lighted oil, and shield himself from the assault of the seasons. If famine casts its shadow in front of his door, wings of sail and steam are ready to waft him to abundant harvests, or commerce will furnish him with supplies from other lands. He has grown so wise and strong that he, in a measure, compels Nature to satisfy his necessities. I do not intend to say that he is not subject to the natural laws. All living creatures feel more or less the effects of climate. Astronomy, physiology and geology testify that hot-blooded animals were not created until the pure state of the atmosphere was fitted for their existence. In the judgment of men who have made this subject the study of a lifetime, climate not only affects the complexion of men, and has its influence in molding the formation of their heads, but that races are subject to change, going down or going up in the scale of civilization according to their climatic surroundings. Our country—thank God! we have a country; it is a great and a good country; it has cost a great deal of blood and treasure, but it is worth all it has cost. Our country embraces every degree of latitude; it has all the varieties of climate. With one hand it touches the gorgeous flowers of the tropics, and with the other touches the floating ice-bergs of the Arctic seas. We have a river which flows through all the latitudes, a ribbon which Secession could not clip, and which connects and ties the climates on the continent. We have vast lakes—inland seas—and into them the territory about which Europe has been quarreling might be tossed without causing their waters to overflow. We have prairies, vast seas of emerald and golden and crimson vegetation. We have deserts and mountains, and all the diversities of land and water that make up a grand and beautiful country. Now, what is its climate and what are the effects of the climate on the people? Do we not easily distinguish a difference between the real Down East Yankee and the Southerner? They not only differ in speech and sentiment, but they also differ in complexion and in the formation of their heads and faces; so marked is the difference that the least observant can distinguish one from the other at a glance. The Western man is unlike the Northerner, and neither of them resemble the New Englander or the Carolinian. These noticeable dissimilarities are not alone due to education, to employment, to dietetic habits—climate has had its influence in tinting the color of the skin, and shaping the features, and it has a powerful influence on the health and life of the people, a subject which I will discuss more fully in a future paper.

SUPERNUMERARY FINGERS.—A discussion upon the subject of supernumerary fingers, which took place at a recent meeting of the Surgical Society of Paris, was somewhat remarkable for the discrepancy of opinion which was elicited as to the frequency of the occurrence, and is on that account interesting, as going to illustrate the freaks and accidents of which the statistician may be the sport.

One physician had observed numerous instances of extra fingers during a two years' residence at the Foundling Hospital; another could not regard the deformity as a rarity; while a third declared that among about ten thousand infants which had come under his notice he had met with an extra finger but once; the fourth speaker asserted, on the contrary, that the deformity in question must be very common, for he had himself seen some fifteen cases; while the fifth stated that he had seen not only a great number of instances of supernumerary fingers. but even of supernumerary hands. Speaker number six remarked that during his twenty-five years' practice at the Maternite Hospital he had not met with more than ten of these cases, and that in a statistical record of the London and Vienna lying-in hospitals, comprising fourteen thousand children, it was shown that not a single instance of the deformity in question had occurred. The third speaker here re-entered the discussion for the purpose of remarking that the long service of his master (sixth speaker) at the Maternite, joined with his own observations at the same hospital and also at the Clinique, furnished the formidable number of from ninety thousand to one hundred thousand infants among whom only twelve or thirteen cases of extra fingers had been observed. At this point M. Velpeau turned the subject by speaking of the curious coincidences which chance often throws in the way of the medical practitioner, and cited, as an example from his own experience, the fact that he had once in private practice met with three instances of fracture of the neck of the thigh-bone upon the same day.

LIQUOR FOR SOLDIERS.—His own testimony was in favor of the best fighting being done by the soldiers who did not drink, and they were the most elastic in endurance. For himself he had found that he had won the respect of of his fellow-officers by his constant refusal to drink.—*Major-General Howard.*

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[Written for The Herald of Health.]

Health of Girls--No. 2.

BY DR. J. H. HANAFORD.

It is manifestly true that *amusements*, with proper limitations, recreations and relaxation, are positively necessary for the preservation of our health. Cheerfulness, not frivolity, hopefulness and a genial temper, are all favorable to physical development, and consequently tend to prevent the attacks of disease. In the language of the Scriptures, "A merry heart doeth good like a medicine, but a broken spirit drieth the bones." This language is verified in our every-day observations, as we see so many who are able to "laugh and grow fat," so many cheerful countenances combined with healthful bodies, and so many, many whose fretfulness and moroseness are undermining the constitution, and whose physical ills are increasing their ill-nature—a two-edged sword, fearfully cutting in both directions.

But while it is true that amusements are or ought to be favorable to the health of the body, it is as true that they are often abused, and perhaps on the whole are productive of more evil than of good, produce more sickness than health. This results from the fact that they are sought, not always because they are naturally favorable to health, but for the sake of the hilarity, frivolity and fun which they afford. The dance, for example, which in our own parlors, with no injurious appendages, if it could remain subject to proper parental restraint, might be safely encouraged, probably, under the present circumstances is among the most fruitful causes of pulmonary consumption and some other forms of disease among the victims of the ball-room. It is unfortunate for those who resort to the dance "for exercise," as many claim, that it is practiced at a time when *rest*, not exercise is needed, at the close of the labors of the day, and continued till a late hour, often varying from midnight till the dawn of day. Instead of healthful exercise it often becomes violent exertion, crushing effort, sufficient to impair if not utterly destroy the strongest constitutions. Added to improper hours, violent exertion, the impure air of such rooms, where so many are assembled for that length of time, with a temperature too high even for moderate exercise, warmed and vitiated by many contaminating breaths, it is not strange that many "a head whirls" as a legitimate result of breathing such impure air, even when ardent spirits, so usual on such occasions, are not used, or that the "blood rushes to the head," causing a violent headache, if not a dangerous congestion of the brain. Indeed, such an amount of exercise, even under favorable circumstances, at such a time, would necessarily prove too exhausting for an ordinary constitution.

Again, it may be observed that the young lady when clad for the ball-room is too often but *half* clad, large portions, as the throat and upper part of the chest, the arms, etc., being entirely nude, while other portions are but partially protected, particularly the feet and lower extremities. But the great danger, the most disastrous exposure is after the victim leaves the over-heated rooms. The violent perspiration, resulting in dampening the insufficient clothing; the exhausting effects of the violent exertion—since most limit these dances by their powers of endurance, dancing until the effort becomes decidedly oppressive to the powers of the system, desisting from sheer necessity—fully prepare the body for the reception of disease. The frosts of winter, the chilling north winds, piercing through this apology for clothing, cooling or almost freezing the dampened garments, contract and shrivel the fevered and enfeebled surface, closing the pores and driving the blood internally, of course resulting in a "violent cold," a severe cough, a congestion of the lungs, and far too often in that scourge of civilized society, *pulmonary consumption*. It is more than probable that many if not most of the victims of this fearful and insidious disease may trace its origin to exposure to the cold, damp night air, after having been made peculiarly susceptible to their worst results by the fatigue, etc., of such over-heated rooms, where they have remained until the powers of the system have become nearly or quite exhausted. Few are fully sensible of the debilitating effects of such exercises, when under the influence of music and objectionable stimulants, or of the almost positive certainty of contracting diseases when exposed to cold. It is almost impossible, if the victim is obliged to ride far, after such exhaustion, to become sufficiently clad to resist the searching cold of a bleak winter's night. But, still worse, it is by no means unusual for such victims, either in the ball-room, or after returning home, to take improper not to say intoxicating drinks, large quantities of cold drinks or ice-creams and similar articles, while in the heated room 'eating voraciously, since the appetite is wonderfully excited by such exertion, retiring immediately, with a fair prospect of experiencing the natural results of such rashness, being visited by that unwelcome *beast* the "*night-mare*."

Similar remarks will apply, with more or less

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force, to other amusements. The skater, as she glides gracefully away, seems to forget that she is a frail creature, unable to endure all of the hardships of such sports, or to rival the sterner sex. However healthful and invigorating this sport may and ought to be, it is probable that more delicate females are injured than benefited by this exhilerating sport. This constant tension of the muscles demanded to balance the body, added to the positive effort of locomotion—generally too vigorous—is too exhausting for the more delicate, though of course this is by no means necessary. Indeed, any exercise of this kind, when so violent as to produce lameness, soreness and tenderness of the muscles afterward, is necessarily injurious, at least, compared with moderate exercise.

Again, the greatest injury results from *irregularity* of such sports, in addition to unnecessary violence. The necessary amount of exercise each day, instead of violent and prolonged effort occasionally, would be not only safe, but promotive of health and vigor. Daily exercise and development of the muscles are as necessary to the vigor of the body as a regular supply of food for the stomach. Such exercise is always adapted to the promotion of health, while too much or too little alike produce debility.

Let it be distinctly understood that amusements are by no means disapproved, but regarded as favorable to physical development. It is only when they are adopted merely *as* amusements, merely to secure present excitement, with no reference to judgment, when the system is *overtasked*, the muscles violently called into action, that injury is inflicted. That labor or amusement best adapted to call into activity all of the muscles of the body, allowing not only sufficient *exercise* but sufficient *rest* at proper times, is the best—always promotive of health and physical pleasure. While many young females have too little of this kind, it is certain that they are injured by violent amusements, indulged in at improper times and under unfavorable circumstances.

M. POUCHET has sent a paper to the French Academy on the effects of freezing animals. He finds that no animal really frozen is susceptible of revivification, as freezing disorganizes the blood. The temperature at which the death of insects, grubs and snails becomes inevitable is far below the freezing point. Animals may be surrounded by ice without being frozen, unless the temperature be very low. M. Pouchet states that when an animal is frozen, the capillaries contract so as to prevent the passage of the blood, and the nuclei of the blood corpuscles escape from the envelopes, and become more opaque than in a normal state.

[Written for The Herald of Health.]

Progress.

In years "lang syne" a tiny sheet,
New-fledged, its course began;
And unto all it met revealed
An era new to man.

It whispered to the young and fair,
The beauteous in truth,
How best they might preserve the air
Of a perennial youth.

It told to middle age, and old,
How health they might retain;
And to the sick and suffering
How they might health regain.

It spoke of air so pure and fresh,
Of water soft and clear,
Of simple, wholesome, healthful food,
Of exercise and cheer.

Years passed along, and thousands saw
And loved this tiny sheet,
And begged for more of vital truth,
To make our health complete.

Which taught mankind themselves to know,
Their passions to control;
Which fed the mind, preserved the frame
And purified the soul.

At length the sheet increased in size,
Became more strong, more sure,
And soon 't was known through all the land,
This JOURNAL, WATER-CURE.

It bore such title many years,
Then by another name—
HYGIENIC TEACHER—it was called,
Its precepts still the same.

Again it changed its form and size,
And changed its title, too;
It now became THE HERALD OF HEALTH,
To readers old and new.

And in a higher, nobler tone,
Its pages breathed of health,
Till all who read proclaimed aloud
Its wisdom is its wealth.

With brighter light and broader field,
New truths it now doth give;
And, *with increasing influence,*
May it for ever live!

A FRIEND.

WATER FOUNTAINS AND BEER SHOPS.—Among the numerous drinking fountains established in London by Mr. Samuel Gurney, one is at the gate of the East India Docks, among a colony of beer shops that have fattened on the patronage of the host of laborers and sailors there congregated. Since the opening of this fountain, several of the beer shops have been closed. A publican, a short time since, threatened legal proceedings against one of the West-end vestries for allowing a drinking fountain to be opened near his house, alleging that it had diminished his receipts more than twenty-five per cent.

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[Written for The Herald of Health.]

The Limits of Liberty in the Excise Law.

BY REV. O. B. FROTHINGHAM.

My subject is given me by the Board of Excise, in its recent action closing all the places on Sunday where spirituous liquors are sold. Broad questions are raised by this action. The immediate effects of it are exceedingly agreeable to the order-loving men and women of the city, but beneath these immediate effects lie great principles whose maintenance is of immense importance, and the very mention of which makes thoughtful men look grave—I mean the principles of liberty. Are these principles violated, or are they not? It is remarkable that on both sides these principles are brought up in opposite interests. The law asserts the liberty of the people to protect themselves against disease, corruption and death, and to suppress any trades or occupations that endanger the health of the community. The victims of the law assert their liberty to obtain their livelihood in their own way, so long as they are maintained by the free patronage of their fellow-citizens. The law asserts that liberty runs into license, and should be restrained whenever its action becomes perilous or offensive. The victims of the law contend that authority becomes tyranny when it restrains liberty by any special edict. One of the followers of the forbidden trade, we are told, hung a flag at half-mast over his premises, and on being asked what it meant replied that "Liberty was dead in America"—he meant the liberty to deal out his poison to all comers who would pay for it. The vast majority of respectable citizens were disposed to run their flags up to the main peak in celebration of their successfully vindicated liberty to put down a pest.

The questions come up, then, What is liberty, and what are the natural limits of liberty? When does liberty degenerate into license, and how shall license be suppressed while liberty is preserved?

And first let us consider what our principle of liberty is and what it implies. There are several kinds of liberty which must be carefully distinguished, for they are so different in character as to be almost opposed to one another. They represent such different experiences, and look to such dissimilar results, that they hold each other in check and neutralize each other. Thus there is spiritual liberty, which is liberty of the man to obey the spiritual laws—to yield freely to the movements of his aspiration, his faith, his reason, his worship. It is liberty to act out himself as a religious man. Then there is intellectual liberty, which is liberty to think and to communicate thought in responsibility solely to the dictates of truth. Then there is moral or social liberty, which is liberty to live in relations of simple justice, duty and charity with one's fellow-beings—to pursue freely whatever course is in conformity with the laws of social progress and the common welfare. And lastly, there is individual liberty, which is liberty to seek the individual well-being, the individual happiness, down on the plane of the individual desire.

See the immense difference between the first of these liberties and the last. Spiritual liberty is the liberty of the soul; individual liberty is the liberty of the body. Spiritual liberty is freedom *from* the natural desire; individual liberty is freedom *of* the natural desire. Spiritual liberty is liberty to walk freely in the regions of sentiment, thought, aspiration; individual liberty is liberty to walk freely in the fields of sense. Spiritual liberty is liberty to soar; natural liberty is liberty to grovel. Spiritual liberty is liberty to be noble, true, elevated, faithful, pure; natural liberty is liberty to be selfish, cunning, sordid, sensual. Spiritual liberty is liberty to do what we OUGHT; natural liberty is liberty to do what we LIKE. Angels enjoy spiritual liberty; brutes enjoy natural liberty. These are the extremes. Among men, spiritual liberty is enjoyed by the high-minded who seek the full development of their manhood and the full advance of their kind; individual or natural liberty is enjoyed by those who have full opportunity of doing as they like, unrestrained by considerations of personal honor or of social well-being.

It is with natural or individual liberty, and with that alone, that we are dealing now. The question of spiritual liberty lies very far away. When we speak of liberty—personal liberty, civil liberty, political liberty—we mean natural liberty, not the liberty wherewith CHRIST has made us free, but the liberty wherewith CIVIL-

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IZATION has made us free. This is our principle, the principle of our American institutions and life, the principle by which we are regulating our affairs in all departments. Natural liberty—the liberty of doing what one pleases so long as he does not injure, check or displease his neighbor; liberty to pursue happiness after one's own fashion, to earn a livelihood in one's own way, to make money and augment one's material estate as one may be able—this is our social principle, this is the law under which we live. We find ourselves living under it, we find ourselves working it out, under the eye of Providence. Hardly aware ourselves what we are doing, we are laboring to organize our personal and social existence in accordance with the principle that each one shall act out himself.

No sooner, however, do we propound such a principle as this—no sooner do we set it in operation, or see it in operation, than we cast about to discover its limitations. We are afraid of it; it looks ugly; it runs out into disagreeable and riotous excesses; it threatens to inaugurate an era of lust; it gives fearful rein to the animal instincts; it authenticates vice and immorality; it encourages the elements of the beast to come out unabashed in public places; it gives a kind of warrant to every odious practice and every abominable institution—the things that hide in a corner in Paris, swell and leer at the corner in New York. Still, there is the principle. What is to be done? We can not forswear it; we can not disarm it; we must not infringe on it. Can we limit it? If it is a right principle—and of that there can be no question among us now—must it not at some point limit itself? Clearly, it must do this, if it is to be limited at all. Any artificial limitation of it is a disavowal of it; any forced limitation of it is a violation of it.

I do not quarrel, in the present instance, with the action of the Board of Excise, in making it criminal for a whole class of men to pursue their trade. That action was based on grave considerations touching the public health. The imminence of the cholera renders necessary a firm suppression of all the causes of cholera. The community feels through its fear that many things it had permitted and fostered before were full of danger to the lives and to all the physical interests of society, and, so feeling, there was a perfect right to abolish them during the period of danger. No man or body of men is at liberty to do what fellow-men complain of as being offensive and injurious to them; and for the moment it is felt keenly, painfully, that rumselling is both offensive and injurious—that the practice of it may cost sufferings manifold and thousands of lives; it is felt that the terrible pestilence will be invited by the traffic, will be entertained by it, will be supplied by it with the largest number of its victims. The natural reaction against natural liberty sets in, and that particular form of natural liberty is restrained and justly restrained. The prohibited man has no just cause of complaint. The community has a natural right to protect itself when it feels its life imperiled. But this, remember, is a transient feeling born of momentary fear, born of instant necessity, born of the love of life and the dread of death. It is not a steady or permanent conviction born of reason. In ordinary times the evil now visited with condemnation is not felt to be an evil by the community; the practice now forbidden is not discountenanced; the traffic now put under the ban is encouraged, not by the animal and the low, but by the elegant, the fashionable, the people of good repute. There is no natural and spontaneous reaction against the liberty that poisons, demoralizes and kills. The poisoning, demoralizing and killing go on all the time in a thousand haunts of dissipation and vice. The natural liberty always infringes on the health, the safety, the order and quietness, the happiness and the sanity of mankind. But if this fact is not recognized and confessed, by what right shall the dangerous liberty be restrained? If the sufferer does not complain, how shall his suffering be regarded? If the very persons whom the liberty of appetite, of instinct, of sensuality injures, do not confess themselves injured; if, on the contrary, they claim the right to be injured, and protest against any interference with their right to be injured; if they are not only passive under this malignant liberty, but aiders and abetters of it, how can those who practice the unholy liberty be taken to account? So long as a whole community is insensible to a mischief the mischief-maker can hardly be held to blame. Now, the whole community is insensible to the mischiefs arising from the license of the

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rumseller, the gambler, the panderer to sensual vice. The liberty of the beast is paraded before its very eyes and it does not frown. Vice multiplies, spreads, infests all places, is attractive, showy, fascinating, throws its bait publicly to all, its arrow flieth by day, its pestilence walketh in darkness, its destruction wasteth at noonday. Thousands fall at its side, tens of thousands at its right hand, but society does not cry for the pain it undergoes. The animal part of humanity supports it; fashion supports it; wealth supports it; usage supports it. Men go willingly to their death. Their death-agonies are ecstacies. There are laws on the statute-book to restrain the fatal liberty of vice, but the community will not allow them to be executed. Can we blame vice, then, for asserting its liberty? Can we ask the rumseller or the gambler to practice self-denial against the wishes of the community? Can we expect him to set up his own judgment as to the injury his trade inflicts on society, when society itself virtually declares that it inflicts none? It would be an easy thing at any time for the men and women in New York to shut up every bar-room, every gin-shop, every gambling-hell in the city, and in such a way that no liberty would be infringed, no right intruded on, no cause of individual complaint given. They have but to will it as a measure of safety, or health, or happiness, and it is done. But they do not will it; they are not free to will it; they are too much in thrall to custom or appetite to will it; and so long as this is the case there can be no natural reaction against destructive liberty, and it must go on.

May not the panderer to vice, intemperance, impurity, come forward and say: "Why do you support my trade if you disapprove it? And why should I give it up while it is so well maintained? I offer my wares like any other man; I am not extortionate in my charges; I use no means for bringing in customers that the agents for life insurance do not use; I stand in my place of business and sell to all comers who will pay my fixed price. I am not concerned with the use they make of my wares. If they drink too much, if they gamble too much, if they lose their reason and brutalize themselves, if they abuse their wives and children and bring their families to want, if they poison themselves or do violence to themselves, that is their affair, not mine. I do not ask them to buy what I have to sell; I do not make them take more than they wish. If they choose to degrade themselves or to kill themselves, they have freedom to do so, and it is no fault of mine. My neighbor, the cutler, sells pistols and bowie-knives. Pistols and bowie-knives are dangerous things; there are scarcely any innocent uses that they can be put to. Shall he refuse to sell one, lest the purchaser may, by some possibility, meditate murder or suicide? And in case the purchaser should commit murder or suicide, would he be guilty because he sold the weapon? I am answerable for myself; my customer must be answerable for himself. No doubt a great deal of suffering and misery is incidental to my trade; a great deal of suffering and misery is incidental to every trade. Have you never heard of the shirt-makers, the lace-makers, the makers of artificial flowers? So long as fashion will have such things, and will pay out so much for them, misery is inevitable. When my customers cease coming I shall cease selling; then, without a word of complaint, I shall shut up my shop, and enter on some other business. Till that time arrives, I claim the right to pursue my business unmolested."

I do not see any answer that can be made to this plea. The man stands on his natural liberty and can not be dislodged. What is there that has authority to restrain his liberty?

The law can not. If the law does not happen to coincide with the public sentiment, it is a dead letter and can not be executed. If it does happen to coincide with the public sentiment, it is the public sentiment which restrains, and its restraint is legitimate. Legislative action, as such, not reinforced by the public sentiment, never suppressed vice or withdrew men from vicious courses. It may drive it from one place, but it drives it into another; it will drive it out of Sunday, it will compress it more into the week; it will drive it out of public resorts, it will force it to take refuge in secret places; it will forbid its open appearance, and will compel it to wear close disguises; it will expel it from New York, and lo! it takes the readiest conveyance for Hoboken. You may not see it in the streets, but it crowds the ferry-boats. As long as people want a thing they will have it in spite of law. Two strangers, finding themselves in Boston

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after sunset of a Saturday, and being in want of amusement, applied for admission at a billiard saloon. It was closed. No billiards in Boston on Saturday night. "At what time does the next train leave for New York?" they asked. The legal prohibition did not stop the billiards; it simply drove so much money out of Boston. There is always room enough for vice. If it is driven from one city it flees to another. Dutch Gaps do not avail much; the stream finds its own way best; if you wish to alter the channel you must begin early. Artificial restraints are not permanent restraints. At this moment the public sentiment, stimulated by the dread of cholera, seizes a statute and restrains liberty; but the instant that stimulus shall be removed the statute will be as powerless as ever. Law is not only no natural barrier against license, it is no effectual barrier at all. The flood of libertinism sweeps over it and carries it away; it has no vital or organic power.

What barrier, then, is there? Shall we call in the aid of the moral sentiment, and, asserting its authority, demand that liberty shall recoil before its presence?

Whose moral sentiment will you call in? The moral sentiment of the community? That, if it existed, would need no summons. What other moral sentiment is there? The moral sentiment of no sect or church or class will answer. The moral sentiment of the Catholics would restrain liberty in a style at which the whole Protestant community would rebel. There would be little natural liberty of any sort under the sway of that. The moral sentiment of the Evangelical Church would be no safer or more salutary. That would cut down natural liberty to a measure that none of us would submit to. That would close the bar-rooms, the billiard-rooms, the concert-saloons, all the haunts of dissipation, all the centers of vice; but it would close also the theaters and the operas; it would prohibit dancing, and curtail the entire freedom of recreation. The moral sentiment of Episcopalians would frown on efforts at social and civil reorm, which are the most precious prerogatives of our liberty. The moral sentiment of the fashionable world always lays under the ban, as strictly as possible, the more earnest people who, in obedience to the law of liberty, would extend the sphere of woman's activity, give her fair wages for her work, emancipate her from masculine tyranny, and break that meretricious spell which she exercises over masculine frailty. Nay, the moral sentiment of the so-called respectable and conservative people would put such unequal and capricious restraints on liberty, that social existence would be hardly endurable. No moral sentiment is entitled to say what men may be permitted to do, and what they must be forbidden to do; what is right for them, and what is wrong; what is innocent, and what is harmful; what is salutary for the community, and what is not. The moral sentiment of the community alone has a title to do that, and liberty of all sorts must go on till that awakens under a sense of fear, or shame, or nobleness, or virtue; and to any special kind of liberty—say the liberty to steal, to cheat, to swindle, to plunder the public treasury, to sell poison, to commit suicide, to devour widows' houses, to fatten on the blood of mothers and children, to practice extortion on the poor, the luring of young men to ruin and young women to shame, to break the tender hearts of wives and sisters, to drag families down from opulence to beggary, to spread disease and depravity through society—till to all this wild, exorbitant, licentious, demoralizing and destructive liberty the settled public conviction shall say: "Thus far shalt thou come and no farther." The liberty must go on without let or hindrance; any artificial, forced, outside interference with it embitters its temper and aggravates its force.

"But what then?" exclaims the earnest Christian, imbued with the sentiment of brotherhood, deeply persuaded that fraternal relations exist between man and man; heartily possessed by the conviction that he is, to some honest degree, answerable for the physical, social and even moral welfare of his neighbor—"What then? Am I to sit still and do nothing, while the little ones are slain under my eyes? Am I not my brother's keeper? Shall I see a young man unwittingly putting poison to his lips, supposing it to be nectar, and shall I not strike the cup from his insane hand? Shall I see a thousand young men doing the same thing, and shall I not dash their cups from their lips by the aid of the law, that public hand, if by any means I can move that hand to strike a blow? Shall I see fathers flinging the hearts of their wives and their

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own reason, too, from the dice-box, and shall I not step in and say: You can not, you must not, you shall not do this desperate thing? Shall I see men and women pursuing trades that I know to be to the last degree injurious to the total well-being of society; trades that are the mothers of pestilence; trades that are the fathers of beggary; trades that are the teeming sources of profligacy, crime and wickedness; trades whose offices are the cradles of atheism and deadly sin, and shall I not do all in my power to stigmatize and suppress them? I should be sadly recreant to the Master's charge if I did not. The woe he pronounced on those who cause the little ones to offend would fall on my head at the last day. It were better for me that a millstone were hanged about my neck, and that I were drowned in the depth of the sea!"

To all this I fervently respond: "Amen!" You are your brother's keeper; you can not look on heartlessly while the little ones perish; you can not stand by heedlessly while the destroyer is luring them into his snare; you must do what you can to restrain this deadly liberty—the liberty to commit suicide, and the liberty to sell the suicide the weapon it is well understood that he will use; the liberty of passion to destroy itself in its own delirium, and the liberty of greed to tempt passion to its ruin. But how shall this be done? By restraining liberty? Nay, by exalting liberty. To the law of liberty we are called, and the only cure for its license is the spiritual law of love. Lord Macaulay said: "The only safeguard against the excesses of liberty is liberty." The natural limitation of liberty is liberty. Take the cup from the young man's hand, but do it by offering him something more attractive than the cup. Take the dice-box from the trembling grasp of the gambler, by offering something that will make him drop it. Arrest the youth on his way to the house of shame, but do it by opening another way for his feet to tread. Shut up the dram-shop by stopping the demand for the dram. Close the gambling-hell by destroying the proprietor's occupation. You complain that passion has too much liberty to rot and ruin; give intelligence and taste more liberty to sweeten and refine. You complain that people have too much liberty to tempt and inveigle, to deceive and betray, to cheat and spoil; give them more liberty to teach and to guide. Why should there be a dram-shop, a den of iniquity, an officina of atheism, a workshop or a saloon of Satan at every street-corner, while there is not a library or a reading-room, an art-gallery or a gymnasium, a pleasant lecture-room or rendezvous in two or three districts? Why should the porch of sin stand broadly on the highway, while the portal of virtue can scarcely be found in the back lane? Why should the shrines of Bacchus or Venus be brilliant with fresco and gilding, while the halls of art and literature are chilly, dingy and dark Why should a solitary Astor Library, with its health for the mind, be open by day only, while a hundred houses of ruin are open day and night Why, on Sunday, should every trade be closed except the trade of the rumseller, the tobacconist and the panderer? Why, on that one day in seven, should people be free to drink, carouse, gormandize, or worse, and not free to hear music, look at pictures, exercise at gymnasiums, sit in pleasant reading-rooms, mingle in bright intercourse at places of public resort? Why, on holidays, is there boundless liberty to dissipate, boundless liberty to play the idler, the villain or the fool, and no liberty whatever to cultivate, to play the wise man? Boundless liberty to demoralize, no liberty whatever to improve? Boundless liberty for sense, no liberty whatever for reason. The Mercantile Library has saved scores of young men from ruin. It is shut on the very days when idleness makes the way to ruin broad. If you confine liberty to one single channel, and that a narrow and steep one, you must expect torrents, and you have no right to complain if your barns are carried away by a freshet, and your cattle drowned by a flood. Open several channels, and the water, which is so destructive when compressed, will turn mill-wheels and irrigate pastures. No good comes of damming up; that only turns the rivulet into a marsh, and substitutes a permanent cause of death for an incidental one.

The wisest dealing with a child who is possessed by passion is to bring in the diversion of another passion. Make curiosity correct anger; make love of fun correct greediness. It is always legitimate to confer liberty, never legitimate to repress it. Liberate the mind, and licentiousness will soon be abated. I would not disfranchise the disloyal people of

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the South; I would enfranchise all the loyal. I would not put even prominent leaders of the late rebellion under the ban; but I would lift the ban from the multitude of the obscure, who are the well-intentioned. Would you disarm dangerous men? Give them no opportunity to call themselves martyrs; give them no ground for saying that you are afraid of them; grant them no pretext for an appeal to the sympathy of their adherents; allow to them no excuse for stirring up strife by telling the story of their wrongs. Let them go; let them do their worst. But, when you let them go, call up the multitude of the right-minded and the true whose loyalty you are sure of, put the ballot into their hands and bid them neutralize and reduce to insignificance by their nobly-used liberty the rabid license of the seditious—the legislation that represses, canonizes—the power that restrains, consecrates. Would you suppress social vice? Give it no chance to hang a flag at half-mast over its shambles and whine, "Liberty is dead!" Run the flag to the peak over the rooms where social virtue offers its wholesome attractions of art and song, of wit and wisdom, of genial intercourse and earnest friendship, and let the spoilers of the peace have their way—it will soon be an obscure one.

Now, what we need is more liberty, and not less; liberty of sentiment and taste, of culture and reason; liberty of social intercourse, emancipation of mind; liberty of the whole man, and not of the bestial portion of the man. We have not as yet learned the alphabet of our grand principle. We will not learn more. Our prejudice, our custom, our indolence, our respectability—nay, worse than all, our religion; our religion, which frowns on all liberty, save its own liberty of sectarian worship; our religion, which, because it can not consecrate one day in seven to evangelical piety, dooms that one day in seven to sensual vice—is in a conspiracy against the noble liberty which would be the parent of a new social order. The very idea of such liberty is held to be inadmissible, and all attempts to inaugurate it are frowned on as efforts to undermine Christian morality. It is forgotten that between the natural liberty to do what one pleases and the Christian liberty to do what one ought, there are many degrees of liberty to do what is innocent, tasteful, refined and improving, and that any of these is an advance on the lowest. That highest liberty which is represented by the Church is far off in the angelic state, as yet. Few have it, few think of it or ask what it may be. Let us fix our eye on it, and on the glorious ones who have possessed it; but let us not forget that the many are still in the bondage of Nature, and it is much to give them liberty to walk but a few steps toward the kingdom. To do so much as this will not be easy—no, no, it will be very difficult. Great heavens! do but look at men as they are; how miserable, how reckless, how brutal! It will be long indeed before they forswear the coarse and vulgar liberty they revel in to commit slow, poisonous suicide, to slay and be slain; it will be long indeed before they will regard this so-called liberty of theirs as a hateful bondage, which they must break if they mean to be men; long indeed before they welcome as a celestial boon that liberty of love which now seems to them a hateful bondage. But the time will come at last, if we work for it. There is humanity dormant in these bestial forms. Let the divine voice of patience and hope and kindness speak to it with divine authority, and it will stagger out of its grave, burst its cerements and become a child of the light. One comfort always remains—the better liberty has the future. The freedom of the animal nature has had its way and done its worst. The next step in freedom must be toward the emancipation of reason and faith.

[Written for The Herald of Health.]

Relative Importance of Knowledge.

Herbert Spencer, in his instructive essay on "The Most Important Knowledge a Man can Gain," makes out that we should study first what is of most importance to us in enabling us to gain a livelihood, preserve our health, perform our family duties, etc. One would almost suspect, however, from the course pursued by most people, that in gaining an education those things are of most importance which concern our personal habits and rules of life least. The most learned of American savans, one whom in his sphere we most delight to honor, Agassiz, has recently and is still spending some months on the Amazon River in South America, making discoveries in Natural History. The expedition which carried him was fitted out by the munificent donation of a Boston gentleman of wealth

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and culture. The importance of the discoveries in that region are deemed very great by the people of America, and the press everywhere have made frequent mention of his progress. One writer from the expedition, speaking of these discoveries, quotes Agassiz as saying:

"The Professor does not cease extolling the riches of this region, and is completely absorbed by his darling fishes. We collected in Gurupa and Tagipuru ten new species, and likewise a new species of alligator, named Jacareky. He told me to-day that when the work is concluded, we will make a real revolution in the scientific world. Almost sixty new species in less than fourteen days! It is really a revolution."

In a letter from Agassiz we find the following:

"It is equally interesting to discover the manner of inter-association of the species; it is evident, for example, that the fishes assembled at Para are not the same as those united at Manaos or in the great affluents of the Amazonas. I have already a certainty of this from the collection I made at Para. During the eight days spent in your hospitable city, where so many courtesies and such delicate attentions were showered on me, I collected sixty-three species of fishes. Of this number merely a dozen are known; and, notwithstanding, about forty-five species are already described as peculiar to the Amazon. Consequently those that are known which I did not discover at Para must dwell in some other region of the great river. You see now that the work merely of two days tends to demonstrate that each region of this great basin must have collections of different species, *a fact that science was completely ignorant of until now.*"

Now all these discoveries in science relating to fishes have of course their value, but how insignificant in comparison with the discovery and application of knowledge relative to man's physical nature, and such rules and habits as would insure parents from losing their children by premature death, disease and suffering; the prevention of cholera, and all forms of pestilences; the knowledge of how the body should be cared for, so that fine vigorous constitutions would be secured, beauty and strength retained. It would be of infinitely more importance to a young man to know the laws of health so he need not fear sickness than to know about the fishes of the Amazon. What we want to-day is a few thousand Agassizs who will make right living plain and easy and more popular, and wrong living and sickness degrading, and, with their causes, to be shunned. Such knowledge is of a higher sort, and produces the noblest results. Let us then help on all movements which tend in the direction of promoting physiological knowledge, and give our time, money, intellect, to the cause of human progress in physiological science, until it is placed upon a basis where it is popular and where it can stand alone. H.

[Written for The Herald of Health.]

Health of American Women.

BY MRS. E. P. MILLER, M. D.

ALMOST overwhelmed as I am at the thought that the women of America are, with scarce an exception, diseased, I enter the prolific field impelled by an earnest desire to help my suffering sisters, and impress upon them the importance of early attention to even slight deviations from the standard of health which they may discover in themselves or their daughters.

The foundation for thousands of ruined constitutions is lain in babyhood—aye, even before the babe has an independent existence—and is it any wonder that the superstructure is weak and tottering? The aching head and quivering nerves, the half-used lungs and enfeebled stomach, the torpid liver and inactive bowels can never furnish to the embryo the means for a healthful organization or supply proper nourishment for the development of the new-born babe.

It is said, and truly, that "if we would improve the world we must begin with the children;" but a word to the mothers, or those who are liable to become such, may be the means of saving some from the evils which ofttimes have strong hold before the child has ever seen the light.

Look well to it, O ye mothers! that ye leave no avenue untrod that shall lead you to a knowledge of yourselves and your conditions, for a sense of *our own needs* is a long step toward the acquisition of a supply for them.

What is the cause of those languid feelings—that headache in the morning? Whence comes the weakness and the "goneness" which so depresses you? Is it that your home is one of poverty, and with a babe in your arms and three or four babes still, yet older ones, clinging around and hanging upon you, you have been compelled to drag along and perform the labors for which only some stout, unfettered woman is fitted? If this be your case, then truly I grieve for you—for with a feeble constitution, poverty in the house, and a husband who does not know and *practice the knowledge that under such circumstances no woman should become a mother oftener than once in five years*, there is truly little or no hope, save of dragging out a miserable existence, and then, meekly folding the hands, lie down to the rest which never came in life, and which but for the babes you leave behind would be welcome indeed.

And yet even for you there is a spark of light, for you have it in your power, feeble as you are, to cast in your mite for the cause of Health Reform. You can so feed your children on plain

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and simple food; so clothe them and give them heaven's pure air to breathe, that the seeds of disease which they may have inherited from you will lie latent and undisturbed, and they grow up to be healthier men and women than it would seem possible for such a feeble mother to rear.

And aside from this, let me whisper in your ear a truth of which you perhaps have never thought. From many, very many, of the homes of the poor would grim Poverty soon stalk out at the door, if the table were but simply and healthfully laid, and the clothing more plainly and healthfully made; for to the table, and the vanity displayed in dress, may be attributed the lack of wealth, as well as lack of health, in thousands upon thousands of our American homes.

But to those upon whom the iron hand of poverty rests not, those in the middle and higher walks of life, I have somewhat to say. Could each and all of the diseased within your ranks, with one fell swoop be set aside, how many think you would remain? So few, I trow, that it would be scarcely worth the while to count; for upon those on whom no definite disease is preying, nervousness and debility have so strong a hold that life seems scarce worth the effort you are compelled to make in order to keep even your slight hold upon it.

Yet why need it be thus? Situated as you are, amid comforts and pleasures, with "neither poverty nor riches" to eat out your happiness, your life should be a constant joy, your every heart-beat full of gratitude for the blessings which are yours.

But can I help you to overcome your difficulties and make bright your cloudy way? First and foremost, see to it that you have plenty of pure air to breathe, for God hath given this so lavishly that we show great ingratitude when we neglect to receive and use it; next, be sure you use the organs which have been given you with which to breathe this air—expand your lungs, fill them with Nature's purifier, oxygen, and thus induce the bright glow and the ready flow of the life-current coursing through your veins; make it an hourly duty to inhale fresh air to the full extent of your lungs, and you can not conceive how much this one little item will do to improve your health and strength; but in order to do this your clothing must be loose and free, so that every organ in your body shall have full play. *You can not breathe in a tight dress!* And the miserable attempts at breathing which our corseted women of the nineteenth century have made, are filling the bills of youthful mortality, and telling their tales of woe upon thousands of the children who survive.

Another prolific source of disease is found in the "good things" (?) with which your tables abound. The quality of the food is such that the temptation to over-eat is almost irresistible, so that the excessive quantity eaten becomes a greater curse than any quality could be if partaken with moderation. And here let me say that you, mothers, have a sin to answer for greater than you can estimate, inasmuch as you constantly and thoughtlessly place before your husbands and sons those articles of diet which tend most surely to arouse and foster the animal passions at the expense of vital stamina and mental vigor! Look well to it, and very many of you will find that your own sufferings in the marriage relations are dependent upon this, and that you are laying the foundation for lives of misery to those whom your sons may choose for wives.

Spread your table only with simple, healthful food, and if it be not too late your own miseries will be decreased tenfold, and your children to the third and fourth generations will rise up and call you blessed.

And still another hint may not be out of place. "Cleanliness is next to godliness," and if you would that health should reign within your homes, the millions of little sewers with which your bodies are supplied must be kept cleansed and free; the pores of the skin can not be clogged without serious detriment to the health, for the effete matter which these pores should carry off is thrown back upon the internal organs, and becomes the seed of sufferings untold. Water in abundance is at hand in every house, and even little children may be taught to bathe the entire body thoroughly and properly, so there can be no excuse for disregarding this great necessity of our being.

Exercise too, of proper kind and quantity should be taken daily, a portion of it, at least, in the open air; for inaction shows speedily its ill effects upon the entire system. Those who are feeble should exercise under the supervision of some one competent to direct their movements, but exercise either active or passive should be a part of the daily routine as much as eating or sleeping.

There are many other points upon which I should speak, for I have but touched upon my subject in a general way; but the limits of one short article will not admit of more. Of some of the diseases to which "human flesh is heir," I may speak more particularly in future numbers, and trust that my efforts for the amelioration of the condition of suffering woman may not be all in vain.

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[Written for The Herald of Health.]

The Victory of Life.

BY THEODORE TILTON.

I ONCE made search, in hope to find
Abiding peace of mind.

I toiled for riches—as if these
Could bring the spirit ease!

I turned aside to books and lore,
Still baffled as before.

I tasted then of love and fame,
But hungered still the same.

I chose the sweetest paths I knew,
Where only roses grew.

Then fell a voice from out the skies,
With message in this wise:

"O my disciple! is it meet
That roses tempt thy feet!

"Thy Master, even for his head,
Had only thorns instead!"

Then, drawn as by a heavenly grace,
I left the flowery place,

And walked on cutting flints and stones.
I said with tears and groans:

"O Lord! my feet, where Thou dost lead,
Shall follow though they bleed!"

As then I saw He chose my path
For discipline, not wrath,

I walked in weakness, till at length
I suffered unto strength.

Nor ever were my trials done,
But straightway new begun.

For when I learned to cast disdain
Upon some special pain,

He gave me sharper strokes to bear,
And pierced me to despair.

Until, so sorely was I pressed,
I broke beneath the test,

And fell within the Tempter's power,
Yet in the evil hour,

Bound hand and foot, I cried: "O Lord!
Break Thou the three-fold cord!"

And while my soul was at her prayer,
He snatched me from the snare.

I then drew nigh the gate of death,
Where, struggling for my breath,

I smote my coward knees in fear,
Aghast to stand so near!

Yet while I shivered in the gloom,
Down-gazing in the tomb,

"O Lord!" I cried, "bear Thou my sin,
And I will enter in!"

But He by whom my soul was tried
Not yet was satisfied.

For then He crushed me with a blow
Of more than mortal woe,

Till bitter death had been relief
To my more bitter grief.

Yet bleeding, panting, in the dust,
I knew His judgment just;

And as a lark with broken wing
Hath sometimes heart to sing,

So I, all shattered, still could raise
To His dear name the praise!

Henceforth I know a holy prayer
To conquer pain and care.

For when my struggling flesh grows faint,
And murmurs with complaint,

My spirit cries, Thy will be done!
And finds the victory won.

[Written for The Herald of Health.]

Meals, Strength, Work.

BY F. B. PERKINS.

A CAREFUL series of experiments was made a few years ago by a reputable English physician, Edward Smith, M. D., to ascertain (among other things) how the strength varies with the time of day, how the meals influence the strength, and what is the effect of daylight, of night and of sleep. Dr. Smith's reasonings and conclusions have much interest, and we state some of them as coincident with our own experience.

The beating of the heart and the drawing of the breath proceed in a daily cycle of variations nearly as follows: From 7 to 9 in the evening, the pulse and the breathing begin to grow slow, and keep on doing so until the period from 1 to 3 A. M., when they are at the minimum. Then for two hours the rate rises a little. When daylight comes it begins to increase, especially at getting up, the daylight alone raising the pulse ten or twelve beats a minute. At breakfast, even during the meal, there begins a rapid and great increase, which keeps on until in the second hour after breakfast the maximum speed is attained. Then the rate declines, losing rapidly even in an hour, and losing, as the hour for noon-dinner approaches, ten or fifteen pulsations a minute. After dinner the rate rises again, more slowly than after breakfast, the highest point coming in the second or third hour, and being seldom as high as the after-breakfast rate. Then comes another decrease until tea-time, after that another increase, and then the final decrease, beginning during the hours from 7 to 9 P. M.

The gain of speed in pulsation and respiration is considerable. Breakfast makes the heart beat faster by from twelve to sixteen beats a minute and the breath come four or five times a minute oftener. An average for five persons gave the following gains:

After breakfast—Respiration per minute, four and four-tenths times; pulsation, fifteen times.

After dinner—Respiration per minute, two and one-tenth times; pulsation, twelve times.

After tea—Respiration per minute, two and one-tenth times; pulsation, six times.

Adults do not feel these effects so quickly nor so strongly as children. In children the speed of pulse was seen to drop as much as from twelve to fifteen beats a minute, even between the courses of the same meal, rising often when eating re-commences. The greatest observed increase of speed of pulse in an adult, from eating, was twenty-three beats a minute; in children it has been observed as high as thirty-seven beats. When fasting was

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tried, at the time of breakfast, the rate of breath and pulse, although increasing somewhat, remained from nine to fourteen beats, and from three to four respirations per minute less than they should have been.

Thus the morning period, after sleep has composed and corrected the system from the disturbance and excitement of the previous day, and when breakfast has furnished materials for renewed exertion, is that of the greatest vitality and strength. The forces fail somewhat toward meal-times, and increase after them, but with a steady average movement toward fatigue until the night decrease, between 7 and 9, and another distinct decrease, which occurs from 10 to 11, indicating bed-time. This natural course of events suggests conclusions about meals, stimulating drinks, manual labor and brain-work.

I.—MEALS.

Breakfast should be the most solid meal, for it is then that the longest period of abstinence must be made up for, and also then that the vitality is at its highest force. Thus the stomach is both most needy and most competent at breakfast.

The best dinner-hour is not far from noon; for by about that time the vital forces have ebbed to the point where a new supply is needed. If dinner be as solid and full a meal as breakfast, there will very likely follow a period of stupidity and reluctance to move or think. That however shows that too much was eaten. A proper dinner leaves the eater as well able to work in the afternoon as his breakfast left him for the forenoon.

A proper supper should be lighter still. Heavy meals in the end of the day overburden the system, tend toward disease and disturb sleep.

II.—STIMULATING DRINKS.

Nobody, unless it be a confirmed drunkard, thinks of using wine or spirits at breakfast. But at an afternoon dinner they are very frequently used. This is natural, for those drinks give a temporary jog or lift to the digestion, and thus help the stomach get rid of the excess of food. High-seasoned food is most used at late meals for the like reason. Tea and coffee operate somewhat in the same way, and do less harm than alcohol. But a proper adjustment of the times and the quantities of meals would avoid the requirement of either. Late dinners are thought a necessity by many business men in large cities. But a lunch at noon a little more deliberate, and a dinner a little lighter, would reconcile their stomachs and their pockets much better, and add, in many cases, much comfort and many years to their lives. Moderate eating and reasonable sleep are a better regimen than a long fast in the day and a gorging dinner at night, forced through the tired body by the stimulus of alcohol.

III.—MANUAL LABOR.

The proper time for manual labor is from after breakfast until a good day's work is done; if necessary, until 8 o'clock in the evening. A working man should always eat before going to work. If factory hands or other operatives are required to work before breakfast-time, they should at least have a lunch before beginning. In shortening hours of labor, those before breakfast, if any, should be cut off before those in the evening. There is no danger that hard working people will omit to eat at noon, and that pretty heartily. They ought to.

IV.—BRAIN WORK.

Thinking, and other intellectual or literary work, may be done to less disadvantage before breakfast, or at night, than manual labor. Even after a moderate meal, there is a consciousness that the mind is not wholly clear and strong. On this point, however, Dr. Smith is not altogether certain in his own mind, for he pretty distinctly recommends to do mental labor before breakfast, or at night, and yet says a little further on, that while "vigorous and masculine thought" belongs to day-work, "routine study or the peaceful flow of ideas" is best done at night. But our own views are very decided, and are based on much experience. The best time in the twenty-four hours for doing any thing well which requires exertion, whether bodily or mental, is *the last half of the forenoon*. At that time all the faculties are at their very best, the body is not yet fatigued; it has been restored from the night's inanition, while it is rested by its sleep; and the mind is not obscured by the digestive process, nor wearied by long exertion.

NOTE BY M. L. HOLBROOK.

Now, what our esteemed correspondent says about the use of wine at dinner we publish more for the sake of comment than because we regard his views as correct. Indeed, we regard the question of wine-drinking by Americans as one of great concern at the present time, when grape-growing and the manufacture of wine are making such rapid strides in our Western States—when the German element, with their wine-drinking habits, is becoming so large, and when even our Temperance men are looking with favor upon the use of wine as advantageous to the Temperance cause. Unquestionably,

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it is less pernicious than the coarser varieties of alcohol, as brandy, rum, Bourbon; and if all who use these beverages would substitute wine they would be gainers. But while the good effects of its use stop here, the evil only begins. All over the country, since it has been purposed to substitute this drink for brandy and rum, a multitude of Temperance families—those who signed the pledge years and years ago, and fought for total abstinence—have ceased to war against this form of alcohol, have manufactured it in their families from grapes, if they had them, and if not, from other fruits, and commenced its use. It is this class who will take to this beverage, and not those whom we wish might substitute it for a worse drink. Now, let us look at what science says regarding this subject. Wine contains from fifteen to thirty per cent. of alcohol. Port wine may be taken as a standard, and contains twenty-three per cent. Now, what is alcohol? A poison. Every writer on toxicology thus classifies it. This fact alone would lead us, if not to condemn, at least to think it in all probability objectionable. A very small quantity of alcohol injected into the veins of a man or animal produces immediate death. It changes and vitiates the character of the secretions. Healthy saliva reddens litmus paper, but after a small quantity of alcohol has been taken, this paper when touched to the tongue becomes green, showing that it has been deteriorated. Mixed with the food during the process of digestion these vital processes are delayed. "It is a remarkable fact," says Dr. Dundas Thompson, "that alcohol, mixed with the gastric juice produces a precipitate, so that the fluid is no longer capable of digesting animal or vegetable matter. Drs. Todd and Bowman say that the use of alcoholic stimulants "retard digestion by causing coagulation of the *pepsin*, an essential element of the gastric juice." It irritates and inflames the coats of the stomach—in time producing loss of its tone.

Passing to the blood, we find the pathological effects upon this important fluid to be an alteration of the shape of the blood-globules, and often almost or entirely destroys them prematurely. It also arrests, according to the experiments of Virchow, the celebrated pathologist, the developments of the blood-globules, even before the health is apparently affected. This injury to the globules prevents complete aeration of the blood, and thus diminishes the manifestations of life; for it is a pretty regular rule in physiology, both animal and human, that the more perfect the aeration of the blood the more life is manifested. This deterioration of the blood can not fail to result in imperfect nutrition of the tissues of the body.

Its effects upon the heart are very much the same as that of a half-dozen hornets upon as many mischievous boys, causing great action on their part to get out of the way or to get the hornets out of the way. The heart, when under the excitement of wine, pumps away rapidly to get rid of the enemy. A glass of wine or brandy will increase the pulses from five to fifteen beats in a few minutes. Diseases of the heart are much more frequent among drinkers than the temperate. And so we might go on till we have shown that there is not an organ of the body but is unfavorably affected by alcoholic stimulants. Science exclaims it is a poison and produces a poisonous effect, and too many dying persons have echoed back the same words in tones deep and sorrowful.

History seems to substantiate the claims of science in a most remarkable manner. Those who will take pains to read Pliny, or investigate the subject from ancient writers, will find ample proof. For our present purpose we will only quote from Shakspeare: "Drunk, and speak parrot, and squabble, and swagger, and swear and discourse fustian with one's own shaddan. Oh, thou invisible spirit of wine, if thou hast no other name to be known by, let's call thee Devil!" And again: "Oh, that men should put an enemy into their mouths to steal away their brains!"

We are strongly of the opinion that the use of wine will, if carried on in America as it has been begun, do more to set back the Temperance cause, unless special warfare be directed against it by Temperance men and women, than all it has or can gain in other directions. There is another argument against the use of American wines, and that is they are much more pernicious than the European; but we will not stop to discuss this point.

Grapes, however, from which wine is made, when properly cultivated and of our best varieties, are exceedingly wholesome, healthfully exhilarating, and, when eaten at proper times and in right quantities, are not only very healthful, but, in addition, a very great luxury; for a dinner dessert for the sick, and as a luxury, wine bears no comparison with them. They have a normal relation to the system, ought to be cultivated for food, and made so cheap that everybody, be he poor or rich, can have them.

These remarks have been made, not with a critical spirit or to stir up unpleasant discussion, but because, from our stand-point, there is at the present time great danger to the Temper-

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ance cause in not including wine, like other forms of alcohol, as an enemy to the human race against which we are to set a powerful guard, if we do not wish to repeat the experience of wine-drinking Europe, as portrayed by an American divine recently writing from Italy:

"We have heard Americans earnestly declare that 'nobody gets drunk in Italy, or in any country where wine takes the place of stronger liquors.' Now, the Italian laborer rarely begins his potations until his day's work is done; consequently, travelers see and know very little of the extent of them. They carouse from about sundown to 10, 11 and often 12 o'clock at night. Their money spent, they reel to their wretched homes, and the cries of their children and the groans of their wives soon tell of the fury and brutality which mark the drunkard the world over, whether he wear homespun or broadcloth. During a few years of residence in Italy our household was served at different times by some eleven men and women-servants, most of them useless through wine-drinking.

"A Swiss physician told us that, throughout that region, with the culture of the vine had come the curse of drunkenness. Two most excellent pastors of the Vaudois Church gave a similar testimony, and stated that very few of the working men could now be induced to attend churches on Sundays, or to give any heed to religious teaching."

[Written for The Herald of Health.]

Cholera.

BY J. G. WEBSTER, M. D.

This king among diseases being a subject of more than ordinary interest at the present time, a brief sketch of its history will be very appropriate, and will serve to awaken—not a fear and terror of this monster pestilence, but—a proper respect for those organic laws, through the transgression of which the cholera is generated and propagated. The cholera, like the avenging hand of Justice, has long been a terror to evil-doers—those, I mean, who may be arraigned as law-breakers in the court of Hygeia. It is well that we give a few moments' thought to the consideration of the work that this scourge has accomplished, in order that we may better appreciate its power and prepare ourselves to prevent its desolating invasions.

It is claimed by those who have most extensively investigated the history of cholera, that it has existed as one of the indigenous diseases of India, from the remotest antiquity to the present; that Hippocrates, Galen and Celsius, as well as the ancient Hindoo physicians, have described this disease, though, in many instances, rather imperfectly. And there can be no doubt that it has existed for many centuries in Hindostan, both in the sporadic and endemic forms, but generally being limited to the valley of the Ganges. Although a number of modern authors, among whom are Bontius, Sydenham, Fischer and Sims, have described epidemics occurring at various places in India, Europe and Africa, which have been supposed by some to have been what is now known as cholera, yet from the imperfections and discrepancies in their accounts we can not determine that, so far as it has been found in Europe and Africa, it was any thing more than an exaggerated form of cholera morbus. It seems however, that Bontius, a Dutch physician, had observed the cholera in India and published a description of it as early as 1629. The first account we have of an epidemic of this pestilence is given by Lebegue de Presle. He states that in 1762 the cholera ravaged the northern portion of Hindostan, and destroyed 30,000 of the native inhabitants and 800 European residents. And during the seven years preceding 1781 it scoured the coast of Coromandel, from Cherigam to Pondicherry, and at one time became so virulent that more than 60,000 people were swept off by it in a short space of time, the Pariahs being everywhere the first and most numerous among its victims. In the spring of 1781 a detachment of 1000 artillerists, under the command of Col. Pearce, which had been encamped for some time on a narrow tongue of land, the Northern Circars, on the coast, were proceeding to join the main body of the army when they were attacked by the epidemic. The disease became so severe and so rapidly fatal among them, that, as Col. Pearce said, it was death rather than disease that reigned in his camp. In six days 700 of his 1000 soldiers had died in the most intolerable suffering. But immediately on moving the remainder of the regiment to another locality, the pestilence ceased.

In the northern part of Hindostan, near the source of the far-famed river Ganges, is the ancient city of Hurdwar, the Mecca of the Hindoos. To this place from time immemorial they have been in the habit of making annual pilgrimages for the performance of peculiar religious ceremonies; and every twelfth year they have a grand and extensive pilgrimage from all parts of that benighted country, to do honors and offer sacrifices to their heathen gods. It was during one of these duodecennial periods when a fabulous number of these Pagans—about a million and a half, it is said—were congregated at this shrine of worship, in 1783, when every house and hovel was crowded with human beings, both night and day, and thousands of them camped on the banks of their sacred river, revel-

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ing in every excess of filth, poverty and debauchery, poorly fed, and thousands of them poorly clad, and fatigued with their long journeys, when the cholera broke out in their midst. The pestilence had such terrible effect that in eight days after the commencement of the festival, the deaths had numbered 20,000. But no sooner had the ceremonies ended and the vast and sickly multitudes dispersed to their homes, than the fatal scourge disappeared from the city. It did not even extend to villages but a few miles distant.

Although a number of such local epidemics had occurred up to this time, it was not until 1817 that the cholera attracted much attention in Europe. At this time a new era in the history of the cholera commenced. In August of this year it appeared at Jessore, a city situated in the low, marshy country included in the delta of the Ganges and about 100 miles to the northeast of Calcutta, and in two months 10,000 of the inhabitants of Jessore had perished. The scourge reached Calcutta in September, and in three months 36,000 persons had been attacked. The epidemic spread in almost every direction from Jessore, for a distance of 250 miles, and such was the rapidity of its progress and the fatality of its attacks that the terrified inhabitants died by thousands in every country through which it passed. It has been computed that no less than 600,000 were swept off by this epidemic in thirty-two cities in the valley of the Ganges, besides thousands in other towns and villages. At some places the invasion of the epidemic was so sudden that the roads were strewed with dead and dying. In November it reached the Land Army, under the command of the Marquis of Hastings, and encamped in three divisions, at Gubbulpore, Mundellah and Sangore, on the right bank of the Betoah. This army, composed of 10,000 English and 80,000 native troops, lost 9000 in twelve days, and a much greater number had fled in terror from the camps. The highways and fields in the vicinity were crowded with the dead who had attempted to escape by flight. The desolation and mortality in this army were beyond description. The domestics and rabble following the army died very rapidly, in great numbers, sometimes in a few minutes after the attack. The Marquis, seeing that his army was melting away and disappearing from his sight before the fatal scourge like snow-flakes before an April sun, marched his men to an elevated plateau, some fifty miles distant, where the disease soon subsided.

Traveling on westward, in the early part of 1818, the epidemic raged violently in Bengal. And following up the Ganges it destroyed 15,000 in the first two months, at Benares; and in the first month, in the district of Goorackpoore, 30,000; and ravaged other cities and districts in the same fearful manner. And following the line of the coast it reached Bombay in August, and Madras in October, having swept over the whole peninsula of India in twelve months from the time of its first appearance at Calcutta. In the Presidency of Bombay alone 150,000 perished from the malady; in some places entire villages were depopulated. In December it reached the island of Ceylon where it raged with more violence than on the Continent. From Ceylon the cholera was carried by the English frigate *Topaz*, to the island of Mauritius, in September, 1819, where 6000 died of it in the first six weeks.

Going to the southeast, through the Burman empire, it was very fatal in Siam; at Bankok alone 40,000 died in a short time. The people here believing that the demon of the pestilence had taken up his abode in the form of a fish in the Gulf of Siam, the King assembled his subjects on the shore to celebrate certain solemn religious rites, in order to anathematize and exorcise the evil spirit; but instead of staying its progress, the pestilence continued with redoubled fury—7000 of this assembled multitude perished on the spot, and the living fled panic-stricken in every direction, spreading the desolating and fatal scourge into all the surrounding country. The island of Sumatra was so desolated the same year that the King fled in terror from his capital. Malacca and Java were also visited, and the interior of the latter island was terribly ravaged in May.

In 1820 the cholera appeared in Manilla, and so intensely did it rage that the natives rose in insurrection against the Europeans, whom they supposed had brought the pestilence to destroy them, thus adding bloodshed, by which many perished, to the mortality from the scourge.

Proceeding eastward it desolated the extensive empire of China from Canton to Peking, appearing at the latter city early in 1821, notwithstanding great precautions had been adopted by the Government to prevent its entering the city. The scourge was so violent at this place that individuals engaged at their business frequently fell in the streets, and died in a few hours in the most horrid convulsions; and the funerals of the poor were so numerous that it became necessary to provide for them at the public expense. It also appeared at Jaggurnah this year, and raged so furiously that there were not left heathen worshipers enough at the festival in

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honor to Juggernaut, to draw the car around the temple; consequently not a single fanatic could this year be crushed in sweet sacrifice beneath the wheels of the car, but the cholera swept off its thousands. Still extending eastward, merchant vessels from Bombay transported the pestilence to Muscat, where it became so violent that 60,000 fell victims, many perishing in a few minutes after the attack. From hence it spread into all parts of Persia. At Bassora 18,000 died, of whom 14,000 perished during the first fifteen days of the epidemic. The city of Bagdad lost 30,000 of its inhabitants, and Shiraz 16,000. These three last-named cities lost about one-third of their inhabitants by death from the pestilence. At Ispahan, the capital of Persia, the caravans from Shiraz were shut out during the prevalence of the epidemic, and in this way was preserved from an invasion; but the city of Yezd which opened the gates to the caravans excluded from Ispahan, paid dearly for her newly acquired commerce; 7000 of her people perished with cholera.

In 1822 the epidemic again visited the island of Java and swept off more than 100,000 of its ill-fated inhabitants; and still continuing its progress toward Europe, it swept away the greater part of the Persian army a few days after having gained a signal victory over the Turks.

During 1823 the cholera extended rapidly through the Burman and Chinese empires and far north into Siberia, operating everywhere with the most fatal effect. The Russian authorities urged the Chinese to adopt measures necessary to prevent the further spread of the pestilence; but the Mandarins coolly replied that, as it only estroyed the weak, the intemperate, the filthy and the vicious, their removal would give more room in the world for a better class of people.

During the same year the cholera, making new journeys with the caravans from Hindostan and China, reached Orenbourg, and many other cities and towns in the western part of Asia, and touched the Russian village of Astrakhan at the mouth of the Volga. The cholera appeared here in the Marine Hospital, where, in eighteen days in September, 144 died of the pestilence. This awakened some alarm in Europe lest it should next invade that quarter of the world.

For a period of several years the epidemic was now confined mostly to India, extending occasionally into China and Siberia; and in 1827 it was particularly fatal at Calcutta. At Palcal, a certain Hindoo woman, whose husband had died of cholera, being impressed with the general belief that the ravages of the pestilence would not be staid until the god of the cemeteries should be appeased with human sacrifices, requested the privilege of being burned upon the dead body of her husband. The Rajah refused her petition; but she persisted in urging it, and at length the Rajah yielded, she insisting that the pestilence would cease in the course of five days after her sacrifice. She was burned, but the epidemic continued the same as before.

In 1829 it again reached Astrakhan in its marches westward, and in about ten days more than 1200 of the inhabitants of this town were attacked, more than one-third of whom died. The epidemic traveled on up the Volga, passing over a distance of nearly 1000 miles in the short period of three months, reaching Moscow early in September, at the same time ravaging and desolating almost every city, village and district in its course. By the 10th of September more than 5500 of the inhabitants of Moscow had been attacked and over 2900 had already died. And although the most energetic measures were adopted to prevent the further spread of the pestilence, every assistance being afforded by the Government to the sick, an armed guard placed around the city, still more than 40,000 of the terrified citizens fled the city and extended the cholera into the surrounding districts.

During the same year it appeared on the southern coast of the Caspian Sea, and in the city of Tauris destroyed 5000. In August the epidemic appeared at Tiflis, the capital of Georgia. Here it became so violent that the inhabitants had recourse to religious ceremonies and solemn public processions, with a hope of abating its fatality; but these greatly extended the pestilence and increased the mortality, and in the course of a few weeks the population was reduced by death and emigration from 30,000 to 8000.

Notwithstanding the efforts at Moscow to subdue the epidemic, it reached St. Petersburg early in July, 1831, and by the 10th of the month 7100 had been attacked and 3520 had perished of the cholera. It now advanced rapidly in every direction through Europe, visiting many cities with the most fearful mortality; and although efforts were everywhere made to arrest its progress, they almost universally failed. Many of the cities of Austria, Prussia and the German States suffered severely. At Vienna the mortality among the nobility and higher classes of society, and also among physicians and attendants on cholera patients was remarkably great. It extended along almost every highway and river, traversing mountains, plains and deserts with almost equal facility.

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From Hamburg it was carried to Sunderland, England, where it appeared in October. It spread extensively and prevailed with great mortality over England.

In 1832, about the last of January, it appeared in Edinburgh, and shortly afterward in Dublin and London. In the latter city the mortality was comparatively light. In March it reached Paris where it continued to prevail with great destruction of life all through the summer. The mortality of Paris being from cholera alone more than 18,000.

On the 8th of June it landed with some emigrants at Quebec, was at Montreal by the 14th, and in New York by the 25th, where, on the 3d of July it was declared by the city authorities to be epidemic. From hence it extended to Albany, Philadelphia, and in every direction north and west. New York lost about 3000 of its inhabitants by death from the cholera, Philadelphia 1175, and other cities and towns like proportions, and many even much greater numbers. And such was the terror inspired by this new pestilence in almost every place in this country, that New York, and many other cities and towns were for a time almost depopulated by the flight of the inhabitants, and great numbers of these frightened people died more from the effects of fear and the exhaustion induced by hasty travel than from cholera itself.

This in brief is an outline of the history and destructive effects of this monster pestilence. It has been estimated that 40,000,000 of human beings have perished from it since it began to extend from its cradle in the valley of the Ganges in every direction over the earth. Its subsequent visits to this country in 1834, 1849 and 1854, are familiar to most of our people.

Everywhere the squalid abodes of the poor, the wretched, the intemperate and profligate, have been the chief places visited by the scourge, and have furnished it the most ready and certain victims. This sad experience, it would seem, should be sufficient to stimulate every one to investigate the nature and causes of this terrible malady and then to do all in his power to prevent its recurrence in this country.

[TO BE CONCLUDED IN THE AUGUST NUMBER.]

THE STRENGTH OF ANIMALS.—Animals of small stature are by no means proportionally the weakest. Pliny in his "Natural History," asserts that, in strength, the ant is superior to all other creatures. The length and height of the flea's leap also appear quite out of proportion to its weight. No very definite conclusion, however, had hitherto been arrived at. M. Plateau has settled the question by employing exact science as the test. Insects belonging to different species, placed on a plane surface, have been compelled to draw gradually increasing weights.

A man of thirty, weighing on an average a hundred and thirty pounds, can drag, according to Regnier, only a hundred and twenty pounds. The proportion of the weight drawn to the weight of his body is no more than as twelve to thirteen. A draught horse can exert, only for a few instants, an effort equal to about two-thirds of his own proper weight. The man, therefore, is stronger than the horse.

But, according to M. Plateau, the smallest insect drags without difficulty five, six, ten, twenty times its own weight, and more. The cockchafer draws fourteen times its own weight. Other coleoptera are able to put themselves into equilibrium with a force of traction reaching as high as forty-two times their own weight. Insects, therefore, when compared with the vertebrata which we employ as beasts of draught, have enormous muscular power. If a horse had the same relative strength as a donacia, the traction it could exercise would be equivalent to some sixty thousand pounds.

To ascertain its pushing power, M. Plateau introduced the insect into a card-paper tube whose inner surface had been slightly roughened. The creature, perceiving the light at the end through a transparent plate which barred its passage, advanced by pushing the latter forward with all its might and main, especially if excited a little. The plate, pushed forward, acted on a lever connected with an apparatus for measuring the effort made. In this case also it turned out that the comparative power of pushing, like that of traction, is greater in proportion as the size and weight of the insect are small. Experiments to determine the weight which a flying insect can carry were performed by means of a thread with a ball of putty at the end, whose mass could be augmented or reduced at will. The result is, that during flight, an insect can not carry a weight sensibly greater than that of its own body.

Consequently, man, less heavy than the horse, has a greater relative muscular power. The dog, less heavier than man, drags a comparatively heavier burden. Insects, as their weight grows less and less, are able to drag more and more. It would appear, therefore, that the muscular force of living creatures is in inverse proportion to their mass.—*All the Year Round.*

PHYSIOGNOMY—PRIMARY RULES FOR ITS PRACTICE.—*Rule* 1. First, take a casual glance and note the impression you have received.

2. Decide whether the person under consideration is quick or slow. If he is thoughtful, he is naturally slow; and if not, the reverse.

3. Judge whether vigorous and determined, or weak and vacillating.

4. Whether haughty or humble, gloomy or joyful.

5. Observe whether cold, formal and bitter, or open-hearted, frank and mild.

6. Notice whether sensual or spiritual, animal or mental.

7. Lastly and above all, find whether governed by his passions or his intellect.

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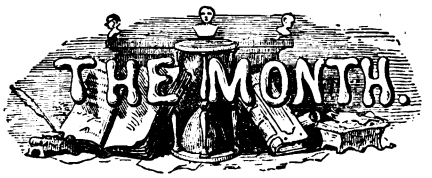
[Written for The Herald of Health.]

Thoughts on Human Life and Progress.

BY HORACE GREELEY.

ALAS for us, we are a dwarfed, distorted race! We are but the fragment of what we might and should be. Here and there we see a judge, general or a ruler; perchance a poet, an orator, a pastor—how seldom a whole and complete man! Our excellence, what there is of it, runs in veins, seams, zigzags—seldom is it found diffused and equable. Could a mental daguerreotype be held up before us, one on which the fullness and deficiencies of the character should vividly appear, what deformities and defects should we not be surprised to discern! far beyond any ability of paint and patches, of whalebone and padding, to disguise or conceal. What indiscreet philanthropists! what godless patriots! what uncharitable devotees! Must human virtue be over a tiny rivulet, meandering through a boundless bog of prejudice, selfishness and passion? Let us hope otherwise. And yet I derive less encouragement than many are able to do from that brilliant aurora in their eyes—in mine, it has some suspicious likeness to a meteor, a will-o'-the-wisp, which they grandly propound as "Progress of the Human Race." High-sounding words are these, and most flattering is their sonorous iteration to our insatiable vanity and conceit. If they were intended only to assert that human nature has a *capacity* for vast improvement; that it ought to be better and wiser with each successive generation, or even that the small portion of our race which have enjoyed the greatest advantages of position, climate, traditional wisdom and of Divine enlightenment, *have* improved, *are* improving, I accept it most heartily. But this is by no means all that flowery orators of our time, the philosophers of the latest French school, and their admiring followers, among us assert and dilate on. They affirm (if I do not greatly misapprehend them) the existence of a principle of progress in man—a constant improvement in the very laws of his being; and one of their essays declares that in these eras, when the race has appeared visibly, palpably to recede into deeper darkness, as in the centuries which witnessed the decline and subversion of the Roman power, that even then the light was not diminished but obscured, as when a new load of fuel is thrown upon a roaring fire, diminishing for a season the brightness of the blaze, but increasing the intensity of the heat within. Not so have I learned history, not so regarded the monuments of human advancement. But life has not rugged and repulsive aspects only—even perverted and degraded as it is, it smiles upon us through kindly and sympathizing eyes. Viewed in a genial spirit it presents themes of elevating, chastening contemplation. Not in the rough and stormy collisions of the market-place, the forum, the senate, the battle-field, are its true nobility, its essential beauty manifested; but in the uncalculating hospitality of some rude squatter on a Texan prairie; in the heart-gushing charity of some Arab or African woman, who in the desert eagerly proffers the scanty morsel of food which stands between her and famine to nourish the drooping stranger of whose nation she never heard till yesterday; in the clustering around some lowly New England fireside of the long-scattered members of a family which passed its childhood thereby, freely disbursing the hoarded coin they ill can spare that they may gather, from distant Ohio, Iowa and Mississippi, once more beneath the dear old rafters blackened with smoke and age to receive for the last time the tottering father's affectionate counsel, the pious mother's fervent, tearful blessing; and still the great world rolls on with empty noise and frivolous iterations, and the impatient soul exclaims: "How fruitless, how tiresome are these succeeding to-days—what use to bear with them longer, expecting the good which never comes." Be not so hasty, choleric friends; perchance this very moment, in the brain of some nameless, noteless dreamer, some awkward, bashful boy, whom the world would not condescend even to laugh at, the idea is silently maturing which shall transform and vivify the whole career of man; whether it shall assume a physical or a moral bearing; shall teach us to ride the thunderbolt or revel in the outermost ether; shall bridge the Atlantic, or only bridle its fiercest waves and cause them to impel the calm, majestic vessel directly athwart their raving breakers; shall detect the hidden metals in the beds a hundred feet below the surface, where they have lain unimagined since Creation; or draw from the unfathomed deep the treasures it has amassed through forty centuries—who may tell better doubtless than any, than all of these, could it secure to every child the blessing of intellectual and moral culture, to every man and woman the means and opportunity of employing the faculties God has given in such manner as best to promote the welfare of all His creatures, while securing beyond contingency a competent support to each.

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NEW YORK, JULY, 1866.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ THE PUBLISHERS *do not hold themselves as indorsing every article which may appear in* THE HERALD. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D.

SALUTATORY.—With this issue of THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE we begin a new volume under the most favorable auspices. We have added to our corps of contributors several names distinguished in the history of hygiene, physiology, science, physical culture and literature. The July number, which we now present to our large and constantly-increasing parish of readers, is an earnest of the future, and we shall spare neither cost nor labor to make each succeeding issue an improvement on its predecessor. We hope to make it not only a welcome visitor, but a pleasant instructor to those who place a proper estimate on health and happiness. We have strong faith in the gospel of health, and hope to proclaim our sentiments through the medium of this magazine to the gratification of appreciative friends, and we ask them to aid us in distributing facts and arguments which are designed to advance the physical, moral and mental welfare of the race. Parents who desire their children to grow up with strong and symmetrical bodies that will not bend prematurely under the burden of life, should imbue the memories of their little ones with just views of life and health, when their minds are like wax to receive, and like adamant to retain impressions. They should read and understand the simple lessons which will save their darlings from sickness, disease, deformity, pain and premature death, and give them such ideas of happiness, associated with health, that they will cheerfully obey the physical laws.

We believe that the period of human life can be greatly prolonged and its enjoyment vastly increased by simple submission to the laws which govern us; that health should be the rule and sickness the exception, and that many of the diseases considered incurable would yield to the healing touch within reach of the afflicted in all parts of the land. We are opposed to intemperance in eating and drinking, and shall take high and impregnable ground in favor of the disuse of intoxicating drinks and tobacco and gluttonous eating of indigestible substances. We have faith in cheerfulness, in exercise, in ventilation, in pure air, in the free use of water as a beverage and for purposes of ablution, and in abundant sleep. Special pains will be taken to encourage those habits which tend to develop the physical strength and beauty of the race, so that our young men and our young women shall grow up square-shouldered and symmetrical, "with the roses on their faces and the star-shine in their eyes," and we shall aim to educate those who will receive our lesson so that they may have strong minds in healthy bodies. To insure this we have secured the assistance of many of our best thinkers and writers, who are acknowledged to be among the foremost men and women in the world of science and letters.

CHOLERA AND QUARANTINE.—So far, the seeds of cholera have not effected a lodgment in New York, though five steamers have brought emigrants to the Lower Bay badly affected with it. It seems almost a wonder that this is so, when we have not yet as effective quarantine regulations as are required. It would be an easy matter to bar the cholera from entering this city, provided, as is most likely, the specific cholera poison does not go in the atmosphere, but by animal poison which is carried by means of clothing, contact and in various ways hardly well known to the most careful observer.

Our sanitary regulations do not reach back far enough. They should be commenced by the owners of ocean steamers, who are full as much interested as any other class of men. It is for their interest that cholera should not break out on their steamers, to detain them at great expense in quarantine for weeks, perhaps months. How can they act?

1. By establishing a rule that no emigrant shall be received on board their vessels until he has been most thoroughly and carefully cleansed, either in a bath-house established by the company or one authorized by them.

2. His clothing should be as carefully washed

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as his body; and it should be insisted that every thing about him and his baggage should be scrupulously clean.

3. During the entire passage the same scrupulous cleanliness should be observed in keeping the vessel well purified with soap and water; proper disinfectants, and the use of thorough ventilation and sunshine.

4. Facilities for bathing should be so ample on shipboard that every passenger could have a thorough bath at least every other day.

5. Abundance of plain wholesome food, and none other, should be provided for the passage. Those who have made ocean voyages, or even long trips on our Western lakes, will understand how liable the stomach and bowels are to become disordered in those whose dietetic habits are not good. And this facilitates very greatly the breaking out of cholera where the exciting causes are in operation.

6. Mental hygiene should be brought into requisition to prevent all panic, uneasiness, unhappiness and, as far as possible, whatever depresses or lowers the tone of the nervous system.

7. No more passengers should be allowed than could be comfortably accommodated.

It may be urged that it is impossible to do all this, and perhaps it is, to do it completely; but if there was a will there would soon be a way. We are so accustomed to trifle with life and health, and treat our bodies as if they were worth no more than so much lumber, that we do not sufficiently regard their wants or laws, but when we break the ten commandments of the body we suffer equally as if we had broken the ten commandments of the moral law. We do not sufficiently regard the value of good bodies and take good care of them. This part of our education is too sadly neglected in our systems of culture.

If cholera should break out on shipboard, with these rules observed it would be less fatal, less prevalent and more easily managed.

Quarantines are so badly managed, generally, that even eminent medical men have thought them worthless; but if the theory of the animal origin of cholera be true—instead of the atmospheric origin, as is very probable—if rightly managed, they are almost a sure preventive to the introduction of cholera. Facilities for placing all cholera patients on shore in a salubrious or in a commodious floating hospital are very important; as it is also important that well persons retained in quarantine be entirely separated from the sick and carefully cared for during a detention that, with all our thoughtfulness, will be extremely tedious. If we demand for our safety that emigrants be detained in quarantine, let them have the most ample accommodations and the most wholesome care. Humanity and our own safety require it.

Cholera threatening a city always induces sanitary measures of more or less value; but the sanitary condition of every city ought always to be so perfect that with cholera on board of every vessel from Europe it could never gain a footing here even for a short summer season. We have constantly in our midst diseases which result from sanitary neglect that destroy more lives than cholera. Most of these come from filthy tenement houses, want of sunshine, pure air and drainage.

New York ought to be better drained. Its streets should be widened, and a proper place prepared for that part of our city population who live by their daily wages to reside in, at low rent and in a comfortable quarter. Decent homes with yards, gardens, water and sunlight for the laboring classes is a first requisite. We might have these at a dozen points accessible by water, either on the North River, Long Island, or in New Jersey. We might even have them in the city of New York, if there was enough of the spirit of humanity and Christianity among sordid capitalists to build model tenement houses without underground basements, where every facility for homes are provided. Much is said of the unhealthfulness of the cities, but if cleanliness, light and pure air were furnished to the inhabitants of towns, there would be as good health in city as in the country. There are many things in city life favorable to health and longevity. We have a magnificent Central Park for the benefit of New Yorkers. It is kept scrupulously neat and clean; hardly a leaf falls on the paths but it is at once caught up and hidden away. The soil is thoroughly underdrained. Fountains, both for drinking purposes and to produce a landscape effect, are established where needed. No liquor is sold there. They do not even allow Congress-water, or ale, or beer, within its borders. Seats, shade bowers, cool retreats, beautiful and picturesque scenery abound. All can walk, ride on horseback or in carriage for many miles without seeing any thing to displease the eye, offend the nostril or mar health. New York is richer and better for owning this park. Mothers take their children there to breathe its pure air, fanned by its cool breezes and kissed by its sunshine. Invalids, weary workers, pleasure seekers, all hie to it when their time will allow. But a few hours in each week is all that any one is likely to enjoy of its rich-

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ness. Now New York, as a city where we live night and day, year in and year out, should be as carefully cleansed from every thing foul and unclean as our park is, where we only go once a week. Our homes should be more healthful than our places of resort. It should be our one idea to make them so. Then cholera will be no more dreaded than the comets that fly in wild disorder through the heavens. The principal reason why it is not so to-day is that our children are not educated to obey the laws of their bodies. They are taught arithmetic that they may be exact in accounts, but not physiology that they may be exact in habits that relate to the body. When we teach our youth physiology enough to induce them to live correctly, humanity enough to restrain them from over-reaching in trade, making one portion of society too poor and another portion too rich and idle and devoted to dissipation, we shall have no cholera to fear or fight against. The time to begin a wholesale war against our ignorance of man and his relations is now, no better can occur.

SHALL WE EAT TRICHINA PORK?—Since the medical men at Chicago have said well-cooked trichina pork can be eaten with impunity, the press all over the land have echoed their words, perhaps slightly modified, but in substance, and, with only here and there an exception, without comment. Why this disposition to take the utterances of so-called men of science as their own thought instead of thinking for themselves? We look to the newspapers to exert a more healthy influence than this—to speak not words put in their mouth, but truth, without reference to who may suffer from it. In this age of preference for science we are too apt to consider the men who stand high in this department of nature as oracles. But science is to-day too much in its infancy to be oracular or to take the place of common sense. If we were to take it for granted that the Creator never prohibited the use of pork for food, as most people do, yet we ought not for a moment to doubt that diseased pork is as unfit to eat as diseased and decayed fruit, grain or meat of other animals than the hog. If flesh is to be eaten at all, it ought to be the flesh of cleanly, healthy animals. The hog is not by nature a cleanly creature. The very emanations from his breath and skin, when slightly excited, fill the air for many rods around with most offensive filthy gases; but the hog that has trichina is a sick hog. He would in time die of the disease if left to himself, as men do; and the argument that his flesh may be eaten when well cooked, is an argument that will apply to the eating of flesh of sickly animals. If the muscles become infested with great numbers of these parasites, their tissue becomes disorganized, and inability to use the muscular system is the result. The boring of the animals through the intestines could only be accomplished by irritating and inflaming the parts, giving rise to pain, prostration, debility, peritonitis, defective digestion and eventually death. The cut given below shows a piece of the muscle



of a hog infested with trichina. It has been magnified two hundred diameters and shows the state in which they are coiled up in the tissue. It takes about fourteen days for them to attain their full size. They feed upon the substance derived from the muscular tissue. It should be borne in mind that these animals are most likely to be found in the bodies of those hogs that are kept most uncleanly in their habits, and consequently most likely to be scrofulous or otherwise diseased before they have trichina.

It is often argued that men do eat pork for a whole life-time without suffering; but this same argument is as applicable to liquor-drinking, tobacco-using and every form of sensuality, and is consequently good for nothing. We have to say again, as we said in a former article, that hog-meat, whether it has trichina or not, should never be eaten; and those who in the name of science advocate its use are abusing science, pandering to morbid tastes, or as we fear was the case with the Chicago doctors, are influenced more by the will of those who had pork to sell than the best interests of the people.

GOITER IN AMERICA.—This affection is very frequent in Switzerland. It consists of an excessive enlargement of the thyroid gland of the neck. It is most frequent among the in-

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habitants of the hilly regions, where the full effect of the sun's rays are never felt, where there is most ignorance and much intermarriage. The same disease has been discovered in several parts of Virginia, mostly among the negroes and mulattoes, under pretty much the same circumstances that it exists in Europe. It is however counteracted there by the "greater amount of migration," says Dr. McGowan, and hence can never become very prevalent.

THE PRESERVATION OF WOMEN.—There are few subjects which should demand more attention than the preservation of the health of women, particularly during the period of rearing children. As a general thing American women have to work too hard during this part of their lives. Not that they should be idle or have nothing to do, but they should never overwork if they would have their children of a high order. Mrs. Josephine C. Bateman of Painesville, O., in speaking on this subject in The Ohio Farmer thus discourses:

"The causes of this too early decay of mothers and neglect from children, lie, we think, far back—commencing in the anxious, over-burdened young mother. We understand your position, sisters; you love your husbands, and you feel that their interest is yours also; you are anxious to help to enconomize as far as possible, and at the same time desirous of gratifying your husband's fastidious tastes; so you hire no help, for you really can not afford it, yet the house must be the perfection of neatness, the table must be abundantly if not daintily spread, the babe must be cared for, and as well dressed too as any of your neighbors' children, and in fact you are as healthy and as smart as your acquaintances, and many of them do all this, and so you will.

"Soon there is another child, and then another, and still you strain every nerve to do all the work without help. You have no time for reading or for rest; you forget the future, and do not ask what will be the end of all this. Your husband, too, admires your industry, and forgets that the time will come when he lays aside most of his active labors, that he will want that in you he can not find—an intelligent companion. You forget that you will soon be distanced by your children in the acquisition of knowledge, and they will be sure to make the sad discovery that mother is more ignorant than they; and with this discovery generally comes the loss of respect for her judgment and opinions. Women seldom rest, except for a few hours at night, yet they need it, and should take pains to secure it. It is not wasting time to rock and read, without the knitting. Your husband would think it hard to work so steadily at all hours, and in consequence of their hours of rest, men do not often grow old so fast as women. The frailest sex work the most incessantly, and the work is more arduous when there are but one or two little ones, than when the family becomes larger, and some are old enough to assist the mother.

"If you do not love reading, still practice it till you do love it, and you will soon become interested. In addition to the Bible, which we hope no mother will neglect, let valuable books be read when they can be, but for those who have as little time as the housewife, newspapers and magazines must form the staple reading, as the short articles and items are well adapted to the spare moments that can be snatched here and there.

"Woman must be intelligent, if she would win both respect and love from husband and children. She must constantly improve, if she would be what she should be; by no means considering education finished when she becomes married."

There are other points from which this same subject should be discussed, which will receive attention in future numbers of THE HERALD.

OTHER WORLDS INHABITED—PHYSIOLOGICAL ARGUMENT.—Dr. Henry Draper delivered a very interesting lecture before the Young Men's Christian Association in New York, a few weeks ago, on the subject "Are there Other Worlds Inhabited?" He did not go so far as to argue the question relative to other planets than those which belong to our own solar system, but with regard to these, he argues not more than three are inhabitable. His arguments are from the stand-point of human experience and human physiology. Says he, "To sustain life three things are necessary—air, water and food." Now from this data, he argues that if these substances are not to be had on any planet, then life can not be supported there. From this data he examines several of the planets, and points out the reasons why they are or are not likely to be inhabited. The two that are nearer to the Sun than the Earth are too hot. Venus is regarded as red-hot, and Mercury even hotter. Of course they are not inhabitable. Then taking a jump to Mars, which is fifty million miles farther from the Sun than the Earth, he finds a state of things the reverse. The telescope reveals at the poles accumulations of snow. They have a short warm summer, a cold snowy winter. As their year is twice as long as ours, each season is twice as long as with us. "It has air, water, alterations of seasons, snow, rain, and possibly vegetation. . . . . It is not cold enough to be perpetually frozen and therefore sterile." He thinks, so far as we are capable of judging, "it is suited to the abode of sentient beings." Without saying much of the planets outside of Mars, he leaves the impression that they are not habitable from their great distance from the Sun and consequent want of the conditions of

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life. Returning to the Moon, which is not much different in distance from the Sun than our Earth, he lets his telescope speak: "So far from perceiving any visible traces of human habitation on the Moon, she presents to the eye only a desolate waste. There are no tokens of activity. Even her volcanoes are extinct."

In conclusion he says:

"1. We have reason to know that the various bodies of our solar system have a composition resembling one another.

"2. We feel satisfied that the same laws which rule the solar system rule the universe; in the case of the laws of gravity, a demonstration can be easily offered, the binary stars revolving round their common center of gravity according to it.

"3. We may be sure that nature operating upon like substances by similar laws, will even produce the same results. There is a unity of scheme pervading the universe. There are immortal types or exemplars, the divine ideas according to which things are framed with an infinite variety of modifications depending on surrounding conditions. I can not believe that on our little globe alone, among the infinity of worlds, life has been possible, because on it only surrounding circumstances have been favorable. It seems more in accordance with reason to believe that there may be on many of the globes intelligent beings, formed on the same plan that we are, but differing, on some perhaps for the better, on others for the worse. On our own globe we see what an influence such conditions as heat, moisture, etc., have on the inhabitants of the various zones. At the poles where man is struggling with difficulty to procure a precarious livelihood, intellect is at a low ebb and exhausts itself in efforts to obtain food. At the equator, amid the bounteous provision on every hand, mind and body are oppressed by a languor only broken by the passions. In the temperate zone, our own happy latitude, the seasons conduce to activity, but thoughts of subsistence need not occupy all our time; enough can be spared to originate the most sublime ideas in science and arts. It must be thus in the universe. Though the general plan is the same throughout, there may be worlds that have never passed the state in which the Earth was in early geological times, while on others conspiring circumstances may have allowed life to develop even beyond our standard, and to reach a point that we may hope in the future to attain."

It is not our purpose to discuss these questions at present. They have no very important bearing upon human development in its present stage, farther than a fine field of inquiry, speculation and discovery; but may it not be true that the planets that belong to our own solar system, that are now too cold to support life, may, in the early stages of their geological growth, have been much warmer than now; indeed they must have been, for, like our Earth, they were originally from the Sun, and for a long period revolved as great molten masses of lava, gradually cooling until the present time. During this cooling period there must have been a stage in which the conditions of life, such as we have now on this earth, modified perhaps by trifling circumstances, were in existence.

A NOTE FROM PROF. FROST.—The following note was written in reply to a request made to Prof. Frost for an article on the Effects of Climate on Birds. It is too good to be lost, and we therefore take the liberty of giving it to our readers. He writes:

"I should most certainly be glad to serve you, or, as I ought to say, to serve myself by bringing myself into such goodly company, and yet I have hardly a right to promise any thing positive. Not that I have any of the irregularities of genius, mind you; but I am already doing two things, and *contributing* is a third. I am working very slowly on another paper for the Harpers, my birds being inclined to hop in that direction. Then those points which you give me to work up are somewhat rare. 'The effects of climate on birds' or 'malaria.' How I remember that when birds would fly over the lake of Avernus they used to drop dead into the water, and that when Virgil describes the *rinderpest* just before his day, he says: 'To the very birds the (upper) air (of the Alps) was not healthful. They drop down precipitate and leave their life under the lofty cloud.' And do you remember the easy gentlemanly talk of the royal party, while they are looking up to the castle as they approach it?

"'*Duncan.*—This castle hath a pleasant seat; the air
Nimbly and sweetly recommends itself
Unto our gentle senses.

"'*Banquo.*—This quest of summer
The temple-haunting martlet doth approve
By his loved mansionry, that the heaven's breath
Smells wooingly here ———.
——— *Where they most breed and haunt*
I have observed the air is delicate.'

"So much for fancy. I am afraid the facts may prove too much. While many birds are dainty of food, climate and air, others are as foul as Virgil's Harpies with their 'loathsome flux of stomach.' While the oriole hangs his nest under green June leaves and swings in the airiest breezes, the High-hole has a hot house with the worst ventilation. Each is healthy, for aught I know.

"But birds are very susceptible of changes of *temperature*. Some of the most beautiful and delicate phenomena of Natural History are manifested by birds and animals on the approach of a storm.

"There are also some points suggested by your letter which are certainly interesting and instructive, but the thing is whether they would *make a Hygienic case* and prove what you want. I can doubtless do some things in this line which you may wish. I am nowadays (and years) pretty well taxed, and the vivacity which is needed to produce any thing lively is otherwise consumed. But if I submit any thing to you, I will do my best before it leaves me, and then you may do what you please with it.

"Very truly yours, TAYLOR FROST."

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LETTER FROM AN AGED MAN.—There are a few old men in the country, and whatever is connected with their lives is always interesting. The following letter from Jeremiah Day, Ex-President of Yale College, can not fail to be read with pleasure and profit. It was written in answer to a note requesting some facts concerning his habits of life:

"DR. M. L. HOLBROOK—*Dear Sir:* In answer to the inquiry in your note, a few days since, I would state that by a merciful divine Providence I have been preserved to the present time, though I have been partially an invalid a great part of my life. As my health has not been vigorous, though comfortable, I have perhaps been more cautious of exposure. I have been in the practice of daily moderate exercise in the open air. I have all my life been in the habit of retiring to rest at an early hour; have never studied late at night. I have never been in the use of tobacco; have been for many years under the Temperance pledge—total abstinence from alcohol as a beverage. Of late years I have avoided going abroad in the evening. I am at present in comfortable health, though not vigorous. President Nott of the College at Schenectady is older than I am.

"Very respectfully your obd't servant,
"JEREMIAH DAY."

This letter was written previous to the death of Dr. Nott. Mr. Day is now ninety-four years old.

EDUCATION OF GIRLS IN THE SANDWICH ISLANDS.—An hour in the morning is spent in gardening, the girls having under cultivation about two acres of land. Besides this the girls do all their own work, such as washing, ironing and other house work. Some of them are quite skilled in crocheting and other fancy work. Every afternoon the whole company, with their lady teachers, either go to walk or indulge in the aquatic sport of bathing and swimming, for which the river affords a fine place. Many of them are said to rival the mermaids in the celerity and grace with which they glide through, over and under the water. Most of them acquired the art of swimming before they entered the school. This is a part of school instruction too often neglected. Every girl and boy ought to be taught to swim.

Special pains have been taken to provide the scholars with all the modern appliances for exercise and out-door sports, such as swinging, rope jumping, etc., in which they exhibit all the zest and skill of their fair-skinned cousins in this and other climes. With them, however, as with other juveniles, each sport has its day and then goes out of fashion, and to the skill of the teachers is left to provide new ones.

The girls are all taught to sing, and special attention is given to this branch of instruction, which requires early training to develop it properly. Most of them sing any of the tunes in the two native tune books, and also many of the more modern hymns and songs composed by the poets of Hawaii.—*Honolulu paper.*

We fear the picture is overdrawn or misstated; but if not, the general plan of education there, is, so far as it relates to health, superior to American schools. With such care of the body feeble girls would improve instead of deteriorate in physical stamina. Indeed, a school where the pupils do not improve in physical health and physical culture ought not to receive any patronage. It would not, if Americans were wise. Parents should demand that their children come home from college sound in limb and in vital organs, as well as accomplished in French, drawing and music. Whatever the people are ready to demand will be supplied; and the only reason why physical culture has not been put upon the same basis in all our schools as mathematics, is because parents have not refused to patronize schools where it was not done.

VENTILATING A CAR.—Prof. Hamilton, the horse-tamer of Hagerstown, Ind., is an original genius, and as fond of a joke as he is of fresh air. The other day, on the train going home from Cincinnati, he tried to raise a window in the car where he was sitting, but could not move it. He called the conductor to assist him, but with no better result. Instantly he knocked the pane of glass out with his cane, saying, "Now we will have a little fresh air." "Sir," said the conductor, "you must pay for that." "How much?" asked the Professor. "One dollar," answered the conductor. Prof. Hamilton passed him a two-dollar bill. The conductor was about to hand back a dollar in change, when the cool tamer of wild animals quietly said: "Never mind, I'll take another pane," and with another stroke of his cane let God's fresh atmosphere through a second window. "Well," exclaimed the conductor, "you can't have any more at that price. It's not first cost."

A GOOD RECIPE FOR HAPPINESS.—It is simple. When you rise in the morning form a resolution to make the day a happy one to a fellow-creature. It is easily done—a left-off garment to the man who needs it; a kind word to the sorrowful; an encouraging expression to the striving—trifles in themselves light as air—will do it, at least for the twenty-four hours; and if you are young, depend upon it, it will tell when you are old; and if you are old, rest assured it will send you gently and happily down the stream of time to eternity. Look at the result: You send one person—only one, happily, through the day; that is three hundred and sixty-five in the course of the year—and supposing you live forty years only, after you commence this course, you have made fourteen thousand six hundred human beings happy, at all events for a time. Now, worthy reader, is this not simple? and is it not worth accomplishing? It is most excellent for digestion, and a producer of pleasant slumber. We hope that none will fail to try it.

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Miscellaneous.

[Written for The Herald of Health.]

Botany for Invalids.

BY MRS. MARY TREAT.

If weak, nervous, dyspeptic invalids knew how much they might be benefited by the study of Botany, that it is almost a panacea for many of their diseases, would it not be more generally prosecuted? The study of botany should be encouraged in every institution of the land. Of all sciences it is the most easily comprehended, and at once affords pleasure, and really beneficial effects upon the student, both in mental and physical culture and growth. It refines the taste, elevates the sentiments, raises woman above the frivolities of dress and fashion; hardly in any way can her ills be so easily forgotten as in the practical investigation of this science. Almost incredible cures have been effected by deep interest in this study alone; as in the instance of the immortal Linnæus, who, having a severe attack of gout, unable to move in bed, upon the return of his pupil Ralm from this country, where he had been collecting specimens for three years, no sooner beheld the beautiful flowers than he forgot his sickness, leaped from his bed and was well from that hour.

It is to be regreted that botany is not more generally taught in our common schools. But very few, in comparison with the many, know any thing about the plants they meet with every day. Thomas Carlyle, one of the greatest men of England, and we might say of the world, says botany should be taught in all of our common schools, and adds that he regrets exceedingly that he neglected it while young, that he hardly knows enough to distinguish or name the grasses by the roadside that he meets with in his everyday walks. Whereas botany is now mostly confined to the few, to men of learning, it is eminently calculated to interest the young. Not in the way it is generally taught, however, crowded in with already too many studies, and hurried over in one short term, scarcely ever to be renewed or thought of again. For persons of sedentary habits of either sex this study is invaluable. A knowledge of it can not be acquired from the library alone, but it calls us into the open air, along the course of streams, on the open plains, into the deep forests, over mountains and steep precipices. No other branch of Natural History seems so well adapted for delicate females as this. In the animal kingdom, taking life is necessary to a collection of specimens, which, to say the least, is distasteful, and to sensitive females almost impossible. In botany, preparing specimens is one of its chief attractions. No science is attended with so little expense, especially for the beginner. Gray's Manual, a tight tin box for collecting specimens, a cheap press for pressing them, a few quires of firm white paper, and the student is equiped—if a lady, not forgetting the short dress however; crinoline and long skirts are entirely out of place in the woods and in climbing mountains.

The first great divisions of the vegetable kingdom are easily comprehended. The first and highest division is into Phenogamia or flowering plants, and Cryptogamia or flowerless plants. The former includes all plants that produce flowers and seeds. The latter includes the ferns, mosses, lichens and mushrooms, and all plants that do not produce flowers and seeds, but spores, minute bodies that take the place of seeds and will again reproduce their kinds. The Phenogamia are sub-divided into Exogens and Endogens, distinctions founded upon their manner of growth. These distinctions are easily and readily seen. Exogens (outside growers) have a distinction of bark, wood and pith, and grow by external accretions, having net-veined leaves which fall off by an articulation or joint. All of our native trees, shrubs and most of our herbaceous plants belong to this division. Endogens (inside growers) include all our grasses, corn, wheat, rye, oats, and most of our bulbous plants, and the palms and canes of the tropics. They have no distinction of bark, wood or pith; the leaves are parallel-veined and do not fall off, but die on the stalks. There seems to be no regularity in the arrangement of woody fiber and pith, as may be seen by a cross-section of a cornstalk, but woody fiber, spiral vessels, and cellular tissue are scattered about in promiscuous bundles. The cellular tissue, however, is most abundant toward the center of the stem. The growth consists in these various bundles of woody fiber and vessels descending from the leaves and passing down to the soft cellular tissue at the center of the stem, crowding the older portions outward, till, as in the case of the palms, the outer surface becomes as dense as a stone, even resisting strokes from the ax. Endogenous stems, however, as in the grasses, are often hollow with solid joints.

We next find these divisions or groups broken up or divided into six classes. The first two classes are formed from the subdivision of Exogens (outside growers). Class first (*Angiosperms*), which is by far the largest class of

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plants, may always be known by its producing seeds with a covering, or pericarp, and the embryo always having two cotyledons, the two first or seminal leaves of the plant. The second class (*Gymnosperms*) produces naked seeds beneath a scale-like carpel, as in the pine, hemlock and cedar, and instead of two there are always several whorled cotyledons or seminal leaves. The next two classes are formed from the subdivision of Endogens (inside growers). The third class (*Aglumaceæ*) flowers on the usual plan, like the lily and most of our bulbous flowering plants. Class fourth (*Glumaceæ*) flowers invested in glumes or husks, as in the grains and grasses. And now lastly the Cryptogamia or flowerless plants are divided into two classes. Class fifth (*Acrogens*) which appear something like the Phenogamia or flowering plants; they have a regular axis of growth and green leaves, as the ferns, club mosses, etc. Class sixth (*Thalogens*). This class consists of the lowest order of vegetable life, having no distinction of root, stem, or leaves, as the lichens and fungi. The first and largest class (*Angiosperms*) is broken up into three sub-classes formed from differences in the flower or corolla. The divisions of the corolla are called petals; when these petals are separate from each other, as in the rose and pink, they are called *polypetalous;* when united wholly as in the morning glory, or only at the base as in the mullein, they are called *monopetalous;* when the floral envelopes are wanting, or if only a calyx they are called *apetalous.*

Next come the orders or families, and upon a knowledge of these depends the skill of the botanist; but it is too long a story to tell here—we shall have to go to the text-book, and to the fields and woods and study for ourselves. We will only mention a few favorite wild flower-plants that we may get a clearer idea of these first great divisions. In April we may look for the delicate little *Anemone* or wind-flower. The stem is six or eight inches in height with an involucre of three leaves near the top, and a single white flower at the summit of the stem. This is one of our most common flowers; it has never failed greeting me from childhood up, from New England beyond the Mississippi, and even here in the pine barrens of New Jersey. We find it in the Crowfoot family; the first order or family in our books, and it belongs to sub-class *Apetalæ,* for it has no petals, but the calyx is delicately colored, which answers the same purpose. It belongs to class *Angiosperms,* because the seeds have a covering and are inclosed in the ovary, and it has net-veined leaves, therefore belongs to Exogens, and finally to Phenogamia or flowering plants. In this same family we also find other beautiful April flowers. The *Hepatica* or liverwort, *Thalictrum* or rue anemone, and *Caltha* or cowslip. But the earliest flower of all is the snowy zillium (*Zillium nivale*), which we have found only in the Western States. We frequently find it in March, on the sheltered side of hills, in close proximity to a snow-bank. The stem is two or three inches in height with a pure white flower, consisting of three white petals, and three green sepals, and a whorl of three leaves near the top of the stem. We find this interesting little flower in the division Endogens, and in the third class *Aglumaceæ,* and in the Zillium family, a long way from the Crowfoot family, being the hundred and twentieth family or order. The *Claytonia* or spring beauty, with its delicately penciled petals, must not be overlooked—it is found in the Purslane family; and the *Sanguinaria* or blood root, with its white flowers in the Poppy family; and the oddly-shaped flowers of the *Dicentra* or Dutchman's breeches, in the Fumitory family. These, too, are found in April and early May; and are all found in the first grand division, the first subdivision, the first class and first sub-class. Also in April and May we find many beautiful flowering shrubs, along the course of streams and the margins of swamps. Among the earliest is the *Cassandra* with evergreen leaves and pure white flowers arranged in one-sided racemes along the branchlets. The *Azalea nudi flora* or Pinxter flower is a beautiful, fragrant, flowering shrub. The flowers are large, in clusters or umbels on the yet naked branches, and variously shaded from pale pink to bright purple. Also the beautiful *Rhodora* that has been immortalized by Emerson in the following exquisite lines:

"In May, when sea-winds pierced our solitudes,
I found the fresh rhodora in the woods,
Spreading its leafless bloom in a damp nook,
To please the desert and the sluggish brook;
The purple petals, fallen in the pool,
Made the black waters with their beauty gay;
There might the redbird come his plume to cool
And court the flower that cheapens his array.

"Rhodora! if the sages ask thee why
This charm is wasted on the marsh and sky,
Dear, tell them that if eyes were made for seeing,
Then beauty is its own excuse for being.
Why thou wert there, O rival of the rose!
I never thought to ask, I never knew;
But in my simple ignorance suppose
The self-same Power that brought *me* there, brought *you.*"

April and May with their beautiful flowers have passed; but the warm summer months are inviting us to the grateful shades of the forest, and to the cooler mountains, where we may find flowers of a brighter hue, and invalids forget their maladies in the contemplation and study of these beautiful creations, "alphabet of the angels."

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[Written for The Herald of Health.]

Resignation.

BY WILLIAM H. BURLEIGH.

Hers was a cheerful faith! The darling child
In whom were centered love and hope and pride,
The radiant idol of her worship, died.
And o'er his beauteous clay the clods were piled;
Yet through her tears the mourning mother smiled
As, with the eye of faith, she saw the bowers
Of Heaven fresh-blooming with eternal flowers,
Amid whose fragrance wandered, undefiled,
Her loved and early-lost! A healing balm
Fell on her heart; serene, though sad withal,
She girded up her soul at Duty's call,
And hopeful still, with spirit meek and calm,
Life's lowly ways through shade and sunlight trod,
Leaning, in love's sweet confidence, on God.

Healthy Spices and Condiments.

THE ONLY ADMISSIBLE HYGIENIC SEASONINGS.

Sensible Advice.—An exchange paper among other suggestions which will enable a person to avoid the cholera; says: "Endeavor, if possible, to keep a clean conscience and two or three clean shirts. Rise with the lark, but avoid larks in the evening. Be above ground in all your dwellings, and above board in all your dealings. Love your neighbor as yourself, but don't have too many in the same house with you.

The owner of a large dog at Grand Rapids, Mich., a few days ago, placed a hundred dollar looking-glass before his canine to worry him. The dog flew round barking and growling. The owner was delighted and cried "seek 'em!" The dog "seeked," and the mirror and the "other dog" disappeared at the same time.

A New York man, who had not been out of the city for many years, fainted away in the pure air of the country. He was only resuscitated by putting a dead fish to his nose, when he slowly revived, exclaiming: "That's good—it smells like home."

A five-year old, riding by the Asylum at South Boston, asked what that great building was. "It is where the blind people live." "What do they want so many windows for?" was the next question.

"I wish," said a young man of Paris, "that my sweetheart shall combine in herself the three fine seasons of the year—spring, summer and autumn—but as for the frosts, I don't like them. If she makes it winter, I shall be a swallow."

"Mamma," said little Nell, "had the governess ought to flog me for what I did not do?" "No my dear child, why do you ask?" "Because she flogged me to-day when I didn't do my sum."

Charms and Merit.—Charms strike the sight, but merit wins the soul.

What is that which when thrown away may be caught without hands? A hint.

Home Treatment of Disease.

☞ *In this department we shall give, from month to month, plain, practical directions for the home-treatment of various diseases.*

Diptheria.—The term diptheria is derived from diphthera, which means the formation of a false membrane; as commonly applied, it has reference to an inflammation of the mucous membrane of the fauces and throat, attended by an exudation of lymph, which is deposited in layers, thus forming the false membrane.

In mild cases this exudation is generally confined to the fauces alone, but in aggravated cases it sometimes extends to the larynx, trachea, and frequently even to the larger bronchial tubes; it is liable, also, to affect the nose, the Eustachian tube, and even the external ear and eyes; the mucous membrane of the gums and cheeks often present patches of false membrane, and the inflammation occasionally extends along the œsophagus to the stomach and bowels, affecting also the bladder.

The greatest danger from this disease is when it involves the larynx, causing so much swelling and œdema as to prevent respiration, producing death by suffocation.

The cause of diptheria is a peculiar poison, usually engendered in the system from improper habits of living, which causes a determination of blood to the mucous membrane of the part affected.

This poison affects the blood in the entire system, consequently there is a general derangement of the functions of all the organs. The mucous membrane of the throat is the point where the inflammation is most concentrated; and in some cases this will quite suddenly subside, when, if the patient be carefully examined, an eruption resembling scarlatina will be observed upon the surface of the body; if this eruption disappears the throat symptoms will be suddenly aggravated; this indicates the necessity of giving the skin proper attention in this disease.

Diptheria presents very different symptoms in different persons. In some it comes on suddenly with a chill, which lasts for a longer or shorter time, and is followed by fever; in other cases it is developed gradually, the poison manifesting its local effects in an insidious manner; the patient feels indisposed, yet has no definite ailment, the inflammation of the throat being first ascertained by the observation of others; the sensibility of the part is very much diminished, the patient suffering more from a feeling of languor and indescribable suffocation than from any local pain, though pain is sometimes felt in attempting to swallow; often, too, there is a partial paralysis of the muscles of deglutition, in which case the attempt to swallow liquids is sometimes followed by their being thrown out at the nose.

There is usually redness and swelling of the tonsils, arches of the palate and pharynx; the neck is stiff, and the glands at the angles of the jaw are enlarged and tender; in some cases the exudation appears in a few hours; in others it may be a day or two, or even longer, before it makes its appearance; it usually forms in patches of a whitish or grayish hue; these may not spread in mild cases, yet it is most likely to extend to the gums, the larynx, and up into the nose; it may continue in this form for a day or two and then disappear, or there may be repeated layers deposited, which are finally exfoliated in strips, or in complete tubes shaped like maccaroni.

Sometimes there is an exudation of blood with the lymph, which gives the membrane a dark appearance; this soon becomes decayed and causes a very disagreeable fetor; the false membrane is often sloughed off, revealing

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a very ugly-looking ulcer beneath. Occasionally several different membranes form and slough off in this way; if the membrane ceases to form after the first week the case usually progresses favorably.

The constitutional symptoms vary much in different patients; some have fever quite severe, while others have very little; some have a hot skin, and others a general coldness of the whole surface; the pulse in some is very rapid, in others less than normal; some have severe headache, others none at all.

The danger in this disease may arise from the inflammation and swelling extending to the larynx and obstructing the respiration, from the depressing effects of the poisons upon the vital powers, or from absorption of putrid matter from the throat.

Diptheria often leaves the system debilitated and depressed, sometimes with impaired vision, deafness, ulcers in various parts of the body, chronic sore-throat, anemia, gradual failing of muscular power, and sometimes with paralysis.

Nose-bleed is a frequent accompaniment of diptheria, but the formation of the false membrane is the characteristic symptom. There is a false membrane, however, in true croup, but it commences in the larnyx and the organs of voice are the first parts affected, while in diptheria the fauces, tonsils and palate will be first affected, and after a time the larynx may become involved.

In tonsilitis, pharyngitis, scarlet fever and other throat affections, there may be some exudation, but no false membrane is formed.

TREATMENT.—First give the patient a thorough warm bath, either by immersing the body in water heated to ninety-five degrees, in a common bathing-tub, or, where this is not at hand, have plenty of water in a large wash-tub, and, putting the patient in, let one or two attendants rub rapidly and thoroughly the entire surface for five or ten minutes; then wipe dry, using a great deal of friction, and put the patient immediately in bed, with hot bottles, or bricks, or sticks of wood to the feet and sides; these should be prepared beforehand, as it is essential to make the sufferer perspire as quickly as possible.

Next take a yard-square of flannel folded three or four thicknesses and place it across the bed, under the back of the neck; fold a large, soft towel so that it will cover the neck and upper part of the chest as far as the breasts, letting it come well around upon the sides of the neck; wet this in cold water and wring out very dry; place it upon the neck, and cover with a large dry towel, doubled to fit; then draw the flannel around so as to cover the whole in front; re-wet the towel as often as it becomes heated; keep a piece of ice in the patient's mouth all the time; this should be held as far back in the throat as possible, and allowed to remain there till it melts.

If there is much fever a tepid wet-sheet pack should be given; wrap well in blankets and quilts, and place hot bottles or bricks around to induce perspiration; if the patient lies comfortable, let him remain two hours, or even more, feeding him with ice all the time and keeping cool cloths on the head. When the pack is removed, the patient should be thoroughly rubbed in a full tepid bath, or, what is quite as effectual, a vigorous towel-bath may be administered. In this latter, a part of the body—say the chest and arms—should be unfolded, thoroughly rubbed with a wet towel till the effete matter is entirely removed from the surface, then dried and covered before another portion of the body is exposed. Proceed in this manner till the whole person shall have been thoroughly cleansed, then place him in a clean bed, with the wet cloths applied to the throat. The packs may be repeated as often as required, two or three times in a day being sometimes advantageous.

The hot hip-bath may be given for ten minutes from ninety-five degrees to one hundred and ten degrees, accompanied by a hot foot-bath; the patient should be entirely covered by a blanket, with an attendant rubbing the back, hips and abdomen during the bath.

If the inflammation of the throat is severe the towel should be wrung out of ice-water, or pounded ice may be enveloped in it and applied, or in severe cases a piece of rubber-cloth may be spread upon the bed, with a large blanket over it, and towels filled with ice kept constantly on the throat, having it completely packed in ice. Whenever ice is applied in this way, warm blankets, hot bottles, etc., must be kept to the feet, legs and body to keep them warm; the ice applications may be alternated with hot fomentations to the throat if there is a tendency to chilliness.

Wash the whole body often, using friction enough to keep the circulation well to the surface; free injections should be given the first two or three days to clear the bowels thoroughly, and no food at all should be allowed till the inflammation subsides, and then only some light gruel or juice of fruits.

The object of this treatment is to keep the blood in other parts of the body, and by applying ice to the throat keep down the local inflammation and swelling, and prevent the formation of the false membrane, until the poison can be worked out of the system through the skin, bowels and kidneys.

Above all things, avoid drugs! There is one poison already in the system, and beware of putting in another to make matters worse; let all the vital force be directed to ridding the system of the diptheritic poison, and not be expended in striving to rid itself of drugs.

I have known cases to recover under the above treatment after having been given up to die by drug physicians. If treated in this way from the first there would be but few fatal cases.

Burns.—To cure a burn, immerse the part in cold water as soon as possible, and keep it there till the smarting ceases; this will generally prevent blistering, though in order to do this it may sometimes be necessary to keep it in water for hours, frequently changing the water, so as to have it as cold as possible. If you can have a dish or tub so arranged as to have fresh cold water constantly running in, all the better.

The object of this treatment is to keep the air from the injured part till Nature can throw out lymph sufficient to cover and protect it. Water will do this most effectually, for it not only keeps out the air, but puts out the fire, and thus the inflammation is kept down.

The next best course is to cover the part with fine flour, mixed with a little molasses or oil to keep it in place. Cotton or wool packed closely around it answers a very good purpose—in short, whatever will protect the part from the air serves well to lessen the pain and permit Nature to do her work of restoration.

Death from Chloroform.—The London Lancet reports a recent death, from the use of this dangerous agent, at St. Mary's Hospital, London. The patient was a healthy man, and the operation was simply removing a finger-nail. The chloroform was administered upon a handkerchief, and all necessary precautions used, yet the patient died from its effects.

Death from Venesection.—The Reader, an English paper, asserts that "Sir Charles Eastlake, President of the Royal Academy, like the late Count Cavour, seems to have fallen a victim to *professional ignorance* and prejudice in the adoption of a merciless course of blood-letting, which so completely prostrated him as to destroy the power of taking nourishment." Millions of human lives have been destroyed by that same "ignorance and prejudice."

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Answers to Correspondents.

BY A. L. WOOD, M. D.

☞ *The readers of* THE HERALD *are invited to ask such questions as will be of general interest for this department, where they will be briefly but comprehensively answered.*

Obesity.—"Ralph" of Maine. "I am very corpulent; weigh now, at the age of thirty-nine years, from two hundred to two hundred and fifteen pounds, though very short in stature. Did not weigh but about one hundred and sixty pounds until within a few years. A little extra exercise seems to stuff me up and make me short of breath. I do not feel well in warm weather, and am troubled with a cough when I get cold. What can I do to become less fleshy? Some advise smoking, but the remedy is worse than the disease. I never drank spirituous liquors. I like milk, but some say it is not good for me. Please give me directions how to live, and what to do for my health and comfort."

The requisite agencies for the cure of your disease—for obesity is a disease—are diet, exercise, bathing and sleep. The diet must be strict in quality and abstemious in quantity. All fat meats and grease, butter, cheese, milk, sugar, eggs, fine-flour bread and rich pies and puddings must be rigidly abstained from. Ripe, acid fruits should be the leading articles of diet. Graham bread and vegetables, and lean meat, if you eat meat, may be eaten sparingly. Two meals a day are better than three. You should take all the out-of-door exercise you can. Ride horseback, walk, practice gymnastics, etc., each day until you get fatigued. Inflate the lungs to the fullest extent, hold the breath and percuss the chest, sides and abdomen with the hands. This is an excellent exercise and should be often repeated. When you rise in the morning bathe yourself all over in as cold water as you can readily react from, wipe dry and rub yourself briskly and thoroughly with a coarse towel. Never sleep in the daytime, and not more than seven hours at night, and rise early. If you follow these directions for one month, please write us the result.

Weak Lungs.—"L. A. W." of New York. "My chest is small compared with the rest of my body, and my lungs weak, but not diseased. What exercise can I take, without the use of any apparatus, that will strengthen and increase the size of my lungs?"

Stand erect and with the shoulders thrown well back; inflate the lungs slowly and to their fullest extent, at the same time raising the arms over the head; hold the breath and percuss the chest and sides with the palms of the hands. Commence carefully at first, and repeat from three to six times. Raise the arms in front until the closed hands are level with the top of the head, at the same time inflating the lungs; holding the breath and bending the elbows, bring the hands suddenly and forcibly downward and backward to the shoulder; thrust the hands upward to the same position and repeat. These exercises may be performed several times a day and always in pure air. The best time is in the morning before dressing. The writer of this increased the size of his chest three inches in as many months by the practice of these two exercises alone.

Falling Hair.—"Charles H." of Ohio. "My hair is falling off quite rapidly. What can I do to prevent it? I live as people usually do, and exercise my brain more than my body."

Live temperate in all things, exercise your mind less and your muscles more, and bathe your head two or three times a day with cold water, which should be followed each time by a vigorous and prolonged rubbing of the scalp with the ends of the fingers.

Movement-Cure.—"F. J. F." of Michigan. "Please state whether there is any work published on Duplicated Movement-Cure, and if the Movements have any tendency to injure persons of forty-five years of age or upward."

The best work on Duplicated Movements published in this country is "Theory and Practice of the Movement-Cure," by C. F. Taylor, M. D. "The Movement-Cure," by George H. Taylor, M. D., explains the principles of the system more fully, and better describes and illustrates Single Movements. Price, $1 75 and $2, respectively; for sale by Miller, Wood & Co., No. 15 Laight Street, New York. If you wish to study the subject more thoroughly, you should procure the "Hand-Book of the Movement-Cure," and "The Cure of Chronic Disease by Movements," by M. Rathe, M. D. Published in London. Price, $10 each.

Movements are just as applicable to one age as another, and can be given so as to either benefit or injure persons of any age. Their good or bad effects depend upon the condition of the patient, the kind and number of movements given, and the time and manner of their application.

Wrong Bathing.—"M. S. G." of Indiana. "Bathing does not agree with me. I take a cold shower-bath every morning, but it is almost impossible for me to get warm after it. I feel chilly, and sometimes it makes me have the headache. My health is quite good, but I am not very strong."

There are a great many that "bathing does not agree with," and for this simple reason—they do not bathe right. Many persons have been seriously and even fatally injured by a wrong mode of bathing; but there is no person who can not bathe and be benefited, if they bathe properly. Instead of the cold shower-bath take a sponge, towel, or even the hands, and a basin of water. Wet the body over rapidly, then wipe dry, and rub briskly with a coarse towel or the hands until you produce a comfortable glow over the whole surface. If you have any difficulty in getting up a reaction, bathe in a warm room or use tepid water, or both; but always secure a reaction after your bath, otherwise it will injure you.

Standing Water.—"C. L." of New York. "Is it true that water standing in an occupied room becomes impure in a short time? If so, does not the air in the room at the same time become purified?"

It is true that water standing in an occupied room absorbs carbonic acid and other gases and soon becomes unfit for use; but no one should depend upon this means alone for purifying the air in a room, for although water will absorb to some extent the poisonous gases, it will not impart to the air its vital element, oxygen, which can only be supplied by good ventilation. The colder the water the greater its absorbing power, and the sooner it becomes unfit for use.

Spinal Curvature.—"F. B. C.," of Conn.—"I have a daughter, eighteen years of age, who has had spinal curvature for six years, and it is constantly though slowly growing worse. Is there any cure for it?"

Send her at once to some institution where she can have the scientific application of the Movement Cure. The probability is that she can be cured. At least the progress of the curvature can be checked to some extent. An article will appear in the next number on "Spinal Curvature."

Eliminating Poisons.—"S. D. B." of Pa.—"Can Mercury and other mineral poisons be eliminated from the system, and if so, how?"

They can, by a full course of treatment at some good Hygienic Institution. The Turkish Baths and Electric Baths are the principal agents to be used for accomplishing this object.

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Publishers' Department.

To Our Friends.—We send out this number of THE HERALD OF HEALTH to the thousands of our subscribers with a feeling of hopefulness and pride. It begins the Eighth Volume of the New Series, and the Forty-first Volume, Old Series; and while in the past it has been filled with useful and most valuable matter, it never before contained in one number any thing like the same number of leading names in the country as its contributors. Greeley, Tilton, Burleigh, Perkins, Street and Frothingham, have each furnished us a special article for this number, beside many others who have written for this magazine before. It is a gratification to us to be able to announce that in future numbers we shall have articles from the same gentlemen, and also from many others of equal note, whose contributions will be equally valued. We intend to make THE HERALD OF HEALTH broad and liberal in its tone, and a journal that parents and patrons will be proud to have in their families. We shall depend upon them to do something to increase our circulation and spread this publication broadcast over the land, that our influence in the cause of Health Culture may be felt everywhere. Our mission is one of good—it is to assist in restraining the passions and appetites of man, to cultivate a beautiful and healthful harmony in our physical natures, to teach mothers how to bring up their children to robust health, strength and beauty. Will you help us? Subscriptions should be sent in at once.

This Number.—In this number of the HERALD OF HEALTH will be found an elaborate discussion on "The Limits of Liberty in the Excise Law" by the Rev. Mr. Frothingham, who is one of the boldest and most fearless thinkers of the day. While we may not indorse all that Mr. Frothingham has to say, we commend the article to thoughtful readers with the hope that the discussion will prove useful. It is our intention to give valuable articles from our best writers, giving all sides a fair hearing. In this way only can real progress be made.

The article on "Botany for Invalids" was written by a very enthusiastic practical botanist living at Hammondton, N. J., Mrs. Mary Treat. A friend just writing from Hammondton, speaking of a Strawberry Show recently held there, says:

"Had a Strawberry Show here last week, and a visit from a delegation of the Farmers' Club in connection with it. Solon Robinson, Quinn, Fuller, Bergen, Downing, and many others, were present. Mrs. Treat made up four fine bouquets of native flowers for the occasion, each inscribed (with a label) to some one of the party—one to Solon Robinson, as "The farmers' friend and the friend of Hammondton;" one to Dr. Trimble, as "The friend of the birds;" one to the Editor of The Agriculturist, and one to the author of "Ten Acres Enough." There were two great meetings (Wednesday and Thursday evenings), and Solon Robinson, in his speech, read for his text the inscription to him (he had taken it off from the bouquet), and spoke from it in the most eloquent and touching manner for a long time. He said that he should keep that autograph till his dying day, that Mrs. Treat had built a monument to him, and he hoped that before he left the place he might be *treated* to the happiness of being introduced to the lady who had thus honored him, which happened in due course at the close of the meeting. And the next night Fuller, in his speech on flowers, referred to one of those in the bouquets as well worth a journey from New York to see. He had botanized over a great part of the country, but had never seen it before."

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books, and Baths.

The August Number.—The August number will contain an article from our London correspondent on "English Pluck," which will be very interesting. Horace Greeley will furnish a paper on "Tobacco;" what he says will be sure to be good. We have the promise of an article from F. B. Perkins, who, by the way the way, is Editor of The Galaxy. He will write on some subject connected with food and dietetics. We also expect an article from Alfred B. Street, who sent us the beautiful little poem entitled "A Health to Water," which appears on the first page of this number. There will be an interesting and practical article on "Spinal Curvature" from Dr. A. L. Wood; a paper from Prof. Rufus King Browne on "Physiology," and a large number of articles on various subjects connected with Health and Physical Culture.

We expect an article from Theodore Tilton, Editor of The Independent, on "Gymnastics" for the August number of THE HERALD. We have also the promise of an article from Dr. Dixon, Editor of The Scalpel, and one of the most powerful medical writers of the age.

Appreciative Letters.—

"DEAR SIRS: I have been a reader of your Herald of Health during the last year. My subscription is up and I want it again. By reading your excellent Herald, it has led me to abandon smoking and drinking what I now know to be poison. I am now forty-six years old, and on my last birth-day I threw my tobacco-pouch in the stove, and threw my pipe away, resolving never to touch it again.

WATERLOO, Iowa, *June*, 1866. C. MANN."

"MESSRS. MILLER, WOOD & CO.—*Gents:* After an absence from home, I find your favor telling me my subscription was out in March. I am sorry this was not attended to before. My family can not do without it, and I hasten to send you $5, which please place to my credit, commencing with April. When this runs out, let me know. I would rather lose my dinner than miss a single number of your valuable Journal. It has saved me more than a hundred times its cost. Let it come! Wishing you ever success, I am, etc., JOHN FRASER.

WHITESIDE, Tenn."

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Premium Book—It will be noticed that we give as a Premium to each subscriber who sends us 6 cents for postage, WILSON'S work on the "Turkish Bath," with an Appendix by M. L. HOLBROOK, M. D. The work contains 75 pages and is a very interesting and valuable book. Don't forget to send the 6 cents postage.

Epidemic Cholera.—See notice of the book on Epidemic Cholera, just published, in our advertising columns. AGENTS wanted in every city.

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Literary Notices.

THE GALAXY.—The Galaxy is a new idea in literature. It is published fortnightly; keeps abreast of current events; is an illustrated, but not a picture-magazine; is independent in every thing, neutral in nothing; it admits the best thoughts and fancies of the best writers in prose and poetry; it is distinctively American; it contains stories, sketches of eminent men—sometimes with portraits—notices of books; pointed paragraphs on social, and critical, and æsthetic topics; and some of the best writers in France and England are among its contributors. Published in this city by the Church Brothers.

EPIDEMIC CHOLERA.—WEBSTER'S LECTURES.—These lectures were delivered in the University of New York in April, 1866, and very highly commended by the press of this city. They give plain practical rules for preventing and curing cholera, without drugs, as adapted with great success by eminent medical men of France. It is published in a cheap form for the benefit of the million. A whole neighborhood might order a hundred of them with great advantage. New York: Miller, Wood & Co. Price, 25 cents.

THE NEW PHYSIOGNOMY. New York: Fowler & Wells. Price, $5. It may be sent from our office. It is a large work, copiously illustrated. A more extended notice will be given in our next number.

☞ WE have on our table, from Ticknor & Fields, The Atlantic Monthly, Every Saturday, and Our Young Folks, each of which are always full of interesting and readable matter.

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☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.

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WILLOW PARK WATER CURE AND HYGIENIC INSTITUTE.

This Cure is now commencing its Fourteenth Year, with the same Proprietor and Physician that founded it. We have never advertised but little; we have never given but little time to writing articles on health or kindred subjects. Our field of labor has been quietly at home, attending to our patients, and improving and beautifying our place. We have carefully and conscientiously examined every new invention and every improvement in the Hygienic Practice, since we commenced at the head of our Institution, and just so fast as we have found any new method of treating patients to be good, we have adopted it. And yet, with all of our study and practice, we have *not* the slightest conception, that *we* or any other Reform Physician in the country knows the *whole*. We are yet to learn and *continue to go on, still learning*.

We commenced using Swedish Movements ten years ago, on a small scale. By experience we find this mode of treatment an excellent auxiliary to the Hydropathic Practice. We find the Gymnastic Exercises to be another excellent auxiliary. In many cases our success has been very marked in the use of Electricity, and for the last three years we have been investigating to ascertain the merits of the

TURKISH BATH;

and so thoroughly convinced have we become of its great value, that this season we have put in these Baths, with a New Movement Room, at an expense of $4000. Our Baths are on the second floor, on the northwest side of our building; are thoroughly ventilated, and are *nice* in every particular. In using the Turkish Bath upon our patients, thus far, we have attended to ourselves and watched their effects closely; and their good results have gone far beyond our most sanguine expectations. We believe that they can be used to advantage in almost every conceivable case. By graduating the temperature and time in the heated Room, we can treat the most feeble patient with the most astonishing results. Saying nothing of the Turkish Bath as a luxury, we believe it to be the *King Bath* for the treatment of disease. We have been surprised to learn how strengthening to the system and soothing to the nerves upon the most delicate and sensitive invalid is the coming in contact and breathing the hot air of the Turkish Bath Room. We can not see how the well-educated Hygienic physician can fail to see the utility of Graduated Heated Air, the *very element of life* in the treatment of disease. When any thing comes up better than the Turkish Bath, we shall be ready to adopt it At present we are fully satisfied with it.

We have now associated with us, as Assistant Physician, Miss ELLEN H. GOODELL, M. D., whose medical education, experience and practice, enables her to stand equal to any one of her sex in this country. We will here mention, what will not be found in our Circular, that we have a Club-Room, a large, airy Hall, where we can accommodate gentlemen patients with all the privileges of our Cure (except personal washing), including the Turkish Baths and Swedish Movements, for $9 per week. Address, inclosing stamp, for our New Circular,

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Is prepared to give Hygienic treatment, including Swedish Movements, at his office, or to attend to general practice in city or country; may also be consulted by letter, by stating fully the patient's symptoms and manner of living, and inclosing $5 for prescription. Office hours from 8 to 10 A. M., 1 to 3 and 5 to 7 P. M. je-3t*

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The "Granite State" has now become widely and favorably known as one of the best Hygienic establishments in the land.

Through its great success in treating disease for the last fourteen years, the perfect homelike atmosphere that has ever pervaded the institution, the moderate terms upon which patients have been received, the care that has been taken to insure their recovery, and to return to them the largest equivalent for the money they have expended, this institution has been built up into a large and flourishing establishment. It is not too much for us to say that patients from all parts of the country, from our large cities and from interior towns, have been enthusiastic in their praise and in recommending our institution to their friends.

The following points have attracted attention:

1. Our accessibility: the cars stop within a few rods of our door.
2. Our location, amid pleasant and romantic surroundings.
3. The purity of the air and the excellence of the water.
4. The dietary: the variety, the exceeding simplicity of preparation, and yet the palatableness of the food.
5. The careful attention bestowed on patients and the specific directions given to insure their recovery.

To all invalids, living far off or near, in the city or in the country, who wish to find some pleasant resort for the spring or summer months where they may recuperate their wasted energies by placing themselves, physically, mentally and socially, in the most perfect health-conditions, the "Granite State" will be found perfectly adapted and will doubtless give satisfaction.

We wish it distinctly understood that this institution is not a fashionable resort, but a *home* and *cure* for the invalid.

We have had a large and very successful experience in treating the special diseases peculiar to the sexes, and patients of this class may be assured that they will receive the most skillful treatment.

We have greatly enlarged and improved our buildings, and shall be able to accommodate many more within the Cure than heretofore. When we can no longer do this, good rooms will be provided at a little distance, as has been done with so much acceptance in the past.

Ministers of the Gospel, dependent on their salaries for support, will be taken at a reduced rate.

The reader is referred to the April number of this JOURNAL, where he may see what our patients say of us.

☞ No drug poisons are ever given in this establishment.

*** The Hot-Air Bath, a modification of the Turkish, is used in some cases.

☞ We shall be glad to send circulars giving particular information concerning our establishment to all inquiring friends who will inclose stamp for postage.

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MOVEMENT CURE, Electricity and Hydropathy. R. WILSON, M.D., No. 665 North Thirteenth Street, Philadelphia. an-tf

TURKISH BATHS.

One of the Publishers of THE HERALD OF HEALTH, Dr. A. L. WOOD, who for the past two years has built and superintended Turkish Baths in Providence and New York, has been traveling in Europe during the past summer, for the purpose of examining the construction, modes of heating, and management of the numerous and extensive baths which are there becoming national institutions, and being convinced that the general introduction of Turkish Baths, *as now modified and improved*, will do more to improve the health of the American people, and lead them away from all forms of Intemperance and Druggery to a reliance upon the natural hygienic agencies than any other means now employed, we shall do all in our power to introduce them throughout the land. In accordance with this determination, Dr. WOOD will respond to calls to lecture upon the subject, or to superintend the construction of the Bath after the most improved plans, in private houses, Hydropathic establishments, Hospitals and public institutions, or for the public in cities and towns in any part of the country. dec-tf

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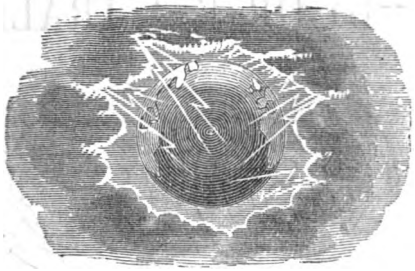
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The Introduction treats of Hygienic appliances; Bathing, Food, Exercise, Light, Clothing, Sleep, Beds and Bedding, Bodily Positions, Night Watching, Friction, Electricity, Galvanism, Magnetism, and cleanliness. Part First treats of Venereal Diseases proper, their history, the venereal virus, modes of propagation, inoculation, syphilization, mercurialization, gonorrhœa, its seat, symptoms and treatment; Syphilis; location, stages, varieties, and diagnosis of chancres, treatment of syphilis, prevention of venereal diseases, &c. Part Two, of Spermatorrhœ, or Seminal Weaknesses, its causes, symptoms, treatment, complications, and sequences; drug-treatment, and cauterization. Part Third, of Female Diseases; mis-menstruation, retained menstruations, suppressed menstruation, painful menstruation, chlorosis, leucorrhœa, inflammations, and ulcerations, etc. etc. Part Four, of miscellaneous affections, including displacement, anteversion, retroversion, inversion and prolapsus of the uterus; uterine tumors, cancers, dropsy, etc. etc.

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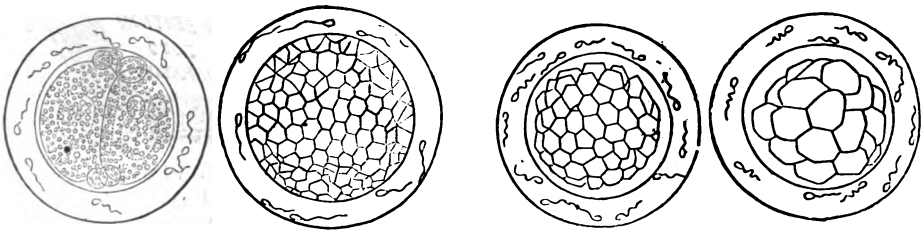
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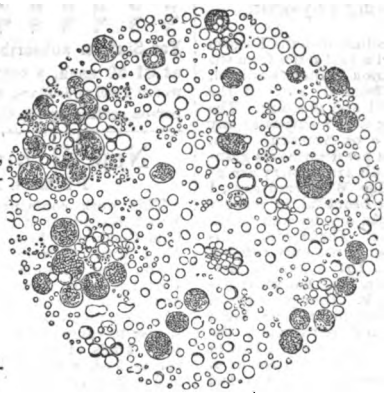
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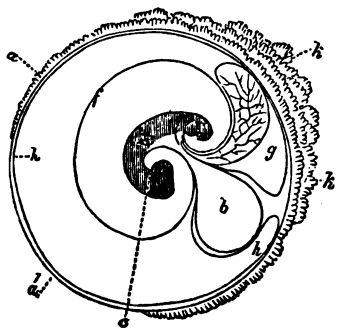
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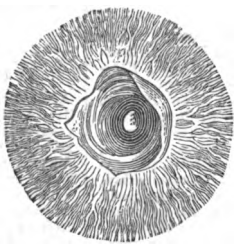
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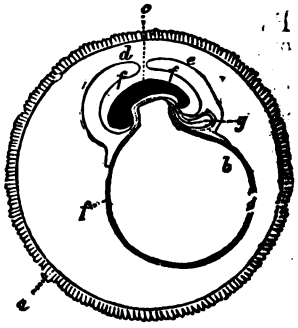


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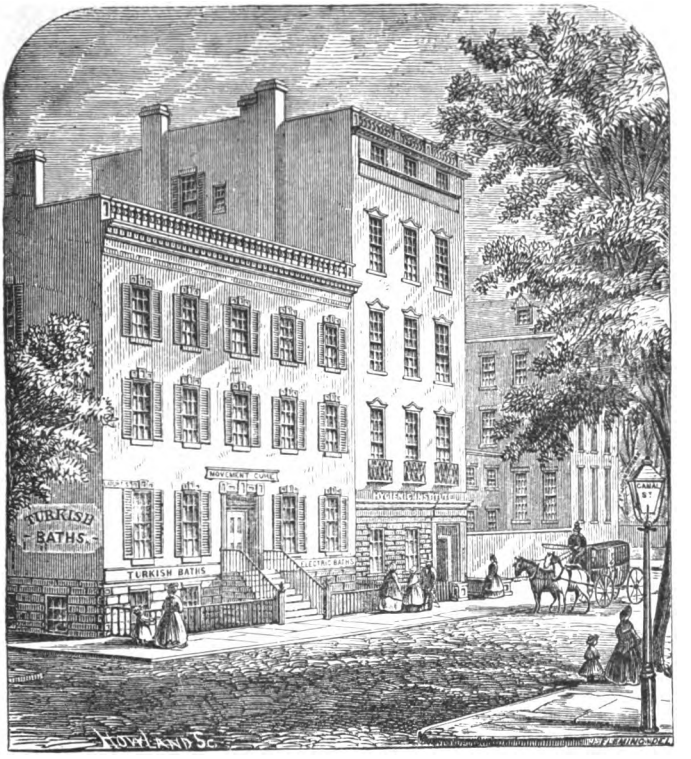
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MILLER, WOOD & CO.,

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NEW YORK, June 1, 1866.

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THE HYGIENIC INSTITUTE.

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Our arrangements for the application of the Swedish Movements are among the best in the country, and we are now for the first time prepared to apply singly or collectively all the hygienic agencies for the cure of disease.—Invalids, no matter what their ailments, may be assured that if their diseases are curable by any process known to man they can be cured here.

Experience has taught us that some forms of chronic disease cannot be cured by simple reliance upon air, water, food, rest, and the ordinary appliances found at Water-Cure Establishments, but that they require heat, electricity, and careful manipulations of the muscles as given in the Swedish Movement Cure.

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PROSPECTUS OF

THE HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE

FOR THE YEAR 1866.

With January, 1866, commences the Seventh Volume of The Herald of Health. We need only briefly refer to its objects:

1. To teach the Laws of Life and the Rules of Health, as far as known, by which each person shall secure freedom from sickness, to a great extent, and avoid premature death.

2. The Care of Children, so that instead of four-fifths of them dying before they attain five years of age, a majority may be preserved to beautiful, happy and useful lives.

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THE

HERALD OF HEALTH

AND

JOURNAL OF PHYSICAL CULTURE,

DEVOTED TO

HYGIENIC MEDICATION, BODILY DEVELOPMENT, AND THE LAWS OF LIFE.

BOSTON MEDICAL LIBRARY ASSN. MAR 8 1893

AUGUST, 1866.

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General Articles.

Written for The Herald of Health.]

The Headland.

BY ALFRED B. STREET.

THE headland breaks
Through the mist that wakes,
As the sunset flows o'er his path of lakes.
The honey-dew cleaves
To the arbor of leaves
That the lady-birch linked to the pine-tree weaves

A deep, grand mass
Frowns the headland, when pass
The gleams from the forest and mirrored-glass,
And the owl's wild shout
Breaks the quiet about,
And the deer startles up to the loon's shrill rout.

In the moon-lit June
When the whip-poor-will's tune
Haunts the heart of the forest like sorrow's croon,
The rock seems blent
In a silver content
Never showing from forehead to foot a rent.

Oh, headland sign
Of this heart of mine!
Now rich with the luster from Pleasure's shrine!
Now dark with the dyes
Of the clouds that rise,
Thus taking the hue of life's variant skies!

[Written for The Herald of Health.]

Tobacco.

BY HORACE GREELEY.

THE vital truth that underlies and uplifts all dietetics, all physiologic righteousness, is the proper subordination of all our physical or material appetites to moral ends. "Whatsoever is not of faith is sin," was the great Apostle's forcible statement of the same truth in a different sphere of application. In the divine economy there is nothing indifferent, but every act is positively right or wrong. Whatever is needful to the healthful sustenance of our bodies, the vigorous performance of all their functions, that is not merely innocent but laudable—whatever goes beyond this, looking to a sensual gratification which terminates in itself and aspires to nothing beyond, is disallowed and pernicious. "What *end* is it calculated to subserve?" is the touchstone of every solicitation by an appetite for indulgence; and by the truthful answer must the innocence or culpability of acquiescence be determined.

Tobacco, like alcohol, first appealed for favor under a medicinal guise, as an antidote for certain physical ills, as well as a soother of cares and a balm for a wounded spirit. Experience has long since proved its claims to medical virtue utterly illusory and unfounded. Were the thousand best doctors on earth called this hour to deal with so many different diseases or ailments, it is possible that not one of them would prescribe tobacco. It is clear, therefore, that tobacco is not one of Nature's great remedial agents for the removal of disease.

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Then why do men seek and consume it?

For precisely the same reason that they imbibe intoxicating liquors. The senses are drugged, the nerves are soothed, by that which debauches the entire physical and moral economy. As alcoholic stimulation results from the strenuous efforts of Nature to expel a deadly poison, so narcotic relaxation of the nerves and muscles is attended by a more tranquil feeling of sensuous enjoyment. Alcoholic stimulation is Nature's resistance to the effects of poison; narcotic relaxation is a welcome given by our mortal frame to the silent approaches of dissolution and death.

The right of a human being to seek enjoyment at the expense of his own physical integrity is not admitted. To allow it is to affirm the innocence of suicide. But the right to annoy, disgust and damage others by the use of tobacco is even more clearly non-existent than the right to injure ourselves.

No person does or can use tobacco without offense to the uncorrupt by whom he is surrounded. They may complaisantly disclaim nausea, but they nevertheless feel it. Their insincere politeness should rebuke his coarse egotism.

But the smoker or chewer who gratifies his perverted appetite in the thronged street, the public conveyance, the public assemblage, and even the meeting for Divine worship—what shall we say of him? He *knows* he is paining and damaging those who have never given even a constrained, hypocritic permission; he knows that he is making himself a general nuisance for ends purely personal and selfish; he knows that he is permitted thus to annoy and injure others only because their courtesy so immeasurably transcends his sense of justice. He presumes only because he is confident they will submit to personal annoyance and harm, rather than wound the feelings of one who has no regard for the feelings of others.

Drinking is oftener a social, smoking a solitary vice. Many who drink deeply seldom drink when alone; while he who smokes at all needs no incitement of companionship. When, O when will men realize that the non-medicinal use of narcotics is a vice, and one of the most inexcusable, most egotistic, most repulsive of socially tolerated evils? When shall our youth be impressively taught to shun tobacco as the natural ally of every form of sensual demoralization?

It is remarkable that the words in all European languages which express forgiveness or pardon, all imply *free* gift.—*Whately.*

[Written for The Herald of Health.]

The Turkish Bath.

A LECTURE BY "ORIENT."

I will now mention a few of the complaints and diseases which may be relieved by the use of the bath. I have said little in relation to the effect of the bath on persons who enjoy perfect health. You can make no improvement on health; the great thing to be done is to preserve it. We seldom see the brute creation in its natural state suffer in consequence of sickness. The wolf and the deer and other wild animals are never afflicted with decayed teeth, fever and ague, dyspepsia, scrofula and consumption. Why not? Because they obey the physical laws of their being. They have no doctors, no hospitals, no predisposition to insanity or ill health. Why not? Because they eat no condiments, drink no poisons, chew no tobacco, swallow no drugs, wear no ligaments to impede the circulation, no garments that exclude the rain and air and sunshine. They seem to live in a free and open bath—warmed by the sun, shaded by the clouds, fanned by the wind, while the lakes and rivers afford ample means for washing and bathing.

In cases of indigestion the bath affords relief to the stomach by calling the blood to the surface. The inflamed stomach needs no lotions, no astringents, no poultices—it needs rest. Whatever disturbs the equilibrium of the stomach tends to produce congestion of the blood within, hence the necessity of calling the blood to the skin. The heat of the bath also renders animal heat less necessary; hence, less food is required, and the task of the digestive apparatus is lightened. It is the opinion of men whose opinion is authority, that the constant use of the bath diminishes by one-third the amount of food required.

The temperature of the stomach is changed by the use of the bath, and it is braced for the task it has to perform. Stimulants and frequent eating and over-eating are the primary cause of dyspepsia. Now, external heat and internal cold, sunshine without and cold water within, are among the speediest and most effectual cures for dyspepsia.

The bath alleviates that craving of the stomach common to drunkards. I do not hesitate to avow that careful treatment and strict fidelity on the part of the patient would cure the drunkard of his unnatural thirst for liquors. I can not conceive of a better cure for delirium tremens. Total Abstinence and the Turkish Bath are twin-reformers, that will cure the most ob-

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stinate cases of perverted appetite when placed under their care.

Not long since a reformed drunkard broke his pledge, and urged as an excuse for doing so that he did not consider his oath binding because there was no Government stamp affixed to it. A witty apology, you say, but not a safe one. Now, the safe and sure way to recover the drunkard is to cure the disease as well as to convert his mind. Heal the scarred and schirrus stomach; wash away the fires of Sodom and Gomorrah from his face; put out the fires in his throat and stomach, and keep them out; then he *is* safe.

In cases of abrasion, suppuration, inflammation and sores, the bath affords quick relief. The air produces no pain on the parts exposed; there are no irritating ointments and plasters. You may be inclined to think that the perspiring process which comes to the relief of the sore stomach or the sore skin, taking away, as it often does, from one pound to one pound and a half in an hour, and more than that even when subjected to intense heat—must weaken the system. Let me at once undeceive you in this matter. The blood that you get rid of is bad blood, effete matter, poison—and, like Confederate bonds, the more you have of it the worse you are off. You remove this bad blood, and in less than a dozen hours the chemistry of life in the laboratory of the system will make pure, good, healthy blood to take its place. In that manner you exchange foul for clean blood—poisoned for pure blood.

The loss of blood by perspiration brings on thirst; you drink water, and it has not to be digested, but passes at once into the blood, for in this case the craving for water comes not from the stomach, but from the blood, for the sweat is the essence of the blood. In the bath we take out the impurities from the blood by perspiration. Instead of tapping the body and taking away the blood, we wash it. Fluids taken into the stomach have quick access to the blood. When a man drinks ardent spirits the poison soon finds its way into the circulation. Bleed a sot, and on the application of a match his blood will burn, covering the bowl with a blue flame and yielding the odor of rum. Cases of spontaneous combustion have occurred by touching the light of a lamp to the lips of drunkards. Their breath caught fire; it was a fire which water might have extinguished, perhaps. To prevent combustion, ignore the rum and take the water.

If it were possible to put baths in the places of our grog-shops, and persuade men and, I will add, women, to patronize the former as they now do the latter, we should have such a Temperance revival as Father Matthew never saw. The disease would be cured, the desire would be conquered, and the blood would be purified, so that the appetite would not be transmitted to other generations; it would not be an inherent appetite, for it would be entirely rinsed out of the system. Delirium tremens—a disease which comes of intemperance, a modern demon from the hell of passion—would no longer be known. Now, it is a black ghost, haunting many unhappy families, and scaring health and peace and life from the circle of home. I hold that the system of frequent bathing should be regarded as an invaluable adjunct to the enterprise which has been properly called the John the Baptist of Christianity.

The effects of caloric on the human system have not been generally appreciated. Tonics and mineral acids have, with quinine, been among the favorite remedies employed by our most popular physicians in their treatment of phthisis. Without attempting an elaborate discussion of this subject, I will merely glance at some of the points which go to prove that the bath is among the best, if not the very best cures that can be employed to arrest the fearful ravages of consumption. It removes the effete matter from the skin, unclogs the pores, and takes away whatever hinders excretion; in this way the general health is promoted, and the lungs receive the advantages of this new lease of life. The Turkish Bath ungloves the patient, and gives the million-mouthed skin an opportunity to perform its natural functions. It brings on perspiration, and pours it through the channels which have been opened, sweeping in its course the bad humors and other offensive matter to the surface. It is like a flood which cleanses the filth from the sewers, washing away the accumulated stuff whose odor was a stench to sensitive nostrils.

It is a process of cleansing not unpleasant, not exhausting to the patient, and it can be easily regulated to suit the convenience or the necessities of the bather.

It admits air to the lungs through the action of the skin, and the heated air of the bath has a beneficial effect, which is manifested by diminished expectoration and the check of the consumptive cough. I could devote an entire lecture to facts showing the improved condition of consumptive patients who have used heated air. Blood being diverted from the lungs, there is no danger of its breaking out afresh in consequence of the use of the heated atmosphere,

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and the patient is less liable to take cold; he becomes hardy and can endure exposure to the air, and the air is his best doctor. The hot-air bath and the cold plunge fit his nature to the climate, and if patients are careful to take proper exercise and obey dietetic laws, in all acute and in many chronic cases they will have vital power enough to overcome the disease, and in the most hopeless cases it alleviates pain and greatly prolongs life.

I have used the word dietetics, and I will say here and now that in nine cases out of ten consumption might be prevented by an observance of the laws of dietetics. In Dr. Howe's recent report before the Massachusetts Board of State Charities, he gives some startling and appalling statistics and facts in relation to disease, insanity, pauperism, crime and death. It appears that the State of Massachusetts, a State nearer heaven and further from the other place than almost any other State in or out of the Union, has four thousand wards whom she feeds, clothes and controls; some are blind, some are deaf, some are idiotic, some are insane, some are cripples, some are paupers; they are supported in eleven institutions at a cost of half a million of dollars per year. These institutions do not include those who are sustained by private charities in the State. Dr. Howe thinks that many of the great army of dependents might have been saved by proper care, by avoidance of the dangers into which they have been plunged by their parents, or into which they have gone of their own accord.

Hear what he says of the mortality among children:

"In careful breeding of cattle, at least ninety-six per cent. comes to maturity, and of horses ninety-five per cent., even in our rugged climate; while of the infinitely more precious race of man thirty-three per cent. perish in infancy or youth. Dr. Edward Jarvis, an eminent and careful statistician of Boston, has recently analyzed the registers of burials in Mount Auburn Cemetery, used as a burial place by American families of Boston in wealthy or comfortable circumstances, and of the three great Catholic cemeteries in Charlestown, North Cambridge and Dorchester, used mostly by the foreign population of the one village. These are the ratios in 10,000:

Age.	*Mt. Auburn.*	*Catholic Cemeteries.*
Under 1	1163	2877
-- 5	2796	5830
-- 10	3332	6319
-- 20	3979	6713
From 20 to 40	2365	1827
-- 40 to 60	1591	975
-- 60 to 80	447	252
-- 80 and over	107	—

"In a private letter from Dr. Jarvis I find a paragraph on this same subject:

"There are manifold matters that would profit the world to be instructed upon through the sanitary section of the Social Science Association. My brain is sometimes crowded with them, and my heart aches with the suffering in sickness, debility, attenuation and shortening of life caused by this want of proper knowledge of the condition of our physical being. What do you think of 28.87 per cent. of the deaths of the poorer classes in Boston and its vicinity being under one year of age, tender infants, and only 11.63 per cent. of the comfortable classes in the same age? Of 58.3 per cent. of the poor under five, and only 27.96 per cent. of the richer? These are the results of manifold sanitary conditions all pressing on the poor.

"The table above given shows that a vast percentage of the deaths of children is caused by improper food and surroundings; that deaths in infancy are much more frequent among the foreign population, and deaths from old age among the native population. The Doctor is of opinion that there is nothing in natural analogies which justifies the presumption that such waste of life is a necessary consequence of man's organization."

If children can be saved from premature mortality by proper breeding and culture, should not the work of saving begin at once? Healthy parents will have healthy children, as a rule.

Bad as Boston and Massachusetts are, in regard to the mortality of children, the city of New York is worse; and I will repeat the remark made at the outset of the lecture, that New York needs cleansing; and we all agree that the sanitary use of water in the streets and lanes and sewers is a great blessing, and I am endeavoring to show that water can be used personally—internally and externally—for the welfare of the citizens as well as for the welfare of the city. Look at the stout, square-shouldered, symmetrical men of Turkey, where the bath is used as a luxury rather than in a sanitary sense. In that country many of the diseases so fatal here are unknown.

I will now proceed hastily to mention some other maladies that have yielded to the treatment of the Turkish Bath. You will please bear in mind that there is a wide difference between mal-treatment and skillful treatment of the bath, and that the results vary according to the treatment. The curative effects of the bath are not confined to the disorders I have named—they extend to the gout, rheumatism, sciatica, stiffness of the joints, neuralgia and other ills that flew out of the fatal box of Pandora, such as scarlet, typhus, putrid, remittent and intermittent and yellow fever, and I will add that cases of apoplexy, cancer, leprosy and hydrophobia have been successfully treated by the use of the bath. The alternations of heat and cold place the system in an attitude and put it in a

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condition, and give it the surroundings the most favorable for husbanding and developing its resources in its life-or-death battle with disease.

Do you cry out "Empiricism!" because I say the water-cure treatment reaches every case of disease that is curable? In reply allow me to say that Harvey was stigmatized as an idiot, when he made the discovery of the circulation of the blood; Jenner was persecuted because he suggested vaccination for the small-pox. Only a few years ago doctors and patients were frightened because cold water was given to invalids burning with thirst, and applied to their skins when they were scorched with fevers; even fresh air was considered only an atmosphere through which invisible souls ascended to heaven, and that a gust of wind coming in at the door or window was the whirr of wings that would soon drop on the shoulders of the sufferer and bear him to a better land. But we live in a progressive age, an age that embodies thoughts in deeds. It is an age of ideas and of action, and men of thought will not hug an exploded theory because it is covered with the dust of antiquity, nor embrace a new one only because it is plausible. We have men and women who have the courage to think and decide for themselves. Our bath of Bethesda is open, the angel of reform moves the waters, and the halt, the lame, the deaf, the dumb, the blind, step in and are healed; the facts are the arguments; those who see them are convinced.

Naaman had the leprosy and was cured by bathing; it was a miracle which can be repeated in the nineteenth century. We do not object to the miracles of mechanism and science, which transport us on wings of steam and flame over the land and over the sea. We point to the steamboat, and say: It is a shuttle, weaving the trade of one nation with the commerce of another. The locomotive is an idea in iron, and seems to be endowed with the intelligence of its inventor—as though he, a mere creature, had breathed the breath of life into inanimate matter, thus performing the functions of a creator. We boast of the telegraph, because it speaks in the language of the lightning to the most distant auditor, making a trumpet of space while it annihilates distance. Suppose some conservative fogy should point to the scow, and say that it was older and safer and better than the steamboat; point to the lumber-wagon, and prefer it to the steam-car because of its antiquity; what would you think of the man who ignored steamboats, rail-cars and telegraphs because they were new, or because some persons did not travel in the boats and cars, and others could not see how a letter could be carried on the wires around the world in a few seconds of time? King George the Third had his doubts about apple puddings, because he could not see the aperture through which the cook put the apples into the dough.

Ours is an age of advancement. Man is a progressive animal. He is part animal and part angel. The angel should control the animal, but the animal is king in many households. We want to roll away the stone from the mouth of the sepulchre of disease and find the angel sitting there; we want to save life, to lengthen it, to make it not only endurable, but to make it so happy that it shall be a foretaste of happiness to come. To this end we echo the invitation given in the Scriptures to come to the waters and be healed. We promise a remedy which soon becomes a positive luxury; a remedy which brings with it no nauseous minerals, no poisons; such a remedy as nature employs to revive the grass and flowers and herbs and trees and birds and all animated nature—heat and moisture, sunshine and water. Pour your nostrums and mineral poisons and alcoholic tinctures about the roots of the rose and the lily, and see how soon they will fade and drop their sweet petals on the ground; bind your mustard poultices on the bosom of the bird, and see how soon the hymn in its heart will cease to vibrate on its bill; give your quinine and blue pills to the deer and the fox, and see how soon they will lie dead and stiff and cold in their lairs. Nature's law is the law of God—*obey it and live.*

Look at a case of cancer. Cancer is unknown in countries where the bath is used. Like scrofula and consumption, it owes its origin, not to climate, but to habits of indulgence, improper clothing, unventilated dwellings, over-supplies of food. The chemical analysis of cancer shows that its matter is like the vegetable pulp of the peach, combined with a salty substance, both of which are easily absorbed by external heat.

Urquhart says:

"I should not mind my child being bitten by a mad dog, so certain am I that the bath would cure him. Some time since I asked a medical man to find me a case of hydrophobia, as I was convinced that that disorder must yield to the bath. He told me that my idea had been anticipated in the only known case of cure. A French physician, having been bitten by a mad dog, and suffering from the first symptoms of the disorder, knowing that medicine was of no avail, and thinking only how he could die most easily, had himself carried into a vapor bath, there to remain till death. He remained until life. He was carried out cured."

One of the most disagreeable and tantalizing of the catalogue of diseases, and one of the most

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prevalent in this country, is the ague. Sometimes this disease is accompanied with painfulness which is prolonged for weeks and months and even years. The past year there were about one thousand persons prostrated in the city of Poughkeepsie at one time. That rural city is a city on a hill, surrounded by mountains, and the Hudson sweeps past it. In all parts of the country, in the east and in the west, this foul enemy of human happiness has made a mighty shaking among the bones. This disease is subject to the bath; cases of long standing have yielded in a few hours to the alternations of heat and cold. Fire and water are more effectual remedies than quinine and brandy. Perspiration comes on gradually and washes the poison out of the system, and thus saves Nature the task of shaking it out.

"A few weeks of the bath" have conquered some of the most obstinate cases of St. Vitus' dance. But I can not catalogue the ills for which it is a remedy. I will merely restate some of the points I have endeavored to make in this lecture:

The Turkish Bath prevents disease, and is especially needed in a city where many of the citizens are, in a greater or less degree, shut in from the light and heat of the sun and the bracing influence of a pure atmosphere, and where their occupations do not produce perspiration; it prevents colds, fevers, neuralgia and kindred complaints. It has particular virtues as a remedy for bilious derangements, gout, scrofula, consumption, dyspepsia, hysteria, female weaknesses, malarious and intermittent fevers, dropsy, diarrhea, dysentery, bronchitis and other ills that afflict the human race. In conjunction with the Swedish Movement-cure it is invaluable, establishing harmony between the nervous system and the various organs of the body, building up the muscular strength and imparting vigor to life.

The Turkish Bath is a luxury; it imparts pleasure by cleansing the body, unlike some of the coveted luxuries which are "dirt cheap." Purity of body promotes purity of thought. Unclean deeds are usually done in unclean places. This bath is the admiration of the ladies who have tested its virtues. They have a finer and more exquisite organization than man, their skin is more delicate and the circulation more languid, and they are less exposed to the air and sunshine. The bath, then, is sure to improve the health, and, with it, the beauty and grace of woman.

Finally, the bath improves, or rather develops, the symmetry and beauty of man and woman. When we look at the procession in the street we see a great diversity of features; some are scarred with sickness, some clouded with vicious indulgence, some pinched by want, some shaded with grief, some branded with remorse. We meet human forms bowed down by toil, tarnished with intemperance and tortured by pain, heads without brains, hearts without hope, souls that look out of satanic eyes.

The chief mission of true reform is to undo the devil's work, to save as much as possible from the wreck of humanity. Education puts the intellectual chisel upon the face, removing the grossness of sensuality and sloth, and imparting electric energy and spirituality in the place of vacant, stupid insipidity.

"Of all God's works doe this world adorn,
There is no one more faire and excellent
Than is man's body, both for power and form,
While it is kept in sober government;
But none than it more foul and indecent
Distempered through misrule and passionate bace."

There is something of the majesty of Deity in the pure and perfect man.

"That beauty is not, as fond men misdeem,
An outward show of things that only seem;
But that fair lamp, from whose celestial ray
That light proceeds which kindleth lovers' fire,
Shall never be extinguished nor decay;
For it is heaven-born and can not die,
Being a parcel of the purest sky."

[Written for The Herald of Health.]

Health of Girls—No. 3.

BY DR. J. H. HANAFORD.

The want of sufficient repose and sleep, for the young and for females more particularly, is another cause of nervous debility and kindred diseases. This is intimately connected with excessive amusements, since one feature of these amusements seems to demand *late hours*. While it is impossible to determine the precise amount of sleep needed by each individual at different periods in life, or establish a general rule applicable to all cases, there are certain principles which may serve as guides in the matter. It is certain that children need more sleep than adults, and that females ordinarily require more than male, at the same period in life and under the same outward circumstances. This follows from their peculiar organization, their temperament, their comparative sensitiveness, their delicacy and activity, the many influences calculated to tax the nervous system, etc., all demanding special recuperation, special restoration of wasted energies. It is generally safe for women whose nerves are overtasked by cares and anxiety, especially when caused by the care of children—nursing included—to secure as much sleep as possible, or at least as much as nature

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seems to demand, since our nature is such that we are able to conform to existing circumstances, taking much or little sleep. Those who labor physically, who are fatigued, positively demand abundant and refreshing sleep, the natural inclinations corresponding with the amount needed. The farmer, rising in the morning as joyous as the birds, after the labors of the day, true to his nature, early seeks repose — "nature's sweet restorer, balmy sleep"—impelled by impulses not easily resisted. In health, Nature's dictates are safely followed. Exertion wastes the powers of the body, demanding the recuperative influences, patent indeed, of sleep and rest. But when the nervous system is exhausted, instead of the muscular, it is by no means certain that the apparent demand for sleep will correspond with the real wants of the system. Indeed, it is by no means strange for certain forms of disease to produce a fearful wakefulness, even when sleep is imperatively demanded. This brings on critical symptoms, and is often the result of some local inflammation or irritation. It is also true that females, even in the absence of ordinary forms of disease, are frequently disturbed in a similar manner, experiencing a depressed state of the nervous system, in which sleep is positively needed, and yet the impulses do not indicate this necessity. Indeed, it is sometimes true that the greater the exhaustion of the nervous system and the need of sleep the more wakeful the victim temporarily becomes. Under such circumstances, soothing applications, such as a vapor-bath, a warm tub-bath, fomentations, etc., are demanded. At such a time the inclinations are less trustworthy than the judgment. Among the causes calculated to produce this condition of the nervous system are intense mental labors, undue excitement, disappointments, grief, anxiety, etc., indeed, any thing that excites or depresses the nervous system.

Again, the time in which sleep is taken is a matter of much importance. It is not sufficient that one should sleep six or eight hours during the twenty-four. There is an appropriate time for sleep—at night—and if not taken at that time one fails to secure the natural benefits of such repose. Although it may not be strictly true that "one hour before midnight is worth as much as two afterward," it is certain that early rising and early retiring are favorable to if not a necessity of health, and that the most valuable sleep is obtained before the dawn of day. In the brute creation, whose natures and instincts are uncontaminated by artificial habits, the sun scarcely sets before beast and bird seek their repose, while their notes of praise and tokens of joyous activity are manifest at or before the dawn of day. This is nature, *uncorrupted* nature. Just so far as man departs from this order, just so far he violates his original nature, and just so far he suffers the penalty of violated laws. The young lady, therefore, who adopts the modern custom of changing night into day and day into night, and writing poetry by the light of the "midnight oil," will find such practices more poetical than physiological, and more pleasing to vitiated tastes than favorable to health. Indeed, such habits are utterly incompatible with good and perfect health. The Creator will never suffer His laws thus to be recklessly violated and wickedly disregarded, and still allow the sinner to remain unpunished. These principles need no further confirmation than the fact that those who watch or labor at night, sleeping by day, necessarily suffer in their health. It seems to be a law of our nature that good and refreshing sleep, the most valuable, is obtained *only* during the darkness and at night, when all nature seems in repose. We are so constituted that for a season we may seem to violate the laws of our physical being, yet the "day of reckoning," the penalty, is sure to come, in no respect mitigated by postponement. Repentance is of no avail when the "ax is laid at the root of the tree."

Again, "weak eyes," so alarmingly prevalent among young ladies of modern times, is attributable, in part at least, to using them late at night by an artificial light. The evils of such a course are twofold—first, that all artificial lights, especially those that flicker and dazzle directly upon the eyes, are unfavorable as compared with the yellow rays of the sun; and also that this unwarranted taxing of the sight follows the labors of the day, during which the eyes are sufficiently exhausted. In short, the couplet:

> "Early to bed and early to rise
> Will make you healthy, wealthy and wise,"

contains far more truth than poetry. These truths apply with special force to females, since they control and mold society far more than they ordinarily suppose. Our interest in them is like that felt in our generals in the late struggle, since *they control.*

A Corn Cob.—A witty clergyman, accosted by an old acquaintance of the name of Cobb, replied: "I don't know you, sir." "My name is Cobb," replied the man, who was about half-seas-over. "Ah, sir," replied the clergyman, "you have so much of the corn on that I did not see the cob."

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[Written for The Herald of Health.]

English Pluck.

BY MOSES COIT TYLER.

PARTLY from an instinctive skepticism, partly also from a sort of whimsical rebound of combativeness, there is in human nature a very perceptible tendency to erect the mark of a query over against any proposition which happens to be frequently and rather vauntingly asserted. It may be on some such principle that many persons, especially before coming to England, have their own private doubts about this thing, renowned in all the four quarters of the earth as "English Pluck." Of course no man, though born at the antipodes, who has even skimmed over the history of human affairs for the last thousand years, can doubt that the English are brave; but so are many other people — the French, the Spanish, the Austrians, for example —yet who ever hears of French pluck, or Spanish pluck, or Austrian pluck? The question is, whether there is in Englishmen any such preeminence and predominance in respect to this peculiar quality of physical fortitude, as to justify the celebrity it has attained in all the civilized languages of mankind.

I am not sure that I can give a satisfactory account of this subject; but I have some observations to make concerning it, which may at least assist the reflections of others.

Whether or not the English actually have more pluck than other races, it seems to me certain that they have more admiration for pluck; and that the incessant expression, age after age, of this genuine and passionate sentiment, may go far to account for the currency of the phrase which describes it. This national tendency to love and to laud the virtue of courage, finds its voice not merely in the poetry, the ethics and the eloquence of England, but even in its vices and crimes; in its social manners and in its traditional aphorisms of political and personal feeling.

There is an important sense in which all crime is cowardice; yet English crime certainly has less of the cowardly element than we find elsewhere. There has always been a plenty of murder done in these islands; but it is not murder of the stealthy and subtle, that is, sneaking and dastardly kind. English ruffians can hack and mangle to perfection; they can equal any body in slashing and slaughter—in out and out horrid, bloody and comprehensive butchery; but for *finesse* in killing, for velvet-footed, creeping, cat-like, artistic "taking off," for letting out human souls through neatly executed apertures, for those graceful, noiseless, clean murders, for deaths done scientifically with cloaked dagger and the exquisite poison, you must go to Italy and to the Orient. Let it be known, then, for the edification of whom it may concern, that the trade of murder in England is practiced after the plucky type. It may be pleasant for you to reflect that if you come to England, you will stand some chance of getting murdered in some other way than in the contemptible, insidious Italian fashion.

The same characteristic of rough physical hardihood stamps itself upon the baser sports of England. Prize-fighting is infamous enough; but in the quality of courage how vastly removed from bull-fighting, the dastardly pastime of the tropics! Tom Sayers, mangled, blinded, streaming with blood, yet keeping on his legs and wagging his broken arm to receive the crushing blows of Heenan's twin battering-rams, with nothing left in him but his dogged pertinacity in pain, displayed exactly the quality which fixed like adamant the British lines at Waterloo. The strongest point in the defence of the Ring in England, to-day, is the pretence that it is a seminary of courage; and probably all that is needed to eradicate the popularity of pugilism, is the repetition for a few more times of the spectacle presented the other day by Mace and Goss—the spectacle of two pugilists turned into two puppies.

Through the whole web of English politics you may trace the same thread of English pluck—a valor scorning the refinements of Macchiavelli, too proud to win by mere adroitness, marching the square-fronted defeat with a bluff and defiant joy. The resolution of the Childless Highland Mother in the old Jacobite song,

> "I ance had sons, but now hae nane,
> I bred them toiling sairly:
> And I wad bear them a' again
> And lose them a' for Chairlie,"

but gives the key-note to that noble, sturdy refrain of devotion unto death and of courage conquering despair, whose echoes resound through many centuries of English history. It is an old political maxim that "Englishmen hate coalitions"—a maxim expressive of that unbending fortitude of nature which will neither strike flag to an enemy nor strike hands with him.

We come upon the same great quality in this people's character by following that strangely significant path which is beaten out for us across the wilderness of words. When a man has something to say, but does not dare to say it, and skulks into an ambiguity, or hides behind

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the corner of a verbal evasion, how do we commonly drive him forth? "Sir, the English of your statement is—so and so!" Thus into the very texture of our daily speech is woven the conviction that a thing which is not honest, straightforward, fair and square, is not English. Who needs to be told that the corner-stone of such a character is that courage which lies on the moral side of what we understand by pluck?

The fact which we are considering gives us a clue as to the cause of the gruff and crusty bearing of an Englishman. The verdict as to manners has gone against him in the great Court of Public Opinion. When a stranger comes to him, his ways at first are undemonstrative and chilling; and when he goes among strangers he contrives to make himself the most unpopular of tourists. I do not deny that there is a fault here, and that there are other causes which conspire to produce it; but I claim that this fault is largely the offspring of a virtue. He is brave enough to encounter your dislike. He is too courageous to lie to you by a forced and simulated cordiality. His pluck will not suffer him to bid for your approbation by skin-deep smiles when he thinks the situation demands growls. Extreme affability lives next-door-neighbor to moral cowardice, and sometimes even in the same house.

I have often been struck, both in English history and in English common life, with the grim, hard style of language with which they often dispose of bodily suffering. After Marston Moor, Oliver Cromwell wrote to his friend Valentine as follows: "Sir, God hath taken away your eldest son by a cannon-shot. It broke his leg. We were necessitated to have it cut off, whereof he died." The popular ballads of England are eminently realistic in their allusions to murder. Theodore Hook has precisely caught their spirit in his horrible-rhymed tale of the assassination of Mr. Henry Weare:

> "They cut his throat from ear to ear;
> His skull they battered in;
> His name was Mister Henry Weare—
> He lived at Lyon's Inn."

Not many years ago a pious old Scotchman had a son, who went to college, learned to "wag his pow in a pulpit," and finally became a missionary. After some time a friend of the family, meeting the old man, inquired after the welfare of the missionary, and got only this answer: "The haithens ate him." What a fine old Englishman was he, who, at the siege of Exeter in 1549, brought out all his provisions to the famishing inhabitants, saying that "as he communicated to them all his store, so he would participate in all their wants, and that, for his part, before he would consent to yield up the city, *he would feed on one arm and fight with the other.*"

Nero expressed the amiable wish that the whole Roman people were reduced to one man, that he might cut off every body's head at one stroke. So it seems to me that there would be a considerable advantage if the whole English people were reduced to one man that we might illustrate all its peculiarities by one example. I do not know but such a reduction was really made in the last century, and that old Dr. Johnson was the result. Was he not the one concentrated and quintessential Briton of all ages? Could a better representative Englishman be discovered or even invented? Range over English biography and can you name any other man who so perfectly condenses into his single individuality all the great and all the ignoble qualities of the English race—its intellectual and moral energies, its superstitions, its rooted prejudices, its magnificent aspirations, its generosities, its meannesses? Would you read the History of England, read Boswell's Life of Johnson! And how worthily the grand old fellow stands for the quality of English Pluck! One night, according to Bozzy, the Doctor was attacked in the street by four men to whom he would not yield, but kept them all at bay until the watch came up, and carried both him and them to the round-house. In the theatre at Litchfield, Johnson having for a moment quitted a chair which was placed for him between the side scenes, a gentleman took possession of it, and when Johnson on his return politely asked for his seat, rudely refused to give it up; whereupon Johnson laid hold of it and tossed him and the chair into the pit. Foote, the comedian, had resolved to imitate Johnson on the stage. Johnson went to Tom Davies, the bookseller, and asked him what was the common price of an oak stick, and being answered six-pence, "Why then, sir," said he, "give me leave to send your servant to purchase me a shilling one. I'll have a double quantity; for I am told Foote means to take me off, as he calls it, and I am determined the fellow shall not do it with impunity." Foote heard of the purchase and changed his programme.

During my residence in England I have had great opportunity and have taken great interest to observe in boys' schools the manifestations of this cardinal attribute of the Anglo-Saxon race. These establishments may or may not spend too much time over the accomplishment of manufacturing Greek Iambics and of translating the language of Chatham into the language of Cicero; but they certainly breed manliness. What

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an English school boy learns from his fellows is of infinitely greater value than what he learns from his tutors; and that is courage, with its attendant virtues—truth in speech and scorn of sneaks. Nowhere else is greater homage paid to pluck. I remember being at a boys' school near London during the play-hour. A little fellow was brought in with a severe contusion of the forehead from a stone. The blood was running freely down his face, but not one tear. He disdained even to appear concerned in the affair. I am told that in these schools if a boy holding the bat flinches at the approach of the cricket-ball, he is "put into Coventry"—a punishment more terrific for him than the Pope's curse with bell, book and candle; for a particular number of days he is simply ignored by every other boy in the school. No one will speak to him, look at him, walk with him, sit with him, help him, or make any reference to him. He is banished to the solitude of his own cowardice. He is made to feel to the core of his heart and to the marrow of all his two hundred and twenty-five bones that death itself is vastly preferable to dodging. Few boys get put into Coventry a second time. It may be imagined what will be the objection of an English school-boy to Dr. Lewis' system of Gymnastics. They have the fatal defect of being perfectly safe. In "Tom Brown's School Days at Rugby" is this remark: "It's very odd how almost all English boys love danger; you can get ten to join a game, or climb a tree, or swim a stream where there's a chance of breaking their limbs or getting drowned, for one who'll stay on level ground, or in its depth, or play quoits and bowls." These little fellows can not at all understand how Dr. Lewis could be such a muff as to make no arrangement for smashing their heads or fracturing their collar bones.

London, *June* 1, 1866.

Joab Plumb.—One of the oldest inhabitants of Wisconsin, Joab Plumb, died at Lake Mills in that State recently, and in his ninetieth year. He was born at Richmond in Massachusetts, and lived in that State till he was sixty-five years of age, when he removed to Oberlin in Ohio, and after a residence of somewhat more than two years in that place, went, in the year 1843, to Wisconsin. There he occupied himself with the introduction and cultivation of such fruits as are suited to the soil and climate of Wisconsin, and did much to encourage and promote this branch of husbandry. His temperate and regular habits not only preserved his bodily vigor to a late period, but his perceptive and intellectual faculties also. His death was calm and peaceful, and he left the memory of a good and useful example.

[Written for The Herald of Health.]

Spinal Curvature.

BY A. L. WOOD, M. D.

Man was created to walk the earth erect, and upon him alone, as being the most perfect creation of Divine Wisdom, was conferred that erectitude of body which distinguishes him from the rest of the animal kingdom. There are few things that tend more to promote the health, strength and beauty of the human organism than this. Perfect health can not exist without it, and the greater the departure from an erect bodily position, the greater, other things being equal, the departure from perfect health.

It is also an indispensable requisite to beauty of form and grace of movement. Who ever saw a person with a curved spine physically beautiful and graceful? True physical beauty does not take cognizance of the form of the face alone, but of the whole organization. How few there are, then, who really possess a beautiful and graceful form; how few that possess that greatest of earthly blessings—health!

The condition which exists in nearly all cases of departure from an erect position, is an unnatural curve of some portion of the spine. The spinal column consists of twenty-four vertebræ or little blocks of light, spongy bone, resting by their flat surfaces upon each other, but separated by elastic cushions of cartilage. They are bound firmly but not immovably together by ligaments, and the whole forms a very flexible column, possessing little power in itself of maintaining the erect position. It is held in place and moved about in various directions by muscles which are attached to it throughout its entire length, no less than three hundred distinct muscles being concerned in its complicated movements.

In its normal condition, the spine, when viewed from behind, appears perpendicular.

When viewed from either side it presents three slight curves—one forward at the neck, one backward in the dorsal region, and one forward at the small of the back. With the exception of these natural curves the position of the spine depends entirely upon the action of the muscles attached to it. If the spine is in its normal position these curves will exactly counterbalance each other—that is, the top of the column will be directly over the base.

There are three principal varieties of curvature of the spine, namely, angular curvature, lateral curvature, and that form usually known under the names of round shoulders, stoop neck, etc. Angular curvature is entirely dif-

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ferent from the other forms, and is produced by an ulcerative absorption of some one or more of the small bones composing the spine, and may easily be known by the angular projection backwards which always exists in this form of curvature. Lateral curvature is a circular bending of the spine to one side, and is always caused by defective and unequal muscular action. Forward curvature or round shoulders is a similar curve of the upper part of the spine forward, and is produced by the same causes as the lateral form.

There are two forms of lateral curvature, the sigmoid or double and the crescentric or single. The former is much the most frequent. It consists of a principal curve to one side in the upper or dorsal region and a smaller or compensating curve to the opposite side in the lower portion of the spine. The upper and principal curve is in a large majority of cases to the right side. When the principal curve is to the right, the right shoulder and hip are the highest, and the right shoulder-blade the most projecting. When the main curve is to the left these conditions are reversed. In the crescentric form there is but one curve and that is usually much lower than the principal curve in the sigmoid variety. It occurs about as often to one side as the other. There is commonly but little difference in the height of the shoulders in this form, and the projecting hip is always the one on the side opposite the curvature. There is a great variety in the appearance of lateral curvatures; but they may all be reduced to these two general types.

Lateral curvature is always caused by the unequal action or weakness of the muscles connected with the spine, and this in turn is produced by any thing which tends to debilitate the general system, by bad positions in lying, sitting, writing, standing or laboring; by the excessive use of certain muscles and the deficient use of others; wrong modes of dressing, etc.

One of the most prolific causes of this deformity is to be found in the false system of education pursued at the popular boarding-schools and ladies' seminaries where the pupils' brains are constantly crammed and overtaxed; where their muscular systems become enfeebled for the want of proper exercise; their digestion impaired and vitality lessened by breathing impure air and eating unwholesome food, and where, to make assurance doubly sure, they are forced to sit, study and write upon high and uncomfortable seats and at wrongly constructed desks, and are thus compelled to sit in crooked positions for hours at a time.

The greater prevalence of right lateral curvature is, in part, caused by the more frequent use of the right arm, and consequently the greater strength of the muscles of the right shoulder, which tend to draw that portion of the spine to which they are attached to the right side.

Another cause of lateral curvature is the habit of standing upon one foot. This throws the lower portion of the spine to the opposite side, and causes the dorsal portion to take a compensating curve to the same side with the supporting foot. The right leg as well as the right arm is stronger than the left, and hence the greater prevalence of the habit of standing upon the right foot. Whenever children or young persons who have weak and flabby muscles acquire the habit of standing upon the right foot and using the right arm more than the left, they are almost certain soon to have a right lateral curvature. If they stand upon the left foot and use the left arm the most, the curvature will be to the left.

In persons who possess strong and well-developed muscular systems slight deviations from a true position in lying, sitting, standing, etc., produce, comparatively, little injurious effects, whilst in those whose muscles are weak and relaxed any such deviation often leads to the most serious results.

Spinal curvature usually commences before the person has reached maturity of growth and is much more common in females than in males, for the reason that they do not receive even the imperfect muscular development that boys do, and because they wear their dresses so tight that they still further weaken the muscles of the spine and debilitate the whole system.

The bad effects of a crooked spine are not sufficiently understood. The mere appearance itself is of comparatively little importance, although most of its victims, especially the feminine portion, seem to think that is the main evil, and if they can, with the aid of the dressmaker and an abundant supply of cotton, corsets and other "fixins," round off the sharp corners and fill up the hollows and depressions, they think they are all right and give themselves no further uneasiness.

The lungs are generally the principal sufferers from this deformity, and with many, spinal curvature is but the precursor of consumption and death. The spine, by being curved to either side, becomes shortened in a straight line from end to end, and consequently the cavities of the chest and abdomen become contracted in length from above downward. In all lateral curvatures the ribs are thrown more or less out of position. In curvature to the right, for example, the ribs

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are forced backward and upward on the right side, and forward and downward on the left side, thus again diminishing the cavity of the chest to a considerable extent, compressing the lungs, heart and large blood-vessels and impeding their action, pressing the stomach, liver and bowels out of position, downward and forward, and, in females, forcing them upon and displacing the uterine organs, thus causing untold misery.

To prevent spinal curvature avoid the causes which produce it. First of all give your children a good physical education. Do not keep them in-doors and confined at their books all the time, but allow, and if necessary, compel them to take abundance of out-door exercise, as walking, running, riding horseback, rowing, skating and playing various games in which their muscular systems are brought into healthful and vigorous action. Also give them a thorough gymnastic training, and you will give them something that will be of more value to them than all the gold of the Californias—strong, symmetrical, healthy and useable bodies. (N. B.—This does not apply to boys alone, but to girls as well. Girls have muscles as well as boys—though parents often act as though such was not the case—and one requires physical training as much as the other). Parents, educate your children physically as well as mentally, and you never need fear their becoming deformed unless by accident.

We have seen that lateral curvature of the spine is permitted by a comparative weakness and relaxation of certain muscles or sets of muscles; therefore, to straighten the curvature these weak muscles must be exercised until their lost strength is regained and they become as powerful as their antagonists. There is such a great variety in the form and locality of this deformity, scarcely any two cases being alike, that it is impossible to give directions for home treatment except in the simplest and mildest forms. Most cases require a competent physician who understands the Movement-cure both theoretically and practically, to examine, prescribe for and apply the movements. Movements that would cure one would injure another. They must be selected and adapted to each particular case. Many cases of long standing require the application of pressure upon the projecting portions. This is applied by means of machines specially adapted to this purpose; but such pressure should never be applied unless accompanied by proper muscular movements. The use of all the various kinds of spinal supporters, stays, corsets, etc., should be discarded, as they always tend to still further weaken the already too weak muscles and ultimately to increase the curvature.

There are some exercises that can be practiced to advantage in all cases of curvature, where they *can* be performed, and if practiced in season will often arrest and correct the curvature. Swinging by the hands from a pair of suspended rings, drawing one's body up while thus suspended, and in fact any form of exercise where the weight of the body is supported by the hands is valuable. The carrying of weights upon the head is very useful in all except extremely bad cases. This is best done by means of a peculiar kind of cap or crown, although weights of any kind will answer the purpose. This cap is made of thick cardboard and covered with cloth. It is open at the top to allow of iron plates being placed therein to increase its weight to any desired extent. These plates are supported by an inner rim and not allowed to rest upon the head. It is made a little larger than the head and with an adjustable cloth lining which rests upon the head. It should be worn two or three times a day and from five to fifteen minutes at a time. The weight should depend upon the strength of the wearer. With some two pounds would be sufficient, while others could carry twenty as easily.

Where the principal curvature is to the right, in the dorsal region, and the right arm is much the strongest, it is always safe and desirable to use the left arm as much as possible and the right as little. Also, if the habit has been acquired of standing upon and using the right foot more than the left, this should be reversed and the left used the most.

As in most cases of curvature the general health is poor, the digestion impaired, and the whole system more or less debilitated, particular attention should be given to bathing, diet, out-door exercise and recreation, and whatever will tend to improve the vital functions and strengthen the general system.

Some cases of curvature yield very readily to treatment while others are very obstinate and require a long time. Their ease of curability depends principally upon the age, vitality and flexibility of the patient. The younger, stronger and more flexible the patient is, other things being equal, the more readily will they respond to treatment. In some cases a month is amply sufficient, while in others six months or a year may be necessary. There are many of the most severe cases of curvature that can not be cured; but there are very few but what can be more or less improved by the judicious application of movements.

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As an instance of the rapidity with which a change of form can be effected by movements under favorable circumstances, I will mention a rather remarkable case that came under my care a little more than a year since. This was a lad of thirteen years of age, naturally of a strong constitution and very flexible. Being, intellectually, a precocious child, he was kept constantly at school, studied very hard and took scarcely any physical exercise. When he commenced treatment he had a sigmoid curvature of the spine, the main curve being to the right in the middle dorsal region. The spine curved two inches from its natural position between the shoulder blades, and the right shoulder was elevated two inches higher than the left. At the end of sixteen days from the time of commencing treatment, I made an examination and found that the spine had not only become straight but that a very slight curvature in the opposite direction had been produced. By changing the treatment for a few days the spine was restored to its perpendicular position.

[Written for The Herald of Health.]

National Health and Longevity

NOTWITHSTANDING our dram-drinking and our disgusting habits of chewing and smoking tobacco, and the fact that as a nation we are a fast people—eating faster, driving faster, working faster, thinking faster than any other people—national health and life are not deteriorating in America. Statistics will bear witness that the average of human life and health in this country, stands in favorable contrast with that of any other country. Our soil is so rich that "if tickled with the hoe it laughs in harvests;" hence, there is no lack of food. If we make good use of this blessing which God sends, and exclude the bad cooks whom, according to an ancient proverb, the devil sends, we have a great advantage at the start in the race of life. A glance at facts and figures, which have the credit of telling the truth, assures us that, in proportion to our population, we have as many aged men and women as can be found in any European kingdom. During the first fortnight of June we were called upon to notice the death of General Scott, of Colonel Seaton, of General Cass. They were upwards of eighty years of age. These men were active and energetic, and occupied conspicuous positions in public life, and I merely mention their names because they were representative men—one was a soldier, one a statesman, and the other an editor.

The Temperance reform which originated here, and which is one of our national institutions, has done something to protect and promote health and life; the diffusion of books, tracts and papers devoted to health and longevity, and the instruction given in our schools and colleges in relation to dietetics and physiology, have had their share in the good work of preventing and curing sickness and disease. Gymnastic exercises, out-of-door sports, ball-playing, skating, yachting, hunting and fishing, should also be taken in the account, with the improved architecture of our dwellings, in which ventilation is not omitted. The graduates of our common schools know something of the importance of eating plain and wholesome food at regular intervals; of getting abundant sleep, on hard beds, in rooms whose windows are open summer and winter; of frequent bathing, that the millions of mouths scattered over the skin may not be suffocated with effete matter; of walking, riding and sailing in a pure atmosphere. The physical improvement of the race, the fact that human life is at least fifty per cent. greater than it was two or three centuries ago, is due to the light that has dawned upon the world in relation to the laws of life. Science has dipped her torch in the sun, and many of "the ills that flesh is heir to" have been exposed to the light and shorn of half their terrors. Pandora's box no longer holds hope at the bottom, but she shows her rosy cheeks and starry eyes in every neighborhood where "there is light." Farmers know better than ever before how to raise the best crops of the best grain, how to fatten their sheep and oxen in the best manner. so that adipose is not universally a mere accumulation of diseased matter. The cholera is a stern teacher, educating boards of health in regard to the inexorable laws of Nature, and we find policemen, even, doing the double duty of watching over the civil interests of our city with one eye, and over its physical welfare with the other. Nuisances are abated, sewers are cleansed, dwellings are ventilated, streets are scraped, disinfectants are applied, and health missionaries go from door to door on their visits of mercy. There is no truth in the old saw that we are growing weaker and wiser. We are growing wiser and healthier, although we still have abundant room for improvement. We should add to our knowledge of dietetics and physiology some of the simple practices of our ancestors, avoiding, of course, their violations of the physical laws. The following extract from an editorial in a recent issue of The Independent throws some light on the invidious contrast of the past with

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the present, which is so frequently made, to the disadvantage of the latter:

"Happily for our peace of mind, this complaint is no new thing. More than three thousand years ago Homer says that no two men, "as men are now," could lift the huge stone which Diomed wielded with ease; and yet, as he tells us in another place, Diomed was by no means equal in fight to his father Tydeus. And two thousand years later Horace tells his Roman contemporaries that their sires, inferior to their grandsires, had produced themselves worse than either, to be succeeded by yet more degenerate sons. Milton held to the same doctrine of the gradual deterioration of the same, though he was in his own person a most eloquent contradiction of its truth, he having been as remarkable for youthful beauty and manly grace as for his transcendent genius. It would be hard to tell who of those that went before him was his superior. And one would like to know from whom Shakespeare had degenerated, who died when Milton was eight years old. Facts contradict this melancholy theory. The weapons and armor of the ancient Romans which are yet extant show that the conquerors of the world were a smaller race than the average of the moderns. And scarcely one of a large party of English gentlemen of the present day, well-proportioned, but nothing extraordinary in point of size, could get into the coats-of-mail in which their ancestors used to fight, as is told by Sir Samuel Meyrick, the antiquarian, whose collection of mediæval armor was employed in the experiment. The average of life is nearly double what it was two hundred years ago, in the reign of Charles the Second, and it was undoubtedly higher at that period than it ever was before."

Our thinkers and inventors are great emancipators. Their ideas, when crystalized in iron, help us in times of war and in times of peace. They have split the yoke, and given us the engine to do the work of slaves. They have given us the locomotive and steamboat, which with many is equivalent to a change of climate. These instruments of locomotion take us from one strand of climate to another, and give us all the advantages of the seasons and climate most conducive to good health and longevity. We see the influence of climate on vegetation. Plants and trees, which grow luxuriantly at the tropics dwindle to dwarfs in the uncongenial atmosphere of the north. Under the light and heat of the equator the palm tree lifts its green crown high in the air; further down in the scale of temperature we find the orange and the myrtle; then belts of evergreen forests; then oaks and maples and elms; then larches and firs and ivies, and then the mosses, the green companions of the snow. The climate which molds and colors vegetation has a powerful effect in tinting the skin and shaping the figure of man. In a tropical temperature he will become dark; in a climate of frost and snow he will become fair, and the form and the skull will vary with the change of climate. Prof. Draper illustrates and enforces this idea by referring to the Jews, who, though derived from a common stock, have fair skin, blue eyes and auburn beards at the north, while in Palestine their color is tawny, in India a deep brown, in Malabar almost black. The skin of the Indo-European in the northwest is light, but it darkens toward the southeast of India; the uniformity of the deepening tint is broken here and there in regions raised above the level of the sea.

Extreme heat or extreme cold are not only detrimental to the development of the highest type of human existence, but they seriously affect the life and health of a people. Our occupations, our emotions, our reflections are influenced by the climate in which we live; hence, the brain is molded differently in different climates, and the brain shapes the skull. In very hot or very cold climates we find the temperament of man as varied as the climate in which he lives. For the perfect development of man a regular succession of all the seasons is necessary. Light and warmth are favorable to the growth of taste and genius and the graces which adorn human character. Perpetual winter is an interdiction to progress, it is an injunction which forbids advancement in education and science—a conservative, standing in the way of schools, churches and printing-presses. Where the climate is equable, there will be sameness of thought, feeling and employment, and changes of government, arising from differences of opinion, will not occur so frequently as in countries where there are frequent and sudden changes of climate. Here at the north we have the commercial and manufacturing interests of the seaboard, the agricultural pursuits of the interior, the mining occupations of the mountain ranges, and the inverse order of all this as we approach the Pacific. The alternation of heat and cold leads to a change of employment. During the cold season our work is under the shelter of a roof; in the warm season we labor in the woods and fields. There is no such thing as success if we put off until winter the work which should be done in summer; consequently the man of the north is taught by his climatic surroundings to be industrious—and exercise is conducive to health and life. In the south, where there is perpetual summer, a man may put off until to-morrow the task he should perform to-day; the habit is a bad one, but it is not followed by such disastrous consequences as it is in the north; hence, the lesson of leisure is taught, and this

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is often followed by indolence, which is not beneficial to health and life. The northern man is thoughtful, industrious and sometimes slow-blooded; the southern is impulsive, given to leisure and quick of temperament. The former is settled in his convictions and stubborn in maintaining them; the latter has enthusiasm and emotion in pushing his idea into a deed. Not only heat and light but dryness and moisture have an influence over man. Prof. Draper, who has written so ably on this topic, says that the social stagnation in Asia arises from the equilibrium of its climate. But I must postpone further discussion of this subject until the next issue of THE HERALD OF HEALTH.

Writers at home and abroad have made invidious contrasts between the Americans and English often to the advantage of the latter. They have spoken of the former as a race of unhealthy, short-lived men and women, whose dwarfed and attenuated frames, sunken chests and wrinkled skin indicate the work of disease and premature decay. The English are referred to as a burly, athletic and vigorous race, whose ruddy faces and broad shoulders show great physical strength and powers of endurance. On my desk is a letter from the London correspondent of The Cincinnati Gazette, which takes an opposite view of the great question of health and life in England. I quote copiously because the matter is of general and national importance:

DECAY OF THE ENGLISH RACE.

"A physician of Manchester, Dr. Morgan, has startled England considerably by a pamphlet on this subject. He declares that the race of Englishmen is going to decay from too much congregating in cities. He has certainly studied his subject profoundly and adduces some ugly facts. His description of the average Manchester operative is drearily suggestive. The present typical factory hand wants physical stamina, and his muscular system is rarely well strung. His pulse tells of a want of power in the heart, and its variations are rapid under the least excitement and exertion. His feet are normally cold, his veins prominent, and he is given to vertigo. Lips blanched, cheeks colorless. Neuralgia besets him, and the teeth, eyes, hair, skin and glands, all denote "the absence of that well-balanced tension of the nervous system on which the easy and harmonious working of the frame so largely depends." Perhaps the most significant facts brought forward by Dr. Morgan are those by which the birth-rates in cities and in the country are contrasted—facts all the more startling when the lowness and wretchedness of the farm-laborers here are considered. In the four largest cities of England—London, Liverpool, Manchester and Birmingham—the average number of marriages to every thousand of living persons was about twelve and a half in the year 1861, and the number of births was about thirty-six, so that the average number of children born in each family is somewhat less than three. But in London, where the proportion of the wealthy and comfortable classes is so great, the average number of children was nearly four; while in Manchester, where the poor are an enormous portion of the whole population, the average number born to each family was little more than two. Now, examine the proportion of marriages and births in the twenty-seven agricultural counties. In the year 1861 the number of births indicated an average of four and a half children born to every married pair during their lifetime. Here, indeed, is a physiological proof of the permanent decay of the constitution of vital moment. There are more than twice as many children born to each country-dwelling pair as are born to each married couple in Manchester.

"Take next the death-rate in the four great cities and in the agricultural counties. In 1861 forty-five out of every thousand persons died under the age of fifteen in the cities, taking them all together. In London by itself the death-rate was only thirty-four per thousand, while in Manchester it was forty-seven, and in Liverpool fifty-six. In the same year in the agricultural districts the death-rate of persons under fifteen was only twenty-two per thousand, showing that in Liverpool the mortality of children is two-and-a-half times as great as in villages and country towns.

"The physical causes of this frightful state of things are, in Dr. Morgan's opinion, chiefly three, each of them destructive by itself, and in combination with the others still more fatal. The first is the vitiated air of the houses, the factories, and the streets of cities, and pre-eminently of Manchester. The phenomena ascertained by meteorological observations at Manchester are surprising. In the middle of the city the average winter temperament is eight degrees higher than in the outskirts, and the average summer temperature is five degrees lower. The explanation is easy. A murky mass of noxious, gaseous vapor hangs over the city night and day, through which the sun's warmest summer rays never thoroughly penetrate, while in the winter the earth's heat never thoroughly radiates upward. That mysterious element of life, ozone, is detected in the center of Manchester — in the suburbs it is obtained in considerable quantities. But what the air loses in ozone it gains in sulphur. No alkaline rain falls in Manchester proper, and the rain is so acid that one drop colors the litmus paper that is used as the ordinary test, while just in those parts of the city where the air is found most largely charged with organic impurities there the death-rate is highest. In the midst of this poisonous atmosphere lives a population that suffers to a frightful extent from that contagious and hereditary disease which is ruining the health of our soldiers and sailors, which a few overflowing Lock Hospitals vainly attempt to stem, and which the shallow Pharisaism of the times prevents us from attacking with any prospect of wide alleviation. In two years, says Dr. Morgan, 6000 of the Manchester poor were known to suffer from this pest, as detected in the working of public institutions alone, and exclusive of the innumerable cases treated in

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private practice. To these two causes add the results of excessive spirit-drinking, and we are no longer at a loss to account for the innumerable early deaths and the childless marriages of the artisan class. Drinking, too, in the country, is more exclusively the vice of the men than it is in cities. There are drunken women enough, indeed, in our villages and smaller towns; but they bear no proportion to the gin-drinking women and girls of London, Liverpool and every city in Great Britain. Drinking, too, tells more fatally on the woman than on the man. Her more susceptible temperament is more easily excited, and the depression that follows and calls for renewed excitement is proportionately more complete. A very small acquaintance with police-offices, or any places where drunken women are to be found, is amply sufficient to show that the gin that turns a man into a beast turns a woman into something almost devilish. Such are the deadly influences at work upon the millions who are congregated in cities, and ever recruited by so large an immigration from the country districts that the purely agricultural population of the kingdom actually remains stationary. The condition of the farm-laborer is bad enough. He, too, often lives in a hovel, is perfectly free and easy in his morals, and gets drunk with beer. It is satisfactory to remember that the fresh air of heaven supplies him with some compensation for what he loses by not following those of his companions who flock to the money-making centers of manufacture and trade.

In discussing the woman's rights question recently, The Pall Mall Gazette makes the following revelations:

"But it is growing daily more difficult to become a wife, and, if we may believe Dr. Farr, to become a mother also. With regard to the first point it is demonstrably impossible for all our women, nay, for more than two-thirds, or even less, to marry, because there are many more women than men, and there are many men who can not and many who will not marry; and, as to the second position, Dr. Farr has announced that there are in England and Wales alone more than one million of childless families, while other authorities affirm that our race is so far less prolific than in former times that in our large towns two children to each married couple has come to be the average nnmber."

G. W. B.

THE LAUGH OF WOMAN.—A woman has no natural gift more bewitching than a sweet laugh. It is like the sound of flutes on the water. It leaps from her in a clear sparkling rill, and the heart that hears it feels as if bathed in the cool, exhilarating spring. Have you ever pursued an unseen fugitive through trees—led on by a fairy laugh—now here, now lost, now found? We have, and we are pursuing that wandering voice to this day. Sometimes it comes to us in the midst of care or sorrow, or irksome business, and then we turn away and listen, and hear it ringing in the room like a silver bell, with power to scare away the evil spirit of the mind. How much we owe to that sweet laugh! It turns the prose to poetry. It flings flowers of sunshine over the darkness of the wood in which we are traveling.—*Prentice.*

[Written for The Herald of Health.]

The Cycles of Life.

BY F. B. PERKINS.

A CYCLE is a *circle of motion returning into itself.* It may be a figurative circle, as cycles of time are, such as the nineteen years' cycle of the moon called Meton's cycle, when the days of new and full moon come round again to the same days of the month. Or it may be a real circle, as that imagined by Ptolemy for the movements of the planets. Ptolemy, by the way, found that a plain circle would not account for all the visible motions of the planets, so he went on to imagine little extra whirls out at one side as they went round in the great cycle, and these he called epicycles.

Our life is laid out in cycles—daily, weekly, yearly, and last, in that one great curve or circle through which each of us swings only once; coming from the unknown when we enter life, swinging back into the unknown again when we die.

I.—DAILY CYCLE—SLEEP AND WAKING.

In an article in the July number of THE HERALD OF HEALTH, the daily fluctuations of the bodily vitality were briefly discussed with reference to meals and labor. The consideration of the completed daily cycle of sleep and waking, and of the longer cycles of life, is here continued, in part from the same sensible and careful book by Dr. Edward Smith, which was used for the previous article.

The old proverb that "One hour of sleep before midnight is worth two hours after it," and the notion conveyed in calling early sleep "beauty sleep," are entirely correct. From daylight to dark there is a regular and natural lowering of the vital powers; and when this has gone on all day, it is pretty clear that the refreshment of sleep is needed. Work done after dark is forced and unnatural. It is done, not by strength, but by excitement. Now, excitement is to strength just what using borrowed money is to using saved money. It is a draft on your future resources. It rolls forward, a growing burden, which becomes larger just in proportion as you become less able to carry it. And it is more fatal than mere money-borrowing in this: that the debt can not be repudiated. We have just so much life measured out to us to live, and if we over-live now, every iota of our extravagance pays for itself off the further end of our allowance. Our vitality is like a reservoir of unknown contents, but whose faucet is put into our own hands. We draw and draw, and all through youth and middle age the sup-

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ply seems inexhaustible. There is no meter. Like careless Croton-takers in the city, we may even let the stream run away all night as well as all day. But all the time the unseen level within is lowering and lowering. The stream runs full almost to the last, but all at once, and always unexpectedly, it gives out. It is more a reservoir than a spring, and, once thoroughly exhausted, there is no filling it up again.

Now, the plan of Nature is to let this reservoir run down all day, but to let it economize all night; and all through youth there is even a surplus pouring in which fills it up again. And judicious sleep is the proper mode of making the supply last for a long, healthy life. The time to go to sleep is not far from 10 o'clock; 9 may be too early, except for wearied hard-workers; 11 is full late, and somewhat too late.

[NOTE.—When it is necessary to remain awake all night, moderate meals should be taken by the watcher as during the day, unless experiment shows that they do harm. Such meals will support the strength, which is expended faster in waking than in sleeping.]

If we set out to go entirely without sleep we can do it, but at the certain expense of insanity in a few days, or else of a fit of illness. Schiller used to write at night, and used to drink wine, too; and he died in the prime of his years, his vitals disorganized and ruined. Some people can do without much sleep, as in the familiar case of Humboldt, who needed only four hours' sleep a day, but such cases are exceptions, like being able to lift three thousand pounds, or to jump twenty-one feet on a level surface.

With reasonable labor, reasonable meals and regimen, and reasonable sleep, the daily cycle is completed as it should be, and the maximum result is got out of that day's life, whether it was devoted to the drudgery of mere labor, or to the enjoyment of some favorite pursuit or exercise or pleasure.

[NOTE.—This "maximum result" contains two parts:

1. The actual maximum of exertion for the time; and

2. The result of that day, taken altogether, *as a training for the future.*

And this second significance is the one commonly neglected. No day is well spent unless it has left the spender in the best possible state for the following days.]

II.—THE WEEKLY CYCLE.

Binding laws always grow out of a natural need. They simply announce a law of nature. With modifications, this will be found true of all laws whatever. The strongest statement ever made of this truth was that astounding intuitional reply of Frederick Douglass to Daniel Webster. Webster had said: "It is useless to re-enact the laws of God." "But I tell the gentleman," said Douglass; "that IT IS USELESS TO RE-ENACT ANY OTHER!" A more crushing answer was never made.

The institution of the Sabbath—that is, of a rest-day, is one of the best known illustrations of this doctrine. If it could be shown that the weekly day of rest were physiologically unnecessary and useless, it would be impossible to enforce its observance by law, and to preserve its respectful regard in religion. But exactly as the body runs down all day to be wound up at night, just so it runs down a little more each of six days, to be wound up on Sunday. Any other day would do. Clergymen, for whom Sunday is the most laborious day—and a very exhausting one it is—commonly take Monday for their Sabbath. If they take no Sabbath, they will come a good deal sooner to their long rest. Monday is the best day for them. A minister ought no more to do business on a Monday than a deacon on Sunday. On the whole, human beings are so made that a total rest from hard work one day in every seven is just the cyclical arrangement necessary to make the most of life, under present circumstances.

We need not here argue the general question of a Sabbath. The demonstration has been made complete over and over again, for both man and beast. Dr. Smith's experiments showed, however, in medical corroboration of the established belief, that, as a regular rule, pulsation increases and respiration decreases in speed all the week, returning promptly through Sunday's rest to the proper rate on Monday. These movements of course show declining strength and increasing effort from Monday to Saturday.

III.—THE SEASONAL CYCLE.

The yearly order of seasons has some reference to exertion, but more to health and disease. Spring is the period of greatest vitality and strength. Dr. Smith's experiments—made in England, and thus very nearly suiting our own climate—showed that at the beginning of June the total amount of vital action began to decrease; that this decrease continued more and more rapidly until the beginning of September; the minimum of vitality continued until October, when the rate began to rise, kept rising until January, remained stationary to the end of March, and then increased until the first of

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June came round again. It is to be observed that this summer minimum coincides with the maximum liability to cholera and yellow fever. The year may be roughly laid off, by this statement, into four seasons, two of fixed grades of vitality, and two of variable grades, thus:

1. Variable, decreasing: June, July.
2. Fixed, minimum: August, September.
3. Variable, increasing: October, November, December.
4. Fixed, maximum: January, February, March, April, May.

In natural accordance with the changes of this cycle, muscular strength and endurance are least at end of summer, greatest in spring, next greatest in winter. Sensibility to external impressions is greatest in spring and summer, as cold contracts and hardens the skin. Thus sensitiveness and weakness both operate in summer to open the system to an attack of disease. Children born in winter and spring are most likely to live. An examination of 3050 cases of children who died aged less than a year, showed that only 7 per cent. of the whole had been born in February or in September; while more than 9 per cent. had been born in May, a like proportion in July, and 11 per cent. in June. Thus a child born in a cold month is more likely to live than if born in a hot month, in the ratio of 11 or 9 to 8 or 7. The growth of children is greatest in the spring; as is that of young animals.

The close relation of this seasonal cycle to health appears clearly in Dr. Smith's application of his principles to "summer complaints." The amount of food eaten, he says, is shown by experiment not to vary much with seasons. But the vital energies do vary, and, accordingly, there is often an accumulation in the system of imperfectly assimilated material and the effort to get rid of this brings on a diarrhea.

There are characteristic diseases most frequent in these different seasons; thus, eruptive diseases are most frequent in spring, chest disorders in winter, and disorders of the bowels in summer. With change of season these disorders pass away. It is a very important practical lesson just now, that, with sufficient care, these disorders can usually be prevented from coming on at all. Thus, careful living, pretty much as usual, *only more prudent, and dropping bad habits*, will prevent any danger of cholera this summer.

IV.—THE CYCLE OF MAN'S AGES.

In one sense, life is a curve rather than a cycle; but as a passage from the unknown to the unknown, it may be reckoned a cycle with propriety enough for our purpose.

Infancy is characterized by maximum rapidity of vital functions, and minimum of power to resist adverse influences. Accordingly, the excessive mortality of infants is well known, some authorities saying that, of all the children born, half die before the age of five. Infants eat from three to six times as much in proportion to their weight as adults. Infant diseases come principally from wrong feeding, sensitiveness, or exposure to cold; and here Dr. Smith strongly urges that infants should always sleep with the mother or nurse, the warmth of whose body is much more important to the little one than clothing.

From infancy to manhood the proportionate amount of food taken lessens, and the constitutional vigor and power to resist adverse influences increase. The period of adult life is strongest; and it is followed by the gradual and imperceptible change into old age, which in susceptibility to cold and other respects has analogies with infancy. We barely sum up this part of the story, for it has been more considered and is better understood than Dr. Smith's observations upon the shorter cycles of life.

V.—CYCLE OF GENERATIONS.

We briefly minute some of the more interesting results of Dr. Smith's observations under this head, without discussing them. His studies of medical and general history have convinced him that social changes have caused great differences in types of disease; the improvements of civilization having a tendency to lengthen and strengthen life, while some of its traits are not improvements, and have a contrary influence. But the balance is decidedly on the right side. These changes Dr. Smith enumerates as follows:

Modern modes of travel have much lessened open-air exercise.

Intemperance has greatly decreased.

Much less animal food is used than formerly.

Later hours for going to bed and getting up are used.

The proportion of the population living in towns has largely increased; being in Great Britain in 1851 34 per cent., against 23 per cent. in 1850—that is, over one-third of the English lived in towns in 1851, where less than one-fourth had done so fifty years before. By looking back further the difference would be more striking.

The struggle for life is severer. There is more competition, more excitement, more brain-work. Accordingly, brain and nerve diseases increase

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Clothing is less warm.

The evils of large towns have increased; such as sexual excess, unhealthy living, general excitement, indulgence in liquors, tobacco and gaming, and insufficient exercise.

The temperature in which people live has risen, both by the general effects of civilization on climate, and by the greater pains taken to have warm houses.

There is an increased proportion of persons with a syphillitic taint. It is much to be doubted whether this observation is as true in the United States as in Europe.

The use of tea, coffee and the like has increased.

[Written for The Herald of Health.]

Cholera—No. II.

BY J. G. WEBSTER, M. D.

SYMPTOMS OF CHOLERA.

FULLY-developed cholera is a disease of such well-marked and characteristic symptoms that no person of ordinary intelligence, much less an educated physician, need ever mistake it for any other disease, or mistake any other disease for cholera, as is frequently done by persons in whom the public have reason to expect better judgment.

The single symptom, termed the rice-water discharges, is sufficient to determine whether a given case is or is not cholera. The rice-water discharges are easily recognized when present, and cholera never occurs without them, and they never appear in any other disease. Hence, there is not the slightest excuse for the numerous sensational reports of fictitious cases of cholera which flooded our daily journals since the arrival of the steamer *England* at Halifax with numerous cases of cholera on board. Such unfounded reports are calculated to do harm by unnecessarily exciting and unsettling the public mind.

CAUSES OF CHOLERA.

In every epidemic of cholera, and in all countries, it has been seen that among the most powerful of the predisposing causes of the disease are a foul and vitiated atmosphere, the habitual use of alcoholic beverages, the fear or dread of taking it, and a diseased or debilitated condition of the body, or a broken-down constitution, together with the ill-advised use of drugs and patent nostrums used as preventives.

Medicines and nostrums gotten up and sold for the prevention of cholera are the most presumptuous absurdities and the most villainous inventions of quackery. None but the most ignorant, superstitious or designing charlatans will take advantage of the fears of the weak and timid to fill their coffers with cash, by a means which as certainly prepares victims for the scourge. The use of these preventive nostrums is one of the most certain methods of bringing on an attack.

Beside these general causes there is a specific cause of cholera, which consists of an animal germ which is generated in the alimentary canal and cast out in the discharges, and communicated or transmitted from one person to another by means of minute ova through the media of the atmosphere or the ingestion of particles of the cholera-discharges. These ova, as a general rule, are incubated and developed and reproduce the disease only under certain conditions of filth and debility, which it is possible for every one to avoid, if he will take the trouble to do so.

PREVENTION OF CHOLERA.

1 This specific cause of cholera originates only in Hindostan, and is transported to other countries by the migration of human beings who are affected with the disease. Hence, in order to prevent the introduction of cholera into our country, we need an efficient system of quarantine at every port of entry on our coast. By this means the cholera might be almost if not entirely excluded. The exceptional cases of its importation would be very rare, if proper quarantines were uniformly and strictly enforced. Every good citizen should unite in urging upon the General Government the necessity of its action in this matter, until the enforcement of proper quarantine regulations shall be as general, uniform, and as strictly and faithfully carried out as those in regard to commercial transactions.

2. When the cholera is introduced into the country a great deal can be done to prevent its spreading by efficient boards of health and sanitary committees, which should be composed of men who are properly qualified by a previous knowledge of sanitary science, and sufficiently zealous in promoting the public welfare to enable them to adopt and carry into practical effect every regulation necessary to preserve the public health. And, wherever necessary, they should have power to enforce such regulations as will secure and maintain the most thorough public cleanliness, the frequent inspection of the water and provisions used by the inhabitants, and the exclusion of every thing detrimental to the public health.

3. The only security we have against an attack of cholera, during an epidemic, lies in carrying out the most thorough sanitary reform in

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domestic and personal cleanliness, in strengthening and fortifying the body, the citadel of life, by the constant and faithful practice of all the rules of Hygiene, especially in regard to the free use of pure air, good diet, sufficient and proper exercise, and temperance in all things, religiously abstaining from all excesses of every kind and nature, and constantly maintaining a cheerful disposition.

THE TREATMENT OF CHOLERA.

The history of the medication of cholera would be highly amusing were it not so grave a subject. Almost every drug, simple and compound, contained in the pharmacopœias has been tried in all the various stages of the disease and under all circumstances. And no sooner has a patient recovered, perhaps altogether by force of a good constitution and excellent hygiene, even in spite of the hindrance opposed by empirical treatment, than the fortunate doctor of the lucky patient imagined he had discovered a specific for the cholera, writes an article for the papers or medical journals to inform the public of his wonderful discovery, and at the same time draw their patronage and win for himself golden honors and renown.

But alas! out of the next dozen victims subjected to the influence of the same remedy, probably not a single one survives to tell the story of his rescue.

The old saw, "Many men of many minds," has perhaps been more perfectly illustrated in the treatment of cholera than in any thing else that man ever undertook to accomplish.

One, supposing the disease to depend mainly on inflammatory action, has arrived at the opinion that nothing but the *lancet* and the *leech* could be depended upon for the safety of the patient, and accordingly has bled copiously in the beginning of the disease, and attempted it in the middle and at the end, even after the blood had almost ceased to circulate in the veins. And although he has often seen the double victim die under his hand, and never saw a single case recover after bleeding, yet, with strange persistency, he has still insisted on bleeding—blood, and blood only, is the remedy for cholera.

Another says: "Why, the patient is dying for the want of blood," and forthwith orders a sheep or a calf alongside the patient, and by means of a delicate tube nicely adjusted most dexterously infuses the blood of the brute into the human. The flagging life-powers flicker for a moment and then entirely fail.

Another still, observing that the discharges contain no bile, suspects it is only the liver that is at fault, and in true Paracelsian style doses the delinquent organ with *calomel*—now in doses of moderate size, now in the most huge and frightful potions, and again in small, repeated morsels. But yet death has marched on in spite of calomel.

One, thinking if the copious liquid discharges could only be stopped the patient would soon be well, has accordingly stupefied the poor sufferer with large masses of *opium*, or constantly aggravated his distressed stomach with smaller doses, until death has kindly relieved him of both disease and drugs.

Another, thinking the cramps to be the main trouble, has poured down and rubbed on *camphor* and *capsicum*.

Another, to warm the cold surface, has enveloped the patient from head to foot in a mustard poultice, and poured down *brandy*.

And thus through a long catalogue of tried and untried remedies have doctors searched in quest of the Aladdin's lamp of medicine, that they might cast its transmuting rays on the dark visage of the cholera victim. But the search has been fruitless so far. All these remedies have been tried singly and in combination—tried cautiously, and tried boldly; but all have failed singly and in combination; yet the cholera quails not before this array of remedies, but becomes all the more destructive, as a general thing, for their opposition.

And yet, while this hap-hazard sort of medication—this empirical chasing of symptoms and hunting of specifics is far worse than no medication at all, and is always to be discountenanced and condemned, the intelligent and judicious physician, if he be on the spot, and take into careful consideration all the constitutional and hygienic conditions of each individual case, may do much in most instances to alleviate the suffering, lessen the severity of the disease, and increase the chances of recovery.

But in very many instances such a physician can not be had if sent for, and in many cases there is no time to be lost; treatment must be commenced at once.

The patient should have a warm bath, be well rubbed with a coarse towel or a piece of dry flannel, and placed in a clean, warm bed, in a dry, large and well-ventilated room, and should be kept perfectly quiet. He should be supplied with frequent small draughts of pure, cool water. And great attention should be given to keeping the surface of the body warm, by means of the application of hot bottles or bricks, or the hot-air bath, and the free use of bed-clothing.

This, together with a careful and constant at-

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tention to all the hygienic conditions of the patient, are the principal restorative means to be employed.

PROGNOSIS.

Whenever an epidemic of cholera prevails, or there is great reason to expect one, it is a most interesting inquiry to know who will be likely to suffer most; and, in case of an attack, to know what the chances are of recovery. In calculating the probabilities of escaping an attack, or recovering from cholera, our opinion will be based on several circumstances, each of which must be carefully weighed in our judgment.

1. The age of the individual and the strength of his constitution at the time of the attack, the character of his previous habits, and the nature and severity of the predisposing cause. The tables prepared by the French Commission show that of childhood and old age about six per cent. died during the epidemic in Paris in 1832; while of early infancy and middle life about three per cent., and of youth and early manhood about one per cent. perished of the disease. From this we see, as might be inferred from a consideration of the nature of the disease, that persons of good constitution and general good habits most always recover from an attack, under favorable circumstances; while persons of poor constitution, broken down by age, previous disease, or use of drugs and nostrums, and those who have led irregular, dissolute and intemperate lives, who have long been subject to the debilitating influences of stimulants and narcotics, and cases in which the predisposing cause has been violent and prostrating of itself, and such as are situated in very unfavorable circumstances, suffer greatly and recover with extreme difficulty, if at all. If the poor sufferer be situated in a small, crowded, dirty and ill-ventilated room, and with little attention and a want of timely and proper treatment, his fate is well nigh sealed; he may have a fair constitution, but under these circumstances there is very little hope for him. But if he have a fair constitution, and be situated in a large, clean, airy apartment, with a plentiful supply of pure water to drink, and constant attention to his cleanliness and comfort, and especially if to these be added proper and timely treatment, his chances of recovery are usually good.

2. The period of the epidemic at which the attack occurs is commonly thought to have great influence on the chances of recovery. It has been observed in all epidemics that at their commencement the epidemical influence has had great power, and the mortality of those attacked is much greater than toward the close of the epidemic. But this, probably, is owing to the fact that there is always a number of individuals in every community, as a general rule, who from feebleness of constitution, miserable condition, and great predisposition to the disease, become an easy prey to the scourge, and are rapidly taken off; while the remainder, being of better constitution and in more favorable circumstances, resist more stoutly the epidemical influence; and with the exception of an occasional case, exposed to violent predisposing causes, all finally recover, and thus banish the disease from the entire community. This does not, however, prevent a recurrence of the epidemic at some future time, nor does one attack preserve a person from a second, whenever the predisposing causes may be suitable and an epidemic prevailing. And whenever a community is ripe for it, and the disease is abroad, it may be subject to another epidemic, of greater or less virulence than before, according to the circumstances and conditions laid down in a former part of this article. The plan of treatment adopted, in most cases, will greatly influence the chances of the patient's recovery. Where anxious and ignorant friends *will* keep constantly dosing the poor sufferer with their favorite specifics and heterogeneous compounds, and the various quack remedies and nostrums everywhere advertised for such occasions, though he had an iron constitution he must succumb to the effect of these poisons, unwisely administered for his benefit. If, on the contrary, he can have early, judicious and effective treatment, good hygienic surroundings, and careful attention throughout, his chances of recovery are much increased.*

INCREASE your expenditures in housekeeping only as your means increase. It will save trouble and sorrow.

WHY does the eye resemble a schoolmaster in the act of flogging? It is the pupil under the lash.

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* For a full and thorough exposition of the Nature, Causes, Mode of Propagation, Prevention and Treatment of Cholera, see the two popular lectures on Epidemic Cholera by the author of this article and published by MILLER, WOOD & Co., 15 Laight Street, New York. This little book gives minute directions for the treatment of cholera in all its stages, and affords its readers a complete digest of all that is known that is of value on the subject of which it treats. The plan of treatment it advocates is that which has been most successful in all epidemics in all countries, and has been particularly successful in the great Military Hospital in France and the Brooklyn Cholera Hospital, in both of which places a large number of cases have been treated.

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[Written for The Herald of Health.]

The Flower's Warning.

BY J. E. SNODGRASS, M. D.

"I'm withered now! Once health I knew!
I bathed my petals in the sun
As he, in kindness, nearer drew
And smiled each grateful bud upon!

"Then, I was glad! Bowed not my head
As now, when in this room I stand!
The dew my drink, I daily fed
On food prepared by God's own hand!

"Alas! those joyful hours are gone,
And with them all I knew of bliss;
And now I'm doomed to pine alone—
Oh, what a wretched life is this!"

Look to that lesson! ye who live
Secluded from the light and air.
Deem not that Nature will re-give
Health you have forfeited. Beware!

[Written for The Herald of Health.]

Botany for Invalids—No. II.

BY MRS. MARY TREAT.

If invalids could be made to see the great advantage accruing to them from the study of Botany, or some other branch of Natural History, they would not long hesitate in becoming familiar at least with one of these studies. Every person with leisure should consider it his duty to understand and make some one branch his study; and invalids, of course, are expected to have leisure. With a common intellect, and not mentally too lazy, one could in a very short time become so interested that he could be of great use to others as well as an advantage to himself. To some Entomology might be more attractive than Botany, and our whole country is suffering for the want of practical Entomologists. Insects are destroying our fruits and flowers, our grains and vegetables; and we are making war upon these insects, killing indiscriminately friends and foes. Every neighborhood at least should have one Entomologist to teach people that have not time or are too indolent to learn for themselves what insects to destroy and what to preserve. Frequently, at first sight, the most revolting insects are our best friends. Last year, in some localities at the West, the ravages of the cut-worm threatened to destroy vegetable as well as flower gardens. It seemed as if "eternal vigilance" was the only price that would save our gardens. Very soon was noticed a coal-black fellow, whom we named "our black friend," that did not look at all attractive, and the first exclamation of all would be on seeing it, "Kill it!"—so that many, very many, were destroyed. But quite early in the season I accidently found this insect preyed upon the cut-worm. It would fasten itself to the throat of its victim, and not let go its hold until the worm was still and dead, when away it would dart as if in search of other victims. I called attention to this fact through the region of country in which I was then botanizing, and was the means of saving a few lives at least. At one time, in company with a number of ladies and gentlemen, walking through a fine flower-garden, one of these insects was noticed on the walk, when the cry was: "Oh, kill it!" I replied: "It is one of your best friends; preserve it by all means." But the company looked incredulous, so I captured it, put it where it could not escape, and soon had a cut-worm, twice as large as his enemy, which we covered with earth and placed in the same dish. At first "our friend" seemed intent on escaping from his prison, and I was afraid my experiment would prove a failure; but soon it was perfectly quiet, as if listening, then moved cautiously over the earth until it came over the worm, and pulled it out by the throat, when a brief struggle ensued, "our friend" coming off victor, leaving the dead on the field. I am ashamed to say I do not know the name of this insect, nor should not know it at all in its other stages.

The "Practical Entomologist," sent out by the Entomological Society of Philadelphia, printed on beautiful clear paper, and in excellent type and style, is doing a good work in bringing this hitherto neglected science into general notice. It is the only periodical of its kind published in the world, and is only fifty cents a year—not enough to cover the cost of the paper on which it is printed. They have now commenced a series of lessons by one of the best Entomologists in the country, which alone will be worth more than many times the price of the paper.

Oh, if we could only enforce upon the minds of persons of sedentary habits and poor health the importance, the necessity of pursuing some branch of Natural History! You have no right to be idle in this active world; poor health is no excuse for idleness. Go to work, and be of some use to the world! Don't be the drones among the workers and die prematurely; but look around you, choose something to do, and go to work in earnest, and soon you can not help becoming so interested you will forget your maladies, and be happy and surprised that you can accomplish so much.

Having a decided partiality for Botany, naturally thinking no other science quite so attract-

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ive, I shall dwell more upon the beauties and attractions of this branch, and proceed to some of the flowers of summer, giving you all a cordial invitation to accompany me to the grateful shades of the forest, where we may see the regal, almost tree-like Laurel (*Kalmia latifolia*) in all its splendor, in various shades of color, from pure white to bright pink. The contrast of color, the beautiful foliage of large, glossy, evergreen leaves renders this one of the most ornamental shrubs for our gardens and lawns. It is the delight and pride of European gardens, but, with all their care and petting, they can not make it more than equal the gorgeous shrubs in this their forest home. If we examine critically, we shall find something very curious and beautiful about the flower. Look at the flower-bud and see those ten projections; now take the open flower and we shall see that these projections form cavities on the inside, and the ten stamens, those little thread-like organs in the center, are bent backward and lodge in these cavities. If we touch the stamens they quickly spring forward around the pistil. This doubtless was one of the beautiful flowers that so delighted Linnæus that he forgot his sickness, for we see he has named this genus in honor of his pupil Kalm, who made an extensive collection of our American plants about the middle of the last century. The specific name, *latifolia*, means broad-leaved.

Near the borders of damp woods and along the margin of swamps we shall find the *Azalea viscosa*, or White Honeysuckle as it is sometimes called. We shall know we are approaching it by its sweet fragrance even before the eye meets it. What beautiful clusters of pure white blossoms repay us for our trouble! But this, too, has a tendency to sport into various shades of color; we may find some with a pinkish tinge, others with a white center and pink border. This is one of the beautiful shrubs that our European brothers have petted and coaxed into almost innumerable varieties, and sent back to us so tender and delicate we can only rear them in the conservatory. Now, too, we can find the *Rhododendron maximum*, rivaling in splendor both the Kalmia and Azalea. The corolla is large, of a pale rose color, greenish in the throat and spotted with yellow. From fifteen to twenty of these beautiful flowers hang in clusters among the dark, shining, evergreen leaves. The leaves are from four to ten inches in length, and remain on the stem two or three years. These shrubs will be found in the first class, Angiosperms, for the seeds are covered, and second sub-class, Monopetalæ, because the petals are united. We shall find them in Order *Ericaceæ* or Heath family, with many other beautiful shrubs. This family seems to be more ornamental than useful, although we find here some wholesome and esculent fruits. The berries of the *Vaccineæ* (Huckleberries, Blueberries and Cranberries), and of *Gaultheria procumbens* or spicy Wintergreen, are all found in this family. These flowering shrubs that we have mentioned are of such world-wide fame that most have seen them under cultivation if not in their wild state. But if you are prepared with short dress and rubber boots, and wish to see some rare and beautiful plants that can not be seen in cultivation, and only by those who are sufficiently interested to hunt them out, we will go to some damp, out-of-the-way place, where we may at this season find many of the showy Orchis family—a strange, uncivilized family, defying all the arts of man to bring them into general cultivation. Look carefully among the shaded marsh grass, and we may find the somewhat rare *Arethrusa bulbosa*, which consists of a single straight, leafless scape, with one large, fragrant, brilliant purple flower at the summit. In similar localities, but much more common, may be found *Calopogon pulcheblus;* it has one long linear leaf starting from the bulbous root and clasping the lower portion of the stem. Our Botany says: "Scape one foot high, and from two to six flowered." Evidently the author did not collect his specimens from the pine barrens of New Jersey, for here we frequently have to bend or break our specimens in order to inclose them in our box, which is twenty inches in length; and the scape is from eight to fifteen flowered, instead of two to six. The flowers are large, bright purple and fragrant. Usually in company with this last is *Pogonia ophioglossoides*, from ten to twelve inches in height, with one clasping, oval lanceolate leaf near the middle of the stem, and a smaller leaf or bract next the flower. The flower is handsome, pale purple or pink, usually only one, sometimes two or three, at the summit of the stem. This family of plants, like the Indian, disappears as civilization advances, and, like some animals, no amount of coaxing or petting will successfully tame them. We would like to call your attention to many other even more beautiful members of this family, but can not, if we would notice any of the other flowers of summer that come crowding along so fast. We wish to notice some of the pine barren flowers, foremost among which is *Xerophyllum asphodeloides*. This beautiful plant I think you have not seen in cultivation, but it well deserves a place in every flower-garden. It consists of a

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thick tuft of grass-like leaves, from the midst of which arises a scape or flower-stalk two to four feet high, bearing at its summit a dense, showy raceme of white flowers. This plant, together with the Orchis family, belongs to the subdivision Endogens, or inside growers, and the third class *Aglumaceæ*. A distinguished florist and horticulturist, said of this plant: "It was worth coming all the way from New York to see." Solon Robinson, one of the most practical men of our country, also spoke in its praise. And this reminds us of his remarks in The New York Tribune, a few weeks since, where he says: "We contend that Botany should be taught in every common school, to every farmer's child of respectable intelligence. It should be the statute law of every State, that no person should be employed as the teacher of a common school in a rural district, who was not able to teach at least the rudiments of Botany in general, and particularly in that locality. The technical names may be easily acquired, explained and understood." If this were the law in every State how much better for both teacher and pupil. The half-hour allotted for recitation should be spent by the whole school in the open air, in some favorite retreat, with specimens of growing plants all around them; when they would return to the schoolroom and their books with a new impetus, better and happier for this short vacation. There is not one scholar in twenty but would be interested in the study of living insects and plants who now almost hates the schoolroom and his books. Every schoolroom should be supplied with a good magnifying-glass as much as with a blackboard, to interest and amuse the children, and thus they would grow up with a taste for such pursuits. A distinguished botanist once told me that he had a theory that every botanist was necessarily a gentleman. So, if we would have children gentle, noble and healthy, we should encourage these pursuits. Instead of having them pore over dry books and the dead languages, send them into the woods and fields to collect specimens of plants and insects. Mothers, in particular, should understand these branches, and thus encourage their children by being interested with them. We should not see so many pale, sickly girls, with aimless lives, if they knew or realized the great beauty, the fascinating pleasure connected with these studies. 'Tis true, it costs some labor and patience to become a successful botanist or entomologist, but we shall be repaid an hundred-fold for all our labor in our improved health and spirits, beside at last being of some use to our fellow-men.

[Written for The Herald of Health.]

The Heedless Eye.

BY J. B. F. WALKER, M. D.

Thou source of life, the soul unseen,
Concealed within the human heart,
How glows thy warmth through every part,
And fills the eye with love's bright beam!

Profound and subtle mystery;
A gracious gift from God direct,
That man may walk the earth erect;
Our forms we bow and worship thee!

If thou were loosed from human clay,
Untarnished by the sins of earth,
Unfettered from thy house of birth,
As pure as air, as free as day,

Expectant eyes might then behold,
The perfect form in truth and grace,
A thought, a deed for all the race,
The *pattern web of life* unrolled!

So long ago the Man Divine
Taught human men the law of life,
Heal'd broken hearts, pluck'd peace from strife,
And set the earth in heav'nly clime,

The law 's grown old—the shadows fall,
And through our long and sickly streets,
The silent darkness slowly creeps,
And winds us all in death's dark pall.

Alas for men with heedless eye!
They quench the fire that burns within
With draughts that come from earth and sin
They waste a life—they groan, and die!

A Physician's Bill.—A physician's bill, *sui generis*, is thus noticed in Trubner's Record: The late Dr. Henry Bigelow, on one occasion, after having given his professional services to a family whose head had once been dear and kind to him, was asked for his bill, when he presented the following:

Henry Bigelow

To the memory of ——.

	Dr.	*Cr.*
Item.—To many grateful recollections.		By any professional services rendered the family by me.
Mem.—"I was a stranger, and ye took me in."		
Item.—To sundry unselfish aims.		Bal.—Command me.
Do. higher aspirations.		
Mem.—"Mark the perfect man, and behold the upright."		

Sincerely acknowledged,

HENRY BIGELOW.

Intemperance.—A drunkard is the annoyance of modesty, the troubler of civility, the spoiler of wealth, the destroyer of reason. He is the brewer's agent, the ale-house benefactor, the beggar's companion, the constable's trouble. He is his wife's woe, his children's sorrow, his neighbor's scoff, his own shame. He is a spirit of sleep, a picture of a beast, and a monster of a man.

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[Written for The Herald of Health.]

The Study of Physiology.

BY RUFUS KING BROWNE, M. D.,

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THE study of the human functions discloses a realm of phenomena of far more real and intrinsic importance to man, than many other branches of study which now take precedence of it; but inasmuch as the ruling motive which has in the past led to this precedence, namely, the cupidity of man, is not directly subserved by this study, it is quite natural that it should be among the last branches of culture to receive due attention.

It is only, moreover, within a comparatively recent period that we have been led to adopt a mode of pursuing this study which enables us to observe the true character of most of the phenomena involved in the processes of life. A hundred years ago scarcely any thing was *known* of these phenomena; for, although from the earliest period of medicine numerous *doctrines* were taught and learned respecting the processes of life in both the higher and lower orders of animals, yet of real knowledge of them there was but little.

Indeed, the discoveries made in this department of science are of so comparatively a recent date, and the science itself so little appreciated, that almost nowhere, outside of schools of medicine, do we find any obvious and striking line of distinction drawn between the past and present of physiology—books being, everywhere outside of those institutions of learning, in use compiled by authors who have never, confessedly, observed the nature of the phenomena they profess to describe, and of which therefore they can have but an imperfect or even erroneous notion. In fact, physiology is a science of so recent growth, and deals with phenomena so unlike what is merely physical or even chemical, that, in order properly to appreciate physiological facts, we must understand the manner in which their nature is really ascertained.

We shall therefore, at the outset, find it necessary to say a few words upon the nature of physiological investigations, and the course of procedure upon which depends our success in finding the truth in this pursuit.

The study of anatomy long preceded that of physiology, and the former was regarded as furnishing the data whence physiological truths could be derived as corrolaries. But though no anatomist can examine the situation, size and shape of an organ without instinctively inquiring what are its functions, yet proper research shows us that there is in reality no such intimate connection between the two as supposed.

True, we can not advance a single step in physiology without the aid of anatomical facts to rest upon. True, not only must we know the locality, form and texture of the principal organs before we can study their action, but we must also be familiar with anatomical details, in order to enable us to make our physiological observations and avoid error; for obviously enough, if there be any anatomical or structural relation between parts unknown or neglected, it is evident that our observation of the functions of those parts, however keen, will necessarily be erroneous.

Nevertheless, although anatomical facts are so connected with physiological actions that a correct mode of observation of the latter *pre*supposes an exact knowledge of the former, the physiologist soon learns that there is no such connection between the structure of an organ and its functions as will enable us directly to deduce the one from the other; and although it is true that every variety of physiological action is necessarily connected with a special arrangement of the anatomical elements, yet the connection of the two is usually of such a character that we are far from understanding it, even after we have mastered all the minutest details of its structure.

The physiological action of any given part is a vital property, and, however simple the function, it can never be ascertained from anatomical facts, but only by direct experiment.

For example: there are in the human body two glandular organs—the parotid and the pancreas—which anatomically are precisely similar. They are so much alike, indeed, that the pancreas has been named by the Germans the "abdominal salivary gland." These are both supplied with the same arterial blood; and yet, notwithstanding this identity of structure, one of them secretes saliva, a thin, watery fluid, containing less than two parts per thousand of organic matter, while the other produces the pancreatic juice, a very viscid secre-

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tion, containing ninety parts per thousand of organic matter. The organic matter of the one has no effect whatever upon certain parts of the food; that of the other has the effect of being the only substance of the body which enables us to absorb the fat we eat.

Furthermore, even from a *difference* in anatomical structure between the tissues of organs, we can never be instructed as to the difference in character of their physiological actions. One set of muscles, for example, is composed of large, cylindrical, striated muscular fibers; another set are small, flattened, and fusiform; and yet the function of both these is contraction. And though both have apparently the same function, they perform it in a peculiarly different and characteristic way. In short, physiology, while it *pre-supposes* a knowledge of anatomy as a study, rests upon a different basis, and must be advanced by some other mode of observation than an anatomical one; for the former proceeds far beyond the limits of the latter. Indeed, anatomical details have very little scientific or practical interest until they become tributary to the work of the physiologist.

The true significance and value of the particulars of form and structure arise only when this knowledge is merged in the infinitely more important study of the vital activity of those different parts—their movements. To the physiologist, then, these structures are an animated and active organism, with the muscles alternately contracting and relaxing, the lungs inhaling and exhaling, the heart beating, the fluids circulating incessantly, and every fiber palpitating with sensibility. It is therefore to the ascertaining both the character and the order of these movements that the physiologist directs his efforts.

Seeing that such is the field presented to the student of physiology, it is obvious that he must devise some means of research in addition to what Nature herself at first presents—some artificial contrivance, such, for instance, as the chemist finds, in an analogous pursuit, he is obliged to adopt in order to obtain certain results. Simple observation, we know, will teach us little or nothing. All, or nearly all, the organs are concealed in the interior of the body; and accordingly, apart from such device, these organs, with their processes, are shut out from our sight.

In order to gain access to these and there watch these processes, we must resort to *experiment*. As naturally performed, the vital functions are not open to vision—and hence there is no other way of learning the operation of physiological phenomena than by employing some means of seeing how they actually take place in the body. Even for the most apparently palpable and external of the vital phenomena—as, for example, the inspiration and exhalation of gaseous matters by the breath—some artificial contrivance and procedure, in short, some *experiment* is necessary in order to demonstrate to the mind the true character of the process.

It is therefore by experiment upon the animal frame, and the products of its different organs, that we have at last, after the lapse of centuries, succeeded in the acquisition of the knowledge which constitutes the science of physiology. Hence, the present era of what is designated as experimental, demonstrative, or, properly, positive physiology.

It is only, therefore, by experimenting upon the living body that any insight into its physiological operations can be obtained, and experience has shown it to be certain that this is the only source from which we can derive positive and correct information respecting the wonderful aud complex phenomena which constitute our daily physiology. If we want to *know* what actually transpires in the organism itself, we must *there* search for and observe the phenomena. It is only in the stomach that we can ascertain the character of digestion; it is only by observation of the heart that we can correctly ascertain the character of its operations; and so of all the operations of the human body. If, for example, the physiologist wishes to ascertain what the character of that most vital function, digestion, is, he must observe the organ in which it takes place in the act, or in different stages of it, for in this and no other way can he possibly ascertain the character of the various and variable phenomena and products involved in the process in question. In short, this method is to physiology precisely what analysis is in chemistry.

It is therefore essential for whoever would study the phenomena of life, to learn that it is from this method, and this alone, we derive all the *knowledge* of them we now possess; and it is in proportion as a knowledge of these results

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are diffused, and a true estimate is held of the manner of proceeding in obtaining this knowledge, that we can be truly said to have any correct understanding of the processes of our bodies. More than this, it is this mode of proceeding which has substituted knowledge or truth for the so-called physiological doctrines of early times, and which, submitted to this test, have been found to yield as the "baseless fabric of a dream." Yet it is very frequently found that in the popular mind more or less of these old doctrines still hold their place, derived from books whose authors lacked a proper appreciation of the radical difference between physiological knowledge *never* obtained unless by this mode, and physiological *doctrines* concocted in the mind.

Indeed, no writer, we venture to say, is competent to even understand the *nature* of the processes in question, much less to discover them, who has not, by pursuing this mode of observation—by, in short, experimental experience—become fully instructed as to the test between the true and the false in physiology, which *his experience of the method itself furnishes.* Heretofore, therefore, the popular physiology has been a gross mixture of *knowledge* gained in this way, and old doctrines of physiology more or less modified in form from their early appearance. Up to the year 1864 there was but a single work in this country not liable to this objection (Dalton's); so that, with this exception, not a single text-book used in our schools could be said to be truly fit for the purpose for which it was intended—namely, to put before the student a correct report of *physiological science.* But we must close, reserving for a second occasion a continuation of our subject. To the biologist all studies seem trivial compared to the study of life, nor is he willing to admit that the relative estimate in which this study is now held is any thing more, for instance, than a very gross delusion, in which the first in value and importance is least in estimation. Almost nowhere in institutions of learning and schemes of instruction is this study accorded a position of extended and first rank. At our National School it is not even taught; and even in our schools of medicine, in but two is it given that relatively commanding position and taught in that mode which alone rewards its pursuit with a constantly augmenting sum of knowledge—of science.

[Written for The Herald of Health.]

"The Limits of Liberty in the Excise Law."

We regard these as limits of liberty, viz., the boundaries of right in all the relations and obligations of life.

We regard this as liberty itself, simply to do every thing that is right under the circumstances, and nothing that is wrong.

To us this not only *seems* to be but *is* rational, consistent, God-given liberty of one, and only one, and the same kind, whether it pertains to spirit, intellect, society or individuals; or whether it pertains to individuals, society, intellect or spirit.

Notice the *no-difference* between the liberty of the spirit and the liberty of the individual. The first is liberty of the man to do right *spiritually.* The second is liberty of the man to do right *individually.*

It is so socially. It is so intellectually.

The simple question is, What is right and what is wrong?

It is right in the commerce of life to make and offer for sale that, and only that, which will do creation good in its natural and legitimate use.

To apply this to the case in hand: 1. No man has a right, nor any liberty whatever, to make and offer alcohol for sale as a beverage. This is not its natural and legitimate use, for as a beverage it only and always does mischief. All conservators, therefore, of the peace and prosperity of any people, community, town or city, only do their duty, their imperious duty, when they *excise* ale, alcoholic liquors as a beverage, from the cities, towns, communities or people, over which they are appointed guardians.

2. No man has a right nor any liberty whatever to compound medical prescriptions with alcohol, for alcohol thus taken in the stomach always does mischief.

This is not alcohol's natural and legitimate use. It is only when one wishes means to make war on human life, derange, disorganize, destroy the "human form divine" and fill the mind, soul and spirit with the deadly leprosy of swift-coming damnation, that alcohol should be administered internally to any living being.

This said, some one may with some curiosity ask, What is alcohol's natural and legitimate use? We answer, it finds its appropriate place *chiefly in the arts.*

C. WELLINGTON.

The oldest lunatic on record—Time out of mind.

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[Written for The Herald of Health.]

Anæsthetics—No. II.

BY E. P. MILLER, M. D.

In our former article, wherein we discussed the merits and demerits of anæsthetics now in common use, we indicated the preference which should be given to nitrous oxide; and any one who is familiar with the chemical elements which enter respectively into the composition of sulphuric ether, chloroform and nitrous oxide, would know at once why ether and chloroform, when taken into the system, are so much more dangerous than nitrous oxide.

It is well known that oxygen is by far the most extensively diffused of all known substances; it constitutes, by weight, four-fifths of the atmospheric air, about eight-ninths of the water of the ocean and of lakes and rivers, one-half of the solid rock and crust of the earth, and much more than half of the tissues of all animal and vegetable life. It is one of the vital properties of human existence—it supports respiration, changes the dark venous blood to bright arterial, and is absolutely essential to the maintenance of life, which would be extinct in a few seconds if deprived of it; every other substance may be removed without the danger to life that would result from the removal of oxygen. If too little oxygen is taken into the system, life is not well sustained; if too much, we live too fast, and as a consequence wear out too soon.

Atmospheric air is composed of one part oxygen mingled with four parts nitrogen and about one twenty-five hundredths of carbonic acid, with a minute portion of watery vapor. This is about the proportion of oxygen which is best suited to perfectly sustain the various phenomena of nature.

The chemical composition of chloroform is two parts carbon, one part hydrogen, and three parts chlorine. It contains not a trace of oxygen, and on this account, when it is administered as an anæsthetic, it is necessary to hold the sponge or towel, or whatever is used in administering it, a little way from the nostrils, so as to allow a free admission of oxygen from the air. Many lives are lost from the want of proper care in this respect while administering it; and probably most of the injurious effects of its use arise from so completely infusing into the system those agents which are but little used in the life process, and shutting out those that are required.

Sulphuric ether is a very little better in this respect than chloroform; and this will account for the fact of its use being somewhat less dangerous: ether contains one part of oxygen to five parts of hydrogen and four parts of carbon. Thus we see that hydrogen forms the greatest proportion of ether, and as this element does not in any degree support combustion or respiration, and being mingled with so much carbon and so little oxygen, it can not but be depressing to the life-powers, and therefore dangerous, when inhaled in such large quantities as is necessary for producing anæsthesia.

Nitrous oxide, however, does not differ in its chemical constituents from the principal elements of common air, but it contains oxygen in excess—or, in other words, the quantity of nitrogen is about one-half that of the air, while the oxygen remains the same. As stated above, the air contains about four parts nitrogen and one of oxygen. Now, if we could remove from the air two of its parts of nitrogen, or about one-half, leaving the oxygen the same, we should have an atmosphere with chemical properties similar to nitrous oxide, and if we should inhale such an atmosphere, we should take into the system just double the quantity of oxygen that we now inhale.

It is easily seen that the results arising from breathing such an atmosphere would be far less dangerous to life than would result from inhaling ether and chloroform, which contain none of the elements of common air. The greatest danger arising from its use would be that we should live too fast and wear out too soon; as one who had inhaled nitrous oxide has said—we should "live a year in a day, and that year in the seventh heaven." We should be in a constant state of elysium. Persons breathing this atmosphere would be filled with delightful thoughts and feelings; all their enjoyments would be intensified, the vital forces constantly excited and exhilarated, and, as a consequence, they would prematurely decay.

In administering ether and chloroform, it is absolutely essential that atmospheric air should be freely mingled with them; it would be fatal to inhale them without this precaution; but there is so much oxygen in nitrous oxide that it is unnecessary to breathe air in connection with it. It is always administered from a close-mouthed bag, the lips being tightly pressed around the mouth-piece, and the nose at the same time compressed—thus the carbonic acid gas in the expired air mingles with the oxygen in the bag, and, it is supposed, helps to produce the anæsthesia.

The time required to produce anæsthesia by nitrous oxide is only a few seconds, generally

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less than fifty, while it often takes as many minutes to produce similar results with ether and chloroform.

There are cases where the attempt to produce anæsthesia with ether and chloroform have failed, and the same person has subsequently been made entirely insensible with nitrous oxide in less than thirty seconds.

The sensations, too, which are produced by the latter are entirely different from the former; for, while inhaling ether and chloroform, the patient experiences an indescribable feeling of suffocation, will twist and turn, striving to get away from it, and often has to be held forcibly while it is being administered; it also creates a sense of nausea and sickness. With nitrous oxide, however, it is entirely different. Most people like to inhale this gas, as it produces a pleasant sense of exhilaration, and, as one who breathed it said, "A thousand delightful visions pass through the mind while coming under its influence." There is not only an absence of all unpleasant feelings while inhaling it, but there is also entire freedom from the still more wretched sensations which are felt while coming from under the influence of other anæsthetics; and also an absence of the long train of disagreeable symptoms which occur, after persons are fully restored to consciousness; but none of which symptoms follow the use of nitrous oxide, the effects passing off immediately.

In using ether and chloroform the pulse is almost always depressed, and the blood in the arteries becomes dark, like venous blood; but with nitrous oxide the circulation is increased, and the blood at first is rendered brighter in appearance.

The superiority of nitrous oxide over every other anæsthetic yet discovered, in point of safety, in the rapidity and completeness of its effects, in agreeableness to the patient while subjected to its influence, in the ease and facility with which this influence passes off, and in the entire absence of any unpleasant results which are to follow—to say nothing of the numberless diseases which may be aggravated or induced by other agents—leaves not a shadow of doubt in the minds of those who are acquainted with the relative value of all these agents as to which is best to employ. The only point upon which the medical profession are not yet fully satisfied, is as to whether a patient can be kept under the influence of nitrous oxide sufficiently long to perform difficult and severe operations. This is now being fully and clearly tested by Professor Colton, in operations recently performed by Drs. Carnochan, Taylor, Warren and others.

Dr. J. H. Carnochan, one of the first surgeons in this city, has performed several amputations of legs, removed tumors, etc., with entire success. Dr. Warren, surgeon of the New York Dispensary, has given the nitrous oxide to an aged and feeble patient, for the extirpation of an eye, with very gratifying success. On the 12th of June, 1866, Drs. C. F. Taylor and W. E. Vermilye of this city, after spending over seventy minutes in trying to bring a patient under the influence of sulphuric ether, using more than half a pound of that material without being able to make any anæsthetic impression, abandoned the effort. About five hours afterward Prof. Colton administered the nitrous oxide, and in forty seconds the patient was in a state of complete anæsthesia, and the operation of dividing the sartorius muscles performed; in less than a minute more the patient opened his eyes, and smilingly asked if the operation had been done. "There was neither nausea, vomiting, headache or any other unpleasant symptom." The same operators have used the nitrous oxide while breaking up ancholosis at the hip-joint, and found "that it answered every requirement of an anæsthetic."

Prof. Colton has kept a patient under its influence for twenty minutes, and is confident that it can be safely given even longer if required.

There has been a good deal of interest manifested, and considerable discussion in the medical and scientific world, in determining who was the discoverer of anæsthesia. There were three prominent applicants for the honor—namely, the late Dr. Horace Wells of Hartford, Conn.; Dr. Wm. T. G. Morton, and Dr. Charles P. Jackson of Boston, Mass.

The facts in the case are undoubtedly these: Dr. Horace Wells of Hartford, Conn., was the first who proved the fact that there were substances in nature, which a person could take, that would produce entire insensibility to pain during the performance of a surgical operation. This was demonstrated upon himself, on the 10th day of October, 1844, by the use of nitrous oxide for the purpose of extracting a tooth. Dr. Wells subsequently administered this gas to hundreds of persons in his practice of dentistry in Hartford. He afterward went to Boston, with the view of introducing it to the medical profession. It is to be regretted that he did not meet with as good success in his efforts to convince the profession of the value of his discovery, as its magnitude and intrinsic worth would seem to claim for it. The mind of the profession was not ready for so great an "innovation," and time was required to prepare them

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for it. Dr. Wells also went to Europe, and afterward came to New York, and although the ultimate result of his visits will be all that could have been desired, yet he was not at the time recognized and treated as a great discoverer should have been.

Dr. Wells was so absorbed in the value of his great discovery, and met with so many rebuffs from the world at large, and was so overwhelmed by the ingratitude of his professional brethren, and the dishonest attempts of others to rob him of the fame which justly belonged to him, that it preyed upon his mind till his brain became disordered, and he finally committed suicide.

On the 16th of October, 1846, nearly two years after his discovery of the anæsthetic properties of nitrous oxide, Dr. Wm. T. G. Morton, who had been a student of Dr. Wells, and knew of his discovery, wishing to extract a tooth from a feeble, nervous patient, applied to Dr. Charles P. Jackson, a physician and chemist, for a bag for administering the nitrous oxide, with the view of making his patient believe it would not hurt her. Dr. Jackson suggested that sulphuric ether could be given as well and with better success. Dr. Morton tried it, and insensibility was produced, and the operation successfully performed. A short time after this he gave ether to a patient in the Massachusetts General Hospital, for an operation in surgery, which was successful; repeated trials then followed, and very soon through the medical journals it was brought before the profession at large.

In November following he applied for a patent under the name of Letheon. Before letters-patent were granted, however, Dr. Jackson asserted his claims to the discovery; this gave rise to an angry discussion, which finally terminated by an assignment of the claims of Jackson to Morton, with the understanding that a certain per cent. of the profits arising from the discovery should accrue to the former, and upon this the patent-office agents granted letters-patent to Morton. As time progressed ether was generally introduced by the profession in all our hospitals and infirmaries, in the Army and Navy, and in private practice. In 1847, a year later, Dr. J. G. Simpson, of Edinburgh, discovered that chloroform would produce anæsthesia in less time and with seemingly as good effects as ether.

In 1852 there was a bill introduced into Congress for the United States to purchase of Dr. Morton his patent, for the sum of one hundred thousand dollars. At the time this bill was introduced, Hon. Truman Smith, a member of the Senate from the State of Connecticut, being aware of the discovery of Dr. Wells, went into a full and thorough investigation of the whole subject, and proved by undeniable facts that Dr. Wells was not only the discoverer of anæsthesia by nitrous oxide, but that he had also used ether for the same purpose, and that all the claim which Morton really had to this discovery was his success in bringing it before the public. This, of course, defeated the bill.

Morton and Jackson both attempted to make out that Wells had entirely failed in his discovery, and that the nitrous oxide could not be used as an anæsthetic; and Dr. Jackson stated that he had tried it in various ways, "from both large and small orifices, and he could not produce complete anæsthesia with it."

In 1856 Dr. Morton came to New York, and commenced suit against the New York Eye and Ear Infirmary for infringements of his patent, with the view of getting damages, and, had he been successful, would have claimed damages of every institution and surgeon in the country on the same grounds. The courts, however, decided that a discovery was not patentable, and that Morton, allowing him to have been the discoverer, was no more entitled to a patent than was Newton for the discovery of the laws of gravitation; his letters-patent were therefore null and void. The discussion growing out of this litigation, with that in Congress, has proved conclusively that Morton and Jackson have attempted to deprive Dr. Wells, the real discoverer, of the honors and emoluments to which he alone is entitled; and the investigations now being made are proving nitrous oxide to be the only anæsthetic that is always safe and valuable to use.

The Hon. Truman Smith has prepared an able work, which will be issued from the press in November next, wherein he gives a full and complete history of this subject, from the commencement down to the present time, which will be not only authentic and of exceeding interest, but it will be a work of history and valuable to every scientific man.

LITTLE BOB begged hard the other day, when some friends were dining with us, to be allowed to come in and sit at the table during dessert, which was told him he might do, provided he neither talked nor annoyed people by asking for fruit. He very readily assented to this condition, which he honestly fulfilled to the letter. At last the poor little fellow began crying and sobbing most pitifully. "What is the matter, Bob?" he was asked; "what are you crying for?" "Why, pa," he replied, "here I am, asking for nothing, and getting it."

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Personal Habits.

[JOHN PIERPONT, the author of the following note, written at our request, is a native of Litchfield, Conn., where he was born on the 17th of April, 1785. He comes of a famous family, his great-grandfather having been a noted clergyman of New Haven, and one of the founders of Yale College. The subject of this sketch entered Yale College when he was fifteen years of age, and graduated sixty-two years ago. After teaching school a few years, he commenced the study of law in the school of Justices Reeve and Gould, and in 1812 was admitted to the bar in Essex County, Mass. Not liking the legal profession he abandoned it and became interested in mercantile pursuits, first in Boston and afterward in Baltimore, but his expectations were not realized, and he then devoted himself to literary labor, and in 1816 he published that fine poem, the *Airs of Palestine*. The grandeur of its sentiments, the elegance of its language, and the harmony and polish of its versification, placed him at once in the front rank of living poets. Just as his fame began to flower he determined to study theology, and did so in a school connected with Harvard College. In 1819 he was ordained as a minister of the Hollis Street Unitarian Church of Boston. In 1835 he visited France, England, Italy and the East. Five years later he gave to the world a collection of his poems in a handsome volume, which added to his reputation. He is now in the employment of the Government in the city of Washington, and although he is in his eighty-first year, there is not a clerk at the capital who can write a neater hand, not one who can accomplish more work in a day than he can, and there are few public men whose services are in greater demand outside of his daily duties. He is constantly called upon to take the pulpit or the platform and speak in behalf of human progress, address lyceums and associations for the advancement of education and temperance and freedom, and, like Mr. Bryant, who is about eight years his junior, he writes as well now as he did forty years ago. There is the true lyric ring in his songs, which are copied in our singing-books and school-readers. There is freshness and vigor and beauty in his poems as they come to us from his practiced pen. How can he perform so much labor? In what fountain does he find the elixir of perpetual health? His hair is white as snow, but his cheeks are red as roses; winter and summer meet and mingle in his person. "His head is December, but his bosom is May." He is erect as a palm-tree, and walks with elastic step, and when his tall, stately form appears in the street the stranger will stop, turn about and look at him. This remarkable and noble type of the American gentleman was endowed by Nature with a strong mind in a sound, healthy body, and during his long and useful life he has been a strict observer of the physical laws. He is a cold-water man. Thirty-three years ago he wrote the dedicatory poem of the Seamen's Bethel in Boston, in which may be found the following lines:

"Ye gracious clouds! ye deep, cold wells!
Ye gems from mossy rocks that drip!
Springs that from earth's mysterious cells
Gush o'er your granite basin's lip!
To you I look—your largess give,
And I will drink of you and live!"

His example is one of the strongest arguments that can be advanced in behalf of the doctrines we teach, and he shall speak for himself:]

REV. JOHN PIERPONT'S LETTER.

"MY DEAR SIR—Habits! You ask what are my *habits*. My answer will depend upon the sense in which you use the words. If you mean what kind of *clothes* I wear, I should say, in general terms, as to quality, always *decent*, and about as good as my pay will warrant, carefully keeping myself out of the hands of tailors, shoemakers and washerwomen; and as to the *fashion* thereof, always meaning to

"'Be not the first by which the new is tried,
Nor yet the last to lay the old aside.'

"If by my 'habits' you wish to know whether I am active or sluggish, taking much or little exercise physically, then, again, I must understand in what sense the word 'exercise' is used. In one sense of the term I disagree, *toto cælo*, with the Apostle Paul, who saith: 'Bodily exercise profiteth *little*.' In *his* sense of the term I have no doubt that he was right; but in the sense usually given to the phrase 'bodily exercise' I can not subscribe to the doctrine, and so I don't admit it into my creed. *I* believe that 'bodily exercise profiteth' a great deal; and though my opponents, in *Church* and State, have in years long gone by charged me with sundry naughty things, I am not aware of their having ever charged me with laziness. For many years previous to the last eight or nine I was at some pains to keep a little account of my locomotion, which on adding up I found, somewhat to my surprise, amounted to just about an average of one thousand miles a month, or twelve thousand miles a year; and though most of this was passive exercise, a good deal of active was connected with it; and although for many years I have

"'Laid down de shubble and de hoe,'

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not having natural adaptation and taste for agriculture and horticulture, I have taken a great deal of muscular exercise with mechanics' tools, using the saw, plane and turning-lathe with the best of them.

"If, when you inquire as to my '*habits*,' you mean to ask about my habits *dietetic*, I answer, in *general*, that I eat when I am hungry; drink—if I can get good water—when I am thirsty, and when I'm sleepy I go to sleep. This last function (as here in Washington the fashion is—we eat but two meals a day, breakfasting at or about 8 A. M., and dining at or about 5 P. M.) I discharge after this fashion: very soon after dinner, when I begin to feel 'the horrors of digestion,' having retired to my room, I say to myself:

"'Now I lay me down to sleep,'

and suiting the action to the word, I recline upon the lounge for an hour or an hour and a half, and when I wake feel no remainder thereof, even though my dinner was veal *pot*-pie, with *mince* pie—hot or cold—for dessert. Then, too, I'm fresh for whatever may 'turn up' between that and 11 o'clock: and having usually taken no lunch—'as the manner of some is'—don't I have an appetite for my dinner? And don't I do justice to the 'provender?' And, 'by reason of use, having my senses exercised thereto,' when a piece of coarse and tough corned-beef and a piece of nice roast lamb are brought upon my plate together, can't I tell which is which without asking my next neighbor?

"As to my *habitual drink*, one word covers the whole case—water, as cold as I can get it, and as much of it as my thirst asks for. I sometimes, especially in cold weather, drink black tea; but it is generally so difficult to get it *good*, and so much villainous stuff goes about under that *pseudonomy*, that of late I eschew it entirely and addict myself to cold water. As to *coffee*—once my darling beverage—I have not drank a teaspoonful of it within the last thirty-five years. As to alcoholic drinks, I never use any of them, except when prescribed as a medicine, and I remember only one case where so prescribed. I do not think any alcoholic drink, as a medicine, ever did me any good.

"There, my friend, I think *that* is all you can want to know of my '*habits*;' *only*, possibly, you may be pleased to know that, as to the outer man, my *skin* is treated to a pretty catholic daily ablution in water of the temperature of the room. Thus far as to my habits self-ward; as to my habits God-ward and man-ward, please do not press your inquiries any more closely upon me than you would like to have them pressed upon yourself,

"By your old friend and fellow-servant,
"JOHN PIERPONT."

[Written for The Herald of Health.]

The Bobolink.

BY GEORGE W. BUNGAY.

Where the pheasant late was drumming,
With her brown and spotted wings;
Where the velvet bees are humming,
Where the ox-eyed daisy swings—
The gay bobolink is coming,
With his song the welkin rings.
A meadow bard is he,
Minstrel of liberty;
He takes a drop of rain,
Then sings his song again.

Hear the solo of the rover,
As he swings upon the reed;
On the thistle, on the clover,
On the tip-top of a weed;
On the elm-twig bending over,
Singing while he husks the seed.
Oh, happy bobolink!
With clover-cups of drink;
The music of the rain
Is mingled with his strain.

How soft and tender is the twitter
Of this meadow minstrel gay;
How jubilant the wings that flitter
When he sings his roundelay,
Above the still and faithful sitter,
Upon her nest of wool and hay.
When the glad husband sings,
His wife—with folded wings,
Hid in the grass and flowers—
Forgets the fleeting hours.

Mellow Age.—I love to look back upon the past. Memory lives there, and in treasuring up what we have acquired or observed, it expatiates upon the resources of infinite goodness. I love, too, to look forward to the future. Faith lives there, and in her brightest anticipations sees Him whose presence and love are the joy of earth and time, and also the everlasting joy of heaven and eternity. It is a delightful thought that God is there; God, our own God. There are sombre hues in the past; but there is radiance even on the darkest cloud.

At all times presence of mind is valuable. In time of repose it enables us to say and do whatever is most befitting the occasion that presents itself; while in time of trial it may be relied upon to protect, and in danger to preserve.

A man should never be ashamed to own that he has been in the wrong, which is but saying, in other words, that he is wiser to-day than he was yesterday.

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NEW YORK, AUGUST, 1866.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ THE PUBLISHERS *do not hold themselves as indorsing every article which may appear in* THE HERALD. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D.

TREATMENT OF CHOLERA.—There is little difference of opinion at the present time, among medical men the world over, regarding the belief that cholera is a disease engendered and almost, if not entirely, caused by filth. There is neither much dispute of the question that the great preventive is cleanliness. When we come to the means of treatment, however, the differences of opinion regarding the best means of cure are as varied and contradictory as it is possible to make them. It is not our intention here to go into any discussion of the means of treatment most universally employed among the various schools of medicine, but to say a few words about the cure of cholera by good nursing, and such simple measures as seem to have, so far as thoroughly tried, proved most successful. If cholera is a disease that is primarily caused by filth, either in the individual or outside of him, or, as is likely to be, both, would it not be wise on our part to carry sanitary and hygienic measures beyond the prevention of cholera and into the realm of cure? In other words, we prevent cholera by personal cleanliness, and by cleansing, disinfecting and ventilating our streets, gutters, drains, sinks, privies, yards, cellars and houses, and keeping our blood pure and our bodies clean, both externally and internally. When we come, however, to treat a case of cholera, the general plan of treatment is not one of purifying the patient, equalizing the circulation of the blood and distribution of nervous energy, and modifying excessive and concentrated action in one part of the body, so as to entirely destroy that part, causing death; but we use those very substances which add to the impurity of the body, and though they may stop the course of the disease, there is almost sure to be an after-period of recuperative effort on the part of the system to get over the effects of poisoning. Now, the question is, Are the laws of Nature such that disease can only be cured by this poisoning process? or will a wise hygiene and proper nursing, when properly carried out, prove that there is a better way?

We believe a wise hygiene will do all that can be done for the cure of this disease. Preissnitz depended almost entirely on water and friction as remedial agents in the cure of cholera, and with remarkable success. His method was as follows:

PREISSNITZ' TREATMENT.

"On the appearance of the cholera itself, the following measures are to be taken:

"One or two rubbings with a large, dripping wet linen sheet; in case of great pain in the abdomen an enema of cold water, a sitz-bath of about forty-six to forty-eight degrees Fahrenheit, connected with drinking of a great deal of water, so that the patient freely vomits; he must remain in the sitz-bath, and have his back and abdomen rubbed, till vomiting and diarrhea are quieted.

"If there be much cramp apply rubbings, alternating every five minutes between wet and dry rubbings. If the patient can not stand up, he is to be rubbed while lying on a mattress.

"After that let him put on the abdominal bandage and go to bed; and on waking, take a bath of about fifty degrees Fahrenheit for a few minutes, during which the abdomen is well rubbed.

"The room must be always well aired. As the water in the sitz-bath becomes foul it must be changed; the patient must eat only cold food, never any meat.

"Those who rub and treat the patient must not be afraid. The disease under such treatment is not at all dangerous, for a patient can often in one hour be perfectly restored by it without any after-trouble.

"The manner in which to proceed in a case of cholera depends partly on the bodily condition of the patient, partly on the progress the disease has made. If the patient is delicate, the temperature of the water should not be so cold, and the sweating moderate; if the disease has reached the degree of insensibility begin to use at once enemas of cold water. If the vomiting and diarrhea be very painful, put the patient at once into a sitz-bath of not less than fifty-eight degrees Fahrenheit; and if he has at the same time headache, surround the head with a cold wet towel. Patient must rub with wet hands stomach and abdomen, while an attendant does the same with his back, legs, and arms till the natural warmth of the body returns. During this treatment he must continually drink cold water, which is, if he can not

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drink himself, to be *given* by another person. This drinking must be continued till the nausea, the oppression at the stomach, the feverish burning of the skin, diarrhea and vomiting shall have subsided. The abdominal bandage must be renewed as soon as hot.

"When the cholera symptoms are diminished by this treatment, or when they have entirely ceased, put the patient to bed, cover the whole abdomen with a cold compress, rub his hands, feet and whole body till he is perfectly warm, pack him in a thick woolen blanket, and cover him with a large feather-bed or what else there is at hand, so that he, if possible, perspires and sleeps (which latter is, however, not always the case). Then open the windows wide, but avoid draught. The patient must remain in this condition as long as he can bear it; after that he is to be put into a bath or washed off with cold water, and he may dress himself, and, if he feels strong enough, be brought into the open air. He must drink while in bed (if he does not sleep) a great deal of water, and continue to do this *till he is well.*

"The abdominal compresses must also be worn, particularly if there exist yet some slight symptoms of the disease.

"Another very important matter is perfect rest, which the convalescent must strive for, so that the body may gain time to recover strength, without being fatigued by any exertion.

"The colder degrees of water—but never ice—the sweating to dripping can only be applied in very strong constitutions and extreme cases.

"Often, particularly if this treatment is given at the beginning of the attack, the first single application is sufficient for perfect recovery; but, if the attacks are repeated, or even grow worse—which may occur in consequence of the obstinacy of the disease, but which should not frighten us at all—we must repeat the proceedings above described, but with perfectly cold water.

"To these conversational instructions, Priessnitz added the following remarks:

"1. The water to be used, particularly for drinking, should be continually brought fresh from the well or spring; water having stood some time is unfit for use. To elevate the temperature pour hot water in.

"2. For compresses we use thoroughly wetted linen, which is well wrung out, but without being warmed by the wringing hands. Over these compresses we put dry cloths to prevent chill.

"3. For a sitz-bath we use a wooden tub, in which the patient sits, and where the upper part of the body and legs remain outside.

"4. The general bath is to be taken only so long as it is necessary to have the whole body washed thoroughly.

"5. If cramps in the feet appear we take a foot-bath of cold water, in which the feet are rubbed hard till the cramps cease.

"6. For the subduing of the violent pains and heat in the abdomen we can repeat cold enemas.

"7. If there are only rumbling and cutting pains in the abdomen we need only sitz-baths, drinking of cold water and abdominal compresses.

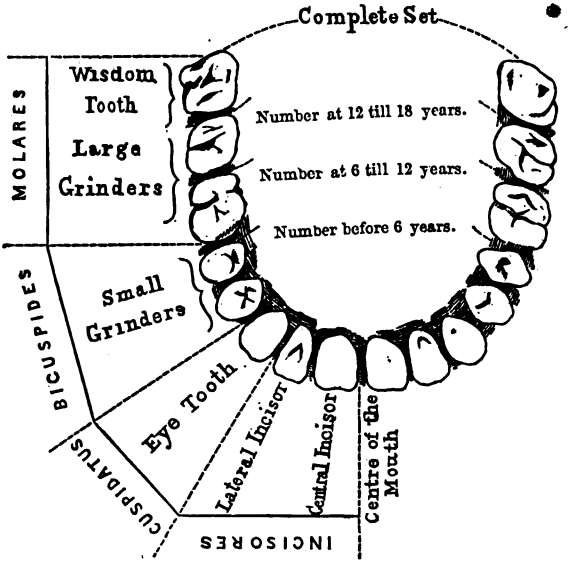
"8. The cholera patient should eat as little as possible, and this only cold; he must not drink any milk. He may eat some stale wheaten bread with butter, and drink at the same time much water. Medicines, tea and similar things are entirely excluded. It is in general to be recommended that even people in health use themselves to cold food, but in the cholera it is unconditionally necessary.

"9. The convalescent must, for some time after his cure, continue to bathe and wash the whole body, to drink freely, to perspire moderately; and he will do well, *as every other human being*, to accept for *his whole life*, the external and internal use of cold water."

We give this plan of treatment, adopted with universal success by Priessnitz, not because we think it perfect, for there is no doubt but it would need modification to meet individual cases, but because it is philosophical and has proved very successful wherever carefully and thoroughly adopted. Priessnitz, perhaps, used water too cold, particularly for persons not robust; but even then his success was at least satisfactory. Cholera is but a violent effort on the part of Nature at cleaning out the body. She concentrates all her forces on the digestive canal, principally the bowels, soon destroying them. This plan relieves the bowels by drawing blood from them to the surface, a matter of the greatest importance. It ought to be remarked that *thorough friction is of the greatest consequence, and without it the rest of the treatment might prove useless.* Thorough friction of the skin can be made most effectual, either when there is perspiration, so as to moisten it or when the body is immersed in water; and it is a most potent means, when properly applied, of equalizing the circulation and relieving congestion. There is hardly any possibility of carrying it too far. It should be applied particularly to the extremities. The length of this article precludes much that we intended to say on the care and nursing of patients with cholera; but we will add that: 1. Their rooms should be clean and well ventilated, *but not cold.* 2. The bed should be kept clean and well aired. 3. The arms and legs should be kept warm, if necessary by immersing them in hot water, afterward rubbing them well and covering up dry in soft woolen blankets. 4. The movements of the bowels should be so managed that the patient be not moved from his bed, and all dejections should at once be disinfected and immediately removed from the room and from all possibility of their producing injury. It is from their fermentation that the seeds of cholera are likely to spread. 5. The patient should keep the lungs well expanded, thereby aiding depuration through them, and to that extent relieving the bowels.

With these hints we leave the subject for the present

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Shows the state of the mouth at various periods; twenty teeth belong to the first set, and thirty-two to the second set. The first large Grinder on each side of the jaws makes its appearance at about six years of age; this tooth is frequently mistaken by parents for a first tooth, and it is supposed that another will come in its place if it be removed. Such is not the case. It is the first tooth of the additional number (twelve) belonging to the permanent set, and great care should be taken to preserve it, if there be the least sign of decay.—*After Sylvester.*

CHILDREN TEETHING.—There are few periods of a young child's life that the mother feels more anxiety about than during the time when the teeth are making their way through the gums, and yet it is not necessarily a period of danger in the well-born and well-cared-for child. But mothers who have little ones who are not robust, whose brains are large and bodies small, and whose nervous organizations are at all excitable, should guard with tender care every transgression of the laws of the child's body, otherwise there will be more or less danger. Even in children of a robust constitution, when they are badly brought up, there is almost always more or less suffering during this period. The following extract on Teething, from a little work by Dr. Johnson, is so much to the point that we quote:

"Dentition is a healthy and natural process, and, in a healthy child, is effected without trouble or suffering of any kind. The appearance of teeth is a necessary consequence of growth—is, in fact, part and parcel of growth—and it is inconceivable that Nature should have attached pain and suffering to this simple organic act. One cannot understand why the cutting of a tooth should be more painful than the growth of a foot or finger. And we find, on reflection, that Nature is by no means guilty of this inconsistency or injustice; but to the folly and excesses of man is due the grevious suffering which so frequently attends infant dentition. Children suffer because they inherit from their parents sickly and diseased frames, or because they have been reared in disobedience to the laws of health. Children who have been nurtured upon improper food, or in any unwholesome atmosphere, or who have been dosed with calomel and gray powder, will almost certainly experience a difficult dentition. On the other hand, the children of Nature—as the offspring of the North American Indians—will pass through this ordeal without cause for complaint. The child who is brought up upon hydropathic principles will escape the annoyances and perils of this much-feared epoch.

"In many cases, for some time previous to the eruption of the tooth, the gums are much swollen; there is an abundant flow of saliva from the mouth; the child dribbles, as it is called, incessantly, and thrusts its finger, or any thing it can seize, into its mouth. As the teeth advance in the gums, the latter swell and become softer and tender. If there be several teeth coming forward, or if the gums be inflamed, the mouth will feel hot to the finger. The child now bites vigorously; its mother does not escape with impunity, and it carries every thing it can seize to its mouth; it is fretful and uneasy; does not sleep as quietly as usual; and the bowels may be rather more free than at other times. In some cases the affection is more severe. The mouth becomes hot and dry; the gums are of a bright or deep red color, much swollen and very tender; the child is not now inclined to bite, on account of this tenderness, and the act of sucking is attended with considerable pain. The infant is restless, cross, uneasy, crying bitterly, and refusing to be comforted or amused by its ordinary playthings. Sometimes it can not settle to sleep; at other times, after sleeping for a while, it wakes up crying. Its thirst is great, and it takes cold drinks with avidity. The flow of saliva may be nearly arrested, or it may be excessive; and, occasionally, the

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glands below the jaw are enlarged and tender. The cheeks are flushed, especially after sleep. If the local inflammation continue to increase, we may find the appearance of thrush in the inside of the lips or cheeks, or the gums may ulcerate.

"It appears that dentition is commonly more severe in the winter than in summer, and in large cities than in the country. and among the badly-nourished children of the poor than the carefully-tended offspring of the rich."

The treatment of teething should be mostly preventive. The child does not need medicines, but—1. Fresh air. If it lives in the city the greatest care should be taken to supply the child with pure air, by taking it out to the parks and public squares, very much of the time when the weather will permit. The rooms in which it lives and sleeps should be so well ventilated as to be always supplied with as pure air as possible. Pure air is a great essential in preventing trouble and danger with children during teething. 2. Pure food is equally essential. The habit of stuffing a little child with a great variety of food, salted and seasoned, is almost sure to derange the whole digestive canal, and through this medium so affect the child's health as to make teething a serious affair. If the child is not weaned, and the mother or nurse's milk is abundant and good, this should constitute the little one's sole food. If cow's milk is used it should be from a new milch cow that is perfectly healthy and properly fed. Cows fed on slops of all sorts can never give perfectly healthy milk. If the child is weaned, bread and milk, good potatoes, boiled rice, oatmeal gruel or barley gruel, and a little ripe fruit, will all be excellent. Feed with great regularity and not oftener than once in four hours. 3. Equal circulation and distribution of the blood and nervous energies. This is impossible unless pure air, and wholesome food are supplied. With these, almost any irregularities of circulation can be kept in control by the tepid or warm bath and thorough friction of the extremities with the bare hand. There are but few things that a young child enjoys better than to lie on a soft mattress, in a warm room, perfectly naked, and submit to a delicate but careful rubbing of the entire body from the hand of a gentle mother or nurse. This may be done two or even three times a day with profit. The exposure to the air and friction keeps the skin healthful, and so well supplied with blood that all internal congestions and convulsions are generally prevented. 4. The clothing should be light and perfectly loose about the body to protect the arms and legs from cold, while it allows perfect freedom of motion. We greatly over-dress children. They ought never to be oppressed with what they wear, and it should always protect the limbs. Generally the body is over-dressed, and the arms and legs too little dressed. It is downright murder to dress little ones with nothing on their arms and legs in cold weather, and it is also injurious to over-load and keep their bodies too warm. In the first case, children are liable to congestions of the internal organs; in the latter, to debility and weakness of the skin. If, however, they are properly clothed, and their bodies exposed to the air and sunshine, the skin may always be kept vigorous. 5. The bowels must be kept free, not by physic, but by the right food, and if necessary an occasional injection. Constipated children will always suffer more from teething than those whose bowels are free.

It is almost impossible to state in a brief article all that parents need to know about the care of the little ones whom they would rear to health and beauty, but if they will study and apply the laws of a wise hygiene, they will be amply repaid by seeing less suffering and death and a more perfectly formed and healthy offspring. The young of animals do not suffer and die during this stage of their growth, and we do not believe our children would do so if we would rear them simply and naturally.

VENTILATION.—A recent number of The Horticulturist contains an excellent article on "Ventilation," and tells how it may be accomplished in dwelling-houses, as follows:

"Surround a common iron stove with a neat Russia-iron case, leaving a space of six inches between the two, and cover the whole at the top with an ornamental grating. Connect this apparatus with the air out of doors by a tin conductor four inches in diameter, leading from a cellar window along under the parlor floor into the open space before described. A damper should be inserted in this pipe to regulate the amount of air brought in. By some arrangement like this, we can introduce a constant supply of pure air, which, when warmed in the air-chamber around the stove, will flow out in a genial current through the perforated top into the apartment. It is to be supposed, however, that a register or valve is also provided in the chimney-flue for carrying off impure air as fast as fresh is brought in."

This, of course, would not apply to the ventilation of large buildings. We have a great many men in the country who devote themselves to architecture, and it is a serious neglect that they do not understand the need of ventilation, or the art of doing it well. There is hardly a church, theater or lecture-room where one can

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go and spend an hour without being more or less poisoned by bad air. The Nation, in speaking on this subject, says:

"The perversity of men has shown itself in few things more than in the pains they take to cabin, crib and confine the freest, and to debauch and pollute the purest of all God's gifts to man. Now, certainly, this need not be so. There must be ways by which the atmosphere of the most thronged churches, theaters, or lecture-rooms shall be as pure and sweet as the circumambient air itself. And as soon as the consumers demand that those ways shall be found out, the discovery will be sure to be made. It is the office of art, informed and inspired by science, to seek out more and more excellent ways of applying the bounties of nature to the uses of man. This is material civilization, and we are barbarians, with all our ornamentations, as long as the laws of God are not fully understood and practically applied to the business of daily life. A wide and beneficent field lies yet scarcely touched for the genius and skill of the architect to work in. He who will contrive to combine perfect purity of air with warmth and light, in crowded churches, theaters and school-rooms, as well as in private houses, will be a benefactor to his race, and will deserve, at least, to be as famous as he who hung Peter's dome in air."

We may talk, however, as much as we please about ventilating our public buildings; we shall never have the work done until people understand physiology. It ought to be the groundwork of all education. Reading, writing and arithmetic have always been considered the most important parts of an education; but this idea is false. All education should have its basis in a sound knowledge of physiology.

EDUCATION EN MASSE.—An educational journal, speaking of compulsory education, says:

"The propriety of congregating masses of children of all ages and both sexes in numbers ranging from eight to eighteen hundred is, and well may be, contested by experienced teachers. It is admitted that physical and, in some cases, mental or intellectual drilling, can be accomplished *en masse*. But the inculcation of morality is a different affair, often requiring special supervision; and even though the State be willing that morality should be dispensed with, it is certain that it would disapprove of immorality being communicated; and it is questionable if this be not the case in many of our public schools. Moral malarias are far more subtle than physical, and their effects are far more difficult to detect and remedy. It would be unwise to trust Rarey himself with a valuable colt, if he had a thousand others in training at the same time. Moral infirmities are also infinitely more varied than physical. They require especial and individual treatment, differing in almost all instances. There are many persons capable of training an army of one or two thousand children, but to faithfully superintend the physical, mental and moral education of one or two hundred is a labor of Hercules. It may be asserted that those who most fully appreciate the duties of their position, who are most experienced and most capable, would be most ready to admit their inability to fulfill all the requirements of such an obligation."

One of the worst features of education in masses is the liability of the children to learn vicious habits. This will be the case, in spite of all teachers can do, unless education has a physiological basis. Parents err greatly who, when they commit their children to the care of teachers, do not also at the same time continue to guard their progress with a most watchful eye. The education of children can never be entirely left to a teacher. The father and mother, who are the educators of their own children as far as possible, do a double duty in keeping their own faculties bright, as well as strengthening the ties that bind them to their children.

MOSES COIT TYLER who has prepared several valuable articles for THE HERALD OF HEALTH, one of which, on "English Pluck," appears in this issue, will leave London for this country in August, and will devote the coming winter to lecturing in the United States. The subject of one of his lectures we see is announced as "England, her Greatness and her Littleness." We are sure that Mr. Tyler will be warmly welcomed to this country, and are confident he will meet with abundant success.

The London correspondent of The Boston Commonwealth pays our friend Tyler the following merited compliment:

"Moses Coit Tyler, a graduate of Yale, who has been living in London some three years, and has gained the first rank as a lecturer, intends, much to the regret of many friends, and to the real grief of lyceums, to go back to America this fall. All I can say is, that if people wish to hear a cultivated and captivating lecturer, and to know what eyes wide open can see in these old lands, they will do well to send for Tyler as soon as he arrives."

A NOTE FROM PRESIDENT DAY.—"NEW HAVEN, CONN., June 25, 1866. Messrs. MILLER, WOOD & Co.—*Gentlemen:* In your HERALD OF HEALTH, page 38, you state that I am ninety-four years old.

"I was born August 3, 1773. If, therefore, I live to the 3d day of August my age will be ninety-three.

"Very respectfully yours,
"JEREMIAH DAY."

WE see by the new circular of the CHRISTIAN HEALTH REFORMERS' COLONIZATION COMMISSION that the officers of this society are working for the establishment of a good Hygienic Colony with very encouraging prospects. This circular will be sent on the receipt of stamp by the General Agent, T. Grow Taylor, Lincoln, Delaware.

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Home Treatment of Disease.

BY E. P. MILLER, M. D.

☞ *In this department we shall give, from month to month, plain, practical directions for the home-treatment of various diseases.*

Diseases of the Bowels.—During the warm summer months more or less disturbance in the action of the bowels is liable to occur, aside from that connected with epidemic cholera. These disturbances are commonly known as cholera morbus, cholera infantum, cholic, diarrhea and dysentery.

These diseases are usually caused by some derangement of the digestive organs, brought on by imprudence in eating or drinking, or by taking cold, over-exertion, exposure, etc. Imperfectly masticated fruits and vegetables are a very common cause; especially if these are unripe or partially decayed.

These diseases often arise, too, from a critical action of the bowels, in working out of the system some miasmatic or other poison which is in the blood.

Medicines of various kinds are a prolific cause of disease of the intestines; they often irritate and inflame the mucous membrane to such a degree that they produce an unnatural action in these parts.

The custom of giving children castor-oil, or salts and senna, or pills, and powders, for every little ailment, is highly pernicious and often predisposes to disease of the bowels.

CHOLERA MORBUS.

The term Cholera was formerly applied to diseases accompanied by a flow of bile—the true meaning of the word being *a flow of bile.* The term Morbus might with propriety, perhaps, be applied to any illness, for it simply means disease. Cholera morbus is called by some writers sporadic cholera. It prevails most extensively in warm climates and during summer weather.

It generally commences suddenly, but sometimes there will be for a few hours a sense of weight and uneasiness in the stomach and bowels, with nausea, followed by severe cholic pains in the abdomen, with vomiting and purging.

The vomiting and purging follow each other in quick succession, and sometimes take place simultaneously; it is most liable to commence in the night. The matter usually thrown off is at first the undigested contents of the stomach and the fecal accumulation of the bowels. The evacuations are generally very profuse at first, and after the contents of the stomach and the bowels are removed, there will be copious discharges of liquid mingled with bile, which is sometimes so acrid as to produce a scalding sensation in the throat, or a burning in the rectum and soreness at the anus. These latter symptoms never occur in epidemic cholera.

The act of vomiting and purging is generally attended by cholic pains or spasms. The vomiting is accompanied by dryness of the mouth and throat, with great thirst. There is usually much anxiety and restlessness, small, feeble, but often accelerated pulse, a cool skin, and sometimes a cold, clammy sweat, and in severe cases cramps in the legs.

TREATMENT.—This should be prompt and active, varying a little according to the most prominent symptoms. Drink freely of water as hot as can be swallowed comfortably to increase the vomiting if the stomach is not emptied of its contents, and afterward sip of the same to quiet it. Copious injections of tepid water after each evacuation will strengthen the bowels, and check the diarrhea. Hot fomentations over the stomach and abdomen, covered by dry blankets, re-applying the hot cloths every five minutes for half an hour—this to be followed by a tepid hip-bath for ten or fifteen minutes, rubbing the hips and abdomen while in the bath, hot bottles to the feet, bits of ice in the mouth constantly, or occasionally sips of cold water. If there are cramps rub the limbs with hot cloths. This treatment will generally relieve the patient in a short time.

In some cases cold applications used in the same manner agree better than warm, but I have generally found the hot to do best. The patient should abstain entirely from food for two or three days, then take a little wheat-meal gruel or rice gruel for two or three days more, and ever after live so as not to reproduce the disease.

CHOLERA INFANTUM.

This disease is known by the more common name of summer complaint. It is peculiar to children under five years of age, and is very common and exceedingly fatal in this country, while it is only occasionally met with elsewhere.

Cholera morbus, diarrhea from indigestion, enteritis, and dysentery in children, are all classed by some authors under the head of cholera infantum. Children, when teething, are quite subject to these diseases. The causes are usually unwholesome food, foul air, and want of proper cleanliness of person during the hot weather.

The symptoms are at first a profuse diarrhea, usually, but not always, accompanied by vomiting; the purging and vomiting are frequent, the discharge being green or yellow, or

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often of a light color and very thin and gelatinous. They are sometimes without color or odor and occasionally streaked with blood.

The patient rapidly loses flesh and strength, and shows symptoms of great prostration; the pulse is quickened but small and tense; the head and abdomen may be hot, while the hands and feet are cold; there is usually great thirst with entire loss of appetite, and in some cases every thing swallowed is immediately vomited up. There is generally considerable fever, especially toward evening, and often pain in the bowels, which become much swollen and tender to the touch.

Occasionally there are morbid symptoms of disturbance in the brain, the child becomes dull and somnolent, eyes wild and suffused with blood, eyelids partially closed, frequent turning of the head from side to side; delirium and convulsions may follow. Such cases often prove fatal.

TREATMENT.—Get the child into good air as soon as possible; give copious injections of tepid water to rinse out all irritating substances from the bowels, and allay the heat and pain; put the child in a tepid or warm bath and give it vigorous rubbing on the back and limbs, and if it can be borne, upon the chest and abdomen; wrap in dry sheet, rub dry and put to bed with hot bottles to the feet. When there is not much inflammation hot fomentations to the abdomen will do good. These may be followed by cool wet compresses, well covered with dry flannels; keep bits of ice in the mouth to allay thirst and arrest vomiting. When ice can not be obtained, sips of cold water will suffice; hot water will sometimes allay the nausea when cold will not. The sponge or towel bath may be given two or three times in the twenty-four hours. Bathe the head in tepid water when it is hot, and be careful to keep the feet warm.

No food should be given for a day or two at least, and even then only of the blandest kind; a little plain gruel, boiled rice or juice of stewed fruit or berries, or pure arrow-root may be given in small quantities. If the child is nursing give it no other food, and even that may be partially interdicted for a day, or perhaps two.

Do not hazard the life of the child by giving it opium or castor-oil or rhubarb, salts and senna, or any thing of the kind.

Epistaxis, or Nose-bleeding, is quite a common difficulty among children and young people, up to the age of puberty. Girls are often subject to it before the menstrual period is fully established. Persons of a full plethoric habit, and also intemperate persons, are sometimes troubled in this way. Epistaxis may arise from injury, from excitement, from plethora, from too great a determination of blood to the head, from intemperance, from obstruction of the circulation arising from disease of the heart, or from too great a relaxation of the capillary blood-vessels, owing to a morbidly thin state of the blood, such as we find in purpura, or in the last stages of fever when treated by drugs.

A person of a full plethoric habit may have bleeding from the nose occasionally without harm arising from it; but it often occurs in persons of naturally feeble constitution, who have no blood to spare, and who are depressed and weakened by it. In some cases the loss of blood is so great as to give cause for alarm and actually endanger life.

TREATMENT.—The bleeding can generally be arrested by applying cold water to the nose, the forehead or back of the neck. If this does not succeed, apply ice to the forehead and sniff cold water up the nose. If this fails, place one of the small tubes of the Mattison or Essex syringe as far up the nostril as possible and inject quite a quantity of cold water, letting it pass up the nose and come out of the mouth. The last process will seldom fail to cure very bad cases of nose-bleeding.

If the bleeding arises from the coronal branch of the facial artery, it can be suddenly stopped by pressing on the facial artery at the point where it passes over the lower jaw, which is about half way between the center of the chin and the lower point of the ear. Placing the hand around the lower part of the chin, with the thumb and index finger pointing toward the ear, press forcibly on each side, and you can scarcely fail to press the artery in the right place.

This method of arresting bleeding of the nose may be so quickly and easily applied, that it is of great value in those cases where the hemorrhage comes from the artery above-named. In the month of May the writer was called to the Tontine Hotel in this city, to see a young man who had bled till he was almost fainting; various remedies had been tried without effect, but pressure upon this artery stopped the bleeding instantly, which so surprised the bystanders that they thought it almost miraculous.

Another process, which however, requires the aid of a physician, is plugging the posterior nares with a plugget of lint. This is drawn through the mouth and back of the soft palate into the nose till it comes in contact with the bleeding vessels, and, by pressing upon them the hemorrhage is stopped. We have never yet seen a case, however, that we could not stop by the injection of cold water, by the application of ice, or by pressing upon the artery, without being compelled to resort to plugging.

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Answers to Correspondents.

BY A. L. WOOD, M. D.

☞ *The readers of* THE HERALD *are invited to ask such questions as will be of general interest for this department, where they will be briefly but comprehensively answered.*

Is Lead Pipe Poisonous?—That water is poisoned by standing or being conducted in lead pipes, was known before the Christian era. Vitruvius, a Roman Architect of the time of Julius Cæsar, forbade its use for this reason. The illustrious Galen, A. D. 130, condemned its use for conducting drinking water, because of its injurious effects. According to recent official statements, there are in England and Wales one hundred thousand (100,000) cases of epilepsy and paralysis, the majority of which can be traced to the use of lead as a conductor of water. One-seventh of this number occurs in London alone, thus showing that in large cities, where lead is almost exclusively used, the evil effects are most felt. Since the introduction of Croton water into New York, the deaths from epilepsy and paralysis and the cases of constipation, cholic, muscular debility, neuralgia, amaurosis and other diseases which the presence of lead in the system produces, have increased more rapidly in proportion to the population than other diseases. The quantity of lead taken into the system at one time, in this way, is, of course, very small, but when continued from day to day and year to year, it as certainly, though it may be imperceptible, undermines a person's strength and vitality as when taken in larger quantities.

The following extract will give a clear idea of its effects when taken in large quantities. This affair occurred a few months since in Orange County, N. Y., and was caused by using flour which had a small quantity of lead mixed with it by being ground by a set of stones whose cavities had been filled up with lead:

"In the town and immediate vicinity of Middleton 213 cases of this malady have happened, besides 100 more at Goshen, a few miles off. The most heart-rending details are given of the sufferings of the people at these places. A great many children have died. Scores of men, who a few weeks ago were in the full enjoyment of health and strength, are ruined for life, and totter to and fro, their faces having the appearance of dry parchment; their eyes sunken and encircled by a dark ring; their lips blue; their muscles contracted, and their limbs distorted; for them to move is intense pain; relapse follows relapse, till in time they succumb to the effects of this fearful malady."

In view of the always injurious effects of the use of lead pipe, we hail with joy the invention of a substitute called the Encased Block Tin Pipe, which, according to the reports of Prof. Doremus, and other scientific men who have thoroughly tested and examined it, is superior in every respect to the common lead pipe, and perfectly free from all poisonous qualities. This being the case it should at once supersede lead pipe as a conductor of water.

Difficult Breathing.—1. Is it the swelling of the lungs or the obstruction of the air-cells by morbid matter that causes difficulty of breathing? What is the remedy?

2. Does the proportion of lime in our bones or iron in our blood depend in any degree upon the amount of these substances contained in in our food?

Ans. 1.—Usually both. It very often arises from the lungs not being large enough to contain a sufficient amount of air to purify the blood. When this is the cause, the size and breathing capacity of the lungs must be increased. Full directions for this will be given in an article in the next number. When it is caused by congestion and the presence of morbid matter, the diet should be strict in quality and abstemious in quantity, avoiding milk, sugar, butter, fine-flour bread, condiments and all greasy substances and stimulating compounds. Particular attention should be given to keeping the skin in a healthy, active condition by proper bathing, and as much out-of-door exercise should be taken as the strength will allow.

Ans. 2.—It does to some extent. This is not only true of lime and iron, but of every substance that enters into the composition of the body, and the proportion of each substance depends not only upon diet, but upon the health, age, sex, etc., of the individual.

Hair Oil.—Is the use of hair oil injurious, and if so why? Does frequent wetting of the hair with water injure its health and beauty?

Ans.—The use of any oily substance upon the hair is injurious, and not alone to the health and beauty of the hair, but to the scalp and brain. It mats the hair close down upon the head, forming an impervious cap, which prevents all evaporation from and ventilation of the scalp, thus over-heating the scalp and brain, and weakening the roots of the hair. The use of water promotes the cleanliness of the scalp and hair, aids evaporation, helps to prevent any over-heating of the parts, invigorates the roots of the hair and consequently strengthens and beautifies the hair itself.

Prevention of Trichiniasis.—The only sure way of preventing this horrible malady is to abstain entirely from swine flesh in every form. Cooking is *not* a preventive.

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Is Smoking Injurious?—Is tobacco-smoking injurious to a healthy person? If so, why, and what are its effects?

It seems strange that such a question as this should be asked, when the great majority of the people puff the poisonous weed, and at least nine out of ten will acknowledge that they know it injures them.

Tobacco in *any* form is *always* injurious. Its only use is to destroy. It contains one of the most deadly poisons, two or three drops of which will instantaneously kill almost any small animal. In smoking, the tobacco-smoke which contains this poison is carried with the incoming air through the bronchial tubes to the six hundred million air-cells of the lungs, blackening and obstructing all those fine, delicate passages which God only intended for the reception of the pure air of heaven. This obstruction of the air-cells and passages tend to produce difficulty of breathing, asthma, bronchitis and consumption. Not only this, but this tobacco soot becoming absorbed into the blood, poisons the very fountains of life and exerts its deleterious influence upon every organ and function of the system. It impairs the natural taste and relish for food, lessens the appetite, and creates an unnatural thirst which often leads to the use of intoxicating liquors and intemperance. It weakens the powers of the stomach and digestive organs, and is one of the chief causes of dyspepsia with all its protean forms and accompanying horrors. It always produces weakness and exhaustion of the nervous system, and often causes palpitation of the heart, epilepsy, paralysis, hypochondria, dropsy, cancer, insanity, and many other of the ills that afflict humanity.

Sleeplessness.—To promote sleep be regular in all your habits; retire and rise at a certain hour; eat very light suppers, or still better, none at all; do not over-exercise the brain and especially avoid every thing exciting in the evening; take sufficient out-of-door muscular exercise during the day to moderately fatigue you; take a sponge or hand bath every morning, and follow it with plenty of friction; upon retiring expose the entire surface of the body to the air for five or ten minutes and at the same time rub the skin briskly with the hands. If you feel restless during the night, rise and walk about the room in a nude state for a few minutes, at the same time rubbing the body briskly with the hands. When you rise don't forget to open the bed so as to air it well. Never retire at night with cold feet. Warm them by exercise if you can, otherwise, by warm water or before a fire, but always warm them in some way.

Medical Student.—The principal requirements necessary for those who intend entering upon the study of medicine, with a view of making it their profession, are: 1. A strong constitution to enable them to endure the study, toil and care always attendant upon the life of the true physician. 2. Good common sense and independence of thought. Without this, the medical student is almost certain to be led astray by the false theories and erroneous teachings to be met with in medical lectures and text-books. He should be able and willing to think for himself and not be disposed to rely upon the dictum of any man or class of men. 3. A good English education. The more knowledge any one possesses of anatomy, physiology, pathology and hygiene before entering a medical college the better. The best works to procure at first, for home study, are Gray's Anatomy, Dalton's Physiology, and the Hydropathic Encyclopedia. These books can be obtained at the office of THE HERALD OF HEALTH.

Use of the Skin.—What is the use of the skin, aside from its forming a protection to the body?

Ans.—The skin is the most important of the excretory organs, and in a state of health about one-half of the waste matters of the system pass off through its seven million pores. The heat of the body is prevented from rising above about 98 degrees by the exhalation and evaporation from its surface, and the function of respiration, which is mainly carried on through the lungs, is assisted to such an extent by the skin, that, if a large portion of it is destroyed or entirely excluded from the air, the person will die. This shows the great importance of keeping the skin in a healthy, active condition.

Unpleasant Odor from the Skin.—I see some of the papers recommend compound spirits of ammonia for the removal of the unpleasant odor produced by perspiration; is there any thing better?

Ans.—Yes, cleanliness is better. Keep the skin clean by a simple daily towel-bath and take a thorough wash with soap and water once a week and you will have no occasion for the use of unguents, perfumes, etc. They are all more or less injurious.

Scrofula.—What should be the diet and habits of a scrofulous child?

Ans.—The diet should be very plain and simple, and confined to fruits, grains and vegetables. The larger the proportion of good ripe fruit, the better. No drink but pure soft water is allowable. Scrofulous children should take plenty of out-door exercise, study little, bathe daily, and spend much of their time in the open air and sunshine.

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Healthy Spices and Condiments.

THE ONLY ADMISSIBLE HYGIENIC SEASONINGS.

Descendants of Ham—*Trichinæ.*

THE time to kill a rattlesnake is before it bites.

THE gem can not be polished without friction nor a man perfected without adversity.

WE may always joke when we please, if we are always careful to please when we joke.

DEAR ladies tilt as much as you please. We can stand it if you can.—*Prentice.*

THE way to get a good wife—get a good girl and go to the parson.

HE who can weather the storm need not storm at the weather.

WHY IS the James River like a keg of lager bier? Because it flows into the Dutch Gap.

BEAUTY in woman is like the flower in spring; but virtue is like the stars of heaven.

HE who has good health is a rich man, and rarely knows it.

THE only effectual way to promote peace is to feed men on nothing but vegetables.

STUFF AND NONSENSE.—Cracking jokes while you are eating your dinner.

THE birds are the most successful of agriculturists, as their crops never fail.

DOUGLASS JERROLD calls woman's arms "the serpents that wind round men's necks, killing the best resolutions."

DR. CHAPIN says there is a class of men too shallow to have a conscience, and too cold to have a heart.

IT is a great waste of raw material to put five dollars' worth of beaver on ten cents' worth of brains.

WHY is Buckingham Palace the cheapest ever erected? Because it was built for one sovereign and finished for another.

CURIOUS FEAT. — A scampish builder ran up a high perpendicular wall of a suburban villa in two days.—*Punch.*

IT is singular but true, that Eve was created for Adams' Express Company—at least it is so recorded.

"I HAVE the best wife in the world," said a long suffering husband; "she always strikes me with the soft end of the broom."

PEOPLE perform the greater part of the voyage of life before taking on their ballast; hence so many shipwrecks.

NO man can ever become eminent in any thing unless he work at it with an earnestness bordering on enthusiasm.—*Robert Hall.*

LET us always go beyond the duties that are marked out, and keep within the pleasures permitted.

SURELY the most painful recollection on earth is that of having had it in our power to do good, and having neglected to do it.

WHY is a restless sleeper like a lawyer? Because he lies on one side, and turns and lies on the other.

AN editor afflicted with hand-organs thinks the rinderpest can not be compared with the grinderpest.

HE who has not forgiven an enemy has never yet tasted one of the most sublime enjoyments of life.—*Lavater.*

"JIM, does your mother whip you?" "No; but she does a precious sight worse." "What's that?" "She washes me all over every morning."

THE "Waterfall" is prohibited in England. The game laws there say "netting the hare shall be punished with fine and imprisonment."

A COOPER, on seeing a dandy with his fingers covered with rings, declared that the fop "must be a feeble chap, as it was always a sure sign of weakness in a barrel when a great many hoops were used upon it."

NOTHING was so much dreaded in our schoolboy days, says a distinguished writer, as to be punished by sitting between two girls. Ah, the force of education! In after years we learn to submit to such things without shedding a tear.

SAILOR'S GRAMMAR.—"What part of speech is man?" said a pedagogue to a sailor-boy pupil. "A verb, sir," replied the latter. "A verb, is it?" said the teacher, with a significant twist of his lips; "please give an example." "Man the yards!" was the little tarpaulin's instant response.

AT a medical examination a young aspirant for a doctor's diploma was asked, "When does mortification ensue?" Think of the amazement his questioner must have felt when he gave the answer, "When you propose to a lovely girl and are refused."

AN urchin, not quite three years old, said to his sister while munching on a piece of gingerbread, "Siss, take half of dis cake to keep to afternoon when I get cross." This is nearly as good as the story of the child who bellowed from the top of the stairs, "Ma, Hannah won't pacify me."

PORK.—An English paper says the trichinæ can not live at the temperature of boiling water, so that thorough cooking, by boiling of infected pork, is all that is required to render it harmless. This reminds The Hartford Press of the old lady's advice, "Always eat your chestnuts biled, my son, *biled worms* don't never hurt nobody."

A FEW hours after a recent wedding in Shaftsbury, Massachusetts, the officiating clergyman discovered that the fact of his residence out of the State disqualified him from legally marrying. He hunted the couple with all possible speed, but did not find them until the next day, when he offered to refund the fee, but the bridegroom would not take it—he said "'twas wuth it."

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Literary Notices.

A Valuable Work.—Fowler and Wells have just published, in the best manner of "the art preservative of art," an invaluable work on Physiognomy and Signs of Character as manifested through temperaments and external forms and especially in the human face divine." Mr. S. R. Wells, the Editor of The Phrenological Journal, is the author. It embraces more than seven hundred pages of matter, and almost every page has a capital illustration. This exhaustive and admirable work defines physiognomy and shows its benefits; refers to previous systems; explains the physical man; alludes to general principles of the theme; illustrates the temperaments; analyzes the faces and forms of men and women; presents graphically the outlines of phrenology; discusses facial anatomy and signs of character; treats of the hair, beard, hands and feet; the question of idiocy and insanity; shows the effects of climate on character, and adds chapters on types of mankind; physiognomy of classes; contracted faces; love signs; changes of countenance; grades of intelligence; instinct and reason; animal heads. The book contains a vast amount of intelligence, and ought to find its way to every private and public library in the land.

It may be ordered from this office. Price, $5.

The Normal.—This is a tri-yearly magazine of 56 pages, devoted to popular education and the improvement of teachers of Common Schools. One of the greatest wants of the age is a more thorough education and higher grade of culture, moral, intellectual and physical, of the teachers of our common schools, and any thing that aids in the attainment of this great object should meet with the hearty approval and support of all true friends of humanity. Judging from the appearance of the first number now before us, and from our acquaintance with the Editor, The Normal is destined to take a leading position among the educational journals of this country. Its typographical appearance is unexceptionable, and the character of its articles interesting and instructive. All teachers, school officers and parents who desire to see the greatest degree of improvement among the children placed under their charge should form a speedy acquaintance with The Normal. Published by J. A. Cooper, at the State Normal School, Edinboro, Erie County, Pa. Terms, 25 cts. a number; 75 cts. per annum.

Publishers' Department.

To Our Readers.—At the request of many of our subscribers and in accordance with our own inclinations we have permanently enlarged THE HERALD OF HEALTH to forty-eight pages, and increased the price to $2. Thus we have increased its size one-half, and its price only one-third. We have secured as contributors to its columns many of the leading literary, reformatory and medical writers of the country, and we intend to spare no pains or expense to render it the most useful and instructive magazine in the world. Friends, we want your assistance in this work. Such a journal as this is needed in every home and can not fail to prove a blessing to every attentive reader. If every subscriber would put forth a little effort (for which he would get well paid) and send us a few new subscribers, our circulation would soon amount to an hundred thousand, which number we mean to obtain. Will you help us in this good work?

The September Number.—The September number will contain, among other articles, a valuable one from Moses Coit Tyler on "Muscular Christianity;" "A Lesson for the Day," by Geo. W Bungay; useful and practical article on "The Culture of the Lungs," by A. L. Wood, M. D.; a paper on the "Study of Physiology," by Prof. Rufus King Browne; "The Health of Our Girls," by Dr. J. H. Hanaford; "Gymnastics," by Theodore Tilton; "Amusements," by P. T. Barnum; "Reform," by Horace Greeley.

Prof. Thomas F. Leonard, of Boston, has promised us an article on Vocal Culture and the effects of Gymnastic Training on the Development of the Lungs and Voice. Prof. Leonard, who stands in the front rank of Elocutionary teachers, and who has occupied the chair of Vocal Culture in Dr. Lewis' Normal Institute for Physical Education ever since its commencement, has enjoyed unusual facilities for observing the effects of physical training in this direction, and our readers may expect a valuable article from his pen.

Commendatory.—The New York Independent, in an editorial notice of THE HERALD OF HEALTH says:

"This splendid magazine is at once a physician and a teacher, and should find its way to every household in the land."

The Coshocton Democrat says: "THE HERALD OF HEALTH for July contains numerous articles on Physiology and kindred subjects. It is a journal that ranks first among those of its class, and we would like to see it in the hands of all our readers. It will interest and benefit all who will reflectingly read."

"I have seen the July number. It is a *super*-excellent one."

"WILMINGTON, Del.

"JOHN CAMERON, M. D."

"I have been a subscriber and attentive reader of THE HERALD for years, and I like its present appearance much. I have a family of wife and four children and we never employ a doctor or take medicine. My wife is competent to take charge of all complaints that occur with us.

"F. I. CHAMPLIN."

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

No Names.—We have several orders for Heralds, Books, Hand-mills etc., on hand, unaccompanied by the name, and in some cases, without the address of the sender. If those persons who have failed to receive responses to their orders will send us their names and post-office address they will soon hear from us. In sending orders, always be careful to write your name and address *plainly* and *in full*.

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books, and Baths.

Herald for 1863, 1864 and 1865.—We have a few bound volumes of THE HERALD OF HEALTH for 1863, 1864 and 1865 on hand, which will be sent free by mail on receipt of $2 25.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

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Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Agents Wanted.—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

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☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.

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aug-1t ISAAC TABOR, M. D.

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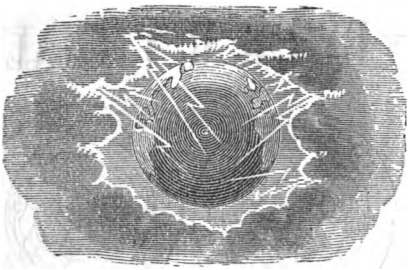
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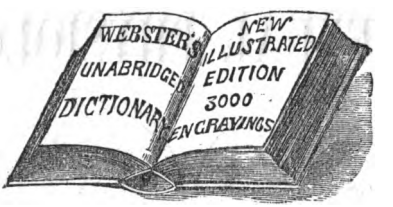
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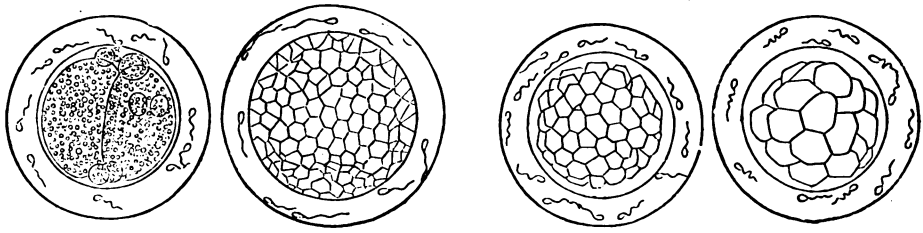
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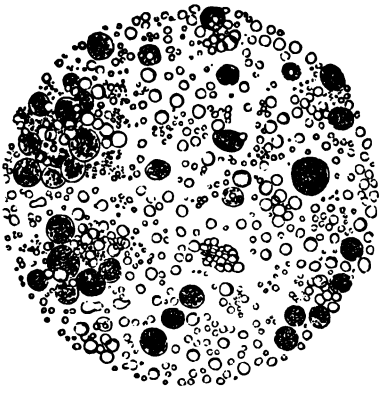
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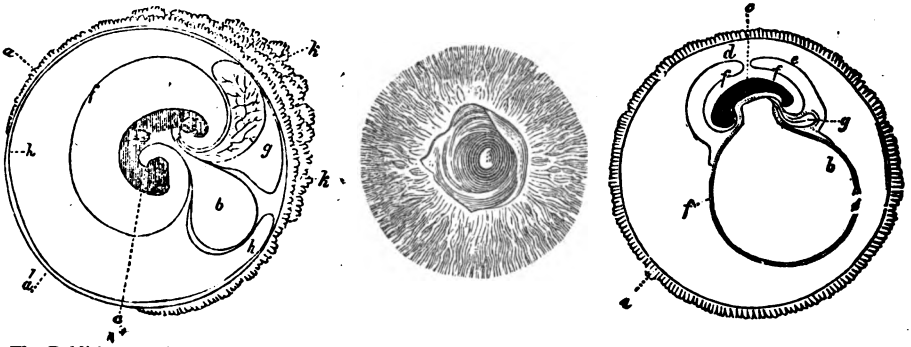
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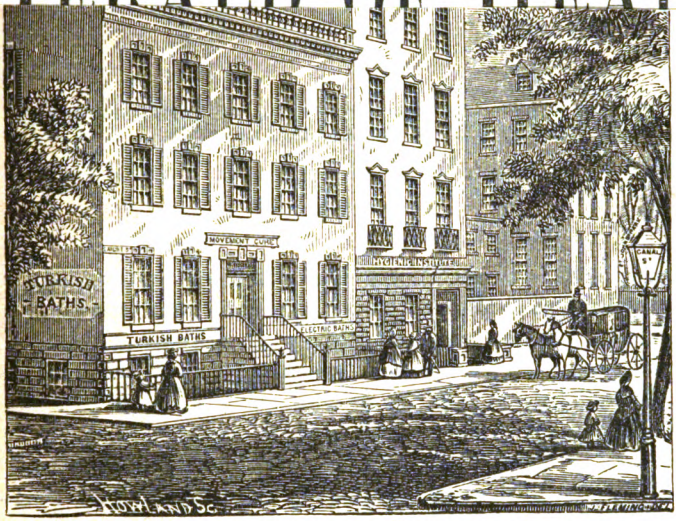
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SEPTEMBER, 1866.

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The shampooers who work ten or twelve hours daily in the bath grow strong, tough and athletic. This is not only true with regard to our own experience, but in that of other Hygienic Institutions of celebrity in this country and Europe, where they have been adopted as an auxiliary in Hydropathic treatment. Feeble consumptives go into the baths as shampooers, and work there daily until their health is restored.

As a speedy cure of intoxication and delirium tremens there is nothing to equal the Turkish Bath. It is one of the most effectual means of obviating sterility.

We do not say that the Turkish Bath is a universal remedy for all diseases, neither do we rely upon it in all cases. There are some cases for which it is the only remedy we want, aside from the proper regulation of diet and hygiene. In other cases we only use it as an aid, relying more upon the Electric Bath, or the Swedish Movements, or upon ordinary water applications. Neither do we say that we can cure every disease by the use of any one or all of these agents combined. We do claim, however, that by a proper adaptation of one or more of these agents to each individual case, we can remove the causes of disease and establish healthful conditions in a few weeks or months that would require double the time to do the same without them under any other treatment. In connection with these remedial agents, we insist on a rigid adherence to proper diet, pure air, sleep and rest.

Our house is in good order, and our location pleasant, being only one door from St. John's Park; we have good air and excellent facilities in every respect for restoring health to the most feeble invalids. Patients coming from the country generally make more rapid improvement than the same class of patients from the city, the change of air and the stimulus of city life operates favorably. We treat every form of disease within the reach of human skill.

*** Letters of inquiry should be addressed to E. P. MILLER, M. D., or to A. L. WOOD, M. D., 15 Laight St.

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AND

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General Articles.

[Written for The Herald of Health.]

Unsympathizing Nature.

BY F. G.

BIRDS are companions,
Flowers are friends,
And who has not felt
The low whisper of winds?
There's a language in tempests,
A voice in the sea,
Communion in forests,
In brooks melody.

Yet be not their votary;
They only are friends
When the full heart, outgushing,
Its sympathy lends.
For Nature, impartial,
Is deaf to thy plea;
Heart alone can respond
To the heart's sympathy.

[Written for The Herald of Health.]

Muscular Christianity.

BY MOSES COIT TYLER.

"NONE the worse citizens or Christians are ye for your involuntary indulgence in muscularity."—*Thos. Hughes.*

ABOUT fifty years ago the sensibilities of England and America were profoundly and generously stirred by the story related by Robert Southey, of the wonderful life and the premature death of a student at Cambridge named Henry Kirke White. No doubt this story owed not a little of its impressiveness to the eminence of the author who told it, and to the charms of that exquisite prose of which the Poet Laureate was so consummate a master. A delicate youth, born in lowly circumstances, with the glorious face and the temperament of genius, attracts to himself the favor of a wealthy patron, and is enabled to enter one of the renowned universities of the world. Pensive, poetical, aspiring, prayerful and bilious, he pants to satisfy the lofty expectations of his admirers, and succeeds in becoming the model of a virtuous but romantic and lackadaisical student. He wrestles with the stern realities of the Calculus, and indites sonnets to the Moon; composes eloquent hymns to his Creator and madrigals to his lady's eyebrow; writes polished epigrams in the style of Horace, which show the elegance of his taste, and essays on Melancholy in the style of Addison, which reveal the disordered condition of his liver; supplicates Heaven for the restoration of his health, and denies himself needful sleep by the help of strong tea, pins and cold-water compresses; utters a pious ejaculation before every meal, and then swallows it with a rapidity indicative of his contempt for the functions of teeth, gastric juice, and all other carnal things; gains all the highest prizes, amazes all the wisest Dons, violates all the holiest laws of health, and dies, in a blaze of glory, a MARTYR TO SCIENCE!

Success is the mother of imitation; and the unintended evil of Kirke White's radiant and rose-watery career infected the colleges of Christendom. Straightway we had a plague of Kirke Whitelings—emaciated, long-haired, big-eyed, pious and moony young gentlemen, who

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excelled in Homer and hypochondria; cultivated prayer, poesy and dyspepsia; made tender reference in rhyme to their lyres, their lutes, and their longings to be no more; sauntered languishingly by purling brooks, when they ought to have been kicking the foot-ball; sat up burning an extravagant quantity of midnight oil, when they had been much more profitably employed snoring in their bunks; and, while confounding the twinges of a morbid conscience with the pangs of indigestion, and, while mistaking the depression of abused nerves for an angelic summons to leave this Vale of Tears, they awaited somewhat impatiently the time when they also should become Martyrs to Science, bemoaned and canonized by the principal Parish Sewing Societies of the civilized world.

If this sort of thing had continued, it is impossible to say into what a state the literary world would have descended. It is probable that Science would have come to be synonymous with Sciatica; and the word Learning would have suggested lankness, lassitude and long hair; the chief purpose of going to college would have been to acquire the dead languages, an interesting cough, the tearful sympathy of old women, and an early death; the royal road to knowledge would have signified a turnpike leading into the graveyard. An old scholar would have been as rare as white blackbirds and four-leaved clover, and gray hair would have been an infallible proof that its possessor was an ignoramus.

Fortunately, before the new philosophy had become rooted in the world, a great, robust and manly scholar, Thomas Arnold, was called to preside over one of the famous Foundation Schools of England. He was a man who above all things scorned cant, effeminacy and unreality, and he set himself with all the earnestness of his powerful nature to the task of exterminating this spirit of literary sickliness. He refused to admire learned noodles of the Kirke White order; he called them by their true names, not Martyrs to Science, but Suicides of Vanity, Ignorance and Folly. Sir Walter Scott wrote for one of the chapters of *The Monastery* a mattox which depicts the sort of student Dr. Arnold abhorred:

> "At school I knew him—a sharp-witted youth,
> Grave, thoughtful, and reserved among his mates,
> Turning the hours of sport and food to labor—
> Starving his body to inform his mind."

What business had the precocious little prig to go on in that style? When it came play-time he ought to play with all his might; when it came dinner-time he ought to eat with all his might; when it came bed-time he ought to blow out the candle and go to bed and sleep with all his might! And he ought to be told that, as to "starving his body" in order "to inform his mind," it was utter nonsense and wickedness, and that the next time he was caught in such silly behavior he should have a thrashing. In this spirit Dr. Arnold reprobated as an impiety the whole system of cultivating one part of our nature at the expense of another. He fought it in the class-room and in the chapel; he talked against it, wrote against it, lectured against it, preached against it. He assailed it with texts of Scripture, with the maxims of Greek Ethics, and the verdict of common sense. He recalled the old Athenian phrase, *αρετη γυμναστικη*; and he told his boys that just as there was the virtue of honesty, and the virtue of justice, and the virtue of fortitude, and the virtue of charity, and the virtue of reverence, so was there the gymnastic virtue—the virtue of obedience to the laws of health. He told them that this was Christian truth, a portion of the Christianity which existed in the world before Christianity was born. He told them that good health was of more consequence to them than a knowledge of the Binomial Theorem, or than facility in the manufacture of Latin hexameters; that sound lungs and capable stomachs were the necessary conditions of useful scholarship; and that they would be displeasing him, disappointing their friends, and disobeying God, if they postponed bodily vigor to the mistaken requirements of literary ambition.

I am not aware that the term Muscular Christianity was ever applied to Dr. Arnold or was ever used in his time; but there can be no doubt that it was he who first gave the broad and wholesome impulse which has culminated in the habit of thought described by that facetious expression, and that it was his influence which produced such heroes and scholars as Charles Kingsley, Dean Stanley and Thomas Hughes—a race of men as superior to the type represented by Kirke White as Shakspeare is superior to Tupper, as harmony and power are to inanity, as physical jubilance is to headache and heartburn, as common sense is to nonsense, as reality is to rainbows.

What, then, is Muscular Christianity? In its results, in its practical deductions and corollaries, I have already indicated what it is; but I will endeavor, as I conclude this paper, to present a direct statement of the fundamental propositions on which it is based.

Muscular Christianity is Christianity applied to the treatment and use of our bodies. It is

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an enforcement of the laws of health by the solemn sanctions of the New Testament.

In one of the celebrated novels of Thomas Hughes we have an important aspect of Muscular Christianity—that of the right employment of our physical energies—presented to us by one of the most illustrious exponents of Muscular Christianity. Mr. Hughes distinguishes between mere muscle-men and muscular Christians: "Both believe in bodily strength; but the former in it without principle, and for sensual, selfish and cruel ends. Whereas, so far as I know, the least of the muscular Christians has hold of the old, chivalrous and Christian belief, that a man's body is given him to be trained and brought into subjection, and then used for the protection of the weak, the advancement of all righteous causes, and the subduing of the earth which God has given to the children of men."

In still another view of the subject, Muscular Christianity seems to me to be a vindication of the full nobleness of meaning contained in the word *Education!* That glorious word, so much used, so much abused, grasps within its golden rim every thing which can develop, strengthen, harmonize and intensify, and render effective all those faculties of our entire nature, intellectual and corporeal, which the Creator has endowed us with; and in the logical application of this truth, it stands forth in assertion of its long-despised and repudiated claims of the body. It says that, since every part of our nature is the sacred gift of God, he who neglects his body, who calumniates his body, who misuses it, who allows it to grow up puny, frail, sickly, mis-shapen, homely, commits a sin against the Giver of the body. Ordinarily, therefore, disease is a sin. Round shoulders and narrow chests are states of criminality. The dyspepsia is heresy. The headache is infidelity. It is as truly a man's moral duty to have a good digestion, and sweet breath, and strong arms, and stalwart legs, and an erect bearing, as it is to read his Bible, or say his prayers, or love his neighbor as himself.

Long creeds, either for churches or for gymnasiums, are stumbling-blocks and snares. The creed of Muscular Christianity is as brief as it is just, comprehensive and sublime:

ALL ATTAINABLE HEALTH IS A DUTY.
ALL AVOIDABLE SICKNESS IS A SIN.
LONDON, *July*, 1866.

LONGEVITY.—James Downie of Alyth Scotland, died in June last at the age of one hundred and four years.

[Written for The Herald of Health.]

How a Man Gets to be Hardened.

By permitting himself to be hardened. It is an easy thing, you see, and generally insinuating, tempting. All is done by habit, as we are "creatures of habit." Did we ever think upon the power of this maxim? Very little, as *we* reflect upon such things. Although we see daily that habit rules the world, yet we are taken by it constantly, and always are aware of it.

The boy who stole a pin next took a needle, and felt less guilt in taking the needle than the pin. He had already acquired the habit.

The first guilt is nauseating; the second less so; the third is encouraging; the tobacco-chewer is the result—and that in a short time—for a long life to be polluted.

The man who has his first fight has the way opened for the second, and that for the third, and so on to the gallows. This is the way these men are formed. It is from such small beginnings that the prison gets its inmates.

And we are all subject to these habits that lead to prison, to the gallows, and to degradation. The worst criminals do not expect, in youth, to become victims no more than you or I. But the easy habit, with its accompanying temptation, leads on gradually—so gradually that it is not perceptible, till all at once the individual is in trouble, and often such a trouble that he would give the world to be out of it.

Is it not worth while then that we should be cautioned against this insidious evil? We can not be cautioned too much—daily are we surrounded with its influence. It is in the world around us, everywhere. The cigar holds it out in its perfume, the meerschaum in its prestige. How sparkling, how very beautiful the dancing heads of the bowls, and it is "fashionable," solid men, men of "standing" indulge in it. And so the evil keeps tempting, and in a weak moment the person yields—yields for once. But succeeding temptations are a little less easily resisted, and still a little less. By-and-by the eye brightens and the step hastens to ratify usual indulgence, not now become a habit, but a confirmed condition, now and then breaking down in abject drunkenness and ruin. And who of our habitual indulgents will escape the "ruin?" This is not foreknown, though *every one* is *sure* he is not the man.

Look upon the world and note the evil, all through the indulgence of habit. We acquire disease by indulging in habits that bring on disease. Need I mention the diseases?

Now, the most effective cure that is known is

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to uncover to view the insinuating workings of habit—how easily it is acquired; for you can not break up a habit, that will not do to trust to, habit will floor you. You are to avoid it. Then it is easy; then the clay is soft in the hands of the potter, if you can only be made to see it—to see the force of *now* breaking away from it. By doing so you will be free, readily. Many do so and have a life of peace and safety. They avoid at the dangerous moments a corrupt life onding in misery.

Avoid then, while you can yet easily, this insinuating, hardening process. F. G.

[Written for The Herald of Health.]

Medical Men and Christianity.

BY JOHN BRAY, PASTOR OF THE SECOND BAPTIST CHURCH, WASHINGTON, D. C.

THAT the present age is one of great activity, earnest pursuit, and of progress, we must all admit. Among others, the learned and liberal professions are being closely scrutinized, remodeled in many respects, modified and improved. This is all well enough; but we think there is reason to fear that too many are devoting their energies, not too earnestly to these things, but too exclusively. All beyond their immediate objects is unseen, especially the things of the soul and God. The paths to earthly distinction are daily thronged, while those that lead to eternal honors and glories have but few pilgrims. The ambitions of this life may be mostly laudable enough from given stand-points; but if the cost of their attainment is to be the loss of the soul, then no honors or distinctions of earth can recompense that loss. The practice and profession of the "Healing Art" is justly held by all to be noble and worthy of esteem. The skillful "healer of human diseases" is valued alike by the rich and poor, and surely such ought to be the best of men. Possessing enlarged and liberal endowments of education and practical science, if coupled with a kind heart, and the whole character of the man is adorned with the virtues and charms of true piety, he is at once a physician alike of bodies and of souls, scattering blessings of health and happiness for time and eternity wherever he moves. There are many reasons to be assigned why medical men should be, and ought to be, expected to be, men of deep and fervent piety; as:

1. They enjoy certain advantages which are, and must remain, exclusively and peculiarly theirs. Their very profession is itself daily admonitive. Just as often as they come into contact with dangerous disease, so they also come into contact with food for reflection. As medical men simply, it is their duty to watch the progress of the disorder, investigate its nature and causes, read its varying diagnosis, and apply such remedies as they deem alike proper and called for. But ought they not also, as Christian philosophers, to consider the prime cause of all these malignant and mortal ails? Should it not remind them of sin? and its most baneful as well as universal fruits? "By sin came death into the world, and death has passed upon all men, for that all have sinned." The common-place idea of the world generally is, that such things belong only to theology, and their investigation only to its ministers. This we deem a serious error; but to say nothing of physicians becoming bedside preachers, yet have they not souls and eternal interests of their own? And ought not their peculiar calling to exert salutary influences on their minds touching their own present and future? Every thing around the physician, in all his studies, his daily walks, and especially his visits to the bedside of affliction, seem naturally to invite solemn reflection, to awaken inquiry, to convince him of the need of an interest in the mercy of the "Great Physician," to sicken the heart of the follies of the world, the vanities of wealth, and to urge him to seek peace and security with God through the blood of atonement.

2. That piety (as it seems to us) is an essential qualification for a skillful physician, and most certainly for the good confidence and hopefulness of a pious patient. How can a sick Christian feel confidence in a profane medical attendant? or hopeful in his hands? To say the least, would not all patients, pious or otherwise, feel more confidence, hopefulness and comfort in the hands of a God-fearing and pious physician, than in one of the opposite character? The fact is, most persons, however sinful their lives, are piously disposed in severe sickness; and could a medical attendant at once endowed with wisdom, skill and kindness, address himself both to the sickness and to the soul of his patient, it is not easy to estimate the greater amount of good that he would in that case accomplish, beyond being the mere physician. Clergymen can not always be on hand; the physician is the first thought on, the first called in, and often the only one who has the opportunity of speaking words of truth and instruction and comfort, as the case may seem to demand. I notice also that true piety would greatly add to the qualifications of medical men in yet another respect. Piety always tends to make men *honest*. I wish to be correctly understood in this

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remark. I imply no reflections; but it is a fact and patent, that, in the present day at least, the practice of Medicine, like every thing else in the world, has run down into a money-making science, and but too extensively into PATENT HUMBUG. Whether it ever was, for the past hundred years or so, any thing else, I shall not now consider. That it is so now, and extensively, no man of common candor will deny. The saving of human life is *not* universally the primary idea and aim of medicine-vending, but the making of money—a fortune, even at the sacrifice of human life. How many thousands of such are to be found on God's earth, who daily give poisons, of which and of whose action they know very little, into human stomachs of which they know yet less, because they "must do something," and don't know what to do? Who shall doubt this? The most candid medical writers that ever lived and wrote confess that "all medicines are doubtful in their operations and effects;" but some medicines in daily use are known to be real and active poisons, which can not be imbibed in the human system without real, positive, serious and life-lasting injury. Now, I say piety is called for here. A truly pious physician would never, merely for the sake of gain, give to any sick person that whose beneficial effect is exceedingly doubtful at best, but whose pernicious effects are just as certain as death. No; if the good is doubtful and the harm certain, piety would say, "Withhold!" Piety would also modify the strongest prejudices to the securing of a physician's greater usefulness. How many are there who really know to do better, but will not, because of bitter prejudices against "the more excellent way?" Other treatment is confessedly (in their hearts) better than theirs; but it is "irregular," not of "their school," and that is enough. They would rather lose their patient than their "regular" reputation, by giving their faith and practice to what is not their profession. All this, of course, is wrong—wrong in principle and wrong in practice. Suppose a man studies Navigation in college, then goes to sea in command of a ship; but, on encountering the facts of navigation, he finds that some portions of his college theory don't work well; skillful seamen suggest improvements—their lives are at stake, the ship also, and cargo; would he be slow to relinquish his theory in a hurricane, because it was taught to him at college and the "regular course?" No; his object would be to save his vessel, the lives of his crew, his own, and cargo. How strange that medical prejudices should not be as ready to yield. Surely, genuine piety before God would sit as an umpire in all such cases, and would say: "If other treatment is better than mine, God speed it!" I can not help thinking that more than mere human skill and discovery has had to do with the now very general establishment, in this and other countries, of "Hygienic Institutions" for the education of a new order of physicians, and a totally new practice of the Healing Art—rather, *old* practice revived. If I understand your healing philosophy, it ignores only what is not good, not safe and reliable—preferring to really heal the sick, rather than to feather your own nests. This is noble, and bespeaks, as I said, more than mere science and medical discovery; because, in the beginning at least, your pecuniary interests were all in the opposite direction. I consider it as an interposition of Divine mercy, in so far, to deliver the sick from the cruelties of the destroyer, who with his scores of Latin-named poisons, many of which are the most deadly in the world, seeks "whom he may devour." Your physicians can also all be perfectly consistent with a knowledge of facts, and hence perfectly honest, whose faith and practice strictly accord, and who therefore have confidence in what they do. I know some men sell liquor, knowing it to be wrong; yet they do so for the sake of the profit of it. Conscience is cheap there. But where is the difference between selling liquor and giving injurious drugs for the sake of the profit? Both are wrong, and wrong because both are poisons and injurious. Enlightened and sanctified consciences can neither do the one wrong nor the other—at least to us it would seem impossible. I shall close this short article by expressing my confidence that generations yet to come will bless and revere the noble and the brave Hygienic pioneers, whose self-sacrificing devotion to the interests of truth and humanity has done so much to emancipate a drug-and-doctor-ridden world from the bitter thraldom of ages, and to bless them with health and life and happiness, to which so many thousands have heretofore been the miserable strangers.

COMMENTS BY E. P. MILLER, M. D.

Most cheerfully is place given to the foregoing article, not only because it contains thoughts of vital importance to the present and future happiness of the race, but because, coming from the pen of a prominent Orthodox clergyman, it suggests subjects for consideration which we shall hope to see freely discussed, not only in Health journals, but also in all the Christian periodicals of the land.

The relations of Christianity to Health, the

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duty of Christians in regard to disease, the duty of Health Reformers as Christians, the duty of physicians as spiritual advisers, and the duty of ministers as teachers of health, are all topics which call for free discussion, and the result of which, if carried on in the light of Science and Religion, can not but be beneficial to the world.

It is doubtless true that there are many reasons why medical men should be Christians, why "they should consider the prime cause of all these malignant and mortal ills," why they should be "reminded of sin and its most baneful as well as universal fruit"—disease and "death," for is not disease an intermediate step between sin and death, and just as truly the result of sin as death?

Surely there is a cause for disease somewhere, and is it not found in a violation of either physical or spiritual laws? Can it be traced to the chastening hand of God as a punishment for sin, except as the natural and inevitable result of violation of His law? If it be true, that disease and suffering are the results of sin, is not the obligation just as binding upon the *minister* to be himself, both in *theory* and *practice*, a teacher of the *laws* of *health*, as it is upon the physician to be a Christian?

Is it not also "the common-place idea of the world" to leave all subjects relating to the cause of disease, and the *physical* well-being of the race, in the hands of physicians? and is not this, too, "a serious error?"

Has not every child of God's creation a body that is "fearfully and wonderfully made," which, if properly cared for, is capable of unlimited enjoyment, or, if abused and neglected, its suffering is most intense? And ought not ministers to be thoroughly conversant with every thing relating to man's personal comfort and enjoyment in this life, as well as those which relate to his future and eternal happiness? For, during this life, the physical and spiritual are so blended, and exert such an influence each upon the other, that the health of the one is dependent in a great degree upon the other; and he who would, in the full sense of the term, reform the life, must of necessity be a teacher of the laws of health; he must so understand and relate himself to these laws that he may lead the people, both by precept and example, to see that if they would be true Christians they must so live as to be free from disease. Christ, the great Founder of Christianity, plainly taught the necessity of physical regeneration, as well as spiritual; He healed the diseases of all whose sins He forgave. As He went about "preaching the gospel of the kingdom," He at the same time "healed all manner of sicknesses and all manner of diseases among the people."

Devils, demons and diseases were alike enemies which He came to cast out and destroy, and in almost every chapter of His history we read of His restoring sight to the blind, causing the deaf to hear, the dumb to speak, the lepers to be cleansed, and "every sickness and every disease among the people was healed."

When He commissioned the twelve Apostles to go forth and preach the gospel, He gave them power also "to cure diseases and cast out devils"—He sent them out to "preach the kingdom of God *and* to heal the sick." The seventy Apostles who were sent forth were told, that into whatsoever house or city they entered they were to "heal the sick that are therein, and to say unto them: The kingdom of God is come nigh unto you." "And these signs shall follow them that believe on my name: they shall cast out devils;" "they shall lay hands on the sick and they shall recover."

In my opinion, Christianity ought to do away with disease. If we are true followers of Christ ought we not to obey *all the laws of God, physical and spiritual?* and would not *health*, as a prime necessity of happiness, follow?

In ancient days, health, happiness and long life were promised only to those who *kept* the "statutes and commandments" of God, and to such the Lord said: "I will take away from them *all sickness*, and will put none of the evil diseases of Egypt, which thou knowest, upon them." But whenever the people disregarded the "statutes and commandments" of God, He sent, first, "disease, consumption and a burning ague" upon them; He afflicted them with pestilence and famine, and, when those failed, He "destroyed them from off the earth."

I am inclined to the belief that the time is not far in the future when sin and sickness will stand in the relation to each other of cause and effect, and that when a person is suffering from any form of disease, it will be generally known what was the character of the sin which caused it.

Viewing this subject either from the standpoint of science or revelation, the causes of disease are in a great measure under our control, and the race as a body have increased those causes. Or setting revelation entirely aside, and placing every thing on the basis of natural law, are not these laws to a great extent within the scope of man's knowledge and control? is it not a duty which every one owes to himself and the race to try to understand these laws, and how to relate himself to them?

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The laws which the Creator has established to govern our physical being are just as sacred as any laws which God has made; and if He has given us minds capable of understanding these laws and how to obey them, so as to live free from diseases and "prolong our days in the land," are we not culpable if we do not give heed to them?

Is it right to allow ourselves to go on in violation of the natural laws of our being, and to live in sickness and suffering when the way of physical salvation is clearly open before us? Is it not our duty as Christians to do all we can for the present as well as future happiness of the race, and to understand and teach the laws which God has revealed in nature as well as those of revelation.

Are we not living on the verge of the fulfillment of the new covenant which God was to make with His people, in which He says: "I will put *my laws* in their inward parts, and write it in their hearts and in their *minds*, and I will be their God and they shall be my people; and they shall teach no more every man his neighbor and every man his brother, saying: Know the Lord, for they all shall know me, from the least unto the greatest. I will forgive their iniquity, and remember their sin no more."

May not this prophecy yet be fulfilled in a scientific point of view? Are not God's laws written all through man's physical organization, in every bone and muscle and nerve and fiber of his being? And may we not yet know and understand these laws that we may respect and obey them?

My friend remarks that, to him, "piety is an essential qualification of a skillful physician." May I not with equal truth remark that the practice and teaching of the laws of health are essential qualifications of the Christian minister?

I believe that, other things being equal, most people would prefer a physician who was a good Christian, but I think, when severely ill, few would hesitate to choose skill, even if coupled with infidelity, rather than ignorance, though combined with all the piety of the age.

And, on the other hand, how much greater would be the power for usefulness of those whose mission it is to care for the souls of men, if they at the same time looked after the health and happiness of the body also; how much stronger would be the inducements to become Christians, if the health of the body were thereby enhanced; how much greater the multitude who would seek salvation from sin, if, by so doing, they could be "made whole of whatsoever disease they had?" Would not Christianity thus be doubly armed, and carry with it a saving and convincing power, which in this enlightened age would soon draw all men within its folds?

This was certainly the doctrine and practice of the great Founder of Christianity. And, let me ask, who can assign any reason why health and happiness should not pertain also to the religion of the present day?

If the doctor ignores those vital truths which pertain to the soul's future happiness, does not the minister more completely ignore those subjects which pertain to the health and happiness of the body?

There is an utter neglect of pulpit teaching with regard to the laws of life and health. Very little is there said as to what we shall eat and drink, how sleep and breathe, and how think and work, what constitutes a proper use or abuse of all the bodily functions, how we should relate ourselves to the laws of the physical universe and our own organization; in short, we should use our God-given powers as not abusing them.

We believe that the doctor and minister should go hand in hand; their duties can not be separated so long as soul and body are united; and when ministers and teachers of Christianity shall realize that they have a work to do in educating the people with regard to the laws of health, and the relations which a pure spirit sustains to a healthful body, then may we speedily look for the dawn of that day when the people of this earth shall be so free from disease as to be rid, not only of the temptation to use those *deadly poisons* which do such "real, positive and life-lasting injury," but also to do away with all drugs of every description; and those who are sick will know that their sufferings are but the kindly admonitions of the great Author of our being that we are violating the laws which He has arranged to govern our lives. Obedience is what He requires, and by obedience millions will realize that perfect health and happiness to which so many are now but "miserable strangers."

A NEW REMEDY.—Once, at Watten, Rowland Hill was preaching in the afternoon, the only time when it seemed possible to be drowsy under him. He saw some sleeping and paused, saying: "I have heard that the miller can sleep while the mill is going, but if it stops it awakens him. I'll try this method," and so sat down, and soon the pastor saw an aroused audience.

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[Written for The Herald of Health.]

Health, Habit and Amusement.

BY P. T. BARNUM.

My Dear Mr. Editor—You ask me to write an article for The Herald of Health. Now, what do you suppose a "Showman" can say that is edifying on the subject of health? "Laugh and grow fat" is an old and proper adage; but if I should suggest such a thing, somebody would exclaim: "That is another of Barnum's humbugs. He wants us to go to his Museum."

And yet, who can deny that proper amusements, given at proper hours and under thoughtful and wise regulations, are not only conducive, but *necessary* to health? "All work and no play" would indeed "make Jack a dull boy." Relaxation of mind and body from the straining and often exhaustive vocations of life are indispensable, occasionally. Cheerfulness aids digestion, promotes not only the health and happiness of the subject of it, but also essentially benefits those around him by increasing their flow of good spirits. [Neither rum nor table-tipping are intended in this expression.]

The morose man or woman who is always looking on the dark side of life, borrowing trouble, fearing the worst, and living "without hope" or pleasant anticipations, becomes fretful and peevish, throws the working-gear of the constitution out of order, provokes indigestion, and necessarily becomes subject to numberless aches and pains which those of a light, joyous disposition know nothing about.

"Variety is the spice of life." A man may live all his days on milk-toast or "bean-porridge," but it is far more pleasant, and doubtless more conducive to health, to extend the bill of fare, so as to include numerous other innocent productions of the garden and field. The mind requires even a greater variety than does the stomach. As an old caterer for the public amusement, I have earnestly watched the various avenues wherein the health of my patrons might be jeopardized. *Ventilation* is naturally one of the first points which a manager should secure to his audiences. He should so arrange his ventilators as to give a bountiful supply of ever-changing, fresh, pure air, and at the same time to avoid its coming in strong currents directly upon the heads of the people. Many an innocent victim has been poisoned by the deadly atmosphere produced in illy-ventilated halls by the breaths of large audiences.

Money will purchase almost every worldly comfort except health. And as there can be no real comfort without health, it is an amazement that so many persons are neglectful of it. For my own part, I am always glad to avoid any habit, and to submit to any temporary "sacrifice" (falsely so called), if I can thus avoid disease or secure good health. I never permitted intoxicating drinks in my house until I visited England, in 1843. There I fell into the almost universal habit of drinking malt liquors, which furnished an easy step to wines and distilled spirits; so that, on my return from a three years' residence in Europe, I was convinced that none but fools imbibed cold water, and that any man who would attempt to dine without aiding his digestion with port, sherry or champagne, or perhaps all three, with a clincher of cognac, was a greenhorn unworthy the company of gentlemen. But headaches, dullness, indigestion, and many other ills that *abused* "flesh is heir to," in a few years convinced me that there was nothing but "death in the pot," so I unhesitatingly signed the teetotal pledge to *never* again taste of intoxicating drinks. Sixteen years of almost uninterrupted robust health, and the easy accomplishment of a life-time of excitement and labor in that period, testify to the wisdom of my resolution.

Afterward I became an inveterate smoker. Not a day passed without my smoking sixteen to twenty cigars. But, like all artificial appetites, it could not be *satisfied*. The more I smoked the more I wanted to smoke, and the excited membranes of my tongue and mouth, like the horse-leech's daughter, constantly cried louder and louder, "Give, give!" My hands trembled, my heart palpitated, the blood rushed to my head; I lost all the fine, delicate taste for fruits which I once enjoyed; and finally, with a desperate resolution, I renounced tobacco for ever. It is now six years since I have used it in any shape, and now I have the same love for fruits that I had as a child, and all hankering for rum and tobacco has long since been turned to disgust for those habits and pity for the slaves thereto.

The attempt to break off from the indulgence of an artificial appetite *gradually*, is, as Gough says, "as foolish as to try to shoot off a gun by degrees"—it can't be done! The sudden dropping of a rum or tobacco habit causes a few days' fretfulness, but when that passes over all is calm as a summer's morning. It is like taking a calf from its dam and turning it out to grass—it causes considerable *bleating* for a few days, but it soon learns that grass is the best as a permanent diet.

And yet, how many foolish persons there are

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who, the moment they become prosperous and are placed where they have increased facilities for enjoying the comforts and pleasures of life, rush immediately to the grocer for an invoice of liquors with which to stock their wine-cellar, and then indulge in late hours, thin clothing, fashionable parties, immense dinners, and thus soon convert their prosperity into a curse instead of a blessing! How many families have been living in health and enjoyment on a moderate competence and a plain, healthy diet, who, when Fortune smiled upon them, have, from a mistaken notion of what rational pleasures consist, formed a new set of habits and trained a new set of appetites, which have led them from a state of affluence to one of misery, poverty, degradation, and frequently crime and ruin!

But hold! What I intended for a light squib of a few lines has grown into a sermon, and I will stop. Alas! how I fear your readers will heartily say, AMEN!

P. S.—On reading the above to my friend, John N. Genin, the renowned hatter, who is spending a few days at Lindencroft, he remarked: "There are half a dozen rules for good health and happiness which I strictly follow:

"1. Abstinence from all intoxicating drinks under any and all circumstances.

"2. Abstinence from the use of tobacco.

"3. Eat to live—not live to eat.

"4. Avoid excesses of all kinds.

"5. Wash the whole body often, so that the skin will thoroughly perform its work.

"6. Cast physic to the dogs."

This is what I call *multum in parvo*, besides which "it is as true as preaching." I am almost tempted to ask you to publish Mr. Genin's philosophic suggestions alone, and put mine in the waste-paper basket, for truly his statement covers the whole ground, and it should be cut out and posted in a conspicuous place in every man's house and place of business.

LINDENCROFT, BRIDGEPORT, Conn., *July* 2, 1866.

HOW THE SEA GETS SALT.—The question of what makes the ocean salt has long been discussed, and many theories have been advanced as to the real cause. In the absence of any, however, that may be pronounced infallible, the reason given recently by a little schoolboy appears to us to be novel if not philosophical. When asked the question, he replied that the saltness of the ocean came "from the codfish that swim in it."

[Written for The Herald of Health.]

Self-Government in Diet and Doctoring.

BY F. B. PERKINS.

THERE is an old proverb which says, "Every one at forty is either a fool or a physician." This means, that with fair good sense and a reasonable share of observation, people forty years old understand the general requirements of health, and understand the peculiarities of their own constitutions, and *can therefore keep from being sick*.

To cure one's self, if, in spite of care, one is taken ill, is more difficult. The question, then, is: Shall I deal with this myself or send for a doctor? And the way to show good sense then, is to decide this question at the proper time and in the proper way. People at forty can deal with more than half of their attacks of illness themselves.

Many attacks are of a feverish character. Now, in a great many cases of this kind, the trouble will pass off if the patient fasts for say two meals, or eats only a slice of dry toast and keeps quiet. A further prescription, repeatedly and successfully tried by the writer on himself for such attacks—and for colds of all kinds, too, which usually bring feverish symptoms with them—was the following: Wait until the stomach is empty after breakfast, say until an hour and a half after dinner-time. Then take a pitcher of cool water (*not* ice-water), and sit quietly down with a book or some work, fill a tumbler of water and drink it in separate swallows a few minutes apart. When the tumbler is emptied take another. Drink in that gradual manner *more water than you want*—four or six tumblerfuls, occupying say half an hour in doing it. The water thus drank is forced into and through the circulation, and passes off by the natural channels within an hour or two. The stomach being empty, the water alone, unmixed with food, runs with the current of the blood, and passes through the whole system. The effect is peculiar; it seems to rinse out, wash out, cool off, every part of the frame. It will very likely need to be repeated two hours before supper, and perhaps once or twice more. In very many cases this simple dose—it might be called the Swig Cure—thoroughly allays the inflammatory state and dried-up feelings of the incipient cold or fever, and wards off any serious attack.

People differ. "Certainly," everybody admits. Yet, it is ignorance of this fact, and practical denial of it, which has been the cause of

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many of the bitterest religious controversies, and even of wars. And the same fact is one of fundamental importance in medical practice. One chief use in being forty years old is to have knowledge enough of yourself to help out your physician, or even to overrule him. Thus, the other day, a very good doctor prescribed for a certain lady entire abstinence from milk. "I've tried using milk a dozen times," he observed; "it always disorders *me*." But she was fond of milk, and it always agreed with her perfectly. The doctor was mistaken in not allowing people to differ. Once in a long time there appears a creature in the guise of humanity who does not like strawberries and who is made ill by them. One such case the writer has seen, and he has seen one case of a person who was always made ill by boiled rice; another of a person who was made ill by even the smell of cheese; another of a person who was fond of onions, but, after eating them, always at once had all the symptoms of a very severe cold in the head.

Now, this question of individual traits is of great importance in the management of one's regimen—that is, in keeping one's self well. It is far better to be able to keep the doctor out of the house, than to have to get him to help you get out. If therefore you like to work in the garden before breakfast, and you find that you feel better for it, do so. But if it spoils your appetite for breakfast, and makes you feel tired and stupid all day, let the early birds catch the worms. The writer, in his youth, lost the enjoyment of many a good breakfast, by being ordered bright and early out of bed to work in the garden, and the same discipline left a feeling of lassitude all day. Labor before breakfast may be endurable and even enjoyable by some strong people, but it is poor business for the majority.

In like manner some people need meat, and some may be able to live without it. Neither vegetarianism nor *meat*itarianism, pure and simple, is a safe code. The writer was once arguing for a mixed diet with Judson Hutchinson, a furious Vegetarian—"What would you have the Esquimaux do?" he urged on the singer; "they haven't one vegetable in their country. They must eat, and there's absolutely nothing to eat except meat, and that fat. What do you say to them?"

The musical gentleman was "stumped" for a moment, but he rallied bravely, and made the only possible answer:

"Well, they'd better die!"

This was smart, but unreasonable. The world was made to live in. From the Arctic circle to the Equator, men will inhabit it. The climate and the productions of the regions of the earth force, to some extent, the selection of food. Within the Arctic circle, men eat blubber and fat and muscle, for the reasonably plain cause that it is all there is to eat. Within the tropics, men eat vegetables and fruit and grain, because meats are not produced of good quality and can not be stored, and because vegetable food is plentiful, healthful and available.

Now, among us, planted midway in the temperate zone, the indications of nature are just as clear as at either extreme. We have abundance of both kinds of food. And exactly as we have the greatest variety of food, so we have the greatest variety of constitutions, and there is then the greater need of discrimination in making rules about diet. The writer has eaten more meat—good roast-beef and beefsteak, mostly—than in any summer of his life before, and he has been remarkably well. But he finds others who eat little meat and who are also well. They are not obliged to do as he does, nor he as they do. The great American principle of individual freedom re-appears even in the democracy of diet, and it is our duty to judge, each for himself, whether to eat no, one, two or three meat-meals per day. Experiment will show. A hot-blooded, full-blooded person, doubtless needs less meat; while one of low vitality, little blood and feeble circulation, needs food of a more stimulating and heat-giving character. The stomach has a conscience as much as the brain, and in eating, exactly as in ethics, "our own consciences are accusing or else excusing us." What each man's enlightening stomach teaches him to eat is best for him, but not necessarily for his neighbor.

WATER.—Water is bid to run by gravitation, and how beautiful it obeys! By that obedience we have its music and its motion. By it the brook goes forth and does an immense good, furnishing drink for so many, many mouths and affording a habitation for the little fishes. Gravitation does this; and yet the brook never reaches its home (the center of the earth), though ever on its way. Frustrated and carried back by a higher Power, it again starts and in *new* paths seeks the old home. But it never finds it. It is happy in seeking, in obeying; that is its office. There is no rest for it; like the stars and the earth, it is ever in motion. Rest! There *is* rest for it, its very motion is rest—yielding to the sway (of the central power), not the least drop has ever rebelled. It is ever harmonious, even when turbulent. F. G.

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[Written for The Herald of Health.]

Culture of the Lungs.

BY A. L. WOOD, M. D.

Our minds are given to cultivate and perfect; so are our bodies, and they who neglect to develop each faculty of the one, or organ of the other, becomes so much the less perfect men and women from what they were intended to be; so much the less they will enjoy; so much the more they must suffer.

Many long years of time and large sums of money are spent in the culture of the brain, but who ever thinks it necessary to devote a single hour to the cultivation of the lungs? Of all the organs of the body the brain is the only one that has any special attention paid to its development. The others are supposed not only to be able to take care of themselves without any cultivation, but to be capable of enduring almost any amount of abuse and neglect. The way in which they do take care of themselves when thus abused and neglected may be seen in the deformity, disease and suffering everywhere so prevalent, and in the myriads of tiny gravestones scattered throughout the land. Nearly all of this disease, suffering and premature death might be easily prevented by a little care and attention bestowed upon the various organs and functions of the body, and instead of one-half of the children born dying under five years of age, and a large proportion of the other half only living to suffer and be a burden to themselves, they might all or nearly all live in health and happiness to a good old age.

The lungs constitute one of the most important organs of the body, an organ upon whose unceasing action health, strength and life itself depends. Stop their action for a few minutes only and soul and body part for ever. Impede their full, free and natural function in any way and in the same proportion you lessen the powers of life—to the same extent you render yourself liable to aches, pains, sickness, suffering and an early death. How important, then, that this should be understood! How absolutely necessary to the welfare of every human being a thorough knowledge of the structure, modes of action, uses and means of culture and development of the different organs of his body! And this knowledge being, as it is, the most important of all knowledge, should take precedence of all else, and instead of children being compelled to remain in an unventilated schoolroom during six hours of the day and made to "sit on a bench and say A," they should be engaged in the out-door sports of childhood amid the songs of birds and the silent teachings of Nature, where the bright, soft sunshine shall tinge their cheeks with rosy red, and the pure air of heaven can seek the inmost recesses of their lungs, there to wed the inflowing "current of life" which shall thenceforth trip joyfully on its mission to every part of the system, imparting health, strength and vitality to body and brain.

Air constitutes the principal food of man. Let us see if this is true; food is whatever supports existence or promotes growth, and no one will doubt for an instant that air does this. The three principal kinds of food are air, water and vegetable and animal substances, and, by-the-way, these are the only things that should ever be taken into the human system. It is estimated that a person of average size receives into his lungs about one pint of air at each inspiration, and reckoning eighteen respirations per minute, the quanity of air passing through the lungs to purify and vitalize the blood would amount to nine quarts per minute, five hundred and forty quarts per hour, and upward of one hundred barrels per day, while the quantity of the two other kinds of food taken into the system amount to only a few pounds daily.

The action of the lungs commences at the moment when the child is ushered into the world and continues without interruption to the end of life. Their care and culture should begin with their first inspiration and end only when their function ceases. The effect of their neglect, non-culture and abuse are seen upon every hand. It is one of the principal causes of the disease, suffering and death that everywhere pervails. According to the last Census Report of the United States for the year 1860, there were 77,309 deaths from consumption and inflammation of the lungs, and the number is constantly increasing from year to year. It is not alone in the sickness and death resulting from disease of the lungs themselves that the effects of their abuse are seen; but weakness of the lungs causes weakness and disease of other organs of the body in consequence of their not properly performing their function.

In the same year it was estimated that there

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were in the United States 1,360,000 persons, or one in twenty-three who were constantly sick. There were also 680,000 deaths during the same year, of which only 10,887 were reported as resulting from old age, and but 466 of this number occurred at the age of one hundred and upward.

What an army of invalids! Nearly three times as many persons as was engaged on both sides at the great battle of Sadowa. Of the 680,000 deaths upward of 300,000 occurred before the age of five years, while but 466 persons lived to the age of one hundred. Of the 10,887 persons who were reported as dying of old age, more than one-half died before eighty. Judging from the periods of growth and length of life of all animals with which we are acquainted, mankind should live, accidents excepted, to the age of at least one hundred years, in full strength and vigor. What a different state of affairs the above statistics show, the cause of which is to be found in the almost universal transgression of all the laws of our physical being. If the 54,543 physicians and 11,031 apothecaries in the United States would stop dispensing their poisonous drugs and assume their true position as teachers of the laws of health to the people, this unnatural state of things would soon be changed. What the people want and need is a knowledge of the physiological laws of their being, that they may obey them and live healthfully and happily and without fear of disease, suffering, and an early death. They do not want to be kept in ignorance and thus unknowingly transgress the laws of their being, and when they get sick, as the result of their violation, be dosed and drugged and poisoned, leeched and blistered, into confirmed invalids or the grave.

Of the many abuses to which the lungs are subject, there is none so universal as the habit of breathing through the mouth, especially during sleep. The nostrils are the natural and only proper channels through which air should be allowed to seek the lungs. The mouth was intended for the ingestion of food and drink to the stomach; the nostrils for the ingestion of air to the lungs. In the mouth is situated the organ of taste which has to do with food and drink only; in the nostrils is placed the organ of smell whose function can only be exercised by its being in contact with air. The organ of taste is the guard placed at the entrance to the stomach to prevent substances which would be injurious to that organ, and through it to the general system, from passing with the food or drink. The organ of smell is the guard placed at the entrance to the lungs to protect those organs from poisonous gases, etc., which might otherwise enter, unknown, with the atmosphere. These sentinels of the lungs and stomach can not perform each other's duty. If food and drink could be taken into the stomach through the nostrils, the sentinel smell would be unable to tell whether it were a friend or an enemy; and so if we breathe through the mouth the sentinel taste can not tell pure air from impure. If not abused they can each perform their own special function perfectly, but not that of the other.

The lungs are very delicate and sensitive organs, composed almost entirely of a network of blood-vessels and air-tubes. It is estimated they contain six hundred millions of little air-cells, into which pass upward of one hundred barrels of air per day. Each air-cell is surrounded by minute blood-vessels, through which pass more than fifty barrels of blood during the same length of time which the one hundred barrels of air is designed to purify and vitalize and render fit for the nutrition of the body. How necessary that this large quantity of air should be rendered pure and free from all dust, smoke or other impurities, which would irritate the sensitive lungs and poison the blood! This purification is accomplished by the intricate structures and the delicate hairs and mucus of the nostrils, which drain the impurities from the air as a filter drains them from water. The nostrils not only arrest the passage of small insects, particles of dust, etc., but to a certain extent prevent the inhalation of poisonous gases and noxious effluvia. Thus, a man can live for hours with his mouth closed, in an atmosphere where he could not survive ten minutes with his mouth open. The impurities which are arrested in the nostrils in inhalation are thrown off by the returning breath during exhalation.

Another evil effect of breathing through the mouth, especially during sleep, when the vital forces have the least power to withstand any attack, is that it allows strong currents of cold air to come in direct contact with the sensitive lungs, chilling the blood and often causing irritation and inflammation. Breathing through the nostrils regulates the quantity of air and

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modifies its temperature, preparing it for its reception and use in the lungs.

A very common source of injury and disease of these organs, and one almost entirely unthought of, is inhaling air that has become infected by passing over and among decayed teeth. We all know that putresence produces infection, and shrink with fear from districts known to be infectious; but how many there are who keep a constant source of infection at the very door of their lungs, and suck in the poisonous emanations from putrefying teeth at every breath.

Next to the unnatural and injurious habit of breathing through the mouth, the greatest abuse from which the lungs suffer is fashionable compression of the chest by tight dresses, stays and corsets. Women suffer far more from this than men, although the latter are by no means entirely exempt. Many men wear their pants and vests so tight as to render a full, free and deep inspiration impossible, especially while sitting. As to the feminine portion of humanity, there is not one in a hundred that can breathe as their Creator designed they should, and as He commanded them to do. But some one will say, "I wasn't aware that He commanded us to breathe." Did He not create the necessity for breathing, and did He not create the organs for perfectly accomplishing the act? As God never created any thing except for some useful purpose, was not the act of creation itself a command as binding as though He had spoken it? God's commands are written everywhere in the immutable laws of Nature, and if we attempt to transgress them we must suffer.

In heaven above, on earth below,
In drops of rain, on flakes of snow,
In winter's cold, in summer's glow.
God's laws are written.

In wavy deep, on starry sky,
In lowly dells, on mountains high,
In tempest's roar, in the wind's low sigh,
God's laws are written.

In Nature's realm, on forms of art,
In thunder peal, on lightning's dart,
In flowery gems, in the human heart,
God's laws are written.

God's laws are just! then heed them, man,
Nor seek to mar the Creator's plan;
For in wisdom, truth and love to man,
His laws were written.

The process of digestion, which commences in the mouth and is continued in the stomach, is completed in the lungs by the action of the oxygen of the air upon the chyle, transforming it into pure blood. If there is not a sufficient quantity of oxygen to effect this change completely, then a portion of the chyle remains unchanged and is carried with the blood to the various structures and organs of the body, causing obstruction, inflammation and disease wherever it lodges. The venous blood, laden with impurities and *debris* from all parts of the system, seeks oxygen in the lungs for its purification, and if it does not meet with the requisite amount, it returns, sorrow-laden, from whence it came, bearing with it suffering, languor and debility, where all should be joy, gladness and health. Compression of the lungs in any manner prevents the inhalation of a sufficient quantity of oxygen to properly carry on the vital processes of life.

Tobacco-smoking is a habit very injurious to the health of the lungs. The air, in being drawn in through the cigar or pipe, becomes very much heated and completely filled with smoke and ashes from the tobacco. In this condition it passes into the lungs, blackening and obstructing their myriads of delicate passages and minute air-cells, and relaxing and weakening their tissues.

There are many other things from which they suffer, either directly or indirectly, as, wrong bodily positions in sitting, standing, walking, at labor and at rest, by which the chest becomes cramped or changed in form; working and sleeping in unventilated rooms where the air has been partially deprived of its oxygen, and its place supplied with carbonic acid or other poisonous gases; insufficient clothing of the extremities in cold weather, by which the blood is made to recede from the surface to the internal organs, causing congestion of the internal viscera, imperfect action of the skin, kidneys, liver and bowels, by which a portion of their work of depuration is thrown upon the lungs; the use of alcoholic liquors and drugs, by which the whole system becomes poisoned and enfeebled, etc.

In commencing the cultivation of the lungs, the first thing is to break off every habit that tends to injure them. First of all, if you have acquired the pernicious habit of breathing through the mouth, sleeping or waking, you

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must break yourself of it at once. There are many persons who sleep with the mouth open and do not know it. They go to sleep with the mouth closed and awake with it closed. Then, how are you to tell whether or not you sleep with it open? If you do not rest well at night, if you awake with the mouth dry and cold or parched, you may be very sure that you are the nightly victim of this habit, and if you *snore* during sleep you may be *certain* of it. Should you have any doubts about it, get some friend to take a few observations while you are asleep.

For a person who has long been accustomed to breathing this way to break himself of it requires considerable effort and perseverance. The only way is to firmly make up your mind that you *will* do it, and if you persevere you will succeed. At all times, except when eating, drinking or speaking, keep the mouth firmly closed and breathe through the nostrils. Keep this constantly in mind during your waking hours, and retire at night with a firm determination to conquer, and you will soon acquire the habit of breathing as man was intended to breathe, and wonder that you ever could have done differently.

Civilized man is the *only* being that breathes through the mouth, which at once shows that it is an unnatural and acquired habit. The wild Indian would as soon think of eating with the nose as of breathing thus. The habit is usually acquired in childhood, and is generally the result of breathing impure air. It is then that the fond mother should guard her offspring with watchful care against this insidious and deadly enemy of her child. Let her follow the example of the wild Indian mother, and give her child the pure air of heaven to breathe, and if perchance it opens its little mouth during sleep, let her gently press its lips together, until the habit of keeping them closed becomes fixed for life. Mothers! there is no one thing in the education of your children so important as this, and if you would rear them to manhood and womanhood with strong, vigorous and healthy bodies, GUARD WELL THEIR MOUTHS.

All compression about the chest must be avoided. This necessitates the removal of all tight bands, stays, corsets, etc, from about the waist. The difficulty here is that not one woman in a hundred wears tight dresses *in her own estimation.* You just hint to any lady who is the possessor of a waist about the size of her neck that she dresses rather tight, and she will immediately expel the air from her lungs, crowd one finger under her belt, and exclaim, with an air of injured innocence, "Just see how loose I wear my dress!"

To breathe naturally and healthfully the lungs must have perfect freedom of motion. No one should wear a dress so tight as to prevent a full and free expansion of the chest either while sitting or standing. A dress that is loose while standing may be tight while sitting. Dresses should be made so that the wearer, while sitting, can place the hands above the head, inflate the lungs to their fullest extent, and still have some room left for improvement. That ladies who dress thus possess more beautiful forms than the devotees of Fashion with their wasp-shaped waists, very few gentlemen of sense will deny. If it is not so, why the so general admiration of such statues as the Venus de Medici and the Greek Slave? Choose ye between a form like theirs, with rosy cheeks, sparkling eyes, elastic steps, health, strength and endurance, and a form of the fashionable hour-glass style, with its unavoidable attendants of pale, sunken cheeks; lusterless eyes; heavy, dragging steps; sickness, debility, a shortened life, and, very often, consumption and death.

The custom of bandaging infants as soon as they are ushered into the world is barbarous. There is not a savage nation on earth who will treat their offspring so inhumanly as do the ignorant but well-meaning mothers in civilized society. They do not dream that they are compressing the very life out of their children, but think they are doing something indispensable to their present and future health and welfare. If it is necessary, why do not the young of animals need to be bandaged? Why do not the children of savage and uncivilized nations need bandages about *their* tender bodies to support them?

If you use tobacco in any form, abandon its use at once and for ever. If you do not use it, never acquire the disgusting and injurious habit.

Avoid all bodily positions by which the chest becomes cramped and the breathing obstructed. In sitting, standing, walking, running or laboring, keep the back straight, and

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the shoulders drawn well backward and downward. While reading or writing observe the same rules, and do not allow the back to bend and the chest to sink forward upon the abdomen. The best position in which to sleep is full upon the back. This position allows the lungs free motion, and does not interfere with the circulation of the blood as other positions do.

Always secure pure air to breathe by night and by day. If your occupation requires you to be in-doors, see that the room you occupy is freely ventilated. Always have your windows open at night, so as to secure good air *then*. Avoid the inhalation of poisonous gases of every kind and nature. Take as much exercise in the open air as possible.

Seek the bright and life-giving sunshine. Keep the blinds open and the curtains drawn, that the full rays of the sun may pour in at your windows and dance upon your parlor and bed-room floors. Let them fade your carpets if they will; they will help put roses in your cheeks, sparkles in your eyes, and health and vigor in every muscle and organ of your system.

Wear proper and sufficient clothing upon the extremities, especially during cold weather, so that the blood can circulate freely to the remotest parts of the body, and not return all chilled to the lungs. Do not make the usual mistake of piling on clothes and furs upon the body and leave the limbs almost naked. The extremities, being furthest from the seat of life, need the most clothing, and they get the least. This is one cause of the cold hands and feet everywhere so common. Mothers! look to it that your children's limbs are warmly clad.

Take good care of the skin, bowels and other excretory organs, that this work of depuration may not be thrown upon the lungs. To do this bathe often, exercise freely, and eat plain food in moderate quantities. Use no alcoholic liquors or drug medicines of any kind.

Avoid undue fatigue, depression of spirits, grief and anxiety, as much as possible, and cultivate cheerfulness, amusement and hilarity. Laugh and be merry.

Of the special means of cultivating and developing the strength and capacity of the lungs, the most important is muscular exercise. Exercise of any portion of the body calls the blood to that part in greater quantities; there is greater change of tissue, and the lungs require and receive a larger amount of air to purify, and re-vitalize the blood. By calling certain muscles into action, and thus strengthening them, we can act directly upon the chest to increase its capacity, and thus give room for the expansion of the lungs.

Swinging the Indian clubs is an excellent means of strengthening the muscles of the arms and shoulders and expanding the chest. Exercising with dumb-bells is also very useful. Climbing ropes and ladders with the hands, hanging by the hands from suspended rings, drawing the body up with the arms, swinging, and any and all exercises in which the body is supported by the hands, are valuable.

Running is an excellent exercise, not only for the lungs, but for the whole body, provided it is done right. It should be commenced gradually, and the speed slowly increased as the body gets warmed up and the lungs act more freely. It should be practiced daily, and the distance run increased from day to day. In running, the head should be held erect, the shoulders drawn well back, the chest thrown forward, the hips back, and the whole body slightly inclined forward. The elbows should be bent at right angles, and the closed hands thrust alternately forward. The breathing should always be carried on through the nose, and *never through the mouth.*

Practice taking long, deep breaths for several minutes at a time, and repeat it several times a day, always inhaling through the nostrils. Inflate the lungs to their fullest extent, hold the breath and percuss the chest and sides with the palms of the hands. With the lungs fully inflated, practice throwing the elbows forcibly back. By faithfully practicing these few exercises alone, the size of the chest can be increased several inches in a few months' time. Where the person is not very strong, he should commence very carefully at first, and increase the amount of exercise as the strength increases. Any one who is so weak as to be unable to practice these exercises, should at once seek some institution where the more gentle and special exercises of the Movement-cure can be given him, until he has acquired sufficient strength to take proper exercise alone.

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[Reported for The Herald of Health.]

Gymnastics.

AN ADDRESS DELIVERED BY THEODORE TILTON BEFORE A CALISTHENIC CLASS.

I LOOK at your exercises with great delight. "The glory of young men is their strength," saith the Scripture. "To be weak is to be miserable," says Milton. A friend of mine who visited the Shakers said to one of those strange folk: "Why do you exercise in this odd way, seeing that the Apostle declares, 'Bodily exercise profiteth little?'" "Ah," replied the Quaker, "it is just that little which we are after." [Laughter.] Now, my friends, a little bodily exercise, judiciously taken, is better than a good deal immoderately pursued. One of the most perfect of human arms was the arm of Ole Bull, the violinist. Every muscle was brought into easy and harmonious exercise by drawing his bow. No blacksmith could compare arms with him as to symmetry and true beauty of physical development. So I am not a believer in heavy dumb-bells; not a believer in the prize-fighter's exhaustive training; not a believer in over-much shuddering in a cold bath; not a believer in any extravagant, high-pressure exercises. I believe my only extravagant notions are in the direction of the negro. [Laughter.] I totally disbelieve in some of the wise maxims which I used to read in the family almanacs when I was a boy—the notion, for instance, that men engaged in intellectual employments ought to be spare eaters. Speaking for myself, I believe in eating a good deal. [Laughter.] And, moreover, I believe in eating the fat of the land. There is a mischievous notion, also, in favor of six hours' sleep. The world would be the better if there were a general habit of sleeping nine hours. If a man, when he is awake, wants to be wide awake, then let him sleep sweetly a whole night long. "Blessings on the man who invented sleep!" Charles Lamb, you know, believed there was such a thing as sunrise; he thought the balance of proof favored that conclusion; but, as for himself, he never saw the thing done. [Laughter.] Now, I believe that people who go to bed early ought to get up early, but people who go to bed late ought to sleep late. "He who would thrive must rise at five," says the proverb. But what if he be the night-editor of a daily paper, who don't go to bed till three in the morning? Dr. Cumming of London once preached a sermon from the text, "The night cometh when no man can work." He took the ground that never should candles be lighted; that human labor should begin and end with the day; that all the hours of darkness are for sleep. Well, this is amiable nonsense. But the great fact remains that intellectual men wear themselves out for want of sleep more than from any other cause. I have great respect for my friend Horace Greeley's habit of sleeping in church whenever the sermon is dull. [Laughter.] Perhaps my creed is somewhat heretical, but I believe in dancing; I believe in ten-pins; I believe in billiards. Ball-playing is good, but croquet is better. Ball-playing is selfish—it is a boy's game, a man's game. But croquet is for boys and girls, for men and women. It is a civilizer. The game of croquet, if it shall come to be generally adopted in this country, as it already promises to become the national game of England, will produce a visible effect on national manners. I believe in the union of the sexes—in society, in schools, in games, in trades and in politics. [Laughter.] Next to Satan and Beelzebub, the two great enemies of mankind are the dyspepsia and the headache. Keep clear of them! I thank God that I have thus far been an artful dodger of both. But think of our afflicted, illustrious friend, John G. Whittier, who is never half a day without a headache—who can never write more than fifteen minutes at a time! It seems to be true of him at least, as Shelley has said, that

> "Poets learn in suffering
> What they teach in song."

The first essential of human happiness is good health. I do not say that happiness is the noblest condition of the mind, but I *do* say that health is the noblest condition of the body. We ought to strive for this good health, plan for it, achieve it. I hold to the doctrine of equal rights. We all have an equal right to drink of God's perennial fountain of fresh air, to brighten our faces in His daily glory of the sun, to nourish our bodies with the unending bounty which His harvests provide. No idea in the Scripture is more striking than that the human body is the temple of the Holy Ghost. Let us, therefore, beware how we profane this sanctuary of our mortal flesh. The best of gifts is a sound mind in a sound body. Nothing yields me greater pleasure than to see a truly handsome man—except, indeed, a truly handsome woman. [Laughter.]

Go on, therefore, with these beautiful exercises. Add roses to your cheeks. Add sparkle to your eyes. Add merriment to your blood. Then I will add a prophecy: Venus and Apollo shall one day return again to the earth! [Applause.]

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[Written for The Herald of Health.]

"Vis Medicatrix Naturæ."

THREE thousand years ago, the poet Homer sung
More truthful words of man's most wondrous frame
Than all the wisdom since by Science wrung
From Nature, whate'er philosophers may claim
For their new lore—supremacy and might.
Give me the poet's dress, the simple utt'rance bright.

How they do strive to prove a thing is so,
When any fool can see it in a trice—
In their long-winded phrase that come and go
Like lumb'ring wagon on a field of ice.
See how the skater skips along with ease—
So use thy words that they may likewise please.

They cut, dissect, disfigure Nature's charms,
And think they have an Eldorado found.
They pin long names to her most lovely forms,
Give their dimensions, color, weight and sound,
Which puzzles student's brains, and more and more confounds.

This one sole question I would like to ask,
If they can tell, why, "good for them," I'll say.
Pray, give the odds atween a lifeless mask
And living soul rejoicing in its day.
The body is the same. Now give it life
That once it had, so fraught with work and strife!

However wise the chemist's skill may be,
And simples and their compounds analyze,
Can he dissolve the soul of Deity
And make himself an umpire of the skies?
Alas, poor fool! soon fades his skill away—
Dies, rots, and turns to dust, like other common clay.

Oh, glorious Sun! Oh, glorious Mother Earth,
No square or compass can thy kingdom bound;
Endless, eternal, boundless in thy girth,
Incomprehensible thou wilt be found;
But those, who seek with mild and gentle eyes,
Thou'lt ope thy temple-gates and on their gaze arise.

TILDEN.

A HORTICULTURIST advertised that he supplied all sorts of fruit trees and plants, especially pie-plants of all kinds. A gentleman thereupon sent him an order for one package of custard-pie seed, and a dozen mince-pie plants.

[Written for The Herald of Health.]

Athletic Sports.

BY REV. HENRY WARD BEECHER.

AMUSEMENTS should always be selected that promote health, vigor and skill. They should not be simple, aimless wanderings after mere pleasure. It is the true doctrine of amusement, that it should be such as to contribute to the well-being of the body. It is therefore important, especially in cities, that great provision should be made for athletic sports of every kind. Boating is good. Riding and driving are good. Gymnastics are good. Various games of ball are good. Bowling and billiards are good. And it is desirable that they should be put within the reach of those that live by the taxation of the brain. The vast multitude of professional men—lawyers, physicians, teachers, and, above all, ministers of the Gospel—ought to have an opportunity for cheerful, exciting physical exercise.

The only thing that I would be permitted to do, if I were to follow the more rigid public sentiment of society, would be to rise early and put on a black coat, a black hat, and a pair of well-polished boots, and, with stately and ministerial step, walk a mile and back before breakfast, and then, with a devout face, call it amusement! This attempting to make amusement out of that which has no remuneration and no stimulation in it; this going into a man's cellar in the dark, and heaving sand first on one side and then on the other, and calling it amusement; this doing things in the nature of exercise that are artificial, wholly, and calling them amusement, is of very little account. If a man is shut up in prison, and can do nothing else, this may be better than nothing; but it is only just better than nothing. There ought to be places opened that shall be respectable, free from temptation, and redeemed from disrepute, where every gentleman in the community—and by that I mean every man that behaves himself, without regard to his cloth—can go and find, in social exercise, and in entertaining, stimulating games and athletic sports, that rest of the mind which comes from an exhilarating use of the body.

In this regard, I have to a very considerable extent, in one or two points, changed the opinion that I entertained earlier in life. I remember when, some fifteen years ago, I denounced billiards and bowling-alleys, partially. I take it back. I like them. Although I do not practice billiards, yet, as they have in them no necessity of bad company, no necessity of temptation, but a gentle excitement and exercise, it is

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inexcusable, when we are suffering for the want of just such things, if we permit them to go so into the hands of temptation that they are disreputable, or that it is dangerous for any man to indulge in them. We spare no pains to redeem laws and institutions from malign spirits, from Satanic influences; and I hold it to be a part of Christian duty to redeem amusements from immorality and evil tendencies, so that the young may enjoy all their benefits, without being subjected to any risk or peril other than that which is incidental to human life.

It is said that these things tend to bring men into bad society. It is not necessarily so. It is true that a man may join a yacht-club whose convivial habits are such that he will be in danger perpetually; but he ought not to join such a club. It is in the fact, not that yachting is bad, but that the man makes a bad choice, that the trouble lies. A man may go to the Astor House or the St. Nicholas; and if he goes to a disreputable house it is his own fault. He ought to go to a reputable one. It is the joining a *bad* club, and not the joining a *club*, that is dangerous. And there ought to be so many clubs under moral and Christian influences that it shall be the fault of every young man if he joins a bad one.

And that is true of almost all athletic games, of all gymnastic associations, of all clubs for ball-playing, of bowling-alleys. And the time has come when, if a man goes to a bad place, it is because he chooses to associate with bad company. He may, if he chooses, go to places that are not bad. For there are some places where a man may go and play billiards, at any rate, I hope, and not lose his reputation. The time has come when gentlemen will have this and other amusements as a part of household economy, so that they shall not be obliged to go among professional gamblers to find healthful recreation.

It is said that such exhilarating amusements of various kinds are beset with strong temptations and strong tendencies to dissipation. These are not a part of their necessity at all. There is no more natural thirst in rolling ten-pins than in hoeing in a flower-garden. There is no more necessity of dissipation in connection with this pastime than there is in connection with work on a farm. If intemperance is the danger, it is to be met by having places where intoxicating drinks are excluded.

It is said that amusements tend to consume time. All things may be carried to excess. If a man is not permitted to do any thing which tis not possible to pervert, what may a man do in this world? What is good that is not susceptible of being corrupted into evil? It is true that a man may over-exert himself in amusement. And if amusements are divorced from conscience; if they are practically ostracised by the Church and by Christianity; if young men resort to them with the feeling that they must do it secretly because they are disreputable, that fact itself tends to demoralization. But if there is a conscience that goes with amusements; if men feel that they serve God as much in relaxation and pleasure as in task and toil, then they tend to develop and strengthen good morals. But as to the matter of the waste of time, I do not think there is any more waste of time in amusements than there is in business. I think a man that works eighteen hours a day wastes time as much as a man that plays ten hours a day. I see men in my congregation who I believe are spendthrifts, not of money or property, but of their own vital economy. They are burning up in twenty years that might and influence which God meant should last forty or fifty years. They are carrying quadruple wicks in their lamps, and they will not hold out long. And if excess is an argument against amusements, it is also an argument against business. But the rule is this: JUDGMENT, CONSCIENCE AND MODERATION IN ALL THINGS.

In cities, particularly, these athletic sports furnish almost the only exercise; and more men break down and die, I think, for want of some such relaxation, than are corrupted by them even in their worst estate.

A mother has an only son, and she is pained at hearing me say this, "because," she says, "my son steals out of my house at night, and goes to a billiard-saloon where there are men that are fascinating him by their wit and corrupting him by their influence; and all he wanted to complete his ruin was to come to your church and hear you say that you approve of billiards; you are destroying my only son." I unquestionably should be, if I knew the case, and talked with the young man, and did not explain to him, not that billiards were bad, but that he was making a use of them that, so far as he was concerned, was to be disallowed.

It is with amusements, in this regard, as it is with food. That which hurts a man is bad. I have known men that could not eat stale bread. I have also known men that could not eat warm bread. I can eat warm bread better than stale, therefore it is my health. Another man can eat stale bread better than warm, therefore that is his health. Now, whatever thing hurts you, to

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you is sin. If you are so constituted that beef is very stimulating and fevering to you, it is sinful for you to eat that kind of meat. Why? Not on account of any physiological doctrine of beef, but on account of the fact that it hurts you. And, in reference to amusements, when, from the peculiar circumstances or education or position of any young man, it is found that any amusement is leading him away from morals and respectability and industry, that is enough. The general doctrine of amusements is for the community; and if from any circumstance there is a reason why a particular amusement should be foregone by any young man, it does not alter the doctrine for the community, but only in its application to him individually.

That which I preach here, in my church, I preach in my own family. I said to my sons, who asked me if I objected to their playing at billiards, "No; but I object to your playing at billiards at such a place and such a place." "Why?" said they. "Because," I replied, "with your disposition, I do not think it is best. And, besides, you are my sons, and it would make me more trouble to answer all the objections that would be raised than the satisfaction that you would get would be worth. And I prefer that, for your sake and mine, if you play billiards, you should do it in private." I never give any instruction to young men here that I would not give to my own boys; and I do not give any instruction to my own boys that I would be afraid to give here, at large, in the great congregation.

And I say again, that all athletic sports that turn mainly on skill and exhilaration, and afford opportunities for social enjoyment, are, as a general thing, beneficial, and should be so provided that a young man can choose them without choosing degrading company. And, further than that, I say, that if in any special instance it is found that a man is tempted into wrong and injured by them, then he should abstain from indulging in them. This, it seems to me, is the true and safe doctrine.

A SUPERINTENDENT of a mission school, being annoyed by the noise, finally, in appealing to the boys, raising his hand, said: "Now, let's see if we can't hear a pin drop." All was silence, when a little fellow in the back part of the room, cocking his ear and placing himself in an attitude of breathless attention, spoke out: "Let her drop."

IF a writer does not make his book concise, the reader can do it for himself.

[Written for The Herald of Health.]

Health of Girls—No. IV.

BY DR. J. H. HANAFORD.

THE somewhat hackneyed subject of Exercise has a special significance as connected with the development of the muscular system and the consequent health of our future mothers, those who particularly control the health of society. It is a law of our being that the exercise of all our powers, physical and mental, promotes health and strength, and that rest and inactivity produce the opposite result. This latter remark, of course, has no reference to the necessary rest which should succeed all labors at proper intervals, but to continued inactivity, with no effort to develop the faculties. Indeed, while it is true that the most favorable condition of the body is secured—other conditions being favorable—by the requisite amount of labor, succeeded by sufficient rest, time in which to recuperate wasted energies, it is as true that extremes result unfavorably. It is possible, by overtaxing both body and mind, to produce as much debility as would result from sluggishness and inactivity. As a general principle, the arm, for example, of the individual who never exercises by labor or otherwise, is small, the muscles not developed; while those of the blacksmith, whose right arm is vigorously used, is large and strong, the muscles being hard and enduring. Such an arm, so well developed, if confined for even six months, never exerted in any way, as when the bones are broken, wastes away, and becomes soft and flabby, as powerless as it would be if diseased in consequence of over-exertion, as in rheumatic affections, etc.

Leaving these general principles, remembering that all strength results from the legitimate use and development of the muscular system, from exercise under proper circumstances, it is well to make an application of them to the subject under consideration. There are in the human body some four hundred and seventy muscles, all made for some definite purpose, all of which positively demand exercise and development as a means of promoting the health of the general system of the body, by developing the strength and vigor of the individual muscles. As a class, but few, relatively, of the young ladies of our country are pursuing a course calculated to call into action one-tenth of these muscles, at least with system and regularity. Of those who have an occupation—and the number is by far much too small—very few have selected it with any direct reference to their health. The

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seamstress, for example, can not continue her employment during ten hours each day, for any considerable length of time, under ordinary circumstances, without laying the foundation of future disease and debility, without "breaking down," even in early life. Experience and observation have taught us the truth of this statement sadly and too often. Indeed, it is scarcely possible to avoid such a fate, unless some system of active exercise is adopted, in addition to this employment, to counteract the legitimate results of such sedentary occupations. Ordinary sewing calls into activity but few of the muscles, leaving the rest to diminish in firmness, strength and size, while the posture assumed by most renders the evils still more decided. The same remarks apply to machine-sewing, knitting, embroidering, crocheting, etc. It seems incredible that so many persons can be found so much under the influence of lassitude—to use no harsher term—who are willing to sit thus idly from day to day, having so little exercise in addition to such employments, wasting their energies in comparative idleness, and consequently suffering in their health. (And in this connection I can scarcely refrain from saying that it is scandalous that so many men, or those dressed like men, are monopolizing the proper employments of females, selling needles, tape, pins, etc.—ignoble employments for men of stalwart frames and sound constitutions—while so much fertile soil is still uncultivated. Such ought to be ashamed of their femininity—nay, of their laziness and imbecility, and for ever leave employments unbecoming real men, men of muscle and manly bodies, and allow females to earn an honest livelihood in their legitimate sphere of labor. Thousands of such may find honest employment appropriate for such frames, opening a wider field for females, and enabling them to obtain something more than a mere pittance, securing the advantages of education.)

No individual, even of a strong constitution, can sit for ten hours each day, having but little, if any, active exercise in addition, from month to month and from year to year, and still retain a fair share of health. And still more. The posture assumed is often much worse than ordinary sitting. Stooping, leaning forward, or in any manner to cramp the body, settling together, etc., necessarily compresses the stomach, the liver, bowels, and to some extent the lungs and other internal organs, materially preventing the action of these organs, and, of course, interfering with the discharge of their functions. As well might the arm be moved with ease, when the muscles are tightly bound with cords, as the stomach, etc., to continue their labors while the body is cramped as it ordinarily is in these occupations, very few sitting erect.

While so many assume these unnatural positions, it is not strange that dyspepsia and the varied forms of indigestion, liver difficulties, bilious and acid stomachs, constipation of the bowels, and such ailments, are alarmingly on the increase among this class. If there is any occasion for surprise, it is that these disarrangements, under the circumstances, are not still more alarming.

The evils of these postures are still more aggravated by tight clothing, to say nothing of corsets, etc., by some supposed to have passed into disuse. As a natural result of this cramped condition of the stomach, liver, bowels, etc., the head is sure to suffer. The dizziness, the headaches, etc., in part, at least, are attributable to these derangements of the stomach, etc., the acidity of that organ resulting from the fermentation of undigested food, and the torpidity of the liver and bowels, particularly the latter, as the direct cause. In fine, it is utterly impossible to avoid these head difficulties while the bowels remain costive, even if all of the "headache snuff" and all of the quack medicines and nostrums of the market are swallowed. And it is quite as certain that this constipated state of the bowels will continue while thoughtless persons persevere in such a course, actually crippling and confining these organs, eating highly concentrated food, such as fine flour, rice, etc., taking purgatives calculated to aggravate the disease for the removal of which they are so often foolishly employed. Coarser kinds of food, fruits, the *meal* of the grains in common use, etc., will do what medicine has ever failed to do in this respect.

If females must sit and sew, by hand or machine, for ten hours each day, it becomes an imperative duty to seek, in addition, vigorous employments as a means of recuperation, since the rest of one organ of the body is secured, not by inactivity, but by calling other powers into exercise. This is admirably secured by a vigorous walk—even a run would not destroy all of the dignity of one's real character; a pleasant stroll, enlivened by agreeable company, innocent amusements, or, perhaps, still better, by useful employments—gardening may be mentioned as one appropriate for any lady, particularly if flowers are cultivated. Sit less, and stand, run, jump and frolic more, even though it may offend the "fastidious tastes" of those female friends (?) whose peculiarities have secured for them more quiet and seclusion than

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they have sought. Such activity would tend to improve the circulation of the blood, inviting the warm blood from the heart to the extremities, warming those cold feet, from which so many suffer, relieving the head and other organs of their surplus of blood, warming the one and cooling the other.

[Written for The Herald of Health.]

The Dog Days.

BY J. E. SNODGRASS, M. D.

I AM requested to write an article for that excellent journal THE HERALD OF HEALTH, and I am resolved to comply. It is hard work to write with the thermometer at one hundred degrees. But I will make the task as light as I can, by selecting a topic on which my thoughts are inclined to run just now—"the Dog Days." It will probably interest the reader as much as any other topic, even though the weather should become somewhat less suggestive of it by the time of its publication.

Early chroniclers tell us that on the day which marked the first morning rising of Canicula, or Dog-star, the seas boiled, wines turned sour, the bile became more copious and acrid, minds generally grew languid, while the dogs went mad. Then they also dated the commencement of the severer summer complaints, such as choleras, dysenteries, diarrheas, and "fluxes" generally.

The Pagan Romans gave unmistakable proof of their belief in the capacity of the Dog-star to exert a malign influence over the affairs of men, in their custom of making sacrifices to it. The victim selected was always a dog. The color of the doomed animal was a question of paramount importance, and brown dogs had the preference. Whether their conviction of the necessity of "doing it up brown," in order to appease the anger of Canicula, furnished us that old saying, I will not stop to determine. But it must have been a sight only excelled in cruelty by the drownings at the dog-pond of our "advanced Christian civilization," to witness the roasting of perhaps hundreds of the doomed quadrupeds on that first day of the insatiate divinity's reign. Whether we have improved on the Pagan treatment of an affectionate as well as useful animal is another question, which I will leave the reader to determine for himself.

To return to my historical tracings, it should be added that among the ancients generally there seemed to be an abiding belief in the power of the Dog-star. Hence, they carefully watched its first morning appearance with intense anxiety, and styled it the Sentinel of the Year. They, however, had more plausible notions of its influence. The dog was to them, as their hieroglyphic representations indicate, the emblem of watchful and faithful care. One of their idolatrous gods was a sort of hybrid dog—a dog with a man's head—which they worshiped under the title of *Anubis*. Its figure was suspended in all their temples. For all this trouble, and the devotional feelings prompting it, there was more philosophy, as well as more beatitude, than in the performances of the Romans and their notions, for the Egyptians associated the rising of Canicula with the annual inundation of the Nile, whose approach they thought it was the special duty and pleasure of this star to herald. And, with this impression, and in consideration of the immense agricultural importance of the Nile's floodings, one can contemplate their superstition with a degree of charitable allowance not easily extendable to the descendants of Romulus.

Darwin, in the third canto of his "Botanic Garden," thus discourses of these superstitious fancies, and the astronomical and other physical facts whose perversion gave them birth:

"Sailing in air, when dark monsoon enshrouds
His tropic mountains in a night of clouds,
Or, drawn by whirlwinds, from the line returns
And showers o'er Afric all his thousand urns.
High o'er his head the beams of Sirius glow,
And Dog of Nile, Anubis, barks below.
Nymphs! you from cliff to cliff attendant guide,
In headlong cataracts, the impetuous tide,
Or leads o'er wastes of Abyssinian sands,
The bright expanse to Egypt's showerless lands.
Her long canals the sacred waters fill,
And edge with silver every peopled hill!
Gigantic sphynx in circling waves admire,
And Memnon bending o'er his broken lyre,
O'er furrowed globes and green savannahs sweep,
And towns and temples laugh amid the deep."

Pleasant associations these, surely, in a poetical way, and suggesting afresh the thought of another poet, that

"Where ignorance is bliss, 'tis folly to be wise."

There has been no little controversy as to the dates of the commencement and termination of the Dog Days. There is an ancient calendar, preserved by Bede, which fixes their beginning at the 14th of July. In a calendar annexed to a Common Prayer Book used in the Church of England, and printed during the reign of Elizabeth, they are represented as commencing on the 6th of July and closing with the 5th of September. When this edition was revised, the reference to the Dog Days was omitted. But as there was no revision of the Prayer Book until the Restoration, these continued to be the authorized dates till then.

These dates remained stationary until the British Calendar was corrected by authority, when the almanacs gave the 19th of July and

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20th of September as the true periods. But these were changed, in turn, and the July date was put forward to the 30th, and the September put back to the 7th. Almanac-makers had fallen into the habit of causing the Dog Days to conform to the shifting time of the Dog-star's morning rising, known as the *heliacal* rising, in the language of astronomical science. By pursuing this course, they finally fixed their advent after the hottest season. But of late years the almanacs have given more rational and fact-expressive dates for the commencement and close of the reign of Sirius. The 3d of July and 11th of August were at length adopted.

I have said this latter fixation of the dates is more fact-expressive. I mean by this to indicate that the association of the heliacal appearance of the Dog-star with the hottest season, gave a coloring of truth to the ancient notions on the subject, whatever their superstitiously added absurdities. If anybody had any doubt of the propriety of thus dating the Dog Days, I think the experience of the past week would have sufficed to remove his dubiety. Nay, I think it would not be very difficult to convince any Gothamite, who was compelled to remain immured from and after the 3d of July of our present Annus Domini, that the almanac mongers are pretty good guessers after all. Such, if they have never been believers in poets any more than astronomers before (we know they "don't believe in hot weather," and won't till "bleak November" comes along with his trumpet blasts), such, I say, will come to the conclusion that Alexander Pope knew a thing or two when he wrote:

> "Shut, shut the door, good John (fatigued, I said);
> Tie up the knocker! Say I'm sick—I'm dead!
> *The Dog-star rages!*"

In-door quietude—the nearer absolutely quiet the better—is unquestionably the best protective against bodily heat. A lady of my acquaintance has a notion on this subject which, though seemingly going to extremes, is perfectly philosophical. She declines to use a fan, where others deem it indispensable, and this although she is very fleshy. She insists that the fan adds fuel to the flame of the animal caloric, with the muscular motions necessary to keep it plying with the usual vigor. Who will say that she is not "more than half right?"

Reader, my advice is: Keep quiet—the nature of your avocation permitting it—if you would "keep cool." But I did not intend to give advice—especially gratuitous, unasked advice—because it is understood to be rather a thankless thing to do. My purpose was simply to take a hurried glance at the history of the Dog Days—for they *have* a history as well as a philosophy, as we have seen.

And yet there is one suggestion, of a more professional bearing than the above, which I will venture to make. It is the necessity of abstinence from animal food during such warm weather as that of the Dog Days, especially on the part of persons of sedentary or in-door habits. When I state that I am not a Vegetarian, either in theory or practice, this gratuitous prescription will at least escape that suspicion of a prejudiced judgment which is so apt, however unreasonably, to stand in the way of the reception of truths which happen to run counter to the habits of thought or the practices of those to whom they are addressed.

NEW YORK, *July* 17, 1866.

[Written for The Herald of Health.]

A Lesson for the Day.

BY GEORGE W. BUNGAY.

THE summer wind comes to me laden with the perfume of pond lilies and wild roses, and honeysuckles and daisies, and there is healing as well as fragrance on its wings. Blow away, ye invisible trumpets of the air! Blow the city dust and the odor of smoke out of my jacket! Blow upon my hot forehead until the blood returns to its red channels and becomes equal in its circulation! Blow the matted hair apart! never heeding the oils, the pomades, the restorers which the barber has rubbed into it until it has become a tangled mass plastered to the scalp. Blow into my nostrils the sweet breath of life! that I may forget the offensive smells of the city, and appreciate the purity and the invigorating influence of the uncontaminated atmosphere of the country. Blow into my open window, in the shade, the odor of the flowers, the songs of the birds and the voices of the bronzed men at work in the meadow!

There is a rose-bush within reach—a little cloud of green leaves, starred with buds and blossoms. I wonder if the insects have a nice sense of taste, or a love of the beautiful, or whether or not it is a mere accident that they gather most thickly on the bushes which are most radiant with petals! Do they find there the food best suited to their wants, or the safest shelter from their enemies, or are they tempted there by the sweetness of the odors and the splendor of the blossoms?

I have been watching the insect republic on this bush, and have admired the variety and beauty of their costumes. Some are clad in coats of mail, which can not be pierced by th

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bayonet-stings of their hostile neighbors; some have gorgeous garments, whose patterns can not be rivaled at Lord & Taylor's or Stewart's; some are plain as the most orthodox of the Quakers, and they all have suits adapted to the season. There are no cords and bands about their loins or legs to impede the circulation; no hoods and mufflers to prevent the access of the air. When they go down into their basements under ground they leave the door open, and when they ascend to their tiny cottages under the leaves their windows are never closed. I wonder if they have pains in the head, pulmonary complaints, or any of the ills that human flesh is heir to! I judge they have not, for the microscope fails to reveal the slightest imperfection in their organization. Within biscuit toss of my writing-stand a pair of robins have a nest, nicely located in the crotch of a young maple. They have been very industrious and thrifty, building their nest in the accustomed neat style of robin architecture and rearing a nest of young robins, carefully fed with the luxuries of the season, and now they are sitting watching, hoping, waiting for the addition of five more young robins to their family. I see the brown head and sunny bosom of Mrs. Robin, as she sits quietly upon her nest. The tree sways to and fro in the wind, but the young leaves are wrapped like a scarf about the nest, and there are no signs of fear. The garden gate, which is almost constantly opened and closed, nearly touches the tree, and the nest is almost within reach of the men, women and boys who frequently pass in and out; but the robin knows that she is safe, that no robber's hand will steal her blue-and-spotted eggs; that no tube filled with shot and powder will be pointed at her, and she sits there hour after hour, occasionally changing places with her mate. Yesterday we were treated to a most refreshing shower. Clouds were suddenly blown up from behind the hills; vivid flashes of lightning were followed by peals of thunder, and then the rain poured down in torrents. I watched the robin; she had no roof to her house, no umbrella over her head, no rubber-cap and cloak to wear, and yet she did not flinch a hair. This morning she is bright and gay and happy as ever. No sign of a cough or cold, no hoarseness of voice, no doctor's visits, no unusual diet indicates impaired health or inconvenience arising from exposure to the rain-storm. This fact is an argument in favor of ventilation; for the cabin-nest of the robin is so well ventilated that the open window embraces the entire roof. It is also an argument in favor of the bath. While the modest matron was sitting quietly on her nest secretly rejoicing in the shower, her husband, perched upon the topmost bough of an apple-tree in the orchard over the way, sang a solo whose music was in perfect accord with the chorus of the rain. There are tiers of green fields and meadows on the hills, which rise in grand and picturesque beauty before me. Clouds sweep over waving fields of wheat, and their shadows seem like giant ghosts striding from the sky. In the meadows are ruddy-faced children gathering berries; their eyes are as bright as the stars, and their lips as red as the berries. When the tea-bell announces that the table is ready for the guests, there will be dishes heaped up and rounded high with crimson berries, and real cream (not flour and water) will add to their delicious richness. Berries are scattered in profuse abundance at this season (August) in all parts of the country. The poor man's pasture (the roadside), the fields, the meadows, the woods, the garden abound with them. The former, I think, are sweeter than the latter. Raspberries red and black, and blackberries and elderberries, promise an abundant harvest.

CATCHING TROUT.

According to appointment we met at the Old Stone House, situated in the woods on the east bank of the Otsquago Creek. The house has none of the peculiarities of ancient or modern architecture—no brick chimneys, no glass windows, no slated roof, no furnished apartments, no sweet woman to greet you with a welcome. It is a house of substantial stone, whose solid walls remain the same amid the dilapidation and decay of the mason-work of man. Its rooms are unlighted caves, which the imagination easily peoples with the fairies and genii of the forest. It was formerly a resort of the red men and their wives and daughters, and is now a shelter for the trout-fisher when he would escape the sun or the storm, or gratify his geological tastes.

There is a weird beauty and picturesque grandeur of scenery hereabout which is sure to win the admiration of all who see it. Nature, in her sportive mood, must have heaped hill on hill, and piled rocks upon them to keep them down, and then have poured the stream among them to give voice to her laughter. Here are steep banks, wooded from the water's edge to the hill-top; little laps of vales covered with grass and moss that invite you to sit down and rest; great boulders that must have tumbled from icebergs before the waters had sculptured the earth into shape, and grand old trees whose branches reach like ladder-rounds to the clouds·

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The stream is one of a thousand. It is no common affair—mere water running in a channel. It has associations of deep interest. It has a history, and has often been the theme of song and story.

It is the companion of the turnpike, and stages full of travelers are familiar with its form and voice. It never loses its identity, even in the drouth, for its life is in the springs and not in the capricious clouds. It is not a dull, monotonous stream, good for nothing but to turn wheels and honest pennies, but it has a variant nature; sometimes it is as pleasant and gentle as a maiden in her teens, running along on silver feet and breaking out in tones of musical laughter, leaping down the rocky stairway, caressing the plants and flowers that lean over to meet its sweet embraces, playing hide-and-seek among the bushes and grasses, and then showing its unfurrowed face, in which is reflected the beauty and the glory of the sky. Sometimes it rises in power and majesty, and sweeps through its channel with a force which breaks over all obstacles. Then its soft tones are changed, and its waters sound like distant thunder. It plows a deeper and broader passage, lays bare the roots of trees that have been its sentinels for ages, and carries off in its spreading arms the fences and the crops within reach, as Samson did the gates of Gaza. Now it is in its pleasant mood and shows a most amiable face. It smiles in the sun, puts on coquettish airs, and once in a while tosses up a trout, as though it would bribe Frank, the famous angler, to stay near it and entertain it with lines falling in pleasant places. Frank is one of the few who wear gracefully the mantle of good old Izaak Walton.

In his hands he holds a long, lithe rod of polished whalebone, tapering to a point almost as delicate and sensitive as the line which drops from it. For the time being it is a part of the man—an artificial nerve touching heart and brain. How the slender line vibrates in the stream, as it bears the bait and hook temptingly to the very jaws of the aristocratic trout. These proud princes of the brook are exceedingly nice in their taste, and reject with scorn the delicate morsels that would be luxuries in the estimation of common fishes. Frank tried young spring worms, such as old Izaak Walton used to carry in his mouth for bait, but they turned up their noses at worms. He then went to his larder on the edge of the bank, and took from the refrigerator of rocks a fresh quarter of crab, neatly dressed and suited to the season, but they would not deign to look at it. He then skewered a steak of snail upon his hook and dropped it into the water as mine host at Saratoga would put a plate of frogs before the young ladies and the young gentlemen, who would scream and faint at the sight of that hydropath in his green jacket and goggles. Our angler, who is a philosopher, and knows how to cater to the appetites of the trouts as well as Delmonico does to the appetite of an alderman, next scoured the woods in pursuit of game, and found some plump and tender grasshoppers which had been overlooked by the birds. These he poised at the end of his line in front of the crystal palaces where the young autocrats of the brook reside; but they maintained a spirit of indifference which would have been creditable to a duke.

But at last supper-time came, and with it came hunger. Now, hunger is democratic and often vulgar, and will take without close scrutiny the very meal which was rejected in the hour of fullness and surfeit. As the sun went down appetite came up, and with it visions of lost worms, lost crabs, lost flies, lost snails, lost grubs, lost frogs and lost grasshoppers. Unlike Coleridge's Mariner, they had plenty to drink but nothing to eat, and when the hook came round they leaped at it with open mouths. One, spryer than the rest, caught the coveted morsel, but he could not swallow it, neither could he disgorge it from his mouth. He soon found himself in a snare, and sought vigorously to make his escape, but his efforts only entangled him more and more in the meshes which had been prepared for him. He pulled for more line and it was given to him, as the sheriff gives more rope to the culprit. He darted here and there showing his starry coat of mail to the excited angler, who soon landed him upon the bank. Fishing is one of the most healthful of the sports. It affords time for thought, the exercise is not violent, and yet is sufficiently exhilarating to stimulate the blood and brain.

INNOCENT GIRLS IN SWEDEN.—The Swedes are not, as it appears to me, a theatrical nation. It was in keeping with this sentiment that when a lady, a friend of Tante Fredrika's, sent her two country maid-servants to the theater thinking to give them a pleasure, they quickly reappeared. "You have surely never been to the theater?" said their mistress, surprised. "Oh, yes; we went to the theater, and sat there," said they, "till suddenly a curtain drew up, and some ladies and gentlemen began talking together, but as it was on family matters we felt we were intruding, and so came home!"—*Twelve Months with Fredrika Bremer in Sweden.*

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[Written for The Herald of Health.]

The Study of Physiology—No. II.

BY RUFUS KING BROWNE, M. D.,

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HAVING seen precisely how a knowledge of physiological truths is obtained, by what method we trace out the various phenomena involved in the animal functions, we shall next do best to take a summary view of the field of physiology.

FIRST, of the blood. The blood is a liquor holding in suspension and solution the materials which, though elaborated by the body itself, support all its tissues, and furnish *the basis for all its functions.*

Some of these materials are incessantly in the act of assimilation to the different organs, and thereby becoming altered into constituents of the tissues, which did not exist beforehand in the blood.

Thus, whether it be the elements of the food, or of the blood, going to replenish the waste of tissue, *the elements* of both pass through a transition stage, in the *progress of which neither the elements which existed before, nor those which are to be produced, can be detected.*

For example: The substance of muscular fiber does not exist in the blood, yet the blood contains the substance which, when assimilated to muscle, becomes identical with it.

Moreover, these various anatomical elements of organs are constantly in the act of yielding their substance up to the blood, which enter the vascular system, either to be decomposed and eliminated as excreta, or to be again transformed into some product of the function of secretion. In every such change they assume not alone other forms, but other characters.

Now, these several processes, the details which occur incessantly, may be described as the *renovation* of the blood.

Simultaneously with this ascending or descending metamorphosis of the elements of the blood, there is produced in the organs themselves materials which are not merely a direct transformation of blood ingredients, but a transformation of ingredients these organs have assimilated and afterward transformed. A correct understanding of this will enable us to properly appreciate the peculiar character of physiological processes.

Thus, a considerable quantity of sugar (liver-sugar) is produced in the liver, and transformed or destroyed in the blood. The torrent of the hepatic vein receives about eight portions of this sugar per thousand; the quantity of blood flowing through other capillaries of the liver in twenty-four hours is not less than sixty-nine pounds. The amount of this sugar daily produced in the liver, and issuing into the blood, is not less than one ounce and a quarter.

Similar is the career of another substance—fibrine. It exists in the blood in the proportion of two parts per thousand, and while freely circulating in the sanguiniferous tubes is fluid, but if its free movement be obstructed it soon solidifies or fibrillates.

But this substance, too, has been decomposed or destroyed in the blood, for the blood proceeding from the kidneys and liver is either entirely destitute of fibrine or contains at intervals a very small quantity of it.

The quantity of fibrine which disappears from the renal and hepatic blood per day is one thousand three hundred and seventy-five grains, yet the whole amount of this substance contained in the human blood channels at any one moment is only three hundred and fifty-five grains.

In the cases of these two substances, we have an example of the matters that undergo dissolution in the blood, but they are not examples of the *same* character of dissolution, for the sugar of the liver is there produced, and *lost* to all other parts of the system, while, on the other hand, the fibrine is *present* to all other parts of the system and lost to the renal and hepatic blood.

Now, it is important to understand that in both these instances, *i. e.* the loss or disappearance of both the fibrine and the sugar, is totally unlike any known form of chemical change, where substances combine with the appearance simultaneously of new properties, or one substance changes to another (in either instance without any change or loss of their volume or atomic sum), but it is a complete disappearance of the sugar and fibrine, a physiological combustion as distinguished from a chemical one. Moreover, that it is no undetected chemical change is abundantly clear, from the fact, that not either has taken place in the formation of a new substance, as albumen in musculine, nor renewed its intimate connection with the composition of the constituents of the blood.

Next, of the products of the glandular organs—the secretions.

These matters are the product of some change in the epithelial or glandular constituents, of the glandular substance, not pre-formed in the blood itself, issuing with, however, some constituent of the blood, transuded by and while in the act

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of passing through the vascular tubes of the gland.

These are the various fluids which are the most immediate, free or fluid agents in the phenomena of digestion, and participants in that of intestinal absorption:

1. The secretions which collect and mingle in the mouth from the contiguous glands (parotid, submaxillary and sublingual) and the mucous membrane.

Those termed the saliva amount to three pounds, avoirdupois, per day.

2. The secretions of the glandulæ in the roof of the mouth, which in the horse may be collected to the amount of some gallons daily, and which serve the very important purpose of thoroughly moistening the comminuted bolus of food on its way to the stomach.

3. The gastric juice, the amount of which is estimated by Bidder and Schmidt, for the adult, at over ten pounds daily, and which is the special digestive fluid.

4. The pancreatic juice, amounting to two and a half pounds daily, and the special duty of which is to reduce the oleaginous substances of the food to a fine emulsion, constituting the chyle, in which form it directly enters the lymphatic and blood systems.

5. The bile, the true character and destination of which we shall presently consider; and

6. The intestinal juice secreted by the glandulæ, which in great part compose the entire inner wall of the intestines.

Each of these contains a small proportion or a peculiar substance, at once the product of the cellular elements of the gland which secretes them, and of the vascular elements which combine to form the secerning part of their structure.

Now, it is by no one alone of these peculiar substances that the physiological act of *digestion*, as distinguished from that of chemical solution, is accomplished.

Now, the whole sum of these substances that, as stated, ceased to be at one time actual ingredients of the blood, and yet, soon after issuing from it into the alimentary canal by the secretory ducts, *re-enter* upon a new course of agency and self-change which returns them to its channels, is at least twenty pounds per day.

The physiological changes these *digestive* substances undergo, and the character and term of their existence, are not similar to those of the liver-sugar and fibrine, since the latter leave no vestige, while the former are separating from the blood for awhile, and taking their course through y canal, distinct from the blood, returning to its channels in undiminished volume united with the products of their digestive activity

Let us now fix our attention upon these latter substances which *replenish the blood.*

The immediate great source of these is the alimentary or digestive canal. Having before, however, entered it from the other side of its walls, they are soon absorbed by the blood-vessels and lacteals going from the stomach and intestines (for different substances are digested and absorbed from different parts of the alimentary canal) and enter the blood.

These substances, according to various observers, amount to 1.206 albuminous, starchy, fatty and saline matters per day — together with 4.275 pounds of water, or five and a half pounds of solid and fluid aliment absorbed, counterbalanced by an equivalent sum of urinous matters, perspiration, salts and fæces discharged by the various excretory channels.

In addition, a little over a pound of oxygen is absorbed, and a pound and a half of carbonic acid is exhaled, with a small and quantitatively undetermined amount of animal vapor.

Of these matters, six and a half pounds are absorbed and eliminated daily.

They enter the system from without as foreign substances, are immediately subjected in order to physical and physiological influences; soon they are fluidized and peculiarly decomposed by contact with the digestive substances already enumerated, and, combined with these (which themselves undergo alteration in the act) they are absorbed and take part in the constitution of the blood.

Thus the great and tumultuous current of individual life is replenished, a relatively small proportion of its ingredients ceasing to be so, being transferred to the alimentary canal by the agency of the vascular, cellular, anatomical elements which constitute the gland, the blood moving in the first named.

These ingredients, which but a moment before occupied the place last named, were changed, and issue from the gland-duct physiologically identified with its characteristic product, as, for example, pepsin, gastric juice, pancreative juice, etc. etc.

They were gained for a brief time by the alimentary canal, while separated from the blood, but were soon again lost to that canal and regained by the blood, so that there is a strict reciprocity and compensation in endless repetition while life endures.

In order to complete our summary survey, there remains for us to cite a characteristic example of the *role* the organs connected with di-

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gestion play in the process. The liver will suffice for this purpose.

The sugar produced by this organ is absorbed by the blood, but performs no special office there, being soon after its entrance, if not in excess, destroyed there.

The bile also, is produced by the liver, and formed from substances wholly different beforehand from the bile. They are, however, derived from the blood.

The *bile* itself does not arrive at the blood at all, but we find therein certain substances which we know to be the product and result of the process of its digestive decomposition and absorption.

This question, *i. e.* the problem whether the bile was excrementitious or served a digestive purpose, has been conclusively settled by the independent researches of Marcet, Leutz and Harley.

The bile is secreted to the amount of several pounds daily. When the chyme passes through the upper portion of the duodenum, and comes in contact with the bile, it is precipitated, and then can not undergo absorption until it has been brought to a state of solution by the intestinal fluids.

But the bile will modify the fat which has escaped contact with the pancreatic juice, and its operation so continues until it is gradually precipitated, and dissociated and fitted for absorption, by mixture with the chyme; for it is one of the more important truths developed by experimental physiology, that the chyme and the chyle are not constituted of the same substances, in different stages of digestion, but of very different elements of the food.

We shall now complete our survey by a consideration of the textures of the body whose functions we have been regarding.

A correct apprehension of this is indispensable to a right understanding of physiological processes.

There are not, in a strict physiological sense, then, such separated systems of solids and fluids of the animal body as appear at first, and always so appear to the merely physical eye.

For in reality the physiologist soon learns that the most rigid of these parts and organs termed solid, mainly consist of a combination of elements, the most intimate part of whose structure consists of fluids; and, on the other hand, the lightest fluids in it are saturated and modified by matters which alone are solid.

Every tissue in our bodies is not only what it is by virtue of fluid matters like albumen, but the peculiarity of every part of its structure is maintained by being constantly bathed in them.

No vital activity can occur, no physiological phenomena take place, without, in the brief moment of time in which it occurs, employing the fluids of the body.

They are really the vital *bond of union* between all its fixed parts, and are the means by which alone all the changes of nutrition in the solid parts take place.

So, too, of the apparent distinction between the tissue and the blood-vessels.

Nature, in physiology, does not give such a distinction.

The distinction may be anatomically correct when arteries and veins are its subjects, but only so because they really do not take any intimate part in the formation of organs proper, nor even supply them in any sense, for it is the capillaries, and not the arteries or veins, which constitute the vascularity of the tissues and supply their fluids.

It is even the capillaries which supply the materials for the nutrition of the membraneous and cellular elements of the arterial and venous channels themselves.

Nutrition is not directly accomplished by the movement of the blood in the veins and arteries, but by the active and reciprocal movements of the fluids within and without the capillaries.

A like remark well applies to the general understanding of the capillaries.

They can not, in a true physiological sense, be distinguished from the *tissues*. They combine to form an essential element of every structure and every tissue, except cartilage, and, in the strictest sense, they, in great part, *are* the tissues.

A correct understanding of this may be reached in connection with the fact that the capillaries frequently cease strictly to be such even anatomically, by their substance becoming directly continuous with the other membraneous or cellular portions of the tissues, their hollows forming an undivided continuation of the hollows or fluid-filled spaces, as in the spleen.

It is not in accord, therefore, with a true physiology, to mean by "capillaries" a set of hair-like tubulæ, which are extensions, on the one hand, of the arteries, and, on the other, of the veins. Regarded anatomically they are so, but physiologically they are no more a separate system than any cell or tissue of the body.

But for another occasion must be reserved an explanation of the part the blood and its tubes play in the part of human physiology.

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A Note from Dr. John Marsh.

We are indebted to Rev. Dr. Marsh, the veteran champion of the Temperance cause, for two brief articles bearing on the great issue to which he has devoted his life. Dr. Marsh is personally a living argument in behalf of the reform of which he is the foremost and oldest advocate. As an editor and author and speaker he has been before the public conspicuously longer than an ordinary life-time.

In our August issue we had occasion to refer to the life and services of John Pierpont, the "poet-preacher." We spoke of his dietetic and hygienic habits, his care of his physical health, his literary labors, and his wonderful vigor of body and mind, although an octogenarian. Dr. Marsh was one of his fellow-students in Yale more than half a century ago—one of the few who eschewed strong drink and did not chew tobacco. In the pulpit, on the platform, at the press, in season and out of season, here and there and everywhere, he has spoken bravely and eloquently against the drinking usages of society, and now, at a ripe age, when his head is crowned with silver and his labor is crowned with grand achievements, he has given us a valuable history of his "Temperance Recollections." For many years the editor of the best Temperance paper, he is now the author of the best Temperance book—a book which ought to find its way to every public and private library in the land. The name of Dr. Marsh is as familiar as a household word, and many of our readers will welcome his name to our list of contributors.

Among the Doctor's classmates in college was John C. Calhoun. He gave us, the other day, an interesting and graphic account of the great Nullifier's first appearance in New Haven. He (Calhoun) went to the City of Elms in a coach, and was attended by negroes. He announced his intention of becoming a statesman, and directed all his studies with that object in view. He diverged somewhat from the plan he had mapped out for himself, but he did it at the suggestion of the President of the College, and after graduating he studied law in Connecticut, and then devoted his life to "statesmanship." Enough of this! Here are the notes from Dr. Marsh. We have a longer article from the same pen, which we reserve for future use.

[Written for The Herald of Health.]

HAPPY HOMES.

In walking through our great cities the question has often forced itself upon us, How many of these are happy homes? Judging from external appearances, most of them are. A forlorn stranger passing would say of many: Oh, if I could bring my family and live here, I am sure I could have a happy home! But there is something needful to constitute a happy home beside that which is visible to the passing traveler; something beside a lofty edifice, neat pavement, beautiful steps, blinds and curtains. What is within? Perhaps there is sickness; a beloved daughter is pining away with consumption, or a wife has been bereaved of her husband and the father of her children—this makes a sorrowful, but does not prevent its being a happy home. We have been in homes where a loved one was just preparing for the Marriage-supper of the Lamb, and there was already joy unspeakable and full of glory. We have been, too, where there had been painful partings and separations, but faith had followed loved ones to better homes than earth could furnish. Perhaps there is poverty, poverty that stings to the quick, because there was affluence, and the dwellers know not how to submit to a reverse. But it is not sure that this is other than a happy home, for the dwellers might say: "The Lord gave and the Lord hath taken away;" "He is my portion;" "Trust in the Lord and do good, and verily thou shalt be fed." Here, again, is a home full of all the means of enjoyment—health, wealth, children, equipage, with fullness of bread, and the harp and tabret and wine in their feasts; but happiness takes not its abode here. Here are envyings and jealousies and strifes and evil passions and violence. Here the parents are obliged to say, This our son is a drunkard; and it may be a once-loved daughter has become a disgrace to the household. Happy homes are found only where the laws of health are observed, and virtue sits enthroned, and conscience is void of offense, and industry prevails, and benevolence overflows, and a higher end than an earthly is in every eye. For these, alas! we may not look in our cities as much as in our mountain ranges and secluded valleys. Stranger! envy not our splendid and beautiful dwellings as insuring happy homes. Look to yourself and your loved ones for happiness and you will not be disappointed.

July, 1866.

A young lady having promised her grandma that she would never marry a certain fellow "on the face of the earth," repaired with him after the old lady's death to the Mammoth Cave in Kentucky, and was married under ground.

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[Written for The Herald of Health.]

Botany for Invalids—No. III.

BY MRS. MARY TREAT.

One source of interest to the botanist is in the study of the habits and diseases of plants, for plants, like animals, are subject to disease and death. Many things affect the growth or health of plants; they can be overfed, become gorged and sickly. Never did I see this better exemplified than by my own experiments this summer. Thinking to have a splendid show of English Scarlet Runners we manured highly and made preparations for a lofty pyramid of living green. But here my plants are, flat upon the ground, a continual reminder of woman's ignorance. Like pampered, over-fed, sickly children, they will perish regardless of my "great expectations." It is something of a curiosity to watch their efforts of growth; they crop out on every side, and try to become like their ancestors, seemingly wishing to be no disgrace to this ancient and much-admired family; but their efforts are all a failure, leaving a short, stunted, burly mass of growth. Seed planted from the same paper, around an oak, with little or no care, are making a vigorous growth, thus showing no fault in the seed nor, naturally, in the soil. On the other hand, we all know plants may become starved and sickly from lack of nourishment.

Another source of disease in plants is insects preying upon them, frequently upon their roots, so we are at a loss to divine the cause of their sickly appearance. A bed of Asters, upon which we had bestowed much care and attention, were withering and dying, and countless numbers of ants were busy among them, almost compelling us to believe them the authors of this wholesale destruction, and we were only prevented from destroying them in turn from the fact that a few of the most healthy-looking plants seemed to be in closest proximity to these busy insects. Upon pulling up some of the withered plants, we found their roots covered with a small green insect which the ants speedily cleared, carrying off every insect, thus showing us it was only through their agency we had any plants left.

One of the most important agents in the growth of plants is light, sunlight—though some of the lower orders of plants will grow in deep caverns and mines where no ray ever seemed to penetrate. But in the higher forms of vegetable life, the direct rays of the sun are essential to their perfection. The pale, sickly appearance of plants in a cellar, striving to reach the nearest light, is an illustration of the health-giving properties of the sun. So, in a dense forest, the lower limbs die, and the trees are exceedingly tall and slender, and woe to the unlucky one that is more tardy in its growth than its neighbors, for no sooner is it outrivaled by its companions than it pines away, crumbles and decays, going back to Mother Earth as nourishment for its more successful competitors, thus keeping up the round in the grand system of circulation. At last the sun is the great source of life in both the animal and vegetable kingdoms; so, to be shut away from his influence in damp, dark cellars and rooms induces disease in the human family no less than in plants. We should take examples from the beautiful creations of the vegetable world, and live as much as possible in the open air, where we can be more directly benefited by their hygienic influence, as they are continually purifying the atmosphere by absorbing the carbonic acid gas given off by the animal kingdom, and in turn throwing off pure oxygen for us to breathe. Thus are the two great kingdoms made subservient to each other in this wise and beautiful arrangement.

A very interesting feature in Botany is a knowledge of the habits of plants. Here, too, as in the animal kingdom, the habits of very many plants may be changed, while others, like some animals and tribes of the human family, will not bear naturalization. Most of our fruits, grains and vegetables are widely disseminated and easily grown, but many of the more delicate flowers and ornamental shrubs will only grow in their native climes; no amount of coaxing will induce them to live with and be on friendly terms with our native plants. Others, again, have their habits entirely changed, and become our most common flowers—the Nasturtion is a good example. Its native home is along the course of Peruvian streams, where it is a perennial plant with a woody stem. Here, by a long course of training, it has become an annual, and crowds into a few short months its term of existence, giving us flowers and fruits the first season, which it takes years to perform in its native wilds. Coming from a warm climate, it could not be made to withstand our winters, so at last it accomplishes all in one season. Others may finally be made to withstand our winters by first rearing them in hot-houses, afterward in green-houses, and lastly in the open air, with some protection at first, but finally they become so acclimated we no longer look upon them as exotics, but claim them as our own. This difference in the hardiness of plants re-

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minds us of children. We see delicate, pale children, that the winds of heaven are not allowed to visit too roughly, that have never pressed their naked feet upon the bare earth to receive its vitalizing influence, or hardly felt the rays of the sun, through fear of its browning effects. Others, especially children of the poor, will endure all kinds of exposure, even their naked feet on ice and snow, and look rosy and healthy. Which class shall we look to for vigorous men and women, for power, for intellect? Surely not the pale, sickly ones, with their already too largely developed brain, reading and studying books they should not be allowed to see for years to come.

The benefits invalids derive from travel is not so much in change of climate as in the beautiful and varied scenery presented to the eye; trees, shrubs and flowers are the most attractive features in a fine landscape, and if we paid more attention to ornamenting of our grounds with the blending of colors, we should have fewer invalids and less need of doctors. The hygienic effect of colors on some patients is remarkable; they seem really benefited by feasting the eye on rich and varied colors, and the rich hues of a flower-garden could be so arranged as to be a perpetual source of delight and happiness. Even ornamental trees and shrubs, with their varied, almost innumerable shades of green, could be so arranged as to have a most pleasing effect, as witness the following beautiful lines of Cowper:

> "No tree in all the grove but has its charms,
> Though each its hue peculiar; *paler* some,
> And of a *wanish gray*; the willow such,
> And poplar, that with silver lines his leaf;
> And ash far-stretching his umbrageous arm;
> Of *deeper green* the elm; and deeper still,
> Lord of the woods, the long-surviving oak."

But no coloring in the world can excel the rich and varied shades of our autumnal forests. Foreigners are struck with astonishment and delight on first beholding our forests, and admit they far exceed any thing the Old World presents. "Painters who have attempted to imitate the splendid hues of our forests, have, by foreigners, been accused of exaggeration; but no gorgeous coloring of art can exceed the bright scarlet, the deep crimson, the rich yellow and the dark brown which these scenes present." So invalids need not go from their own beautiful country to find novelties, but learn something at home. As Emerson says, "Traveling is the fool's paradise," and, if we would not be classed in that category, let us stay at home and learn something of the botany of our own land; for certainly our country is broad enough and not without its attractions. Let us first learn the botany of our own vicinity, and in these walks and by this exercise we shall have so regained our health and strength that we shall be able to make a much wider circuit. Like William and Mary Howitt we may yet be able to perform a journey of five hundred miles on foot. Does the base thought nearly shock you? But remember, Mary Howitt never would have been the glorious woman she is without this exercise. It has given her mental and physical stamina, and her name will be loved and revered and handed down from generation to generation long after we are forgotten. Do you say the lakes and hills and bright flowers of Scotland, among which the Howitts journeyed, are more attractive than our own? Then you do not agree with the greatest travelers and naturalists. "No country in the world excels the sweet and smiling plants of America," as, for example, the *Linnæa borealis*, named in honor of Linnæus, the most profound naturalist, either ancient or modern, and author of the above quotation. This delicate little plant was one of his special favorites; it is a trailing evergreen, and widely disseminated throughout the northern temperate regions. Northward we shall find it in moist, mossy, generally evergreen woods; southward, in cold bogs and along mountains. The leaves are small, roundish, and strung along in pairs. The scapes, the only erect part of the plant, are two or three inches high, and at the summit they fork into two pedicels of equal length, each bearing a nodding, fragrant flower of the most delicate rose-color, pale without, but of a rosier hue within.

Among our most delicate and attractive little herbaceous plants are the *Drosera* or Sundews They blossom from July until September, and may be found in almost every bog and marsh. *Drosera filiformis* is the most curious species. The leaves are destitute of a lamina or blade, simple-like threads covered with reddish hairs, each hair terminated with a gland, which exudes a clear fluid, sparkling in the sun like dew, hence the name. The scapes or flower-stalks are destitute of these hairs, are perfectly smooth, and from eight inches to one foot high, terminating in a one-sided raceme of pink flowers about half an inch across. The curious leaves are not quite as long as the scapes. Quite early in the spring we removed some of these delicate plants from their watery bed to a dish of sand and water, placing them in the window, where they have grown and blossomed finely, and been the wonder and admiration of very many, who could hardly be made to believe such beautiful creations were all around

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us. *Drosera rotundifolia*, with round leaves covered with these same hairs and glands, and white flowers, is very pretty, and may be found in similar localities.

Many beautiful water-plants will claim our attention during the "heated term," foremost among which is the White Pond-lily (*Nymphæa odorata*), queen of flowers and rival of the rose in delicious fragrance and purity. The flower is double, and here is the best example in the world to see the change of stamens into petals, or how a flower becomes double. The stamens are gradually transformed into petals, until, in some flowers, we lose all traces of the stamens—they have all become petals. In the Pond-lily we may see how this is brought about, for the stamens are in all stages of transformation; some of the petals show the anthers still adhering to them; others, again, it is difficult to tell whether they are most of stamen or of petal The name comes from Nymph, goddess of the water.

[Written for The Herald of Health.]

The Mermaid's Story of the Submarine Cable.

I AM an original Hydropath. Long before the great German thought of the curative virtues of the bath, I was accustomed to the plunge, the douche, the shower, and all the variations of the healing and pleasurable applications of water. When the poor mortals of the earth earthy are sweltering in the summer sun, and suffering the additional inconvenience and pain of the dust, smoke, malaria and noise of the city, I am quietly seated in my coral cave, in the realm of, I was about to say, undisturbed repose.

In my kingdom in the sea we have no fires, no jangling of bells, no shouts of firemen, no blowing of trumpets, no rattling of engines, no blackened ruins marking the pathway of conflagrations. Here sickness and disease are not epidemic, endemic, nor sporadic; consequently we have no physicians, no hospitals, no sanitary laws, no boards of health, and no need of THE HERALD OF HEALTH. There are no criminals here; hence, all that relates to jurisprudence and punishment is unknown; and should a limb of the law venture here, he would have to hire out to some industrious merman or starve. Should a blue-coated policeman with a shield on his breast make his appearance, he would be caught as a curiosity and kept for the entertainment of our submarine inhabitants. Drunkenness is never dreamed of in the broad domain in which I live, and the evils which grow out of it are not numbered with the calamities of sea life.

Enough of this! I did not intend to copy the example of editors and other dwellers of the earth, who have axes to grind, and puff my native land—I beg pardon—water. My object in writing now is to give an account of a singular occurrence, which has created something akin to a new sensation in the "eternal calm" below the surface of the waves. A few days ago, I was sitting quietly in my coral hall, when I discovered something which looked like a line of fire falling slowly down through the water. Down, down, down it came, breaking the branches from the trees of the ocean forests, touching the islands whose heads are lifted into the sunshine, lodging on the sides of the great green mountains, and scaring from their hiding-places the monsters of the deep.

My maid-of-honor, companion and confidential friend, was alarmed at first, but she soon regained her accustomed self-command, and appeared as attractive as ever. She is the belle of the sea—has golden hair, ornamented with sea-flowers and shells of pearl. Her eyes are blue as the over-arching heavens, and her lips as red as a cloven cherry.

> She wondered what that line could be
> Falling slowly into the sea,
> Stretched so far on the ocean floor,
> Scaring monsters up to the shore,
> Swinging from hill to hill afar,
> Vibrating, when storms of thunder jar,
> The sensitive sea from shore to shore
> Beyond the sound of the tempest's roar;
> With her white hand she touched the wire
> And felt the thrill of its magic fire.

Very soon other mermaids and mermen came to my palace, and gazed with wonder at the line of light which flashed and sparkled and crinkled like lightning in the vast realm of water. Now it flashed out from an island of coral; then it blazed down the uneven sides of the mountains; then, like a flaming sea-serpent, it crept over the floor of the ocean, kindling a light among the wrecks of ships, and moving the uncoffined dead, whose staring eyes look for ever up to the sky from whence came the unpitying wind which hurled them down to the great graveyard of the sea.

Now, I have discovered that this line of fire is nothing more nor less than a link in the vast chain which is to unite the sea and the land, and to gather all the nations in a group.

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I shall now enlarge my sphere of usefulness, for here mermen do not object to the rights of mermaids; indeed, the former are, as they should be, the servants of the latter, and

My mermen shall visit the dead,
Who sleep upon their briny bed;
And if they have a message to send
To mother or child or dearer friend,
They shall touch the magical wire
And wing the wish with words of fire.

Since I am a true Hydropath, allow me to say, through your journal, that I should be most happy to welcome any sister of mine outside the sea. It is delightful to spend the summer months here in coral groves beyond the reach of the sun. No sun-strokes here! If it be pleasant at the sea side, what must it be inside the sea. I will warrant you no harm shall happen to her. My most trusty merman shall conduct her down the coral stair, and he will protect her from the mailed monsters hereabouts. I will crown her with shells and flowers, and she can make the tour of the ocean with me. I will have the fleetest dolphin harnessed to my boat of shells, and we will go over the course taken by the Great Eastern—from the coast of Ireland to Bear Haven, and thence to Heart's Content.

From the Irish coast to Heart's Content,
From continent to continent,
From sea to sea,
We'll follow where the lightning went,
Unhindered, free;

Past the wandering whale and shark,
Led on by the electric spark,
Bound for our goal,
Through the deep realms no longer dark,
From pole to pole.

From icebergs to the groves of palm,
And down in the deep ocean's calm,
We'll speed away,
Touching the cable's pliant arm
From day to day.

We'll follow in the track of fire,
Up to the hill-tops high and higher,
Toward the sun.
This day brings distant nations nigher
And makes them one.

If you print my unrythmical lines in verse and prose, please inclose them in a sea-shell and drop them into the water at Long Branch, and I shall be sure to find them. In the mean time accept my good wishes for your success in all laudable efforts to cleanse and purify all who will step into the waters to be healed. May the submarine telegraph which swings in front of my throne of pearl and leans upon my palace of coral never be the medium of angry news between the nations now at peace, but may it continually throb with tidings of good will to all men, and be the wedding-ring that shall symbolize the unbroken harmony of both hemispheres.

It is not generally known by those who dwell on dry land that we have meadows and gardens and groves in the sea, and a great diversity of waterscape, made picturesque, beautiful and grand by the deep vales and lofty mountains, interspersed with hills, whose undulations are as graceful and symmetrical as the waves. We also have a vast variety of sea-plants and flowers whose petals rival the hues of the rainbow, and you would be utterly astonished could you see the uncounted living creatures that rove with fins and feet among the tall trees of the submarine forests. Some of them are huge as whales, but formed somewhat like the elephant, with enormous tusks; others move about like immense barges, with open jaws, devouring at a meal as many fish as would feed all the boarders at a fashionable watering-place; then there are aquatic monsters answering to your lions, bears, dogs and serpents. The floor of the ocean, over which I travel at my leisure, is strewed with the wealth of wrecked argosies, crates and casks of untasted wine, chests filled with gold and silver coin, and jewels glow there like the stars of the sky.

But I must bring my letter to a close, and give way to the dispatches of Cyrus W. Field, one of the greatest men of modern times, who ranks with Franklin and Morse and Columbus—the latter discovered a continent, the former moored it alongside of Europe, and brought the nations together in a group.

G. W. B.

A Candid Bride.—A young woman of the humbler classes was married in Paris the other day to a young man in the same sphere of life. The priest had gone through the *conjungo*, and was making a few appropriate remarks, exhorting the young couple to mutual affection and fidelity. After he had finished, the bride, whose turn it was, briefly said, "Monsieur le Cure, if my husband conduct himself as he ought to do, I promise that my conduct toward him shall be irreproachable; but if he do not, why I will not bind myself to observe any thing that you have said."

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NEW YORK, SEPTEMBER, 1866.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

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TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D.

DEMONSTRATION OF THE FORCE-GIVING QUALITY OF FOOD.—An interesting and valuable communication on the sources of muscular power has been furnished us by our esteemed correspondent, Prof. Rufus King Browne.

Until now, the study of the relations of the food to the human body was the study of nutrition — of the relative amount of its flesh-forming constituents, determined on the chemical hypothesis. The amount of force which the body was capable of taking up or deriving and exerting, was not until recently deemed a problem capable of a similar mode of treatment, for the force was supposed to proceed wholly from the physiological combustion or decomposition of the body itself, and virtually its muscular tissue.

This latter problem has now been for the first time determined.

In its demonstration, too, it very considerably advances a march in our idea of nutrition itself, for it shows that those substances used for food which have hitherto been considered the most nutritious are not the same with those from which the body develops the most available working power or force. The questions are evidently distinct, although their consideration involves primarily the same elements.

The demonstration of the force-giving properties of food, and the relative amounts furnished by different kinds, is here given for the first time, and it very remarkably sustains our Hygienic view of the most suitable kinds of food:

RECENT RESEARCHES ON THE SOURCE OF MUSCULAR POWER.

It is well known that in 1842 Justus Liebig, in considering the nature of the tissues and the various phenomena of nutrition, respiration and motion, divided the various kinds of food into two great classes—namely, those which contain nitrogen and serve for the building up and replenishing of the muscular tissues, and those destitute of nitrogen, as starch, fat, etc. etc., whose use is limited to the production of animal heat.

These two classes he named flesh-formers and heat-givers, respectively.

He taught that the source of the muscular force in animals is the combustion of the living muscle by means of the oxygen conveyed to them by the blood, and that consequently every motion, however slight, is the cause of the destruction of a certain amount of muscle, and the liberation of its quantity of vital force.

Moreover, he said, the final product of this destruction of the muscular substance is urea, which passes into the blood, and thence is eliminated in the urine by the kidneys.

Accordingly, the amount of urea given out should indicate exactly how much muscular substance had been consumed, and a man working had ought to produce much more urea than one at rest, since, because of the great expenditure of force, a larger amount of muscular substance is burnt.

The experimental proof of this is, however, very difficult to ascertain, since the amount of urea secreted also varies, to a considerable extent, with the quantity of flesh formed of the food.

Later, Helmholtz sought to apply our subsequently acquired knowledge of the relation of heat and mechanical energy to the solution of the same problem. On the assumption that whatever may be the proximate source of the muscular force, it must be attended with disappearance of heat from the body, he concluded that of the total heat given out by the combustion of food, a man can make a fifth available in the form of actual external work.

But neither of these theories have been received by competent physiologists.

It remained, therefore, that the real source of muscular power should be discovered.

In its simplest form, the problem to be solved is, whether the muscle is merely the apparatus which effects animal motion or whether it is

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that, and also the force to work it. In order to solve this problem by experiment, by the only mode in which the physiologist would accept validity, there are three things to be determined:

1. The amount of force or energy generated by the oxidation of a given amount of muscle in the body; 2. The amount of mechanical energy exercised by the body during a given time; 3. The quantity of muscle oxidized in the body during the same time.

If, therefore, the amount of mechanical force exercised by the muscle be greater than the amount of the substance oxidized could possibly furnish, then the force of the muscles is not exclusively derived from their own substances.

The data for an answer to the second part of this problem—namely, the actual work performed, has been most ingeniously furnished, by Fick and Wislicenus, by the elevation of the body. For this purpose they ascended the Faulhorn, a high mountain of the Bernese Alps six thousand five hundred and sixty feet high, near the lake of Briery, whose regular slopes, suited it to their experiment.

The height of the mountain, multiplied by the weight of the body of each experimenter, gave the amount of external work performed, and to this was added the estimated internal work of the circulation and respiration.

The third datum, the amount of muscle consumed, was given as a maximum of the amount of nitrogen excreted by the kidneys. This amount having been determined by analysis, the amount of muscle is speedily calculated, since every 15.6 parts of nitrogen indicate one hundred parts of muscle destroyed.

The excreted nitrogen was determined by the best method, with every possible care, and in order that there might not be any source of loss, the amount excreted for six hours after the loss was taken into account.

As the final result of their investigation, they determined that the muscle consumed, even with a very liberal allowance for sources of error, would not account for the work performed; they conclude *that the combustion of the muscles would not account for even one-third of the work performed.*

This experimental disproof of the early theory is final, and we are forced to look elsewhere for the source of that power of which the muscles are but the agents.

In short, the chemists have not yet apprehended the true character of the problem itself, let alone the means of determining it, since, as we years ago taught, the force in question *does not take its rise in the muscles themselves, but only issues from them.*

But if the muscular force be not furnished by the consumption of the muscle itself, what is the source of its supply?

To this inquiry there is a definite answer:

The supply of this force is from the food, as assimilated in the blood and the various articles of diet, both those called heat-givers as well as the flesh-formers.

Smith has already shown that the combustion of *carbon* in the body varies according to the amount of work the body performs. This fact, indicated by the amount of carbonic acid exhaled, may be thus figured:

	Carbonic Acid Exhaled.
During sleep,	19.2 gram.
Before sleep, after lying for several hours,	23.0
Walking two miles per hour,	73.6
Walking three miles per hour,	100.4
Upon the treadwheel, ascending one-third mile per hour,	175.0

But in order to complete this series of research and give it all the value possible, it was determined to ascertain, in accordance with the above, the actual energy developed by various articles of food when consumed in the body. This is expressed in metre killogrammes, or the force necessary to raise a killogramme (2.4 lbs.) to the height of a metre (3.28 feet).

Name of Food.	*Metre Killogrammes.*
Cheshire Cheese,	1908
Bread,	1200
Milk,	206
Potatoes,	482
Apples,	315
Oatmeal,	1798
Flour,	1797
Rice,	1760
Arrowroot,	1900
Mackerel,	738
Lean Beef,	623
Fat Beef,	4113
White of Egg,	266
Isinglass,	1700
Hard-boiled Egg,	1003
Carrots,	243
Cabbage,	198
Cocoa Nibs,	3149
Cod-liver Oil,	4127
Lump Sugar,	1800
Butter,	331

The above numbers show, in a very striking degree, the superior source of animal force that

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the dry, farinaceous cereals possess over the animal food, but the condensed form of nourishment afforded by the fats is very marked. It must not, however, be understood that it is *animal* fat alone which excels in this respect, the vegetable oils not having been the subject of experiment.

R. K. B.

THE TURKISH BATH AND CHOLERA.—There are many reasons for believing that few plans of treatment for cholera could be more effectual than the right use of the Turkish Bath, the great objection being, perhaps, that it would be difficult to make a practical application of it, except in rare instances. The plan in its main features could, however, be modified and made available in nearly any house. The following extract from a letter written by David Urquhart to John Bright on this subject, has been sent to us by a friend in London, and will be found to be very instructive. Mr. Urquhart has lived very many years in countries where cholera is prevalent. He says:

"Cholera is a malady which yields to a certain treatment with great docility. That treatment consists in obtaining abundant transpiration, and in application of external force. By the first (heat), an escape is afforded for the poison (urea), which in this malady does escape, even when unaided by external heat, through the skin; by the second (shampooing so vehement as to extend to blows), the cramp is relieved, breaking the tension of the nerves, and restoring the equilibrium of the circulation. My conclusions as to the certainty of stopping cholera by the Turkish Bath were formed on a prior ground. My own life has been saved in a relapse of cholera by the same means, when I had no bath, and had to obtain the heat in a subsidiary manner. These few words contain, if you give to them effect, protection from death and relief from suffering for hundreds and thousands of our fellow-creatures. There is, however, a preliminary objection, which can not fail to be urged, and to it I must supply the answer. If the Turkish Bath cures the cholera, how is it that it comes to us from Alexandria and Constantinople? The Turks are not in the habit of going to the bath when attacked by cholera; and if they did they would not be cured, because the heat of their baths, at present, has descended below the necessary point, and the amount of vapor has consequently increased, so as to neutralize, in a considerable degree, the value of that heat which they still retain. What I speak of is the Turkish Bath as I have presented it to Europe, which, in case of disease, must have the heat equal to or surpassing that of boiling water, and in which the air must be perfectly dry. I can recall an incident which will make the case clear. It bears not on the cholera but the plague. But the value of it consists in showing that I could obtain perfect immunity from the latter disease while at Constantinople, and making use of one of their baths, by merely taking the precaution of using additional fuel. In 1837 I inhabited a yali (country house) on the Bosphorus, at Arnaotet Keni. A half circle of hills on the west inclosed the village. There not only did the plague rage, but an encampment had been formed, just above me, for the plague-patients; and thence proceeded, day and night, the wail of the relations of the dying and the dead. I did not fly, as others, the fatal spot. I did not take, as others, sanitary precautions. I had long been on familiar terms with the plague, visiting it wherever it was to be found. My confidence was based on two considerations. The one was the discovery I had just before made of the immediate cause of its propagation. I could rate the danger of positions, even to feet. The other was the protective and curative power of heat. The discovery was this: That the plague extended, first, in places exposed to the heavy gases evolved from the burying-grounds, and that these escaped in consequence of a peculiar manner of burying practiced by the Mussulmans. The plague has now disappeared from Turkey, and I attribute its disappearance to the change in respect to the manner of burying, even though that change has been, as yet but partial. My first precaution, then, consisted in closing up all the windows looking landways, or on the side of the cemeteries, and opening those on the side of the Bosphorus. My bath, in itself an attractive suite of apartments—for it was the most beautiful private bath I have ever seen—was kept constantly heated. It followed that the heat was high and the air dry. I occupied the bath as an apartment. Then commenced the restoration of the Roman habit of taking the bath daily. Every person in the house went in daily. I explained the matter to them, and they submitted to this change in their national habits. Well, now as to the results. I escaped with impunity. In the adjoining house to mine all died. I had no case of sickness. Not one of my servants, about thirty in number, suffered while under this treatment. Two died; but they were away on leave, were smitten, and never returned."

THE DROP BATH FOR OPIUM POISONING.—Dr. Munroe reports, in The Boston Medical Journal, the successful treatment of a lady who had taken two ounces of laudanum and received no benefit from emetics, counter irritation, or other treatment, but was rapidly sinking under them. She was then treated as follows:

"We placed her upon her back on the floor, with her head elevated a little upon a folded sheet; slipped her clothes down below her waist, leaving the chest entirely naked. A pail of cold water and a pitcher was brought in. I placed myself in a chair, and raising the pitcher filled with water to the ceiling, eight or nine feet from the floor, I allowed the water to fall in a small stream upon the epigastrium. By the time the first pailful was exhausted the breathing evidently become a little more frequent and equable, and the stertor less. The second pailful was brought in, and soon, to my great joy, I could see that the deathly pallor of the face was being lighted up by the flow of the vital current from the heart. A blush, barely per-

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ceptible at first, gradually and steadily spread over the before pale and expressionless features, until it warmed into the full glow of life and health. (My feelings at this stage of the proceeding must have been in some respects not unlike those experienced by Pygmalion when his beloved statue of ivory began to live and breathe under his warm embrace.) By degrees other manifestations of returning life appeared. She began to make efforts to move away from the pouring stream, weak at first, but increasing in power until she could turn partly over and interpose her hands to break the force of the stream. At length, after about three pailfuls of water had been used, her struggles to escape from what was now evidently torture were quite severe; and about this time, to our infinite satisfaction, she began to beg for quarter in long-drawn, drowsy syllables, increasing in energy and force until they were uttered in a tone and manner which evinced a considerable degree of passion and even anger at the strange and cruel treatment to which she was subjected. But even now she would fall asleep immediately if let alone. Having continued it as long as we thought necessary, we desisted and rubbed her dry with warm cloths. We then raised her up and walked her about the room, or rather an adjoining room, which was dry, for an hour or more, resting at intervals. This was no easy task, for she was a full, well developed woman, weighing one hundred and forty or one hundred and fifty pounds. She would beg pitcously to be let alone and to lie down; and in spite of us she would often slip from our hands upon the floor. This forced exercise was continued until we deemed it unnecessary. She recovered without any permanent ill effect. It was the last attempt she made to destroy herself. She had been subject to periodical fits of insanity, but has had no return since then, and has lived a blessing to her family and society."

Dr. Munroe, was so delighted with the result of this treatment, that he proposes it as applicable to the treatment of cholera. It will be a great blessing to humanity when medical men discover how to treat or prevent every form of disease without resorting to poisons, which, even if beneficial in a certain way, can not fail to be poisonous and thus injurious to the system.

HYGIENIC TREATMENT OF CHOLERA.—The cholera is now slowly on the decrease in New York. So far about sixty per cent. of he whole number attacked die, and generally within a few days, or even within a few hours. Almost every variety of drug treatment has its special advocates; but we have the history of one case treated entirely by means of Hygienic remedies. The case was that of a child in one of the filthiest parts of the city. The report is from the pen of Mrs. Dr. Miller:

"About noon on Saturday my husband was called to attend a sick child in Laurens Street, a few blocks away. I accompanied him, and we found a little boy five years of age with eyes rolled up and fixed, mouth open, tongue fallen, face leaden-hued and like putty, pulse nearly extinct, legs and arms cold to the body, fingers blue and shriveled, spasmodic twitching of muscles, constant purging of whey or 'rice-water,' incessant vomiting, intolerable thirst, etc. The child had been sick since 4 o'clock in the morning, and had had a diarrhea for two days previous.

"We had never seen a case of cholera, but the symptoms were so marked, the collapsed stage so evidently present, that we had no difficulty in diagnosing the case, and, as death seemed already to have nearly gained possession, not a moment was to be lost. We took *hot* water, and with a clean cloth (the only clean thing in the whole place) rubbed vigorously the entire surface till a bright glow appeared, the eyes unset and the mouth closed; *hot* dripping fomentations were applied to the stomach and abdomen, injections of tepid water to the bowels, bits of ice in the mouth, rubber sacks of hot water to the feet and legs, and thorough rubbing was kept up till a bath at about eighty degrees could be prepared; into this the child was put, seemingly almost lifeless still, and active rubbing administered.

"Meanwhile the bed was stripped of its filthy appliances, feather beds removed, and in a decent blanket, borrowed without leave from a neighbor's bed, the child was wrapped, and placed upon the straw mattress, for no sheet or other usual appurtenance could be found. The only parent, the mother, was half intoxicated, and utterly unable to render any assistance.

"We had notified the physician appointed by the Board of Health, as the law requires, but when he came, two hours after us, the condition of the child was at least more hopeful. This physician would like us to keep charge of the case, but as we were to leave the city at 3 o'clock we resigned the charge; he wrote a prescription for medicine, a teaspoonful to be given every two hours, etc., and we left.

"Then my heart smote me, that the child, *for the want of care, and of that medicine, would die:* our labor would be lost, and we should have proved nothing with regard to the efficiency of Hygienic measures.

"I resolved to return and keep charge of the case; so, hurrying that I might get there before the drugs, I went back, and, with renewed vigor, continued the means we had before used.

"About 5 o'clock the Health Physician came around again; the child was in a healthy sleep, and he said: 'Your patient is doing

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splendidly. Have they sent for that medicine?' 'I do not know,' I replied, for I had been very careful not to inquire; so he asked the half-sleeping mother, who answered in the negative. Then he turned to me and said: 'I would like to have the child have the medicine, as it is very effectual (for what?); and I'd like to have you send for it.'

"Here was an issue, and I said: 'I do not wish to dictate at all in the matter, nor would I interfere in the least with your treatment; the child is doing well under my care, yet, if you choose, you can send for the medicine; *but, if it is given, I can not retain charge of the patient!*' 'Why not?' he asked. 'Because my principles are Hygienic, and I can not take any responsibility where medicines are employed; you admit that "the child is doing splendidly," and what he needs is a few hours more of just such care as he has had; but if you send for the medicine, and leave it in charge of this drunken mother, I would not be willing to vouch for his recovery. He may die if I stay, but it will not be for want of care,' and I might have added, 'or from taking medicine.'

"'Well,' he said, smilingly, 'I am not so set but I can see good in other practice besides my own; but I belong to what is termed the Old School, and what I believe to be the only true school of medicine, and I know nothing about your way of treating disease.' 'I wish you did know our way,' I replied; but he was politely bowing himself out, so I was left 'alone in my glory.' (?)

"I continued the treatment without relaxation till 10 o'clock at night; the child was perfectly convalescent, had cried for bread, and been so terribly cross and savage that I knew all danger was passed.

"The next morning, Sunday, he was running about the room, and this morning, Monday, when I went to assure myself that all was right, not seeing the child I inquired for him, when the mother said: 'He's gone for a little walk, up to see me sisther,' which, by-the-way, is nearly half a mile off.

"This may seem to many like an exaggerated statement, and to me it seems almost miraculous, but it is literally true; and although we could not always work over patients as in this case, yet we proved that if Hygienic treatment is thoroughly applied it will prove effectual, even in the worst cases.

"MRS. E. P. MILLER, M. D."

TRUE happiness if understood consists alone in doing good.

ENORMOUS YIELD OF GRAPES.—"Among the oldest vines to be seen at Sonoma, Cal., are some planted by Gen. Vallejo over twenty-five years ago. They are of the size of an ordinary apple-tree, in full health and vigor, and they have never been known to fail a single season, since they acquired sufficient age to bear at all, to produce enormous crops of grapes. But these and all other grape-vines on the coast, and perhaps in the world, are entirely cast into the shade by one now flourishing in the highest exuberance near Santa Barbara, in the lower part of the State. This gigantic specimen measures over three feet in diameter, and it has been trained over an immense arbor so as to give full expansion to its vigorous growth. In some favorable seasons, incredible as it may seem, it has been known to bear over fifteen thousand pounds of grapes, and its yield is always large enough to give comfortable subsistence to the family in whose possession it has remained for a number of years. There is no reason to doubt, therefore, that the vine in California may reach the extreme longevity, as it already has the enormous proportions which it has attained in the most favorable sites in the Old World. We may get an idea of what this longevity is, when we call to mind the fact in history, that the celebrated vineyards of Tokay were planted by the Emperor Probus in the third century."

It is most unfortunate that California grapes are so far away from us that they can not be sent fresh to New York, to regale at small expense the taste of the thousands of poor people, who can not afford to buy them at the prices they bring in all large cities. They would, eaten fresh during their season, do very much to add to the healthfulness of the masses. Manufactured into wine they can only produce evil results. Thousands of them should be made into raisins, which are, if properly used, delicious and wholesome.

A SENSIBLE MAN.—A German living in Harrisburg, Pa., is said to have discovered a spring of mineral water at that place, possessing similar properties to those of the Congress Spring at Saratoga. He came on it while digging a well, and, finding its taste peculiar, after once partaking of it refused to drink any more. Others better (or worse) informed took a draught of it and pronounced it Saratoga water.—*Ex.*

Thousands of persons frequent Saratoga and drink Congress and other mineral waters, where it is fashionable for people to do so, who would be shocked at the idea of drinking more than one drink, if they should find the same water anywhere else.

WHEN M. Lamartine's merits were under discussion at a club of artists and authors, "Oh," said a clever young author, "he and I row in the same boat." Jerrold, who was present, turned round and said, "But not with the same skulls."

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Home Treatment of Disease.

BY E. P. MILLER, M. D.

☞ *In this department we shall give, from month to month, plain, practical directions for the home-treatment of various diseases.*

Colic.—This affection is quite common during the summer months, and although in its simple form it is seldom if ever fatal, yet it is frequently the cause of intense and prolonged suffering.

Colic, strictly speaking, refers to a disorder of the colon or large intestines, and is characterized by spasmodic paroxysms of pain, unattended with fever or inflammation. This term, however, is more commonly applied to those painful paroxysmal affections that occur in any part of the abdomen.

There are several different varieties or phases of colic, such as intestinal colic, bilious colic, nephritic colic, lead colic, copper colic and uterine colic. There are also several diseases resembling it—gastralgia, intussusception of the bowels, spasm of the bladder, strangulated hernia, enteritis and peritonitis. There are many symptoms which are common to all these difficulties, and it is not always so easy for the inexperienced to diagnose the difference between them. As a general rule, however, the symptoms peculiar to each disease are so well marked that the careful observer will have no trouble to decide to which they belong. Serious results might follow should a case of strangulated hernia be mistaken for a case of intestinal colic, and with proper care such mistakes need never occur.

INTESTINAL COLIC

Is characterized by a severe griping or twisting or pinching kind of pain, occurring commonly near the umbilicus, coming on in spasms or paroxysms, which may last for only a few minutes, or, with short intermissions or remissions, may continue for several hours. It is usually associated with constipation of the bowels and unattended by fever.

The pain is often very intense, the patient twisting, writhing, groaning, bending the body forward, and putting it in a variety of positions to find relief. While the pain lasts the countenance assumes an anxious, frightened expression, the skin becomes cold and frequently bathed in perspiration, the pulse depressed and generally retracted. There may occasionally be a case where there will be a little tenderness of the abdomen on pressing it, but in a great majority of the cases firm pressure or lying upon the abdomen affords some relief. Sometimes nausea and vomiting occur, and also there may be some distension of the abdomen instead of retraction.

The special morbid condition in colic is supposed to be a spasmodic contraction of the circular muscular fibers of the small or large intestines.

The causes are indigestion, excess in quantity or an indigestible quality of food, imperfect mastication, the decomposition of food in the alimentary canal, producing flatus hardened and impacted feces; from long-continued constipation or torpor of the bowels, acid drinks, worms, drug medicines and poisons.

Exposure to cold or excessive fatigue often gives rise to fits of indigestion that will cause colic. The bad practice which some mothers have of nursing children till they regurgitate their food will cause it.

Some people seem to have a predisposition to it, having attacks quite frequently; such, however, are most generally induced by indiscretion of some kind. Colic occurs much more frequently among children and young people than in those of middle life or old age.

TREATMENT.—This should consist of injections of tepid or warm water till the intestines are thoroughly emptied of their contents. If there is nausea and an inclination to vomit, give an emetic of warm water to induce the throwing up of what undigested food there may be in the stomach, then apply hot fomentations to the abdomen. This is done best by laying a flannel blanket, folded two or three thicknesses, on the bed; let the patient lie across this; then take a yard square or more of flannel folded to half its size, roll it up, and, while keeping hold of the ends, dip as much of it as you can in a pail of boiling water; wring it out as dry as you can, place it over the abdomen of the patient as hot as he can bear it; draw the ends of the blanket up over it to keep in the heat; change this hot flannel as often as it becomes cool, say every five or ten minutes; this may be continued for a half hour or for two or three hours, as the case may require. It will generally relax the spasms and relieve the pain very soon after it is applied—sometimes immediately. A hot foot-bath should be given at the same time, especially if the feet are cold. When the fomentation is taken off, a tepid hip-bath may be given for twenty or twenty-five minutes; if more convenient, a towel-bath, rubbing-sheet or full tepid bath will do instead. A cool compress should be worn over the bowels for a day or two after

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the pain is relieved. A hot hip-bath at 105 or 110 degrees, with a foot-bath at the same time and temperature, may be given in place of the fomentation. These hot applications will generally bring relief quickly, but there may be cases in which they will not, and where cold will answer better, or where the hot and cold should be used alternately for a few times.

When warm or hot applications are applied to any part of the body, it is generally well immediately afterward to apply tepid or cool water to the part, to restore the capillaries to their normal condition and prevent taking cold. The diet at first should be simply nothing at all. A person who has deranged his digestive organs enough to bring on a fit of colic, would be benefited by a fast of three or four days, and then it would do him good to live for an entire week on nothing else but gruel; certainly a person with colic should fast for a day or two, and then should eat gruel for as much longer. If there is severe constipation or impacted feces in the bowels these must be removed, and to do this may require injections of several quarts of water, to be retained as long as possible, to soften the contents of the bowels; occasionally there are cases where the feces have become so hard and impacted that they are impervious to water, and require to be removed by a spoon-shaped instrument prepared for the purpose. Dr. Shew speaks of such a case in his writings. I have never found a case yet that I could not clear out by free use of injections. It may occasionally be best to use very cold or very warm water for this purpose, or to alternate these, and also to use some external manipulations of the bowels.

If these directions are followed, every case of what is commonly called intestinal colic, can be relieved, and, when cured, the patient ought to live so hygienically as not to have it occur again, and if he follows the instructions given in our works he will not be likely to do so.

Should it be too much trouble to give the baths prescribed, and if you would rather pay somebody else than work so hard yourself; if you don't like to be put on short allowance, and can stand the pain longer, send for your doctor, and if he be Allopathic, he will give you a little spirits diluted in hot water; some anise, ginger, clover, mint, or a few drops of chloroform, or some opium, or an injection of laudanum and assofœdita, with starch. If these do not relieve you he will double the dose, and when the pain is relieved he will give you a cathartic of castor oil, salts and senna, or perhaps a dose of calomel, or rhubarb and jalap. If he is Homœopathic, he will give you camomile, aconite, ipecacuanha, nux vomica or pulsatilla doses, in water, a teaspoonful every fifteen minutes, or a dry powder every hour till relief is afforded. If he is Eclectic, he will give you an aromatic purgative, followed by capsicum, cinnamon, cloves, nutmeg, ginger, gum aloes, each equal parts, in a little Holland gin, a tablespoonful in herb tea or sweetened water till relief is afforded; at the same time take spearmint or peppermint tea every hour, and bathe the bowels in capsicum and spirits. If there is much distress he will give an emetic with an anodyne powder, or an opium pill which contains two or three grains, repeated in an hour or two; if the pain does not subside, he will then apply fomentations of hops to the bowels—that will do it sure. The wise can judge which is the better way.

The Vapor or Hot-air Bath.—An English surgeon has recently observed that it is "hardly possible to salivate a patient with mercury or iodize a patient with iodine who is using the vapor bath while undergoing a course of treatment by these remedies."

It was a saying of Abernethy that he only knew of two cases who had lost their noses by venereal diseases, but he knew at least two thousand who had lost them from the abuse of mercury. Not one of these accidents would have happened had the vapor or hot-air bath been employed, either with or without mercurial treatment. There is a strong effort of the vital forces when contaminated by venereal poison to throw it off through the surface, as there is in smallpox and other eruptive diseases. In venereal disease this is manifested by the various forms of cutaneous eruptions which appear, such as ulcers, roseola, fissures at angle of mouth, etc. The vapor or the Turkish Bath will eliminate venereal, mercurial, or any other poison from the system without the use of those dangerous remedies which produce such injurious effects upon the general system. This we have demonstrated repeatedly in our own practice.

Treatment of Cholera.—In the prisons and hospitals of Jamaica, whenever cholera patients refused to submit to the treatment or to take the medicines ordered for them, the rule was to put the mattress on the floor and to lay the patient there, placing by his side a bucket filled with ice-water and a tin panakin. For the most part these patients recovered with little or no further care; certainly they were not rubbed and covered up with blankets as the more tractable were. But my experience was that the majority of those thus left to their own resources got well.—*Dr. Le Bowerbank, Medical Times and Gazette.*

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Answers to Correspondents.

BY A. L. WOOD, M. D.

☞ *The readers of* THE HERALD *are invited to ask such questions as will be of general interest for this department, where they will be briefly but comprehensively answered.*

Saratoga Mineral Waters.—"Are the mineral waters of Saratoga useful or injurious? Of what are they composed? Would you advise a person who has incipient consumption to go there and drink the water? If so, which spring is the best? Do the mineral waters that are sold all over the country as 'Saratoga Water' come from Saratoga, or are they manufactured? Are they as good as if drank at the Springs?"

The following is the analysis of the waters of the "Star Spring" as made by Prof. Chandler of Union College:

Chloride of Sodium, - -	378,962 grs.
Chloride of Potassium, - -	9,229
Bromide of Sodium, - -	565
Iodide of Sodium, or Iodine, -	20,000
Sulphate of Potassa, - -	5,400
Bicarbodate of Lime, - -	124,459
Bicarbonate of Magnesia, -	61,912
Bicarbonate of Soda, - -	12,662
Bicarbonate of Iron, - -	1,213
Silica, - - - - -	1,283
Phosphate of Lime, - -	a trace.
Solid contents in a gallon, -	615,685

407.65 cubic inches Carbonic Acid Gas in a gallon.

As there are 480 grains in an ounce, it will be seen that a single gallon of this water contains upward of an ounce and a quarter of solid mineral matters, more than three-fifths of which is chloride of sodium, or common salt. It is the usual custom among the frequenters of the springs to drink all the water they can, and it is a very common thing to hear them bragging of the amount they have drank, as if it were something to be proud of. The amount taken daily by different persons varies from two quarts to two gallons and upward. Suppose a man drinks two gallons of the water per day, which is no uncommon occurrence, he takes into his system more than two and a half ounces of mineral matters every day, which in a month's time would amount to over six and one-half pounds. If it is useful to drink such poisonous compounds as this, it is useful to take into the system the most deadly compounds of the drug-shop. It is merely an accidental combination of poisons mixed with water, and its general effects are the same as of any other poison, viz., to derange and debilitate the system and exhaust its vitality.

I would not advise *any* person to drink mineral waters of any kind, whatever might be the disease from which they were suffering, any more than I would advise them to take strychnine. But many will say they have been benefited by going there. So they have, but the waters did not do it. The benefit they derived resulted from a change of scene, rest, recreation, freedom from the cares of home or business, the out-door exercise and fresh air they received in walking to and from the springs several times a day, and the absence of the still more poisonous drugs of the apothecary shop. If the water was perfectly pure, and people would go there and drink it as they now do, it would be of far greater benefit to them.

That spring is the best, whatever name it may bear, which contains the smallest amount of impurities. There are immense quantities of mineral waters manufactured in New York and other cities and sold throughout the country as "Saratoga Water." Its composition is about the same, and it is no better nor no worse than the water that bubbles up from the swamps of Saratoga.

Dr. Stone, of the New York Board of Health, speaking of the proposed introduction of mineral waters into Central Park, said: "We deprecate at all times the daily use of purgative medicines (and most of these waters have purgative effects), but especially at this period, when we are threatened with cholera, do we believe that these waters would be injurious."

Swelling upon the Eyelid.—"When there is what appears to be a little sore filled with matter upon the eyelid, seldom causing pain, except occasional itching and burning, something like erysipelas, will it probably disappear after awhile if let alone, or what is the best thing to be done?"

If the swelling contains matter it should be opened. It indicates an impure state of the blood, which must be corrected by a strict dietary, out-of-door exercise and proper bathing. All fats, salt meats, fish, salt, spices and condiments of every kind, should be eschewed. Good ripe fruits and coarse bread should be the principal food, and water the only drink. When the system has become purified the swelling will disappear.

Snoring.—"What is the cause of snoring, and how can it be prevented?"

It is caused by sleeping with the mouth open, and may be prevented by breathing through the nostrils. See article on "Culture of the Lungs" in the present number.

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Disinfectants for the Country.—"What is the best disinfectant for use in the country?"

If thorough cleanliness were everywhere observed there would be little need for disinfectants other than those so liberally provided by Nature, such as pure water, fresh air and sunlight, which are the best of all. Country farm-houses are often more unhealthy places to live in than the city. If farmers would have *healthy* homes they must have *clean* homes and clean surroundings. One of the greatest of farm-house nuisances, and one that no disinfectant can cleanse, is the pig-pen. It is a nuisance in every sense of the word, and should be at once abated, pigs and all. All stables and yards where animals are kept should be removed to such a distance from the house that no smell from them can reach it. All decaying animal or vegetable matters, in cellars or anywhere in or about the house, should be removed and destroyed. Let fresh air and sunlight visit and purify every thing they can reach, and let water be freely used where needed, and no other disinfectant will be necessary, except in drains and privies. For this purpose sulphate of iron (copperas) dissolved in water is the best.

Diabetes.—This disease has almost invariably proved fatal under drug treatment. Its treatment by the Turkish Bath has as invariably proved successful when thoroughly carried out. In this disease there is great determination to the kidneys, and the indication is to divert the action to the skin, which is always very torpid and inactive, which can be most thoroughly and effectually done by this bath. Go at once to some place where you can take a thorough course of these baths.

Dreams.—A correspondent is troubled with unpleasant dreams, and wishes to know, if he must dream, how he can have pleasant ones. A person enjoying good health is never disturbed by dreams, either pleasant or unpleasant. They always indicate some abnormal condition. To sleep sweetly, undisturbed by dreams of any kind, take sufficient out-door exercise to feel moderately fatigued, eat a light supper or none at all, and retire to rest at a regular hour, with a clear conscious and warm feet.

Best Health Books.—"What books would you recommend as containing the best information upon health?"

The "Hydropathic Encyclopedia," price $4 50, "The Science of Human Life," price $3 50, and THE HERALD OF HEALTH, price $2 per year.

Preserving the Teeth.—"What is the best method of keeping the teeth clean and of preserving them from decay?"

If there is tartar upon the teeth, have a dentist remove it at once. If there are any that have commenced decaying, have them filled with gold. When the teeth are once clean they can be kept so very easily. Immediately after eating use a toothpick to remove all the particles of food from between the teeth, and then thoroughly rinse the mouth with water. At least once a day take a dry tooth-brush and commence brushing the teeth with it. The brush will soon become moistened with the saliva of the mouth, which is much better than water for cleaning the teeth. Brush the teeth well upon all sides and then rinse with water. Soaps, dentrifices and tooth-powders are not only unnecessary, but injurious.

Romping Children.—"My children are perfect romps. They want to be out of doors all the time, and it is very difficult to keep them in the house at all, when it is so they can be out. Can you inform me of some way of keeping them in-doors more; or of some kind of amusement which they can practice in the house?"

Let the children run and play and romp out of doors as much as they like, nor seek to cage them up like wild beasts. Let them play and frolic upon the green grass, climb the hills, and chase each other to their hearts' content. It is natural for them to do so, and it is just what they need. It will impart strength, vigor and endurance to their frames, plant the roses of health in their cheeks and the sparkle of happiness in their eyes.

Reading on the Cars.—"Is reading while riding on the cars or on boats injurious to the eyes?"

It is. It not only weakens and injures the eyesight, but tends to produce congestion of the head and headache. Let any one whose eyes are weak read for half an hour or an hour on a train of cars or on a steamboat, and he will be likely to feel a dull, aching sensation of the eyes, and a decided fullness, if not pain, in the forehead. Think and talk while reading, but do not read if you value your eyes.

The Left Hand.—"Why is the left hand almost always weaker than the right? How can they both be made of equal strength?"

The greater strength of the right hand is caused by its more frequent use. The right leg is often stronger than the left for the same reason. If the left hand and arm were used as much as the right, they would be as strong; if used more, they would be stronger.

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Healthy Spices and Condiments.

THE ONLY ADMISSIBLE HYGIENIC SEASONINGS.

HIGH coloring—steeple-painting.

WHY is a prudent man like a pin? Because his head prevents him from going too far.

GOOD.—The Telegraph Cable makes a bed of the Atlantic Ocean and pillows of the two continents.

WHY do many carpenters really believe there is no such thing as stone? Because they never saw it.

A WHITE Mountain stage driver said to a New Yorker sitting by him, "I s'pose if I went to New York I should gawk around just as you folks do up here!"

SMITH—"Brown's a regular wag, isn't he? He's fond of cracking his jokes." ROBINSON—"Yes, he cracks his jokes—that's the reason they're so bad."

HUMILITY ever dwells with men of noble minds. It is a flower that prospers not in lean and barren soil; but in a ground that is rich it flourishes and is beautiful.

IN the Committee on the Factory Bill, a witness from Dundee was asked, "When do your girls marry?" "Whenever they can meet with a husband!"

A GENTLEMAN, walking with two ladies, stepped on a hogshead hoop that flew up and struck him in the face. "Good gracious!" said he, "which of you dropped that?"

BRIGGS has a great faculty for getting things cheap. The other day he had a beautiful set of teeth inserted for next to nothing. He kicked a dog!

I MADE a box and filled it with mold. In the mold I sowed some seed, and then placed it on my window sill, and what do you think came up? A policeman, and told me to take it down!

A GOOD REASON.—A gentleman, talking with his gardener, expressed his admiration at the rapid growth of the trees. "Why, yes sir," says the man; "please to consider that they have *nothing* else to do."

A LITTLE girl of three and a half years of age, one moonlight night near the "wee sma' hours," awoke her mother very carefully and bade her look upon the floor, saying at the same time, in the sweetest voice: "See there, ma, the moon is *smiling on the carpet!*"

"MY dear Horatio, I had a very mysterious dream about you." "What was it, dear?" "I dreamed I saw you carried up to heaven in a golden chariot, surrounded by angels clothed in white and purple. What is that a sign of, dear?" "It is a sign of a foul stomach, my dear."

Literary Notices.

The Emphatic Diaglot.—New York: Fowler & Wells.

The name hardly expresses to the general reader what the work is about—so we will explain: It is a recent translation of the New Testament from the Greek language. This work contains one feature which we think will make it valuable, not only to the scholar but also to the general reader. It is the Greek text, under each word of which is its corresponding word in English. Presuming that the Greek is faithfully rendered, it helps those ignorant of that language to an insight, to a certain extent, into the original. This is arranged on the left side of each page. The new translation is on the right column of each page, and convenient for comparison. In regard to the merits of the translation it is not our intention to speak. Those who are interested in new translations of the Scriptures will find it a valuable addition to their library. It may be ordered from our office. Price, by mail, $4.

The Citizen is a weekly paper formerly published by the Citizens' Association, a society formed for the purpose of inaugurating certain reformatory measures in the municipal affairs of this city. It has recently passed into the hands of Col. Charles G. Halpine, a gentleman who is known in the literary world as "Private Miles O'Riley." The Citizen, under his management, is one of the most sprightly, intensely interesting and reformatory weekly papers published in this country. It is an advocate of political reform, local reform, medical reform, health reform, and reform generally, and is also valuable as a literary paper.

Demorest's Monthly and Young AMERICA.—Our enterprising townsman, Mr. Demorest, has secured for his Monthly an immense circulation. The success of this magazine of literature and fashion is due to the liberality and foresight which that gentleman carries into his business. The first number of a juvenile monthly to be called Young America, will appear this month, and we predict for it a vast parish of readers. It will not use baby-talk nor be stupidly profound, but it will be brimful and running over with just such reading matter as that intelligent little man in miniature (Young America) likes to read. It will contain essays, lectures, stories, poems, and gems of thought in prose and verse.

Publishers' Department.

To Our Subscribers.—With three additional numbers will be completed the present volume of THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE. In our enlarged form, and with our list of eminent contributors, we believe we ought to have 50,000 subscribers. Between this and winter will be a most favorable time to add to our list, and we hope our subscribers everywhere will make their calculations to push our circulation. Our labor is a useful one. It is to help to do away with physical suffering, sickness and premature death. It is to show, as far as is known, how children may be reared with finer bodies, more beautiful forms and better health, and how our bodies must be cared for in order to reach a healthy manhood and womanhood. It is to teach the invalid the laws of health, and how he may most easily and surely become healthy. It is to inculcate temperance, good habits, and wage unremitting warfare

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against poisons, bad habits, and whatever tends to mar or injure the temple of the living God, or make it prematurely old, decrepid and deformed.

Invalids will find our monthly visits most valuable in teaching them the laws of life and health. Mothers will find much relating to the health of children, and how they should be educated and cared for physically, so as to be strong, and capable of filling their proper places in society. Teachers will find frequent articles on school-room hygiene. Physicians will learn much not taught in medical colleges about the cure of the sick, and the little need they have for medicine. In short, we shall make our journal a household necessity, and we ask the aid of all our friends everywhere to aid in placing a copy in the hands of 50,0 00 families within the next year. We offer the most liberal inducements to those who will help to extend our circulation.

The following letters have just been received, and show what our friends think of our new programme. The first is from Dio Lewis, the new apostle of Physical Culture, whose name is a household word all over the land.

"LEXINGTON, *Aug.* 10, 1866.

"MR. EDITOR—The HERALD OF HEALTH is coming into the broad daylight, and under your management is sure to achieve a great success. I shall look for a circulation of 50,000. I sent you an article yesterday for the September number.

"Very truly yours, DIO LEWIS."

TOBACCO SMOKING.—The following letter will be read with interest:

"CANNELTON, Ind.

"*Dear Sirs*—By reading your excellent HERALD OF HEALTH it has led me to abandon tobacco smoking. I followed it for nine years, and often said I would quit it, but never did until this spring. I made up my mind that it was nothing more nor less than an ugly and unhealthy habit. I laid my tobacco and pipe down together, and said: 'Now, Mr. Pipe, you and I have got to fight and see which will conquer;' and, thank God, I came off more than conqueror, and I have not passed a healthier summer, so far, than the present one for nine years; and I venture the assertion, that any one who will make a resolution to quit this miserable habit can conquer. I did it, and I know others can do the same. I would not sit down and smoke a pipe of tobacco for five dollars in greenbacks.

"I remain, as ever, truly yours, JOHN A. QUICK."

"MILLER, WOOD & Co., New York."

Electrical Bath Apparatus.—Dr. Kidder, who has spent many years in the study and improvement of Electrical Machines and Baths, and whose advertisement will be found in another column, has recently patented a new form of Electrical Bath, which, in many respects, is superior to any form yet brought into use. As these Baths are largely used in all Water-cures, we recommend those of our readers who may need any thing in that line to write to Dr. Kidder for full information.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books, and Baths.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

Lectures and Lecturers.—The following gentlemen are familiar with the great question of Physical Culture, and we suggest to our friends in the country that they form clubs and raise funds to secure, if possible, their lecture service: Horace Greeley, George W. Bungay, Dr. M. L. Holbrook, Dr. A. L. Wood, Dr. E. P. Miller, F. B. Perkins, Dr. Snodgrass, Dr. Dio Lewis, Moses Coit Tyler, John Pierpont, S. R. Wells, Nelson Sizer.

Applications for the services of these gentlemen may be sent to us (stamp inclosed for the payment of postage) and we will endeavor to secure an engagement from them. Persons applying will please name two, three or more of the gentlemen whom they would prefer, so that, if the first person of their choice can not be obtained, the second or third may. Address MILLER, WOOD & Co., 15 Laight Street, New York. Any lyceum or school near New York city, and convenient of access, which will give us a club of fifty subscribers for THE HERALD OF HEALTH, shall have a gratuitous lecture from some one of our lecturers.

An Interesting Letter.—The following interesting letter is from one of our subscribers in Mansfield, Mass., Mr. Isaac Stearns:

"I am seventy-one years of age, and have eight children and twenty-seven grandchildren now living, having had but one child and three grandchildren die, who all died very young. I think the good health of my children and grandchildren is owing to their being reared up in habits of temperance. Myself and my wife, the mother of those eight children—three sons and five daughters—were taught the principles of temperance, taught to not use tobacco nor strong spirituous drinks. I do not know of one of my children or grandchildren who smoke, chew or snuff that filthy Indian weed called tobacco. Although it now costs three or four times as much for a pound of tobacco, yet there is three or four times the quantity used, according to the number of inhabitants, I think, notwithstanding the high tax upon it. If the tax were four times as high as it is now, it would not lessen its use much with those who could raise money enough to purchase it. It is lamentable to see what a growing evil this using of tobacco has become; even boys not three feet high use it. I would as soon learn my son to drink rum, whisky, or any other intoxicating drink, as to use tobacco. Even in this very hot weather, when the mercury in the thermometer stands between ninety and one hundred degrees, when the juices of the body are emitted by perspiration, young men are seen with the noxious cigar, puffing away, drawing off the juices of their bodies which the God of nature designed to aid in the support of life. Can it be any thing but detrimental to their health and the prolongation of life?

"Yours, most respectfully, ISAAC STEARNS."

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Herald for 1863, 1864 and 1865.—We have a few bound volumes of THE HERALD OF HEALTH for 1863, 1864 and 1865 on hand, which will be sent free by mail on receipt of $2 25.

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Agents Wanted.—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

Epidemic Cholera.—See notice of the book on Epidemic Cholera, just published, in our advertising columns. AGENTS wanted in every city.

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.



A PLEASANT RETREAT,

Affording at once the advantages of city and country life, can be found at No. 63 Columbia Street, Brooklyn Heights, New York, three minutes' walk from Fulton Ferry. The rooms are first class, pleasantly located, away from the dust and noise of the city, commanding a fine view of New York harbor and metropolis. The feature of the establishment, however, is its

TURKISH BATH,

which is not only well known for its luxuriousness as a bath, but also for its valuable properties as a remedial agent in disease. As a prompt and effective remedy for the preliminary attack of the prevailing epidemic, this bath is unequaled, and those in the habit of its weekly use may be said to be insured against cholera.

The table is amply supplied with good Hygienic food.

For terms, etc., address

sept-1t CHAS. H. SHEPARD, M. D.

NOTICES TO LYCEUMS.

Mr. GEORGE W. BUNGAY, the Author, Editor and Lecturer, has a new lecture entitled "WORK AND PLAY." His address is 15 Laight Street, New York. sep-tf

WANTED--A SITUATION BY A LADY

thirty years of age. Is a good practical Housekeeper, and posted in the Hygienic way of living. Has been in an institution administering all kinds of baths, especially "Electro-Thermal Baths." Address Box 243 Syracuse, N. Y. sep-1t*

DENTISTRY.

A FULL SET OF TEETH INSERTED FOR $8, $10 TO $15. Extracting without pain with pure Nitrous Oxide Gas, at 138 East Thirteenth Street, between Third and Fourth Avenues, New York. sep-3t

HIGHLAND WATER CURE.

H. P. BURDICK, M. D., and MRS. MARY BRYANT BURDICK, M.D., } PHYSICIANS.
Send for Circular. Address—Alfred, Alleghany Co., N.Y.
aug-tf

THE RADICAL:

A MONTHLY MAGAZINE DEVOTED TO RELIGION.

EDITED BY S. H. MORSE.

The Publishers to their Patrons and the Public:

The second volume of The Radical commences in September with an increase of its number of pages, an enlarged list of contributors, and under new and most favorable auspices.

To those persons who have been familiar with it during the past, nothing need be said in explanation of the object of its publication; to others we may state that it is a monthly magazine devoted to the expression of Free Thought in all matters of Inquiry and Belief, the Presentation of Reformatory Views of a Religious, Social and Political Nature, and a general elucidation of those great principles that underlie all Religious Faiths. It is not the voice of any Denomination or of any Party; it is not pledged to any position from which there can be no advance; is bound by no Creed, shackled by no Opinion, restrained by no Sect, but rejoices in that Freedom which is of God, and labors to the end that all mankind may equally enjoy it in body and in mind.

Among the already large and rapidly increasing number of persons who, throwing aside the Bound Faith of the Past, seeks to become identified with the Free Spirit of the Future, The Radical finds its heartiest welcome.

Its contributors comprise some of the ablest writers—writers whose productions, because they speak for humanity to humanity, are invariably read with pleasure and profit. These will continue to contribute to its pages, and other writers of the same class, both in this country and Europe, have signified their intention to furnish us with articles on the leading topics of the day.

The Radical is issued every month, each number containing 64 pages, printed from new type on fine paper, and furnished to subscribers at Three Dollars per Annum. Single Copy, Thirty Cents. The postage is twelve cents a year, payable at the office of delivery.

***All communications should be addressed to the Editor, and all correspondence relating to the business of the magazine to the undersigned. ADAMS & CO.,
Publishers, 21 Bromfield Street, Boston.

NOTICES OF THE PRESS.

A magazine which addresses itself thus courageously to the discussion of great questions, and which can call upon such contributors, is sure to make its mark on the public. We commend it to all who are not too closely wedded to their own opinions to tolerate freedom of inquiry and earnest discussion.—*Commonwealth.*

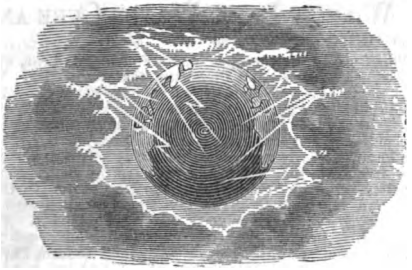
The Radical is full of fresh and earnest thought, and is one of the best representatives of radical religious ideas which we know. It will be read with interest by all who love truth more than party, whether their party be a conservative or a radical clique.—*Christian Register.*

THE RADICAL.—Combining boldness with excellent literary culture; thoughtful, yet never wearisome; independent but decorous, it fills a place in religious literature that has been too long vacant. Disagreeing, as we most earnestly do, with many of its theories, we admire the "pluck" everywhere exhibited on its pages.—*Hebrew Leader.*

The Radical, as its name indicates, is an idol-breaker. It presents in various ways, and with remarkable vigor, the views of the extreme advance in religious inquiry. Certainly writers and publishers who undertake such a work can not be moved thereto by any prospect of pecuniary reward. Therefore all those who sympathize with the principles and purposes which characterize it should be prompt to assist in its support; and so able and earnest are its contributors that its friends will find it very attractive, and all who venture to think on its special subject will find in its pages much food for meditation.—*Taunton Gazette.*

THE RADICAL.—We can not do justice to this magazine by a passing notice. It must be regarded as a work of more than ordinary merit. While many of the articles may be above the capacity of the general reader, they can not fail to be perused with profit and satisfaction by the more thoughtful. The work opens a new era in the history of religious inquiry, and it is needless to observe that the productions bear upon their face unmistakable evidence of being the work of those who have thought long and profoundly on all those matters pertaining to our spiritual and religious nature.—*Cincinnati Journal of Commerce.* sep-tf.

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GENUINE SIX CURRENT

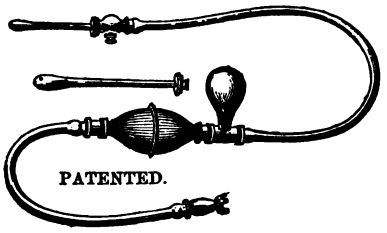
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"I am satisfied you have reached a point and developed combinations that far exceed in a therapeutic aspect the discoveries and combinations of every other experimenter."

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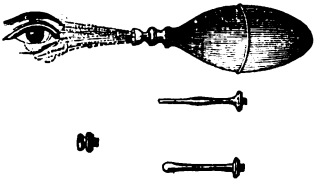
☞ Address Dr. JEROME KIDDER, 480 Broadway, New York. sept-tf



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Improved Army and Navy Syringe, single, by mail..$3 00
Improved Continuous Stream Syringe, single one by mail 3 50



Improved Infant, Eye and Ear Douche Syringe, for " ulcers, sores, etc., single one by mail 2 00
Improved Vaginal or Uterine Syringe, single one by mail 2 00

The trade supplied at the manufacturers' prices in lots of one dozen or more sent by Express. For wholesale prices address the Agents,

MILLER, WOOD & CO.,
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We have obtained a very convenient and useful form of Rubber Bottles for holding hot water for warming the feet or applying a local fomentation to any part of the body. They are small, may be carried in a satchel, knapsack, or even in the pocket. For feeble persons and those ravelling from place to place they are invaluable. Price, $2.

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The only ones where a true *unmixed* Direct Current, with strong intensity and strong magnetic power, is developed. Send for a Circular, wherein is shown that there is *but one current* in electricity, and but one important modification in that current. On the Direct Current-poles I raise a nine-pound weight; other so-called Direct Currents raise but a "*ten-penny* nail!"

Price, with single cup battery, $18; double cup, $20.
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PHILADELPHIA HYGIENIC INSTITUTE.

Dr. Wilson's establishment is now located at 1109 Girard Street, above Chestnut. This institution is very favorably located. The situation is central, pleasant and healthy; the rooms spacious, elegant, and attractively furnished. Patients receive the personal attention of the doctor and his wife, and may rely on skillful, careful and attentive treatment. We use no drugs. Our table is liberally supplied with a variety of well-cooked food. Persons visiting the city on business or pleasure can be accommodated with rooms and board.

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PATHOLOGY OF THE REPRODUCTIVE
ORGANS. BY R. T. TRALL, M. D.

The Introduction treats of Hygienic appliances; Bathing, Food, Exercise, Light, Clothing, Sleep, Beds and Bedding, Bodily Positions, Night Watching, Friction, Electricity, Galvanism, Magnetism, and cleanliness. Part First treats of Venereal Diseases proper, their history, the venereal virus, modes of propagation, inoculation, syphilization, mercurialization, gonorrhœa, its seat, symptoms and treatment; Syphilis; location, stages, varieties, and diagnosis of chancres, treatment of syphilis, prevention of venereal diseases, &c. Part Two, of Spermatorrhœ, or Seminal Weaknesses, its causes, symptoms, treatment, complications, and sequences; drug-treatment, and cauterization. Part Third, of Female Diseases; mis-menstruation, retained menstruations, suppressed menstruation, painful menstruation, chlorosis, leucorrhœa, inflammations, and ulcerations, etc. etc. Part Four, of miscellaneous affections, including displacement, anteversion, retroversion, inversion and prolapsus of the uterus; uterine tumors, cancers, dropsy, etc. etc.

This is by far the best work that has appeared on the Causes and Treatment of all forms of Sexual Diseases. It is printed on fine white paper with clear type, and contains an excellent steel engraving of the author. Sent post paid by mail. Price, $2.00. Address,

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LADIES' SUSPENDERS.

We are now prepared to fill orders for Ladies' Suspenders. Their object is to support the skirts over the shoulders, instead of on the hips as heretofore, much to the detriment of women's health. We are sure there are thousands of women in America who will welcome them as an invention giving them great relief, and doing much to secure to them a healthy condition of the internal organs. Woman's curse in America is weakness in the sides, back and chest. Secure to her strength here, and you secure to her one of the greatest blessings she can enjoy. We recommend these skirt-supporters to the intelligent and cultivated women of this country as one of the most important inventions regarding woman's dress of the present age. Price, $2 per pair, $18 per dozen. MILLER, WOOD & CO.,
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AN IMPORTANT HYGIENIC WORK!

EPIDEMIC CHOLERA.

We have just published an important work on Epidemic Cholera, embracing Dr. Webster's Lectures on the History, Causes and Treatment of Cholera. It is the best work that has yet appeared on the subject from a Hygienic stand-point. PRICE, 25 CENTS. All who want to know the way to avoid this disease, or treat it by means of Hygienic Treatment, should have a copy at once.

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GRANITE STATE HEALTH INSTITUTE,

HILL, N. H.

The "Granite State" has now become widely and favorably known as one of the best Hygienic establishments in the land.

Through its great success in treating disease for the last fourteen years, the perfect homelike atmosphere that has ever pervaded the institution, the moderate terms upon which patients have been received, the care that has been taken to insure their recovery, and to return to them the largest equivalent for the money they have expended, this institution has been built up into a large and flourishing establishment. It is not too much for us to say that patients from all parts of the country, from our large cities and from interior towns, have been enthusiastic in their praise and in recommending our institution to their friends.

The following points have attracted attention:

1. Our accessibility: the cars stop within a few rods of our door.
2. Our location, amid pleasant and romantic surroundings.
3. The purity of the air and the excellence of the water.
4. The dietary: the variety, the exceeding simplicity of preparation, and yet the palatableness of the food.
5. The careful attention bestowed on patients and the specific directions given to insure their recovery.

To all invalids, living far off or near, in the city or in the country, who wish to find some pleasant resort for the spring or summer months where they may recuperate their wasted energies by placing themselves, physically, mentally and socially, in the most perfect health-conditions, the "Granite State" will be found perfectly adapted and will doubtless give satisfaction.

We wish it distinctly understood that this institution is not a fashionable resort, but a *home* and *cure* for the invalid.

We have had a large and very successful experience in treating the special diseases peculiar to the sexes, and patients of this class may be assured that they will receive the most skillful treatment.

We have greatly enlarged and improved our buildings, and shall be able to accommodate many more within the Cure than heretofore. When we can no longer do this, good rooms will be provided at a little distance, as has been done with so much acceptance in the past.

Ministers of the Gospel, dependent on their salaries for support, will be taken at a reduced rate.

The reader is referred to the April number of this JOURNAL, where he may see what our patients say of us.

☞ No drug poisons are ever given in this establishment.

*** The Hot-Air Bath, a modification of the Turkish, is used in some cases.

☞ We shall be glad to send circulars giving particular information concerning our establishment to all inquiring friends who will inclose stamp for postage.

je-tf W. T. VAIL, M. D., Hill, N. H.

A TOUR WITH THE POLICE

THROUGH THE LOWER DEPTHS OF THE GREAT AMERICAN METROPOLIS. A DISCOURSE BY REV. PETER STRYKER.

"Graceful in style, full of interest and information." Appears in PULPIT AND ROSTRUM, No. 38. Price, 15 cents. Sent everywhere by mail. SCHERMERHORN, BANCROFT & CO., Publishers, 430 Broome St., N.Y. aug-tf

WORCESTER WATER AND MOVEMENT CURE, WORCESTER, Mass.

Please send for Circular.

aug-1t ISAAC TABOR, M. D.

MANUAL OF LIGHT GYMNASTICS,

Designed for Clubs, Evening Classes and private use. By W. L. RATHE. Price, prepaid by mail, 38 cents. Address MILLER, WOOD & Co., No. 15 Laight Street.

WILLOW PARK WATER CURE AND HYGIENIC INSTITUTE.

This Cure is now commencing its Fourteenth Year, with the same Proprietor and Physician that founded it. We have never advertised but little; we have never given but little time to writing articles on health or kindred subjects. Our field of labor has been quietly at home, attending to our patients, and improving and beautifying our place. We have carefully and conscientiously examined every new invention and every improvement in the Hygienic Practice, since we commenced at the head of our Institution, and just so fast as we have found any new method of treating patients to be good, we have adopted it. And yet, with all of our study and practice, we have *not* the slightest conception, that *we* or any other Reform Physician in the country knows the *whole*. We are yet to learn and *continue to go on, still learning*.

We commenced using Swedish Movements ten years ago, on a small scale. By experience we find this mode of treatment an excellent auxiliary to the Hydropathic Practice. We find the Gymnastic Exercises to be another excellent auxiliary. In many cases our success has been very marked in the use of Electricity, and for the last three years we have been investigating to ascertain the merits of the

TURKISH BATH;

and so thoroughly convinced have we become of its great value, that this season we have put in these Baths, with a New Movement Room, at an expense of $4000. Our Baths are on the second floor, on the northwest side of our building; are thoroughly ventilated, and are *nice* in every particular. In using the Turkish Bath upon our patients, thus far, we have attended to ourselves and watched their effects closely; and their good results have gone far beyond our most sanguine expectations. We believe that they can be used to advantage in almost every conceivable case. By graduating the temperature and time in the heated Room, we can treat the most feeble patient with the most astonishing results. Saying nothing of the Turkish Bath as a luxury, we believe it to be the *King Bath* for the treatment of disease. We have been surprised to learn how strengthening to the system and soothing to the nerves upon the most delicate and sensitive invalid is the coming in contact and breathing the hot air of the Turkish Bath Room. We can not see how the well-educated Hygienic physician can fail to see the utility of Graduated Heated Air, the *very element of life* in the treatment of disease. When any thing comes up better than the Turkish Bath, we shall be ready to adopt it. At present we are fully satisfied with it.

We have now associated with us, as Assistant Physician, Miss ELLEN H. GOODELL, M. D., whose medical education, experience and practice, enables her to stand equal to any one of her sex in this country. We will here mention, what will not be found in our Circular, that we have a Club-Room, a large, airy Hall, where we can accommodate gentlemen patients with all the privileges of our Cure (except personal washing), including the Turkish Baths and Swedish Movements, for $9 per week. Address, inclosing stamp, for our New Circular,

jy-tf Dr. J. H. HERO, Westboro', Mass.

TURKISH BATHS.

One of the Publishers of THE HERALD OF HEALTH, Dr. A. L. WOOD, who for the past two years has built and superintended Turkish Baths in Providence and New York, has been traveling in Europe during the past summer, for the purpose of examining the construction, modes of heating, and management of the numerous and extensive baths which are there becoming national institutions, and being convinced that the general introduction of Turkish Baths, *as now modified and improved*, will do more to improve the health of the American people, and lead them away from all forms of Intemperance and Druggery to a reliance upon the natural hygienic agencies than any other means now employed, we shall do all in our power to introduce them throughout the land. In accordance with this determination, Dr. WOOD will respond to calls to lecture upon the subject, or to superintend the construction of the Bath after the most improved plans, in private houses, Hydropathic establishments, Hospitals and public institutions, or for the public in cities and towns in any part of the country. dec-tf

RE-OPENED AND RE-FURNISHED.

THE GRÆFENBERG HYGIENIC INSTITUTE,

near Utica, N. Y., is re-opened for Boarders and Patients by its original Founder and Proprietor. For particulars address R. HOLLAND, M. D., Græfenberg, N. Y. jy-tf

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The Hygeian Home.

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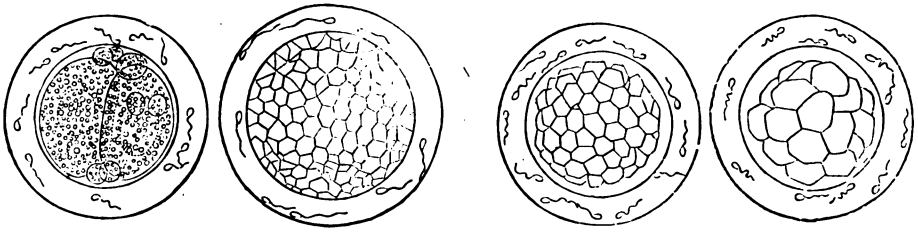
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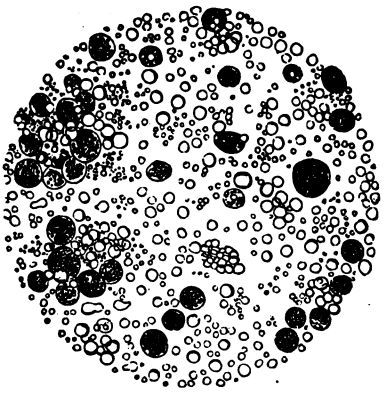
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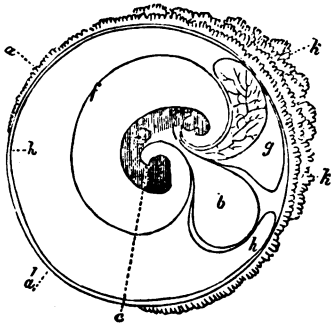
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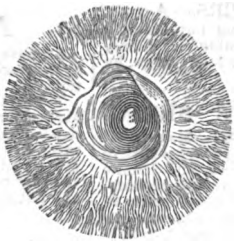
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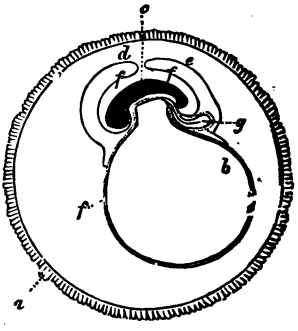


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General Articles.

[For The Herald of Health.]

My Creed.

BY THEODORE TILTON.

As other men have creeds, so I have mine;
I keep the holy faith in God, in man,
And in the angels ministrant between.
I hold to one true church of all true souls;
Whose churchly seal is neither bread nor wine,
Nor laying on of hands, nor holy oil,
But only the anointing of God's grace.

I hate all kings, and caste, and rank of birth;
For all the sons of man are sons of God;
Nor limps a beggar but is nobly born;
Nor wears a slave a yoke, nor czar a crown,
That makes him less or more than just a man.

I love my country, and her righteous cause;
So dare I not keep silent of her sin:
And after Freedom may her bells ring Peace!

I love one woman with a holy fire,
Whom I revere as priestess of my house;
I stand with wondering awe before my babes,
Till they rebuke me to a nobler life.
I keep a faithful friendship with my friend,
Whom loyally I serve before myself;
I lock my lips too close to speak a lie;
I wash my hands too white to touch a bribe;
I owe no man a debt I can not pay,
Save only of the love men ought to owe.

Withal, each day, before the blessed Heaven,
I open wide the chambers of my soul,
And pray the Holy Ghost to enter in.

Thus reads the fair confession of my faith;
So crossed with contradictions of my life
That now may God forgive the written lie!
Yet still, by help of Him who helpeth men,
I face two worlds and fear not life or death.
O Father, lead me by thy hand! Amen.

[Written for The Herald of Health.]

Concerning a Muscular Christian.

BY MOSES COIT TYLER.

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multitude of all lands and tongues to witness the splendors of the regal procession, and more especially to see again the face which sorrow and the dark veil of widowhood had so long concealed. I remember that I had a fine outdoor position by one of the windows of Westminster Hall, and had been watching the carriages of the nobility and foreign ambassadors passing to the door of the Peers' Entrance, when my attention was suddenly arrested by the sight of a gentleman on foot, in plain black clothes, advancing rather nervously along the sidewalk, which was being guarded by the police from the encroachments of the multitude. He was walking toward the Peers' Entrance, and yet he half-seemed to have lost his bearings, and not to know precisely whether he was going the way he wanted to. He appeared to be rather under the middle age; of medium height, neither slender nor stout; with a ruddy, genial, earnest face; with lip and chin shaved, but whiskers of sandy hue at the side; and altogether having a look of ample health, vigor, elasticity, kindliness, intelligence and success. Who could it be? Evidently he was not a nobody; else the discriminating gentlemen in sham helmets, whose creed seems to be that a nobody is worse than a knave, would have pushed the audacious intruder back among the rabble. But he can hardly be a very great somebody; for, if he had been, he would have emulated the other great somebodies by coming in his carriage. Who can he be? On he goes along the sidewalk beneath us toward the Peers' Entrance, with a quick step, and now a little conscious that many eyes are upon him, and a little anxious to hurry away out of sight. Perhaps it is one of the new members of Parliament, and not being yet thoroughly broken to the intricate courses of statesmanship, it may be that he has already lost his way and is going in by the wrong door. But, hark! Listen to those voices of the crowd across the street and of the crowd on this corner of New Palace Yard. What is it they say? All this time, while you have been letting the man go by in the fog of your own speculations concerning him, you might have used your ears, and you would have instantly found without further trouble who he was. Your last chance! Listen sharply! As the cheer dies away, do you not catch the words of that fellow shouting with delighted enthusiasm, "*It's Tom Hughes, the member for Lambeth!*"

Yes, glorious Tom Hughes; the new member for Lambeth, the trusted favorite of the workingmen; because, though their friend not their atterer;—of almost boundless popularity with them; because, while helping them he can frankly tell them their faults! Tom Hughes, the pupil of Dr. Arnold, the graduate of Oxford, the barrister of Lincoln's Inn, the author of "Tom Brown's School-days," the friend of Maurice and Ruskin and Kingsley, and the Prince of the Muscular Christians!

According to the promise of my letter a month ago, I now proceed to give you a brief sketch of the eminent man whom I have thus introduced to you hastening along the sidewalk near Westminster Hall on that fine February afternoon.

Thomas Hughes is one whose name England will not willingly let die; or, if she were so disposed, America would come to the rescue, and carry it off from the gates of Forgetfulness. There are some men the very sight of whom gives us a better opinion of human nature, rekinding our hopes, rebuildling the fabric of our fortitude and our faith. Thomas Hughes is one of these men. It was said of Swedenborg, so sensitive was his organization to moral influences, that the approach of a hypocrite used to give him the toothache. We may be grateful that we do not possess such a delicate spiritual barometer; for who would like to be continually clapping his hand to his jaw? Yet what in Swedenborg was an abnormal development, is in the rest of us only the common endowment of Nature—a faculty of responding either with pleasure or with trouble to the moral conditions of those who approach us. Hence, an honest man is a joy for ever! Thomas Hughes is not a great scholar, nor a deep philosopher, nor an acute reasoner, nor an orator at all; but he is and he has more than all that —he bears about with him the nameless aroma of moral reality, of downright manly virtue, of eye-bright truth; the frankness, the directness, the simplicity of a child, with the courage of an athlete and the charity of a Christian. In a classification of mankind he would go into the same compartment with Abraham Lincoln. He has the same homely, quaint honesty; the same incapacity for evasion and *finesse;* the same humor; the same uncommon gift of common sense; the same genius for what is right and true. Thomas Hughes presents another example of a man attaining great success in life—fame, position, abounding usefulness—by the sheer force of moral worth. His career is no encouragement to that sort of ambition which aspires to be great while forgetting to be good.

I am not going very minutely into biographical details for several notable reasons; chiefly for the notable reason that I have not the bio-

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graphical details to go into. But, adopting the good old orthodox plan of beginning with a man's life where Nature does—with his birth—I may state that Thomas Hughes was born near Newberry, Berkshire, October 23, 1823. All the world knows that he was educated at Rugby under Dr. Arnold, and at Oxford University. He was called to the Bar at Lincoln's Inn in 1848; he gave to the world "Tom Brown's School-days" in 1856, "The Scouring of the White Horse" in 1858, "Tom Brown at Oxford" in 1861. These, so far as I can learn, are the only books he has yet published; but he seems to have been an industrious writer for reviews and newspapers, especially for "Macmillan's Magazine;" and he has edited "Whitemore's Poems" and "The Biglow Papers." The publication of his first book, at the age of thirty-three, made him famous throughout the vast domain of the English-speaking race; and since then, beside being an author who could write nothing which the public could refuse to read, he has been a man of mark in sanitary and educational reforms, in social science, in the volunteer movement and in politics.

Last year the time seemed to have arrived for his noble and useful career to meet with a fitting political recognition. At the General Election, 1865, he was induced to stand as candidate for that populous and important district of London known as Lambeth; and the result of his candidature may be given in two lines of an obscure poem which contained this allusion to him:

"What wonder Lambeth, such a MAN to see,
Gave him her heart and made him her M. P."

Here, then, we have a famous author, a lawyer, a member of Parliament and a rising statesman; one of whose special claims upon our admiration is his distinguished advocacy of that generous and wholesome creed of physiological piety, "Muscular Christianity." Mr. Hughes has both preached and practiced this noble faith. As the child is father to the man, there can be no doubt that the boy Tom Hughes was as fine a specimen of an intrepid, pugnacious and magnanimous little Muscular Christian as ever came out of Berkshire, or handled the gloves, or cricketed on Rugby play-ground, or sent a boat skipping along the top of the Isis. No man could have portrayed the boy "Tom Brown" as he has done, without having been such a boy as "Tom Brown" was. Indeed, the heartiness and muscularity of his juvenile days cling to him still, and often crop out in very amusing forms in his speeches. A few weeks ago, in addressing his constituents on the defeat of the Ministry, and charging upon the Tories that they had not waged a fair fight, he excited great mirth by this bit of school-boy reminiscence: "I know what a fair fight is. I was taught at school to fight fair, to fall light; if I got a licking to take it like a man, and hold my tongue when I got my belly full." The celebrity of Thomas Hughes as a Muscular Christian is certainly owing to the celebrity of the books in which he has so magnificently expounded and illustrated Muscular Christianity; but his deeds in private, though less calculated to swell the trump of Fame, have been no less earnest and useful. In connection with a fine group of old University friends, clergymen, barristers, authors and artists, he established several years ago the Workingmen's College in Great Ormond Street, an institution on which every year lays the garland of new triumphs and new hopes. In this college Mr. Hughes has been, of course, the inspirer of the gymnastic department, and with the greatest advantage to the pupils. Once every year the members of the college make an excursion to some pleasant rural spot in the neighborhood of London, and on these occasions they have an opportunity of displaying their progress in muscular development. Only last week the excursion took place for the present year. The party, which numbered two hundred, and consisted of the students, their wives, children, sisters and friends, went to Petersham Park, near Richmond, as sweet a spot for its rich woodland beauty as can be found in England. They had songs and dances and merry games, and finally sat down to tea beneath the spreading roof of a superb cluster of ancient lime trees. But that which it is of immediate interest to us to know, is that in this jubilant festival of liberated Londoners a very important portion of the afternoon was devoted to athletic sports, Mr. Hughes acting as general director and referee. They had a mile flat race, a two hundred yard flat race, a mile walking race, jumping, hopping, cricket, rounders, and a boat race on the Thames. This list of their gymnastic contests will indicate the nature of the muscular discipline which they receive at the college. It will be perceived that it is almost entirely competitive. Mr. Hughes seems to have little respect for any gymnastics but those which involve that principle, and he likes none so well as the rough old athletic games of England. I remember a passage in one of his books which vigorously sets forth his views upon the subject:

"Don't let reformers of any sort think that they are going really to lay hold of the work-

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ing boys and young men of England by any educational grapnel whatever which hasn't some *bona fide* equivalent for the games of the Old Country 'veast' in it; something to put in the place of the backswording and wrestling and racing; something to try the muscles of men's bodies and the endurance of their hearts, and to make them rejoice in this strength. In all the new-fangled, comprehensive plans which I see this is all left out."

Mr. Hughes is said to be an ardent admirer of the gloves; and that his admiration reposes on a solid basis of knowledge will be evident from the following amusing story that is told of him: One evening Mr. Hughes being at the college looked in upon the gymnastic class and found them engaged in sparring. It appears that a veteran was on the floor, and, instead of treating the tyros with consideration, was knocking them about in a very ostentatious style, until at last they all declined to practice with him. Mr. Hughes had been looking on in silence, but now stepped forward and said, in his usual quiet way, "I should like to have a turn with you, if you don't mind." "Very happy," said the bully; "have you ever had the gloves on before?" "Oh, yes, two or three times," said Mr. Hughes. They soon stood face to face, and in half a second the bully lay sprawling upon the floor. He got up angry, but Mr. Hughes kept cool and punished him to his heart's content, and then told him that the next time he had to spar with beginners he should remember that evening and be decent, if not generous!

When the cholera smote the metropolis a few years ago, Mr. Hughes, declining to flee from the breath of the pestilence, selected an exposed district of London and personally visited from house to house, to soothe the alarmed, to minister to the sick, and to provide sanitary corrections to the neighborhood. If there be in the world such a thing as chivalry, does not this look like it? No wonder Mr. Hughes is the idol of the workingmen! And to show how his character as a sanitary laborer is appreciated, I shall introduce a paragraph which appeared last year in The South London Chronicle. I give it exactly as it stood, lest any should suspect that my own words may be the result of an individual enthusiasm for Mr. Hughes:

"The fear that cholera may come and carry away its thousands of victims before any active steps shall have been taken to check its fatal career, gives considerable anxiety to some of the best and most practical men in the country. In the first rank of unselfish workers in previous visitations was found the member for Lambeth, Mr. Thomas Hughes, B. A., who, with Mr. J. M. Ludlow, M. A., and Dr. Fraser, manfully stood to his duty, as himself interpreted it, and visited from house to house the population of Golden Square and vicinity. We rejoice in the possession of a Member of Parliament who, while not a resident in the borough for which he has been returned, accepts his position as involving the responsibilities of kinship with the mass of the people; and we have good grounds for the statement that Mr. Hughes is prepared to do this in any thing connected with the health as fully as in any thing affecting the politics of his constituency. Very little has come to our knowledge relative to any measures for preventing cholera incursions contemplated in either Lambeth or Southwark, but Mr. Hughes' wishes are known to the leading members of his election committees and to others beside."

For any American it would be ungrateful, and for me, knowing what I do of Mr. Hughes, it would be impossible to conclude such a sketch as this without some reference to the literary and political sympathies of Thomas Hughes with our own country.

In 1859 Mr. Hughes edited for English readers the "Biglow Papers." I shall cull a few choice sentences from the admirable Preface with which he enriched that immortal book:

"Greece had her Aristophanes; Rome her Juvenal; France her Rabelais, her Moliere, her Voltaire; Germany her Jean Paul, her Heine; England her Swift, her Thackeray; and America has her Lowell. By the side of all these great masters of satire, the author of the 'Biglow Papers' holds his own place, distinct from each and all. The man who reads the book for the first time, and is capable of understanding it, has received a new sensation. In Lowell, the American mind has for the first time flowered out into thoroughly original genius. For real unmistakable genius, for that glorious fullness of power which knocks a man down at a blow for sheer admiration, and then makes him rush into the arms of the knocker-down and swear eternal friendship with him for sheer delight, the 'Biglow Papers' stand alone. . . It is satisfactory, indeed, to think that Mr. Lowell's shafts have already, in a great measure, ceased to be required, or would have to be aimed now at other bull's eyes. The servility of the Northern States to the South, which twelve years ago so raised his indignation, has well nigh ceased to be. The vital importance of the slavery question is now thoroughly recognized by the great Republican party, which I trust is year by year advancing toward an assured victory."

No American need to be told that the Englishman who wrote these intelligent words twelve months before the nomination of Abraham Lincoln, knew enough of our political condition not to take the wrong side in the mighty strife which was even then rushing on to its settlement in blood and in battle-fury. Who is not aware that one of the first voices raised in England to cheer us was the voice of Thomas Hughes, and that on the platform, in the lec-

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ture-desk, in the drawing-room, and through the columns of the magazines, he has steadily, bravely and powerfully sustained our cause? And now that from the overwhelming turmoil; now that from the slaughter and desolation of war, to save an empire from the death-stabs of treason, we have been led to the task, equally urgent, of saving a whole race from starvation and plunder, the voice of Thomas Hughes is still to be heard in England appealing to his countrymen, and entreating them to seize the "greatest opportunity that will ever be given to them of making stronger the bands which tie them to the American people."

I have already said that Mr. Hughes is no orator, and I was about to add that he is too honest to be one. His style is quiet, simple, colloquial, full of market-words, not a word put in for show. He often hesitates, stumbles, gets into a maze and comes out backward. Yet, speaking only because he has something to say, or if he has nothing to say saying that, he is a man whom the people always welcome upon their platforms and listen to with attention.

I remember hearing him last April, at a meeting convened at the Westminster Palace Hotel under the auspices of the Duke of Argyle, for the purpose of promoting the Freedmen's Aid Society. John Bright was there, and Sir Thomas Fowell Buxton, and other celebrities, and among them I saw the bald head of Thomas Hughes, which, like that of Thackeray's Dr. Firman, "glistened like a billiard-ball." He was one of the last speakers, and his speech was one of the best. I shall never forget the sincere emotion with which he gave utterance to these noble words:

"But there is another reason why we should come forward on this occasion heartily and warmly, and that is the extraordinary importance of a cordial alliance between the two branches of the Anglo-Saxon race to the future of mankind. It does seem to me that two great nations, possessing and glorying in the same traditions and the same history, struggling at this minute with the same trials both political and social, and animated, I trust, by the same hopes—I say it does seem to me that two such peoples as these, enjoying too, as they do the freest institutions that ever have obtained in great nations upon the face of the earth, should go forward, not with jealousy, not with distrust of any kind, but with a cordial and rational wish to advance civilization and Christianity over the whole of this earth, and, as far as peaceful efforts can do it, to impart to all down-trodden people, and to all people who are in need of them, the glorious ideas of freedom, and the glorious hopes, which we who speak the English tongue in all climates of the world possess and enjoy—I do think that we ought to be stirred up to great exertions in this matter. I do think that when we look at the grand, the magnificent way in which the Americans have met their own great trial, English men's and women's hearts ought to be warmed toward them, and that we should show, as emphatically as we possibly can, our deep respect and reverence for the work which they have done, and the way in which they have done it."

Yes, for the sake of such glorious Englishmen as Thomas Hughes, let us try to forget the words and deeds of those Englishmen who are not like him.

May the tribe of the Muscular Christians increase!

LONDON, *September* 3, 1866.

A NATURAL APPETITE FOR LIQUOR.—An article recently appeared in the editorial columns of The New York Times, from which we quote the following:

"There is no doubt a universal appetite in mankind for alcoholic excitement; against this no wise reformer or legislator should struggle, as an absolute evil. His great effort should be to lessen the inducements to an over-indulgence of this propensity."

What new discoveries have recently been made in the natural history of man, by which it has been shown that alcohol has the same relation to the human organism that bread, potatoes, water, and air and clothing sustain, we are not informed. The only relation which a true interpretation of nature shows alcohol to have to the stomach is that of poison, and no amount of falsification of nature can make this relation any different. It is natural for man to eat, to drink, to breathe, to sleep, to exercise, and he dies if these universal instincts are not gratified. Surely, if there was the same universal appetite in mankind for alcoholic drinks, the race could no more live without them than they can without air. But human experience shows conclusively that the less it is used the better we are off; and those who do not use it at all not only have no craving for it—as they do for air, food, water, sleep and exercise—but an absolute digust and loathing of it. The unwise editor who penned the quotation, should study nature from a physiological and not a perverted pathological stand-point.—ED. H. OF H.

BOSTON PUBLIC BATHS.—Statistics show 294,836 persons have availed themselves of the sanitary influences of the Public Baths of the city of Boston within the last two months.

WHEN we record our angry feelings, let it be on the snow, that the first beam of sunshine may obliterate them for ever.

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[Written for The Herald of Health.]

Some of Our Faults.

It is bad enough to have faults—too bad to have them so glaring as to attract the attention of foreigners and give us the odor of a bad name abroad. The other day I met an intelligent and observing Englishmen, who did not scruple to speak plainly of our faults. Said he:

"How curiously you dress in this country! Almost every man wears black clothes, and the thronged streets seem as though the entire population was going to a funeral. Now and then I see a suit of gray; some wear coats and pants of a copper color, and I have seen a few men dressed in white—but these are exceptions; the funeral color is the rule; black is the fashion. No wonder one of our authors said you looked like a nation of undertakers."

I said as coolly as possible, that black was a becoming color, suited to all complexions and seasons, and that this was a free country; I also added something about bare feet when shoes are scarce.

He was one of those lights (gas-lights) who would not be snuffed out with my cool extinguisher; so he continued:

"And now look for a moment at your fashions. They are as odious as your taste in colors is repulsive. Look at the short jackets which barely reach to the hips, and are constantly tempting a man who hates the display to lift his foot and kick the wearer. Such coats do well enough for boys who have just reached their teens, but they make full grown men appear very ridiculous. Those who wear such garments should never say a word about the short dresses of the ladies. As for the American ladies, they overdress. I have noticed red, hard hands, that must work for a living, hooped with cheap jewelry; and servant-girls often dress as well as their mistresses, and more gorgeously, showing plainly that they exhaust their income to please their vanity. Now, our English ladies dress richly but plainly. The higher classes seldom show much jewelry; indeed, it is considered vulgar for ladies in polite circles to make a grand exhibition of trinkets, as though their husbands and fathers were all in the jewelry trade. Lady Napier, one of the highest born of the aristocracy, never wears any gold about her person save her wedding-ring."

I could only reply by saying, that our coats were not so short as we desired the visits of fault-finding strangers to be; as for our ladies, they had exquisite taste, and whether their dresses were long or short, masculine or feminine, they were lovely in our eyes; and servant-girls, who worked hard for their money, had a perfect right to spend it as they pleased, so long as they did no harm to others. In this country we acknowledged no aristocracy, save that of moral and intellectual excellence; that here every man was a king and every woman a queen, whether she played on the piano or the wash-tub, folded newspapers or "flirted" a fan at Saratoga.

"You have no aristocracy, that is evident," said he; "but you would like to have even that distinction. When a live lord makes his appearance on your shores the people turn out *en masse* to see him, and, if he be young and unmarried, scores of families in which there are marriageable young women covet his company and invite him to accept their hospitality. He is sure to turn the heads and hearts of all the silly girls who dance with him. See what fools you made of yourselves when that coffee-colored chap from Japan came here. He received a peck of letters a day. What did the simple darlings care about his habits of eating rat soup and dog cutlet? He had a title; he was almost a 'Black Prince,' and that was enough for them. Then, look at the list of your titled men. Why, you have more men with handles to their names than we have, ten times over. Look at the armies of captains, colonels, generals, squires and majors. Why, if a man crossed the Hudson in a scow he would get the title of captain for life, and his child would be known as the captain's son. I'll wager the price of a new hat that every tenth man you meet on Broadway has a title to his name."

I gave him a piece of my mind, and told him square to his face that our officers were the true nobility, and had won their honors with their swords; that when we honored his master, the Prince of Wales, it was not because the boy had royal blood in his veins, but because he was the son of a good mother. We are a gallant people, and never lose an opportunity to show our respect for woman. Queen Victoria was one of our favorites, not because she sat upon a throne, but because she was a good, true woman.

Now, if he had been a Frenchman, the compliment paid to his sovereign would have softened his criticism, and he would have found some kind word to have said of us; but he was a plain John Bull, and proceeded in the same strain, but with a more provoking personality. He continued:

"Your habits at the table are not always refined. I often see men and women shovel their peas into their mouths with their knives. I

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have seen them pick their teeth with the prongs of their forks. At a Western hotel I saw a man take a quid of tobacco from his mouth and put it on the table-cloth alongside of his plate until he had finished his dinner. By-the-by, your habits of chewing and smoking tobacco are shameful. Old and young, rich and poor, the educated and the illiterate, chew and smoke tobacco. Cigar-stumps and tobacco-stains are seen everywhere. The appetite for the nasty weed seems to have grown into a passion; even well-dressed men, who claim to be cleanly in their habits, will roll the quid like a sweet morsel under their tongues, making their breath fetid, discoloring their teeth and soiling their linen. Why, I can smell a tobacco-chewer at the distance of a rod, and his odor never fails to bring a sickening sensation. How delicate and sensitive young ladies can endure the presence of a tobacco-chewer—how they can receive his caresses without utter loathing and disgust, is something unaccountable to me. Then men who pretend to be gentlemen will not hesitate to smoke all about the house. Having smoked their own faces to the color of smoked ham, they convert every room to which they have access into a smoke-house. To the credit of railroad companies be it spoken, they have provided special cars where these human locomotives can puff out twenty miles of smoke an hour; now they should provide disinfectants, so that the smoking and smoked passengers can not sicken tidy men and women who do not indulge in such disgusting habits. I was looking out of a car window the other day, when the wind blew into my face the spray of tobacco-juice from the lips of a fellow-passenger who sat in front of me. My first impulse was to take him by the collar and pitch him out of the window, but he disarmed me with an apology, while the tobacco-tears trickled down from the corners of his mouth and formed a liquid brooch upon his shirt-bosom. I merely said, Never mind, I will spit on you some time when I have something disagreeable in my mouth."

I replied that, although I did not use tobacco myself, I had great respect for many persons who did; yet the respect was not for the habit, but in spite of it.

"Hold!" he said, before I could crowd another word into the conversation; "we drink beer, so do you; but our beer is made of malt and hops, while yours is a poisonous compound not fit for swine to drink; besides, you drink whisky and gin and rum and brandy, and stuff made of logwood and whisky, and other *dye*-stuffs, and call it wine."

I said, with considerable emphasis, that the United States was the birthplace of the Temperance Reform; that we had four or five millions of signatures to the total abstinence pledge, and that our Temperance literature was scattered like snow-flakes over the land. G. W. B.

SUGAR CANDY.—One of the evil results of perverted tastes is seen in the great demand for sugar candy. We have often pointed out the evils resulting from feeding it to children, but it will be a hundred years or more before all parents will learn that candies are poisonous, and should not be allowed to the dear little ones they love and wish to bring up with fine health and perfect physical systems. To such parents as feed their children on confectionery, the following, by a well posted writer, will be found instructive:

"The adulteration of sugars, candies and spices is a trade largely and regularly carried on in this city. Instead of plaster, which till lately entered so largely into the manufacture of confectionery, in place of sugars, a new article has been discovered called *terra alba*, or white earth. It comes from Ireland, and costs by the barrel about two and a half cents a pound, while loaf sugar costs seventeen cents. The body of candies, the coating of almonds and lozenges are made from this earthy material. It is whiter than plaster, and is much used in the adulteration of flour sold in this market. A glue, paint and oil manufacturer of New York has sent round his annual circular, which I have seen, to the principal confectioners, calling attention to a fresh arrival of this white earth. I have seen an ounce of lozenges dissolved in water, in which two-thirds of an ounce was of *terra alba*, and not a particle of sugar in the lot. The common method of flavoring candies, almonds, sugar plums, etc., is with deleterious substances. The pineapple flavor, the banana and the peach are made from fusil oils, which are very poisonous. Bitter almond flavor is made from prussic acid unadulterated. Pineapple flavor is also obtained from rotten cheese — very rotten — and nitric acid. Gum arabic for pure gum drops is costly. An article has been invented of the most beautiful appearance, that is used instead of the gum. It is very cheap and very poisonous. In pure candy cochineal is used to color red and saffron for yellow. But in the common candies poisonous coloring is put, the same that is used to color wines and liquors. One of the most common is called 'carlot,' into which arsenic largely enters. A few grains of the substance will color a cask of wine. Liquorice drops for the 'trade' are made of poor brown sugar, glue and lamp-black, flavored with liquorice. And for the Western trade much of this vile stuff is packed in barrels, and sent West to be put up in boxes to suit the market, of which from seventy-five to ninety per cent. is *terra alba*. This material also enters largely into the common chocolates and spices. Much of the cream of tartar used for bread is made of *terra alba* and tartaric acid."

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[Written for The Herald of Health.]

Female Dress.

BY DIO LEWIS, M. D.

This subject is vitally important. Beside it, diet, exercise and baths sink into insignificance. My pale-faced country women are dying for lack of room, freedom; they are being stifled.

Dress Reformers proclaim short skirts as the remedy. This is well. The short skirt is an improvement—a movement upward, but of no consequence compared with the readjustment of the dress about the middle of the body. That part contains the vital organs. Is a man strong? it is because the middle of his body is strong. Is a woman vigorous? it is because the middle of her body is developed and active.

The changes needed in woman's dress are the following, and I believe their importance is in the order named:

1. The dress about the waist is to be very loose, without whalebones or other stiffening, and the skirts carried with suspenders over the shoulders.

2. The arms and legs are to be so warmly dressed as to maintain a healthy circulation.

3. The skirts to fall to the knee.

I have said that the importance of these several changes is in the order named. The lungs, heart, liver and stomach, which together make up the fountain of life, must have room, or the vital forces must halt. With the corset and tight-lacing, these organs are reduced one-third in size and two-thirds in motion.

Health and *equilibrium of circulation* are interchangeable terms. Whoever, whatever living thing, either animal or vegetable, has a perfect circulation has perfect health. Whoever, whatever living thing has defective circulation has defective health. Flannels, cotton padding, thick shawls, cloaks and furs piled upon the chest, while the legs are covered with a single thickness of cotton cloth surrounded by a balloon in the shape of a hoop, steams the chest and freezes the legs. The legs and arms, separated so far from the center of the body, surrounded by the cold air, need, to say the least, as much clothing as the body, and ought to have one or, in cold weather in this climate, two thicknesses of knit woolen. Women complain to me of headache, tell me their blood is all in their head and chest, while their feet are as cold as ice. With the fashionable dress how can it be otherwise? Let them cover the limbs with one or two thicknesses of warm flannel, and the feet with a warm dress, and the head and chest will be immediately relieved.

The short skirts, although in importance to health the least vital of these three changes, is nevertheless very important. The skirt should fall a little below the knee. The pants should be the large Turkish pants, which, made long enough to fall to the ankle, and fastened at the bottom by being drawn close about the ankle with a slight elastic cord, should then be drawn up to the place usually occupied by the garter, and pulled down to the middle, or a little below the middle of the calf of the leg. When going out into the cold air the exposed part of the leg should be covered with a patent-leather anklet, and during the cold season of the year that part of the leg should be covered with two thicknesses of woolen. While all this peculiar arrangement is, in point of convenience and protection, less satisfactory than the straight pants, such as gentlemen wear, I nevertheless advise it, because it is very easy to introduce the short dress with these pants, and very difficult to introduce what is known as the Bloomer costume. For example: In my school at Lexington, Mass., I had more than a hundred fashionable young ladies last winter, all of whom wore constantly during the school year the short dress, the gymnastic costume, while all the fashionable ladies of the village outside of the institution adopted the same dress. Indeed, it is almost rare to see in Lexington a lady with a long dress. An attempt to introduce the Bloomer costume, I am sure, would have proved a failure, not in our own house, perhaps, but in its influence outside. All through our part of the country, when we go out to ride, we see ladies in the short dress. Indeed, some of the clergymen, who observed that our young ladies changed for the long dress on going to church, came to me to say that they hoped I would allow them to come in their short dresses, for they liked very much to see them. A single lady appearing in the streets of Boston in the regular Bloomer costume attracts a crowd of boys, while twenty of our young ladies can go into Boston without remark or notice. The fact is, we men and boys are very jealous of our breeches, but the gymnastic costume does not involve that garment, and so we lords of creation give our consent to its adoption by our sisters.

Modesty depends upon good manners; happiness on security; good society on good education; wisdom on experience; and, for the safety or protection of a country, a tried man is often much more valuable than a renowned warrior.

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[Written for The Herald of Health.]

October Woods and Flowers.

BY GEORGE W. BUNGAY.

DEDICATED TO MRS. MARY TREAT.

Beneath my feet the grass looks up
To greet the cloud. Long had it prayed
For rain, till heaven held out the cup
To every parched and fainting blade.
The thistle, with its head upraised,
Like genius bearing noble deeds,
Though coarsely clad and seldom praised,
Sends on white wings afar its seeds.

The modest daisy, in its bloom,
Here gaily wore its satin frill;
A lonely mourner at its tomb,
The gentian, bows upon the hill.
Sad thoughts flit through my restless mind,
And die unspoken and unsung,
As leaves, touched by the autumn wind,
Fall from the twigs to which they clung.

The wood-birds nest upon the bough
Is like my stricken heart, which grieves;
'T was full of music once, but now
Deserted hangs and filled with leaves.
But why should I, alas! be sad,
Amid the light of such a scene—
Up to the hills the clouds are clad
In gayest hues of gold and green.

Here, like the patriarch in his dream,
I see the ladder angels trod;
These mountains to my vision seem
To lift earth's sacrifice to God.
Alas! I'm seeking for the flowers
Which sleep beneath the leaves that fell;
They' re kindred to the friends of ours
Who rest in peace where all is well.

The tint upon the maple tree,
So soft, is like the crimson hue
Upon my darling's cheek. I see
In her soft eyes the heavenly blue,
On her pure face Hope's blossomings.
The sky stoops near the earth to-day,
And we can hear the sweep of wings
Of angels on their upward way.

Voltaire related to Mr. Sherlock an anecdote of Swift. Lady Carteret, wife of the Lord-Lieutenant, said to Swift: "The air of Ireland is very excellent and healthy." "For God's sake, madam," said Swift, "don't say so in England, for if you do they will certainly tax it."

[Written for The Herald of Health.]

Patient Waiting.

BY REV. HENRY WARD BEECHER.

The love of exertion is a sign of health and manliness. Languor, the love of ease, the various forms of indolence, mark a kind of physical degeneration—a want of circulation; a want of nerve; lowness of organization; imperfection of sensibility. It is sometimes the preliminary stage of disintegration and precedes utter waste.

Work indicates a preparation for working. The love of work indicates a high state of health. This love of work arises partly from the pleasure inherent in the healthful exercise of our powers; partly it arises from the excitements which spring up during the plannings and excitements of enterprise; and it arises partly from a natural and proper pride and satisfaction in the results which we secure by intelligent activity. We can scarcely conceive of happiness in one who is not generously active. We can hardly imagine unhappiness when one has congenial occupation, vigorous health and daily activity. For, appropriate work which we love covers up sensibility, takes away temptation, withdraws the mind from morbid cares and fears, and gives it wholesome employment. It is a good thing to work because you *love* to. If you do not love to work, it is a good thing to work because you *have* to.

While people are young, or strong, or prosperous, they think little of that great army with muffled banners that is silently walking amid troubles and disappointments day by day, unable to do or achieve.

There is peculiar grace required to maintain patience and contentment where one is placed socially in such a position that all the stronger and most natural activities are kept useless, as is the case not unfrequently; for men are not always, by any means, matched to their appropriate work nor joined to their appropriate place in society. There is neither principle, nor law, nor experience, by which we can always sort our children and connect them with the thing for which they are best adapted in their outward nature. Beside all that, however well a man may be placed, and however well adapted his education and faculties may be to his position, there are these upheavings, these ruptures of society, and these sweepings of Providence, that dislocate men, and scatter them up and down in the community, so that there are in society at large thousands and thousands of per-

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sons who are admirably adapted to some things, but unable to reach them. They are not well adapted to other things, but they are put to doing them.

Thus, a man may be eloquent in the French language; but if by stress of weather he is thrown upon our shores, what does all his eloquence in his mother tongue avail him here, where he is obliged to gain his livelihood from day to day by stammering bad English? A man may have potency in his mother tongue; but let him travel in Europe, where he passes from the English to the French, from the French to the Spanish, and from the Spanish to the German, and see how his power of language is shut up in his mouth. If a man feels proud at home, I would advise him to go abroad a month or two and learn how insignificant he is. A man traveling in a land of whose language he is ignorant, is like a man swimming in the Atlantic. He is shorn of those ten thousand comprehensive ways which at home made him vital, sympathetic and useful, but which, being taken from him, leave him almost as a dead man.

These are strong instances projected out of the ordinary course of things; but our houses, our streets, our villages, our cities, are filled with persons who are dislocated and out of place in society. As there are multitudes of men that are attempting poorly to discharge functions a great deal higher than their powers fit them for, in every branch of public service; so in lower departments there are many persons who are competent to discharge higher trusts, but can not get up to them. We can not see how one and another person got there, but society is full of persons who are below their appropriate level. Where this occurs in youth it is right, because young persons can press their way up. They are like young and vigorous plants that draw an abundant supply of food for growth through the roots below; but when men pass the climax of life, and with discouraged spirit are thrown down below their level, it is not so easy for them to obtain nourishment, since the root itself is impaired; and when they are transplanted they can scarcely get hold again to grow. And they are obliged to wait, holding their best faculties inactive, doing work which requires but little thought, and to which they are not adapted, and remitting intellectual labors for which they are conscious of being well qualified.

This is more the case with women, I think, than with men, for the simple reason that, for the largest part, woman's happiness in life is made to depend upon her social connections and family estate. Largely, women do not enter into the social state; but when they are once in it, it is built of glass, and some side-long blow may shiver it in a moment. And such is the uncivilized condition of society that there are but few alternatives for a woman. Women that are broken off from their relations to the domestic circle, find but few channels in which they can employ thought, and taste, and fidelity, and affection, and stand independently in the community. So that you see on every hand among women instances the most marked of persons who are fitted for higher places than they occupy. And there are not a few of these instances in which patient waiting for a better day is rendered more beautiful than in almost any others.

Are there not multitudes of persons whose minds are stored with valuable information, who have fineness of taste that indicates much of the artist nature, and who have been trained to nice moral distinctions—are there not multitudes of such persons that ply the needle; that teach in the lowest schools; that spend their energies in the meaner walks of life? Are there not multitudes of such persons that are conscious that the greatest part of their inward nature is buried and has no function? Are there not multitudes of such persons who, although there are a few things on which they can bring the power of their mind to bear in its higher ranges, are conscious that they are carrying the great orb of their being in obscuration, veiled and darkling?

Out of this, which in some sense is unnatural, and which springs largely from the infelicities of society, but somewhat, also, from peculiarities of individual history and disposition, there may and there do break forth morbid tendencies. Much of vice and crime springs from morbidity, which springs from minds not properly joined to their functions. And among the mischiefs of want of liberty to use that which is strong in us is this: that it disorganizes many and many a nature. There are nurses and teachers of little children who are capable of rising to higher positions than they occupy. Not that teaching little children is to be despised; not that it is not itself a noble work; but there are many doing this work under restrictions and circumstances which keep them far below that for which they are fitted by their capacity. Many persons, by change of fortune, have fallen from position in society. They are not adorning the circles that they might. I think some of the noblest natures walk mostly in disguise. In a society like ours, where there

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is so much enterprise, where there is such rapid growth, and where the tides of speculation so frequently rise and fall, in the course of ten years there are hundreds and thousands that are overtaken by such a change of fortune, and such a change of position in consequence, that they are quite out of their place, and are obliged to say that they find little use for that part of themselves which is most to them. And so we find men strangely situated. We find men, for instance, in factories, that are competent to plead at the bar.

I remember that I once found breaking stone near Cincinnati a University man from Germany, who had held one of the very highest positions under the Government in the management of schools. He came to this country by emigration, and, finding little to do, accepted it, whatever it was. Being able to get his bread and beer by breaking stone, he was willing to engage in that humble calling, though the strongest part of him was his head, and not his hands.

When the Hungarians came here they scorned charity, and as a means of maintaining themselves resorted to various physical occupations. One that I knew learned the carpenter's trade. Another that I knew learned saddle-and-harness making. And another that I knew turned to making soap and candles, as Garibaldi did in this land. Others went to farming. And men of the highest culture and refinement, men of the best intellectual education, men that were leaders of the people in their own country, when in the providence of God they were thrown on these shores, and they found that they could not use that which they possessed of talent, accepted lower positions than many which they were qualified to fill. And one could not but feel that the most that was in those men had to wait. They ought to have labored as they did; it was noble in them; but, after all, they had no sphere for their stores of knowledge. The power that they had in their own country was gone from them, and they were buried alive while they lived, in some respects.

God deliver me from being an exile—from being a stranger in a strange land, out of the reach of my mother tongue. Send me to prison; give me quicker dismission by the halter; let the bullet do its work on me; but of all that God could send me of misfortune and trouble, that would be the worst which should place me among a strange people, speaking a strange tongue, to walk up and down without a position, a function, a home, a country, or friends.

The condition of thousands who have been disrupted and broken down, brings their case within the sphere of waiting of which I have spoken. There are multitudes to-day that see the world going by them conscious that they have powers equal to any that are in exercise.

There are many who are deriving their pittance of bread from men whom they greatly surpass. I remember that once, on going into my father's kitchen, in Ohio, to speak to Charles, our hostler and gardener, I found him reading a book in which I thought I perceived mathematical diagrams. On examining it, I found it to be a scientific treatise on geography, in which all the astronomical problems were wrought out; and as I had seen him from night to night with his tallow candle poring over this book as though it were the last new novel in the hand of beauty (though he was not beautiful), I asked him if he understood what he read. "Certainly," said he, "most certainly." I saw that there was some Latin in the book, and I asked him if he could read that. Oh, yes, he could read Latin, and he talked it. It put my college honors somewhat in peril, and I feared that he might be talking to me in Latin! "Do you understand Greek?" I said. "Oh, no; I can only read it—I can not *speak* it."

There was that man deriving his small monthly wages from my hand, and he was my master, probably, in every walk of science and literature. I was rising and prospering. He was faithfully and humbly occupying the position of hostler and gardener. And do you not suppose he had thoughts about me as well as I about him? Do you not suppose there are men that have in some strange way been thrown out of the counting-office, the bank, the professor's chair, places of honor and trust, who can not get back, and who are walking day by day where they are denied the opportunity of engaging in affairs that they see carried on by men that are far less competent than themselves? Do you not suppose there are such men that are obliged to stand down low and see men that are pigmies compared with them getting upward and onward? It may be very easy, if you are prosperous, to say that such men ought to wait; that they ought to clothe themselves with patience; that they ought to substitute large-mindedness for a narrow, complaining disposition; but did you ever walk where they are called to walk? Will you change places with them, and see how easy their lot is to bear?

Nevertheless, your advice is good. I, too, think that men who are thrown into circumstances where they are obliged to derive their very life, not from outward success, not from

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attritions and collisions with their fellow-men, not from the remunerations of pride, but from deeper sources—from faith, and hope, and trust in God, and the resplendent horizon of the future life, which shall never be marred by circumstances—I, too, think that they should have royalty of disposition, and should wait patiently. But it is not easy to give them advice, nor to blame them when our advice is not readily taken by them.

There is also a sphere of waiting by reason of sickness, weakness, age, and the remission of labor in consequence. Where idleness is of a transient nature, we look hopefully forward to being restored again to vigor; but where weakness becomes our daily attendant, our hope dies away. Moreover, long-continued sickness ceases to excite sympathy, because it has not alarm in it. For we sympathize with our friends in proportion as we think they are in danger. Our sympathy for a man that has the toothache is *nil*. If a man has the cholera, or a fever, or any disease that imperils his life, then we sympathize with him. We sympathize with men, not according to the measure of their suffering, but according to the measure of their danger; and yet a man may suffer more, a thousand-fold, every day, than it takes to kill scores of other men.

Where men have sickness in the form of weariness; where men do not suffer from violent pains, but where they are so fragile that they break down under almost every stress, and find it impossible to plan, or, at any rate, to achieve in life; where men are obliged, day by day, to ask leave of their brain to think, and to ask leave of their foot to walk; where men are prisoners, and every member of their body is a jailor, and they feel that this condition is to continue, not for a week, or a day, or a month, or a year, but as long as they live, and that their life is to be shortened by it; where men are obliged to carry their body of death with all its infirmities, and to walk in obscurity, and to be for ever pensioners upon the doctor—under such circumstances it is not easy for them to patiently wait. And yet here is a sphere of waiting—that kind of moral waiting in which a man measures his condition, and then clothes himself with a manly grace which enables him to accept the lot to which in the providence of God he is appointed, and lift up his head inwardly, if not outwardly.

There are many men that we turn rudely from our door with censure whom God does not blame. There are many men that we call shiftless who are like a bag that stands up when it is full and collapses when it is empty. There are many men that, as long as you are helping them, get along very well, but that the moment you leave them to themselves do not get along at all, and we get tired of them and say that they are lazy. But, in many cases, the trouble is not that they are lazy, but that they are physically incapacitated. It is not that their will is not good, but that they lack strength of bone and muscle. Do you sleep well? There is many a man that dozes more hours than he rests. Have you a good appetite and thorough digestion? There is many a man that has slender digestion, and can not eat enough to keep his body in repair and health. Are you vigorous? There is many a man that is almost entirely wanting in vigor. Many a man inherits a good constitution, and comes out in life with a broad prospect in himself; while many others inherit such feebleness that they are liable, under almost any pressure, to break down. And these last ought not to be blamed. They were made feeble; and let us hope that there is a better chance awaiting them in the other world.

It might, perhaps, not do any of us harm if we were to suffer some from sickness. I think we grow more humane, more compassionate, more considerate for others, when they are brought into a condition of suffering like that which we are in, or have been in. And let us not forget to have forbearance with those who are obliged to walk through life in perpetual sickness, that impairs courage and cripples every exertion. For it requires rare grace to endure and piously wait on God under such circumstances.

This may be applied to mothers who are rearing families. It is often the case that those who grow up amiable, sweet and obliging women, when they are brought into family relations are, by sickness, by necessary suffering in child-bearing, and by their household cares, greatly taxed and tasked in their nervous system, so that they become acutely sensitive and irritable, as well as more feeble and less hopeful. So great is the strain upon them, that they even lose self-respect, in some cases. And frequently they are blamed by their parents, wondered at by their friends, and harshly dealt with by their husbands and their children. And much consideration is to be accorded to mothers whose sharpness and impatience are often in the ratio of that which they have suffered for others.

We are to remember, too, that upon the woman comes the greatest weight of sorrow in

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all afflictions. It is rare that a man suffers as much as a woman from death in the household. Upon her comes the duty of patient waiting with the sick. She it is that has hand-to-hand conflicts with Death. And at last, in the charge by which the feeble structure is overthrown, she is found confronting the dread enemy face to face. And after the struggle is over, in which Death has been victorious, she is the greatest mourner. At the Cross last, and at the Sepulchre first, were the women; and by them more tears were shed and more sufferings were felt than by all the other disciples. And that is typical of woman's lot in the household the world over. And women need, perhaps, more than any others, the love of patient Christian waiting.

At the same time, there are many men who are obliged to fight a battle through life, *for* life, and who need this love. Indeed, it is that which we all need in some of our earthly relations and experiences, and which we shall all do well diligently to seek and cultivate.

WHAT THEY EAT AT XENIA.—The "Fat Contributor" gives the following experience of endeavoring to get dinner at Xenia on the Little Miami Railroad:

"Twenty minutes for dinner," shouted the brakesman as we approached Xenia.

Arrived there, I entered the dining-room and inquired of a waiter,

"What do you have for dinner?"

"Twenty minutes," was the hurried reply.

I told him I would try half a dozen minutes, raw, on the half-shell, just to see how they went. Told him to make a minute of it on his books. He scratched his head trying to comprehend the order, but finally gave it up and waited upon some one else.

I approached a man who stood near the door with a roll of money in his hand.

"What do you have for dinner?"

"Half a dollar," says he.

I told him that I would take half a dollar well done. I asked him if he couldn't send me, in addition, a boiled pocket-book stuffed with greenbacks, and some seven-thirties, garnished with postage stamps and ten cent script. Also, a Confederate bond, done brown, with lettuce alone (let us alone). I would like to wash my dinner down with National Bank Notes, on "draft."

He said they were out of every thing but the bank notes, and he then ordered a waiter to go to the bank and "draw" some.—*Ex.*

[Written for The Herald of Health.]

Overwork and Underwork.

BY A. L. WOOD, M. D.

IT is a law of Nature that all living things possess within themselves the power of motion, upon the exercise of which their existence, as living entities, depends. Their life commences with action, action constitutes their life, and when action ceases their life has departed for ever. Everywhere we find that action is life and inaction death. In thus speaking of action I do not mean mechanical action or chemical action, but vital action—that which is inherent in all organized, living things.

Look at that blade of grass, that flower, that tree. The elements of which they are composed are drawn from air, earth and water, and transformed, by a power existing within themselves, into the substance of their own beings. When this force ceases to act death ensues. As it is in the vegetable world so it is in the animal kingdom, in man—only to a far greater extent in the latter. As we progress upward in the scale of life the operation of this power becomes more extended and diversified. In the plant its action is limited to formation and growth. The plant has no power of moving itself from place to place. In the animal it not only produces development, growth and constant change, but gives the power of external, voluntary motion, which is indispensable to the proper performance of the vital functions of animal life.

A large proportion of the solids of the body are composed of simple tubes, as the arteries, veins, capillaries, lymphatics, etc., which are filled with fluids of various kinds, through the agency of which all the vital processes are performed. These fluids constitute, by weight, more than four-fifths of the body, and they, as well as the solids, require to be undergoing constant change. This change can only be effected by having them kept in constant motion. This motion can only be fully secured by exercise or voluntary action of the entire muscular system. The muscles constitute more than one-half of the bulk of the body, and upon their healthful condition the health of the whole system depends.

It is a law of our nature that if any organ or faculty is kept from the exercise of its

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proper function, that organ or faculty becomes weak, withers away and dies. Each and every part of the body requires to be used in its proper and legitimate manner in order to maintain its integrity. The natural action of the muscular system is to contract. By this contraction motion is produced. Proper muscular contraction directly secures the health and development of the entire muscular system, and indirectly aids in securing the normal and healthful action of every organ of the body. It greatly promotes the circulation of the blood, thus facilitating the vital processes of digestion, absorption, assimilation, secretion and depuration, and increasing the health and strength of the organs engaged in the performance of these functions. It largely promotes respiration, causing full and deep inspirations of air and a vigorous action of the lungs, thus strengthening these important organs and imparting vigor and activity to all the others. It gives strength, endurance, agility, elasticity and grace to the body, and energy and activity to the mind. In short, it develops every organ, strengthens every function, and aids in securing the healthful and harmonious development of the entire man.

While a certain amount of exercise is necessary to maintain the health and secure a proper development of the different organs of the body and faculties of the mind, an excessive amount as surely produces weakness, disease and undue vital exhaustion. The following remarks of Dr. Tyler of Boston, in his Report of the McLean Insane Asylum, presents the subject in its true light:

"With the opportunities of observation which my position gives me, I shall scarcely be faithful to duty without briefly referring to one 'error of the times,' which is shortening many a life, and bringing many to our hospitals in a state of incurable brain disease. I refer to the intense and unceasing activity, displayed chiefly in business, but extending to almost every other pursuit. Every hour of every day is given up to an unflinching and persistent devotion to whatever interests the individual. Nights and Sundays can scarcely be spared from labor, and are compressed into such small periods as shall just suffice to appease a weary frame and a very moderate conscience. No time is taken for recreation and little for meals, and that little in a very irregular way. Every moment not spent in the keen drive of business is looked upon as lost. Every nerve is strained to accomplish just as much as is possible to unremitting exertion. Every thing is done rapidly, or, in the language of the day, 'with a rush.' Every man has a given amount of vital force to live with and work with. His capacity for any kind of labor, whatever it may be and however it may compare with that of another, has its limit. It never can be over-drawn upon without serious damage. So much of this force as he wastes, or so much as he turns in any one direction, so much less has he for any other. If he overworks his brain, his body will suffer. If he overworks his body, his brain will suffer. He may overwork one set of organs, or invigorate them, as *he* says, at the expense of another set. An illustration of this is evident in those who give their chief attention to the development of muscle, as boxers and members of boat-clubs do. Their regimen and diet tend to keep the digestive organs in good order and develop the muscular system. This is frequently carried to an excess, and when it is, the individual for a time can show an athletic figure, great strength, and an external appearance of high health; but in a little while it is plain that he has diverted his vital force from other organs—say the lungs—which have been insufficiently nourished: they fail him and he dies of consumption. To keep one in the best working order, this vital force must be properly distributed to every organ, and to the digestive and respiratory organs in full share, to keep them active, else its supply will be diminished. What is lost by use and waste must be regained by regular bodily nourishment and refreshment, that is, by food and repose. Its use must be regular, must never be excessive, and must alternate with rest. Each person will accomplish the greatest amount that is possible for *him* by working regularly for a given number of hours, and by taking time at regularly returning periods sufficient for food, rest and recreation. The consequences of overwork may not appear at once, but they are inevitable and destructive. Overworkers deceive themselves by the belief that they can bear more than others, or that they can bear what they are doing because they have so long borne it without breaking down."

The *intelligent* stock-grower, who is accustomed to raising horses, knows very well that if he puts a young colt at long-continued hard work it will not attain the strength and size which it would acquire were it left to gambol in the pastures at its own free will. He knows that if the vitality of the animal is expended in hard labor it can not be used to form nerve and bone and muscle, and that the colt can never become the perfect horse which it otherwise might, but will always be small, weak and inferior.

The stock-grower knows all this and lets his colts roam the pasture free, or only re-

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quires of them the lightest labors, while his growing sons he sends into the field at early morn, and through all the day requires them to perform the hardest labor their strength will allow. The effects are the same with the boy as with the colt, only in a more marked degree, for the higher in the scale of life and the more refined the violater of Nature's laws the greater the suffering.

The stock-grower perceives the operation of this law upon his colts but not upon his sons, and the result is that he raises beautiful, symmetrical and finely-developed horses, and small, deformed, weak and unhealthy men. When men learn to bestow as much care and attention upon the raising of fine and healthy specimens of their own species as they do to raising fine horses and cattle, humanity will have taken a long stride forward upon the road of progression.

The same law that applies to overwork of the young body applies with still greater force to overwork of the young brain, for the brain is higher and more refined than the body. Knowing this, what can we expect from the present forced, hot-bed system of mental education for the young and growing brain? The child of three or four summers is sent to school, and then commences the process of cramming, of urging the weak and immature brain to perform tasks beyond its strength to accomplish, without the expenditure of vitality which should be used in strengthening and developing it, together with its servant, the body. This process is continued through the growing period of youth, and, unless the young student rebels, fails to perform the tasks assigned him, and obeys the instincts of his nature and plays and frolics with his companions under the greenwood tree or by the running stream, the chances are that, if he survives the ordeal, he will graduate with due academic honors; a small, weakly body; loose, flabby muscles; a dyspeptic stomach; feeble lungs; a small stock of vitality; and a contracted, nervously active and excitable mind, which can plod along very well for a time in the well-worn ruts of custom, but which is utterly incapable of bold, vigorous and manly thought upon any great, new and important subject. Such are the results of the present system of education of the young, which constantly overworks the brain and neglects the body.

But a new era in education is dawning upon the land, and there are a few that have learned the lesson that children have *bodies* as well as minds; that the one requires care and culture as much as the other, and that forced culture of either produces weakness and injury to both.

While overwork is a great evil from which one class of society suffers, another class suffers still more from underwork or idleness. Better wear out than rust out, if it is done in a good cause; for then some good will be accomplished, and humanity will be "the better for it." But the true course is to avoid both extremes and pursue the even tenor of a happy medium. By so doing a far greater amount of labor can be accomplished, at less expense of health, strength and vitality.

An idle man! What is he? Of what use is he to himself or to the world? He is an imperfect, undeveloped being, a drone, a burden to himself and a disgrace to humanity. Shakspeare says:

"What is a man,
If his chief good and market of his time
Be but to sleep and feed?—a beast, no more!"

The great poet wrongs the beast by degrading it to the level of a *lazy man*. The animal was created lower than man, it is true, but it accomplishes the object of its existence. What more can be expected of it? How is it with the idle man? He has higher powers and more exalted faculties, but what do they avail him? He makes no use of them except, it may be, to plot mischief and practice vices which the most degraded animal on earth would never be guilty of. It is said, and truly, that "An idle man's brain is the Devil's workshop." The old philosopher, Burton, says:

"Idleness is the badge of gentry; the bane of body and mind; the nurse of naughtiness; the chief author of all mischief; one of the seven deadly sins; the cushion upon which the Devil chiefly reposes, and a great cause not only of melancholy, but of many other diseases."

"The last, best fruit which comes to late perfection, even in the kindliest soul, is tenderness toward the hard, forbearance toward the unforbearing, warmth of heart toward the cold, philanthropy toward the misanthropic."

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[Written for The Herald of Health.]

A True Life.

BY HORACE GREELEY.

THERE is, even on this side of the grave, a haven where the storms of life break not, or are but in gentle undulations of the unrippled and mirroring waters—an oasis, not in the desert, but beyond it; a rest, profound and blissful as that of the soldier returned for ever from the hardships, the dangers and the turmoils of war, to the bosom of that dear domestic circle whose blessings he never prized at half their worth until he lost them.

This haven, this rest, this oasis, is a serene old age. The tired traveler has abandoned the dusty, crowded and jostling highway of life for one of its shadiest and least-noted by-lanes. The din of traffic and of worldly strife has no longer magic for his ear; the myriad foot-fall on the city's stony walk is but noise or nothing to him now. He has run his race of toil, or trade, or ambition. His day's work is accomplished, and he has come home to enjoy, tranquil and unharassed, the splendor of the sunset, the milder glories of late evening. Ask not whether he has or has not been successful, according to the vulgar standard of success. What matters it now whether the multitude has dragged his chariot, rending the air with idolizing acclamations, or howled like wolves upon his track, as he fled by night from the fury of those he had wasted his vigor to serve? What avails it that broad lands have rewarded his toil, or that all has at the last moment been stricken from his grasp? Ask not whether he brings into retirement the wealth of the Indies or the poverty of the bankrupt; whether his couch be of down or of rushes; his dwelling a hut or a mansion. He has lived to little purpose, indeed, if he has not long since realized that wealth and renown are the true ends of exertion, nor their absence the conclusive proof of ill fortune. Whoever seeks to know if his career has been prosperous and brightening from its outset to its close, if the evening of his days shall be genial and blissful, should ask not for broad acres, nor towering edifices, nor laden coffers. Perverted old age may grasp these with the unyielding clutch of insanity, but they add to his cares and anxieties, not to his enjoyments. Ask rather: Has he mastered and harmonized his erring passions? Has he lived a true life?

A true life! Of how many lives does each hour knell the conclusion, and how few of them are true ones. The poor child of sin and shame and crime, who terminates her clouded being in the early morning of her scarce budded yet blighted existence; the desperate felon, whose blood is shed by the community as the dread penalty of its violated laws; the miserable debauchee, who totters down to his loathsome grave in the spring-time of his years, but the fullness of his feasting iniquities—these the world valiantly affirms have not lived true lives! Fearless and righteous world, how profound and how discriminating are thy judgments! But the base idolater of self, who devotes all his moments, his energies, his thoughts, to schemes which begin and end in personal advantage; the grasper of gold and lands and tenements; the devotee of pleasure; the man of ignoble and sinister ambition; the woman of frivolity, extravagance and fashion; the idler; the gambler; the voluptuary—on all these and their myriad compeers, while borne on the crest of the advancing billow, how gentle is the reproof, how charitable the judgment of the world! Nay, does it not pick its way daintily, cautiously and inoffensively through the midst of drunkard-making and national faith-breaking?

A true life must be simple in all its elements. Animated by one grand and ennobling impulse, all lesser aspirations find their proper places in harmonious subservience; simplicity in taste, in appetite, in habits of life, with a corresponding indifference to worldly honors and aggrandizement, is the natural result of the predominence of a divine and unselfish idea. Under the guidance of such a sentiment, virtue is not an effort but a law of Nature, like gravitation. It is vice alone that seems unaccountable, monstrous, almost miraculous. Purity is felt to be as necessary to the mind as health to the body, and its absence alike the inevitable source of pain. A true life must be calm. We wear out our energies in strife for gold or fame, and then wonder alike at the cost and the worthlessness of the meed. How sloth is jostled by gluttony, and pride wrestled by avarice, and ostentation bearded by meanness! The soul which is not large enough for the indwelling of one virtue, affords lodgment and scope and arena for a hundred vices; but their warfare can not be indulged with impunity. Agitation and wretchedness are the inevitable consequences, in the midst of which the flame of life burns flaringly and swiftly to its close.

A true life must be genial and joyous. Tell me not, pale anchorite, of your ceaseless vigils, your fastings, your scourgings. The man who is not happy in the path he has chosen, has chosen amiss.

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[Written for The Herald of Health.]

The Study of Physiology—No. III.

BY RUFUS KING BROWNE, M. D.,

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HEART—CIRCULATION—LUNGS—RESPIRATION.

We have already seen that the blood is the source from which all the materials which sustain the tissues and replenish the waste is derived.

We have next to understand that upon the regularity of the *circulation* of this fluid depends all the phenomena of a systemic character in our bodies, so that all these phenomena *pre*-suppose the existence of both this fluid and an apparatus by means of which it is incessantly kept in motion from the center to the periphery of the body.

This apparatus, called the circulatory apparatus or the "vascular system," consists of three sets of continuous muscular and fibrous tubes, and a central organ of impulsion, the heart.

Now, although this latter does not constitute the sole means of propelling the blood through the vascular system or blood channels, it is by far the most important of all; for, although the circulation in limited points of the system may be arrested, if the heart suspends its incessant action for a single moment the animal organism can never again be re-animated.

The heart is nothing more than a hollow, muscular organ, the hollows of which are continuous with those of the arteries, capillaries and veins. Its motions are the pulsations, and it differs from the other organs of the circulatory apparatus in being provided with valves to regulate the flow of blood, and to give it the proper direction. It has been aptly likened to a double forcing pump, situated between the veins, on the one hand, and the arteries on the other, these valves being so arranged as to open in a forward and shut in a backward *direction*.

The capillaries are the minute tubes which extend from the arteries to the veins, and it is they from which the blood issues whenever the surface of the flesh anywhere is pierced or broken.

In the mammalia the heart is divided into four cavities, which are continuous on the one side with the veins and on the other with the arteries.

It consists, therefore, of the two cavities constituting the right side—namely, the right auricle and ventricle, and on the left side, the left auricle and ventricle.

The former receive and propel the venous blood *to* the lungs, and the latter receive and transmit the arterial blood *from* the lungs.

The lungs are therefore the compound or double organ, in which the blood, being transmitted through their capillaries, is converted, during the passage, from venous into arterial.

They, therefore, have a distinct circulatory apparatus, different from that which is common to the whole of the other parts of the circulation; because, while passing through by a short route to and from the heart, the blood, which is dark or venous on reaching them, becomes arterialized on its return to the heart.

The auricles are that part of the heart which is uppermost, and are the receiving cavities, while the ventricles are the lower part of the organ and are the discharging cavities.

Now, it has been only recently understood what the exact character of the phenomena involved in the passage of the blood through these cavities is.

Both the smaller muscular chambers of the heart, the auricles, are receptacles—the one right and the other left.

These are, therefore, first occupied by the blood coming from the veins. The blood then passes on the right side from the auricle into the ventricle in a *downward* direction, but on reaching the bottom of the right ventricle it changes its course. It makes a turn upon itself, and instead of passing from above downward, continues to pass from below upward, but from right to left.

This is the change in the course of the *venous* blood. This is the character of the passage, through the *right side* of the heart, of the dark or venous blood.

On the other hand and simultaneously, the blood as it comes from the lungs passes into the left auricle downward into the left ventricle. Arriving at the bottom of the ventricle this stream changes its course, and passes from below upward, and from left to right. This course is the reverse of the change of direction on the left side of the heart.

This, then, is the course of the arterial blood.

There is accordingly, simultaneously and at given moments during life, in the heart, two streams of blood, both of them making their way, in the right and left sets of cavities, first from above downward and next from below upward.

Between these cavities and the streams occupying them we must remember there is a thick muscular wall.

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These two streams, the one red or arterial and the other dark or venous, separated by a thick wall of muscular tissue, which partitions the heart into right and left halves, take a crossed direction in the cavities, and emerge from it at different orifices and in different directions.

The valves are those fleshy curtains situated at the line of junction of the right auricle and ventricle on one side, and left auricle and ventricle on the other side.

They interrupt from moment to moment the continued current of the blood from the one to the other, when the latter has become filled and is about contracting to discharge.

Both these, then, alternately relax and contract, but while the auricles of either side contract simultaneously, the ventricles contract instantly afterward, and it is precisely at the moment between the two contractions that the valves previously dependent as festoons, raise and form a momentary partition in the auriculo-ventricular cavity.

Then comes the contraction of the ventricles, which react instantly from their relaxile state after the contraction of the auricle. This closure of the valve prevents the blood from returning into the auricle, when the ventricle contracts upon its contents and forces it in a side direction.

Now, as the two auricles contract simultaneously, so the two ventricles at one contraction instantly follow (contract simultaneously), and the volume of blood which occupies the latter is thrown out at separate orifices, each of which is provided with valves.

And as the blood passes the first set of valves, which are relaxed and open until the ventricles are filled, so the blood from the latter passes out through these two orifices, when the latter set of valves also contract and close them, to prevent the blood returning into the cavities of the heart.

We have thus briefly but plainly described the *circulation of the heart*, but, to repeat, the course of the phenomena is as follows:

The blood flows from the veins into the auricles and into the wide-open orifice between that and the ventricles (these two, on either side, being only apartments of the heart, each two chambers, having a continuous hollow); immediately the auricle contracts completes the filling of the corresponding ventricle, and at the same instant the valves close and thus shut the blood into their ventricles.

Then comes the contraction of the ventricles, which instantly follows the shutting of the valves.

The latter force the blood in a different direction, through the orifices leading to the lungs and the general system, and past the valves at those orifices, which immediately contract upon the just emptied ventricles.

As the contraction of the two *first* valves is simultaneous, so that of the two last is simultaneous, but they are *successive* to each other's contraction.

Let us now direct our attention to the important changes which take place in the blood during its passage through the lungs, from one side of the heart back to the other.

The right auricle contains the blood just arriving from the general system by the veins, which terminate in it. This is venous blood. If the auricle be looked at it plainly shows the dark color of the venous blood. On the opposite side of the heart, in a corresponding situation, is the left auricle, which contains the blood arriving from the lungs.

The color of this blood, as seen through the walls of the auricle, is of a brilliant scarlet, strongly contrasting with that on the opposite side.

We see, then, the change of color which characterizes the arterial and venous bloods, and at the same time we are enabled to distinguish the exact point in the circulatory system where this change takes place.

The blood before its entrance into the lungs is bluish. Immediately after leaving them it is red, and this change is incessantly continued as fresh portions of the blood arrive at the right auricle and ventricle, pass through the pulmonary circulation, and return to the left cavities of the heart.

We see, therefore, that the blood in different parts of the system, although a continuous volume, is *not precisely the same blood.*

Let us now consider the course of the blood as it leaves the heart and is distributed to other parts of the body.

It enters the arteries, whose pulsations are but an extension of the pulsatile movements of the heart.

It is transmitted in an unbroken stream through these into the capillaries, and through those into the veins. In the first, the blood is red from the lungs and the stream is rapid. In the last, it is again dark and the stream sluggish.

In the arteries it is carried forward by their propulsive movements, but in the veins it moves slowly, and is pushed forward by the current from behind.

Between these are the minute tubes called the

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capillaries. These have extremely attenuate walls, and it is through them that certain elements of the blood transude to replenish the constantly occurring waste of the tissues they penetrate.

These capillaries are found in every district of the human system, and they are the channels through which all the waste of the body is supplied.

They contain the blood in its proper state of distribution for nutrition.

They supply the material by which all the products of the various organs of secretion are elaborated.

From their contents is formed all the various substances which take part in the phenomena of digestion and digestive absorption.

Forming in their ramifications by far the greater part of the substance of every organ, and containing in their hollows by far the most active elements taking part in the function of every organ, they are really the nutrifying organs, supplying the pabulum which sustains the body and from which its products are evolved. From their contents are replenished all the fluids and the solids.

If the pancreas is to produce its characteristic secretion, it is the capillaries of the organ which supply the needed material for the work of elaboration.

If the bile is to be produced, it is the capillaries of its structure which furnish the substance which the liver transforms into bile.

If the gastric juice is needed for the digestion of the food in the stomach, it is the capillaries which transude the materials composing it.

But, further than this, the capillaries not only furnish these materials to be elaborated, but they perform the equally important service of reabsorbing the materials they had already supplied, together with those parts of the food that have been changed by the gastric juice and are fitted for assimilation.

Thus the capillaries furnish the materials which have transformed the food, and again possess themselves of the resulting combination of the food and their own previous substances.

They are not, therefore, the mere channels of the nutrient substances, but are also the seat of the great changes which occur in the blood itself.

The study of the capillaries, and what occurs within and immediately without them, is in fact the study of nutrition in its several phases.

Without these delicate, blood-holding tubes permeating everywhere the tissue of the lungs, no possibility would exist of supplying the blood with oxygen, nor of ridding the system of the products of physiological combustion in the form of carbonic acid and animal *vapor*.

We have now taken a sufficiently lengthy survey of the great field or realm of phenomena, the study of which we remarked awhile ago was of truly surpassing interest to the welfare of man.

The experience of history teaches us that the relatively most important studies which have engaged the attention of the human mind are always the latest in the order of development to be pursued.

Thus the study of physiology, from being so comparatively difficult, and because its results did not immediately reward us with any direct addition to our material wealth, as the various other branches which are now so assiduously cultivated, will eventually become the most important of all these.

Nor is the time far distant when institutions of learning will be constrained to devote to it quite as much attention as any of the other branches of learning.

The *kind* of knowledge it confers has a far more direct and fruitful bearing upon man's interests, both present and eventual, both temporal and eternal, than all the others, which but strive at present to satisfy and stimulate our cupidity or our natural pride.

And at length it will be found that all these have preceded it and reached their fullest development in order that they may furnish an indispensable basis for this STUDY OF STUDIES.

WELCOME.—"Papa will soon be here," said mamma to her two-year old boy. "What can Gregory do to welcome him?" And the mother glanced at the child's playthings, which lay scattered in wild confusion on the carpet.

"Make the room neat," replied the bright little one, understanding the look and at once beginning to gather his toys into a basket.

"What more can we do to welcome papa?" asked mamma, when nothing was wanting to the neatness of the room.

"*Be happy to him when he comes!*" cried the dear little fellow, jumping up and down with eagerness, as he watched at the window for his father's coming.

Now, as all the dictionary-makers will testify, it is very hard to give good definitions; but did not little Gregory give the substance of a welcome? "Be happy to him when he comes."

FASHIONABLE young lady, detaching her hair before retiring: "What dreams may come when we have shuffled off this mortal *coil*."

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[Written for The Herald of Health.]

Botany for Invalids—No. IV.

BY MRS. MARY TREAT.

Nearly all invalids love flowers. What a quick flush of joy overspreads the patient's face at the sight of a beautiful bouquet arranged by some loving hand! Those who scarcely ever notice flowers while strong and well, pre-occupied, as they think, with weightier matters, yet, if stricken down with disease, show this instinctive love as if it were a part of their very being. Yes, we all have love for the beautiful interwoven in our natures, although it may seem to lie dormant in some rude specimens of humanity. Young children especially show this love, but differing greatly in degree and intensity according to temperament and organization.

A frequent visitor of our flower-garden is a neighbor's delicate little son, only in his third summer. I first noticed this child's passionate devotion to flowers when our Tulips were in bloom. Looking from the window I saw him on his knees before these bright flowers, his face radiant, his little hands partly clasping but not touching, the flowers—a perfect picture of love and devotion. And what a picture it was for an artist! Many times a day these Tulips are visited, and as they began to wither and fade he seemed to look sad; but other bright flowers soon attracted his attention, and now the *Phlox Drummondii*, with its many brilliant colors, seems to be his special favorite. Never touching the flowers himself, he seems to think the bees and butterflies have no business to be robbing them of their sweets, his hands waving gently over the flowers to frighten these insects away. No doubt this child was born a botanist, but his future training may warp these fine sensibilities; he may be sent to school too young, and thus, coming in contact with minds cast in a rougher mold, will naturally influence his after career. "Like begets like." The companionship of the great and good has a direct influence upon the forming mind. 'Tis true, now and then a brilliant light emerges from darkness and obscurity, dazzling both continents, but these are exceptions; it is the surroundings, the culture while young, that gives us these master minds. Never was I more struck with the force of the truth of this than in reading a sketch by Mrs. Fletcher in The Atlantic Monthly, where she relates the following incident as occurring in Geneva, Switzerland, illustrative of my position:

"We do not remember who said that 'in Geneva every child is born an artist,' but the statement would bear investigation. Talent as well as taste for drawing and painting is almost universal, and belongs as well to the poor as to the rich. It may not be well known that De Candolle, the celebrated and untiring Genevese botanist, made use, in a course of lectures, of a valuable collection of tropical American plants, intrusted to his care by a Spanish botanist. Unfortunately, the herbarium was needed by its owner sooner than expected, and Professor De Candolle was requested to send it back. This he stated to his audience, with many a regret for so irreparable a loss. But some of the ladies present at once offered to copy the whole collection in one week. This was done. The drawings, filling thirteen folio volumes, and amounting in number to eight hundred and sixty, were accurately executed by one hundred and fourteen women artists in the time specified. In most cases the principal parts of the plants alone were colored, the rest was only pencilled with great accuracy. Where is there another city of the same size in which such a number of lady artists could be found? One of these very drawings, having been accidently dropped in the street, was picked up by a little girl ten years old, and returned to De Candolle, copied by the child, and it is no blemish to the collection."

It is well known that Geneva has been the home of literature and the fine arts for centuries, so we do not so much wonder at the number of lady artists found there.

But the civilization or culture of the human family, or of the animal kingdom in general, has no more marked effect than the change man has made in plants. Our fruits, grains and vegetables have all sprung from plants that would hardly be recognized as the same species. The almost innumerable varieties of the apple have all originated from a hard, sour, unpalatable forest fruit. The same may be said of all our fruits, though the change is not so great as in the apple. Some of our wild small fruits are delicious. The flavor of the strawberry in its natural state is superior to the monsters produced in cultivation. Horticulturists may think me semi-barbarous in taste when I say I have eaten wild grapes at the West that I preferred to any cultivated variety ever tasted; and may-be my roving life in those Western wilds did affect my taste, for I have eaten wild plums there that I pronounced equal to the horticulturist's best. They were large, juicy and firm-meated, and if a little bitter in taste next the skin, it could be easily obviated by paring, which I invariably did, when nothing could be more delicious. Of course, these fruits could be improved as regards size, but it is doubtful if a finer flavor could be imparted. And this is the fruit for invalids—the tree of life—if they will hunt and pluck for themselves.

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A wealthy gentleman of New England, given up by his physicians to die with consumption, as a last resort started for the West. On arriving at the prairies—Nature's great flower-gardens—he shunned doctors and men, camping out and living on wild fruits and simple bread. The result was that in three years' time he was a healthy, robust man, and could not be induced to give up his roving life; but he hunted and trapped, and would endure all kinds of exposure, never taking cold nor scarcely knowing fatigue. 'Tis true, good health is the first and greatest blessing we can enjoy, and second to this is congenial society—society of man. We have no sympathy with one who isolates himself from his fellows out of disregard for their fellowship. However much we may admire Thoreau, yet we have a secret feeling of chagrin that he should prefer the society of woodchucks to man. The remarks of the critic in The North American Review were to the point, when, in reviewing Thoreau, he said: "The natural man, like the singing birds, comes out of the forest as inevitably as the natural bear and wild-cat stick there."

Cultivation, too, has given us many varieties of grain. Almost innumerable varieties of maize or Indian corn have been produced since the landing of Columbus on these shores. We have early six weeks' corn, and later varieties that take a long summer to perfect, originally from the same species. These early varieties were brought about by taking corn as far north as it would grow, where in the course of time it learned to ripen in the short summers, and is sent back to us for early garden varieties. It is a very easy matter to hybridize corn, as every farmer knows, for the staminate or male flowers are at the summit of the stalk, and the pollen, at the mercy of the winds, may be carried to a distant cornfield, where, falling upon the silk or pistillate flowers, it produces a mixture often differing in color from either parent.

So the change in our vegetables is no less marked. The potato in its native wilds has scarcely a tuber upon its roots, but cultivation has produced untold varieties. The parsnip in its native state has a slender, poisonous root, but is made wholesome and nutritious by the abundance of saccharine matter deposited after years of care and cultivation. But this plant, almost more than any other, has a tendency to go back to its original or former worthlessness. If left to itself for only two or three years, about the garden fence or some other out-of-the-way place, the root dwindles in size, becomes hard, acrid and poisonous. Frequent cases of poisoning have occurred in families unacquainted with this fact. The cabbage is another illustration, which has no appearance of a head in its natural state.

But perhaps there is no more marked change in plants cultivated for use than in those for ornament. By cultivation the internal organs of flowers—stamens and pistils—are gradually made to pass into petals and thus become double. This is frequently carried to such an extent that all traces of sexual organs disappear—they have all become petals, and of course no seed can be produced. If civilization and high culture can thus affect plants, may it not affect the human family in the same way? May this not be the reason why so few children, comparatively speaking, are born among highly intellectual and cultivated people, while in the cabins and log huts of the poor we see swarms of children, the same as we do seeds among uncultivated plants?

The great natural order or family *Compositæ*, to which we are indebted for most of our autumnal flowers, is by far the most extensive of all the natural orders, embracing about nine thousand species, and always known by its heads of flowers and united anthers. They are distributed over all parts of the globe, but very unequally. According to Humboldt, in some of the countries of Europe and Asia they constitute but a very small proportion, while in tropical America and in some of the tropical islands they are full one-half of all the flowering plants, and on the Island of Sicily, according to some botanists, they are one-half. They give us but very few useful species, unless we call the horrid bitter herbs with which we were dosed in childhood useful, and which we never see without a sort of dread and nauseating sensation—as, for instance, thoroughwort, tansey, wormwood, camomile, and many others, whose medicinal virtues were formerly supposed to be very great. Latterly, most of these supposed medicinal plants are very much out of favor, and we do not see the great bundles of dried herbs in every well-regulated household as formerly. But some of our most brilliant and highly ornamental plants are found in this order. Our autumnal gardens would look dreary enough did not this family give us the splendid Dahlias, Crysanthemums, Asters, Zinias, Helianthus, and many others too numerous to mention.

The fields and waste places are no less indebted to this order for their autumnal decorations than our gardens. Especially the graceful Goldenrod, whose beauty and gracefulness has been the theme of poets in all ages. Over thirty

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species of Goldenrod decorate our roadsides and fields. The most pleasant species is *Solidago odora* or Sweet-scented Goldenrod. The crushed leaves of this species have a fine fragrance, similar to anise, and are frequently distilled for the fragrant volatile oil which they yield in abundance, and they have been used as a substitute for tea, and even been exported to China. As every body is supposed to know the Goldenrod, it is hardly necessary to speak of the flowers, for the divisions of calyx and corolla, stamens, pistils, fruit and seeds, are what we depend upon to determine the family and genus, but as we all know this belongs to the *Compositæ* family, and genus *Solidago*, we have only to look carefully that we do not mistake the species, which is determined by the leaves. The stem is from two to three feet high, the leaves linear-lanceolate, smooth and entire, with a strong, yellowish mid-vein, veinlets scarcely perceptible; but, above all, the fragrance of this species is so distinct from the others it can hardly be mistaken. It takes its generic name from the Latin *solido*, to make whole, in allusion to its then supposed medicinal properties; its specific name, *odora*, from its sweet-scented leaves.

But soon the frost will crisp and blacken these flowers, and we can only turn to our books and dried collections, of which I hope we have all secured a good supply, to study during our leisure in the long winter months.

[Written for The Herald of Health.]

A Homily for Ministers and Christians.

BY REV. DR. JOHN MARSH.

THERE is, it is believed, no portion of the Christian world in which religion has a higher and purer type than America. England, our fatherland, has, we know, ever been identified with extreme formalism, amid much true devotion. Scottish piety has been in another extreme—piety of the head more than the heart. America has placed her religion more in the affections—is more decidedly spiritual, seeks an abstraction from all that is visible and tangible. But is there not danger of an extreme, even here? May not we Americans become, even in our piety, so wholly spiritual as almost entirely to neglect the animal constitution, and bring injury upon ourselves and disgrace the very religion in which we glory? By what law is that minister of the Gospel or that professing Christian governed whose conversation is daily and literally in heaven, but whose mouth is filled with tobacco? who indulges two or three times a day in his cigar? or who, without any regard to the admonitions of those who understand their poisonous qualities, will be seen using in social and friendly circles alcoholic beverages? Paul tells us: "The body is for the Lord," and therefore it is as much a part of true religion to take care of the body as it is to take care of the soul—a strange doctrine; however, it is believed by not a few professing Christians. Temperance sermons were at one time viewed as an outrage in Christian pulpits. And the clergyman who should now deliver a discourse upon the Laws of Health, severely remarking upon a daily violation of those laws in Christian families—in their food, their dress, their labors, their parties and pleasures—would be considered in most congregations as forfeiting his ministerial standing.

In caring for the body there is, even among many good people, little or no conscience. They do not feel that they are responsible for what they eat or drink, or for what dress they wear or what pleasures they engage in; if the heart be right, if they have saving faith and make a good profession before many witnesses and give liberally of their substance, that is enough. But it is not so. We are to be temperate in all things and keep in subjection our appetites and passions. The body is for the Lord, and our bodies are to become temples of the Holy Ghost; and until ministers and Christians understand this better than they do, and care more for health and less for appetite, in vain shall we look for the suppression of intemperance and the reformation of inebriates; in vain shall we look for the disuse of tobacco and narcotics among our young men; in vain shall we expect a converting and sanctifying power in the pulpit and the Church, and in vain look for the coming of the glorious millennium. Let all, then, remember, "The body is for the Lord;" is to be subject to His law and trained for His glory. In neglect of this not a few good men live out not half their days. In our attention to it there is an increase of days, an increase of animal and spiritual enjoyment, a vastly increased usefulness, and an honor put on Him who has formed us, placed us in this beautiful world and fitted us for His glory.

GARMENTS of beauty may cover, but they can never impart worth to abandoned character.

WHY is the assessor of taxes the best man in the world? Because he never underrates any body.

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[Written for The Herald of Health.]

Health of Girls—No. V.

BY DR. J. H. HANAFORD.

THE compression of the chest is still another cause of disease and debility. The chest contains the heart and lungs, two organs demanding special space for exercise. Indeed, by nature there is just room enough for all of the internal organs and none to spare. If any are crowded, their usefulness, so to speak, is impaired, and none more than the lungs and heart. These, in the form given to the chest, are amply protected, bounded by firm bones, the ribs, breast-bone, spinal column, etc.—at least firm when fully matured. This chest, at birth, is large, ample to accommodate and protect its contents, the shape being adapted to its design. But that shape is wonderfully and sadly changed from its original conical form, with the larger portion down, inverting Nature's plan. Those who doubt this will please observe the chest of the infant at birth, notice the ample expanse of the ribs, particularly at the base, relatively larger in the female than in the male, for reasons that need not be specified. But, between the ages of ten and fifteen years, though some have supposed that the days of corsets, etc., have passed away, mark the wasp-like forms, so beautiful, and notice that this change occurs very soon after the miss begins to have some idea of "taste," diminishing in size, particularly at the base, at a very rapid rate just when the dawn of womanhood appears, when the chest naturally enlarges. Facts justify the assertion that the chest is relatively the smallest where it should be the largest, diminishing from birth. Now, this is not without a cause. A part of this is referable, it may be, to the tight bandages of infancy, worn sufficiently tight to cause discomfort, if not pain, and at a time when the bones—if such they may be called—are very yielding. At this time a slight pressure is sufficient to materially diminish the size of the chest; still, all of the mischief is not done at this time. A system of "tight lacing" is commenced in girlhood and continued systematically, though the pressure may be slight, so slight as to be regarded as of no importance. Yet such pressure, commenced when the bones are yielding and continued for a few years, is sufficient to produce the result—a sad result.

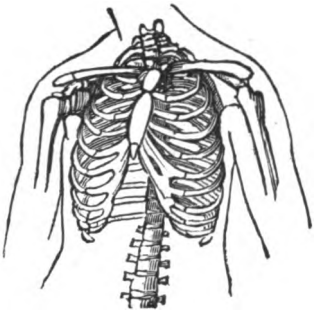
But the causes are of less importance than the results. Observation teaches us that the chests and waists of females are relatively smaller than those of males, while at birth they are larger, and ought to be, for sufficient reasons. If the chest is thus contracted, adequate room for the lungs, etc., is utterly impossible. If the lungs are in any respect compressed, the minute air-cells and passages—estimated by millions—become closed and adhere for ever, rendering a full inflation of the lungs, and a consequent full supply of air, utterly impossible. To understand the extent of the evils of such compression, it should be remembered that one object of breathing is to purify the blood by a contact with the air—or its oxygen—in the lungs, one of the most important means of purifying the blood. Indeed, this method is much more efficacious than the use of all of the sarsaparilla "blood-purifiers" that ignorant quacks have ever cursed society with, since this is Nature's own purifier, leaving no "dregs of impurity" introduced in the very process of purification. (Young lady, if you would purify your blood, use less salt, less "grease," less pork—the most abominable of all grease; less diseased animal food, etc.; it is difficult to use too little of such articles—and breathe as much as possible of pure, cool air, day and night, exercising sufficiently to throw off the waste of the body, and you will not only find an economical but also an effectual method.

Again, this compression of the lungs is among the many causes of pulmonary consumption, so alarmingly prevalent at the present day particularly among females—a disease that is consigning thousands of the fair buds of mortality, frail young ladies, to a premature grave annually, even in our own favored country. It is not necessary to state the physiological reasons for this result; yet, it is a fact that such pressure, closing the air-cells, etc., resulting in facilitating unhealthful deposits or preventing their escape, preventing the ordinary supply of air, etc. etc., is making sad inroads into the health of the future mothers, those now in the bloom of life. Indeed, this is a disease comparatively unknown in savage society—a kind of crowning glory (?) of civilization? It may be remarked in this connection that we are breathing an insufficient amount of pure air, even under the most favorable circumstances. We have too little fresh air at night in our sleeping-rooms, often almost hermetically sealed as a means of excluding the supposed "poisonous night air." Still others are breathing only about half the necessary quantity at each inspiration, partly from habit and partly from a compression of the chest that admits of only a limited supply. Nature has provided for and demands full, deep and copious

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inspirations of this grand invigorator and purifier—life-imparting, pure air, inviting full measure, "pressed down," enough to expand the cells, enabling them to eject irritating and poisonous deposits.

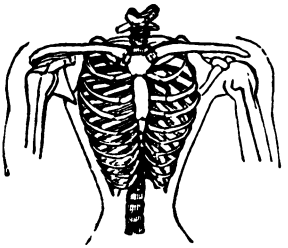
It has not escaped the notice of observers that there is a close connection between a large and well-developed chest and lungs and physical



A NATURAL WAIST.

power and endurance. If about to exert our strength to the best advantage we instinctively inhale a generous supply of air as one of the necessary means of preparation. The fleet animals, the most hardy, those enduring the most fatigue, etc., are those well developed in the chest, possessing ample lung-power. Human beings having such lungs are seldom the victims of diseases of this character, unless the result of accidental causes, such as breathing poisonous air and the fumes generated in some chemical works, or causes of a similar nature.

To be safe in this matter, to be sure that the lungs are in no danger of being too much compressed, it is absolutely necessary that clothing should be so loose that no inconvenience shall be felt by taking a free inspiration, full and deep. But very few, if any, fashionable young ladies can be found who are thus free to breathe



AN UNNATURAL WAIST.

the air of heaven without restraint. Most are so deformed, have chests so compressed, that the lungs contain only about one-half of the air necessary to meet the wants of the system. Many, far too many seek, by a daily compression of the chest and waist, to imitate the forms of the "fashion plates," which generally are mere caricatures of the human form as it came from the Great Architect.

Still another evil resulting from this insufficient supply of air—the food of the lungs—is connected with the heat of the body, or what is generally termed animal heat. A process is constantly going on in the system, an action connected with the relations of the air and waste parts of the body, by which warmth is evolved. Now, if there is an insufficient supply of air—and only large lungs can receive the necessary supply—if the blood is only partially purified, it is utterly impossible to develop a sufficient amount of heat to meet the wants of the system. Hence the "chills" of so many delicate young ladies, the purple cheeks, the bloodless lips, the shrivelled appearance, etc., are all indicative of an insufficient supply of natural heat. Hence the necessity of artificial warmth, the extra clothing, the hot soap-stones, etc., while the extremities are cold and pale, like lifeless remains, the blood having retired to the internal organs—almost congesting them—and the head, but from the same cause.

The remedy for such difficulties consists principally in removing the cause, enlarging the lungs by systematic full-breathing, throwing the shoulders back, standing erect, allowing full motion to the muscles of the chest, with such gymnastic exercises as are calculated to bring these muscles into action, enlarging the chest; or, still better, by useful labors, such as one of ordinary capacity may suggest, constantly bearing in mind that the object is to expand the chest and lungs, strengthening the muscles connected with them by appropriate exercise, breathing as much pure air as possible. Such a course would diminish doctor's bills and those of a similar character, benefiting young ladies more than those whose success depends upon the misfortunes and sickness of society.

REPRODUCTION.—A single grain of barley was planted by an agriculturist in the Isle of Man in 1862, and the same year produced 300 grains. These were sown, and the second year's produce was about half a pint. These were again sown, and the third year's produce was 14 pounds, which being again sown, have realized this year about seven bushels, covering a space of one hundred yards by five. Thus there have been produced in four years seven bushels of barley from a single grain.

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NEW YORK, OCTOBER, 1866.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

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TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D.

DEATH OF REV. JOHN PIERPONT.

OUR friend and contributor, Rev. JOHN PIERPONT, died at his home in Medford, August 26, 1866, at the ripe age of 81 years. Unlike most who live so long, he retained his health, vigor and usefulness up to the very day of his death. He was found dead in his bed on Monday morning, August 27, although he attended church the day before, and retired at night in usual health and strength.

Mr. Pierpont was born in Litchfield, Conn., April 6, 1785. He graduated at Yale College at the age of 19. Of his life, it may be said, it was a most useful one. He had that rare combination of talents which, while it made him reformatory, precluded the possibility of his being a "man of one idea." His tastes led him to occupy himself at different times with law, trade, teaching, mechanics, poetry, medicine, politics and divinity. His mind was "hospitable to new ideas;" hence, whatever in any branch of human life appeared to claim a candid hearing was sure to find in him a reasonable and ready listener. While pastor of the Hollis Street Church, in Boston, he made himself quite noted as a fearless advocate of the then unpopular Temperance cause. The following account of the feeling at the time is from the pen of one who is familiar with the facts:

"It chanced that several of the wealthiest and weightiest people in his church were distillers and spirit-dealers. To these persons the zeal and activity of Mr. Pierpont in the Temperance Reform, from its very commencement, were highly distasteful, and they led a party strong enough to prevent, for a long series of years, the payment of his salary, after they had vainly tried other means of getting rid of him. A majority of the pew-owners took this position, and held it, though a decided majority of the congregation were in favor of the pastor and his ideas. Since among these earnest friends were some who were able to advance him money, so that want of the means of subsistence should not oblige him to quit the field, Mr. Pierpont remained and carried on the war with vigor. Reduced to extremity, the rumsellers of Hollis Street made public complaint of their minister as neglecting his pastoral duties, and brought in evidence certain ingenious mechanical inventions devised and patented by him and publicly sold in connection with his name. The time and thought bestowed upon the invention of these articles, they averred, was so much unjustifiably withdrawn from their service, in violation of his contract as their minister; while the advertisement and sale of these articles, publicly connecting the name of a reverend clergyman with mechanical and commercial transactions, was a grievous derogation from his professional dignity!

"The published reply of Mr. Pierpont to the published charge above described, was one of the keenest specimens of sarcastic wit I ever saw. In regard to the charge of fraudulent withdrawal of time from the services of the parish, he said that it came with a very ill grace from those particular persons, who were very slack in their attendance on his preaching, and still more so in reducing to practice the truths he taught. But in fact there had been no neglect on his part, either of public duties or pastoral attendance. He had never failed them in either particular. But he had chosen to employ those hours and weeks of recreation which are admitted by all to be essential to bodily and mental health, in employments that combined use with recreation. He did not understand true dignity, either that of a man or that of a minister, to be infringed by any sort of useful activity. And he had the pleasure to find, by the commercial demand for those articles in use for daily household comfort which his care and skill had improved, that he had enlarged the sum of human happiness, and aided the material as well as the spiritual welfare of his generation. He then wittily described each of the articles in question, enumerated the advantages which his improvement had added to it, and mentioned the place where the improved article was for sale, assuring his critics that a fair trial of these things could not fail to convince them. His wit, and the soundness of his argument, turned the laugh of the whole city upon his assailants, who could revenge themselves only by withholding his salary for a time. The law ultimately compelled them to pay up the whole of it."

Mr. Pierpont's patriotism will long be remembered by all. At the age of 75, when the war for the destruction of the Union began, he im-

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mediately offered his services to Gov. Andrew as chaplain of one of the Massachusetts regiments, was accepted, and marched with the Twenty-second Regiment to the seat of war. The exposures of camp life, however, proved too severe a tax upon his powers, and he resigned. He was subsequently appointed to a clerkship in the Treasury Department at Washington, which post he held at the time of his death.

The following anecdote illustrates Mr. Pierpont's honesty—it is almost unexampled:

"The Rev. Mr. Stetson, in his address on the death of the Rev. John Pierpont, narrated the circumstances connected with Mr. Pierpont's business failure in 1861. Not daring to make use of money to which he had not a perfect right, he left his well-furnished and well-provided house in Baltimore, and, with his wife and children, rented a single apartment in an obscure portion of the city. His partner found him with much difficulty, and reminded him that there were funds in the possession of the firm which the creditors would expect them to live upon until the affairs of the firm could be settled. Mr. Pierpont promptly replied: 'No, not a dollar will I touch.' For three days he was almost without food, and during this time he wrote his famous 'Airs of Palestine,' which he carried to a publisher, who purchased it for the sum of five hundred dollars. This poem had great popularity, two editions being soon called for. Mr. Stetson stated that Mr. Pierpont was induced to use his inventive powers and to compile school-books to obtain extra funds for the payment of his business obligations. From these he was legally exempt; but the honorable and high-minded man regarded himself as morally bound to discharge them."

In his will, Mr. Pierpont gives a valuable lesson to professional men in regard to the habit of regular exercise as a means of relaxation and to preserve and educate the body. His turning-lathe, with all its fittings and equipments, chisels, files, etc., together with his tool-chest, he bequeathed to his step-son, Mr. Fowler, in consideration of the fact that he is skilled in the use of mechanical tools, trusting that they will be to him, as they have been to the testator, "a means of educating the physical organs and powers, of relaxation from mental labors, of general bodily health, and of amusement, both innocent and salutary."

As a poet Mr. Pierpont will ever be held in grateful remembrance by his countrymen. Many of his poems are familiar to every school-boy and school-girl, as they have been largely copied into the school-books of the age. They were always full of pathos and imagination, and rarely failed to convey a very important lesson of life. Several of these have been published in THE HERALD OF HEALTH, among the most recent of which is the one entitled "Nothing but Water to Drink." There is something in his verses that always touches the popular heart, and they are constantly being republished in the newspapers of the day.

The following religious poem from his pen was written to be sung at the dedication of the Congregational Church in Plymouth, which was built on the ground occupied by the first Congregational church erected in America, and gives a good example of his style:

"The winds and waves were roaring,
The Pilgrims met for prayer;
And here, their God adoring,
They stood in open air.
When breaking day they greeted,
And when its close was calm,
The leafless woods repeated
The music of their psalm.

"Not thus, O God, to praise thee,
Do we, their children, throng;
The temple's arch we raise thee
Gives back our choral song.
Yet, on the winds that bore thee
Their worship and their prayers,
May ours come up before thee
From hearts as true as theirs!

"What have we, Lord, to bind us,
To this, the Pilgrims' shore!
Their hill of graves behind us,
Their watery way before,
The wintry surge, that dashes
Against the rocks they trod,
Their memory and their ashes—
Be thou their guard, O God!

"We would not, Holy Father,
Forsake this hallowed spot,
Till on that shore we gather
Where graves and griefs are not;
The shore where true devotion
Shall rear no pillared shrine,
And see no other ocean
Than that of love divine."

Probably the last writing he did for the press was the letter written for and published in THE HERALD OF HEALTH for August concerning his personal habits.

While his memory will gladden the hearts of thousands, who only knew him to love, his bright spirit has gone to the summer land to be for ever at rest.

EXHAUSTED COAL FIELDS.—The English people fear the destruction of their nation by an exhaustion of her coal fields. They had better fear its destruction by physical vices such as knowledge would remedy. If coal gives out, they will find abundance of it in America for generations to come; but if their habits of dissipation should ever become so bad as to ruin the race, there will be no remedy.

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THE CHOLERA.—The cholera has now nearly disappeared from New York; indeed, it has not raged here with great violence during the past season. The number of deaths has been considerably less than one thousand. There is much to learn from its visitation, which, if people were wise, they would put in practice. There is no more necessity of these occasional visits of cholera to our shores, than there is of the regular visits of alligators and the fierce serpents of the torrid climes. They only come because we have such depraved ways of living; so many foul basements and tenement-houses; eat so much constipating and obstructing food; breathe so much foul air, drink so much liquor, and bathe so infrequently. The very habits of life which render one liable to this disease, are those which, when cholera-poison is not present, produce other diseases, or such debility and weakness as render life very imperfect and uncertain. The lesson people can never learn is that these visitations come in consequence of violated organic law; and that it is infinitely better so to eat, drink, sleep and exercise, and to so construct our houses and clean and drain our cities, that they shall be proof against pestilence.

Sordid people think money is made by grinding down the poor and giving them little chance to live cleanly, comfortable lives; but there is no surer way to depreciate property in any part of a city than to debase its inhabitants by poverty or sickness; nor any surer way to increase it in value than to improve the health and home surroundings of the population.

We owe much to the Board of Health for their earnest efforts to put the city in a better sanitary condition. They seem to have taken hold of the tail end of the Hygienic system of treatment, so far as preventive measures are concerned. For this let them have due credit. As regards treatment, they have little to boast of. Under the regular treatment about sixty per cent. have died. This is not a very creditable record to maintain by the physicians of that medical school which boasts of its origin and its antiquity, its respectability, its facilities for medical culture, and that, too, in New York, where the talent of the profession reside. Homœopathists, on the other hand, whom the regular profession will not allow to control even one ward of a cholera hospital, get, perhaps, their proportion of cases to treat, and, if we may trust the reports, they lose less than the regular profession. Indeed, a leading New York weekly declares that nearly all patients treated Homœopathically recover. It can hardly be said that the Hygienic physicians treat many cases, but they do some, and the results have been more favorable than by any other practice; and so it ever will be. Cholera is a disease pre-eminently of filth and unbalanced circulation and action. And the Hygienic system has for its chief end and aim cleanliness, a regulation of irregular and unbalanced action, and good nursing. The day has not quite come for the full realization of the benefits of this system to the people; but just as soon as the car of progress advances and people become educated, and understand the relation which drug-poisons have to the human system, just so sure will they cease to take them or employ physicians who give them. The signs of the times plainly show that this day is coming more rapidly than we are aware. Let those who are interested in human growth and progress, and particularly in medical reform, which lies close to all other reforms, do all they can to help on this golden day.

GRAPES.—Horace Greeley, in writing from Vermont about the destruction of the apple-trees by insects, multiplied because of the destruction of birds by cold winds, and augmented by the destruction of forests, says:

"We must try to change this; but, for the present, I ask attention to the multiplication and diffusion of choice vines. The grape, under skillful culture, is a surer crop to-day than almost any other delicate fruit, the strawberry only excepted. Experienced growers say that grapes may be grown, wherever they thrive at all, for the price of wheat, pound for pound; yet, while wheat scarcely averages four cents per pound to growers, grapes can almost always be sold at double that price. We can start the vine and enjoy its fruit within three years; whereas at least thrice that time is required to bring an orchard from infancy to maturity. Our farmers and mechanics, their wives and children, but especially our farm-laborers and day-laborers generally, ought to eat far more good fruit and far less salt meat—and they can not until fruit becomes far cheaper and more abundant."

INFLUENCE OF MEDICAL PRESCRIPTIONS ON PLANT-LIFE.—"Competing for a prize in Experimental Physiology, a French observer has recently ascertained that plants are far more sensitive than animals to poisons. Even citric and tartaric acids, in very dilute solution, kill the plants that absorb them. So do many substances, as very dilute mixtures of alcohol and ether. Quinine and anchomine will stop the growth of a plant and often kill it."

Probably plants have not got so used to being poisoned as men. Let poisoning be practiced on plants for a few generations, and perhaps they could endure it better.

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FEVER AND AGUE.—During the autumn, in malarious districts, this disease is always prevalent in a greater or less degree. Whether the recent discoveries by the microscope have disclosed the true cause of it has not yet been decided with certainty; suffice it to say, its cause is in some way connected with those changes in vegetable matter which are produced in low, wet regions, near marshy swamps and ponds, where vegetation is vigorous and its decay rapid under a hot sun. It is not our purpose now to go into a minute history of the disease, or the various remedies which have been vainly tried to prevent and cure it. Its history is written indelibly in the shattered frames of ten thousand pioneers and their families, who too early emigrated to the Far West, and placed too much dependence upon drugs for a cure. It has never been considered a dangerous disease, as it rarely terminates in death; but if it does not kill outright, it is a disease which produces very great suffering, more so than many others of a fatal character. It has been described as a monster seizing his victim, chilling and shaking him with a cold no fire can warm, burning him with heat to the other extreme, and finally melting and sweating him into a temporary relief, lasting for one, two or four days. Really, the disease is not a monster at all, but a peculiar kind of remedial effort on the part of the system to rid itself of the poison that has been introduced into the body, either through the lungs or by means of the water and food taken into the stomach.

In speaking of this disease we shall discuss, firstly, its prevention, and, secondly, its cure.

PREVENTION OF FEVER AND AGUE.

As it is caused by a poison which, taken into the body, is acted on by the vital energies, the question is, How can we avoid it? We can not prepare for it as we do for visible danger, but, if people would be more careful in selecting their homes, and to avoid such as are known to be malarious, they would succeed quite effectually in preventing the disease. We are never so careful as we should be in choosing our homes that they may be healthful. There is great recklessness of life and future happiness manifested by nearly everybody in choosing the place where all their joys and happiness should culminate, where their children are to be born and reared. Many of our largest cities are located on low, wet ground, which can never be healthful. So serious is this matter becoming, that the eminent Dr. Bowditch of Boston says, in an essay read before the Massachusetts Medical Society, "Now, the track of a railway, or the wit or reckless energy of the owner of some swamp may be the sole reason for erecting a station-house, and thereby promoting the erection of dwelling-houses near by, in localities totally unfit for human habitation." He thinks the Government should not allow the health of its inhabitants to be tampered with in this way, but should prevent it by suitable legislation. There is much force in his argument. A home should be chosen with even more care than in buying a horse or building a railroad. Above all things, it should be sunny, dry, airy, away from swamps, and furnish pure water. Another way to prevent ague is to keep the standard of health high. Whenever men gormandize on constipating food, pork, grease and all the abominations which are generally found on our tables, they are, if exposed to miasma, more likely to contract ague than where proper care is taken to have only healthful food to eat and *pure* water to drink. Many a case of ague is cured by proper attention to diet and bathing. If the bowels do not become torpid, the liver obstructed, and the skin inactive and feeble, there is less danger from exposure to ague-miasma than where all these conditions are combined. A system obstructed by imperfect depuration seems to furnish a very suitable place for planting the seeds of fever and ague, while a clean, healthy system, on the other hand, is rarely liable to an attack. This is certainly a very strong argument in favor of cleanliness, internal as well as external.

There is one point regarding our habits that, in regions where miasma abounds, we ought to guard against—it is night-exposure. Then, more than at any other time, are the atmospheric causes of this disease present. There should be no needless exposure to night air in fever and ague localities. We by no means mean by this that persons should sleep with closed windows, but that they should keep from places where the poison exists. It is much better to sleep on the side of a house where the sun shines, and an upper room will be more free than a lower one from bad air. The practice of sleeping in rooms on the ground floor, in either city or country, is bad; the higher up the room the better the air. It is also a most excellent plan to have an *open* fire in our sleeping-rooms in malarious districts, not so much for heat as for dryness. With fire, ventilation can be made more perfect. If it be true that malaria is only microscopic fungi, as has lately been argued by scientific men, it will be very plainly seen that a fire in a room may entirely or partially destroy the germs, or pre-

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vent their development so as to render them harmless.

THE CURE OF AGUE.

Of course, it is very desirable in treating this disease to get the patient away from its immediate cause to where the air is pure and the water wholesome. The special treatment is quite simple and generally very efficacious—balance the circulation and counteract the leading symptoms. The chill should be treated by warm applications, and the fever by cooling ones. Hot foot-baths, fomentations to the abdomen, bottles of hot water to the sides, arm-pits and down the limbs, will be found excellent. When it is possible to put the patient, at the beginning of the chill, into a hot bath—as hot as he can comfortably bear, and have active friction applied to the entire surface until the skin is red and in a glow—the chill will generally be very much lighter, and probably not be felt at all.

The hot stage should be treated by tepid ablution, the wet-sheet pack, or, if the patient is strong, the cold effusion. Give only such cooling drinks as water, lemonade, the juice of fresh oranges or ripe grapes.

The intermission of the paroxysm should be treated with quiet, rest and good nursing.

The diet should be rather abstemious and principally of mild acid fruits. Fresh, ripe grapes will themselves, if used in moderation, often without other treatment, cure ague. It is possible that other fruits might prove equally beneficial. All greasy food, or that which is hard to digest, or constipating to the bowels, or obstructing to the liver, should be scrupulously avoided.

We might in this connection speak of the use of the Turkish Bath as a means of curing ague, if it was more commonly adopted in our houses. It will probably be found, when tested on a large scale, as it has already been proved in a number of cases, to be the most complete and perfect bath for this disease. This bath might be constructed in every house in the country, at small expense, for family use; and, when rightly appreciated, we have no doubt it will be as necessary to every well-regulated house as a pantry or kitchen.

In regard to the drug treatment of the ague, we only need say it is producing thousands of chronic invalids all over the West; the children of whom, as we have hundreds of times had occasion to observe, are feeble in constitution, dwarfed in stature, and likely to prove much less perfect men and women than they otherwise would be. We are thoroughly satisfied that a wise Hygienic treatment of ague will more perfectly cure the disease than drugs, and without danger to any person's future health.

"LOOK TO THY MOUTH."—A friend sends us the following poem, which is slightly altered from one written by that good and Christian philosopher, George Herbert, who was cotemporary with Lord Bacon. It was our good fortune to be presented with Herbert's Poems by the first patient we ever treated. They are full of rich sayings, some of which we shall, perhaps, some time give to our readers. The idea inculcated in the following poem is that sociality at the table is a preventive, in part, of over-eating; also, that men, like the planets, ought to live by rule, and that it is necessary to keep a guard on our passions. The style is quaint, but none the worse for that:

LOOK TO THY MOUTH.

Look to thy mouth, diseases enter there;
Thou hast two sconces: if thy stomach call,
Carve or discourse; do not a famine fear.
Who carves, is kind to two; who talks, to all.
Look on food, think it dirt, then eat a bit;
Then say withal, "Earth to earth I commit."

Slight those who say amid their sickly healths,
"Thou livest by rule." Who does not so but man?
Houses are built by rule, and commonwealths.
Entice the trusty sun, if that you can,
From his elliptic line; beckon the sky;
Who lives by rule, then, keeps good company.

Who keeps no guard upon himself is slack,
And rots to nothing at the next great thaw.
Man is a shop of rules; a well-trussed pack,
Whose every parcel underwrites a law.
Love not thyself nor give thy humors sway,
God gave them to thee under lock and key.

GOITER IN AMERICA.—Dr. J. Green, referring to our note on Goiter in the July HERALD, mentions several cases that came under his observation which he thinks were caused by bad water. He says:

"I then ascribed the complaint to the use of water extensively saturated with lime, as snow-water was not drank there. It was frequently melted for washing purposes, as the water in the brooks was so saturated with lime that it could not be used to advantage. Or did any other cause exist that I could discover to produce that diseased action, as in Switzerland and Savoy, where the absence of light may engender idiots, mind being dependent on light? I then considered it peculiar to that section of the country, and not at all prevalent in any other part of the country."

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MUSCULAR CHRISTIANITY.—Nature, having furnished every human being with two hands and one mouth, plainly teaches the lesson that we should work twice as much as we eat—that it is our bounden duty to earn our dinner before we eat it. No man is so rich that he can afford to be idle, because indolence is a violation of the physical laws, and one which is sure to be followed by severe punishment. The circulation of the blood will not be changed to suit the convenience of the millionaire, and there is not wealth enough in all the world to purchase a new digestive apparatus for the diseased stomach. Sickness indicates a transgression of the laws of health, "and a foul stomach, as well as a wicked heart, is an abomination to the Lord." We believe in the gospel of health. We have faith in muscular Christianity. We do not hesitate to ask our parish of readers to row, ride, sail, walk, run, leap, swim, climb, shout, sing, box, and perform feats of ground and lofty tumbling; even if by doing so they can banish the blues, aid digestion, sharpen appetites, and promote health and longevity. Pull an oar on the river; take a turn in the gymnasium; leap into the saddle and shake up the juices of the body; spread a sail to the wind, and let the air fan you with its invisible wings. When you knock down the nine-pins they must remind you of the ills that flesh is heir to; the ball is a mere pill, which you take outwardly for the removal of disease. There is not a shadow of truth in the old notion that a pale face is the sign of piety, or that a long one is a guarantee of a good heart. It is no sin to be muscular, to have a broad chest, to wear a healthy countenance, to have a good appetite and good digestion, and to be able to sleep soundly. The slave who prayed with his feet found freedom, for which he returned thanks upon his knees. There is physical salvation in air and light and sunshine and exercise. There is religion in labor, and the devils will be cast out of the stomach and the blood of the invalid if he follows the example of Christ, who *went about* doing good. A clear head, well poised over a clean stomach; a warm heart, with a vigorous circulation; a stout arm, with a strong fist at the end of it, are certificates of obedience to law. Away with the idea that white lips, and weak eyes, and narrow chests, and feeble lungs, and aching backs, and dizzy brains and attenuated limbs are favorable to the growth of piety. We are to love God with all our heart and soul and strength, and the more heart and soul and trength we have the more we can love God. When a man carries in his face a certificate of gluttony or drunkenness or lechery we read his character without an interpreter, and know that he tramples upon the laws of Nature. Let us beware—there are other methods of breaking the laws of our being. It is a sin to sleep in an unventilated room, when you have strength enough in your fist to break a pane of glass or knock a hole through the wall. The atmosphere is forty miles deep, and he who shuts it out from his lungs need not envy the donkey its redundancy of ear. It is a sin to cram the stomach with indigestible food, make it a nest for breeding sickness and disease. Instinct, which is the reason of brutes, teaches the cattle to do better than those human beings do who make their systems the receptacles of whatever can be pulverized or melted or torn to pieces, risking digestion, as a client does a bad case, in the court of chancery.

LETTER FROM GERRIT SMITH.—We recently asked Gerrit Smith to write us an article on the effects of bad habits, such as smoking, chewing, drinking, night-sessions of Congress and dissipation upon legislation. We did not get the article we desired, but we received the following epistle, which we share with our readers:

"PETERBORO', *August* 29, 1866.

"MILLER, WOOD & CO.—*Dear Sirs:* I thank you for the July and August numbers of your very useful periodical, and for the honor you have done me in inviting me to write for it. I regret that I can not accept your invitation. My excuse for not accepting it is, that I am an old man (in my 70th year) and am hurried with labor.

"But you do not lack writers. Some of our very ablest writers are at your service. How sad that the pen of dear John Pierpont has fallen from his hand! I read with great pleasure his article on Personal Habits!

"Please continue to send me your periodical. Inclosed are two dollars to pay for a year's subscription.

"Respectfully yours,
"GERRIT SMITH."

SCIENTIFIC NONSENSE.—The scientific column of an exchange contains the following bit of scientific nonsense:

"PRODUCTION OF QUININE IN THE BODY.—It has recently been ascertained beyond a doubt that there exists in the bodies of man and animals a fluorescent substance nearly precisely identical with vegetable quinine. This newly discovered substance of the animal body is called animal quinoidine. The discover suggests that the injurious effects which sometimes follow the taking of a dose of quinine may arise from its doubling the quantity already in the system."

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WOMAN'S DRESS.—The New York Tribune, which is not afraid to speak favorably on any subject it thinks right, has the following on Woman's Dress:

"The Quaker who wears a broad-brimmed hat, the Sister of Charity, with her white hood, have conscientious rights which fashionable men and women are bound to respect. The man who works in his shirt-sleeves on a warm day is to be excused on account of the weather. There is a cool plea for all the fashions of Saratoga and the breeziest watering-places; but the woman who intended to protect her modesty by wearing a dress not quite in fashion, shocked the fine nerves of a Metropolitan policeman, and would have done a very wrong thing had not Commissioner Acton decided in fact that a woman has a right to dress as modestly as she can. No one doubts that the garb worn by Dr. Mary Walker is more modest and comfortable than the one in vogue, though not, perhaps, so handsome. But, if ladies can not go to the sea-shore, can not fully enjoy a country ramble in vaction time, or ride on horseback, or go up into high places without suffering exposure and entanglement from a dress which can be worn safely only in the house or on promenade, who should complain if women rebel against the dressmaker, just as Nature itself protests against the dress? 'Norah Creina's gown' might have been very poetical; but, as we infer from the poet's language, it was a very bad one for mountain breezes. It is almost idle to talk of hygiene, and dumb-bells, and gymnasia for girls, when woman herself has so little liberty for out-door exercise, enjoyment and travel.

"In short, we respect the present Woman's Dress Reform as a protest from the modest. So long as the prevailing fashion is condemned by every lady physician who has worn it, what shall men say? We observe, too, that the strong-minded are not the greatest sufferers by it—it is the signal and shroud of the weakness of the weakest. How does it suit the daily task and slender purse of a woman who must work like a man for less wages, and pass through crowds of man loungers on her way home? Why should not these things be said and discussed? It seems to us that the future is not far off, when, if the plea of toiling and sorrowing woman be heard, new opportunities must be given her; and, accordingly, she must dress herself for more earnest tasks, and, for her own sake and man's, bear him more constant company."

COOKING VEGETABLES.—Professor Blot speaks, in one of his articles on the art of dining, on cooking vegetables as follows:

"Dry vegetables, like beans, peas, etc., should be put over the fire in cold, soft water, after having been soaked in lukewarm water—beans for twenty-four hours. Potatoes should be steamed but never boiled. Steam with the skin on. Bear in mind that a potato must never be peeled; the part immediately under the skin contains the most nutriment. Cut out the germs or eyes, if any; if young and tender the skin can be taken off with a scrubbing-brush; if old, scrape the skin off and then roast them. In selecting potatoes, remember the smaller the eye the better the potato. By cutting a piece from the thickest end, you can tell whether they are sound. They must be either white or pink, according to the kind. Always select beans without spots. Mushrooms should be selected with great care. It is better and safer never to use them when they are old; this can be told by the blackness of the comb underneath, before picking; when young it is of a pink color."

In regard to the use of vegetables he has the following, together with a savage hit at Vegetarianism:

"Although I am strongly in favor of much vegetable food in the spring and summer, I am by no means an apostle of the Vegetarian creed—Graham bread and like eccentricities. I pity persons of that persuasion, but have no wish to imitate them in spite of the proverb:

"'First learn to pity, then embrace.'

"The mind has its diseases as well as the body, and I think Vegetarianism is one of them."

We presume Vegetarians will not object to allow Prof. Blot to have his fling at them, although it is founded in ignorance. There are many arguments in favor of an almost or quite exclusive vegetable diet as the best food for man, which it is more easy to get over by such assertions than by argument.

LETTER FROM AN OLD MAN.—We have in our drawer several letters from men nearly one hundred years old waiting for publication. We give in this number the following from Austin Johnson of Rupert, Vt.:

"PUBLISHERS OF THE HERALD OF HEALTH—You, in your last, speak of my communicating what I might have that was interesting. In this, there perhaps was reference to my bodily state and habits. As to that, I have only to say I have been a good deal infirm through life; yet it has providentially been so ordered that I have taken but little drug medicine to poison the system. I never used alcoholic beverages habitually, and have long since discontinued their use entirely. Tobacco I have had no fellowship with. Hot drinks were never much of an object, and for years have been rejected. Flesh food is but little used—pork never. But ter has been set aside. My bread is made of unbolted grain—the object is to subsist by means of plain, wholesome food. Thus living, my stay on earth is protracted (I am now in my 80th year), and I think dieting has a connection with longevity.

"Yours truly, AUSTIN JOHNSON."

SKIN DISEASES.—Skin diseases have often enough been attributed to parasites. A medical authority, however, more rationally declares they are caused by filth and bad habits, the parasites taking up their abode in the filthy person as soon as the egg has been deposited.

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"The observations by means of the microscope of Mr. Hogg afford proof that vegetable parasites do not, as hitherto supposed, produce disease of the skin, but that when certain diseases already exist, germs of those floating about in the atmosphere, finding it a suitable soil, greatly aggravate or even change the type of disease. These diseases have long been believed to be associated with neglect of person and bad air; but Mr. Erasmus Wilson, who has written several books upon skin diseases, states that in an unhealthy state of the body the renewed epidermis is unhealthy. Therefore, the cutaneous diseases are never caused by parasites."

EFFECTS OF ALCOHOL.—If the effects of alcohol could be confined solely to the person who uses it, its use might be tolerated; but as it is not, we can not wage too fierce a war against it and tobacco, its elder brother. Both, when used, are enemies to the race, and their effects are visited too often upon the children of those who use them. Dr. Jolly rightly pictures it:

"In every country the statistics of the amount of alcohol imbibed precisely correspond with the number of judicial sentences recorded in law reports of the year, as well as with the number of poor, of beggars, of vagabonds, of divorced husbands and wives, of idiot children, of suicides, murders, and of epileptics and lunatics inscribed on State registers."

SALT.—Our friend and subscriber, S. Howe, writes that he is 70 years old, and that he abandoned the use of salt thirty-five years ago; that he enjoys life now as well as in his younger days; that there are few boys who can go through more vigorous gymnastic exercises or dances than he. He concludes his letter with the following:

"I am fully convinced that had I continued using stimulants and condiments with my diet, I should have been in my grave years ago."

A PROMISE WE HOPE WILL BE KEPT.—

"HANCOCK SCHOOL, BOSTON, MASS.,
"*September* 3, 1866.

"*Dear Sir*—On my return from a pleasant vacation among the mountains and valleys of New Hampshire on Saturday, I found among my letters yours of August 11. You allude to my notions on school punishment. I am a radical, and conduct a large school (having nearly twelve hundred pupils) without the ferule or its equivalent, or the common scold or its spirit in any form. In October or November I may find time to place my views on paper. If they would be of any service, I know of no better organ for their dissemination than your valuable journal. As Editor of The Massachusetts Teacher for years, I have read THE HERALD OF HEALTH, and think it one of the most sensible and useful magazines in the United States. You are doing good, and may God bless you.

"Very sincerely, W. E. SHELDON."

Miscellaneous.

[Written for The Herald of Health.]

The "Mild Hunger Cure" for Cancer.

BY REV. H. N. STRONG.

IT was in the latter part of August, 1864, when Mrs. Strong and myself were making a short excursion into Crawford County, that I noticed an uneasy sensation near my left ear and in close proximity to the point of the jaw. There seemed to be a slight swelling and a little pimple. It increased in size as rapidly as a boil, but soon had an appearance reminding one of an acorn, having a rim around it on the outside, then a depression, and a rising again in the middle. I kept on it most of the time a salve prepared by Mrs. L*****, who is known to be a woman of medical skill and experience. As far as any external application effected any thing toward a cure, let that have the credit. I changed twice to other external applications, but can not say that I perceived any difference in the effect, but the application first spoken of was most convenient, and I thought it had a softening effect. It was also necessary to keep it covered, as it soon had an offensive smell when uncovered, and discharged matter, apparently, from different points in the ulcer. It was also necessary to keep a handkerchief or other bandage under my chin and over my head, as the discharging matter would otherwise loosen the patch that was on the cheek. As the autumn months passed away it was noticed by several persons, and was spoken of as a cancer. Cancer doctors were recommended by some. I was told of some that effected a sure cure for fifty dollars. I once showed it to Dr. Hyde of Lancaster, who is known to be an educated and skillful surgeon and physician. He exclaimed, "That is a bad thing!" I replied: "I suppose so, but not the worst thing in the world." He answered, "I don't know."

A little after I was in Hazel Green, at the house of Mr. York. Mr. York's physician then saw it and gave the same decision. Mr. York, a druggist, furnished me with a vial of iodide of potassa, which I was to take as an alterative preparatory to eradicating it, either by the knife or a caustic application. This was by Dr. Jenckes's prescription.

On my way home I called with Mr. John Jenkyn, who read to me in the "Hydropathic Encyclopedia" (I think) concerning cancer. What most arrested my attention was "The

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Hunger Cure." A work of Dr. Lamb on "pure water and vegetable diet" in case of cancer was referred to. I read two other medical works on cancers. I took the alterative—I abstained from meat and butter, and tea and coffee. I sent for Dr. Lamb's work and read it attentively, but must say the additions by the American Editor were the most satisfactory to me.

In December I took the charge of a small school a few miles from home. In January the appearance of the cancer was worse than ever before. The lancinating pains were more severe. I was advised to make no more delay. One says: "You had better sell your little property, if it is necessary, to raise the money. What," says he, "is fifty or sixty dollars in the case of such a thing as a cancer." But it was fixed in my mind that a cancer doctor was, to say the least, about as much to be dreaded as a cancer itself. Now I thought I had a right to be my own doctor, and I reasoned thus: This ulcer is an enemy; Nature is a friend that is fighting the enemy. How shall I best aid Nature in the contest? The answer seemed plain: Only cut off the supplies which the enemy gets and notice the result. But, I am told, Nature calls for nourishing food, and enough of it; yet, in that case, the enemy appropriates so much as to gain strength and give increased trouble. I have taken the alterative; I have been abstemious, but the enemy gains strength. I wash it twice a day and keep on a salve, yet the prospect is gloomy as ever. One man in this place had died with a cancer near his ear. I now resolved I would adopt the "hunger cure." Accordingly, I had my wife bake corn-bread for me; at first it was about one-fifth flour and four-fifths corn-meal. This was my food and cold water was my drink. I took rations for five days when I left home for my school, which was sometimes on Sunday evening and sometimes on Monday morning. As to the bread, it was once made entirely of corn-meal, but generally a small amount of flour was mixed with it. It was baked so as to make as much crust as convenient. I warmed it on the stove at the house where I stayed or at the school-house, as might happen, and so it was harder and harder as it became older. Fortunately, I have twenty-eight pretty good teeth given me by Nature. The first week Nature seemed to say: I can appropriate all of this, and the enemy can not get any. Every night and morning I washed the sore carefully with soft water and castile soap. I could not see it, but I had a feeling of encouragement, and when I reached home on Friday night one of my daughters soon came to wash and dress it. She made an exclamation of surprise and joy at its altered appearance, which was so much for the better. In short, by thus withholding supplies from the enemy, and taking no more than Nature could appropriate, possibly not near so much, and persevering about seven weeks, the cancer was all removed and a perfect cure effected. I used to go as often as I could to visit a friend who always furnished me mush-and-milk for supper. At first I took less than half a pint of milk and but little mush. This I did not more than three or four times in the seven weeks. My wife also put up, two or three times, a little dried beef and two or three crackers. This was not my choice, but I took what was provided. But the corn crust relished better than any thing else. If I had been supplied with good Graham crackers I should have been satisfied; but I knew that crackers or bread made of fine flour would not answer. My stomach and bowels appeared to be in good order; I was hungry all the time, and evidently became weaker. My school was not very laborious, and I did not lose a day. "But," says one, "why call it the 'Mild Hunger Cure?'" Because I took so much good food and drank just as much cold water as I wanted. Had I not been engaged as I was, and had determined on the "Strong Hunger Cure," I might have taken two or three crackers, three times a day, and drank nothing for some hours after eating. As it was, I suppose I averaged about as much as four large crackers three times a day, and drank water from the spring whenever I felt like it. I am sure that in my case the "Mild Hunger Cure" proved to be effective.

It seems to me that I ought not to close this communication without mentioning the cost of cure, though there are those who would prefer one that cost a hundred dollars to a cure that required hunger and saved the money. The man with whom I lodged and boarded till I determined on the corn-bread rations, in consequence of my course, threw off ten dollars from his bill. But, to be particular, I can not say that ten dollars was saved, for what I took from home cost something. It need not be estimated at more than five cents a day. Twenty-five cents a week for seven weeks would be one dollar and seventy-five cents.

The book (Dr. Lamb's, above referred to) cost me	$1 50
Cost of the seven weeks, ...	1 75
Total amount, ...	$3 25

Which, deducted from the ten dollars thrown off from my board-bill, leaves six dollars and

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seventy-five cents actually gained by the "Mild Hunger Cure;" not to speak of the fifty dollars' fee to a cancer doctor saved by being my own physician, I was at the time in my sixtieth year.

LANCASTER, Wis., *July* 25, 1866.

[Written for The Herald of Health.]

A Prevailing Malady.

BY F. G.

We meet pale faces and sunken eyes constantly. This shows an error. The error is in the abuse of the common diet of life; not always, but generally. Too much food is the great evil of the day, because it is so very common and has its allurements—we gratify and eat too much. This is the main cause of the pale faces and haggard countenances we meet. The remedy is simple: Eat less. And yet who does it? Few, because it requires moral courage, just the thing which is affected, which is part of the pale face and sunken eye. The dyspeptic is diseased mentally, morally and physically. Of all beings the most miserable is the confirmed dyspeptic. His mind is disturbed, his moral feeling is blunted and disordered, and his body suffers. For what is he fit? He is fit for nothing, not even for "stratagem and spoils." He drones his time away—years, a score sometimes—and his whole life is a blank. If that were all, it would not be so bad; but it is a most wretched, miserable blank, full of vapors, gloom and forebodings. The mind is the torment of the man, making appear real what is unreal, and exaggerating evil. The little good that the man gets is also exaggerated, and this puts him all around in a false position. His judgment is not reliable, though once so correct; his imagination plays tricks with him, deceiving him constantly by magnifying its doings. In a word, the man is morbid—mentally, morally and physically. It took him long to get into this state. He got into it by degrees, almost ere he was aware. Ah, the insinuating habit of alluring the system, which God had made right, but which man is wronging constantly! This great evil is all brought about by littles—a little excess which breaks the back of the camel. Here is the danger. And here is the remedy: Avoid the littles—the little excesses; they seem to be always at the end of our meals. Then cut off that end—that cup of tea or coffee, that dessert or other dainty. This course would generally succeed.

We *must* guard against the excesses; nobody calls them such. At the time they may give rise only to a little uneasiness, a little headache or sluggishness of feeling. The brain acts less, as it always does when oppressed, overstrained; as it does through the sympathetic channels. After awhile these symptoms will cease, and the eyesight seems to be clouded momentarily; the man will soon be prepared to re-enact the same thing. By-and-by, in the course of his persistence, there will be more uneasiness after his meal, greater headache and dullness. There will be other symptoms gradually stealing upon him. There will be slight pains here and there; beginning, perhaps, in his chest; felt between his shoulders and in his left side. He will gradually become nervous, lose flesh—though not always at first—his hearing is affected, there is a ringing and other unusual sounds, which sometimes greatly frighten him. Sometimes he even will get dizzy and almost fall. He is apt now to have bad sleep and worse dreams, so that night becomes a dreaded time to him. Society begins to be distasteful to him; sometimes he seeks it as if to get rid of the evil that follows him. But he can not shake it off. It follows him because it is himself. These unpleasant accompaniments increase; they increase both in intensity and in number. New symptoms are constantly evolved, new evils attack, until the individual is a walking load of evils. At last he becomes confirmed. And now it is as difficult to remove these evils as it was easy to get them, and it takes as long often to do it. Why does it take so long? It seems to be in the nature of the case, perfecting the work by slow process. But it is the long weakening, the constant sapping, that at last undermines, and establishes, as it were, a second nature.

The difficulty in removing this evil is in the moral courage of the man; he has it not. Though he may resolve a thousand times, a thousand times he breaks his resolve, or rather it breaks itself. It is so difficult to resist, when you have nothing to resist with, no courage or a momentary thing, only seeming strong at the time (when the resolve takes place), but impotent when the trial comes. So the drunkard, he has no strength of will left, and the dyspeptic is but a drunkard in another sense.

What, then, is to be done? for this is a great evil and must be met, if possible. The remedy is, put a watch and tie upon the man; he himself is not capable of doing it. Or you must leave him to himself, to the risk of becoming worse, and perhaps of dying, or, if he has self-regard left, to be forced into reformation. He may prefer mending his ways to a worse evil—to dissolution, for death has sometimes horrible

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pictures for the stomach-ridden invalid. Medicines, the world has long since decided, are of no good in dyspepsia. They may aid in some respects, as time aids, but always at the expense of original power. Time and medicine will kill any man prematurely. The poor afflicted patient must, first of all, remove the cause. He may have been doctoring for years, piling evil upon evil, while the cause, "like a worm i' the bud," remained. This is a double abuse of poor nature. Throw aside this incubus, the whole of it; stop aggravating the wound it has made; lessen your food, which a false appetite urges you on to partake, and flatters you that all is right—it is the false "syren song" that accompanies all dyspeptics.

Break off, then, what should never have been indulged in—the little excesses of the table. If you are a laboring man, more food will be required; less if a man of sedentary habits, and especially of literary habits, which weaken the stomach additionally through sympathy. This is the absolute, indispensable condition of all cures. Without it, aggravation can only make the matter worse, and the patient continue as he has—a wretched, suffering man, the "iron in his heart" wherever he goes. Resolutely, then, stop this excess. And this is enough. If any nature is left, any strength, it will develop; it will grow up as a plant long kept down—never so thrifty thereafter, but still having life and being—and infinitely better than the smothered, strangled thing with the weight upon it.

We have spoken of dyspepsia as it is generally brought on, through the stomach and the food. "Strong drink" will sometimes do this, excesses in venery, excesses of many kinds, if not of all, all tending to affect the stomach, the organ of tenderness. But whatever the excess which produced the evil, it must be stopped—the stomach must be favored. There are other things that aid, but the great thing is to remove the cause and keep it removed. This is the all-important point, and it is sufficient. With it a cure can be effected; without it, it can not. Cheerfulness of society, it is said, is a good addition; so is traveling in strange lands; so is exercise. But always make a clean bottom by removing the exciting cause. To do this, self must not be gratified, but mortified; it must be done, however unpalatable. Yet, how little it is done, as the million of sufferers testify. It is *so* hard to do, because there is a lack of power; not that the evil is so strong—it is we that are weak, we dyspeptics. Had the man the usual strength which he had in health he would easily floor his adversary. But this he lacks, and this is the evil; he can hardly cure himself. He does it, however; it is being done daily. Were it not, what would become of us as a nation? of the world? The evil frequently cures itself; it is perhaps hard to say in how many cases. This is fortunate, that it bears its own correction. But it is also unfortunate that it must be strained to such an extent—till the machine is almost ruined. Better begin in time, and save the wreck while its timbers are yet sound.

The friends of these sufferers have a responsibility. It becomes them to see that they are aided, forced, if need be—and it generally needs to be. Aid them, then; be a will to them in place of theirs, which is impotent. It will not do to leave a man unaided in his "vapors;" he is not himself; he must be taken care of; he suffers more than you are aware of. Leave him not rudderless at the mercy of the winds.

[Written for The Herald of Health.]

How to Bathe.

BY E. P. MILLER, M. D.

Who does not know the great luxury of a good, a refreshing, inspiriting bath? How light and joyous it makes one feel! I bless God every day for water, for the pure, soft, sparkling water! I love it everywhere! I love to see it falling from the clouds, dripping from the eaves, or showering from the green leaves; or, I love it as it comes bubbling from the crystal spring or rippling in the rivulet, dashing down the mountain brook or rushing in the rapid river, foaming and gushing in the cataract, spreading out clear and glassy in the silver lake, or raising and falling in the majesty of the boundless and illimitable sea.

It is an emblem of beauty, purity and virtue. It is abundant everywhere; more than three-quarters of our entire being is water. Life can be longer sustained without food than without water. It is necessary to our life, health and enjoyment now, and to our future and eternal happiness. "Except ye be born of *water* and of the spirit, ye can not enter heaven." Bathing may mean something more than simple sprinkling or pouring or immersion. It may have been but a type of the grand use of water for the future physical, mental and moral regeneration of the race. "I say unto you the kingdom of heaven is within you." Many of our sins have a physical origin, which a right application of water helps to wash away. "Cleanliness is next to godliness." Those persons who bathe and keep themselves cleanly in all their habits, are apt to be moral and virtuous. Thieves, liars,

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pickpockets, drunkards and gluttons, seldom bathe. Health, cleanliness, temperance, goodness and virtue are associates. Disease, filth, gluttony, vice and crime seek the same haunts. That man is not a very good Christian who never takes a bath, and he who takes a daily bath is not a very great sinner.

Being born of water is necessary to regeneration, and regeneration necessary to salvation from sin. Bathing ought to constitute a part of every Church creed in Christendom. Water is a great cleanser and purifier. It will remove the dirt and filth when applied externally, and carry away impurities when taken internally.

The seven millions of little pores and the twenty-eight miles of little sewers that are constantly carrying off the waste and useless material of the body, will perform their tasks much more easily if plenty of water passes through them to wash away their accumulations.

There are a great variety of ways of taking baths. There is a right way and a wrong way. A certain bath may be taken so as to do good, or it may be so taken as to do harm. The effect produced by any bath depends very much upon how the bath is administered. There is much harm done by injudicious bathing. Some persons are soaking themselves in water all the time. They get an idea that bathing is good, and that the more they bathe the better.

No person should take a bath without securing a comfortable reaction after it. If they feal cold, have chilly sensations or unpleasent feelings, the probabilities are they have not derived much benefit from the bath. It may be necessary for sick and feeble persons to be covered warm in bed, in order to produce the desired effect. There are very few people so feeble but that a bath of some form will be beneficial, if administered judiciously. All things considered, one of the mildest and best home baths is the

SPONGE OR TOWEL BATH.

This is a universal bath, and is within the reach of all. It can be given to those who are too feeble to take any other form of bath. A pint of water and a couple of towels or a sponge and one towel, will answer to give it, although it is better to use a gallon or more of water when it is convenient to do so. It is an excellent bath for any one to take in the absence of other more thorough baths. It will cleanse the skin quite thoroughly and will equalize the circulation, relieve local congestion, subdue fever and give a general feeling of freshness and comfort. It can be taken in the sleeping-room, in the parlor, library, or even in a closet, if no larger accommodations are to be had. For persons who are able to stand and take their own baths, and like to use water quite freely, it is well to spread a rubber or oil cloth a yard square or more upon the floor, set your bucket of cool or cold water in the center, dip the sponge or towel in the water, and, when in readiness, squeeze the water from the towel or sponge, so that it will not drip too much, and begin by washing the face, head, neck and arms first, rubbing vigorously till the skin looks red; then wipe them dry with a dry towel; the chest, abdomen and back can be washed and wiped in the same manner; lastly, the lower extremities. If you rub vigorously with the wet towel or sponge and the same with the dry one, you will secure a fine reaction and will feel warm and refreshed. It should be given quickly and vigorously, and the clothing should be put on at once; then go out for a good sprightly walk or for some light gymnastic exercise.

This bath can be given to very feeble persons while in bed by using a soft towel or sponge just moistened in tepid water, washing, drying, and covering each part of the body as you progress.

In all forms of fever, or in any disease where there is difficulty in moving the patient or in administering more vigorous baths, this is the safest and best bath to use. In a fever where there is much heat of skin, it may be given every hour or two, and if properly applied will always be beneficial.

THOUGHTS FOR YOUNG MEN.—Costly apparatus and splendid cabinets have no magical power to make scholars. In all circumstances, as man is under God, the master of his own fortune, so he is the former of his own mind. The Creator has so constituted the human intellect, that it can grow only by its own action, and by its own action it most certainly and necessarily grows. Every man must, therefore, in an important sense, educate himself. His books and teachers are but helps; the work is his. A man is not educated until he has the ability to summon, in case of emergency, all his mental power in vigorous exercise to effect his proposed object. It is not the man who has seen the most, or has read most, who can do this; such a one is in danger of being borne down, like a beast of burden, by an over-loaded mass of other men's thoughts. Nor is it the man that can boast merely of native vigor and capacity. The greatest of all the wariors that went to the siege of Troy, had not the pre-eminence because nature had given him strength and he carried the largest bow, but because self-discipline taught him how to bend it.

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Home Treatment of Disease.

BY E. P. MILLER, M. D.

☞ *In this department we shall give, from month to month, plain, practical directions for the home-treatment of various diseases.*

Bilious Colic.—This disease prevails most in malarious districts in the summer and autumn months. It is generally preceded by loss of appetite, by bad taste in the mouth, by furred tongue, by nausea, by constipation of the bowels, and by other evidences of derangement of the digestive organs. There is often tenderness in the region of the liver; and, after the disease is well established, there will be a yellowish color of the skin and of the white of the eye. It sometimes commences with a chill, and is attended with more or less fever. The paroxysms of pain are referable to the epigastric region, are very severe, and are usually accompanied by vomiting—first of the contents of the stomach, then of mucus and bile. The bowels, though generally constipated, sometimes discharge their contents freely, accompanied with a liberal admixture of bilious matter. The jaundice, associated with pain in the region of the liver, and nausea and vomiting, are the characteristic symptoms of this disorder. Derangement of the digestive functions and obstruction to the action of the liver are the causes of this variety of bilious colic.

There is one form of bilious colic that is due to the passage of the gall-stones through the cystic or common duct, along which the gall passes on its course from the gall-bladder to the intestines. The passage of gall-stones (or biliary calculi, as they are sometimes called) of large size, occasions the most aggravating cases of bilious colic. The severity of the attack depends upon the size and irregularity of shape of the gall-stones. These gall-stones are usually formed in the gall-bladder, though sometimes they originate in the hepatic duct, or even in the cells of the body of the liver They are formed from cholestrine, a substance which enters into the composition of the bile, and which, in a healthy condition of that excreta, is in a state of solution. In certain morbid conditions of the bile this substance is released from its solvent state, and readily crystalizes into masses of various sizes which soon become as hard as stone. These calculi vary in size, from a millet seed to that of a large walnut, and are generally quite irregular in shape. The duct through which they pass from the gall-bladder to the intestines is not larger than a goose-quill; the reader may well imagine the pain and agony a person has to endure when calculi of large size and of irregular shape are forced through so small a tube. I think I have seen as intense suffering from the passage of large calculi as from almost any other cause.

They are often found in large numbers. Dr. Watson of Edinburgh reports one case in which thirteen hundred gall-stones were taken from the gall-bladder of a man after death had occurred. I have in my possession five, which I obtained from a *post-mortem* examination, which are the size of large cherries, flattened to a three-sided figure, and which completely filled the gall-bladder from which they were taken.

Persons who have once passed gall-stones are quite liable to repeat the process. In some cases several will pass in the same day; in other cases weeks, months or even years will intervene between the attacks. When one of large size has passed, it is liable to so dilate the duct that, if there are others remaining behind, they follow in the wake of the first one till they are all out. If the patient passes a single round, smooth stone, it is an indication that there are no more left behind; but if they are flattened and irregular, it is an evidence that they were made so by being in contact with others. These gall-stones, when they are forced through the duct, go into the intestines and are passed out with the feces, where they can be found by a careful examination.

Sometimes a calculus of large size becomes impacted in the duct, and remains there till inflammation is set up, ulceration takes place, and a fistulous, artificial passage is formed for its exodus. This fistulous passage may be formed through into the intestines, or into the cavity of the abdomen, or out through the abdominal walls, discharging them externally through the abdomen. After the false passage has formed and the gall stones worked out through them, either into the intestines or externally through the walls of the abdomen, the inflammation may subside, the parts heal and the patient get well; but if it works through into the cavity of the abdomen it causes a peritonitis that generally proves fatal. Happily such cases are seldom seen, for in the great majority of cases they pass through the natural course of the duct and pass out of the intestines.

The paroxysms of pain in this disease generally commence suddenly, and end as suddenly as it began. It may last only for a few minutes, or it may continue for several hours. There is usually some tenderness on pressure

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over the seat of pain, but generally firm pressure affords some relief, and the patient often places the palm of the hand over the place, or leans the body against some hard substance to find ease. There is no fever; the pulse is not quickened, but is irritable? the skin is cold and generally tinged with yellow; there will be nausea and vomiting, with obstinate constipation, together with a dark-colored urine which contains bile.

The passage of these gall-stones through the duct is mainly due to the pressure of bile, which accumulates behind them in the gall-bladder, forcing them along. When considerable time is required for the passage the bile can not pass out, and is retained in the blood and carried the rounds of the circulation, giving a jaundiced hue to the skin and eyes.

TREATMENT.—In a case of bilious colic unconnected with gall-stones, we should first try to move the bowels by copious enemas, and if there is nausea give a warm-water emetic to free the stomach of its contents also; then apply hot fomentations to the liver and stomach for an hour or more to relieve the pain. Follow this by a full tepid bath or rubbing-sheet. A hip-bath at one hundred and five or one hundred and ten degrees, with a foot-bath of the same temperature, for twenty or thirty minutes, accompanied with vigorous friction of the hips, back and abdomen, will do good, and answer in place of the fomentations when the bath is not convenient. The fomentations and hot hip-baths will generally relieve the pain very soon. In some cases, however, the cold compress or cool hip-bath may be used to advantage instead of hot appliances. The tepid compress should be applied for some time after the fomentations and baths have been used. After the pain is relieved the vapor bath, the Turkish bath or the wet-sheet pack should be given daily (if the patient be not too feeble) for several days, till the secretions become healthy and the bile is removed from the blood. These applications should be followed by either a thorough towel-bath, a rubbing wet-sheet, or, what is perhaps better, a pail-douche or full bath. The feet must be kept warm by foot-baths or hot bottles applied to them.

No food should be given till the paroxysms of pain subside, and after that only the blandest kind of food should be given for a few days. The treatment should be followed up assiduously till the pain is relieved.

During the passage of gall-stones it is generally impossible to entirely relieve the pain till the stone has passed out of the duct, unless we resort to opiates or something that will produce entire insensibility to pain, and even these often fail to relieve till they are given in quantities that endanger life. The pain can be greatly mitigated, however, by the full hot bath, say one hundred and five or one hundred and ten degrees, prolonged for several minutes, or by the hot hip-bath or by fomentations. These applications not only mitigate the pain, but they relax the tissues, so that the calculi pass more readily through the duct. In all cases of this kind the bowels should be relieved of their contents by injections, and, if there is much nausea, an emetic of warm water given. After the pain is relieved the tepid compress should be kept applied to the part for several days, and a daily pack given in the forenoon, with a hip-bath at eighty degrees for ten or fifteen minutes in the evening.

After being cured the patient should try to live in such a manner as to avoid the formation of gall-stones. I have had several patients who were subject to repeated spasms from gall-stones, who subsequently escaped for years by adopting the Hygienic style of living.

Injurious Effects of Sugar.—Mr. Tanner, Professor of Rural Economy in Queen's College, is inclined to believe that by the use of sugar as food any animal can be rendered incompetent to propagate its species. He observes that stock which had been fattened upon molasses mixed with dry food were rendered barren, and that heifers fed in that way escaped the periodical excitement of the breeding season; and it was doubtful whether the power of reproduction was ever regained. The effect of eating sugar, in females, was a fatty augmentation of the ovaries, from which recovery might be rather difficult.

CAUSE OF THE BLUE COLOR OF THE SKY. Tyndall has shown, by a remarkable series of experiments, not only that aqueous vapor absorbs the obscure heat rays of solar radiation, but that the oxygen and nitrogen gases which constitute the great mass of our atmosphere exert but little or no action on them. Cooke, after a long continued examination of the solar spectrum, concludes that a very large number of the fainter dark lines of the spectrum, hitherto known as air-lines, are due solely to the aqueous vapors of our air. The distribution of these aqueous lines, and the variation in them, marked by a remarkable increase, with the increase of aqueous vapor in the atmosphere, point to the cause of the blue color of the sky.

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Answers to Correspondents.

BY A. L. WOOD, M. D.

☞ *The readers of* THE HERALD *are invited to ask such questions as will be of general interest for this department, where they will be briefly but comprehensively answered.*

How we Escaped a Pestilence.—"It was generally thought, last spring, that, on account of the filthy condition of the city, New York would suffer from cholera during the summer as it never had suffered before; but still it has escaped with a comparatively slight visitation. By what means has it thus escaped a pestilence?"

Cholera is a disease which is pre-eminently the offspring of filth. It feeds, so to speak, upon it, and when deprived of its aliment it disappears. When the Metropolitan Board of Health commenced its labors the city was ripe for pestilence. The streets were in a most filthy condition, the inmates of the crowded tenement houses and underground habitations were wallowing in their own filth, and breathing the fetid emanations from their own excretions, and the slaughter-houses, fat-boiling establishments, and other nuisances were sending forth streams of disease-engendering gasses to poison the surrounding atmosphere. In the face of every obstacle that could be thrown in its way, the Board has labored energetically and faithfully to cleanse and disinfect the city, and to remove all nuisances.

It has only partially succeeded, it is true, but its partial success has prevented the cholera from becoming a pestilence and destroying thousands instead of hundreds.

The success which has attended the efforts of the Board in preventing the further spread of the cholera shows the effects of hygienic conditions in preventing disease. The labors of the Board have but just commenced. Cholera is not the only nor, indeed, the most fatal disease which the Board of Health possesses the power to "stamp out" by the enforcement of hygienic regulations. During the months of July and August there were 871 deaths from cholera, and 2303 deaths from other diarrheal diseases alone, to say nothing of the large number of deaths from fevers, and other easily preventible diseases. People are beginning to learn that disease is not a "merciful dispensation of Providence," but a penalty inflicted for the violation of the laws of health.

Flatulence.—Flatulence is merely a symptom of indigestion. To effect a cure, the digestive organs must be strengthened and the digestive powers perfected.

Cold Feet.—"What do cold feet indicate? what is the cause, and what the remedy? What is the best method of warming them upon retiring at night?"

Cold feet indicate an unbalanced state of the circulation and more or less congestion of the head or some of the internal organs. Coldness of the extremities may be caused by any thing that tends to depress the powers of life, or derange the circulation. The remedy is to remove the cause, whatever it may be, and restore the health. The feet should always be made warm, in some way, before retiring to rest. If the person is able to do so, the best way to warm them is by exercise. I will mention a few of the best exercises for this purpose which can be practiced singly or in succession until the feet glow with warmth. Walking in various ways, as with the toes turned in as far as possible; walking with them turned far out; walking on the tips of the toes; hopping on one foot and then on the other, then alternately, and then on both together; hopping and crossing the feet; stamping the feet; standing on one foot and kicking forcibly downward and forward with the other; swinging the legs forward and backward and in a circle; sit in a chair or on a sofa, and slowly but forcibly bend the ankle, drawing the toes far up and then slowly extending them downward as far as possible; twist the feet alternately outward and inward in the same manner; rotate the feet, making a large circle with the toes. There are but few who will be unable to thoroughly warm their feet in from five to fifteen minutes by practicing the above exercises. The continued practice of such exercises will do much toward permanently equalizing the circulation and restoring health. For the few who are not strong enough to warm their feet by exercise, the best thing is to soak the feet in hot water until they are red, then turn a little cold water over them or dip them in cold water, after which wipe dry and rub briskly with the hands or a dry, coarse towel.

Breathing through the Mouth.—"In the culture of the lungs, should we not breathe through the mouth, making the aperture very small? I admit that generally we should breathe through the nose, but the nasal chambers are so large, that we can not fill the lungs perfectly through the nose. I think that in a complete inflation of the lungs we should breathe through the mouth, as we can breathe so much slower."

Any person, with a little practice, can breathe as slow through the nose as through the mouth, but no one should occupy more than from five to ten seconds in inhaling. They can expand

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the lungs to as great an extent in that time as they can if they are from one to two minutes in doing it, and if a person only breathes once in two or three minutes, as some do not while practicing, the lungs can not receive a sufficient quantity of air to purify the blood, and the individual must suffer. In striving to cultivate the lungs by breathing exercises, endeavor to fill them to their utmost capacity, but *do not* try to see how long you can be in doing it, or how long you can hold your breath. Remember that you must *breathe* while cultivating the lungs, as well as at other times.

Dyspepsia and Cook Books.—A subscriber, while ordering "The New Hygienic Cook Book," states that he is troubled with dyspepsia, and wishes to know if there is any other cook book wherein he can find a good recipe for his case. There are plenty of cook books in which "subscriber" can find recipes for dyspepsia, as, for instance, the following recipe for "Imperial Cake," which is but a fair sample:

"Two pounds flour, two pounds sugar, two pounds butter, two pounds raisins, stoned and chopped, one pound blanched almonds, one half pound citron, sixteen eggs, four wine-glasses wine, mace."

If the eating of food prepared from such recipes as the above will not give a man the dyspepsia, he might as well give up all hopes of ever having it. A fashionable cook book is just the place to find recipes for *producing* dyspepsia but not for *curing* it.

Difficult Breathing and Gaping.—"I am troubled about breathing, and have a strong desire to gape, but can not always make out. What is the cause and cure?"

Gaping is an instinctive effort to secure the introduction of a greater amount of air to the lungs. It is generally caused by a want of sufficient physical exercise. The curative measures consist of occupation, fresh air and exercise. For information about breathing, see article in September HERALD OF HEALTH, entitled "Culture of the Lungs."

Man's Best Drink.—"What constitutes man's best and most natural drink under all circumstances and conditions, and what rules should be observed in regard to its use?"

Water, pure and unmixed, is beyond all question, the *best* and only *natural* drink of man, as it is the *only* drink of every other living being. It should be drank only when nature calls for it by the feeling of thirst, and then, slowly and temperately, until the thrist is quenched. Follow the example of the animal creation, and do not stop eating to wash the food down with water. If man would live entirely upon fruits, which make the purest and best food, he would feel no thirst, and need no drink. The juices of the fruits would supply a sufficient quantity of water in its purest possible form.

Morning Walks.—"Is a walk in the morning before breakfast good for persons in moderate health, or is some other time better? What distance should they walk?"

About the middle of the forenoon is the *best* time for walking or exercise of any kind. The system is then in its best condition. A short walk or other moderate exercise before breakfast is beneficial, but it is not the best time for severe exertion. The distance which persons in moderate health should walk depends upon their strength, endurance and other bodily conditions. It should never be continued so as to produce pain, soreness of the muscles, or fatigue from which the system can not fully recover by an hour's rest.

Nervous Headache.—"What is the cause of nervous headache, and the remedy."

One of the principal causes, is the use of tea, coffee, spirituous liquors and tobacco. Undue mental exertion, loss of sleep, constipation of the bowels, torpidity of the liver, skin, etc., are also prominent among the causes of this disease. The remedy consists in removing the cause, whatever it may be. If habituated to the use of tea, coffee, alcohol or tobacco, quit them at once. Avoid much mental exertion, take an abundance of out-door exercise, bathe frequently but not in very cold water, eat temperately of plain, healthful food, avoiding spices, condiments, rich cake, pastry, etc., and obey all the laws of health.

Weak Lungs.—"What is the best work on the lungs?"

If by this question is meant the best work on the care, culture and treatment of weak or diseased lungs, I should unhesitatingly recommend "Weak Lungs, and How to Make them Strong," by Dr. Dio Lewis. Price, $2 00. It may be ordered from the office of THE HERALD OF HEALTH.

Private Queries.—A number of communications containing questions of a private character and of no interest except to the inquirer have been received. Only *questions of general interest to the readers of* THE HERALD will be answered in this department. Prescriptions for the home treatment of special cases of disease, etc., will be sent by letter on receipt of $5 00.

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Healthy Spices and Condiments.

THE ONLY ADMISSIBLE HYGIENIC SEASONINGS.

THE loudest *wail* on record—Jonah's.

SABBATH BREAKERS—The waves at Newport.

WHAT perfume is most injurious to female beauty? The essence of thyme (time).

A BACHELOR discovering his clothes full of holes, exclaimed, "Mend I can't."

THEY say that coal oil cures fevers. We think that it has been creating fevers.

BOARD OF HEALTH—A farmer's cupboard.

WHY is the early grass like a penknife? Because the *spring* brings out the *blades*.

EATING ground glass is sure death. It gives one a permanent pane in the stomach.

ADAM and Eve, after finding the apple, discovered they were a pair.

A TOAST.—Woman: she requires no eulogy—*she speaks for herself*.

WHAT ailments are policemen most afflicted with? With felons on their hands.

THE gayest smilers are often the saddest weepers.

AFFECTIONATE TIMES—When every thing is about as dear as it can be.

WHEN is a blow from a lady welcome? When she strikes you agreeably.

A PIN has as much head as a great many authors, and a great deal more point.

"THIS is the last rose of summer!" exclaimed a wag as he rose from his bed on the 31st of August.

WHY is the milkman like the whale that swallowed Jonah? Because he took the "profit" out of the water.

"UGH! Him great man! Big Brave! Take many scalps!" said an Indian, seeing a window full of wigs.

IT has been asked, when rain falls, does it ever get up again? Of course it does—in dew time.

"WE see," said Swift in one of his most sarcastic moods, "what God thinks of riches by the people whom he gives them to."

MANKIND should learn temperance from the moon—the fuller she gets the smaller her horns become.

THE age of a young lady is now expressed according to the present style of skirts, by saying, "eighteen springs have passed over her head."

WHAT is the difference between a spider and a duck. One has its feet perpetually on a web, and the other a web perpetually on its feet.

A YOUNG lady, whose father is improving the family mansion, insists upon having a beau window put in for her benefit.

A CELEBRATED wit was asked why he did not marry a young lady to whom he was much attached. "I know not," he replied, except the great regard we have for each other."

WHAT is the difference between accepted and rejected lovers? The accepted kisses the misses, and the rejected misses the kisses.

"How do you like Shakspeare?" said a blue stocking young lady to an old river captain. "Don't like her at all madam; she burns too much wood and carries too little freight.

PRENTICE, in a wicked lunge at the very underpinning of society, says, "tilting hoops, enable the common people, to see a great deal more of good society than they ever saw before."

AN honest Hibernian, trundling along a handcart containing all his valuables, was accosted thus: "Well Patrick, you are moving again I see." "Faith, I am," he replied, "for the times are so hard it's a dale cheaper hiring handcarts, than paying rints."

A FELLOW out West being asked whether the liquor he was drinking was a good article, replied: "Waal, I don't know; I guess so. There is only one queer thing about it: whenever I wipe my mouth, I burn a hole in my shirt."

A BOY down East is accustomed to go out on a railroad track, and imitate the steam whistle so perfectly, as to decive the officer at the station. His last attempt proved eminently successful; the depot master came out and "switched him off."

AN artist invited a gentleman to criticise on a portrait he had painted of Mr. Smith, who was given to drink. Putting his hand toward it, the artist exclaimed, "Don't touch it, it is not dry." "Then," said he, "it can not be like my friend Smith."

DRUNK *vs.* MEDICAL PROFESSION.—A good story is in circulation of a certain doctor, who sometimes drank a good deal at dinner. He was summoned one evening to see a lady patient when he was more than "half seas over," and conscious that he was so. On feeling her pulse, and finding himself unable to count its beats, he muttered, "Drunk, by Jove." Next morning, recollecting the circumstance, he was greatly vexed, and just as he was thinking what explanation he should offer to the lady, a letter was put into his hand. "She too well knew," said the letter, "that he had discovered the unfortunate condition in which she was when he had visited her; and she entreated him to keep the matter a secret, in consideration of the inclosed"—a $100 bill.

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THERE is an old proverb which declares that none can tell where the shoe pinches save he who wears it. The maxim has a thousand applications. A husband who appears to have found his wife a good deal less an angel than he had imagined in the days of his courtship, lets out some domestic secrets, in the following graphic manner:

"I own that she has charming locks
That on her shoulders fall;
What would you say to see *the box*
In which she keeps them all?

"Her taper fingers, it is true,
Are difficult to match;
I wish, my friend, you only knew,
How terribly they *scratch*."

THERE is no sin we can be tempted to commit but we shall find a greater satisfaction in resisting than in committing.—*Mason.*

Literary Notices.

NEW YORK MEDICAL COLLEGE FOR WOMEN.—We earnestly believe in a medical education for women. The day is soon coming when all women will be required to have a thorough education in this direction, not so much, perhaps, with the view of curing the sick as to keep well themselves, keep their families well without dosing and drugging, and that they may rear their children in health and beauty. There is to-day no college that comes up to the needed requirements in this respect. The one mentioned above is one of the best, where much can be learned. We think it is doing good, and though we do not indorse its mode of practice, we commend it as worthy of patronage.

OLIVET COLLEGE.—We have received a pamphlet containing the history of Olivet College, Michigan. It is from the pen of its President, Rev. N. J. Morrison, and gives a graphic account of the rise and progress of the College. Olivet is a town in which there is not a grog-shop nor a gambling-den, and the moral, intellectual and social influences are such as parents and guardians desire for the youth under their care. Mr. Philo Parsons of Detroit, a banker and a hearty friend of education, recently contributed $5000 to support this excellent institution of learning.

Publishers' Department.

Our Past and Future.—During the last four months we have exerted our utmost endeavors to increase the usefulness of THE HERALD OF HEALTH. We have added to the number of its pages, and filled them with original contributions from the pens of writers of national reputation. There is not another magazine on this continent that can show such a list of illustrious writers on matters pertaining to Physical Culture and the science of Health. We have the indorsement of many of the best scholars and thinkers in America, and we are grateful to them for their efforts to extend our circulation. A great work is before us, and we strip to the task with faith in God and hope in man that the truth will penetrate society and spread through all its varied phases, as the sun fills the atmosphere with light. We ask the countenance and aid of all who have faith in the holy laws of life and the gospel of health. The sick and the infirm must be cured, and their lives be prolonged; children must be taught to observe the rules of physical health, so that they shall not build up a tottering and miserable existence on the foundation of dyspepsia and consumption. Darkness which may be felt must be displaced by the light and beauty of truth. Physically speaking, society is badly in need of reconstruction. The constitution and the laws of health are trampled under foot. We shun the bath and goblet brimming with water as though we were afflicted with hydrophobia; we pour nostrums down our throats and aggravate the ills that flesh is heir to. Now, we have given you and yours the opinions of the most scholarly and scientific men in the world of Hygiene in relation to these matters. In addition to the views of eminent surgeons and physicians, we have given the opinions of our best thinkers in the world of letters and reform.

Henry Ward Beecher, Horace Greeley, Theodore Tilton, Prof. Rufus King Browne, William H. Burleigh, F. B. Perkins, Rev. O. B. Frothingham, Alfred B. Street, Moses Coit Tyler, P. T. Barnum, G. W. Bungay, Drs. Miller, Wood, Holbrook, Webster and others. We have still richer treats in reserve, and most cordially invite all who have faith in the laws of life and the gospel of good health to enjoy with us the refreshing viands spread for the entertainment of our friends, and to bring the hundreds of their friends with them for another year. A great work is before us in the redemption of our race from sickness and premature death. Let us work earnestly in it while we can, and so hasten the day of perfect human health and happiness.

Important and Liberal Offer.—The Publishers of THE HERALD OF HEALTH, with a view to extend the usefulness of their magazine, and at the same time give their patrons the opportunity to introduce it, at a comparatively low sum, to a large circle of readers, have concluded to offer it, in Clubs of 50 or more, at One Dollar per year, provided the list is made up previous to the first of February, 1867. We wish it distinctly understood, however, that we will not for a smaller Club deviate from our regular rates. The names and money must be sent all at one time. Persons who request us to send THE HERALD for one dollar to smaller clubs will not be accommodated. This is a special offer, and those who do not meet its requirements will be credited according to regular rates. THE HERALD is richly worth two dollars a year to any family, but as there are thousands of families who are not acquainted with it, we make this offer as an inducement to those interested in the Health Movement to do a great deal of good at a very small expense of time and money. Let those who wish to profit by it make a move at once.

This Number.—This number will speak for itself. The article by Mr. Tyler, giving a sketch of the life of Thomas Hughes, is in the author's happy vein, and will be found exceedingly interesting. "Overwork and Underwork" discusses a subject of great interest, and can not fail to be read with profit. "The Study of Physiology," by Dr. Browne; "A True Life," by Horace Greeley; Beecher on "Patient Waiting;" Bungay on "Some of Our Faults;" "A Homily for Ministers and Christians," by Rev. Dr. John Marsh; Notes for the Month; Poetry, Miscellany, Answers to Correspondents, Home Treatment of Disease, etc., are all very interesting. Mr. Tilton's poem, entitled "My Creed," which appears

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on the first page, and Mr. Bungay's "October Woods and Flowers," can not fail to please. We are giving our subscribers more and better matter than we promised, and we thank them for the numerous commendations constantly received. We ask their special attention to the subject of adding largely to our subscription list for the year 1867. By the circulation of no magazine can so much good be done in building up a nation of strong-bodied and pure-minded men and women.

Lectures and Lecturers.—The following gentlemen are familiar with the great question of Physical Culture, and we suggest to our friends in the country that they form clubs and raise funds to secure, if possible, their lecture service: Horace Greeley, George W. Bungay, Dr. M. L. Holbrook, Dr. A. L. Wood, Dr. E. P. Miller, F. B. Perkins, Dr. Snodgrass, Dr. Dio Lewis, Moses Coit Tyler, S. R. Wells, Nelson Sizer.

Applications for the services of these gentlemen may be sent to us (stamp inclosed for the payment of postage) and we will endeavor to secure an engagement from them. Persons applying will please name two, three or more of the gentlemen whom they would prefer, so that, if the first person of their choice can not be obtained, the second or third may. Address MILLER, WOOD & Co., 15 Laight Street, New York. Any lyceum or school near New York city, and convenient of access, which will give us a club of fifty subscribers for THE HERALD OF HEALTH, shall have a gratuitous lecture from some one of our lecturers.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books and Baths.

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5. The careful attention bestowed on patients and the specific directions given to insure their recovery.
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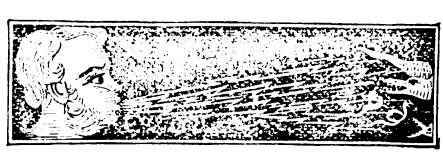
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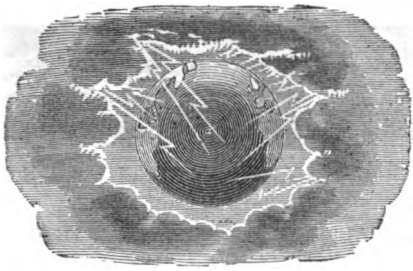
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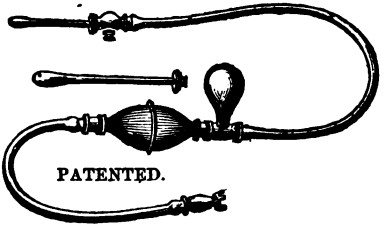
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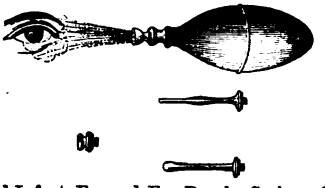
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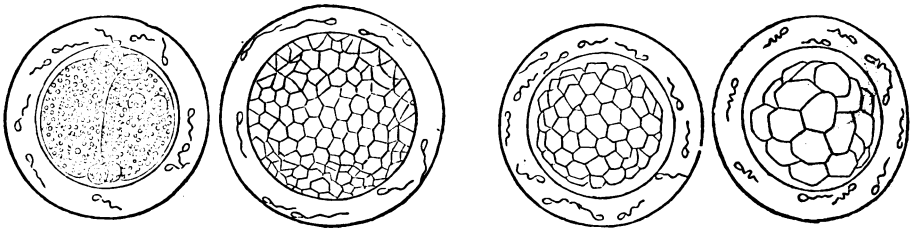
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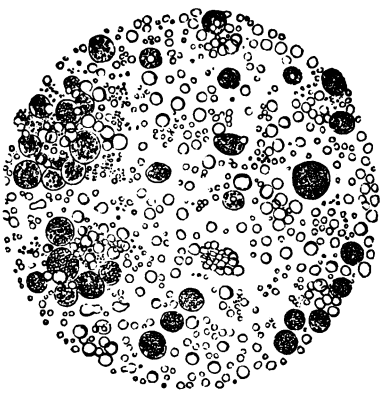
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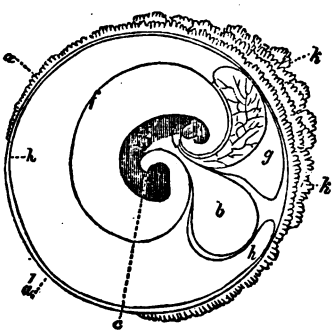
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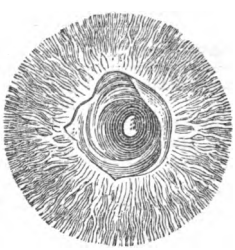
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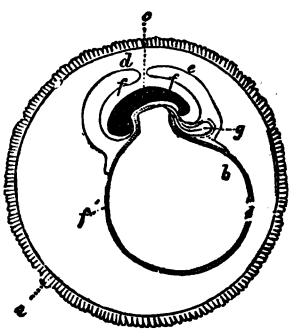


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DEVOTED TO

HYGIENIC MEDICATION, BODILY DEVELOPMENT, AND THE LAWS OF LIFE.

NOVEMBER, 1866.

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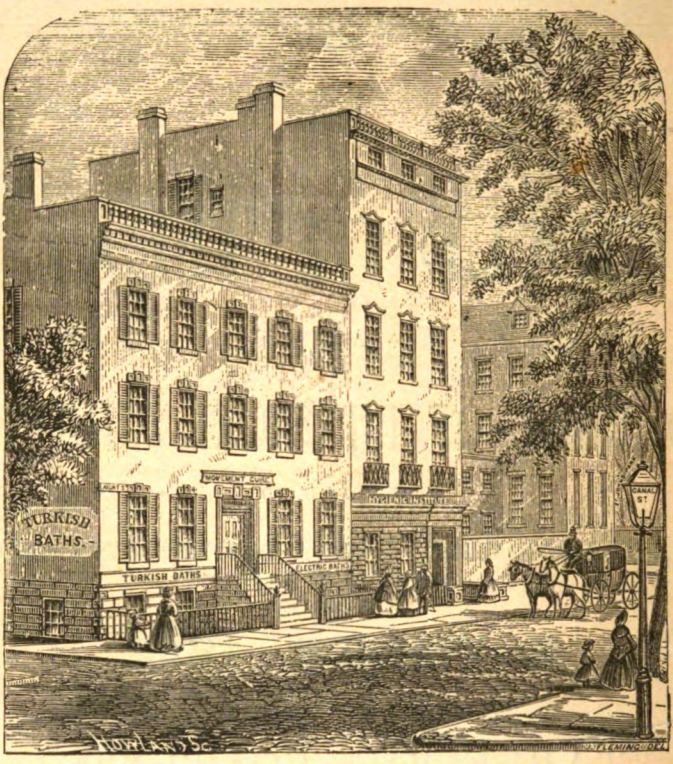
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General Articles.

[Written for The Herald of Health.]

The Snow Fall.

BY GEORGE W. BUNGAY.

A GREAT white sheet has been let down from heaven,
Containing nothing common or unclean;
Earth wraps it round her family of hills,
As a fond mother folds her cloak of wool
About her children, shivering in the storm.

How gently falls the snow on starry wings,
Each flake a white-winged messenger from heaven,
Lighting as softly on the humble shed,
Where the tired laborer finds sweet rest on straw,
As on the roof which shields luxurious ease.

There is a snow fringe on my darling's grave,
White lace-work woven by the weaver wind—
Sad spirit of the universe, whose voice
Seems uttering the grief of all mankind.
Is it the conscience of all wicked things?

O wind, build a white stairway to the sky;
Heap hill on hill, and mount to mountain add,
That I may climb beyond the clouds and meet,
Upon the spotless ladder of the air,
My dear child-angel in the shining land.

From the exhaustless quarry of the clouds
The soft and silent snow unceasing falls,
And unseen sculptors carve, on columns high,
The names of heroes, and white epitaphs,
And mottoes grand, in syllables of snow.

[Written for The Herald of Health.]

Alcoholic Liquors and Drugs.

THEIR EFFECTS UPON THE HUMAN SYSTEM.

BY HORACE GREELEY.

ALCOHOL is a peculiar combination of hydrogen, oxygen and carbon. It is a compound unknown to Nature, but evolved by art from certain vegetable substances in a peculiar stage of dissolution. The first step toward producing alcohol is the death of the grain or fruit destined to yield it. When the life of an organic substance is destroyed, that substance tends by a law of the universe to decay and dissolution. More accurately: with the cessation of organic life, the laws of vitality, by which the peculiar assimilation of elements forming the grape, the apple, the berry of wheat or rye, was created and sustained, now lose their power over this matter and the opposite laws of chemical affinity take effect upon it, causing its several constituents to enter into new combinations with each other, and with other substances, wherewith they are brought in contact by the action of air, water and otherwise. Thus the sugar, which, in the form of starch or gluten, forms one of the bases of the process of decay, and, combining with other substances, ferments, or effervesces and enters upon the stage known as that of *vinous fermentation*. In this stage alcohol is produced—a fiery, volatile, nearly transparent liquid, which imbibed by itself, is a most undoubted and deadly poison to mankind, as well as to nearly or quite every animal constitution. Had alcohol been originally and universally produced and imbibed independently of other fluids, there

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can be no question that it would have been recognized and shunned as a bane deadly as any other vegetable poison.

But alcohol does not naturally manifest itself independently of other substances. The water which forms so large a portion of the grape, the apple, the peach, the potato, and which must be commingled with the grains, in order to produce the vinous fermentation, remains combined with the alcohol after the fermentation has produced it. Some small portion also of the other constituents of the original organic substances are held in solution or chemical combination by their affinities with the water or alcohol, or both united. Indeed, it was not till the ninth century that alcohol was separated and recognized as a distinct substance by an Arabian chemist. Fermentation has been very generally practiced, more or less rudely, from a very early age, and alcoholic beverages of course produced; and intoxication just as naturally followed; how or why seems to have been scarcely considered. But the Arabian's discovery induced or blended with it the art of distillation. Thenceforward, alcoholic spirits, more or less pure, began to find a place in the bottles of the apothecary, and, in minute quantities, among the physician's prescriptions. It was not till the sixteenth century, however, that distilled liquors began to be commonly used as a beverage or stimulant by persons in health.

Distillation is a more potent process superinduced on fermentation, rendering its liquid product more fiery, acrid and stimulating. In other words, it is the art of reducing the proportion of water, etc., and increasing that of alcohol in a given quantity of the stimulating fluid. Of the earlier stimulants, ale contains but one-twenty-fifth of alcohol, and palm wine one-twentieth; cider, berry, elder and some of the milder grape wines about one-tenth. It can hardly be necessary here to remark that none of these contain alcohol nor any principle of intoxication until they have fermented, or "worked" as the cider makers say, and that many if not most of the ancient wines were drank unfermented. That these were known to the Hebrews by a different word from that used to designate alcoholic or fermented wines has been fully shown by recent critical investigations, and the seeming contradiction between those passages of Scripture which mention approvingly and those which severely condemn wines, is thus shown to be no contradiction at all. In the one case, a mild, harmless, palatable beverage, which cheereth god and man; in the other, a raging "mocker," a heating, corrupting, infuriating poison, was indicated. Those who have any doubt on this subject may dissipate it by consulting "Bacchus," "Anti-Bacchus"—E. C. Delavan's essays, and other elaborate treatises in exposition and defense of total abstinence.

The difference between fermented and distilled liquors is one purely of degree—alcohol, the intoxicating and poisonous quality, is precisely the same in the two, but there is more of it in an equal quantity of the distilled spirit. While the different kinds of beer contain from one-twenty-fifth up to one-fourteenth of alcohol, and the fermented grape wines from one-tenth to one-fourth, the distilled liquors known as brandy, rum, gin, etc., are generally a little more than half alcohol. Sometimes they are reduced far below this standard by the introduction of water to increase the seller's profits; but this is very unlikely to diminish their poisonous properties, because the diminution of "strength; improperly so called, must be disguised by the infusion of drugs, often as poisonous as alcohol and sometimes more concentrated. The vile and baleful ingredients employed to conceal the infusion of so much water as will reduce the cost per gallon to this standard, are such as, if fully exposed, would utterly shock credibility.

They greatly mistake who in this country hope to live longer by drinking wines or malt liquors than they would expect to if addicted instead to distilled spirits. True, there is less alcohol in the same quantity of the fermented beverages, but the same quantity will not content them. Deceive themselves as they may, it is the alcohol stimulus that their depraved appetites exact, and, if indulged at all, they will be indulged to the constantly receding point of satisfaction. The single glass of wine or beer per day which sufficed at the beginning, will soon be enlarged or repeated. It was enough to start the blood into a gallop yesterday, but falls short to-day, and will not begin to do to-morrow, and, even were the fact otherwise, the wines and malt liquors drank in this country are nearly all so adulterated that drinking them would be foolhardy, even if those liquids, when pure, were naturally wholesome instead of being the poisons they are known to be. White lead, red lead (litharge), copperas, sugar of lead, rhatany, logwood, alum, elder berries, opium, henbane, quassia, aloes, tobacco, nux vomica, oil of vitriol, cocculus indicus, grains of paradise, and even arsenic, beside many comparatively harmless ingredients, are all in current use among the preparers of wines, malt and distilled liquors, for consumption. Few of the wines drank out of the wine-produc-

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ing districts are even comparatively pure, while nine-tenths of the liquids imbibed by the drinkers of this country never smelt of a grape. Even in the wine-producing districts ef France and Germany, there have been formidable and fatal epidemics, raging through a lifetime, caused solely by the adulteration of wines with lead. So with cider in England and rum in Jamaica, in the very regions where these beverages were respectively produced, "lead colic" is a well known disease, whereof drinking drugged liquors is the source. The facts here stated do not rest upon anti-alcoholic authority. In the standard vintner's guides, brewers' manuals, etc., you will find directions for correcting acidity, producing paleness, clearness, briskness, body, color, bead, etc., by the use of the notoriously poisonous substances above enumerated. Sometimes the reader is warned against liquors so drugged, or the practice of using such deadly poisons is condemned and less objectionable substitutes are suggested; but the manufacturers take the hint. British custom-house returns show indisputably that the use of nux vomica, cocculus indicus, etc., has rapidly increased of late in England, as it doubtless has also in this and other civilized countries. Nine-tenths of these poisons are consumed in the form of drugged liquors, and that alone. The British Channel Islands are not subject to the British tariff of duties, and are consequently places of deposit for wines destined for British consumption, which the dealers choose to have within easy reach, while they defer the payment of duties as long as practicable. The official returns show that for every pipe of wine imported into these islands some ten or twelve pipes are in due season exported thence to London. It is the same the world over, save that the farther the liquors are transported the greater is their probable adulteration. In Southern Europe, half the wines consumed may contain no other poison than the alcohol; but in more northern countries it is not probable that one-fourth are thus uncorrupted; while in America not one bottle in ten is free from gross adulteration. Our home-made whisky, new rum, etc., is a little better; our porter, ale and other malt liquors, generally worse. Adulteration with regard to these is the law; purity the exception. Of liquors ostensibly imported, observing, experienced drinkers habitually observe that they grow worse as you recede from the sea-board, so that thé pretended French brandy, Holland gin or Jamaica rum, which is a tolerable imitation of the genuine in New York or Boston, becomes one-fourth whisky and drug at Albany to Syracuse, half ditto thence to Buffalo, three-fourths ditto to Chicago and Milwaukee, beyond which points it is difficult to detect the flavor of the genuine article at all. Now, while this fact does not necessarily imply the pernicious character of alcohol, it does show that the use of alcoholic liquors is pernicious and perilous. If we waive altogether the proof that alcohol is essentially a poison, the fact that it is habitually mingled in beverages, with ingredients whose poisonous qualities no man ever disputed, should induce us to let it carefully alone.

Partridges are naturally very wholesome and savory; but they sometimes eat obnoxious berries which render their flesh a poison. When it is known that some of them has done so in any locality, the eating of partridges in the locality is at once desisted from by all but the grossly ignorant or stupid; and if it shall ever become a habit with these birds to eat the poisonous berries freely and generally, so that their bodies shall be usually poisonous, who can doubt that their flesh will be generally rejected and uneaten? In nothing else do sensible, moral, intelligent men act so irrationally as when they persist in the habitual use of alcoholic liquors.

The first production of alcoholic liquids was doubtless accidental—caused by the spontaneous fermentation of grape-juice, grains, etc., under peculiar circumstances, finally evolving a fiery, transparent fluid. (When we term alcohol an unnatural product, we simply place it in the same category with carrion, malformations, idiots, etc., which are not produced in the regular and healthy course of Nature, but evidence her defeat and disappointment.) Ten thousand times this phenomenon may have occurred unnoted before some stern necessity of thirst, faintness, and destitution induced some one to imbibe cautiously of the product, in spite of the reluctance and revolt of the senses. The effect was immediate and palpable, elasticity, energy, courage, invigoration—the first pair and the apple over again. The depression, prostration and pain came afterward, and could be forgotten or referred to some other cause. If the first bold experimenter in alcohol did not choose to repeat the dose, the second, the fifth, or the tenth was doubtless less wise. It crept gradually into use—first as a medicine or wonderful elixir, capable of curing almost any disease; and very soon repaid the confidence reposed in it by creating many new disorders and aggravating those previously known. While it may have been medically employed in some cases with effect, it has unquestionably created a thou-

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sand pains where it ever removed one, and caused more deaths than all the medicines on earth have postponed or prevented.

Throw a fierce blood hound into the cage of a young leopard or tiger, and, although neither ever before saw an animal of the other's species, each instantly, instinctively recognizes the presence of a deadly foe. Each summons every energy for the imminent and deadly encounter, places himself in the best attitude, rallies all his strength, quickens his circulation—"bristles up," as we say. He is more strongly nerved, resolute, formidable now than he was a minute since, precisely because he feels himself confronted by an implacable enemy, before whom to quail is immediate death.

So with the use of alcohol; a man swallows a glass of alcoholic spirits—his first; at once his whole vital economy recognizes the presence of an unnatural intruder—a deadly enemy. The stomach, disturbed in all its functions, says, "You must not stop here, I can not digest you," and throws it off upon the liver, which repels it as peremptorily, and trusts it toward the heart, which, with like emphasis, repels it. It is thus hurried from one to another of the vital organs, and repulsed by them all; but the necessity for disposing of it is pressingly imperative, and it is expelled in one way or another, partly through the kidney, partly through the lungs, and partly through the pores of the skin; unless the outrage be repeated, a short time sees the enemy banished, but only through an extraordinary exertion, an unnatural activity of all the vital forces. The pulse bounds, the blood gallops, the heart quickens its movements, and even the endangered brain is goaded to unwarranted exertion. Of all these exhausting efforts the mind perceives only the impulse, the exhilaration. The happy neophyte almost walks on air—he feels richer, more generous, and of more consequence than hitherto; he has a great mind to give somebody a fortune. The illusive exhalation produced by opium and some other poisons is known to be even more intellectual and ethereal than that produced by alcoholic liquors. But all this elevation of spirits is not really created by the stimulus; it is simply so much vivacity and elevation of spirits borrowed at ruinous usury, and of which payment is sure to be demanded to-morrow. To-morrow comes, and the demand with it; but the debauched consciousness fails to attribute the intolerable exhaustion and depression to its real cause. "When the liquor was present, and potent," it perversely reasons, "all was better than usual; but now that it is gone, I feel horribly!" "Take more," chimes in the depraved appetite, and the counsel is deferred to. More is taken, and momentary relief thereby is secured, by means which shall necessitate a still more abject prostration on the morrow, which will require a still stronger potion to overcome it. And thus the blind victim goes on, cherishing the adder which daily stings him, and fancying he is revived and upheld by that which is constantly depressing and destroying him.

But it is said that very many drink moderately and guardedly through a long course of years, preserving to old age a sound constitution and vigorous intellect, which could not be the case if the natural effects of alcoholic drinks were such as has been depicted.

Now, that some men live long in spite of moderate drinking, no more proves that practice safe and healthful than the fact that some soldiers who fought through all Napoleon's wars are still alive proves fighting a vocation conducive to longevity. That some persist in drinking without drinking immoderately is true; but the natural tendency of drinking at all, is nevertheless from less to more, and from more to indisputable excess. There are many vices of which the natural, obvious penalty is not inflicted on every one who commits them, yet no man doubts the connection between the sin and the punishment. Some men steal so moderately and slily that they are never detected by man; yet no one doubts that stealing is a crime, and that every crime meets its proper punishment. That some men drink liquors yet do not die drunkards is true, as it also is that some habitual drunkards live to old age; and yet it is none the less true that drinking leads to drunkenness, and drunkenness shortens life.

The laws of the universe are vindicated alike by their usual consequences and the apparent exceptions. There may be men who began to drink one glass of liquor per day forty years ago, and whom one glass per day still suffices; but if so, they are exceptions to a law almost universally vindicated; and it is safe to assume of them, that a less amount of self-denial than was requisite to keep their allowance down to one glass per day would have preserved them from drinking at all. And if any moderate drinker of forty years standing will recall to mind the subsequent career of the fifteen or twenty associates in whose company he began to drink, he will, if well informed and candid, admit that seven-eighths of them are now dead, and that full three-fourths, whether now living or dead, have been seriously injured by drinking

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[Written for The Herald of Health.]

An Essay on Teeth.

The time occupied by the first dentition is a critical period in the life of a child. The mortality occasioned by the local irritation of teething has been variously estimated by medical writers from one-half to two-thirds of those that die under two years of age.

The immediate cause of the irritation at the tender age of infancy, is induced by the pressure of the teeth in the gums, depending somewhat upon the temperament, management and strength of the child. As the teeth push forward the gums are wasted by absorption, and are at last cut through by the teeth. *In the course of life we all are dentists, and the first job we do is to cut our own teeth.* The lancing of the gums is one of the remedies resorted to for the relief of the child. The membrane which has secreted the enamel often becomes dense and tendonous, and the gum swollen by the protruding teeth; the lance takes off the tension and gives instant relief. If the gum heals before the tooth cuts through, dentists usually repeat the lancing. Never give children hard substances like coral to put into their mouths when they are teething, because they bruise the gum and produce inflammation in the bony structure of the teeth. External caries are caused by mechanical and chemical agents, and the first and most prolific of the causes that stand out in bold relief is *salivary calculi*, or; tartar of the teeth—in other words, the carbonate of lime—which adheres to the tooth. This substance, which is secreted with the saliva, often collects about the teeth in great quantities, particularly about those near the entrance of the salivary ducts.

When it is first secreted it is quite soft, like slime, and may be easily removed with a toothbrush; but if neglected it soon becomes concrete and hard, and can only be removed by instruments—an operation not more painful than the application of soap and water to the faces of some of the unwashed little ones who do not think water is a blessing. The temporary teeth, twenty in number, are generally in proportion to the size of the mouth. When the second dentition or permanent teeth appear, the temporary or milk teeth should be removed to prevent the irregularity of the permanent teeth. When the permanent teeth make their approach to the gum, the fangs of the temporary teeth are gradually absorbed until scarcely nothing but the crown is left; hence the vulgar notion that temporary teeth have no roots. There is a root you may take in your hand which will cure the toothache, I need not say it is the root of the tooth. Irregularities of teeth are caused by a lack of simultaneous action between the protrusion of the permanent teeth and the absorption of the roots or fangs of the temporary teeth. The narrowness of the *maxillary* arch, or a want of exact proportion between the extent of it and the size of the teeth, is also a cause of irregularity. These irregularities can be removed by skillful dentists. Since most persons work their jaws more than they work their brains, it is of the utmost importance that the former should be regulated. Especially should the roots of the "milk teeth" be removed in season to prevent the irregularity of the permanent teeth. In this country of sweetmeats and tobacco no part of the human system is more subject to disease than the teeth, and no disease is more frequent, none so easily prevented or cured in competent hands. Quack dealers in acids for the whitening of teeth should be avoided. The teeth are organized and living bodies, having vascularity and sensibility; to prove this, I need only prove that they can be injected; that a nutrient circulating fluid passes through them to sustain the principle of life; that the roots or fangs of the teeth are secured in their socket by a *periosteum*, which transmits nerves and arteries to them for the preservation of their vitality. Without dwelling on this topic, I hasten to say a word or two respecting the diseases of the teeth. Gangrene or caries are divided into classes thus: Superficial, when the disease first makes its appearance on the outside of a tooth; deep-seated, when it has extended to the internal bony structure of the tooth; simple, when the disease has not reached the internal membrane; complicated, when it has extended to that membrane. Various opinions have been given as to the origin or cause of these diseases of the teeth; the most satisfactory are the following:

The peculiar structure of the teeth shows them to be susceptible of inflammation, for the inflammation may separate the membrane which is the medium of communication betwixt the tooth and the general system. This theory has been questioned by some distinguished writers on Anatomy and Physiology.

The exciting cause of dental decay arises from bodily disease, improper aliments, powerful medicines, acrid filth and destructive poisons; such as alcohol, tobacco, drugs, etc., that are deposited in the mouth and upon the teeth. I may add, that a disordered stomach [Horace Mann said "that a foul stomach as well a wicked heart

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is' an abomination of the Lord"] nervous fevers, acidity of the saliva, etc., are to be named among the prominent causes of decay. Some writers affirm that those who live in cold, moist, marshy countries, damp basements, etc., seldom have good teeth. The symptoms of external and internal caries show that their causes are different. The first appearance of internal caries in teeth that have been kept free of foreign matter is marked by a peculiar bluish or dark spot shining through the transparent enamel. External caries also occur in different parts of the teeth, and never attack teeth that are kept free from chemical agents and stand apart.

The effects of climate—great and sudden changes of temperature—hereditary predisposition to decay, malformation of their structure and inflammation of their bony structure, should be taken into the account. The teeth of young persons are far more liable to decay than the teeth of old persons, and when attacked by caies are destroyed in far less time. The teeth of the lower jaw are not so liable to decay as the teeth of the upper jaw. I speak of the incisors or front teeth and not of the molars. This is owing to the fact that the lower teeth have a thicker enamel.

Now let us come directly to the cause and cure of the diseases of the teeth. The teeth as before stated, decay earlier in this country than in Europe, owing to our dietetic and other habits, and to the sudden changes of temperature. This fact can be proved by the fact that Europeans have better teeth than Americans; but when Europeans have resided in this country a few years, their teeth decay and are no better than ours.

Very hot or very cold meats and drinks have an injurious influence upon the teeth. No part of the system is so much exposed to the changes of temperature as the teeth, and the low degree of vitality which they possess illy fits them to bear the extremes. Whenever we take any substance hot or cold into the mouth, we experience a painful sensation which would seem a monitor that such extremes are injurious. Different kinds of food can only be productive of caries, as of diseases of the general system by inducing an inflammatory diathesis, deranging the digestive organs, or by being of too high or too low a temperature. Luxury, indolence, intemperance, are all conducive to general disease. Savages who live in the forest have good teeth, while those who live near white settlements and copy the habits of the whites have diseased teeth. Our forefathers had better teeth than we have, because of their simpler habits. A febrile state of the system is a prolific cause of caries. Often after a severe attack of sickness the patient will perceive that cavities are coming in his teeth, which he previously supposed to be perfectly sound. This he ascribes to the effects of mercurial or other powerful medicines. Persons laboring under dyspeptic affections are apt to have bad teeth. The profuse administration of mercury is a grand cause of internal caries, by inducing inflammatory action. Tartar of the teeth is a common cause of external caries, by acting chemically on the enamel, and exposing the bone of the teeth to the action of foreign matter and to inflammation. It discolors, erodes and decomposes the enamel, as is always seen with teeth that have been covered with it for a length of time. In this case, the teeth next the gums are found rough and of a yellow color, and frequently the enamel is completely destroyed across the neck of the teeth.

Putrefactive agents—particles of food lodged between the interstices of the teeth, which, if not removed, undergo decomposition, have pernicious influence. Tartar and putrefactive agents are the principal causes of external caries. The tartar gradually separates the gum from the necks of the teeth by insinuating itself deeply between them, and, aided by other causes, produces inflammation of the gums, which gradually become of a livid color, sore and spongy, and bleed on the slighest touch the disease extends to the socket, constituting what is vulgarly called scurvy in the gum. A puriform discharge takes place around the necks of the teeth, the periosteum and the alveoli are gradually absorbed, the teeth become loose and sore, they drop out one after another when they might have been saved. The saliva when vitiated—which is apt to be the case with those who neglect their teeth—is a case of external caries, decomposing saliva, tartar, putrefactive agents, decaying teeth and dead roots, stumps, are among the most fearful and fatal causes of dyspepsia, consumption and premature death. Mineral acids recommended by quacks as tooth curatives and cleansers, and vegetable acids are alike injurious to the teeth, so don't touch the "Sozodont." It has been said that acids can not act on the teeth, having less affinity for lime than phosphoric acid. But you put a tooth into acid and you will find that it will gradually decompose. All tooth washes and dentrifices that whiten the teeth are dangerous, they whiten the teeth by decomposing them. Beware of lotions and teeth preservatives. Dead teeth, crowded teeth, fangs, are also the cause of decay.

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How is this to be prevented? I answer by removing the causes and filling the cavities. The operation of plugging teeth is of great antiquity. It was known to the ancient Greeks and Romans, and they treat of it in their writings. By this beautiful and useful operation carious teeth may be preserved for many years, in most instances during life. He who loses a tooth loses a part of himself. Save your teeth.

There is no subject connected with dental surgery of much more importance than the science of filling teeth, which is so often practiced by those who have no skill, no scientific knowledge, no knowledge of anatomy; hence, so much distrust on the part of those who have been deceived by empirics and quacks, who tinker teeth as a tinsmith would a tin-kettle. Hear what the great authors and doctors say on this interesting subject: Dr. Parmlee of New York says: "The benefits of the operation of filling the teeth are so truly important that it is impossible to recommend it too earnestly to the public." Dr. Fitch says: "Plugging the teeth, if properly done, is one of the most useful operations in dental surgery." Dr. Sigmond says: "I have no hesitation in affirming this to be one of the most important and useful operations that can be performed." Dr. Clark says he is "acquainted with the case of a well known medical man in London, who has a serviceable tooth which has been plugged forty-seven years." This operation can be performed by dexterous and skillful hands with little or no pain to the patient, the experience of clumsy operators to the contrary notwithstanding. If the cavity be so situated that it can not be well filled the operation will be useless. But I must leave a subject that a volume would not exhaust. No person will dispute the fact that clean and regular teeth are an ornament to man or woman, while distorted or discolored teeth are not. Those who keep their teeth in good order, will be able to speak distinctly, to chew their food well, and at the same time be free from the offensive odors that invariably accompany bad teeth. A trifling expense can, in nine cases out of ten, save teeth which the patient may consider beyond cure, thus increasing his happiness and lengthening his lease of life. Scarcely can you look into the mouth of the most fastidious person without finding more or less tartar upon the teeth. This should be removed by instruments before it works fatal mischief to the teeth. Parents, see to it, that your children's teeth are kept in good condition.

A DENTIST.

[Written for The Herald of Health.]

Health of Girls—No. VI.

BY DR. J. H. HANAFORD.

It is more than probable that the style of dress has an intimate connection with some of the weaknesses and diseases of females. Dame Fashion is generally very freakish, seldom guided by *common sense* in her dictation to her followers. Fancy usually takes the precedence, not judgment. Fashion wonderfully transmutes every style, every form into beauty, rendering the mammoth bonnet and its apology, the large and flowing sleeves and the opposite, alike beautiful.

Omitting any special reference to the conflicting views in regard to the amount of clothing needed, the extreme views on this subject—the "happy medium" is generally safe—it is proper to state that the evils of too much clothing and too little are nearly the same, both tending to debility. It is no worse, perhaps, to suffer from cold, from a deficiency of clothing, than from an excess, from too much warmth, which necessarily debilitates. All have observed that we are more religious and more active and energetic in cool or in cold weather than during the oppressive heat of summer. Winter is the time in which the system is fortified, invigorated, to enable it to endure the enervating effects of summer's heat. Hence the folly of raising the temperature of our apartments in the winter higher than the heat of summer. As a general principle, the "comfort point" is desirable, employing as little artificial heat as consistent with that idea. In other words, seek *comfortable* warmth with as little clothing as possible, allowing the body, with proper food and exercise to generate as much of its own heat as possible, one design of clothing being to retain the heat thus generated. The non-conducters of heat and cold—woolens, silks, furs, etc.—of course retain this warmth the best, rendering them desirable for winter use, while cottons, linens, etc., conducting off the heat with ease, are appropriate for warm weather. And here it may be remarked, while some of the advocates of flannels for summer wear direct them to be worn next to the surface to absorb the perspiration, etc., the non-conducting power is the same, whether worn in this manner or with a garment of cotton between. It may be a question whether the debilitating effects of flannels worn next to the skin exceed those resulting from the moisture of perspiration. It is quite certain, however, that personal comfort is generally promoted, aside from the effects of habit, by the use of cotton, linen, etc., next to the surface,

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while the flannels are worn externally, as a means of retaining the warmth and of excluding the cold.

Allowing all to use their own judgment in reference to the amount positively necessary to preserve the requisite warmth of the body, doing this with as little as seems necessary and desirable under the circumstances, since no rule can be adopted so applicable to all, how it shall be worn is a matter of equal importance. In fashionable life, it is by no means unusual to see young ladies half clad, or to say the least, insufficiently clad. This deficiency relates to certain portions of the body, rather than to clothing in the aggregate. Fashion sometimes demands the exposure of the arms, neck, upper portion of the chest, to say nothing of insufficient protection of the lower extremities. These portions are frequently entirely nude, and of course, must suffer from the cold. While these surfaces are thus exposed, and while they need protection as much as the other parts of the body, it is evident that tender females, possessing less vitality and power of endurance than the sterner sex, necessarily suffer from such exposure. It is surprising that frail creatures not only presume so much upon their power of endurance, but are willing actually to suffer so much while conforming to these unphysiological customs. A strong man who should thus expose a similar surface to the chilling winds of winter, would be deemed reckless by his fellows. Are females more hardy than males, or can they afford such escape of the natural warmth of the body? Such exposure of the chest is chilling to the vital organs, causing, in connection with other exposures, serious lung affections. The mother who has any regard for the health of her little daughter, if intelligent, will provide "high necked" dresses, and be sure to guard against the exposure of the limbs, a matter of the utmost importance. In this connection it is proper to refer to the care of the feet. The former custom of wearing very thin shoes, with soles scarcely thick enough for summer wear in the house, fortunately has become nearly obsolete, firm uppers and decidedly thick soles now being in vogue. It is feared, however, that this change had too little reference to health, and that another freak of the fickle goddess will again consign these tender feet to coldness and to exposure. No individual, especially frail females, can thus suffer from cold feet and long succeed in warding off the attacks of disease. That was a noble woman, Queen Victoria, who, when furnishing her daughter's "outfit," was careful to include *one hundred and forty-four* pairs of *calf skin* boots and shoes All honor to such an intelligent and *womanly* mother. Will not the mothers of our country copy her example, putting children on, not "downy beds of ease," but on mattresses, and feeding them with a diet as simple and abstemious as that of the children of the royal family? For various reasons the feet are specially exposed, and need much more care than they ordinarily receive.

In addition to sufficient covering for the feet, it is necessary to have reference to other considerations. If the blood is not allowed to circulate freely through them, no amount of covering will suffice to keep them warm. Close-fitting boots, so tight as to prevent a free circulation, are as unfavorable as thin boots. Tight lacing of the boots, and elastics that prevent the warm blood of the heart from reaching the feet, are among the prominent causes of cold feet. It is proper to add that a *warm* foot-bath at night, followed by a dash of *cold* water and a *thorough* rubbing with a crash towel securing a glow of warmth, and, continued for several nights, will prove effectual, returning the blood to the feet, and of course warming them. In short, those who keep the system in a good condition by the use of plain and wholesome food, who exercise freely, and breathe freely of pure air, who resort to friction of the whole body, including proper bathing; those whose blood is made to circulate freely through the smaller vessels of the skin, and who *avoid* stimulants, will suffer less from exposure, needing less clothing than others. Secure *enough* but not too much warmth.

MEN AND WOMAN.—Men love things, as facts, possessions, and estates; and women, persons; and while a man regards only abstract scientific facts, a woman looks only at the person in whom they are embodied. Even in childhood the girl loves an imitation of humanity, her doll, and works for it; the boy gets a hobby horse or tools, and works with them. But the noblest quality wherewith Nature has endowed woman for the good of the world is love—that love which seeks no sympathy and no return. The child is the object of love and kisses, and watching, and answers them only by complaints and anger, and the feeble creature that requires the most repays the least. But the mother goes on; her love only grows stronger, the greater the need, and the greater the unthankfulness of its object—and while fathers prefer the strongest of their children, the mother feels more love for the feeble and garrulous.—*Ex.*

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[Written for The Herald of Health.]

A Plea for Little Children.

BY M. M. H.

"It must be sweet in childhood to give back
The spirit to its Maker!"

What? "*Sweet*," through weary years of pain,
To miss for aye a prattling voice,
Whose bird-like tones shall ne'er again,
On earth, the aching heart rejoice?

Go watch the beaming eye grow dim,
Death's pallor blanch the blooming cheek!
Go listen to the funeral hymn,
And still say, if thou canst, 'T is "sweet!"

I knew long since a happy home,
O'er which no shade of gloom or strife
Had come, wherein awoke one morn
The music of a little life—

A tiny bud of promise bright,
So passing sweet, so strangely fair,
She almost seemed borne to our sight
From some bright realm of upper air.

One little year, and on that brow
Disease hath set the seal of pain;
All care, all skill are futile now—
Love, agonizing, strives in vain

To save the helpless, suffering child;
They listen to the failing breath,
They see her barque go drifting wild
Toward the boundless sea of death,

But naught their outstretched hands avail;
Powerless they stand upon the shore,
And watch through tears the less'ning sail
Vanish from sight for evermore!

How many eyes like theirs have wept!
How many parents fond and true
Mourn comfortless, who might have kept
Their darlings with them, if they knew

The simple rules of life and health
Ordained by God for man's control;
Benign, unchanging, wise and just
As those to guide his deathless soul.

O mothers! as you kneel in prayer
Beside the cradles where they sleep,
Beseeching God, with tender care,
To guard, and safe from danger keep

Your little ones—pray on in faith;
Seek all *His* laws to know, t' obey,
Remembering that our Saviour saith
We all must "watch as well as pray."

[Written for The Herald of Health.]

The Cry for Rest.

BY REV. O. B. FROTHINGHAM.

The spirit of the East is rest. Every thing there reposes—earth, air, water. The elements are quiet. Human existence is monotony. The dream of the Orientals is rest—rest from heat, from travel, from labor. Their legend runs that God himself rested one day in seven. Their Sabbath was a day of rest, and they had weeks of Sabbaths, years of Sabbaths, years of what to them was blessedness.

Our sentiment is different. With us the characteristic word is *work*, not *rest*. Rest we know nothing of; it has no place in our scheme of existence; it has no place in our philosophy of life. Our world is all alive—nature is quick and varied; the elements are active. The idea of rest does not enter even into our conception of heaven. Heaven to us means growth, development, progress. The angels of our Paradise, instead of resting on their wings in mute adoration, are studying sciences, exploring new worlds, busy at imparting knowledge to the people on the planet, or in shaping the affairs of nations and families on the earth. Even in our *bliss* there is disquiet.

A word about this gospel of "work"—this preaching of the dignity, the nobility, the grandeur, the kingliness of work. I believe in it. It is the gospel of the day, as against ease, sloth, luxury, elegant idleness, aristocratic lounging, the spirit that holds toil to be degrading to ladies and gentlemen. It is the gospel of the people against the idle privileged classes; it is the gospel for the New World in contrast to the Old World. But it is not the *whole* gospel even for the people of the New World.

This is acknowledged. Our people confess all the time that there is an element of curse in the work they are doing; not only by their willingness to shirk it, their readiness to lay it down, their sigh to be relieved of it; but by the efforts they make to keep it within limits and reduce its amount. The Eight-hour Movement, so noble in spirit and intention, is an endeavor to rescue the humanity of the toiler from the crushing curse of his toil. The attempts to make the Sunday a time for rational instruction and recreation is a protest against excessive work, and a plea for those things which toil pushes aside. The welcome that meets each new labor-saving invention, like the mower, the reaper, the sewing-machine, bears witness to the feeling that men have in regard to their la-

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bor, and is a cry to be relieved from its pressure. They are glad to throw it off upon wood or iron or gutta percha. They are overjoyed when vapor or electricity will do it for them. Every labor-saving machine is a man-saving machine. It helps to lift the curse. It helps to bring in rest.

The gospel for us is not work, but emancipation from work; the refining of work; the getting out of lower work into higher; the advance of the worker from mean to honorable places of labor. We should be jealous of the doctrine that women ought to extend their sphere downward, and be permitted to do men's work. For humanity's sake let them keep out of that; and let men try to get out of it as fast as they can, and put the elements of nature into it. We should pray that none may be dragged down among the bestialities; that all may be lifted up into the humanities.

Work is good, so long as there is nothing better; work is good, in order that we may rest. When work is no longer *work*, but *play*, that is best of all. But work *as* work, work regarded as work, felt as work, done as work, begun, continued and ended as work, is not well. "Rough work," says Ruskin, "honorable or not, takes the life out of us." But so does all work, as work, take the life out of us. Fine work, done as work, takes the life out of us. It tends to degrade us from the position of men and women to the condition of tools. It sharpens one set of faculties at the expense of the others.

The drudgery of the housekeeper, the routine of the man of business, the watchfulness of the trader, the inventive toil of the manufacturer, the overstrained keenness of the financier, the confinement of the teacher and the artist, all help to develop some one muscle or nerve to the damage of the man and woman. Work makes one a finger; another a throat; another an eye or an ear; another a calculating machine. It turns the doctor into a thumb, the lawyer into a needle-threading contrivance, the minister into a morbid nerve. After a term of professional work he feels as if he had no body; his senses are gone; the world of men and women is unreal; he is a metaphysical ghost.

The curse of work is overwork—all work, nothing but work. The art we need to cultivate is the art of resting, the art of doing nothing, when the time comes that we can do nothing. With all of us it should be a sacred duty to rest; to make time for rest; to cultivate the power to rest, and the capacity to enjoy rest.

Is it said that repose is the very thing that men long for but can not get? That I very much doubt. People are very fond of saying how tired they are; but they only want to let you know how hard they have been working, in order to get the credit of working hard. There are few men who will rest when they might as well as not. They sigh for rest when they know they can't have it. They discharge their sentimentality in that way. Is it said that work is imperative? that circumstances keep us at it? that our family expenses keep us at it? It is better to reduce expenses than to reduce being.

Is it said that work is an ordinance of God which can not be escaped? that work is the law of existence? the doom passed on living men? the destiny to which God holds them? that Providence makes endless provision for work, and creates everlasting necessity for it, and that rest is a thing simply impossible?

I reply by pointing out God's most bountiful provision for rest. In the tropics, where no labor is required of men, the night is scarcely divided from the day; but in temperate climes, where man's working powers are in the highest state of activity, the night nearly halves the day—at the season of intensest activity it does halve it—God lights his candle late and puts it out early. All the remainder of the time is for rest. Then labor naturally stops; office and shop are shut; machinery is still. The decree goes forth that the places of business shall be deserted. Then comes sleep—the long sleep, knitting up the ravelled sleeve of care; pouring balm into hurt minds; immersing Nature in her bath of oblivion; untying the knots of the brain; sifting and disentangling the thoughts; carrying sufferers away into the land of dreams, and bearing the weepers off among their loved and lost ones. Sleep, answering questions that could not be answered in the day-time; putting to rest doubts that had made the mid-day wretched; keeping all low cares and tribulations in their place, and calling out the imagination which revives and transports the mind.

But we murder sleep. We turn its darkness into day; its silence into revelry; its peace into pain. Fashion murders sleep; pleasure murders it; yes, and work murders it. Was not there an up-town Brokers' Board, in the excited times, in which men who had been wild all day became frenzied at midnight? In the days of youth, when we might cultivate the habit of long, still, deep sleep, we scorn its heavenly privilege, and throw its divine opportunity away; and then in middle age we *can't* sleep.

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We have lost the art; we are nervous and restless; and God's great immeasurable night is all in vain for us. We wake exhausted. The night's fever spoils our day. We stumble and bungle in our work. It is a touching story in the Gospel which tells how Christ was asleep in the fishing-boat, when the storm came up, and shipwreck seemed inevitable. His companions, who had been watching their nets all night, were nerveless, and had lost command of the vessel. He wakes from slumber, rebukes the winds and seas, and there is a great calm. The good sleeper goes safely over life's turbulent sea. He rules the storm, for he has rested. He is himself. We should cultivate sleep while we can. Woe be unto us if we do not. In sleeplessness is utter weakness; there may be madness in it at last. Get all you can of it; it is God's daily boon of rest to the workers.

But does God's provision for rest end here? Not so. We must not forget the Sabbath, the one whole day in seven which Nature—not the Old Testament, but Nature, from which the Old Testament copies it—has set apart from the other days for repose? All over the world, I believe, one day in seven is thus consecrated; all over the world this one day in seven, this resting-time, is held peculiarly sacred. The day of rest is the Lord's Day; the days of work are man's days. Do we forget it? Have we lost the beautiful lesson? Have we rid ourselves of the association? We may do well to revive it and restore it. It has become the fashion with us to speak lightly and disrespectfully of the Jewish Sabbath, that day of entire and absolute rest, when no work might be done, not even the ordinary household work deemed so needful; when even the picking up of a few sticks to make a fire was a transgression; when no journey could be made; no animal taken from the stable, except for watering; no manservant or maid-servant called on for duty; no buying or selling carried forward; no utensil cleaned after use. We say "this is absurd." But it is a touching absurdity, after all. How touching, when we consider that, rather than disturb this rest of theirs, the Jewish warriors sheathed their swords and allowed their city to be taken.

The Jewish Sabbath had a good side. It would do us no harm if we could have something of its imperative quiet among ourselves. But that precious one day in seven we have almost lost. We have murdered the Sabbath, just as we have murdered sleep. We have no day of rest in Protestant Christendom. True, work is suspended; though work goes on more than we suspect, and is very fast pushing its intrusion into the day of repose. But fashion does not rest; pleasure does not rest; worldliness does not rest; the brain does not rest. There is no rest for man-servant or maid-servant. Vice does not rest. Passion has no repose. Nay, religion gives no rest on its own day. What rest is there for people who are kept on the march to and from church two or three times in the day? who are turned out of their place of business into the theologian's? who are pitched about from one point of divinity to another? who are exercised furiously in metaphysics? Work! For many a poor sinner who needs a long sleep Sunday brings work compared with which the toil of all the week is light; to many a poor sinner the day of rest brings more fatigue than the day of toil. It is a fearful day to many; a day when idleness is reckoned disgraceful, but when all useful work is forbidden; day when to be vicious is a sin, but when the meeting-house offers the only escape from vice; day when one must not refresh himself with cultivating flowers, or painting pictures, or practicing music, or reading entertaining books; but when the listening to long sermons is made a duty. Do we call that a day of rest? For my part, I think it would be well if all the churches in the city could be shut up inexorably for a month or two in every year. Let there be an entire rest from preaching and praying; let theology be still; let aspiration cease; let controversy be laid aside; let the lids of the vexed and vexing Scripture be shut; let dust collect on the Articles of Faith; let the tormenters and the tormented be permitted to forget that they have souls either to rescue or to be rescued. It is not a day of idleness that we want, it is a day of rest. We are not likely to get it; for, as I have said, the excitements of Sunday are on the increase. But if we do not get it our children's children will suffer. The old curse once pronounced on laborers will be repeated; the vitality of men and women will be exhausted; the generations will be puny; and we shall pray hard for the rest that once wooed us to health.

HEALTHFUL EFFECTS OF GREAT FIRES.—It is stated as a singular effect of the late Portland fire, that while previous to it several burials a day took place from one of the most unhealthy wards in the city, none have occurred from that locality since the conflagration. There would be nothing very singular in the above, if the "unhealthy ward" was one situated in the midst of the "burnt district."

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[Written for The Herald of Health.]

Country Nuisances.

BY A. L. WOOD, M. D.

In this article I purpose only to speak of some of the principal nuisances which are usually to be found about the country farm-house, the effects of which are to poison and infect the otherwise pure air of the country. There is no natural reason why the tiller of the soil *should* not be healthy. One of the principal reasons why he *is* not, is that he surrounds his home with a series of nuisances, the emanations from which defile and poison all the atmosphere around.

First, and generally worst of all, is the hog-pen, with its loathsome inmates rooting and wallowing in their own filth. That man should ever have domesticated this most filthy of all filthy scavengers is indeed strange. That he should associate himself so closely with this scavenger-brute, keeping it, with its attendant collection of filth, in close proximity to his family dwelling, and sometimes even within it, so that the emanations of foul gases from its body and surroundings shall pollute the air which himself and wife and children must breathe, is stranger yet. That he should do all this that he and his family may eat their filthy carcasses, and thus poison their bodies with scrofula and the causes of many other diseases, is strangest of all.

The hog was created for a wise and useful purpose—as a scavenger, to devour decaying animal and vegetable substances that they might not contaminate the atmosphere; but man, by domesticating and perverting its use, has brought many curses upon himself, chief among which is scrofula.

The hog and the hog-pen constitute a prominent nuisance, which should be banished for ever from every home where health and happiness are desired for companions. But, it may be asked, what shall be done with the refuse substances of the kitchen that are usually fed to the pigs and thus saved from decomposition? A proper receptacle should be prepared, at some distance from the house, where all slops and refuse matters should be conveyed and mixed with vegetable mold, muck, or other substances, so as to absorb all noxious gases, and at proper times this should be removed to fertilize the soil.

The objection to the piggery applies, in a lesser degree, to the barn, with its stables and barn-yards. Where animals are herded together there must arise unhealthful gases, which mingle with the atmosphere for a considerable distance around. For this reason, the barn, with its yards, stables and animals, should always be at a sufficient distance from the house to obviate this objection. Then, again, they should be kept as cleanly and well ventilated as possible, not only on account of human health, but on account of the health of the animals occupying them. The same laws of cleanliness and ventilation apply to animals as to man. If they are kept in close, filthy and unventilated places, their health must suffer. As long as man keeps animals subject to his use and control (the time will some time come when he will no longer need them), so long he is in duty bound to protect them. It is as much a religious obligation for him to look after the health and comfort of his brute servants as it is to care for his own, and the man who does not do this is no Christian. "A merciful man is merciful to his beast."

It is customary with most farmers to raise large numbers of hens, turkeys, geese and ducks, which they allow to be around the house, and in some cases in it. To some this may seem to be a small matter, but where domestic fowls are kept in this way, in large numbers, it is a very serious one. It is a filthy custom, to say the least, and no home can be as cleanly and healthy as it should be where it is practiced. If fowls must be raised, let them be kept, with the horses, cattle and sheep, at a safe distance.

The practice of keeping a wood-yard close to the house, where there is always collected large piles of old rubbish, wood and chips, is unhealthful. There is always in these yards a large quantity of decaying organic matter, which is constantly throwing off unwholesome gases into the atmosphere. Let the open wood-yard be abolished, and have a suitable building constructed wherein the wood can be drawn, chopped and kept dry until it is needed for use. This building should not be near the house. A good location for it would be in connection with the barn. No decaying organic matter or rubbish of any kind should be allowed in the vicinity of human homes, but every thing around should be kept sweet and clean. Surround your home with flowers and green grass and groves and orchards and gardens, instead of filthy pig-pens, stables, barn-yards, poultry promenades and decaying wood-piles.

To come to the house itself: there are usually nuisances within, as well as around it.

As the one generally foremost in its unhealthful effects, I will first speak of the privy. This is usually in the house, or in close connection

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with it. From the excrements of the human body arise the most unhealthful and disease-producing gases. We are told by the Council of Hygiene of the New York Citizens' Association, that "careful observation has established the fact that neglected and putrescent excrements and the effluvia from privies serve to localize outbreaks of cholera, and more fatally than almost any other class of nuisances." The Consulting Physicians of the City of Boston tell us that "among the causes which act upon the human system to induce the disease (cholera), are exhalations from the bodies of human beings in crowded residences, and unremoved excretions." Dr. Greenhorn, an eminent London physician, says: "An atmosphere impregnated with the products of fermenting excrements is at once the most obvious and most constant concomitant of cholera." There is no calculating the amount of disease produced, wholly or in part, by breathing the emanations from our own excretions. How shall this nuisance be abated? 1. Have the privy removed from the immediate vicinity of the house. 2. Disinfect the privy vault frequently and thoroughly; for this purpose sulphate of iron (copperas) is usually most available. Dissolve it in water, in the proportion of an ounce of copperas to a quart of water. Carbolic acid, when it can be obtained, will do as well. (See article on "A New Era in Disinfection" in this number.)

The effluvia-laden vapors arising from chamber vessels in bed-rooms constitute another very injurious nuisance, which may be obviated by cleanliness and disinfection, as with privies. The vessels should be kept covered, and always contain a small quantity of one of the disinfectants above mentioned.

The swill-barrel and unremoved accumulations of kitchen offal constitute still another common domestic nuisance. Says Dr. Snow, the Providence (R. I.) Superintendent of Public Health: "The impure air arising from these collections of swill and house offal is a most injurious nuisance and a most prolific source of disease. The danger is still greater when, as is frequently the case, the swill and offal are deposited in cellars or thrown into privy vaults." That all such matters should be removed from the house before they have a chance to decompose must be obvious to every reflecting mind.

A damp and filthy cellar often causes disease and even death. Cellars are usually damp, unventilated places, where meat, fruits and vegetables are stored, and are often very filthy and unwholesome. The fruits and vegetables kept there decay and give off the poisonous gases of putrefaction, which, having no other place of exit, escape through the cellar-door into the rooms above, and thereby poison the atmosphere of the whole house. Thousands of cases of fever and other diseases are produced in this way. They are generally worst during winter and spring, though there are many which are an abomination at all times. The remedy is very simple. Make them as dry as possible, secure good ventilation, and keep them clean. To secure these indispensable requisites, have a tight floor of stone and cement over the whole cellar; have windows in the sides to admit fresh air from outside, and a flue opening into the chimney to carry off the impure air; have the cellars washed, scrubbed and kept clean as you do other rooms in the house, and when any of the articles stored there commence decaying remove them.

There are other minor nuisances which might be mentioned, but I will close by saying that if you wish to preserve the health of yourself and family and avoid sickness, doctors and premature death, secure cleanliness in all things in and about your home. "It has been said that "Cleanliness is next to godliness;" but I say, Cleanliness *is* godliness.

A Disinfecting Filter.—It is known to physiologists that the most suddenly fatal of all poisons are those of organic origin. The presence of this matter in water is frequently imperceptible to taste and sight. In the year 1854, a pump, from which large supplies of water were drawn, yielded perfectly clear water, which yet killed 500 people in the first three nights of September. Stimulated by this experience researches were entered upon to ascertain whether all the organic matter in water could be filtered out. More recently a curious property of magnetic oxide of iron has been demonstrated in the preparation of filters. This magnetic carbide is asserted to possess the power of converting oxygen into ozone. The inventor says its purifying property is "due to its power of attracting oxygen to the surface," which "there becomes changed into ozone, or at least a body having its properties." But whatever may be the theory of its action, its effects in removing oxidizable and other organic matter from water are undoubted.—*Ex.*

Swimming is one of the regular branches of a Honolulu female boarding-school.

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[Written for The Herald of Health.]

Healthful Agency of Trees.

BY MRS. MARY TREAT.

One of the most interesting features connected with the study of plants, whether considered in the light of utility or beauty, is the leaves, the ever-changing foliage. The leaves are to the plant what the lungs and digestive organs are to the animal. So upon the luxuriance and vigor of these depend the health of the plant.

We have all noticed the intricate system of venation or net-work of the leaves, and that upon the principal veins depend the form of the leaf. If but one strong mid-vein, it gives us the feather-veined leaf, as in the beech; but if several strong veins start from the base, it gives us that beautiful form of lobed leaf for which the maple is so justly admired. Pre-eminent among the lobed leaves stand that of the Sweet Gum (*Liquidambar styraciflua*). The lobes of this leaf extend further and are more regular than even those of the rock maple, which together with the dark green, glossy surface of summer, and the deep crimson of autumn, renders it one of the most beautiful of all our forest trees. All the varied forms of the leaf then depend upon the venation which soon becomes intelligible and very interesting to the student. Not only with regard to the great diversity of form is an acquaintance with the venation of the leaf necessary, but it also helps us to quickly discern to which of the divisions our plant belongs. The Exogens having net-veined leaves, the larger vein starting from the base, throwing off many smaller ones, dividing, sub-dividing and ramifying every part of the leaf, forming a kind of net work. The Endogens having parallel-veined leaves which are always connected by simple transverse veinlets. And finally, the Cryptogamia having forked veinlets, dividing and sub-dividing but not uniting again.

There is nothing that thrills me with greater pleasure than a fine tree with perfect healthy foliage. The most delicate flower does not give the same lofty feeling. And I never see a tree with imperfect leaves without a feeling of sadness, as if it were a thing of life, with joys and sorrows, with suffering and enjoyment, the same as with mortals. The green tissue of the leaf perforated by worms, or covered with a fungus growth, or again with a superabundance of tissue, as if it were swollen out of all proportion, causing the curl of the leaf, as we often see in the peach, are all sad sights.

We may well consider trees as the greatest hygienic agents, for they purify the air by absorbing the carbonic acid gas, and giving us pure oxygen in return. So in all large towns, wherever a space can be found, each one should consider it his duty to plant and protect one tree at least. If he cared nothing for the beauty, still he should think of the sanitary effects, and remember it is so much life and health. But this is true only of sound, healthy trees. A decaying tree rapidly consumes the oxygen, and evolves carbonic acid gas. One large dead tree, such as I have seen in the streets of New York, will do more harm than many healthy ones can counteract. If for no other reason, the unsightliness of a dead tree should be a sufficient reason to banish it from our streets. I never approach a house in close proximity to decaying trees without a sort of dread, as if the inmates were morally corrupted, cared so little for being surrounded with the beautiful; as if their own natures were as unsightly and rotten as the trees.

But the most obscure and, at the same time, deeply interesting theme in botany is the fertilization of plants—how the pollen acts upon the stigma; how it reaches the forming seed or ovules; its great diversity of form, and in many plants how it could never reach the stigma without the aid of insects. The pollen, the yellow dust-like substance contained in the anthers, is always the same form in the same species; but the microscope reveals various forms in different species, generally spherical, but sometimes triangular, and in others cubical, etc. etc. As the flower expands the anthers become matured, open and scatter their contents, when, in the perfect flower, with the organs in the right position, it falls at once upon the stigma. But not infrequently the stigma is wanting, the pistillate flowers being on separate plants, when the pollen must reach the stigma through some foreign agency. And again, when both stamens and pistils are present they are frequently in such a position, as in the Orchids, that the pollen can not reach the stigma; so there seems to be the most wonderful design for attracting insects to reach the nectary, which they can not do without coming in contact with the pollen, carrying it with them to the next flower, when they must necessarily rub against the stigma bearing a portion of the pollen for impregnation. This curious matter is fully treated and illustrated in a most happy manner in Darwin's "Fertilization of Orchids," so clearly explained and so free from technical terms that no one with any knowledge of botany can fail to become deeply interested in the book. In his introduction he says, "The object of the work

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is to show that the contrivances by which Orchids are fertilized, are as varied and almost as perfect as any of the most beautiful adaptations in the animal kingdom; and secondly, to show that these contrivances have for their object the fertilization of each flower by the pollen of another flower. In my volume 'On the Origin of Species' I have given only general reasons for my belief that it is apparently a universal law of Nature, that organic beings require an occasional cross with another individual; or, which is almost the same thing, that no hermaphrodite fertilizes itself for a perpetuity of generations. Having been blamed for propounding this doctrine without giving ample fact, for which I had not, in that work, sufficient space, I wish to show that I have not spoken without having gone into details. And I have thought, that, as Orchids are universally acknowledged to rank among the most singular and most modified forms in the vegetable kingdom, the facts to be presently given might lead some observers to look more curiously into the habits of our several native species. An examination of their many beautiful contrivances will exalt the whole vegetable kingdom in most persons estimation."

Not only are Orchids fertilized though the agency of insects, but many of our most common flowers. You have all noticed the flower of the Kalmia, to which allusion was made in a former article; how the ten stamens are lodged in the ten cavities of the corolla; how they spring forward, scattering the pollen, which at first thought would lead us to believe was a contrivance for throwing the pollen upon the stigma. But Prof. Gray tells us in an article in the September number of The Agriculturist, that this flower is also dependent upon insects for fertilization. To make it clear, we will quote his own words: "When the flower is wide open, the filaments are bent backward still more, with considerable tension, like a bent bow. Pull the filament a little, or gently lift the anther with the point of a pin, so as to disengage it, and the bow straightens itself with considerable force, throwing the pollen out of the anther with a momentum which carries it far over the stigma. In fact, this stamen is on the plan of, and acts like, a boy's pea-shooter—or, rather, like a double pea-shooter—two quills upon one bit of whalebone. So the pollen is shot at the stigma; and out of ten shots some may hit the mark. But we may well believe this elaborate contrivance was not got up for such a purpose. On inclosing a truss of flowers in gauze, so as to keep off the flying insects, we find that the anthers remain in their pouches till the flowers wither, or till the filaments lose their elasticity and become flabby. Evidently the anthers are to be set free by insects. Now, bees and wasps visit the Kalmia flowers abundantly, chiefly in early morning. A bee on the wing poises himself directly over the center of the flower, and usually rotates around, his forelegs hitting or even pulling at the filaments in succession, while his proboscis is searching the bottom of the flower on every side; and the anthers, one after another, discharge their pollen upon the bees chest and abdomen, the very parts of the body which, during the operation, are continually rubbing against the stigma."

The bright array of autumn flowers will soon pass away. The Golden-rod, Gentians, and Asters warn us of the near approach of the rest or sleep of the vegetable kingdom. What a pity the animal world, especially our poor human brothers of the crowded cities can not rest like the flowers, starting up with renewed vigor in the spring. How much suffering, pinching want, and misery might thus be avoided. But no doubt my pity is uncalled for. Not many, even sunk to the lowest depth of misery, but find some pleasure in life. But when we look at the miserable rag-pickers of the street, we experience a thrill of horror and involuntarily exclaim, Can there be any pleasure in such a life? Did they ever visit green fields and cull bright flowers? Were they ever bathed and made clean and pure? Would the invigorating air of the mountains, the sparkling water, the glorious trees, the beautiful flowers, have any charm for them? But the greatest mystery is how they live at all. Plants could not survive such treatment, and yet more highly organized human beings manage to breathe and live in these dens of filth and infamy, and, as they emerge from these dens, they carry with them on Broadway and other parts of the city the contaminating corruptions of body and soul for us to inhale, to incorporate into our own beings.

Moral Culture.—When the child stumbles over a block and hurts himself, and the mother says, "Naughty block! block must be whipped!" she teaches a lesson of revenge instead of caution, gives the moral feelings a wrong direction, and nurtures perverse dispositions which will distort his character and embitter his life. How often do we attribute to nature faults of temper, irascibility, ugliness, which, after all, are creations of our own ignorance and folly!

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[Written for The Herald of Health.]

Notes from the Country.

TOBACCO *vs.* QUOITS.

"WHEN I was at school I was in the habit of employing many leisure hours playing quoits; but, becoming convinced of its sinfulness, I gave up the amusement." So said the pastor of a country church to me not long ago. At this very time my friend's mouth, out of which God designed instruction should come, was contaminated with a filthy quid of tobacco. What inconsistent creatures we are! How prone to put away our little vices, and take more closely to our bosoms our greater ones.

VOICELESSNESS.

Stephen B——, a soldier in the Army of the Potomac, lost his voice from measles or their bad treatment, and for more than three years did not speak a loud word. Several months ago he applied to a distinguished Homœopathic physician for advice, saying that he would deny himself of every thing, submit to any treatment, and give all he was worth in the world to be restored to health.

"I can not cure you, you use so much tobacco; give that up and I will cure you for nothing," said the honest, generous German.

In two days B——, almost overcome by the loss of his accustomed quid, replenished his tobacco-pouch, and assured me he had no faith in any treatment "that could not cure him, tobacco and all, and that he would never stop using it so long as he lived." Woe to men who deliberately place themselves in the power of vicious habits so wonderfully strong that it is easier to give up happiness, health and life, even, than to break the cursed bonds.

It is a very curious circumstance that this same young man was knocked down a few days ago by a wagon, the wheel passing over his chest, when something seemed to break, a quantity of dark bluish matter was raised, and his voice was restored.

POWER OF THE IMAGINATION.

The following anecdote, vouched for by Captain J——, is another evidence of the wondrous power of a diseased imagination to make men miserable. A long, lean, lank apothecary, who keeps a "hole in the wall," and retails pills, codfish and whisky—who is always complaining, ever doctoring, and, of course, never well—became convinced that he was suffering from the gout, after reading an article on that disease. He sought his medical adviser, describing his symptoms and stating his fears. Said the old gentleman: "There is one symptom, which you have not, that invariably accompanies the gout—you have no pain in your great toe." The pill-maker departed, feeling something of the same spirit with which Galileo recanted—that it was *gout* nevertheless, and in a few days went back to his physician with a *severe pain in his great toe.*

L. D. B.

HOME INFLUENCE ON EDUCATION.—At the fireside, in the street, in the fields, in the workshop, is where we get our education, not in schools. Schools make us acquainted with letters, and with the mechanical part of a literary life, though these are sometimes gotten at the hearthstone. We are interested away from school—at our play, at our recreation, at many things; and what interests us is our instruction. Without interest there is little done. Even our exercise (our health), is of little benefit if there is no interest in it. Do what we like, and we not only do it well, but we are benefited by it. Educate a child in what he likes to do, and there you have your greatest advantage. But some children have a liking for forbidden things. Probably most have it, at least to a certain extent. This is unfortunate, but not entirely hopeless.

Secure the affection of a child first; this is the duty of every parent and teacher. Then you have a moral control over him, and this is what you want. Physical force will not secure your end. The world is full of examples of this kind of corporeal punishment. It is brutal; it is Pagan. The gentler is the moral way of treatment—it is the Christian, eminently. A child won this way, is not only deterred—you have secured his will, the important point; his affections, another important point. But coupled with this should always be an idea of the deformity of evil—especially in its results—and the beauty of virtue. These early instructions are of the greatest moment. Whether good or evil, they are lasting. They affect the future character of the man. He will look back to these days always as the Eden of his life; he can have no other. If it is one of good, it will be all the more attractive. Such should home be made, and the youth and childhood of every individual. Parents have more or less the future of their children in their hands, and the responsibility will therefore be resting upon them. It is here where the germs are set, and set, or permitted to be, by the parent and guardian. The world will contribute to their growth, but the home roots will ever be there affording nourishment, pointing back to the days that more than all, have still an influence. F. G.

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[Written for The Herald of Health.]

Peaceful Nature.

How SWEET the calm which Nature keeps,
The saintly, earnest face she wears;
Nor ruffled by tumultuous fears,
Nor o'er her many follies weeps.

So gentle in her varying moods,
So tender in their interflow;
Yet solemn in their passions' glow,
And awful in their interludes.

Nor haste nor rest disturbs her calm,
Unvarying round of peaceful joy,
The years run on unceasingly,
Like some grand anthem of a psalm.

O Mother Earth! my soul would be
Like that calm, earnest face of thine;
Could its sweet peace be only mine,
How blessed my serenity.

The lustful eye, the pride of life,
Keep under with a steady hand;
Hot passion's fiery glow withstand,
Nor e'er engage in lawless strife.

Like thee preserve the wise control;
Be good and just with equal mind;
Joy's happiness alone we find
In heart and brain, in mind and soul.

TILDEN.

[Written for The Herald of Health.]

A New Era in the Hygiene of Disinfection.

DEMONSTRATION OF THE ANNIHILATING POWER OF TAR ACIDS UPON THE INFECTIOUS PROPERTY OF VARIOUS KINDS OF INFECTIOUS MATTER.

BY RUFUS KING BROWNE, M. D.,

(FORMERLY) PROFESSOR OF EXPERIMENTAL PHYSIOLOGY AND MICROSCOPIC ANATOMY AT THE NEW YORK MEDICAL COLLEGE.

No MORE important course of investigation and discovery was ever entered upon than that of disinfectants, for the obvious reason that, could human beings be relieved of the dread of seizure and sudden death by the class of diseases which demand these antidotes to their cause, they would be relieved of one of the most oppressive and silently-harrowing cares of their lives.

Moreover, no other line of research has been brought to a definite close with so perfectly triumphant a result; for the series of experiments we record have at last enabled science to present us a perfect antidote to the most subtle and deadly of animal viruses, and in the end it will be admitted by every appreciative mind that the moderation of our language will be vindicated, when we say that, in the whole history of scientific investigations, none affecting directly the life and health of domestic creatures was ever undertaken and pursued to so successful a result.

Long familiar as we are, not merely with the standard *learning*, but also with much scientific investigation for disinfection, we are sure that we may truly say, in the future there is nothing further required for the complete obliteration of one source of disease, than the knowledge of the substances which experiment shows us will utterly extirpate all the evil power of the virus of rinderpest.

Into the *history* of disinfectants we need not enter, nor into a description of the comparatively numerous substances which have been heretofore tried and recommended for that purpose. All these, successively tried, were found to have some objection, except the three we shall proceed to give an account of.

Says Mr. Crooks, the eminent chemist, and the author of these experiments:

"Dr. Angus Smith, by his exhaustive examination of disinfectants, has rendered it unnecessary for me to search among the numerous class of possibly useful bodies for those likely to be of practical value."

He himself proceeded to investigate the respective merits of the comparatively small number of agents available for disinfection.

But we may as well say a few words as to the terribly vicious character of the substances the experimenter undertook to find the means of subduing.

As to the bare fact of the infectious nature of the rinderpest all are agreed, and there are sufficient reasons for deciding that the infecting matter is neither a gas nor a volatile liquid.

But the disease-producing particles must be organized and possess nominal power. No poison yet known to chemists can approach, even in a faint degree, the tremendous energy of the active agent of infectious diseases, and notably of rinderpest. A poison may be organic, but it is not organized. It may kill with far greater *rapidity* than the virus of infection, but, unlike this virus, it can not multiply itself in the animal economy to such an extent as to endow, within a few hours, every portion of its juices with the power of producing similar results. A virus, on the contrary, renders the liquids of the infected animal as virulent as the original germ.

Strychnine may be regarded as the type of a poison, and vaccine matter as the type of a virus—and of this character is the virus of rinderpest.

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"There appears," says Mr. Crooks, "but faint hope of finding a *cure* for rinderpest, and even were medical science to supply that boon, it would be of little use, unless supplemented with vigorous disinfecting measures; otherwise it would be like attempting to put out a fire fed on all sides with inflammable materials."

Disinfection must, therefore, be the first consideration.

Disinfection, in the widest sense of the term, includes deodorization, and means the neutralization or destruction of all substances arising from putrefying organic matter, or emanating from diseased animals, either injurious to health or offensive to the sense of smell.

In a more restricted sense, the term "disinfectants" is used to express those agents which destroy or neutralize offensive matter by oxidation or analagous action; while under the term "antiseptics" are classed those agents which *prevent* chemical change by destroying the tendency to putrefy.

At the very outset, then, we find that it is necessary to strike off at once a whole class of valuable agents which will not meet the requirements of the case.

These experiments entirely reverse our ordinary notion, that oxidizing agents are the best disinfectants, because it was found that the substance which transcended all of the numerous ones tried, and not only that, but was found to be a *perfect* disinfectant, "neither accelerated nor retarded oxidation."

At first sight, nothing appears more perfect than the action of a powerful oxidizing disinfectant, like chlorine or ozone, upon noxious vapors and septic germs.

In presence of an excess of either of these, all organic impurity is at once burnt up and reduced to its simplest combinations; but in practical work on a farm, these disinfectants are inadequate; for in epidemics the oxidizing agent has presented to it far *more* noxious material than it can by any possibility conquer; and being governed in its combinations by definite laws of chemical affinity, the sulphureted and carbureted hydrogen, the nitrogen and phosphorous base, etc., would all have to be burnt up before the oxidizing agent could touch the germs of infection, while the continued renewal of the gases of putrefaction would be perpetually shielding the infectious matter from destruction.

It is here that the very great objection lies to disinfectants which act by oxidation. For, in using disinfectants of this class, the only test of efficacy which a workman would employ is that of smell, and Mr. Crooks relates several occasions that stalls deodorized by chlorine were yet in reality saturated with infectious matter.

Further, it may happen that the stinking gases of decomposition are of little or no danger in the atmosphere, while the deadly virus-cells of infectious diseases are inappreciable to the sense of smell.

Mere deodorization is therefore no protection whatever.

Again, oxidizing agents possess little, if any, continuous action.

What they attack is destroyed perfectly, but the portion they leave has no special resistance to decomposition conferred upon it.

They remove the products of decomposition, but they do not take away the power of further putrefaction.

In addition to these general faults possessed by the oxidizing disinfectants, the following special objection may be urged against chlorine and ozone:

Chlorine.—This agent requires to be liberated in the gaseous state. This, at the outset, is an objection. The smell of chlorine is irritating to the lungs of diseased or convalescent animals, and the cattle dislike it very much. Its action, too, is more energetic upon the valuable constituents of manure than upon infectious germs.

If much ammonia is present in the shed, chloride of nitrogen is likely to be formed, the vapor of which, even in the smallest quantity, is painfully distressing to the eyes of the cattle and their attendants. It is also disagreeable to handle.

Ozone.—This powerful agent attacks all kinds of organic matter with intense energy; but, as in the case of chlorine, the specific substance we most want to destroy would be nearly the last to go; and when much ozone is in the air it acts hurtfully on the respiratory organs. Beside, the generation of ozone from phosphorous by servants is dangerous.

Antiseptics.—These, it was found, answered all the conditions in the most perfect manner. They act by destroying the activity of infecting substances. They destroy vitality, and are therefore the only agents fitted to deal with this special case.

Sulphurous acid gas and the tar acids (carbolic and cresylic acids) were the three found to effectually destroy the pest.

Sulphurous acid gas (obtained by burning sulphur) is far preferable to chlorine.

No agent checks so effectually the first development of animal and vegetable life. All animal odors and vegetable emanations are immediately and for ever destroyed by it.

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The value of sulphurous acid in arresting the progress of the cattle-plague has been fully proved.

When used, however, by itself, it can only be employed very sparingly in sheds when cattle are in them.

It is very stifling, and its powerful *de*-oxidizing agency shows it to be incompatible with health.

For this reason Mr. Crooks used it only as an additional precaution, relying principally upon other agents.

These were the two tar acids, which in many experiments he found the most effectual of all antiseptics, themselves non-injurious.

These two bodies, from the same source, have the greatest similarity. They are the active principle of tar, just as quinine is the active principle of bark, or morphia of opium, and are easily prepared where coal or wood can be obtained.

Many experiments, to determine that point, equally proved that these acids have no power in interfering with oxidation.

Other experiments were instituted to endeavor to understand the mode of action of carbolic acid.

Some meat was hung up into the air until the odor of putrefaction was very strong. It was then divided into two pieces; one was soaked for two hours in chloride of lime, solution, and was then washed and hung up again; the offensive smell had entirely gone.

The other piece of meat was soaked for half an hour in a solution of carbolic acid containing only one per cent. of the acid; it was then dried and hung up.

The surface of the meat was whitened, its offensive odor was *not* removed, though it was masked by the carbolic acid. But two days after the bad odor was utterly gone, and was replaced by a fine but faint smell of carbolic acid. In a few weeks' time the pieces were examined again. The one which had been deodorized with chloride of lime now smelt as offensively as it did at first, while the pieces treated with carbolic acid had simply dried up, and had no offensive odor whatever.

It was then hung up for another month and then examined; no change had taken place.

Many other experiments were made, with different forms of animal substance, but with the same result.

They demonstrate, in a very striking manner, the difference between mere deodorizers and antiseptics. They prove that while chlorine will act on gases of existing putrefaction, and carbolic acid; it has scarcely any action on their gases, it *attacks the very cause* which produces them, and at the same time puts the organic matter in such a state that it never re-acquires its tendency to putrefy.

Mr. Crooks next instituted experiments to ascertain in what way carbolic acid acted in arresting decomposition.

A few drops of carbolic acid, added to half a pint of sugar-syrup and yeast in full action, immediately put a stop to the fermentation.

Fresh brewers' yeast was washed with a solution of only one per cent. of carbolic acid, and then with water; its power of inducing fermentation in a solution of sugar was entirely destroyed; but when the yeast was washed thoroughly in water, it readily induced fermentation.

These experiments proved conclusively that carbolic acid has a special preventive action on the fermentation induced by organized matter; it not only arrests it instantly when in progress, but it prevents the development of future fermentation.

From other experiments on purely chemical ferments, as diastase, which carbolic acid did not affect, it appeared that it only acts by attacking the vitality of living ferments.

The action of carbolic acid was tested in various ways.

A very minute quantity of a very weak solution of carbolic acid was added, under the microscope, to water containing various infusoria.

The acid proved instantly fatal, arresting the movements of the animalculæ at once.

The same experiment was tried with putrid blood, sour paste and decayed cheese, and in every instance the destruction of vitality and the arrest of putrefaction have been simultaneous.

In the presence of carbolic acid the development of embryotic life is impossible, and before its influence all minute forms of animal and vegetable life must inevitably perish. And if the contagious matter of cattle-plague is possessed of organic vitality, as is now admitted, it will be destroyed beyond the possibility of revival when brought into contact with the vapor.

The collected virus of cattle-plague was now subjected to its action, but when animals were inoculated by it there was no effect; but when inoculated with a portion of the same virus not treated with the acid they sickened and died, as they always do when inoculated with the virus.

By the last arrival of scientific intelligence from England, we have very full accounts of a long-continued series of experiments with a

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great variety of substances known as deodorizers, disinfectants and antiseptics, in the localities of the cattle-plague.

These were undertaken by Mr. Wm. Crooks, the distinguished chemist, the discoverer of the metal thallium.

So complete have they been that they seem to leave nothing to be desired, and scarcely any thing to be further sought for.

These experiments furnished repeated demonstrations that the tar acids—namely, carbolic and cresylic acids, diffused by sprinkling or otherwise, will both destroy the virus of the rinderpest and completely disinfect its haunts.

It may therefore be considered as definitely proved that the vapor of carbolic acid in the atmosphere exerts a specially selective power on all minute animal organisms possessing life.

If the contagious matter of cattle-plague is possessed of organic vitality, as must be now admitted, it will be destroyed, beyond the possibility of revival, when brought into contact with the vapor.

Experiments directly proved that the inoculating virus, united with *a trace* of carbolic acid, becomes wholly incapable of transmitting the disease.

We conclude by earnestly impressing upon the reader that, if there is any thing beyond doubt—any thing we absolutely now know—it is the contagious character of rinderpest, and these experiments have made assurance doubly sure.

In fact, they have served the purpose of giving us a clue to enlighten our previous ignorance as to the nature and behavior of the substances begotten of it which infect the well cattle.

But far more than this. These experiments fully assure us that, since the infectious matter of rinderpest is far more deadly than any infectious matter causing human diseases—though both are doubtless analagous in character, and differ only in degree—that the same agents will as effectually destroy the latter as the former.

In both alike these disinfecting agents will be equally effectual. To human infection they are therefore a true preventive, limiting the cases of such diseases to their original or primary number, and thus preventing epidemics dependent for their spread on the infectious proceeds of original cases.

But it is not merely for the great value in arresting the spread of existing disease, even chiefly therefor, that we hail as a great boon to humanity these discoveries, but on account of their hygienic value; for they furnish us with the certain means of completely estopping or nullifying a prolific source of disease, which hitherto we have had no means of detecting until they have actually taken effect, leaving us to enact but the poor part of attempting to cure them when established.

With the revelation of this knowledge there is, therefore, presented to us the admonition that disinfection is not merely demanded when infectious diseases are in the act of spreading, but as a hygienic precaution, a measure which does for the air—at all times liable to contain noxious and sickening emanations from life and decay—precisely what cleanliness does for our abodes.

We see, therefore, in the near future that the discovery of these substances serves the very highest purpose of all medical science—namely, to nullify even the natural causes of disease—natural, because they arise in the operations of Nature without the modification of human effort.

They furnish, in short, the material of a new era in hygiene, turning that hitherto largely indefinite field into a special one, giving us complete control over causes of disease, which we can only apprehend, as yet, through the knowledge of the effects of these agents.

To those who have so long occupied this field, now at length explored and seen by the eye of science, these discoveries of Mr. Crooks must be a source of rare satisfaction.

They are truly the dawn of a new era in hygiene.

THE DOG DOCTOR'S SECRET.—Good food, dainties and want of exercise are the destruction of parlor dogs. They become fat with increasing age and contract various diseases. At last the day comes when a dose of prussic acid must finish the business, or that medical practitioner must be called in who will by severe regimen restore the dog's health and appetite. An ex-kennel man in our neighborhood made a very comfortable income by this peculiar line of practice. He divulged the secret of his system a few days before his dissolution to the estimable clergyman of the parish. "I always tied 'em," said this canine Abernethy, "to a crab tree at the end of my garden for a week, and gave 'em nothing but water. When I fetched 'em from their mistresses they refused to eat what I should have been glad to get, and when they went back they would eat what I couldn't have touched. I've had some dogs twice or three times a year, but I always cured 'em at last. One of them was as good as £3 a year to me." —*Field.*

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[For The Herald of Health.]

Monuments.

BY MISS LEMIRA F. WHEAT.

[The following essay suggests an idea in relation to monuments which ought to be impressed on the American mind. In every country there should be "memorials" raised to the memory of the brave men who have fallen in defense of their country. There is no hill too grand and picturesque, no marble too white for their monuments. Ptolomy, one of the Egyptian kings, commanded an artist to erect a monument, and to write upon one of its blocks the following inscription: "Ptolomy, King of Egypt, the Savior of Seamen." In due course of time the monument rose five hundred feet in the sunshine, and threw its shadows on the shores of the Mediterranean. Before the circuit of a century had been made, the name of the king crumbled away and disappeared with the dust; for it had been written in plaster on the face of the marble; but the name of the artist was seen in great capitals, deeply cut in the solid marble. We have erected political memorials in plaster, let us write the names of our heroes in solid marble. They saved the health and life of the nation; they vindicated the courage, the loyalty, the endurance and the vigor of the nation.

This essay was read at the Annual Re-union of the Excelsior Society of the Delaware Literary Institute, Franklin, N. Y., July 5, 1866.—Ed. H. of H.]

The thought I wish to present is trite, but none the less important. We Build Our Own Monuments!

To leave some endearing memorial behind seems always to have been a ruling passion of the human race. We have little knowledge of old-time nations, save what we gather from the monuments of their great. It would indeed be a curious and not uninteresting study to trace the history of monumental art in all ages. As a single line of prophecy may contain a tale of centuries, so a single monument may bear in its structure the whole history of its time. The Pyramids lift their enduring summits heavenward. From a rude antiquity they have come down to us to tell their story of the great of old. In their labarynthine cells rests the dust which in life had a glorious majesty.

With what an ever present gloom these mighty monuments stand above a buried nation. "The glory has departed;" but in letters of living light graven on their silent walls, graven on the Sphynx, graven on the sounding statue of Memnon, which overlooks, like the angel of doom, the hundred-gated Thebes, we may read one truth:

"They build too low who build beneath stars."

How much that is grand in conception and almost complete in beauty and glory do we owe to this longing to live in memory after death! To this is due St. Peters at Rome—that marvel of the modern world; that temple, the largest and most magnificent on earth. Pope Julius II. wished to prepare for himself a splendid mausoleum, and commissioned Michael Angelo to construct it.

The design as sketched by the artist was stupendous and worthy of his genius; but when he repaired to St. Peters to select a site for it, the church was found entirely too small to admit such a structure. He was like Julius, unused to being thwarted in his designs; he resolved to move the old church, and build one better suiting his ambition, and to-day that church remains in its unique grandeur, a fitting monument to the almost godlike genius of Michael Angelo. While toiling for his master, for himself "he builded better than he knew."

He placed his monument in an unapproached height, and men, in wonder at his creating power, call him the "divine."

And those old-time sages and poets, who wrote out their great thoughts or from their academic retreats taught men to think for themselves, called up a spirit which will never tire, never rest. How truly does the old Latin poet Horace give utterance to the triumph of his work, "I have built for myself a monument more enduring than brass, and loftier than the royal fame of pyramids." More than we think, we owe those who with tongue and pen move the world, and grander than we dream are these monuments.

Among heroes and statesmen there are some names the world will not willingly let die. The crumbling marble placed above their rest will be forgotten long before their deeds. Our noble Washington—shall we, "the children of the free," ask, Where is the monument he built? Tell me where in all our broad land it is not, and I will tell you where it is. Each day, in a million homes, his name is uttered with fond reverence, and glad multitudes delight to do him honor. Not among us only, but wherever freedom of thought and action is dear and cherished, there are found the name, the spirit and the monument of not ours alone but the world's Washington.

And very near to that of Washington will stand the mausoleum of Abraham Lincoln, the

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Great Emancipator. The favoring hours of destiny found the true man ready, loyal to his trust.

"When can his glory fade?"

And those heroes who, perhaps unnoticed, fell in the death struggle with that terrible foe, think you they built no enduring monument? Among us, at almost every fireside, with tearful praises we honor them, and though the place of rest may be unknown, though cold marble may not tell their glory, it is graven on the living heart of the nation, and every pulse-beat of freedom honors them.

That there are monuments of shame is sadly true; that they are daily being built is also evident. There always has been a shadow in every sunny picture. That such sad records have an enduring fame is true, almost as the poet has it:

"Men's evil manners live in brass,
Their virtues are writ in water."

Do you remember the traitor Arnold, and how, even while he lived, he knew that his deed had brought him immortal infamy? There is an anecdote which illustrates his condition. When, during the reign of terror, Talleyrand, who in life was bishop, prince and prime minister, was about going in poverty and disgrace into exile, he inquired of his landlord if there was an American staying at his hotel. His host replied, "There is a gentlemen up stairs, but whether English or American I can not tell." Talleyrand gained admittance to the stranger's room. He was a strange, sad looking man of about fifty years. Talleyrand told him his wants, his history, in eloquent French and broken English: "I am an exile, forced to fly to the New World. You are an American. Give me a letter to some friend of yours, that I may be able to earn my bread. A gentleman like you, doubtless, has many friends." With a look his visitor never forgot, the stranger rose and retreated backward to the door of the next room. He spoke as he retreated: "I am the only man born in the New World who can raise his hand to God and say, 'I have no friend; not one in all America!'" "Who are you? your name?" "My name," said he, with a mocking smile; "my name is Benedict Arnold." He was gone—Arnold the Traitor! Did not the monument he built reward him with sorrow, even here?

To-day the same trouble is likely to rest upon a greater traitor, unless a merciful Government ends soon his living misery. It is said that Jefferson Davis can not sleep nights. Ah, well! Macbeth thought he heard a voice cry, "Sleep no more!" and if it be indeed true that we build our own monuments and sometimes reap a rich reward here, perhaps his sleep may not be soft for troubled dreams. The ghastly record of the Andersonville dead, which Dorence Atwater has brought to light, might well of itself drive sleep from his eyes. What a cutting force there must be in the truth that his work will be immortal. For indeed we all know that our life-work will be immortal, whether it be good or bad; and even though our work be not right, none of us covets oblivion. That in dying we shall go away and be forgotten is a thought against which our whole being rebels. That in us which remembers, tells us truly that others will remember; that which loves, tells us that others will love; that which thinks, tells us that while thought remains it will give a language to this loving remembrance.

There is a little German poem that gives a vivid and gloomy picture of the effect of being "forgotten and forsaken." It is entitled the "Minstrel's Curse." It opens with a description of a glorious palace, situated in a beautiful garden, where fountains leaped and laughed in the sunlight, and scattered it in rainbow tints; where all that could gladden the heart and delight the senses was found; where thronged the joyous and the beautiful, and where music filled the air. Then comes the deed of blood, and afterward the fulfillment of the minstrel's curse. A desert waste—nor fount, nor pleasant tree, nor garden, nor things of beauty, nor music, nor palace; but one broken, falling column, and the king's name was untold in story or in song. "Forgotten and forsaken!"—it was a fearful curse.

Shudderingly we turn from the picture, and remember that it is but a poet's dream, and that for us is no such future. No; while we deck with unfading flowers of hope and love the memories of the loved, and, alas! the early called of our band; while we read with tearful triumph a glad and glorious "Excelsior" written all over the monuments they built, we will hope that others will thus remember us. The loved and early called—how is their memory written in tears, not for unfulfilled life-work; ah, no! but because our veiled and earth-dimmed eyes can not quickly see the broken links taken up in heaven.

The old belief of Heathen Mythology—"whom the gods love die young"—is with us replaced by a firmer hope for our beloved. Should we write down all the loving memories that thrill our throbbing hearts, we might forget to look at the simple beauty of the monuments they built. The great of earth have built

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for time, they for eternity. Each silent finger points upward, each unforgotten lip says, "Onward!"

And now, what shall be our life-work. The granite of immortality is given into our hands, and we are working at it, willing or unwilling. We can not avoid it. Whether we will or not we are working at monuments that will not crumble, but must be ours for ever. It is no dreamland fancy, no "building a cloudy house for the soul to dwell in," but the real end to which all our labors are tending. And there is coming to us all a time when we shall see the result. If unkindness and frivolity pain us now, what lines of deformity will they trace indelibly.

There is a ray of hope for us. With daily duties nobly done, with deeds of loving kindness, with earnest struggles after a right life, with generous thoughts, let us make our monuments beautiful. God loves all beautiful things, and thus will our names stand with those whom love of God has blessed.

But if ever in life's pathway darkness comes upon you and stern trial, as come they may to the most favored and the best, do not forget this truth. It is only by the oft-repeated, sharp incision that the rough marble is chiseled into beauty; it is only when the refining fire is intense that the dross is separated from the precious metal; it was not until the three Hebrews had endured the sevenfold heat of the burning furnace that the form of the fourth appeared to comfort them; and even He, let us remember it with wonder and reverence, was "made perfect through suffering." Then "never say die," though mid the shadows you are toiling. Strength is born in the deep silence of long suffering hearts, not amid joy. Never lay aside the chisel, for while you are idle busy fingers will mar your beautiful creation. Let the light of truth ever be with you, that no random stroke be given to demolish your work.

A Short Chapter on the Management of the Hands.—In the present dearth of items, accidental, sensational, or otherwise startling, we give a short chapter on the management of the hands, by Dr. Schultz. Many of our fair readers, we are sure, will be glad to meet with the valuable recipes contained in the following article:

"The nails are placed at the extremities of the fingers and toes to cover and protect from injury the numerous sensitive nerves of touch. The nails of the fingers, when well formed, contribute greatly to the symmetry of the hand. They constitute in the lady an important feature of personal attraction.

"According to European fashion they should be of an oval figure, transparent, without specks or ridges of any kind; the semi-lunar fold, or white half-circle, should be fully developed, and the pellicle, or cuticle, which forms the configuration around the root of the nail, thin and well defined, and when properly arranged, should represent, as nearly as possible, the shape of a half filbert. Properly to arrange the nails is to cut them of an oval shape, corresponding with the form of the finger. They should not be allowed to grow too long, as it is difficult to keep them clean; nor too short, as it allows the end of the finger to become flattened and enlarged by being pressed upward against the nails, and give them a clumsy appearance. The epidermis, which forms the semi-circle around and adheres to the nail, requires particular attention, as it is frequently dragged on with its growth, drawing the skin below the nail so tense as to cause it to crack and separate into what are called tag-nails. This is easily remedied by carefully separating the skin from the nail by a blunt half-round instrument.

"Many persons are in the habit of continually cutting the pellicle, in consequence of which it becomes exceedingly irregular, injurious to the growth of the nail. They also frequently pick under the nails with a penknife, or the point of sharp scissors, with the intention of keeping them clean, by doing which they often loosen them, and occasion considerable injury. The nails should be cleaned with a brush, not too hard, and the semi-lunar skin should not be cut away, but only loosened, without touching the quick, the fingers being afterward dipped in tepid water, and the skin pushed back with a towel. This method should be practiced daily. It will keep the nails of a proper shape, and prevent the pellicle from thickening or becoming ragged. The biting or picking of the nails is an unfortunate and pitiful habit, which can seldom be prevented, and frequently continues for life. In many cases they are disfigured so as to be scarcely visible, and that which remains is covered with skin, so that the top of the fingers appears clumsy and unsightly."

Knowledge can not be acquired without pains and application. It is troublesome, and like deep digging for pure water; but when you once come to the spring, it will rise up and meet you.

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[Written for The Herald of Health.]

Unity of the Human Species.

PROF. HUXLEY, who stands abreast with the highest authorities in philosophy and science in Europe, has been delivering a course of lectures on Ethnology at the Royal Institute in the city of London. After the most painstaking and exhaustive investigation in relation to the unity of the human species, he reaches the conclusion that the varieties of mankind are "inexplicable on any other theory than a diversity of origin." To answer this theory he points to the population of Easter Island. He says:

"The varieties of mankind are inexplicable on any other theory than a diversity of origin. The Professor selected the two cases which are supposed more strongly than any others to point to a diversity. The first of these is the population of Easter Island in the southeastern Pacific. This island is further from other land than any known land, being two thousand miles from the South American coast and fourteen hundred miles from the nearest island. Here the Dutch, on discovering the place at the end of the last century, found about two thousand souls. On this island huge sculptured idols were found, of whose origin the natives knew nothing, nor did they use or worship them. They were themselves unable to carve stones in such modes. Whence came this people? Was Easter Island the remnant of some submerged continent? Were the idols the work of some people of higher civilization? The nearest land to the island was the Island of Tahiti. It was found that the people understood the Tahitian language. Admiral Beachey found that their language resembled the Polynesian languages. They made canoes like the Tahitians of small bits of wood skillfully joined—no large trees growing there—and made bark-cloth for garments. He found no mammals there but rats, though the inhabitants possessed domestic fowls. The people resembled South Sea Islanders, but were totally different from the aboriginal Americans. The trade-winds blew southeast in that latitude, which is directly opposite to the course a canoe would take coming from Tahiti; but Admiral Beachey found that these were not constant, and that occasionally a westerly monsoon blows for several days together. He also found in the South Pacific a coral island, six hundred miles from any other land, occupied by Polynesians, who had recently been driven thither by one of these contrary winds."

How came the carved images on that island? Surely they did not, like Topsey, grow out of the ground! Were they transported there? Are they the relics of a former and a higher civilization? Will Prof. Draper, or some other gentleman who has studied this subject, give us the information so devoutly desired? Prof. Huxley seems impressed with the idea that Easter Island was settled at a remote period by individuals who had been driven there by adverse winds.

"The other instance was Tasmania, one hundred and forty miles from Australia, from which it is separated by Bass' Straits. The Floræ and Faunæ of Tasmania resembled those of Australia, but the inhabitants—who had now dwindled to a few persons—were totally different from Australians. The next nearest land is New Zealand, one thousand miles off; but the Tasmanians are entirely unlike New Zealanders. The next land is New Caledonia, fifteen hundred miles off; but while the Tasmanians resemble the New Caledonians, you are met with the difficulty of locomotion, for the latter possess no boats capable of carrying people to Tasmania. Prof. Huxley thinks, however, that there is evidence of vast geologic changes in that region, and particularly of a great depression having occurred between Tasmania and New Caledonia, and inclines to the opinion that the people were thus cut off from the rest of their race."

In discussing the question of which, if any, race was to be regarded as the original stock, he spoke of the African and said:

"The popular view that the African occupies the position nearest the animal he regarded as erroneous; for their special characters—elongated heel, woolly hair, etc., are departures from an animal type. (The animals have no heels; the more heel the less animal.) He finally concluded that the Australoid races, with their superciliary faces and projecting jaws, were nearest the inferior animals; and, indeed, so far as we have other evidence, it goes to show a wide distribution at an early period of the Australoid type.

"The Professor gave many facts to show that climate could not produce the varieties of the human species. He thought the Darwinian theory alone explained the distribution of mankind. When great geological changes occurred in any region, the forms which were best suited to the altered conditions—climate being included—would subsist, and others would be destroyed. As an illustration he mentioned that from some unexplained cause the black races of the West Coast of Africa did not suffer like the whites by yellow fever. If we imagine as originally existing there a mixed race of blacks and whites, those individuals which inclined to the white type would be destroyed, while the blacks alone would survive. He explained the reproduction of peculiarities ending in persistency of type."

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There is one history of the human family to which reference may be made here—the Scriptures—which declare that God has made of one blood all the nations of the earth. I do not write with the view of sustaining any theory of this matter; I merely wish to call out the reflection of men whose opinion is authority. Some account for the varieties of mankind on the ground that there were several pairs of "first parents"—some black, some brown, some white; others attribute the variety of color and shape to climate. B.

[Written for The Herald of Health.]

Dash the Wine-Cup Away.

BY WILLIAM H. BURLEIGH.

DASH the wine-cup away! though its sparkle should be
More bright than the gems that lie hid in the sea;
For a syren, unseen by thine eye, lurketh there
Who would lure thee, through pleasure, to woe and despair.

Some who once walked with *us*, with untremulous feet,
Have yielded their souls to that lovely deceit;
And, forfeiting honor and manhood, have died
In the glow of their youth and the flush of their pride.

And others still linger, to darken a name
Once brightened with love, but now wedded to shame;
Poor tempest-toss'd wrecks on an ocean of woes,
The grief of their friends and the scorn of their foes.

Wherever the cup of confusion is poured,
In the cellar of Want or at Luxury's board,
From palace and cottage, from hovel and hall,
A wail goeth up to the FATHER of all!

Then rally! then rally! ye wise and ye good,
Come up in your strength and roll back the dark flood,
Ere your treasures are wrecked in its desolate path,
As it sweeps o'er your homes in its terror and wrath—

Ere the woe shall be ours which smote Ephraim of old,
And our glory shall be like a tale that is told,
And the wolf, coming back to our cities shall howl
To the mournfuller cry of the bittern and owl!

[Written for The Herald of Health.]

Amusements.

BY REV. HENRY WARD BEECHER.

THERE is a great prejudice, under which most of us have been brought up, against amusements, as such. It has arisen largely, I think, with us; for it may be said, almost, to be peculiar to Western Christianity as distinguished from Oriental. And it is modern, as distinguished from the spirit of the Old Testament dispensation, which was not only alert and cheerful, but absolutely hilarious. It has arisen in part, probably, from the contemplation of the evils springing from an exclusive addiction to amusement. There have been persons innumerable who have followed amusements that were debasing indeed. They were rather dissipations, indulgences of the appetites and passions, than amusements in any proper sense of the term. And it has been supposed that, as these extreme cases were exceedingly bad, it was dangerous to take any steps toward them. Because they turned sour, men were afraid of the very sweetness out of which the acid was formed, as if it was inevitable that it should turn sour. There have been those that had no other aim in life than pleasure-seeking. Relieved by circumstances, perhaps, from the necessity of much labor for their support, they have given all their thoughts and zeal to hunting down those pleasures. They have lived only for transient satisfaction, without any useful occupation in life. And surely no man can look upon pleasure under any such circumstances without contempt. Amusement, in this sense, can not be too much reprobated by the common understanding of mankind, as it is solemnly reprobated by the conscience of the Christian.

Besides, I think there have been very special reasons that have made us, as descendants of the Pilgrims and Puritans, averse to recreation and pleasure. There is no question but that a corrupt religion, seeking hierarchical domination, has sought to make men content to lose their conscience and personal liberty by bribing them with prepared recreations and pleasures.

That which has been true ecclesiastically, has been and is true politically. And to-day, in Europe, governments are more than willing to build opera houses and open gardens and parks, and institute festivals and bear the expense of them, if the great common people will consent to take this dole of pleasure at their hands in lieu of their political rights. If the common people will laugh and not think; if they will be happy and not mind their political demoral-

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ization, these governments are more than willing to bribe them out of their liberty by preparing pleasures for them.

And so our fathers came to associate popular recreation with popular degradation. Partly because pleasure, in their day, ran so largely to vice, and partly because they were the highest price paid for a degrading submission to tyranny—for both of these reasons, which were honorable to them—there was a strong bias in their minds against public amusements.

But, in this land, circumstances are now changed. At present we are not in danger of hierarchy; we are not in danger of political despotism. We must therefore investigate this subject from its original grounds and principles, and lay aside these objections, which, though they were good enough in their time, have ceased to have any pertinency to our own.

There is a design and a need of amusement indicated in the structure of the mind and of the body. They that have studied most and that professionally best understood the workings of man in this mortal state, and in his physical economy, are most emphatic in this regard. It is as much a natural law that a man should live so as to make himself happy, as it is that he should eat food for the recuperation of strength, or that he should sleep that he may have added strength.

There is a peculiar necessity for amusement in our case, arising from the peculiar instability of American society; from the ambition which free institutions engender; from the unusual and abundant natural means that are within the reach of our people. There is no such nation of workers, I think, in the world. Slaves do not work half as hard as free men; and there is no parallel to the industry of this people. There is in American society a peculiar danger in this direction. There is in some nations a vast deal of laziness; and we have specimens of lazy men in our own country; but our native-born people—those that have come under the influence of our common schools, our literature and our religion—are in danger of drifting the other way; there is danger that they may become excessively addicted to business. Hundreds and thousands of men are breaking down every year from overwork; from excessive nervous excitability; from perpetual care; from unremitting thought. And for such there is evident and crying need of something that shall be in the nature of relaxation. I therefore urge amusement as a part of the duty of health.

And you ought to be happy. If you are not so spontaneously, you ought to make yourself so. You ought so to prosecute your labors as that they shall redound to your happiness. And if your labors are such, and the circumstances under which you prosecute them are such, as not to create happiness, then you should seek it specially at intervals, and in various ways.

Let me make some suggestions, then, on this subject.

In order to amusement one must be a worker. Work is the preparation for amusement. Amusement must be a relaxation. It must be a change. It must be a contrast to something. There is no sauce, it is said, like hunger; and there is no amusement that has such piquancy as that which comes as an interval between seasons of real, earnest, hearty, manly work. Therefore, when I say that it is our duty to make ourselves happy, I do not mean persons that have nothing to do. I scarcely count such persons as belonging to the kind. Men that come into the world, and do not work, and maintain a kind of impertinent life in the midst of other men—I have hardly any words for them except of chastisement and contempt. But if you are a man in earnest; if you have daily duties; if they are heavy at times, and fatiguing both to the mind and to the body, then you should seek amusement. There ought to be amusements, and, as far as may be, these amusements ought to go with work. I am aware that there are many kinds of work that are intensely interesting, and that keep the mind in an agreeable play of excitement. This is peculiarly the case with husbandry and horticulture, which develop the taste, and whet the imagination, and bring into action the various faculties of the mind, and intermit between muscular and mental activity. But there are other employments, of which it must be said that they are drudgery, and always drudgery. And, as far as possible, there should be connected with such employments opportunities for social hilarity. No work should be unaccompanied by cheer.

It is the habit of shipmasters to have, if possible, in their crew, one man that can play the violin. They will pay a man higher wages if he can play the fiddle. It is found that a man who amuses the crew, makes them more contented and better workmen, and that therefore he is invaluable. It is a good thing, if a man, being virtuous, is mirthful; is full of jest; is full of stories; is full of music. The man that, on the ship, can sing and whistle, that has tact, that is in sympathy with the workmen, and that, by innocent gibe and jest and repartee, can keep them roused up and happy while yet they work, is next to an evangelizer; for he is

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saving them from being slaves and drudges, and obliging them to use their higher and better powers. It is a great thing to have, not only on the ship, but in the shop, on the road, on the farm, everywhere, men that can make work cheerful by interspersed social enjoyments.

But where this is not sufficient, men are obliged to seek, during the intervals of toil, amusement. And it is not a matter of indifference what sort of amusement men seek. The law is, that occupation and amusement should contrast with each other. Society may be divided into two classes. You may say that men stand as brain-workers and muscle-workers. And, although these two classes run into each other variously and indefinitely, it is a general fact that they exist. Now, men whose daily toil is thinking, should seek relaxation in things that are not thoughtful, that are not brain-exciting. Physical amusements belong to students, to designers, to thinkers, to men that tax their brains to carry out their plans. Men whose occupation is such as to weary their head, get amusement by bringing up the other part of their system. And, on the other hand, men that all day long tax the bone and muscle, and weary the body, are to find their relaxation in exciting the brain. Enough, already, they have had of toil; now they should have that excitement which comes from exciting the nervous system. One part needs to be soothed while the other is aroused. The mind needs to rest while the body works, and the body needs to rest while the mind works. So this matter of choosing our amusement is not an unimportant one. Our work will determine what our play should be.

It is in vain, therefore, to undertake to provide amusement for a community on any one pattern, or of any one kind. It must be susceptible to almost infinite variations, that men may suit themselves according to their several necessities. In this respect it is that amusement is so eminently capable of being combined with instruction, as it may be profitably, especially with the poor and laboring classes in the community. It would scarcely be worth the while of a lawyer, a student, an architect, a mathematician, or an engineer, after he had all day long, over book or parchment, drawn upon the resources of his perceptive and reflective faculties, to go, in the evening, to the lyceum, where some Mitchell was to discourse upon astronomy, and tax that same part of his economy that has already been overtaxed. This is no way for him to get relaxation. But if a man has all day labored with his hands, and taxed his bone and muscle, then he may be suitably refreshed by going to the lyceum and listening to a discourse on history, or art, or political economy. Workers with the hands find rest and relaxation in the exercise of the mental faculties; and since the great majority of mankind are to be workers of the hand, it is fortunate that relaxation in their case is entirely reconcilable with education, and the storing the mind with useful knowledge, which they can receive as a part of their amusement. But the great educated class, cerebrated men and women, find rest and relaxation in some form of physical exertion and labor. True Christian amusements tend to harmonize the extremes that exist in society.

THE MOST BEAUTIFUL HAND.—I recollect that once there was a dispute between three ladies, which had the most beautiful hand. One sat by the stream, and dipped her hand into the water and held it up; another plucked strawberries until the ends of her fingers were pink; and the third gathered violets until her fingers were fragrant. An old, haggard woman passing by, asked, "Who will give me a gift? for I am poor." All three denied her; but another who sat near, unwashed in the stream, unstained with fruit, unadorned with flowers, gave her a little gift and satisfied the poor woman. Then she asked them what was the dispute; and they told her, and lifted up before her their beautiful hands. "Beautiful, indeed!" said she, as she saw them; but when they asked her which was the most beautiful, she said, "It is not the hand that is washed clean in the brook; it is not the hand that is tipped with red; it is not the hand garlanded with fragrant flowers; but it is the hand that gives to the poor, which is the most beautiful hand." And as she said the words, her wrinkles fled, her staff was thrown away, and she stood before them an angel from heaven, with authority to decide the question in dispute.—*Theodore Tilton.*

SOME FACTS IN NATURAL SCIENCE.—According to the French chemist, Lavoisier, the human body exhales about three and one-half pounds of aqueous matter daily. A large cabbage has been forced to exhale twenty ounces of water from its surface.

The poison of the most venomous serpents may be taken into a healthy stomach without injury, but the smallest portion introduced into the circulating system may produce speedy death.

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[Written for The Herald of Health.]

The Effects of Medicines.

BY E. P. MILLER, M. D.

THE precise effects upon animals and upon man of most of the agents that are now used as medicines, have been very accurately and definitely ascertained by those who have become close observers. These effects invariably follow their causes, and are as certain as cause and effect in any department of Nature. A hundred grains of mercury, given at stated intervals to a hundred persons of similar temperaments and in similar conditions, will produce precisely the same phenomena of morbid symptoms; and were the experiment repeated a thousand times, we should each time observe the same results.

There is scarcely a remedy given for the treatment of disease but will, when given to a healthy person, produce symptoms and morbid actions precisely like those manifested in disease.

This fact is so well understood and has been so satisfactorily demonstrated that the founders of Homœopathy have based their law of cure upon it.

While the Hygienic physician, reasoning from these well-established facts, can trace a close analogy between the effects of medicines and the effects upon the system of poisons, miasms, infections, and obstructions which cause disease, and therefore rejects them in his practice, the Homœopath thinks he can see a way in which they can be made to aid Nature in the cure of disease.

They reason like this: There is a great variety of substances in Nature, called by the medical profession medicines, which, when given to a person in perfect health, will make him sick; yet, when given to a person who is already sick, they will overcome the disease and make him well. The precise way in which this is done is not so clear to the minds of most people.

The theory upon which this kind of practice is based is that disease is regarded as an effort of Nature to rid the system of the poisons and obstructions which cause disease; the symptoms of disease are manifestations of the kind of effort that Nature is making to accomplish her purpose. Now, they claim to find, by experiments upon a healthy person, what effect medicine will produce in symptoms like those manifested by the person sick, and they give such medicine with the view of aiding the sick person in producing the kind of effort the system is attempting to perform in removing the causes of the disease. For this reason they have a medicine that will produce in a well person a symptom similar to the symptoms of every known disease; consequently, they always prescribe according to symptoms, and their law of cure is *Similia similibus curantur*—"Like cures like."

There may be a degree of plausibility in this theory to some people, but when traced to its logical sequences it is, after all, not so scientific.

Look at it from this stand-point: Disease is an effort of the system to remove the causes of disease. The symptoms are the evidences of the kind of effort being made to remove this cause, also of the kind of poison or obstruction producing them. The poisons or obstructions cause the disease and produce the symptoms.

Homœopathy would now prescribe as a remedy for disease some poison or medicine which will produce symptoms similar to those which the poisons that have caused the disease have produced. From this philosophy we must conclude that Homœopathic medicines will produce symptoms and diseases similar to those produced by the causes of disease; or, to reduce it to still plainer English, Homœopathic medicines or poisons will produce, when introduced into the human system, diseases precisely like those produced by poisons taken into the system from any other source.

How their medicines, upon this theory, can be remedial, and of actual service in treating disease, remains for Homœopaths to prove.

That they are much more successful in treating a certain class of diseases than many Allopathic physicians are we will not deny; but we should credit their success, not so much to the virtue of their remedies in controlling disease, as we should to the dilutions and triturations of their doses, making them less powerful for injury, and giving Nature a better chance to overcome the disease. Perhaps it may be said of Homœopathists, also, that they give more attention to diet, ventilation, cleanliness and other hygienic agents. They have done great good in one respect, and that is in convincing the majority of the people that disease can be just as safely treated by administering remedies in much smaller doses than was once thought to be necessary.

It will be readily observed, if our exposition of the virtues of Homœopathy is correct, that the theory promulgated by Hahnemann, the founder of Homœopathy, was, after all, correct —that the higher the potency, the more numerous the triturations; the greater the dilutions, the more infinitessimal the dose, the greater its power to remove disease. With him a decil-

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lionth of a grain of any remedy was of more virtue in curing any disease than the twentieth, the sixth or the third of a grain.

It was evident to the mind of this great reformer that better success attended his practice when his poisons were given in such infinitessimal doses that they were not perceivable to his own senses or appreciable to those of his patients.

So *we* would say, if you are desirous of giving poisons for the cure of disease, the smaller the dose, the more you dilute it with water or milk, the greater the number of triturations with sugar or honey, the less you will observe of the manifestations of the symptoms of disease, the less the vitality of the patient will be disturbed, and the more power will the patient have in reserve to expend in removing the causes of disease, and restoring the body again to health and vigor.

In Allopathic practice, as many know to their sorrow, medicines are given in large and often disgustingly enormous doses. They are not only given in doses that are painfully revolting to all the senses at the time they are taken, but their disagreeable effects are often cognizable for a long time after.

The theory upon which they are given is too much that of curing one disease by creating another. "*Contrari contraris curantur*" is their motto, which means, cure one disease by creating actions and conditions of a contrary nature. This is very easily done by the large and exceedingly disagreeable doses of various poisons given. Let us examine some of the most common among their remedies, and see what the effects are when administered to a person in health. The effects of these agents, when given to a person who is sick, would, of course, be about the same as if given to those in health, being modified some by the exhausted condition of the vital forces occasioned by the disease. The long train of morbid symptoms and conditions which we shall enumerate as following the administration of the mild mercurial preparations are not those that have been trumped up for the occasion, but those which have been long and repeatedly observed by men who have thoroughly investigated the subject.

Any person wishing to be more fully satisfied of this may consult a late work on Materia Medica by Dr. Stillie, where he will find a full description of the effects of nearly all the different medicines, upon both animals and men, minutely detailed.

When calomel, blue mass and other mild mercurial preparations are taken in small but repeated doses, the following train of symptoms will be observed: At first, an increased activity of all the secretions; the appetite fails; digestion is impaired; the firmness of the tissues is diminished; recently healed wounds will open afresh; the muscles waste; the skin has an earthy paleness; the eyelids and ankles become edementous, and even general dropsy may ensue; the blood loses a large portion of its solid constituents and becomes predisposed to hemorrhage; the breath becomes fetid; there is a peculiar metallic taste in the mouth; the pulse becomes quick and frequent, and manifests unwonted nervous excitability; there is soreness of the teeth; a red line is observed along the gums—the redness extends to the lips, cheeks, tongue and fauces; the tongue soon after becomes coated with white slime; the salivary glands become swollen, tender and their secretion augmented, till several pints may be discharged in twenty-four hours; the tongue and mouth finally become so swollen that deglutition and speech are obstructed; extensive ulceration will finally attack the gums, cheeks and fauces; the breath becomes insufferably fetid; the teeth loosen and fall out, with caries of those remaining and also of the maxillary bones; there will be soreness and extreme tenderness at the pit of the stomach, with nausea and disposition to vomit; the bowels become loose, and the stools sometimes contain blood; there will be a general prostration of the whole system, the function of almost every organ of the body being deranged in its action.

How such a long train of disturbed actions and morbid symptoms can be considered remedial or health-restoring, requires a wide stretch of the imagination to conceive.

A Beautiful Woman.—One day last winter, a boy from the South, who was on a visit to the city, was taking his first lesson in the art of "sliding down hill," when he suddenly found his feet in rather too close contact with a lady's silk dress. Surprised, mortified, and confused, he sprang from his sled, and, cap in hand, commenced an earnest apology. "I beg your pardon, ma'am; I am very sorry."

"Never mind," exclaimed the lady, "there is no great harm done, and you feel worse about it than I do." "But, dear madam," said the boy, "your dress is ruined. I thought you would be very angry with me for being so careless." "No, no," exclaimed the lady, "better have a soiled dress than a ruffled temper." "Oh, isn't she a beauty!" exclaimed the lad as the lady passed on.—*Ex.*

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[Written for The Herald of Health.]

A Natural Life.

BY M. L. HOLBROOK, M. D.

It is very doubtful if there are many persons who have any just conception of what it is to live a natural life. It is said that all civilized people live an artificial and unnatural one, and to the wilderness of America or to the wilds of Africa we are referred for the only specimens of the natural man. This view of the case is both shortsighted and false. Men, whether savage or civilized, live a natural life when they live in accordance with the laws of their bodies and minds, and an unnatural life when they forget the organic laws which they ought to respect, substituting others instead. A natural life admits of the highest degree of culture and refinement. A natural man is as much at home in the parlor as in the forest. We speak of the Indian as a natural man, but it is doubtful if he is half so natural in his habits as thoroughly cultivated, civilized men. Is it very natural to sleep in a wigwam, scalp one's enemy, make woman a slave, never think of to-morrow or provide for the future, and know nothing of beautiful homes, social culture, books, art and science? We must not confound the natural man with rude ferocity, barbarism, unculture; it is the reverse. Man was made for culture, for refinement, for growth, and it is as natural for him, under favorable circumstances, to take on these conditions as for the bee to store up honey. We believe all that has been said and written about the more natural life of the Indian than the white man is erroneous. Indians are not more perfect, physically, than the whites; they have a coarser organization, can not endure work so long, can not bear themselves so manfully and naturally as their more cultivated brothers. Mr. Barnum recently had a troupe of red men dancing and performing in his Museum, but they had not one-fourth the agility or grace and majesty of physique seen in his white performers. It is quite doubtful if the Indian's mode of life is natural when we take this higher standpoint from which to draw our deductions.

Now let us consider what a natural life demands for its complete fulfillments.

It first demands a healthy birth and a childhood devoted mainly to healthful bodily development; children, more than grown-up people, instinctively turn to the natural instead of the artificial. They seek their mother's breast and protection rather than artificial food and the stranger's care. They are then more sportive, happier and natural than ever thereafter. They lose much of their naturalness during their education, when mental and physical restraint take the place of healthful, natural growth.

A natural life demands a natural education. All education should be founded on the "natural laws of man." Half the secret of so many artificial lives among civilized races comes from not adopting education to the natural law. It is unnatural to demand that a boy or girl shall sit six hours a day in a close schoolroom with the brain constantly on the strain and the body quiet. Educators have heretofore modeled their course of instruction more to meet the demands of society, than the fulfillment of their manhood. It would be impossible here to mark out a course of education founded on natural law, but such a course is earnestly demanded by the spirit of the age.

But more than all, to secure a natural life requires good habits. It is unnatural to chew tobacco, to smoke, to drink intoxicating liquors, to swear, lie, steal or live vulgar sensual lives. It is on the other hand natural to be kind, loving, tender, thoughtful of others; just to the world and to ourselves; full of the spirit of growth and progress, and a hater of cant, hypocrisy and every thing mean. It is natural to love fresh air; unnatural to shut ourselves up in closed rooms. It is natural to covet the kisses of the sun; unnatural to live in parlors, with drawn curtains and shutters. It is natural to eat fruit and drink water; unnatural to swallow those drenches, tea and coffee. It is natural to sleep soundly; unnatural to be nervous and wakeful after we retire to our couch for rest. It is natural to clothe ourselves beautifully and healthfully, so every muscle is free to act gracefully and vigorously; unnatural to torture our waists or obstruct the full and free movement of any muscle or limb by restraint. It is natural to be industrious, sportive, lively, mirthful; unnatural to be lazy, sad, hypochondriac. It is natural to love society; unnatural to become a hermit. It is natural to seek the family relation; unnatural to pass through life alone, without family ties. It is natural to be strong, healthy, upright; unnatural to be sick, scrawny, feeble, round shouldered, small chested, rickety. It is natural to seek pure air, a wise hygiene, and to remedy our departures from Nature; unnatural to dose with drugs, pills, powders, and deadly poisons. It is natural to study the arts and sciences, to become familiar with the literature of this and past ages, to learn to "know thyself;" unnatural to excite the mind and debase the heart by constantly pouring over yellow-covered fiction.

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A natural life is the most desirable life. It includes all the Christian graces of love to God and man. An infidel is always an unnatural man. He has no faith in God, and we might almost say in himself. There are too many infidels in the world. Every man is infidel, so far as he is unnatural, or so far as his life is not in harmony with natural and therefore divine law; for all natural law is divine in origin and in essence.

A great want of the age is to induce the people to more natural lives. It is the great mystery of creation that we are allowed to live any other; but perhaps it is only because our departure from nature have blinded us so we can not see. It will be wise for us when we return to Nature, to seek to learn our relations to her and follow them. It is doubtful if we can accomplish this in any way so successfully for all, as by educating our children to good habits. Now we educate them to such habits as are fashionable, or current, or as suit our own perverted tastes. Shall not all earnest men and women seek this—it is in their power—and add their pens, voices and influence to secure for the young a more natural education, one that shall lead them to simpler habits, cultivated tastes, and a higher degree of health and perfection of body and mind?

[For The Herald of Health.]

Student's Dress at Antioch College

BY MRS. S. W. DODDS.

[It will probably be remembered that at the last Commencement exercises of Antioch College, Mrs. S. W. Dodds, who had passed through the allotted course of study and was entitled to the graduating Diploma of the College, was not allowed to read her essay because she wore a short dress. Many of the leading papers of the country condemned the action of the Trustees, who, instead of the Faculty, decided that none should appear upon the stage who did not dress in the usual way. Mrs. Dodds, shortly after the Commencement exercises, came to New York, where she remained a few weeks prior to sailing for Europe. Since sailing she has forwarded to us a brief account of her connection with Antioch College. She says:—Ed. H. of H.]

For the past ten years, I have been from time to time connected with Antioch College as a student; have done seven years of hard study there, and have at last completed the entire undergraduate course. When I first went there, in 1856, I had never worn the Reform Dress much, and knew but little about it. But finding that it was very generally worn (most of the lady students and some of the teachers having adopted it as a wet-weather dress and excursion costume), I determined to try it. I soon after adopted it, almost exclusively; and for the last eight years I have never worn a long dress into the halls of Antioch; nor have I worn it elsewhere, except occasionally in traveling or in visiting friends. During my connection with Antioch, there have been at least two other students who wore it exclusively, and many who have worn it occasionally. It has likewise been worn there, and is *now*, as a gymnasium dress, as indeed it is in hundreds of places all over the West.

Having been a member of one of the Literary Societies at Antioch, I have repeatedly performed public duty there on the rostrum, and always in this dress. And in perhaps every instance there have been present at these public exercises, not only a portion of the Faculty, but different members of the Board of Trustees. Neither has there been, on any of these occasions, one word of protest made to me respecting the dress, by either Trustee, Faculty or student.

Why the Trustees, after allowing me to wear the dress during so many years of my student life, and to perform public duty upon the rostrum, even up to *three days* previous to Commencement; why, after such a course, they should, without any notice to me whatever, have cut me off from the closing honors of Commencement, has seemed to many strangely inconsistent. But certain it is, that *just one hour* before the exercises of that day were to begin, the following resolution, passed by the Trustees, was handed me:

"Whereas, That the Board of Trustees possess ample power to regulate the costume of students appearing on the stage of Commencement, therefore

"*Resolved*, That no student shall be permitted to appear on the stage of Commencement wearing the Bloomer or other unusual style of dress."

The *Faculty* of the College (which the public press has so universally quoted through mistake in place of the *Trustees*), had nothing whatever to do in the matter. In fact, the sympathy of that honorable body (for whom I cherish the greatest respect), was, together with that of the student and friends generally, sufficiently apparent on that (to *me*) never-to-be-forgotten day.

After the exercises of the day began, my name, together with that of a sick classmate

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present, were passed over in silence; not a word of explanation in regard to either being given. As the following name was called, a murmur of inquiry ran through the audience, as to "what was the matter." There I was, present; could I be sick? Nor was the mystery fully solved (for scarcely one in the audience knew what had passed), when, after the degrees had been conferred on all the members of my class, I rose to my feet and said, "With the consent of the Trustees, and in the presence of these friends, I wish to say, that self-respect, and love of what I believe to be right, compel me to *decline* the honors which to-day have been conferred upon me."

In a moment more the benediction was pronounced, and then there was a rush of friends from all sides eager to learn "what all this meant." And, in the language of a friend, I was upon that day "the recipient of more congratulations, than is good for one person at one time."

The diploma intended for me I have never seen, except as it lay with the others, bound in blue, upon the stand on the "stage of Commencement." *It* went where *I could not.* The other members of the class informed me, that they received *theirs* (not as *usual*, from the hands of the worthy President, but) at the public dinner table.

I forgot to state, in the proper connection, that all the members of my class *protested* against the resolution as passed; and endeavored to *submit* their protestation to the Board of Trustees, but were not allowed a hearing. Nor were the personal entreaties of different members of the Faculty more successful in averting the blow which the Trustees had determined to give.

As to the reason alleged by some for the action of the Trustees, viz., that my appearance in the Reform Dress upon Commencement Day, would make a bad impression upon the audience (in which there would perhaps be representatives from Boston), and that the progress of Antioch's further endowment might be thus impeded or thwarted, I have not a word to say. I only know what has been done, and that an institution hitherto favorably known to the public has received more than a personal detriment.

I am yours, very respectfully,
S. W. DODDS.

[The New York Tribune, ever ready with a word of sympathy for the right, speaking of Mrs. Dodd's essay, says:

"Antioch College, at its late Commencement, would not allow Mrs. S. W. Dodds (a graduate) to read her essay, because she wore a Bloomer dress. It has since been printed. Here is a sample of it:

"'The alphabet of true government has scarcely been mastered. We are still disputing in regard to first principles; doubting—some of us—whether all people are created equal. But the light is shining, and we shall move forward. If the law of development is the law of Nature, we can not stand still. As man grows wiser *his* social relations will be better understood, and civil governments must correspond with them.

"'And shall America—she who boasts of Saxon lineage, but in whose veins courses the blood of many a distinct race—shall she not be able both to establish and firmly maintain a government based upon the broad principles of justice? We, of all people, claim that we are thoroughly cosmopolitan in thought and in feeling, hemmed in by no narrow prejudice, perverted by no bigotry. Let, then, our actions conform to our assertions; let our Government be what it professes to be—a Government of equal rights; a Government whose requirements for political rights are founded in brain, not in skin. Let it ask of its voters three things: common sense, good morals and a loyal heart.

"'On the broad pages of history, whether we read of human governments, of social relations, of religious belief, or of scientific knowledge, there is written—progress. Religion began with the lowest depths of idolatry, immorality, and superstition. It now embraces the sublime principles taught by Jesus. Government once meant unconditional obedience to one man. It now signifies something vastly different. It will come to mean the greatest good to all, through the protection of individual right.'

"It strikes us that such suggestions are worth listening to, even though they emanate from a Bloomer."

We think the Trustees of Antioch College made a mistake in the course they pursued toward Mrs. Dodds. Ladies who wear the short dress sometimes err in not having the costume neat and tasteful, and in this way cause prejudice against it; but this was not complained of in her case. We think that if the managers of colleges undertake to carry out their idea of prescribing appropriate costumes for the "Commencement stage," they should begin by prohibiting what is unhealthful—for instance, corsets, tightly-laced clothing, heavy skirts supported only on the hips, tight shoes, and a variety of abominations peculiar to female attire. By what principle do we prohibit what is intrinsically good, because it offends the taste of those who do not care to depart from established customs of fashion. But we will not despair of Antioch. It may commit errors, for this is human. We trust it will yet realize all the hopes of its first President (Horace Mann), who, we may almost say, gave his life for it, and who strove to place it on a basis of enduring progress.—ED. H. OF H.]

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NEW YORK, NOVEMBER, 1866.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ THE PUBLISHERS *do not hold themselves as indorsing every article which may appear in* THE HERALD. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

☞ *Exchanges are at liberty to copy from this magazine by giving due credit to* THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D.

COOKING, A FINE ART.—J. Burns, the London Agent for THE HERALD OF HEALTH, has republished, for circulation in England, the "New Hygienic Cook Book," by Mrs. M. M. Jones (now Mrs. M. M. Hyde). The following is the Preface of the London edition. Mr. Burns is a Vegetarian, and what he says about the experience of three generations of Vegetarians is particularly interesting:

"TO BE READ BY ALL COOKS BEFORE PUTTING ANY OF THE RECIPES INTO PRACTICE.

"Good cooking may be regarded as one of the fine arts. The mere compounding of the ingredients and general application of the process, will not make on all occasions a good dish. To bring out the proper qualities of the articles in their cooked state, requires a susceptibility of mind, carefulness and attention that places the operator above the level of a common drudge.

"Cooking should be performed in all cases by healthy, cleanly persons, who have the personal interests and happiness of the eaters at heart. Cooks should be of a superior cast of temperament, and thoroughly earnest in their pursuit. A coarse, vulgar, careless, slovenly and unloving person can never be a good cook, though you give such a one all the materials, facilities and experience in the world. We therefore do not expect that all who use this little book will alike reap its advantages. Some will succeed, and improve on the hints here given; others will throw the book aside in disgust.

"We do not profess to teach the art of cooking—that is only to be attained by experience and a genius adapted to it. We only profess to point out the general principles and scientific bearings, intimating the best articles and combinations of articles to which the art may be applied. Cooks must attain success for themselves individually.

"The writer has lived in some hundreds of families throughout Great Britain, and has noticed two defects in domestic cookery. Some are quite deficient in the art of cooking, and invariably make a failure of all attempts. Such families are miserably and expensively fed, for the housewife has no skill to produce dishes from the materials within her reach, and so has to purchase the ready-prepared and costly articles of commerce, subjecting the family to the horrors of adulteration and a limited dietary. Another class have the skill, but are not wise in its application; hence they expend their efforts in producing unphysiological and unwholesome compounds, and strive for pre-eminence in the preparation of extravagant, rare and highly-made dishes. This is genius misapplied. If these cooks had a knowledge of the system taught in this little work, they would never be at a loss for the means to make a delicious meal.

"But to the question at issue—the great question that is now agitating the minds of many thousands of families throughout the land. The cattle are dying, meat is high priced, diseased carcasses are constantly being seized in the markets, persons have been poisoned by using the dairy produce of cattle that have had the plague; besides, it may continue to spread, and render matters infinitely worse. It has attacked the sheep, and it is said the poultry likewise, so that meat, eggs, butter, cheese, milk and all animal produce may be tainted with this disgusting ailment. And are human beings safe? May the poison not also be carried into the human frame, and ruthlessly slay ourselves and our near ones and dear ones?

"Then the momentous question arises: What shall be done? Can we live without meat and animal produce? Can the laboring man, the business man or the professional man pursue his calling without animal food? Will the children thrive and grow up to be strong and healthy men and women; will mothers be able to nurse and rear families, and invalids and weakly persons get well and strong, without these animal products? These are important questions to all, and to the great majority they even wear a serious aspect. We rejoice in being able to allay all their fears, and assure them that science and experience offer abundance of consoling testimony. All kinds of labor, bodily and mental, may be performed on a diet from which animal products are excluded. The mother who adopts a fruit and farinaceous diet has better health, less trouble with family ailments; and the children, being of the same dietetic habits, are better tempered, more moral, make better members of society, and are more vigorous, jolly and efficient.

"The experience of thousands of families corroborate these hearty assurances. The writer does not preach one thing and practice another, as his experience extends over three generations. His father and mother abstain from animal food, he and his wife do the same, and their children never tasted of flesh, and they are pictures of rosy health and joyous activity. Strangers who meet them in the streets often ask if they are

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country children; and their appearance and general disposition present a striking contrast to the pale-faced, sickly, pining, whimpering children seen in too many families; besides laying the foundation for pure tastes, temperate habits and moral measures, the possession of which are more than all else beside, and the value of which every parent can well appreciate. In them there is no lack of animal spirits, no falling off, but a positive improvement on the generations that preceded them.

"Science also begins to unfold the dietetic plan, indicating that carnivorous conditions, both in animals and man, are incidental to creation and man's development, and not a final result. As the earth is subdued, carnivorous animals gradually perish; and man, as civilization advances, gives up a predatory and hunting life, and takes to the cultivation of grains and fruit. This transition process is far from being completed. Beautiful fruits might be raised in abundance on land now waste and uncultivated. This century has added much to the dietetic resources of our nation, both by cultivation and commerce. A system of diet and agriculture involving the use of fruit instead of flesh, would give pleasant food and elevating employment to millions more than could be attained by the present method."

ROUTINE.—One of the greatest obstacles to progress is Routine. Children are taught to do their work, their study and their thinking after certain prescribed forms, and the habit in after years becomes so fixed that they can not easily adopt others or make needed improvements. Perhaps one of the greatest obstacles to progress in medicine is because Routine holds such complete sway over medical men. Routine says, "This remedy has been used from time immemorial," and Routine has its way. In the late European war the Prussian Army proved to be the champion at arms, and though the needle-gun gets more than its share of praise as the cause of Prussian success, yet it is a well-known fact that the intelligence and gymnastic drill of the Prussian soldier had much more to do with gaining the victory than this peculiar style of gun. To show, however, that Routine was a great enemy to progress even here, we have only to quote from the conversation of an American in Europe with the inventor of the needle-gun, showing how much and long he had to combat routine before his invention for destroying armies was adopted:

"'It certainly must have cost you much thought and anxiety to carry out this?'

"'You can not have the remotest conception of the trouble it cost me. You must have read somewhere or other of those torments and sufferings which have ever fallen to the lot of the inventor. With the exception of bodily torture, which does not belong to our day, I may say that I have gone through every thing it was possible to endure, and that for thirty long years. When at last I gave out my new igniting material, accompanied by the needle-gun, imagine the revolution it caused. I was looked upon as a madman.'

"'Had you to encounter any special enemy?'

"'One I had who opposed me with such obstinate perseverance that I was often on the very verge of despair, whom even now, after the campaign in Bohemia, I have not yet succeeded in vanquishing. This is Routine? She is a bitter enemy, I can assure you, sir, and as often wears the uniform of a General as the jacket of a soldier or the coat of a Minister of War, and woe be to him who has to contend against her. I could talk to you by the hour together of what I have gone through, but all would be as mere dust in the balance if my invention had not likewise had calumny, derision and mocking insult to put up with. You said awhile ago that my name was in every body's mouth, at least all such as interest themselves in the military glory of Prussia; but do you suppose that those who assisted me in wrestling with that infernal spirit, Routine, do not deserve equally honorable mention? Without their aid I certainly should never have been successful.'"

MISS DR. MARY E. WALKER ON TOBACCO AND DRESS.—Dr. Walker, now in Europe, thus writes concerning her ocean voyage:

"I have been sick enough to feel as disagreeable as possible, for never in my life have I felt such a hatred of the vile and filthy 'goat weed,' tobacco, as since I left New York. I had often expressed myself as wishing the last tobacco seed in the middle of the Atlantic Ocean, so terribly did I hate it; but on ship-board, when it came to be more than usually disgusting, irritating every nerve of my system, I cursed it with curses so loud that the echoes still sound back in my ears. The languages of all nations combined could never express my downright and unqualified hatred of it, because it has always had such an effect upon my whole being."

Concerning the dress of the Scotch people she writes:

"But I must say a word about dress, as you are so interested in the style of covering for 'mortal coils.' Well, every thing is worn here, from the *kilt* to Paris styles, with men; and as for the women, the most sensible dress is declared to be my own, although dresses are worn all lengths, many as short as mine, without even stockings, and many without shoes, in the streets of Glasgow and in the country; these women are of all ages below 60, and yet people do not seem to notice them. It is true that they are of the poor classes; but then there is a study of natural limbs that some of our Broadway ladies, with their false calves, might be interested in, and that some of the gentlemen might gaze upon until they were weary, and think they would look quite as well clothed, even in *pants*.

"One old Scotch lady said to another, that 'if the Scotch lassies were to dress like the *wee* Doctor, there would not be so many *queer* children,' and when it came to my ears I asked what 'queer' meant, and was informed that it

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meant children raised after H. B. Stowe's 'Topsey' style—'in the market.' But really, it is astonishing how many here (as well as in America) are praying to have this dress fashionable, which many have never even heard of before. But I shall be too late for the mail if I do not close."

SCRIPTURE WINE.—Temperance people, and those who believe in the use of wine, both claim the Scripture as on their side. It is true enough that the common English version of the Bible contains many texts which appear to be on the drinker's side, and others which really are on the side of the advocates of Temperance. For years the question has been a vexed one, the Temperance man knowing he was right, and that he had Science and Nature on his side, while to appearances the Bible was against him. At last, however, a work has been written by an eminent Scotch divine, entitled "Scripture Evidence Against Wine." From this it appears that where wine is favorably spoken of in the Bible it never means fermented liquor, but either grapes or the fresh, new juice of the grape, just from the press, or preserved fresh in this state by artificial means; while, on the other hand, where wine is spoken against it always has reference to the intoxicating article, the words in the original being entirely different. It also appears that a very large number of texts in which wine is used and spoken of in connection with corn and oil does not mean a drink at all, but grapes, either fresh or dried, and consequently a food. The work referred to is a very learned one, and the proof that it brings to bear on the Temperance question is perfectly overwhelming. It has placed the Bible where it should be—on the side of the Temperance question in every case. How the translators could have made such an error is wonderful. We hope all the clergymen in America will read the book. Too many of them have been mislead by this error, and placed themselves on the wrong side of a very important question.

"A WONDERFUL OLD LADY.—The Macon (Ga.) Telegraph says an old lady named Martha Carson, aged one hundred and three years, six months and three days, died lately in Bibb County, Ga. She had cut three sets of teeth, the last being small and like a squirrel's. She never took a dose of medicine in her life. Up to within six years she would walk two or three miles with the greatest ease. About eight years ago her sight failed, but when she cut her last set of teeth, about two years since, it improved very much."

We would have more old people in the world than we do, if people were as fortunate in escaping from the effects of medicine as the lady referred to above. With the present ignorance on the subject of taking care of children, few escape to manhood without getting more or less poisoned by various sorts of drugs supposed to have a beneficial effect on the stomach, bowels or nervous system. When people learn to take the right care of children from birth to the age when they are self-dependent, old age will be frequent and premature death the exception.

"SCHOOL AGE.—In Pennsylvania children are not admitted to the public schools under six years of age."

This is better than most States do, but not yet good enough.

Home Treatment of Disease.

BY E. P. MILLER, M. D.

☞ *In this department we shall give, from month to month, plain, practical directions for the home-treatment of various diseases.*

Lead Colic.—This disease is often known by the name of painter's colic, plumber's colic, dry bellyache, rachialgia, vegetable colic and saturnine. It is caused by lead poisoning. It is usually developed gradually; the pain in the abdomen is at first slight, but gradually increases till, in some cases, the suffering is extreme. The pain usually commences near the umbilicus, although it may begin in any other part of the abdomen, and it frequently darts into the back, the genital organs or other parts of the body; it is usually of a dull, aching character, but sometimes it may be acute and lancinating. The pain when severe, occasions great uneasiness, causing the patient to groan, roll about, and assume a variety of positions.

Pressure upon the abdomen with the palms of the hands generally affords a temporary relief; for this reason the patient often likes to lie upon the belly, with a pillow or folded blanket under the abdomen. The bowels are most always constipated, there is also more or less nausea and sometimes vomiting. Eructations of gas from the stomach, and hiccough are often present. Urination is generally scanty and sometimes difficult and painful. The appetite is lost, the breath fetid, the mouth has a metallic taste, the countenance becomes pale and emaciated, and the whole system exceedingly debilitated. There is no fever, the pulse is slow and hard, the skin cool and of a bilious hue.

The pain is persistent, but remitting rather than intermitting. There is sometimes paralysis

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of some of the voluntary muscles accompanying this disease and also amaurosis and occasionally convulsions and coma.

There are various ways in which lead may be introduced into the system. It may be inhaled through the lungs when it exists in fine particles in the air, or absorbed from the mucous coats of the stomach when taken with food or drink, or it may be absorbed by the skin or mucous membrane from any other part of the body.

Employees in the manufactories of lead paints, dealers in paints, and painters, are most liable to suffer from this disease. Plumbers, manufacturers of shot, dealers in lead pipes, manufacturers of enameled cards and earthen ware, are subject to it. A very common cause is drinking water that passes through lead pipe, and the softer the water the greater the danger from this cause. I once had a patient that had a severe attack of lead colic caused by using cistern water that passed through only a short piece of lead pipe. A prolific cause of lead poisoning is using *soda water*. The gas that makes the soda water foam and gives it that delicious taste is generated and kept in a strong iron or brass tank, and is passed through long coils of lead pipe which are packed in ice to make it cool, and every glass that is drawn from the fountain come direct from this pipe, and unless it is fresh-made and is being constantly used there is poison in every glass.

Those who are compelled to use water that passes through lead pipe should draw off enough to empty the pipes completely of the water that has been standing in them. Using water from newly painted pails or other vessels will produce lead poisoning There are a great variety of colored candies and confectionery where lead is used in the coloring which will cause lead colic.

The various preparations of lead that are used as medicines are a fearful cause of lead poisoning. The acetate of lead, the carbonate of lead, sugar of lead, etc., that are used in ointments and liniments when applied externally to the skin will cause it Children should not be allowed to chew shot or to handle lead bullets. There are also certain forms of cosmetics that have so much lead in them as to cause a form of lead paralysis, known as wrist drop.

Lead colic may be distinguished from other varieties of colic, from the gradual manner in which it is developed; from the occurrence of shooting pains in the back, limbs or other portions of the body; from the persistence with which it continues without intermission from the obstinate constipation; from the continuous nausea and vomiting, and from what is considered a pathognomonic sign of this disease; that is, the presence of a *blue* or *leaden line along* the *margin* of the gums; this will be found in the great majority of cases.

The treatment of lead colic should be such as is calculated to eliminate the poison from the system. A full warm bath, a vapor bath, or Turkish bath or the wet-sheet pack, should be given daily. For home applications the pack and warm bath are most easily applied. The vapor bath can be improvised in almost every household by a blanket or two and a pail of water with hot bricks or stones. Hot fermentations applied to the abdomen will relieve the pains and afford relief. The hot and cold hip bath, alternating with vigorous rubbing of the back, hips and abdomen, will be useful. The wet compress should be constantly worn upon the bowels or the wet girdle around the back. The full warm or tepid bath, the rubbing wet sheet or a vigorous towel bath, should be used after the pack or vapor bath. The bowels should be moved daily by copious tepid injections. The diet should be simple; wheat-meal gruel, boiled rice, Graham toast, cracked wheat, and acid fruits may be used sparingly. There is often a craving for acids, and the free use of lemons and sour lemonade has seemed to do good; it is supposed by some that acids will neutralize the poison so that it will be the more readily removed from the system. Persons suffering from lead poisoning should be entirely removed from the cause which has produced the difficulty. It is not considered a very dangerous disease, and most cases will get well if they are entirely removed from the causes and made to keep quiet.

The common treatment for lead colic has been palliatives of anodines and chloroform taken internally and applied externally to the abdomen to relieve the pain, and then active purgation to carry off the poison—salines, croton oil, and other drastic purgatives have been used freely. Alum has been strongly recommended, so has sulphuric-acid drinks. More recently iodide of potassium given in from three to five drachm doses, three times a day, has been the principal treatment, sulphuret or sulphurous acid baths are recommended. All of these agents tend more to carry poison into the system than to work out any already there, and much injury is often done by their use. It is a better way to excite action in the eliminating organs by the use of those hygienic agents that will do no harm than to use agents of themselves poisonous.

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Answers to Correspondents.

BY A. L. WOOD, M. D.

☞ The readers of THE HERALD *are invited to ask such questions as will be of general interest for this department, where they will be briefly but comprehensively answered.*

Colds, Coughs and Deafness.—"What is the best way to cure a cold, or a temporary cough resulting from a cold? How can deafness be cured where it is caused by a cold?"

Where it is available, the proper use of the Turkish bath is the most speedy and effectual remedy. Where this is not practicable, the following course is advisable: 1. Take nothing whatever into the stomach, except water, until the difficulty is removed. 2. Go to bed in a well-ventilated room and wrap up closely and warmly, with bottles of hot water at the feet and sides. 3. Every few minutes take two or three swallows of cool water—not ice water—and continue drinking until you have been in a profuse perspiration all over for some time. Do not be afraid of drinking too much. From four to ten glasses of water are generally necessary. 4. Except when drinking, make a business of breathing, taking long, deep inspirations through the nostrils. After perspiring from half an hour to an hour, according to circumstances, have the body bathed in tepid, cool or cold water, as the patient can bear best, and then wiped dry and rubbed vigorously. If this does not remove it, which it will do in most cases, repeat the same process the next day, the patient having eaten nothing in the mean time. The process for the removal of temporary deafness, caused by a cold, is the same as for the removal of the cold.

Natural Laws.—"There is a great deal said in your journal about the laws of Nature. What do you mean by them?"

Natural laws are those laws which were instituted by the Creator for the regulation of the universe and all things therein. They are inherent in all things, and are always demonstrable, universal, invariable and harmonious. It is a natural law that when a body is unsupported it will fall to the ground. It is in accordance with natural laws that fire always burns, and that water will quench fire. Natural laws govern all our actions and control every function of our bodies. In obedience to them we see, feel and hear, we eat and digest, we exercise and rest. If we attempt to violate them we suffer. From ignorance and disregard of the natural laws of our beings arise all the sickness, sin and misery in the world.

Weak Skin and Lungs.—"My lungs have been weak ever since I had the whooping-cough when two years old. By lying without a pillow, breathing plenty of fresh air and expanding my chest, I now have no more pain, but still expectorate at times very freely and take cold easily. If you can give me any advice you will greatly oblige a constant reader of THE HERALD and a great admirer of its teachings."

You are probably dyspeptic, though you may not know it. Eat but twice a day, and nothing between meals. Live very plainly and simply, wholly or principally upon fruit and coarse bread, and drink nothing but water. Take a hand or towel-bath daily, followed by vigorous friction of the skin. Be out in the fresh air and sunshine as much as possible, and every day when the sun shines bathe the whole body in the direct rays of the sun from fifteen minutes to an hour or more, as the skin gets accustomed to it. See HERALD OF HEALTH for September, page 107.

Flatulence.—"I am troubled very much with wind in the stomach and bowels. My food is plain and simple, consisting mainly of fruits and bread, and I eat but twice a day. What can be the cause of it? and what shall I do to cure myself?"

The difficulty with you is, you either eat too large a quantity of food, or you do not chew it sufficiently, or, what is still more probable, both. A person may eat the right kind of food, and at proper times, and still make himself a dyspeptic by eating too hurriedly or too much. Eat only a sufficient quantity to supply the wants of the system—it does not require very much—masticate it thoroughly, drinking nothing while eating, and take daily out-door exercise, and your difficulty will soon leave you.

Sleep Alone.—"Is it injurious for two persons to sleep together? If so, why?"

It is. The extent of its unhealthfulness depends upon the physical condition of the sleeping companion—the more diseased the greater the injury. It is unhealthful, because the exhalations from the body of the one come in contact with and are absorbed by the skin of the other, and because each one must, of necessity, breathe some of the air which has been breathed by the other, and consequently been rendered impure.

Sick Headache.—Sick headache is caused by overloading the stomach—by indigestion. It may be relieved by drinking very freely of warm water, whether it produces vomiting or not. If the feet are cold, warm them. To prevent it, let plainness, simplicity and temperance preside at the table.

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Two Meals.—"Are two meals a day sufficient to sustain the strength of a laboring man?"

Yes. A man who labors hard, either physically or mentally, can accomplish more, and do it with less wear and tear of the system, upon two meals than upon three. Many persons who read this will ask the reason why. I answer: 1. An ample supply of nourishment can be furnished by two meals (and not heavy meals either). 2. When the stomach is performing the process of digestion a large supply of vitality is required to perfectly perform that function, and there is but little left for the use of brain and muscle. 3. The digestive organs require about one-half of the waking hours for rest, in order to fully maintain their integrity, and this they can not have if they are tasked more than twice per day.

Vinegar.—"Do you regard vinegar as a necessary and healthful article of diet? I have a strong desire for acids; and, if vinegar is hurtful, I would like to be informed if there is a healthful substitute for it."

Vinegar, like alcohol, is a chemical and not a vitally organized substance. It is the product of the chemical process of fermentation or decomposition. All chemical compounds are poisons—there is not a single article of food among them. Vinegar not being a food, of course there can be no substitute for it as such, but there are many healthful kinds of food which will supply the natural craving for acids. Among these are apples, pears, peaches, grapes, lemons, oranges, cranberries, blackberries, etc.

Fresh Butter.—"Is fresh butter as healthy as salted butter? I am very fond of fresh butter, and am anxious to have your opinion. What is the best way to freshen butter that has been salted?"

Fresh butter is much healthier than that which has been salted. The less salt the better, not only in butter, but in every thing else. The best way to freshen salted butter is to churn it in new milk, in about the proportion of a pound of butter to a quart of milk, treating it, in churning, as if it was new. Fresh butter is not only healthier but is more agreeable to the taste after using it for a short time. Give it a trial. Throughout Ireland, in many parts of England, and in some other countries, fresh butter is as common as salted butter is in this country.

Suicide.—"Could a person commit suicide by simply holding the breath?"

I do not think it possible, except in very rare cases. It is very seldom that the will would prove strong enough to restrain the instinctive efforts of Nature to breathe.

How to Grow Beautiful.—"Will you inform the readers of THE HERALD how they can improve their looks? I suppose most, if not all, would be glad to become more beautiful, if they knew how, for we naturally wish to appear as well as we can."

We can all become more beautiful if we will, just as we can become cultivated and refined, and cultivation and refinement will impart beauty to the homeliest features. If you would be beautiful, obey the laws of your being, physical, intellectual and moral, and cultivate, develop and refine all the powers and faculties of body and mind.

Stooping Necks.—"What is the cause of and cure for a stooping or bending forward of the neck?"

It is produced by wearing shawls and heavy collars, which press the neck forward, and by the habit of leaning the head forward while reading, studying, writing or laboring. To correct this deformity, have the clothing made so as not to press upon the back of the neck; endeavor to hold the head erect at all times, and try and push the neck back to its proper position; practice carrying weights upon the head, keeping the chin down and shoulders back.

Vails.—Coverings of any kind over the face are always injurious. According to the kind and texture, they more or less prevent the access of pure air to the lungs, and retain and cause to be breathed over and over again the impure air from the lungs. It is true that they tend to keep the air that passes to the lungs warmer, but it is at the expense of purity. Better breathe cool pure air than warm impure air. If people will breathe naturally and keep their mouths shut, the air will be warm enough when it reaches the lungs. Discard vails. They are a nuisance.

Alcoholic Medication.—"Is not the use of alcohol, wine and cider as medicines, sometimes necessary and beneficial?"

Never! They are a curse in health and a greater curse in sickness. The medical use of intoxicating liquors is one of the greatest fallacies of the age, and produces an untold amount of drunkenness.

Retiring and Rising.—Retire early, not later than 10 o'clock, and rise immediately upon waking in the morning, and not lay and doze away an hour or two of the best part of the day. You will be the better for it.

Children Sleeping.—Never wake children in the morning. Have them retire at an early hour, and let them sleep undisturbed as long as they will.

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Healthy Spices and Condiments.

THE ONLY ADMISSIBLE HYGIENIC SEASONINGS.

LIVE to shed joy on others.

FIRE dresses the meat, and not a smart lass.

WHAT length ought a lady's crinoline to be? A little above two feet.

WHEN may a loaf of bread be said to be inhabited? When it has a little Indian in it.

LUCK is ever waiting for something to turn up. Labor, with keen eyes and strong will, will turn up something.

A cow recently died in Maine, and a piece of hoop skirt was found in her throat. It is supposed she swallowed the milkmaid.

THE Alta Californian has hit it in saying: "When lawyers make short deeds and mortgages, and physicians write prescriptions in English, many ancient humbugs will be exploded." Two, if not many.

AN old lady who recently visited Oneida, was asked on her return if the canal passed through that village. She paused awhile and answered: "I guess not—I didn't see it; and if it did, it must have gone through in the night, when I was asleep."

A YOUNGSTER came home after having a glorious time in the puddles, his face all aglow and his rubber boots full of water. The punishment of staying in the house for the remainder of the day did not seem very hard at first; but as his little heart warmed up with the recollection of the triumphs of the morning, when he had waded deeper than any of his playmates dared to, he could bear the restraint no longer, and went to his mother, saying: "Please, mother, whip me, and let me go out again!"

Literary Notices.

THE Rev. William Ritchie has written an admirable argument against the use of intoxicating wine. His philosophy is based upon the Bible, and sustained by quotations and facts which no sophistry can gainsay. In this elaborate and exhaustive analysis the author shows plainly that the Scriptures are not silent on the great question of the use of wine. He refers to the different wines mentioned in the "Good Book," defines the nine words used for wine, gives chapter and verse in his quotations, considers the objections urged by those who countenance the use of wine as a beverage, shows how good wine was prepared, how preserved, in what manner fermentation was produced, by what means prevented, speaks of good wine as a common drink among the Jews, of their mixed wines, of the Greek and Roman wines, of the Bible verdict in relation to wine, quotes texts of warning against the use of fermented wine, and texts of permission of the use of unintoxicating wine, and explains texts that seem to countenance the use of strong drink The volume is packed with explanation and argument, and is an invaluable contribution to our Temperance literature. Every clergyman and lecturer, and all others who advocate the claims of the good cause which is the "cause of all mankind," should procure a copy of this excellent work. The style of the author is as clear as the crystal element he loves, and his words have the freshness of drops of dew. The book shows that the writer is a man of study and research, and his talent and scholarship must commend his effort to thinking men and women throughout the land. Since the publication of "Anti-Bacchus" no book has appeared on the subject of Temperance which can be compared with this lucid and logical, compact and comprehensive volume. It is published at 172 William Street, by the National Temperance Society. Price, $1. It may be ordered through us.

THE "American Educational Monthly" is a neatly printed and popular magazine, filled with excellent reading for those who teach and those who are taught. Its immense circulation affords evidence of its worth and its appreciation, since its readers are principally men and women of letters, whose chief occupation is to teach the young idea how to shoot, and, as they say at West Point, what to shoot at. J. W. Schermerhorn & Co., 430 Broome Street, New York, are its enterprising publishers. Among its contributors are men of national fame. The October number contains articles on "Pedagogical Law," "Our Normal Schools," "Aereostation," "Shallow Theorists," "Ocean Winds," "The Atlantic Telegraph," and editorial articles of great value. $1.50 a year.

ORTHODOXY: Its Truths and Errors. By Rev. James Freeman Clark. Boston: The American Unitarian Association, Walker, Fuller & Co. New York: James Miller.

This book is the production of one of the first thinkers of the country, a Unitarian minister of a logical mind, and, we might say, in no sense a strong partisan. The work is an able one, and will well repay perusal by all inquiring persons. Price, $2 by mail.

WHY NOT? A book for every woman, by Dr. Storres of Boston. It was written and presented to the American Medical Association in 1865, and was awarded a gold medal as being the best essay on the subject of which it treats. The principal topic treated is the question of Abortion, its extent, and the injury it is doing to American women. It is earnest in its tone, and, if read, will do much good. Price, $1.

THE NORTHWESTERN FARMER. Dr. T. Bland of Indianapolis is publishing one of the best agricultural papers in the West. We wish him all the success he deserves in the publication of his monthly. Price, $1 a year. Those who wish samples can have them for a stamp.

THE LITTLE CORPORAL.—If there is a better monthly for the entertainment of boys and girls than The Little Corporal we should like to see it. Its matter is original and well written; indeed, much of it is of a very high order of merit, and its typographical appearance is very tempting to the mental appetite.

IVISON, PHINNEY, BLAKEMAN & Co., the famous publishers of the books for schools, have just issued under the editorial supervision of D. W. Fish, A. M., a model Almanac, which is brimfull and running over with valuable information, and it is also elegantly printed.

THE "Atlantic Monthly," "Our Young Folks," and "Every Saturday," appear as regular as the months come round, and always contain enough of the best reading to make them desirable in every family.

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THE RADICAL.—This monthly magazine is devoted to religion, and is sustained by a corps of contributors many of whose names stand first in the ranks of literature and scholarship. Its name, The Radical, indicates where it stands in point of opinion. We would advise all who are interested (and who is not?) in progress in this direction to send thirty cents for one copy, when they can decide for themselves on its merits. Adams & Co., Boston, Mass.

THE HOME JOURNAL.—Among our exchanges none are more welcome than The Home Journal. Its matter is the best the literary market affords. Why does not Mr. N. P. Willis, who is a score of years younger than some of his brother bards who are writing now in their happiest vein, give to the world an occasional poem? Any thing from his artistic and elegant pen would be gratefully received by an appreciative parish of readers.

GYMNASTIC ACADEMY.—Mrs. Z. R. Plumb has opened her Gymnastic Academy in a new hall located at No. 82 Fifth Avenue, corner of Fourteenth Street. We can say of her school that it is in every way worthy of patronage. We bespeak for her a large success during the coming season.

THE LAST SUPPER.—This popular picture has been published by Ledyard Bill of New York. Sent by mail for $2.

Publishers' Department.

This Number.—The first article in this number is from the able pen of Horace Greeley. It handles the subject of alcoholic stimulation in a scientic common-sense way. The article should be read by all who would know his views upon liquor-drinking.

Henry Ward Beecher gives us an able dissertation on Amusements. We are to have an article from his pen every month. This feature alone would amply repay all our subscribers, did we not add so many other names of men of fame as reformers and men of science. Mr. Beecher takes the true view of his subjects.

Prof. Rufus King Browne favors us with an interesting article on Disinfectants, a subject too much neglected. The scientific stand-point from which he speaks renders what he says very important.

From the able pen of Rev. O. B. Frothingham we have an article on "The Cry for Rest." We are well aware that some of his views may not be accepted by all; but they are so well put that we do not see how they can give offense to even those who do not agree with him. Mr. Frothingham is one of the foremost men of the age, and he is entitled to a candid hearing.

If the "Essay on Teeth" shall succeed in directing attention to the important subject of preserving these necessary and too often neglected organs, it will do just what the writer intended it should.

The paper on "Monuments," while it may not be a health article, will induce a healthy train of thought in all who read it.

The article under the caption of "A Natural Life" is intended to correct some errors on this subject, which seem to be at present unusually prevalent.

We want to speak a good word for the poem by Mrs. M. M. H., formerly M. M. Jones, the author of the Hygienic Cook Book. It may not be entirely faultless in style, but it is very rare that we find a poem on this subject but has some sickly sentimentalism in it that makes it any thing but desirable for a Health journal.

The poems by William H. Burleigh and G. W. Bungay need no commendation.

The numerous articles on health, "Topics of the Month," etc., will, we believe, make the present number equal to any of its predecessors. It is doubtful if there is a Health or Temperance magazine in the world that can show such a valuable list of articles from able writers as ours has during the past five months. Future numbers will be equally valuable. The New York Tribune claims to be "the best newspaper on this planet, and perhaps in the solar system." Probably as much could be said in favor of our monthly as a Health and Temperance journal.

Clubs.—We offer the most liberal terms to those who form Clubs for THE HERALD OF HEALTH for 1867 that can be desired. Those who form a Club of Fifty Subscribers, and send all the names, together with Fifty Dollars, at one time, get THE HERALD OF HEALTH for One Dollar each. In no way can so much valuable matter from the first writers of the age be had for this low price, nor in any way can so much good be done. It must be distinctly understood, however, that for less than Fifty Subscribers the regular rates will be charged. We are sparing neither pains nor expense to make ours a first-class journal, and ask the hearty co-operation of all interested in Health and Temperance, and all that relates to the well-being of humanity, to put a helping hand to the wheel and increase our subscription list. We are sure that in every town where fifty or one hundred HERALDS are taken, there will be less sickness, premature death, intemperance, and more bright, healthy children, more happiness and more perfect men and women.

Human Improvement.—Most of the papers and magazines of the world are devoted to the improvement of the agriculture of the country, to politics, to letters, news or some special idea all right in itself. THE HERALD OF HEALTH is devoted to the improvement of the race, the most vital subject that can come before the public. Its aim is that there should be less sickness, and fewer children born with tendencies to sickness, but that the human race shall be vigorous and healthy. We believe the tendency to vice, intemperance, and all the sins against the body, can be better remedied by attention to the laws of life and health, and shall teach accordingly. We doubt if so much good can be done in any way as by aiding in extending its circulation.

A New Idea.—Mr. T. B. Helm, School Examiner for Cass County, Ind., proposes to add five per cent. to the standing of all teachers who subscribe for and read THE HERALD OF HEALTH. The following is an extract from his letter:

"As Superintendent of the Public Schools of Cass County, I have felt disposed to add five per cent. to the general usefulness of teachers who will subscribe for and become readers of THE HERALD, believing that by such means teachers will be better qualified to discharge the responsibilities they owe to the rising generation. At my general examination of teachers held on last Saturday I made announcement as above, when several teachers were induced to subscribe."

Write Plainly.—All letters should be directed very plainly, and all names should be carefully spelled. Sometimes people write so *they* can read the names easily, because familiar with them, but others can not do so. Mistakes may arise in this way. The address should also be well defined and written plainly.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

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INTERESTING TO LADIES.

THE following extracts are from the testimony, taken under oath, in a recent case pending before the United States Patent Office, upon the actual merits of the GROVER & BAKER SEWING MACHINE, and its relative merits as compared with other machines.

Mrs. Dr. McCready says:

"I have used, for nine years, a GROVER & BAKER MACHINE, and upon it I have done all kinds of family sewing for the house, for my children and husband, besides a great deal of fancy work, as braiding, quilting, and embroidering. During all that time my machine has never needed repair, except when I had the tension altered, and it is as good now as it was the first day I bought it."

* * * * * * *

"I am acquainted with the work of all the principal machines, including Wheeler & Wilson's, Finkle & Lyon's, Wilcox & Gibbs's, Ladd & Webster's, the Florence machines, and Sloat's machines, besides a number of ten dollar ones; and I prefer the Grover & Baker to them all, because I consider the stitch more elastic. I have work now in the house which was done nine years ago, which is still good; and I have never found any of my friends who have used the other machines able to say the same thing."

Mrs. Dr. Whiting gives the following reasons for the superiority of the Grover & Baker Machines over all others:

"The elasticity of the stitch, and ripping when it is required; and also the stitch fastening itself, as you leave off; and also the machine may be used for embroidering purposes; and therein consists the superiority over other machines.

"The stitch will not break when stretched, as the others do, and neither does it draw the work.

"I find this stitch will wear as long as the garments do—out-wear the garments, in fact.

"I can use it from the thickest woolen cloth to Nansook muslin."

Mrs. Alice D. Whipple, wife of Rev. Mr. Whipple, Secretary of the American Missionary Association, testifies:

Q.—As the result of your observation and experience, what machine do you think best as a general family instrument?

A.—The Grover & Baker, decidedly.

Q.—State the reasons, such of them as occur to you, for this opinion.

A.—I think the stitch is a stronger stitch than that of any other machine I have used, and it seems to me much more simple in its management than other machines; one great advantage is the ease with which the seam is ripped when necessary to do so; and I think that the work, by an experienced person, on a Grover & Baker Machine, is better than the work of such person on any other machine; it requires more skill to work other machines than the Grover & Baker.

Mrs. General Buell says she prefers the Grover & Baker Machine over all others.

"On account of its durability of work, elasticity of stitch, and strength of stitch. It never rips.

"It is preferred over all others; it is very easy in its movements, and very easily adjusted, and very simple in its construction.

"We can accomplish more in one week, by this sewing machine, than we can in a month by hand-sewing."

Mrs. Dr. Watts says:

"I have had several years' experience with a Grover & Baker Machine, which has given me great satisfaction. Its chief merit is that it makes a strong elastic stitch; it is very easily kept in order, and worked without much fatigue, which I think is a very great recommendation. I am not very familiar with any other machine, except a Wheeler & Wilson, which I have had. I think the Grover & Baker Machine is more easily managed, and less liable to get out of order. I prefer the Grover & Baker, decidedly."

Mrs. A. B Spooner says:

"I answer conscientiously, I believe it to be the best, all things considered, of any that I have known.

"In the first place, it is very simple and easily learned; the sewing from the ordinary spools is a great advantage; the stitch is entirely reliable. It does ordinary work beautifully, and the embroidery stitch. It is not liable to get out of order. It operates very easily. I suppose I can sum it all up by saying it is a perfect machine.

"I have had occasion to compare the work with that of other machines. The result was always favorable to the Grover & Baker Machine."

Mrs. Dr. Andrews testifies:

"I prefer it to all other machines I have known anything about, for the ease and simplicity with which it operates and is managed; for the perfect elasticity of the stitch; the ease with which the work can be ripped, if desired, and still retain its strength when the thread is cut, or accidentally broken; its adaptation to different kinds of work, from fine to coarse, without change of needle or tension."

Mrs. Marie J. Keane, of the house of Natalie Tilman & Co., says:

"Our customers all prefer the Grover & Baker Machine, for durability and beauty of stitch."

Mrs. Jennie C. Croly ("Jenny June") says:

"I prefer it to any machine. I like the Grover & Baker, in the first place, because if I had any other I should still want a Grover & Baker; and having a Grover & Baker, it answers the purpose of all the rest. It does a greater variety of work, and it is easier to learn than any other. I like the stitch because of its beauty and strength, and because, although it can be taken out, it don't rip, not even by cutting every other stitch."

The foregoing testimony establishes beyond question:

1. The great simplicity and ease of management of the Grover & Baker Machines.

2. That they are not liable to get out of repair.

3 That a greater variety of work can be done with them than with other machines.

4. That the elasticity of the stitch causes the work to last longer, look neater, and wear better than work done on other machines.

5. That the facility with which any part of the seam can be removed when desired is a great advantage.

6. That the seam will retain its strength even when cut or broken at intervals.

7. That, besides doing all varieties of work done by other sewing machines, these machines execute beautiful embroidery.

Over one hundred other witnesses in the case above referred to testified to the superiority of the Grover & Baker Machines in the points named in substantially the same language, and thousands of letters have been received from all parts of the world, stating the same facts.

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Premiums.—*How to get a Sewing Machine for nothing.* Get fifty subscribers for THE HERALD OF HEALTH, and send us One Hundred Dollars, and we will send one of Weed's Machines worth $60.

How to get a Webster's Unabridged Pictorial Dictionary. Get sixteen subscribers to THE HERALD OF HEALTH, and send us Thirty-two Dollars, and we will send, free, one of the largest and best Dictionaries ever published, illustrated with 3000 engravings.

How to get a beautiful Picture worth Six Dollars. Get eight subscribers to THE HERALD OF HEALTH, and send Sixteen Dollars, and we will send a beautiful engraving of "Washington on the Field of Trenton." Every body should have it.

How to get THE HERALD *free.* Get five subscribers, and send us Ten Dollars, and we will send it free to the getter up of the Club.

It will be seen we pay those who work for us liberally.

Lectures and Lecturers.—The following gentlemen are familiar with the great question of Physical Culture, and we suggest to our friends in the country that they form clubs and raise funds to secure, if possible, their lecture service: Horace Greeley, George W. Bungay, Dr. M. L. Holbrook, Dr. A. L. Wood, Dr. E. P. Miller, F. B. Perkins, Dr. Snodgrass, Dr. Dio Lewis, Moses Coit Tyler, S. R. Wells, Nelson Sizer.

Applications for the services of these gentlemen may be sent to us (stamp inclosed for the payment of postage) and we will endeavor to secure an engagement from them. Persons applying will please name two, three or more of the gentlemen whom they would prefer, so that, if the first person of their choice can not be obtained, the second or third may. Address MILLER, WOOD & Co., 15 Laight Street, New York. Any lyceum or school near New York city, and convenient of access, which will give us a club of fifty subscribers for THE HERALD OF HEALTH, shall have a gratuitous lecture from some one of our lecturers.

Notices of The Herald of Health.

"THE HERALD OF HEALTH again bristles with renowned names in its table of contents. An article on 'The Health of Girls" treats of a subject that can not be sounded too often in the deaf ears of the vanity-besotted devotees of Goddess Fashion, who persist in murdering the budding loveliness intrusted to their 'care,' by lacing the body into forms invented by modistes but tabooed by Nature. A similar lecture on tight shoes were not amiss, for, although the subject is not quite as vital, the folly of the latter abomination is not less egregious. A more truly humane and elevating lay-sermon to the young could not easily be preached than the one Horace Greeley favors us with in 'A True Life.' THE HERALD OF HEALTH is one of the few publications which can not fail to be worth more than their price to *all* attentive readers."—*Anti-Slavery Standard.*

"THE HERALD OF HEALTH.—This magazine is greatly improved by the able corps of writers contributing to its columns. It is published at $2 per year."—*Amsterdam Recorder.*

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books and Baths.

Herald for 1863, 1864 and 1865.—We have a few bound volumes of THE HERALD OF HEALTH for 1863, 1864 and 1865 on hand, which will be sent free by mail on receipt of $2 25.

Epidemic Cholera.—See notice of the book on Epidemic Cholera, just published, in our advertising columns. AGENTS wanted in every city.

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Bill-heads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Agents Wanted.—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.

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Western Publishers, SPEAKMAN & PROCTOR, 6 Custom House Place, Chicago. nov-1t

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In no other work is so much light thrown upon the character and destiny of mankind as in this, or the distinctive traits of nations and tribes so clearly pointed out. Portraits of distinguished persons of ancient and modern times, with biographical sketches and delineation of character are given. Divines, Orators, Statesmen, Warriors, Artists, Poets, Philosophers, Inventors, Surgeons, Discoverers, Actors, Musicians, etc., are included. It is an "Encyclopedia" of biography, acquainting the reader with the career and character of many great men and women of the past one thousand years, and of the present—such, for instance, as Aristotle, Julius Cæsar, Shakspeare, Washington, Napoleon, Franklin, Bancroft, Bryant, Longfellow, Irving, Rosa Bonheur, Theodosia Burr, Cobden, Bright, Lawrence, Bolivar, Whately, Thackeray, Dow, Knox, Richelieu, Hopper, Buckle, Dickens, Victoria, Wesley, Carlyle, Motley, Mill, Spencer, Thompson, Guthrie, Alexander, and hundreds of others. A Beautiful Present for the Holidays. AGENTS WANTED. Book sent by return post or express, on receipt of Price. nov-3t

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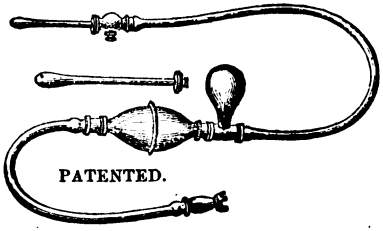
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Notices to Lyceums.

Mr. GEORGE W. BUNGAY, the Author, Editor and Lecturer, has a new lecture entitled "WORK AND PLAY." His address is 15 Laight Street, New York. sep-tf

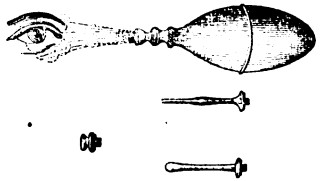
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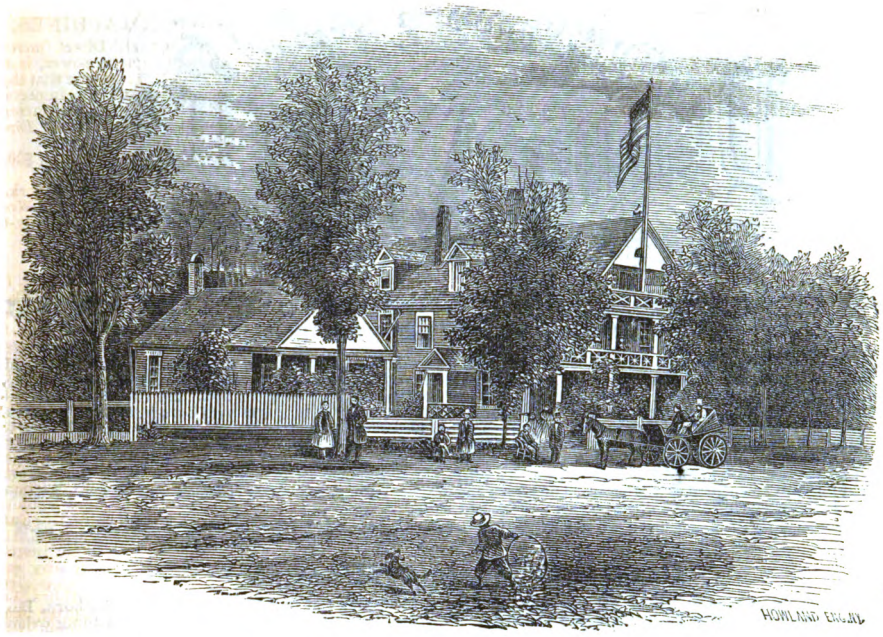
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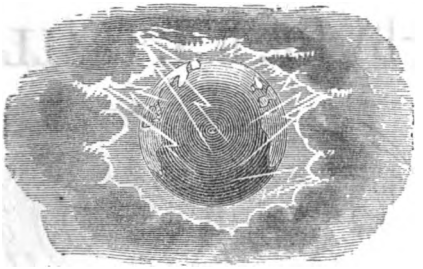
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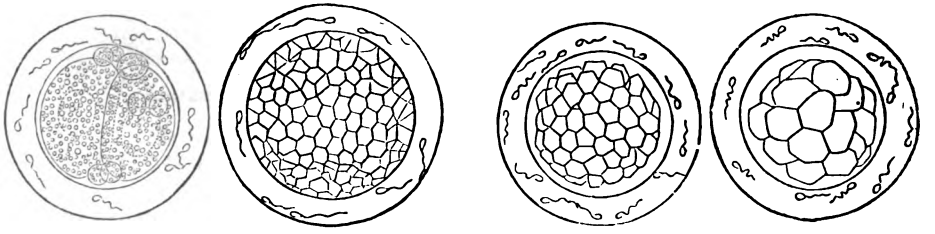
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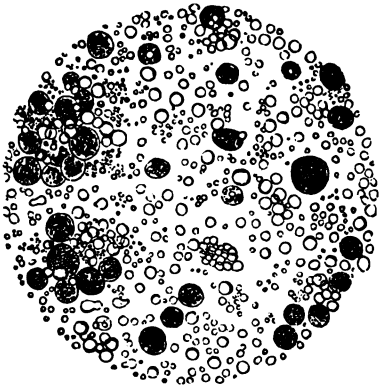
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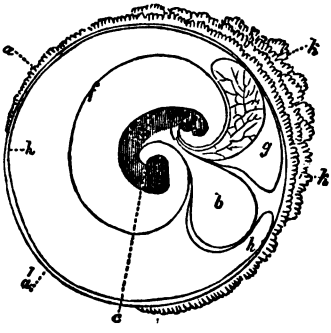
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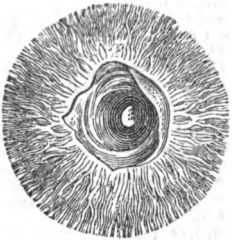
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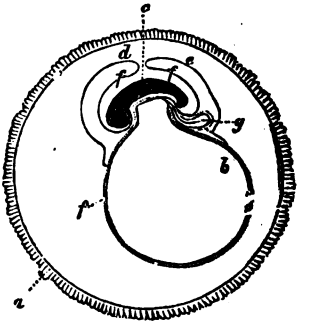


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DECEMBER, 1866.

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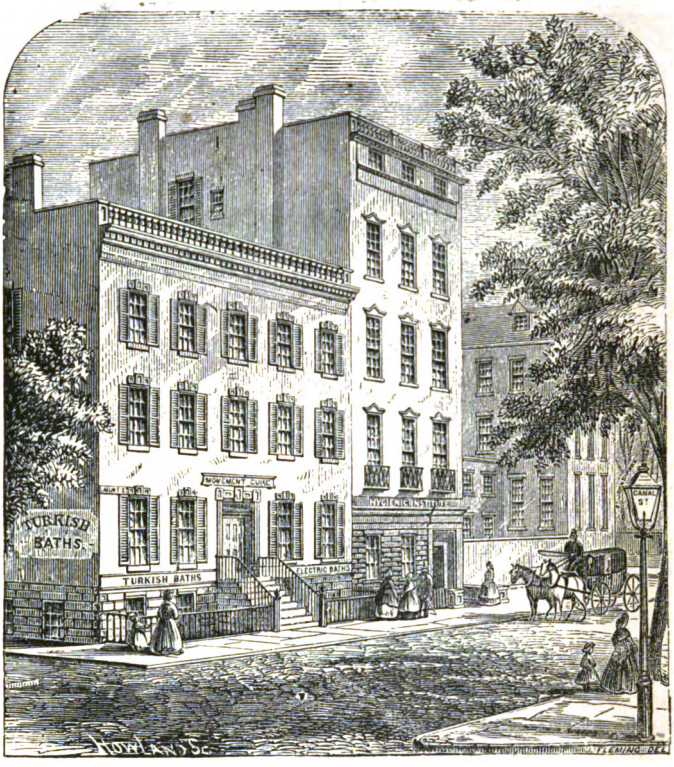
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General Articles.

[Written for The Herald of Health.]

A Psalm of Night.

BY WM. H. BURLEIGH.

FADES from the west the farewell light
  Flung backward by the setting sun,
And silence deepens as the night
  Steals with its solemn shadows on.
Gathers the soft, refreshing dew
  On spiring grass and flow'ret stems;
And lo! the everlasting blue
  Is radiant with a thousand gems.

Not only doth the voiceful day
  Thy loving kindness, LORD, proclaim,
But night, with its sublime array
  Of worlds, doth magnify thy name!
Yea, while adoring Seraphim
  Before thee bend the willing knee,
From every star a choral hymn
  Goes up unceasingly to thee!

Day unto day doth utter speech,
  And night to night thy voice makes known;
Through all the earth where thought may reach
  Is heard the glad and solemn tone;
And worlds, beyond the farthest star
  Whose light hath reached a human eye,
Catch the high anthem from afar
  That rolls along immensity!

O Holy Father! 'mid the calm
  And stillness of this evening hour,
We, too, would lift our solemn psalm
  To praise thy goodness and thy power!

For over us, as over all,
  Thy tender mercies still extend,
Nor vainly shall the contrite call
  On thee, our Father and our Friend!

Kept by thy goodness through the day,
  Thanksgiving to thy name we pour;
Night o'er us with its stars, we pray
  Thy love to guard us evermore!
In grief console, in gladness bless,
  In darkness guide, in sickness cheer,
Till, in the Saviour's righteousness,
  Before thy throne our souls appear!

[Written for The Herald of Health.]

Longevity of the Aborigines

OF THE UNITED STATES, AND SOME LOGICAL REASONS FOR IT.

BY J. R. SIMS.

"TALL and erect as an Indian" has ever been a proverb. The great age attained by many of the *real* native Americans at an early day, and the general tendency of those people, in their natural condition as a race, to old age, has been proverbial in all time since the white nations of Europe first made their acquaintance; but that tendency has correspondingly shortened, as an intimacy with the whites and an inculcation and inoculation of their vices has followed. Then, it was not an uncommon thing for Indian men and women, if they escaped death by accident from the chase, or an arrow from the war-path, to which their roving and uncivilized life exposed them, to count the waning moons of six or seven scores of years. In other words, when the human frame was literally left to wear out,

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it manifested great tenacity for life. Occasionally some newspaper still chronicles the death of an Indian centenarian, but comparatively few now attain to very old age, if they have lived for several generations contiguous to white neighbors.

REASONS FOR INDIAN LONGEVITY.

Let us glance at some of the reasons for the red man's longevity, as he existed on this continent prior to and in the early part of the last century. The fact that there were fewer children, in proportion to their numbers, in the Indian families of North America when the Europeans came among them than there were white children in European families, does not of itself prove the former less prolific; still, we candidly believe that as a people they were less amorous, either from cranial development, long-forming or necessary abstinence from stimulants, calculated incidentally to provoke fondness for the opposite sex. As a people, phrenologically considered, their long and unchanging habits of life and social relations we may well suppose would have a direct tendency to develop the attribute of veneration for Nature's wonders—indeed, for any thing marvelous, rather than that of love for the domestic altar, where reading, music, and the festivities attending them, were unknown.

But, while we admit to some extent the above reason for the paucity of numbers of American Indian children, as compared with European white children in an equal number of families, still we can assign other and we think better reasons for much of this marked disparity. It is, we believe, a well-established historical fact that few, if any, Indian children born at an early day, who chanced to be deformed or were of a puny and unpromising character, ever passed from infancy to childhood. Custom gave them—whether by bow-string, hatchet, or the river-bath of King Pharaoh is unknown—a speedy entrance to the hunting-grounds of their fathers. Therefore, for even the chance of life and old age, like Moses in Egypt, every Indian infant must in appearance have been a *goodly child*, and strong enough in a few days to be strapped upon its mother's back for a long journey, cradled in a basket among the briars of the wilderness, or deposited in an ark of bulrushes among the flags that grew along some American Jordan.

It is well known to every reader of this article that a very large proportion of white children born, with all the fender care of mothers and friends, and surrounded with all the comforts of well-ordered homes, die under the age of ten years. May we not reasonably suppose the mortality of Indian children to have been even greater in the same period, when for a moment we look into the red man's bark home in mid-winter with mercury at zero, and see his illy-clad squaw with a little stone hatchet endeavoring to keep her fire from dying out, as well as herself and papoose, and there learn that she had the day before eaten her last morsel of food, and that her husband was then tramping through snow several feet deep to supply, if possible, his larder with wild game, at the hazard of slaying it with a stone-pointed arrow? There are conditions under which the greatest physical strength must yield to hunger and frost; but when an Indian child has passed through the ordeal of privation imposed by cold and hunger, and comes out with a constitution not injured, but fitted all the better for future endurance, its chance for extreme old age, fatalities excepted, is secured, or rather was at the period under consideration.

And we may here add, that there was probably no one thing which caused so great a disparity in the infantile chances of life between white and Indian children as the use of milk from the white man's cow, which resort the Indian did not have, however great his necessities from unlooked-for causes may have been. We all know how common a thing it is, from one cause and another, to raise our infant statesmen and heroes with a milk-bottle, and thousands through life find their health promoted, if not their longevity secured, by the free and constant use of this most natural of all aliments.

INDIAN MEDICINE.

Another reason for the longevity of the Indian race is to be found in the fact that they did not live so fast as do the whites; that is, they had no luxuries which the art of modern cooking provides, and no beverages or stimulants which the chemical genius of civilization has originated. Consequently, they never had, from over-feeding and luxurious indolence, to go to Europe to recover their lost health, which the energy necessary to take them there would have been quite as likely to have given them, if judiciously expended in their own kitchen and garden, supposing them to have had such possessions. Furthermore, the Indians took very little of what we call medicine, for they did not have it to take. They had literally no doctors among them—I mean men skilled in the use of vegetable and mineral extracts and compounds. Hence, they were never over-dosed with some-

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thing which proved fatal, nor were they crippled and diseased for life, or laid in an untimely grave by the use of a lotion from the wrong bottle, or a powder from Pandora's or some other box, that required the immediate application of a stomach-pump to prevent a new job for a grave-digger, just because some drug-store or physician's laboratory had got a new clerk.

It is true, they had their so-called *prophets* and *medicine-men;* but if one of the latter visited a patient, he expected to cure him, if at all, rather by some incantation or charm, than by administering powerful soporifics or remedial compounds. The sequence was that Nature, given a fair chance, usually wrought out her own cure, and the medicine-man got his reward for the improved condition of his patient—not in money, for his people had it not, but in a claim to increased importance and regard among the chiefs and great men of his tribe. Some of the Indian medicine-men, we are historically told, said over their patients some lingo or incantation, and then took their own medicine, which no doubt did their patients as much good as though they had taken it.

It is a noteworthy fact that the Indians did possess some knowledge of botany—not as a science, but they well knew the virtues of certain roots and plants, having distinguishing names for them, and to some extent used them. Their conveniences for steeping them, however, precludes the idea of their using them as much in warm drinks, perhaps, as in a dry or powdered state. The reader will bear in mind the fact that, at a period anterior to their acquaintance with Europeans, they had no metallic vessels, but substituted for pots and kettles, rude and clumsy jars made of steatite and other soft stone. Another fact to be remembered is, they had to resort to great labor to kindle a fire when desirable, either by friction of dry woody substances, or by striking a spark from two bits of silex or flint-stone into spunk.

The ever-ready little lucifer match, one of the most convenient and time-saving of all inventions, only dates back about one generation; and fifty years ago the white race had to resort to various expedients to light a candle, and many a sick person in warm weather has had to groan and suffer all night for the want of something which their friends could not find in the dark, and they had no means of ignition at hand. We say in the summer, because in the winter, in a fire-place, pains were taken by every family to bury coals in ashes to keep fire over night, if possible, month in and month out. Of course, in their winter wigwams, the primitive settlers were quite as careful to preserve fire over night as were the whites, who had greater facilities for overcoming such difficulties.

We have said that the Indians had some botanical knowledge. For certain difficulties they had certain remedies, and that information almost universally known among them was handed down from one generation to another. For instance, where tobacco was raised, some of the Indians were silly enough to smoke it, and hand down its use as a curse to their white followers; but they made a far better and wiser use of this poisonous narcotic in its external application to wounds and bruises. The Aborigines from time immemorial, for aught we know, may have been smokers; but they have not all smoked a weed with death in it. The Indians living contiguous to Green Bay, Wis., and St. Paul, Minn., are smokers; but their kin-i-ki-nick, Indian tobacco, is harmless when compared with Virginia tobacco, it being made of red willow bark, at times with the addition of sumac leaves. Other substances fill the Indian calumet in other localities.

It is also proverbial, that in districts infested by rattlesnakes there is a wild plant growing which is a certain cure for their bite; and old people of the Schoharie and Mohawk Valleys say that the Indians living in those districts, when first peopled by whites, did not apprehend any serious difficulty from the bite of those reptiles, because all knew what the specific was and how to apply it. We may, we think, very readily conclude that the Indian's knowledge of the medical properties of herbs was of a practical and time-serving kind. It is possible that there grows in nature some substance, if its virtues were fully known, that would prove a sovereign balm for every human ill that is curable.

[NOTE.—The philosophy of curing the bite of the rattlesnake by some plant is probably explained by the fact that the application either neutralized or destroyed the poison before it produced any bad effect, as caustic will do if applied to the wound sufficiently early. It is, however, doubtful if many cures attributed to their medicine did not come of themselves, because of the purity of the blood of the Indian, in consequence of his simple habits. It is also well known that many persons may be bitten by snakes without being injured. The idea that there is a remedy growing in nature for al known diseases is, we think, untenable.—ED.]

EVIL EFFECTS OF DRUGGING.

The manner of life in civilized society renders it absolutely necessary for a large *medica*

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profession, which fortunately contains many wise, prudent and conscientious men; but we are constrained to remark that the white race have ever taken too much rather than too little medicine; believing that thousands have filled early graves from the use of powerful stimulants or opiates, who but for them might have lived to old age, had Nature, with fasting, been left unaided to work her own cure.

It may, we think, be a fair question for debate, whether the white man's medicine does not annually shorten more lives than it prolongs. "*There* lies another subject killed according to the books!" is a sort of proverb from the lips of a learned physician that has, no doubt, quite as much truth as poetry in it. We believe that the good sense and experience of every well-bred physician who has been in practice twenty years will bear us out in the opinion that, sooner or later, medicine has injured nearly as many as it has benefited; and show us a hale and hearty person at the age of eighty years, and ten to one you will find an individual who has digested little, if any, calomel or jalap.

What long practitioner is there, who is honest, who will not tell you that he has been called to see scores of patients whose difficulty was from over-eating, and who only needed a little fasting to give Nature a chance to recuperate, and yet who left him something to take, if it were only castile-soap pills, knowing that if he did not allow the patient to consider himself quite ill he would at once be dimissed and another physician sent for. There are very few doctors who can not tell you that they have frequently left medicine for a patient, to be taken after a certain time, who not only hoped but believed that the patient would begin to improve soon enough to obviate the necessity for its being taken at all. We know there are cases now and then in which, if human aid is to be of any avail, it can not be called too soon; while there are a great many others, had but a little delay been observed, the necessity for a physician would not only have been avoided, but the patient would have been kept from the sick-list, drugs and leeches, and resumed his daily vocation with less delay and more economy.

AN INDIAN HOME.

We have already intimated that the red man lived to be older because he did not live so fast as did the white man. Let us lift the curtain of time and see if we can not find good reasons not yet named for the longevity of the former. And to get a good mirror in which to reflect the past, let us accept his proffered hospitality for the day, and step into the wigwam of the principal chief of a powerful tribe, which is the best-constructed and best-ordered dwelling in the settlement, if its walls are of thin bark, its only door a raw deer's hide, and its window and chimney a good-sized hole in the roof, which is not over eight or ten feet from the earthy floor. We find as we enter that the hut consists of a single apartment not over twelve or fifteen feet square (although it accommodates a family of half a dozen members), and has not the convenience of either a bedstead, chair, table, stand, or in fact any of the surroundings, of what we would call creature comforts, found in the humblest cot in civilized society. There appears, however, to be a kind of crib or hurdle near one corner of the room several inches high, made of forest boughs, and covered with the dressed skins of bears, wolves, panthers, beavers, otters, foxes and raccoons, which serves at night as a bed for the chieftain and his squaw.

Having passed his threshold, our proud and dignified host beckons us toward the hurdle where we become seated. Accustomed to do so at home, we take off our hats, and look along the wall in vain for a projecting hook upon which to hang them, and finally deposit them on the ground at our feet. We have discovered along the wall, however, very ingeniously fastened there, several stone-headed spears, war-clubs, unbent bows and quivers of arrows; and a little further along, as if placed there to remind us we were guests of a savage and warlike race, there hung a few strings of shell wampum and a dozen human scalps. Perhaps I need not have stopped to say that our host had provided no resting-place for a hat or cap, because he had never been the owner of one.

BREAKFAST.

Ere we had taken our seats, so lowly that no little engineering was necessary to beget ease, regardless of grace for our understandings, we had discovered that we were in time for breakfast, and also what it would consist of, for the savory smoke greeted both our eyes and our nostrils from a haunch of venison roasting before the fire, spitted upon two pointed sticks set firmly in the ground. Soon breakfast is ready, though not announced by bell or gong, and the generous host serves each of us a liberal piece of well-cooked meat, cut off with a knife made from the rib of an elk, upon a clean and before unused bit of bass-wood bark. We would have been supplied with knives similar to the one named, but we intimated to our host that we

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had knives of our own, which we immediately put in requisition. The female part of the family did not breakfast with us, as it was not the custom for them to eat with strangers, and in truth we were glad they did not, as we made such awkward work that we must have blushed even before the women of the forest. Our host, seated before us on the ground, with his feet under him, as tailors are wont to sit upon their work-bench, soon gave us ocular demonstration how well he relished his morning meal.

Ah, my comrades! you need not look over either my shoulder or your own to see if a tray of bread, a dish of vegetables, a bowl of coffee or a mug of cider is not coming from some corner, followed by a plate of butter or a sugar-bowl and cream-cup, for none of those things were ever seen in any hut in the settlement; but if you must have drink, an ingeniously wrought bark cup, filled with crystal water from a mountain spring will be served to you—pure, although it may be a little warm. As we have not been long enough from tables filled with little delicacies to pamper our appetite, we perceive that our first meal in the forest will not rank us among gluttons, or prove a flattering testimonial to the cooking of our chieftain's wife, and her charmingly, because naturally, formed *Chin-chilee-ta*, or Forest Bird.

INDIAN FISHING.

But the atmosphere of the wigwam seems close, and we improve the first hint of our host to step out into the open air. Anxious to make our visit a satisfactory one, although he can speak but few English words and we still less Indian, we follow him to a small lake a mile or two distant, where, he gives us to understand, he will show us how to take fish. Not caring to trust ourselves in any of the frail-looking bark craft of the tribe moored along the shore, we remain there, and see him in his decorated, tiny, one-man craft put off from the shore, bait a hook made of bone and fastened to a line of sinews, and drop it into deep water. At the end of an hour he had taken several fine trout, which he sent by a runner to his home, and then for hours he entertained us by visiting several spots of local interest to himself and his people, one of which was where one of his warriors had, single-handed and after a desperate struggle, slain a monstrous bear; another, the very spot where had stood, a few years before, an immense oak which a thunderbolt had shivered to atoms, killing in its branches an ugly panther which had proved a pest to the tribe, having previously killed several of their dogs and a promising three-year-old papoose. The skin of the "varmint," as we now learned, was beneath us while partaking of our morning meal.

TWO-MEAL SYSTEM.

We learned practically, long after *our* usual dinner-hour, that our new friends ate but two meals a day, preferring to wait long enough between them to have a zest for them when they did come. After spending several hours profitably and agreeably in learning how people can live evidently contented and satisfied, if not happy with their lot, with limbs bare and body scantily covered—especially in moderate weather—with the dressed skins of animals, without possessing any thing in or out of their lodges calculated to excite the envy or jealousy of their neighbors, we returned, with the leading spirit of his people, to his own unpretending cot.

Having been once initiated, we feel more at ease at our second entrance, the more so, perhaps, from meeting with a look of recognition and smile from the female part of the family; for the kindness and affection of woman's heart is justly proverbial, whether it throb beneath silk or cotton, wool or deer-skin; whether in a city palace or in the bark hut of an American wilderness; although, as in this case, she may be treated as the inferior of man, having certain duties imposed upon her which man would think it unamiable or degrading in him to perform.

DINNER.

We are hardly seated when a demonstration is made at the fire-place, a simple arrangement containing about a wagon-load of stone in the condition in which Nature had quarried them. Viewed across the room it seemed quite simple, and especially constructed to guard against setting the lodge on fire. A rough stone wall several feet high formed the back, faced with large flat stones upon their edges, with wings some three or four feet apart extending several feet into the room. Within this fire-place there lived almost annually a bed of coals, if the family occupied the same hut. On the occasion under consideration the embers were raked open with a stick, and from their midst were taken out the identical trout sent home in the morning. From them we received liberal portions and, as at our morning meal, each upon an unused bit of clean bark. We descried, as it came to us, that the entrails had been removed before cooking, giving, of course, an enhanced value to the smiles we met on entering the rude apartment, as this was not usual in every Indian dwelling. The scales, having been left on, were

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removed with the skin when cooked, leaving a clean and dainty morsel for an epicure.

As we received our dinner-supper, our host made us understand that he had a substitute for the white man's seasoning (salt, pepper, mustard, jelly, and the like, are unknown among primitive Indians), when *Os-ca-loo-loo*—Sunlight—a little sylvan sibyl of a dozen summers whom we had not seen in the morning, at a motion from her father's hand, with the agility and ease of a squirrel, bounded before us with a little bark cup filled with white hard-wood ashes, a portion of which she placed upon each of our trenchers. On sprinkling it upon our meat, we thought it a pretty good substitute for salt, and, as our appetites were now sharpened, we made a hearty meal, and one hour after had forgotten that we had done so without tasting of bread and butter, pickles, preserved fruit, mince-pie richly spiced, strong cheese, fried cakes, plum-pudding and sundry other little delicacies, and, too, without having washed the whole down with two cups of strong coffee and a pint of claret, instead of a good draught of spring water.

SMOKING HABITS.

We have said the primitive Indians were smokers—they never indulged in smoking, however, as do the whites. At the period under consideration tobacco was never rolled into cigars, and as the bowls of Aboriginal pipes were usually wrought from stone with great labor, comparatively few pipes were used, and one, we may suppose, usually served a family. The smoking was mostly done after meals, and never were the natives seen with pipes in their mouths while engaged in manly duties—especially when in the chase or on the war-path, as white farmers, mechanics, day-laborers and idlers are seen, with pipes in their mouths nearly all day, often burning their own barns, fields of grain and workshops. But our visit was far away from Virginia, and where tobacco was unknown.

After our frugal meal with wilderness nobility the calumet of peace must be smoked, and our host produced a stone pipe of no mean dimensions, on which a bear was ingeniously wrought, and having filled it with some vegetable powder and placed a wooden stem in it, Os-ca-loo-loo quicker than thought had placed a coal in it from the fire-place and returned it to her father. First giving it a few puffs, as was the custom of his fathers, he handed it to his guests, and we all in turn followed his example. The question has often been asked: Why does an Indian smoke before his guests? As he always saw them helped first at his table, it may reasonably be presumed that he did it to allay suspicion of any attempt at poisoning.

But the reader is anxious to know what the tobacco we smoked consisted of, and that we would like to know ourselves. As it gave an odor which smacked of wintergreen and the inner bark of birch, we supposed those ingredients to have entered into the compound; but, whatever it may have been, it is believed that no warrior was ever given a cancer or paralysis from its use to shorten his days, which surely can not be said of the contents of every white man's clay pipe, saying nothing of the expense of its untidy use.

NO KNICKKNACKS FOR CHILDREN.

We should not omit to tell the reader that we saw no Indian children about the settlement chewing either candy, gum or tobacco, three *necessaries* in civilized life, which give to thousands of white children a pale, cadaverous and puny look, if, in fact, they do not lay the foundation for their premature death—for sooner or later they injure the coatings of the child's stomach, if in fact they do not rob it of a healthy appetite and eventually of the rose in its cheek.

AGRICULTURE.

Several of the principal warriors, as also the medicine-man of the tribe, joined us in our rambles, some of whom could speak more or less English words; and being anxious to learn all we could, while with our wilderness friends of their daily life, we succeeded quite satisfactorily by signs when words failed. They cultivated with considerable labor, for the want of teams, plows and hoes, a few hills of beans and a small patch of corn, where some favorable opening in the forest let in the sunlight. Most of it was eaten in a green and tender state, and that which ripened was husbanded with the greatest economy, small parcels being now and then seethed, if practicable, with some kind of meat in a stone pot, thus breaking the usual monotony of the red man's diet. Their soups were, to a limited extent, seasoned with uncultivated roots and plants. The greatest care was taken to husband seed for another year. We may also add that much of their meat was dried, to be used as occasion required, to guard against famine or serve upon rapid journeys, and wild fruit and berries found in occasional localities were also used with jealous economy.

Intelligent reader, do you believe that the forest-life diet we have described, and often scanted at that, would be very likely to produce either gout or dyspepsia—ills which follow over-

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feeding upon luxuriously-ordered Thanksgiving-dinners, and turkey-suppers with an ice-cream finish? Indeed, modern skill in cooking tempts one to eat, whether Nature asks for food or not, and our American desserts, after the system has already been surfeited with rich food, only serve to fit it for restlessness or the nightmare, a condition which never follows an Indian's larder.

ALCOHOL.

If the absence of the white man's medicine gave the Indian a better chance for long life, what shall we say of his *alcohol*, which has done so much to *decimate the world*, and which has to a very great extent proved the red man's *exterminator?* When men of cultivated minds are so often found yielding to the baneful influence and idiotic use of rum and tobacco—twin evils to dissipation and death—is it any wonder that the confiding and unlettered red man should so readily have yielded to their seductive control? The poor victims to intemperance were numbered by thousands in the American forests, after the white man began to barter *fire-water* for their game and peltry, and a once powerful and in many respects a noble and happy race of people were thus besotted and degraded. Who has not heard the reply of one of the latter class, when asked to name his three greatest earthly wishes—namely: "1. All the lum in the world; 2. All the toboc in the world; 3. More lum."

TOIL.

But let us not fail to name one cause in favor of the red man's longevity seldom, if ever, considered in that connection. He performed less heavy manly toil, and seldom knew such a thing as a rupture, which is usually produced by overlifting. The labor of quarrying stone, clearing up root and branch a virgin forest, working at heavy mechanical trades in a poisoned atmosphere, digging in the mine or smelting at the furnace, were to him all unknown. He had, it is true, to do certain things at a great disadvantage. He had to construct for himself a dwelling, and, as he had no metallic ax, he could not cut down a tree of any size, often having to serve patiently for a long time to fell one by burning, if necessary to obtain bark for his hut or canoe, when not lucky enough to come upon a suitable windfall. So, also, in procuring his fuel, and in getting out timber for his bows and arrows; but his labor, though done at hours of toil instead of minutes, for the want of proper implements, was not often at so great a strain upon physical strength as were many of the white man's labors. So, in the pursuit of war, he had not to drag cannon through marshes or over mountains, nor in the chase to lug a heavy rifle all day. He had to trust more to time, to native genius and instinct, than to brute force and physical labor to accomplish certain desirable ends.

PEDESTRIAN POWERS.

The natives have ever been justly celebrated for great pedestrian powers, and their ability to make long and rapid marches upon little food astonished the pioneer white settlers, who at times found them very serviceable as runners of errands, in the absence of horses and roads—a knife or a hatchet securing their telegraphic services for a day's journey. "Fleet as an Indian" is a proverb as old as our knowledge of him, and he seldom ever experienced any ill effects from a foot-race. May we not reasonably suppose that an Indian child, if sent upon an errand, would in its accomplishment set an example worthy the imitation of many a laggard white child?

MENTAL EXCITEMENT.

If the body of the primitive Indian was not often subjected to great physical strain, neither was his brain overtaxed in the investigation of scientific truth, or in threading the intricacies of a political life; consequently, there were no Hugh Millers or Preston Kings to be prematurely mourned for among them; indeed, few were their suicides produced from the many causes which they follow in civilized society.

Few were the motives found in the American wilderness that exist in civilized life for the bloody violence engendered by the passions—of envy for distinction, place and power; jealousy for unrequited love, or revenge for an imagined newspaper insult; or a slight, fancied or real, at a mansion with Italian mantels and rosewood furniture. In fact, the many little matters which come along naturally in refined life to create and keep up excitement—such as rivalry in beauty, in singing, in dress and ornaments, in the power to please and entertain friends genteelly, in equipage, in dwellings, in interest-paying bonds, etc., and often tending to fatal results, never disturbed the quiet and monotony of the red man's home.

A CHANGE.

When the white adventurers of Europe first came to our American shores, they found the natives generally not only in good physical condition, but strangers to venereal and variolous diseases, which their less virtuous visitors soon inoculated among them, and their difficul-

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ties being fearfully augmented by European fire-water, they were swept off in great numbers. Their social relations were materially changed by the introduction of innovations upon their ancestral customs and habits of life, and usually for the worse. The ameliorating influences introduced by the white man to promote the health and better comfort of the Indian were greatly overbalanced by the adoption of his vices and the chance of his thousand adventitious accidents, and although it is not so much in the use of certain things as in their abuse that they become our foes, still, if a thing does not exist at all, it can not be used, and, of course, can not lead to suffering and death. So, also, if causes for accidents do not exist, the accidents will not follow.

SUMMARY.

Without pursuing the subject any further at present, let us deduce from our argument what we set out to give—namely, the principal reasons for the primitive Indian's longevity:

First.—He was not born of a sickly mother, nor injured in infancy by sugar-plum nursing.

Second.—He entered manhood with a vigorous constitution.

Third.—He usually breathed a pure atmosphere.

Fourth.—He seldom ate more than nature required.

Fifth.—He ate no highly seasoned food.

Sixth.—He went to bed at dark and rose with the sun.

Seventh.—He drank no stimulating or intoxicating drinks.

Eighth.—He took no chemical medicine.

Ninth.—He was never excited to deadly revenge or suicide.

Tenth.—He was not murdered by a drunken neighbor.

Eleventh.—He was not killed by the accidental discharge or bursting of his own firearms.

Twelfth.—He was not killed by a steamboat explosion or a railroad smash-up.

Thirteenth.—He did not take cold, and in it death, by going from a close room overheated by a stove into a colder atmosphere.

Fourteenth.—He was not killed by a pastry-cook through the process of indigestion or gout.

Fifteenth.—He was not burned to death in the fourth story of a dwelling he could not escape from when on fire.

Sixteenth.—He was not suffocated, either by escaping gas or burning charcoal in a close chamber, or from inhaling miasma at the bottom of a deep well.

Seventeenth.—He was never blown up while blasting rocks, nor killed by falling from a balloon.

Eighteenth.—He was never mutilated in the gearing of a cotton-mill or any other mill.

Nineteenth.—He never fell through a trap-door and broke his neck, or met Judge Lynch beneath a Californian oak.

Twentieth.—He was never quietly killed by a newspaper criticism, nor murdered in consequence of one.

Twenty-first.—He never killed himself by working beyond his strength from pecuniary motives.

Twenty-second.—He never died from a disease his people had never known until the whites came among them.

Twenty-third.—He never died of grief for having turned his back upon a former friend.

Twenty-fourth.—He was never a politician, a gambler or a drunkard, but literally he was—*temperate in all things.*

Thus we have given the reader, who has so patiently followed us, some reasons which we think logical for the longevity of the primitive settlers of this country as compared with that of its present inhabitants; and although we may have failed to convey to his mind what seems so clear and conclusive to our own, still we will feel compensated for our labor if we shall have induced other and abler pens still further to investigate this interesting theme.

FORT PLAIN, *November*, 1866.

PROGRESSION.—He who travels five hundred miles over our railroads, spanning half a continent, and at each mile in his progress sees prosperous villages where but a few years ago was an uninhabited wilderness; who visits prosperous towns or populous cities where but a decennary before was an agricultural hamlet, knows that the improvements of inventors and mechanics add to the beauty of the landscape, as well as contribute to the advancement of the race, and he will not be inclined to believe that the improvement of mechanical and engineering science really infringe upon the domain of the natural. The truth is, in a nut-shell, that the "mission" of this generation, at least, is that of improving—of pushing forward the march of the human race—and it will not do for us to attend to the obsolete and effete ideas of the generations which preceded us, nor to accept the notions of those who would see in the practical Yankee and Anglo-Saxon opinions an element that would destroy all poetry, romance and sentiment.—*Exchange.*

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[Written for The Herald of Health.]

The Outcast.

BY GEORGE W. BUNGAY.

Behold the outcast at thy door—
A thin robe wraps her shivering form;
Mock not her bitter tears that pour
And freeze like rain-drops in the storm.

Her wet and melancholy face
Is white and cold as falling sleet;
Upon the ice-cased steps we trace
The foot-prints of her bleeding feet.

With aching heart and aching head,
With trembling hands and streaming eyes
And quivering lips, she asks for bread
And shelter from inclement skies.

In Christ's name, raise the fallen up,
Though bowed and weeping in the dust;
Press to her lips the cooling cup
Of water and the needed crust.

Do not with shame her forehead brand,
For Jesus stooped from heaven to save;
He only wrote upon the sand
Were washed out by the sobbing wave.

Speak gently to the erring one,
She is thy sister frail and fair;
Roll from the sepulchre the stone
And find an angel sitting there!

[Written for The Herald of Health.]

An Eleventh Commandment.

BY F. B. PERKINS.

There is a story about a priest who astonished some haughty bishop by talking about "the eleven commandments," but silenced the pompous old prelate by quoting, "A new commandment give I unto you, That ye love one another." There are more modern "Eleventh commandments." One of them, often referred to, is "Mind your own business." Another is, "Fret not thy gizzard." I now propose a fourth, shorter than either of these, and not inferior to the last two. It is this: Be well.

Probably happiness can be best defined as natural and successful activity. One is always happiest while doing what he likes best, even if that be only what the country boy said he would do if he were a king—"have plenty o' pudden and 'lasses and swing all day on a gate." That is, one is happiest while doing what he naturally wants to do. But this must also be successful. Thus, if a man's life is naturally chiefly active in his affections, and he becomes deeply in love with some woman who jilts him, the affectional activity is unsuccessful, and the disappointment makes him as thoroughly miserable as a reponse to his sentiments would have made him happy. But if this jilting had happened to one whose principal activity was in inventing machinery—to Captain Ericsson, for instance—he would be perfectly consoled next day in the wrought-iron embrace of one of his monitors, or in the arms of a patent windmill.

Now, the human activities are exerted through a body. This body is the instrument of the mind, which lives in it and *runs* it. And unless this body can execute what the mind orders there is unhappiness. The mind is the real essential existence, though in all the *practical* human philosophies the combined being, made of body *and* mind, must constantly be kept in view if there is to be any sound reasoning. Health, therefore, is absolutely indispensable to any happiness which is at all complete. Hence the significance of the old motto, "A sound mind in a sound body." Indeed, it is a question whether either can be unsound without making the other unsound too. Thus, the insane have a peculiar smell, as an experienced superintendent of lunatic asylums once told me; the disordered mind (the doctrine is just as true if lunacy be considered mere brain complaint) disordering the body. And in like manner, but conversely, a disordered stomach has often disordered the mind and caused ill-nature and even religious despair.

A remarkable confirmation of the doctrine that a good body must be had to do the work of a good mind, will be found by considering the cases of personages distinguished for accomplishing great things. Great men have as a rule had strong, handsome, fine-fibred, enduring bodies. Napoleon was very strongly and handsomely built, and had immense powers of working and enduring fatigue. So had Wellington. Humboldt all his long life needed only four hours a day of sleep. Agassiz is a man of prodigious physical strength. Cæsar was of uncommon endurance and athletic vigor. Charlemagne was of colossal stature and vast physical strength. Washington was an exceedingly strong man. Henry Ward Beecher is remarkably powerful in his make, strong-limbed, deep-chested, heavy, and at the same time quick and active. Daniel Webster was of massive physical proportions. Henry Clay had immense endurance. So had S. S. Prentiss, probably the most wonderful orator the United States ever produced, and who could travel, speak, eat, talk, plead in court and

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gamble over a faro-table for three or four days without sleeping at all, and look all fresh and bright when he got through. All great soldiers have had great strength and endurance. Sherman and Grant and Thomas have it. Scott had it. Of Wellington and Napoleon and Cæsar I have spoken. Frederick the Great had it; and Marshal Saxe, the strongest man of his day; and Charles XII. of Sweden, and Gustavus Adolphus. Great philosophers and great poets and artists have not been so remarkable for vast strength as for fineness of texture and (in the case of the poets at least) for personal beauty. Goethe was wonderfully handsome and stately in person. Shakspeare was a handsome man. Milton was singularly attractive in person. Robert Burns was handsome and vigorous. Byron, though lame, had otherwise an extremely fine face and person. Tennyson is a man of great strength and commanding and handsome physique. Southey and Wordsworth were men of fine person. Keats was handsome. Raphael, Albert Durer, Michael Angelo, Titian, Leonardo de Vinci, Rubens, Vandyke, were all men of very beautiful or of very stately personal appearance.

But the list may as well stop here. The larger I make it the wider the proof would be—that is all. Any reader can extend it without limit. Pope is an exception. He was a sickly, ill-conditioned, deformed little fellow, so that once, when a military officer suggested an interrogation mark at some doubtful passage in Homer, and Pope petulantly inquired whether he knew what it was, the soldier silenced the poet by looking straight at his hump back and replying, "Yes, a little crooked thing that asks questions." Pope, however, had a very tough and wiry and enduring constitution. Pascal is an apparent exception, too; but if he had lived in a healthier way he might have enjoyed a long life of usefulness, instead of dying at thirty-nine. But the few exceptional cases that may be found do not weaken the general doctrine, that an active and efficient mind must have a sound body to do its bidding, or else the bidding will not be done.

The best use of life is to be made by accomplishing the greatest possible total of results with it. And therefore HEALTH IS A DUTY. There was a religious teacher who preached an exaggerated inversion of this maxim. He taught that *disease is sin*. But this is by no means always the case, although disease is often the direct result of wrong-doing. But generally speaking, and with necessary exceptions, *health is a duty*.

Grown-up men and women are under obligations to be healthy. Young folks, old folks, are equally bound to take care of themselves, to watch over themselves, to provide against the ailments and infirmities incident to their time of life, and make the very best of themselves. The general doctrine for accomplishing the utmost possible quantity with our life is exactly parallel to the doctrine for making the most out of our money—get the maximum of interest without impairing the capital. In youth, work below the strength; in manhood, work up to it; in old age, work perhaps rather more than you want to; for resolute activity will often drive off or avert the lethargic tendency which comes to many with advanced years.

I shall not attempt here to set forth a treatise on practical hygiene. Much is done in this direction when the thoughts have been turned to the subject; really great and important principles and rules are extremely simple, and, indeed, many of them abide in all intelligent minds, almost as part of them. I shall only suggest one or two thoughts on the subject, not too hackneyed to be striking:

Life, with regard to health, has a curious analogy to the "Rule of Three" in arithmetic. "The product of the extremes," in this venerable rule, "is equal to the product of the means." That is, if you say 2 : 4 : : 3 : 6, then $2\times6=4\times3$. The analogy I speak of is this: the physical characteristics of infancy govern those of old age, while those of youth govern those of manhood. Thus, a sickly infant with a more healthy youth is likely to have a healthy manhood, but is liable to be sickly in old age. That is, in life, as in the Rule of Three, the extremes must be factors together, and so must the means.

It follows from this that parents can do much to determine the hygienic conditions of our infancy and our old age, but that our adult age is our own, if we are only wise enough in youth to prepare such a manhood or womanhood as we choose to have. This consideration warns both parents and children; parents, to be careful of their little ones; and youth, to be careful of themselves. But for both health is a duty. For both, our eleventh commandment is equally binding: BE WELL.

IF the surface of a frog be covered with oil it will die, so important to its existence is the cutaneous respiration. The lungs of a frog can only be filled with air by an action reseming swallowing.

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[Written for The Herald of Health.]

The Sanitary Commission.

THAT Good Samaritan idea, the Sanitary Commission, was a thought of love and pity flowering into deeds of loyalty and benevolence. It found the brave soldier, the hero of the nation, bleeding by the wayside, and it touched him tenderly, lifting him in soft, loving arms from the red soil, and bearing him to the hospital as gently as a fond mother would carry her sleeping child.

It provided nurses and stretchers and ambulances and soft carriages and delicacies. When our poor, struggling, overburdened Government was unable to meet the emergencies that followed a battle, the Commission would step forward and from its abundant storehouses send packages of syrups, sweetmeats, fruits, lint, bandages, clothing, crutches, and scores of relief-agents to administer them. It was like the "shadow of a rock in a weary land." It has prevented a vast deal of sickness and suffering; it has afforded relief to regiments of men, and it has been the great amanuensis of the army, writing for the soldier to his mother, wife, child, sister or sweetheart.

At the commencement of the war we had a multitude of men filled with untrained courage; they were unfamiliar with military discipline. They were called in haste from the different walks of life, knew little in relation to the best modes of preparing and cooking food, and scarcely thought of selecting healthy localities for their tents; indeed, our brave volunteers were in danger of becoming the prey of disease, when the Commission came, like a messenger of mercy, to avert the danger. The Secretary of War could not issue bulletins on sanitary science; the Commission could, and to some extent it taught the nation the laws of health. During a campaign the Commission rendered invaluable services. When the army began to march, the sanitary wagons began to move; the wagons were laden with hospital stores and accompanied by relief-agents. Steamers were chartered, and when the locality of the struggle was determined on, a storehouse was opened, and the branch depots that extended to the field drew their supplies from it. From these stations the wounded on foot and in ambulances could stop and take refreshments. They had ice-water, lemonade and jellies, and nurses to serve them. In a single month the Commission distributed to the Army of the Potomac over one hundred tons of canned fruits, five thousand barrels of fresh vegetables, and wagon-loads of other articles. On the soil plowed with shot and shell at the West, on the rugged sides of the mountains and the sunny slopes of the hills, our invalid soldiers were leisurely employed in cultivating gardens and vineyards This labor was not imposed as a task, but called for to prevent rather than to cure disease. It was done at the suggestion of the Commission. As a special relief-agent it inaugurated the system of "Homes" and "Lodges," to feed and shelter the soldier going to his home or returning to the front. It collected, without charge, back pay, bounties, pensions and prize-money; it opened depots in many of our large cities to supply substantial meals to our soldiers; it procured transportation-tickets at a reduced price; it wrote innumerable letters to anxious friends, and furnished money to those who were destitute, and with a strong arm it kept off the army of sharpers and vampires who sought the blood of the army.

These deeds of humanity and patriotism had a tendency to bind the army with the people. We created a great army and a great navy out of a peaceful people. They have now put off the harness of war and resumed the robes of the citizen. The camps and the forts are not to be their future home. Many of them had pleasant homes, where they found loving hearts awaiting their return.

It is not possible to over-estimate the influence and value of the Soldiers' Aid Societies that sprang up all over the land. "A thousand societies, five hundred thousand hearts, and ten hundred thousand hands, interested in the soldiers' welfare, lavished millions of money to relieve their sufferings." These societies were forging those links of alliance which bound the citizen-soldier to our home institutions, and kindled his sympathies for the peaceful associations of home.

Were it not that we so often see the empty sleeve and the crutch, we should scarcely notice the fact that we have just ended a terrible civil war. The Sanitary Commission and all who contributed to it deserve to be held in grateful and everlasting remembrance. That good angel found humanity bleeding by the wayside, and, irrespective of the color of its coat, it raised it out of the mire and dressed its wounds, and lifted it so far above the stained dust and battle-smoke that while its feet pressed the earth its heart beat in the pure atmosphere of freedom.

An idea of the work done by this Commission can be formed if we glance at the vastness of the army.

"If," said Major-General Sickles in a late

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speech, "if the trains of the Army of the Potomac had been put in motion on a single road toward Richmond, the head of the column would have entered that city before the rear was out of the sight of the Capitol at Washington." In Nashville, in the summer of 1864, more than fourteen thousand mechanics and laborers were employed in providing materials for the armies under General Sherman. The storehouses of the Commissary of Subsistence at that time contained eight months' provisions for one hundred thousand men and forage for fifty thousand horses. These stores, with multitudes of sick and wounded men, were transported by rail, on a single track, a distance of three hundred miles through an enemy's country, in the teeth of bridge-burners, track-breakers and guerrillas, and this was but a single point of many under General Meigs. In addition to this vast work, a million of men had to be clothed, their subsistence, arms and ammunition transported to every camp from Virginia to Texas. Then there was the task of supplying horses and forage, constructing telegraph lines, making roads, building bridges, supplying wagons, etc. Under that upright man, Colonel Eaton, tons of hard tack and thousands of barrels of beef, were sent to various departments of the army. The manufacturing of muskets, carbines and swords employed a capital of twenty millions of dollars and an army of twenty thousand mechanics, placing us ahead of all other nations with repeating rifles, breech-loading carbines, rifled cannon, floating torpedoes and invulnerable iron-clads.

Glance at the construction and organization of the general and field hospitals, their supplies, their scientific appliances, ambulances, hospital-wagons and hospital-cars. Look at the work of the Sanitary and of the Christian Commissions, with their armies of nurses, physicians and chaplains. Call to mind the donations of individuals and of societies to the men of our great armies and the statistics will astound you. It is a record which deserves to be written in syllables of stars.

G. W. B.

THERE are men so thickly encrusted and cased in with old prejudices and ways of thinking on religious and reformatory questions, that they must change altogether if they change at all. They seem to bear upon their faces, as addressed to all new ideas, the inscription which is sometimes posted on the doors of offices, "Positively no admittance," without even the qualifying condition, "Except on business," for what business, they say, have new ideas here.

CARELESS PEOPLE.—Only the other day our nerves were worked up to explosion point by an account of a perilous surgical operation, by which a woman's trachea was opened to remove a silver dime which had lodged there. And how on earth did a silver dime ever get into a woman's windpipe? Simply because she was careless, and laughed with her mouth full of silver coins. Was there no other place where she could keep her ten-cent pieces?

We do feel sorry for a creeping baby when it gets hold of the bars of the grate by mistake, or cuts its fingers, or bumps its head, but with grown people who suffer from their own restlessness we have very little patience.

What is the use of a woman converting her mouth into a pincushion, and then expecting our sympathy when a sudden sneeze or an unexpected cough imperils her life?

What is the use of a man balancing himself on an oscillating chair, instead of sitting up straight like a Christian? Are we expected to keep on hand ready remedies for the contusion on the back of his head, when finally he comes down with a crash (and it serves him right)?

What is the use of a woman picking her ears with a long knitting-needle, as half the women do, when a child running against her would send the instrument three inches into her brain, if she has any?

What is the use of a man handling a loaded gun as though it were a broom-handle, and then accusing Providence because the charge goes into his head or foot, as he might have known it would?

What is the use of a woman buying arsenic to poison rats, and putting it just where the children are sure to get at it? What does she suppose her reasoning faculties were given to her for?

What is the use of leaving children to play by themselves in a room where there is fire, or postponing the sweeping of that dangerous chimney till to-morrow?

What is the use of endangering life by the use of the fiend camphene as long as any thing else will give light? Those who persist in this practice must have a greater fancy for being burned to death than the rest of the world.

In short, what is the use of careless people? —*Ex.*

A NEW PHYSICIAN.—Dr. Sunshine will administer gratis to all patients who will receive his medicine. He can be seen almost any day.

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[Written for The Herald of Health.]

National Prohibition.

BY J. B. SNODGRASS, M. D.

In 1852 the writer of this article expressed himself in the following words, in a paper on the interesting topic indicated above:

"The movement in behalf of legislation for the suppression of the traffic in intoxicating beverages now on foot in several of the States, after the glorious example of Maine, is revealing a most important contradiction, if not a direct conflict, between that more thorough legislative control, so desirable in these States, and the existing policy of the General Government, touching the same interest. Thus, Maine has been compelled to make an exception in favor of the 'original packages' of poisonous liquids, as they come from the custom-houses; and, while she has placed upon her statute-book a law which, though thus circumscribed, has conferred immortal honor upon her sons, the more virtuous and orderly of whom are now sustaining it, the nation retains upon its statute-book a law which sanctions the importation of these same poisonous liquids into her borders, for use as beverages, contrary to the manifest wishes of the great majority of her citizens.

"Should the Maine Law be enacted in this State, or others in which it is now being mooted, the same contradiction and conflict will be encountered; and thus the National Government, which ought, in all cases, to stand forth as a kind parent protecting and fostering the highest interests of the various members of the family, will be found placing barriers in the new paths wherein they may seek to walk, in search of the prosperity of themselves as individual States.

"According to my information, this exception, as required by the United States Revenue Laws, has opened the door of evasion and subterfuge to some extent, even in Portland. If so in that city, what increased difficulties may we not anticipate in such emporiums of direct foreign trade as New York? Mark well what I write. I speak not of these difficulties as insurmountable. That is the enemy's cry—not mine."

Prophecy indicates itself through fulfillment or not at all, and therefore I may safely leave the foregoing to speak for itself in the dim and not very encouraging light of the history of Temperance Reform. My concern is for an experiment not yet subjected to the ordeal of history—National Legislation.

Apart, then, from the obstacle to the success of State efforts encountered in the obligation to exempt the "original packages" of foreign liquors from local prohibition or restriction, there is another consideration which should never be passed over lightly in discussing any phase of our cause—I refer to the effect of legal sanction upon the public sense of right and wrong, whereby the individual sense is so surely molded and controlled for good or evil; in other words, the public conscience. There can be no doubt that the license system, in its most favorable form, prompts to erroneous processes of thought as well as to wrong-doing, while it shields the wrong-doer from public censure to no inconsiderable degree. Mankind have long been taught to consider "law" with reverence. Just law is certainly entitled to this homage, and it generally receives it. But, unfortunately, this is often extended to unjust laws, because they are "laws." Thus a false condition of conscience is produced, which is too willingly accepted by the undiscriminating masses. The offender against the general social good, who finds it quite convenient to measure his employment or conduct by it, may be referred to the unchangeable principles of truth, and pointed to the malign influence of his course. But it will generally be in vain. He will retort upon you, and refer you, with an air of triumph, to the highest popular idea of justice, the "statute book." He will coolly tell you that he scouts your "higher law" notions; that the statute is high enough law for him!

Now, this being admitted as true of State laws, how much more so of national laws. There is not a man in the nation—there never was one, even in the extremest sect of "State sovereignty" worshipers in the ante-war era—who does not, in the quiet secresy of his conscience, contemplate his *whole country's* authority, moral as well as physical, as more commanding than that of any one of its parts. This is the result of his intuition, if not of his tuition also. But, with the greater part of our people, tuition and intuition have co-operated to produce this impression, and the effect of it will cling to them, with more or less tenacity, in spite of the character of the nation's laws, whether founded in justice or in wrong. In this view, then, it is very clear that the friends of Temperance can not longer afford to forego the assistance of national legislation, simply as a crowning sanction of the right, to say nothing of its enforcement, or of the prohibition of the antagonism of the wrong, which the right is constantly encountering. What is the conclusion to which this train of thought brings us? Why, clearly this: the necessity of bringing the National Government to our aid, if we are to follow up the prohibitory scheme, as a local agency in our separate States.

Does any one doubt the power of Congress to enact prohibitory laws against the importation of intoxicating liquors? It certainly has power, under the Constitution, over foreign commerce, as well as the regulation of commerce between the several States. These powers are expressly

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named as national in the eighth section of the first article, in these words: "To regulate commerce with foreign nations, and among the several States, and with the Indian tribes." The Government has exercised this authority again and again. The prohibition of the foreign slave trade is a prominent example, where its exercise has received general acquiescence. And the same class of motives that were wielded against that national sin would justifiably call for the prohibition of the foreign liquor trade as well. Their toleration would rest on the self-same grounds, so that not a plea for the one but would prove equally plausible for the other.

But we have still another precedent of national legislation in the desired direction which ought to satisfy the veriest sticklers. I refer, as I may safely and triumphantly do, to the famous Embargo Act, which received the sanction of both Jefferson and Madison. It was a prohibitory measure of the most sweeping character; yet the British Government, whose commerce was greatly and detrimentally affected by it, not only did not complain, but admitted its strict accordance with the Laws of Nations. This was clearly done through Mr. Canning's letter to Mr. Pinckney in 1808. So of the Non-importation and Non-intercourse Acts of the same governmental era. And here it should be noted, as applicable to the question under discussion, that the rule of reciprocal intercourse between nations is, according to the settled doctrines of international law, based upon the clear understanding that the prosperity and happiness of the country with which intercourse is sought shall ever be kept in view and strictly regarded. This view will be found running through all the discussions on this point by Vattel and the elder authorities on international law, as well as the later ones.

I may be told that these acts were justified by the stern "necessities of the case." Grant it. But what then follows? Why, plainly, that the same plea must be allowed when we ask for a national prohibitory law. And, if so, is not our case a very strong one? Has there ever been a stronger? Could there ever be? Behold the woful influence of the foreign liquor traffic, both direct and indirect, and find our answer glaringly ready—ready, even if what are usually classed as "pure liquors" were alone imported, and no cover to the most poisonous adulterations and imitations was furnished by the fact of importations thus opening, as is seen to the sorrow of our people, a very floodgate of disease and crime.

But I do not need to go back so far as the Embargo Act or slave-trade prohibition, or justification of our demand for national aid to our beneficent reform. I may successfully point to revenue laws now on the statute books and continually in force. Among these it should suffice to cite the law prohibiting the importation of obscene books and pictures. At least one case of its application has come to my notice, wherein a large invoice of pictorial German pipes was declared contraband, and forfeited and destroyed by order of the national authorities. But not only so—a lot of otherwise lawfully imported goods, found with them in the "original packages," shared the same fate.

I will cite one more analogy and then rest the constitutional argument which it was the chief purpose of this paper to make. It is furnished by the course pursued in regard to foreign paupers and criminals. The fact having come to the knowledge of the American public, some years ago, that some of the European governments were making a convenience of our great "asylum," and emptying their alms-houses and prisons upon our shores, some of the States enacted a law prohibiting the importation of those classes of persons, and enforced it to a greater or less extent. And yet I never remember to have heard the constitutionality of the measure questioned. Indeed, the only question that could have arisen would have been that of *quo modo*—that is, of the States exercising the power instead of the General Government. That the Federal authority could have constitutionally prohibited the importation of such additions to our population, had Congress and the Executive been called upon to do so, would have followed upon the same rule, precisely, that prohibited the importation of slaves. Now, "if there was reason as well as authority for prohibiting the in-bringing of paupers or criminals," how much more necessary that such criminal and pauper-making agents as foreign intoxicating liquors should be prohibited from swelling the fearful tide of woe set in motion by the domestic traffic?

I have illustrated and enforced the claim of national protection to our people against the appliances of intemperance from without sufficiently, I trust, to satisfy any reasonable mind that "the law and the testimony" are both with us. But if any still doubt on the constitutional point, I beg leave to remind them of the citation from the first article of the Constitution given already. Under its authority, Congress long since carried the power given to "regulate" so far as to totally prohibit the introduction of "fire-water" as a beverage among the red men.

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Having done this, they clearly established the principle of prohibition for whatever public sentiment, as to the welfare of the Indians, might have further demanded, and a total prohibition might have been as legitimately applied to their case as a discriminating one.

Well, now, this being admitted as a sound view, who fails to see that authority to "regulate commerce" with the Indian tribes applies, by express terms, as much to the States as to the Territories, if inhabited by the Indians—to one portion of the country as much as to another; and the United States, under the Constitution, never has admitted that there was any obligation to make any distinction whatever between the different parts of the country. In the District of Columbia and the Territories authority is exercised, we know, upon quite another ground—that of exclusive jurisdiction—so that there need be no words wasted in an argument to prove that there is a constitutional way for Congress to shield the inhabitants of those portions of the country with prohibition, whether as against the foreign or the domestic traffic in alcoholic liquors. And is it not high time that at the least, that much should be done for the credit as well as the safety of the country? Leaving the consideration of personal and public morality of the Members of Congress and other public servants out of view for a moment, it is a burning shame that intemperance should have been allowed to run riot so long, not only under the proud shadow of the Capitol, but within its very walls!

When in 1852 I took the ground that national prohibition should be urged in the modified form of discrimination between liquors intended to be imported from foreign countries, or from one State into another, or from a State into a Territory, in the circular quoted from at the commencement of this paper—as I did in disregard of my own preference for total and unqualified prohibition—even that modified project, was met by the objection that such an exercise of authority to "regulate commerce" would be resented by some of the States as an arbitrary interference with "State sovereignty." In now advancing, as I do, to the position of a total and undiscriminating prohibition, under which the States, in their separate legislation, would no longer be hampered or thwarted by the "original package" dodge (for such it became in practice), I can not encounter any worse objection. Certainly none more formidable is likely to be summoned from the vasty deep of political opposition—at least none more formidable than it was in its day. But if we must encounter any such barrier to the bringing of the whole power and example of the nation to the aid of State legislation hereafter, I shall be prepared with the sword of Alexander to cut the gordian knot. In plain words, I would meet it with a proposition to add an amendment to the Constitution of the United States prohibiting the foreign liquor traffic, and declaring that no State shall thereafter permit the sale of domestic ones, for use as beverages, on penalty of forfeiting the right of her people to manufacture them for any purpose whatever. Justice, humanity, and a consistent regard for the religious sentiment of the age, demand that the opponents of Rum should insist that it be buried in the same dishonored grave with its twin sister, Slavery!

I close with a simple suggestion as to the expediency of national legislation—namely, that if the States should not come up to their duty under the new national *regime*, and the liquor traffic must be allowed to continue in some form, it would be desirable, in a sanitary as well as an economical sense, that the "raw material" should be supplied from our own grain-fields and orchards and vineyards. Thus we would, at least, have some knowledge of the toxical processes by which the victims of disease and the perpetrators of crime are made such at the rate of a hundred thousand a year. I have already intimated that the indirect effect of permitting these importations to go on is the furnishing of a complete cover to the most poisonous adulterations, and also of imitations of which drugs furnish the chief ingredients; and this is a result which, in view of its woful destructiveness, is positively appalling to contemplate, especially at the present time, when the high revenue charges, both external and internal, tempt the avaricious to produce these drug-imitations of foreign liquors in immensely increased quantities.

Under the *regime* which I propose, home-made victims would continue to find drunkards' graves, as I admit. But they would do so in decreased numbers, for reasons just hinted, while at the same time their dishonored deaths would afford us at least this compensatory consolation—poor though it might seem to be—that the pecuniary profits as well as the vital losses of the liquor traffic would inure to our own country.

The hope does not die out of me, with the close of my discussion of this deeply interesting subject, that I shall have done something, with the widely circulatory aid of THE HERALD OF HEALTH, to hasten the day when prohibition, statal as well as national, shall be the law of the

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land, embodied in a firmly welded chain of enactments furnished by our lawgivers in the clear conviction that the well-accredited maxim, that the safety of the people is not only the "higher law," but the highest—*salus populi suprema lex*—is the only one worthy of their acceptance, as the guardians of such privileges as God evidently designed to be ours.

[Written for The Herald of Health.]

A Letter from Dr. Dio Lewis.

DEAR HERALD OF HEALTH—You are improving so rapidly, and becoming so clearly one of the substantial magazines of the country, that I feel drawn toward you, and am very happy, when my overwhelming engagements permit, to say a word to your readers.

Miss Catharine E. Beecher, who is one of the corps of teachers in my Young Ladies' Seminary, is now delivering a course of lectures to us on the subject of "Domestic Economy." Her teachings run thus:

1. The women of America are falling into a sadly dilapidated condition—round-shouldered, nervous, with thin, soft muscles and general exhaustion. Efforts are being made to restore them through gymnastics, horse-back riding, and other similar measures. But these means, good as they are, will never be extended to the nation at large, nor continued through any considerable part of the life. Besides, the labor thus performed is non-productive, or at least reaches only the individual engaging in the exercise.

2. The exercise which should be relied upon as the means of physical regeneration among the women of America, is found in the discharge of what Miss Beecher calls "the duties of their profession." Women are destined to perform the duties of housekeeping and the care and training of children. This is their preordained profession. And yet, in all their school-training, nothing is done to prepare for this all-important and sacred work.

Young men destined to the medical profession devote years in preparation. Young men who would give themselves to the carpenter's trade are prepared by years of constant training. In brief, man's life-work is constantly kept in mind and hand during what may be called the educational period of life. But young women, who are destined to perform the duties of wives and mothers, are not, during their preparatory training, taught any of these duties. They are taught Latin, French, music and painting, but never bread-making, dress-making or clothes-mending. And never having been taught how to perform these and other kindred duties in a graceful and successful way, after their marriage they blunder and stumble along through life, the victims of stupid servants. Now, says Miss Beecher, if women were taught the duties appertaining to their natural profession, they would find in their performance abundant and varied physical training which would be, not expensive and brief, but constant, productive and most healthy.

I think our friend states vital truths. Every school should have a domestic department, and no young lady should receive a diploma until she is well qualified to perform, in a rapid and complete manner, all the varied duties appertaining to the care of a home. She should show the examining committees that she can make good bread; that she can cook in the best manner all the common vegetables; that meat, after passing through her hands, is ready for the palate and the stomach; that she can make a dress for herself and dresses for children; that she can mend clothes, darn stockings, and indeed perform with dispatch and neatness all the duties involved in complete housekeeping.

In my judgment, Miss Catharine E. Beecher is not second to any member of her remarkable family, and she is turning her talents to a most excellent account. I thank her with all my heart, and believe that her labors in our school will prove of great value to the large number of young ladies with us, who belong to families not accustomed to perform their own domestic labor.

I must, in justice to my own convictions, say that any woman has a right to withhold herself from the marriage relation, and devote her life to one of the learned professions, or to any other trade or occupation, and I honor the noble and holy aspirations thus evinced; but no woman has a right to enter the marriage relation and become the mother of children without thoroughly preparing for the duties of wife and mother.

I am, my dear HERALD, with the largest wishes for your continued usefulness and prosperity,

Yours very truly,

DIO LEWIS.

LEXINGTON, Mass., *November* 1, 1866.

THE oldest man in Illinois is supposed to be Mr. Jordan D. Rhodes of Camden township. He has seen one hundred and four summers and winters. His health was very poor for the first thirty years of his life.—*Ex.*

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[Written for The Herald of Health.]

Black Eyes and Blue Eyes.

BY LEWIS DAYTON BURDICK.

A THRILLING power the black possess;
They tell of brilliancy of mind,
Of depth of passion, restlessness,
A soul to daring deeds inclined.
A tenderness lies in the blue;
They speak a sympathizing heart,
Of friendship tried and true,
And faithfulness, though distance part.

The black eye penetrates us through,
And tremblingly it is obeyed;
So softly comes the glance of blue,
Not knowing it, we're captives made.
We love the soul-lit eyes of blue,
Affectionate and innocent;
Admire the glowing jetty hue,
So sparkling, bright, magnificent.

Amusements—No. II.

BY REV. HENRY WARD BEECHER.

AS FAR as possible, amusements should belong to the household. I am jealous of any thing that makes any other place pleasanter than home. I am sorry to know that fathers and mothers are not, sometimes, the light of their own dwellings. It is a deplorable fact that the peculiar structure of many and many a family is such as to make the child rebound from the household as soon as possible. I attribute the tendency of children to break away from the family at the age of sixteen to twenty-one largely to the injudicious structure of the family. If a young man has been brought up with such deprivation of knowledge and experience that when he becomes of age he knows that there is a new and untried liberty that he has never been allowed to enjoy, he will be apt to break away from the household. Or, if he does not choose to hurt his parents' feelings, he will *sneak* into that liberty, not daring to *walk* into it, and so be doubly demoralized. But if the family is so constructed that the child is made to believe that he has all and more than he could create for himself of liberty and occupation for his forces; if home is such a place that the child goes to it as the bird goes to its nest at night, and says: "After all, father and mother, this is the blessedest place to me on earth; I am happier here than anywhere else in the world"—then there is no such danger as that which I have just mentioned. Those children have great reason to be thankful whose parents know how to rear them aright.

It is therefore a part of Christian duty to provide, in the management of the family, for innocent and hilarious amusements at appropriate intervals. Games, plays and household dancing are good. Many people have a strong prejudice against dancing. Why, there is no more in it than there is in walking. Dancing may be carried on under circumstances that make it bad, and then it is sinful. Promiscuous dancing, that leads to improper familiarities; dancing in crowded assemblies; dancing where the air is vitiated; dancing at late hours; dancing that lays long-continued stress upon persons—these are in their nature unwholesome. The conditions in which dancing is often carried on make it sinful. But I think that in the household it has its appropriate place. It is both graceful and beautiful as an exercise. And if a man asks me, "Would you recommend it to the young Christians in your congregation?" I should not hesitate to say, Certainly, in the family circle.

I remember that, as far back as twenty-five years ago, in my parish, I preached a discourse in which I condemned promiscuous dancing, but said, "Do not hesitate to dance among your own family and friends, under the supposition that it is wrong. It is certainly your liberty, and it is right and wholesome. Some young ladies asked me, "Who may we reckon as within the circle of our family?" Whoever is near enough to you to salute you are in your family, and all others may be safely considered as not in your family. Your brothers and sisters and cousins, and those with whom you maintain relations like unto those which exist in the household, you may regard as within your family circle. But I think that if a person wants to know the truth, he will find no difficulty in making the proper demarkation in this regard. And fathers and mothers that undertake to provide for their children in the family all that they need of music, innocent games, little companies, and various exercises, will be apt to have children that will not want to break away from the parental roof, and that will look back to it as long as they live, and say, "After all, there was no place like home."

This leads me to say that where amusements are public they should be for the most part such that men can take their families with them. It may be laid down as a general rule that amusements which separate the sexes are dangerous. I would not press this truth too narrowly and literally; but undoubtedly it is a general truth

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that where women seek their amusements in one way by themselves, and men seek theirs in another way by themselves, there is in both ways a tendency to degeneration and temptation. God meant that man and woman should live together, work together, and, in all the functions of life—civil, social, religious, artistic and intellectual—co-operate with each other; and their mutual relations are harmonizing and balancing, and nowhere else more than in the seeking and prosecution of amusement. I believe that boys and girls should go to school together. As they sit together in the household, so I think they should sit together in our temples of learning. Colleges should not be for all men or for all women, but the same buildings and the same professors should be provided for both in common. I hold that the same political duties should devolve upon one sex as upon the other. And this law runs through human life. What God has joined together man is not to put asunder. And as it is in every thing else so it should be in amusements. There is much greater liability to temptation and immorality where amusement is sought in the isolation or separation of the sexes.

Therefore, all exhibitions of pictures and statues, all provisions for public recreation, all institutions for public amusement, should be such as to enable the people to go in groups and families. Some years ago, when the Philharmonic Concerts were first instituted, I recommended them to you, but lately I have not said a word about them—and for two reasons. 1. They are so expensive that they are not any longer a source of amusement or instruction for the common people. They have gone above them. 2. There are such bad manners among the young people that resort thither, that those who really love music can not go there and enjoy it. The Academy of Music on the occasion of these concerts is made a courting and coquetting hall; and though those little concerts are very pleasant to the two little performers, they are not so agreeable to those who come together to listen to professional music! But a very grave objection to those concerts is that they are so expensive that only the elect can attend them. They are entertainments for those that have money. My idea of furnishing music for the public, is that there should be a provision of the very best music, such that the honest mechanic can return in the evening and say to his wife and daughter and son, "Let us go to the concert this evening," the price of admission being so small that it shall be entirely within his means. Now how is it? Two tickets will cost him twelve or fifteen dollars, as the case may be; and he says, "I can not afford to buy more than that;" and he takes the two, and with them the five or six members of his family eke out the season, two only at a time going to the rehearsals and the concerts.

Boston does better. If in Boston they were not so humble, there are many things there that might be held up to the admiration of the world! Among these are concerts held at 4 o'clock in the afternoon, at which classic music and entertaining music are afforded at a price so low that a man on the way home from his shop can go in and be recreated for an hour, and be cleansed of all low feelings, and be washed inwardly, and be made a better man and a better citizen. There is no place that has in it the elements of a public sentiment in favor of such beneficent provisions more than Brooklyn; and I hope ere long to see the day when there shall be a hall in this city where two or three thousand persons shall be enabled to hear for a shilling as good music as now it costs a dollar and a half to hear. It is preposterous to suppose that these expensive concerts are meeting the public want of amusement. There is no popularity in them. They are a mockery. And he will be a public benefactor who, amassing wealth, shall by proper investments of funds procure the means of giving free music to a free people, and under circumstances so ample that the great mass of the people can, day by day, through the year, be entertained and recreated thereby.

I was struck, when I was in Germany, with the music-gardens there. At Berlin I resorted two or three times for my evening meal to one of these gardens—"tea-gardens" they are called. For the most part they are in the open air. Plain articles of food are furnished at a moderate price; and there is a continuous performance of the very best music. You pay a small fee at the entrance—perhaps sixpence or a shilling. You will see there common men, with their wives and daughters and sons and little children. They can take them all in. And they sit around their little table and call for their bowl of tea and their plate of plain bread, without cheese or butter in most cases, and as they eat they chat or listen to the music. I looked upon them and felt, "There are some things here that we might well copy in my own land." It is not the guzzling of beer that I call for, but the making of amusements both so cheap and so wholesome in their influence as to justify a virtuous household of moderate means going in together to enjoy them. And this fea-

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ture of German life struck me as eminently wise.

I do not think amusements can be good generally in a community in which a man is ashamed to take his whole family to them. If there is any thing that you would not like your wife and children to participate in with you, the presumption is that it is wrong; and if there is any thing that you would like them to participate in with you, the presumption is that it is right. And this might well be made a rule of judgment far more widely than it now is.

It seems to me that there might be established in the poorer districts art-galleries and reading-rooms, and places for the supply of food and potations at moderate prices, and provisions for good music, that should be real blessings in the community. I believe in Sabbath-schools and lecture-rooms and churches among the poor; but I take notice that when a man gets through his work, and his home is cold and dark and cheerless, and the corner-grocery is warm and light and cheerful, he will retreat to the latter place; not because it is a grocery, but because it is light and warm and cheerful. And if there were rooms where men could find papers and books and virtuous companionship, and where they could take their families, they would frequent these rather than drinking-places. And the result would be salutary beyond conception. If they could, under the direction of wise and Christian men, combine amusement with religious instruction, it would be all the better. Christian men ought to be the almoners of amusement in the community, instead of their being left to men that make money by catering to the passions and appetites—selfish men that gain their support by ministering to the lower feelings. Amusements ought to be administered and cared for by men of moral power.

I may mention in this connection the desirableness in our land of that which is very undesirable in others—national holidays. Any thing in this country that brings people together is apt to be beneficial. Prejudices grow as people live apart; but when men come together prejudices speedily pass away, in most cases. I have known men to have the impression that the meek pastor of Plymouth Church was an awful man, and to lose that impression when they looked at him as he was, without any horns or hoofs! I have thought that men were monsters till I knew them, and then found that they were of like passions and excellences with myself. It is a great thing to know men. You will read the newspapers, and think that any body who belongs to the Democratic party must be a very wicked man, and the presumption is justified by so many instances that you have a sweeping prejudice against that party; and yet, your partner or brother-in-law belongs to it, and you know him to be a good man. There are prominent men in my mind whose names have been inveighed against for scores of years, and against whom you have been strongly prejudiced, but whom, if you were to go to them and talk with them, you would find to be genial and kind and sympathetic, and who you would be impressed were attempting to act according to a law of right. It is a great thing to find each other out. And whatever brings men under the influence of the same feelings tends to harmonize them.

I shall not here discuss the admissibility or the inadmissibility of particular kinds of amusements. I shall not speak of the theater and the opera, and such like things. This, however, I will say: that no man should allow himself to take or reject any amusements that are proffered to him, until he has formed a deliberate moral judgment concerning them in the exercise of proper liberty. What I wish to impress upon the minds of the young is, that they should not run heedlessly after this or that or the other thing just because they are asked to, or because somebody else does. Judge deliberately, on the grounds of principle, with regard to every thing; and then follow your own judgment. I maintain my right of judging for myself, and I respect yours. All I can ask is that you should investigate, and that you should decide, not on purely secular or frivolous grounds, but on broad Christian grounds.

It may be said that the hilarity which accompanies such amusements as I have been recommending is not consistent with the dignity of man. What do you mean by *dignity?* I understand dignity to consist in a moderate right use of every faculty that it pleases God to put into the making of man. If God had not meant me to laugh, He would have made me like an ox or an ass, incapable of laughing. In making a harp I would not put in a string that was not to be touched, to be a temptation to the harper; and on making man God did not put in one appetite, or passion, or social attribute, or element of taste, or humor, or mirth, or reason, or moral sentiment, that he did not mean should be used. Indulge in laughter, only let it not be frivolous; let it be something that springs from your higher nature. Lift up that which distinguishes your manhood in distinction from animalism. If you have mirthfulness, consecrate it, and employ it for the sake of manhood

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Do not suppress it. Do not quench the light which God gave you with which to be a guide and cheer to wayfaring men.

I assert your right to amusements, and I urge upon you the duty of recreation; but there ought to be something in you to say to the world, "These are not the things for which I live. They are my relaxation." If by any infelicity you lead men to believe that you live for amusements—that is to say, if they bear such a proportion in your life that men infer that you give yourself up to sensuous enjoyment—you have misconceived as to what is the true office of amusement. If you have a right to amusement, you have purchased it by being so addicted to manly, useful vocations that men shall derive their ideas of you, not from your periods of rest, but from your term-time of work. The more liberty you have of amusement, the more responsibility you have of counteracting it by such impressions produced on the higher ranges of men's thoughts that they shall not commit any mistake respecting you.

Mr. Lincoln was a man that addicted himself, and not always with the best taste, to mirthfulness; but did any body, does any body, suppose that he lived only for jesting? Does not every body know that where others would have fallen down athirst or perishing, he, with camel-like patience and toughness, carried the welfare of the nation across the desert and under the sirocco? And does not every man feel that his humors and outbursts of mirth were his safety-valves; that he went to them, as it were, to get breath, and that had it not been for these, his overburdened and oppressed spirit would have been crushed?

Now, if men that know you are led, in fairly judging, to form the opinion that you live more for your self-indulgence than any thing else, it is not because amusements are wrong, but because you are making a wrong use of them. And, on the other hand, if men that are with you, and know you, see that in your life amusements are held subordinate to something higher, they will become your defenders, and will say of you, "I know him to be a man that not only is companionable, but that also is pure and right-minded, and noble and lordly in his disposition, and that does an immense life-work." In proportion as your usefulness is broad and high and pure, you earn the right to relaxation; and in proportion as you are useless, you forfeit that right.

"Is YOUR city a healthy one, sir?"
„ Oh, yes; medicines are drugs there."

[For The Herald of Health.]

Vital Statistics of Massachusetts.

BY NATHAN ALLEN, M. D.

EDITORS OF HERALD OF HEALTH—Your journal I have read for some time, with much interest. I inclose you an article which might perhaps be noticed in your magazine, especially the parts near its close. I am confident that such facts interest all readers of health articles. I would frequently write something for your journal, but have not the time. I am engaged in medical practice besides attending to much other business, and have but little time to read or write. I purpose to follow up this article, particularly the causes of decrease of births among Americans.

In haste, yours truly,
NATHAN ALLEN.

LOWELL, Mass., *October*, 1866.

"In Massachusetts the system of Registration has been carried out more completely than in any other State. The Twenty-Third Report—which is for the year 1864—has just been published, and contains facts of great interest. It reports the whole number of births that year, 30,449; males, 15,604, and female, 14,845. There were 12, 513 couples married—7,574 Americans, and 4,939 of foreign or mixed origin. There were 28,653 deaths—14,964 males, and 13,689 females. The marriages and deaths were much larger than in most any former year, and the births were considerably less. The war will explain, in part, the cause of this difference. There were 1,640 more marriages than in 1863, and there were just twice the number among the foreign population for the same number of inhabitants as among the American. Previous to 1864, the number of marriages had been decreasing for a series of years.

"This Report, with previous reports, serves to confirm some important facts connected with the great laws of life and health. It appears that farmers are, as a class, the longest lived, reaching on an average over 64 years. The next class are those reported as gentlemen (62 years), who probably have the means and knowledge to take the best possible care of health. Professional men come next—judges reaching almost 62 years; lawyers, 56.50 years; clergymen, 56.25 years; and physicians, 55.50 years. It is a fact very well established, that mental exercise and pursuits properly conducted are conducive to long life.

"The next class in longevity are mechanics engaged in outdoor work. This includes carpenters, masons, slaters, etc. etc. On an average they exceed by a fraction the age of 50.

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The mechanics working in shops, and having considerable exercise, reach 47 years, while another class, having but little exercise, attain only the age of 41. Here comes in the great importance of exercise and pure air to good health and long life. Merchants, financiers, and capitalists, are reported at the age of 47. There is a great difference among those composing these classes; for instance, merchants are returned at 52, while their clerks live, on an average, only 34 years. Manufacturers are reported at 45 years, and railroad agents and conductors at only 37 years.

"The average age of three thousand females is returned at 46. Housekeepers at 50; domestics, 48; seamstresses, 43; dressmakers, 33; operatives, 28; and teachers, 28. Whatever advantages means, leisure, or knowledge may give, it is very evident that *house work* is the most wholesome business that any woman can pursue. It is not simply the situation of mistress of an establishment, as the domestic or servant lives almost as long as the housekeeper. It is *house work* that gives the greatest variety and regularity of exercise to all the muscles of the body. From a careful examination of the Registration Reports of Great Britain, it appears that the mortality among females in Massachusetts is not only larger than in England, but that a much larger proportion of them die in early life. There are good reasons to substantiate this fact in the difference in early training, education, and other exposures which violate the laws of life and health.

"The Registration of Deaths establishes some important facts in respect to rates of mortality in different places. As a general rule, it is much larger in cities than in country towns; the more dense the population, the greater the mortality for the same number of inhabitants. The rate of mortality for the whole State of Massachusetts, for a long series of years, has been found to be 1 death to 51 persons living. But the rate varies in different localities. In Berkshire County, where the grounds are elevated, and the population are mostly engaged in agricultural pursuits, the rate of mortality is only 1 in 68; whereas, in Suffolk County, made up almost entirely of Boston, it is 1 to 44—that is, one-third greater mortality for the same number of inhabitants. About the same difference exists in purely country towns and rural districts, when compared with cities and large villages.

"The average age of all who died in 1864 was 38.50 years. One-fifth died under 1 year, and two-fifths under 5 years of age. In the cities and villages of the State, the mortality of infants and children under five is much greater than in the country. The average age at death will vary in places according to the respective ages of those living in any given place.

"Under the head, 'Causes of Death,' consumption takes the lead, numbering about one-sixth of the whole mortality. This disease is much more prevalent in the towns along the sea coast, exposed to the east winds, than in the interior or western parts of the State. In some districts, it numbers nearly one-fourth of all the deaths. Most of its victims are between the ages of 20 and 40. With all the improvements in Hygiene and medical treatment within the last twenty-five years, this terribly fatal disease is probably on the increase in New England. Females are much more subject to it than males.

"Pneumonia, or inflammation of the lungs, comes next in order; this disease proves more fatal in the country than in the city. Old age is reported as the cause of death in about 1,200 cases each year in Massachusetts. The other principal diseases are cholera infantum, dysentery, scarlet and typhoid fevers, brain and heart diseases, etc.

"The months to life most fatal, are February and March, August and September; the first two for throat and lung difficulties, and the latter two for stomach and bowel complaints. May and June are the healthiest months in the year.

"Connected with the subject of vital statistics is a matter of vast importance, viz. *increase of population.* This can be effected only in two ways: first, by the births exceeding the deaths, and second, by immigration. The Census shows a gradual increase in Massachusetts for the last half century. But within thirty or forty years, there has been a large increase by foreign immigration. In 1830, the Census returned less than ten thousand inhabitants of a foreign origin. In 1860, there were over two hundred and sixty thousand of this class. In examining the towns and cities where the principal increase of population has taken place, it will be found that this increase is largely made up of a foreign element. While the Irish, the Scotch, the English and the Canadian French have been pouring into Massachusetts, large numbers of its native-born citizens have, at the same time, been emigrating to California, to the West, and to the South. But neither by census nor any other record, can we ascertain the number of persons removing from time to time from this State to find homes elsewhere. It is impossible, therefore, to determine precisely what has been the actual increase of population from this quarter. How, then, stands

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the other source of supply? The Census of 1860 made the population of the State 1,231,066—of these 260,114 were of foreign origin. From 1855 to 1860, the returns made but a slight increase in the number of births. In 1860, the the number of births reported was 35,445; more than one-half of which were foreign. Up to this time, the majority of births had always been American, but here at this period the scale turned. A population of 260,114 foreigners would have more children than 970,052 Americans—almost four times as many, in proportion to the same number of inhabitants. Since 1860, the proportion of foreign births has gained on the American, till in 1864, they amount to almost one thousand majority. If now the mortality record is compared with the number of births, it will test the increase of population from this source. The Report of 1864, gives 28,723 deaths and 30,449 births—an increase of only 1,726 as a whole. But the same Report returns the deaths as follows: American, 24,021; foreign, 4,207, and not stated, 485. The parentage of births is reported thus: American, 13,453; foreign, 14,-266; American father and foreign mother, 1,030; foreign father and American mother, 1,209; and 491 not stated. It will be seen at once by these figures, that the number of deaths with the Americans for 1864, exceeds that of the births over 9,000! But this is not all; only about one-half those born that year ever reached the adult age, which will add some 6,000 more, making a decrease in one year of over 15,000 persons reaching adult life—commencing in 1864. It may be said that the war made this difference—that the death of many men by the war, and the absence of others, served to diminish the births, while many came home to die, thereby increasing the mortality. Admitting the force of these facts, it does not fully explain this difference. The number of American births had been diminishing for a long series of years before the war, and, for several years prior to 1861, the number of American deaths exceeded that of the births.

"These facts and figures are so startling, and look so unpropitious for the increase, if not even the long continuance of the native stock of the State, that we inquire, Can they be disproved by evidence obtained from other sources?

"From the first settlements in New England, it has been customary in every parish or incorporated town, to keep an exact record of all children born, thus preserving family histories. Thus a record of all the births occurring in every parish or town, for over two hundred years, has been preserved—extending through six or seven generations. These records have been carefully examined in a large number of cases with reference to the number of births. For the sake of convenience, an average of all the children in each generation has been made to every family, and there has been a general correspondence in the results. We here present the exact figures from an inland town in the State, which has been occupied by six generations. The first generation had, on an average, to each family, 9.50 children; the second, 7.31; the third, 7.69; the fourth, 7.25; the fifth, 4.90; and the sixth, 2.84. The last generation brings the history down to the present time. In all the towns examined, the first settlers had, on an average to each family, from eight to ten children, which diminished slowly with the earlier generations, till we reach the two last generations, when the number drops off more rapidly. It is surprising what large families were once found in those old towns. In one small town, settled in 1655, may be found on its records these facts: There are recorded the names of 26 families having 10 children each; 20 families having 11 each; 24 having 12 each; 13 families having 13 each; 5 families having 14 each; 1 family having 15, and 1 having 21. There were 90 families having 1,043 children. Nothing like this, not even an approximation to it, can be found in any town in the commonwealsh. It is very rare that an American family can now be found anywhere, having 10 children; but here were 90 families each having that number and upward. And nearly all the children born in those early times, grew up to adult age, whereas now only about one-half reach that age.

"Again, an examination of these town records show that, for several generations after the first settlement, the number of families having two, three or four children, was comparatively small, and there was scarcely a family then to be found which had no children. The situation of such a family was regarded, in those times, as a calamity. But, in all the cases where the average number of children to each family has been obtained from town records, it is found that the present generation upon the stage will average to each family only about three children. In some few places the average number of children was four, and, occasionally, a fraction higher, but there were far more places where the average was less than three. This same general fact is confirmed from personal knowledge, and numerous inquiries, in a large number of places, made with reference to this object. Let any one having an extensive acquaintance in rural or city districts in the State, make a careful investigation on this subject, and he will be sur-

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prised at the result, especially at the large number of married people having no children, and others having only one or two.

"There is another mode of obtaining evidence on this subject. Within some twenty years great interest has been awakened in this State in collecting genealogical and family histories. Many of these histories have been published in essays, journals and books, including five, six and even seven generations. A careful examination of these histories presents a class of facts precisely similar to those obtained from town records. The first family started with a goodly number of children, and the families continued to multiply in each generation till you reach the two last, when the average number of children in each family is found to diminish rapidly. The families composing the present generation, in these genealogical histories, will average, at most, only three or four children each.

"Still there is another medium of testing this increase of population. All the cities, and some of the large towns in the State, publish annually, a report of the births, marriages and deaths which occur respectively in their several places Boston reports for 1865, 5,275 birth; 3,575 foreign; 1,641 American, and 60 not stated. Deaths, 4,651; foreign, 1,398, and American 3,143. Here the whole number of births exceed the deaths by only 734. But the deaths of Americans exceed the births by 1,502; and, if only three-fifths of the American-born reach adult life, that makes the loss still greater. That is a loss, in one year, of over two thousand persons, by death, to the natural increase in population. The Census of Boston, in 1865, reports the American population at 126,304, and the foreign, 66,020. The former class, 126,304, have 1,641 children, while the latter 66,020, have 3,575—that is, one-third foreign have more than twice as many children as two-thirds American, equal to six times as many children for the same population. Lowell reports present similar statistics.

"There is still another mode of viewing this subject, by way of comparison. There is what is called a birth-rate in every community—that is, one birth every year to so many inhabitants. The following table presents what has been found, for many years, to be the birth-rate in

Saxony (to each 1,000),	25.98
Prussia,	26.50
Austria,	26.18
Sardinia,	27.82
Norway,	31.64
Denmark,	32.28
Hanover,	32.66
Sweden,	32.39
Bavaria,	20.22
Netherlands,	30.00
England	30.06
Belgium,	34.35
France,	37.16

In Massachusetts the birth-rate has ranged, for many years, from 34.00 to 40.00 If the American population is separated from the foreign, this birth-rate will not make so respectable an appearance. In 1864 this birth-rate, with the native Americans, was only 1 to 66 persons, and for several years previous, it falls but little less than that number. For any community or nation to be in a prosperous and growing state, the birth-rate should be 1 to 30; once Massachusetts came up to this standard, but now it has fallen less than half that. This downward course commenced long before the war broke out, and we apprehend that the return of peace will not much amend the matter. Neither was there any unusual mortality in 1864, or any previous year. It must be obvious, from the facts already presented, that there is operating, to produce this degeneracy, an agency more effective and permanent than war, or any temporary disease. If this gigantic evil is ever to be remedied, the causes must be understood. If the deaths exceed the births every year—if all married families average only between two and three children each, and these diminish in each successive generation—if only three or four-fifths, even, of these live to reach adult life; if moreover, large numbers shall see fit to live a single life (and that number relatively increasing every year), it is plainly evident that the native American stock in the "Old Bay State" will rapidly diminish, and comparatively, at no very distant day, *must run out.* Is it possible that the best stock (the Puritan) the world ever saw, under what would be considered the best family training, the highest order of educational influences, and the purest religious instruction, should thus *run out,* and give place to a people of foreign origin, with far less intelligence, and a religion entirely different? Was there ever in the whole history of the world a tribe, a race, or a nation, blessed with such an ancestry, with such advantages, with what should be such glorious prospects, that met such a fate? What cause, or causes, could ever possibly bring about such disastrous results? Is it war? is it pestilence? is it famine? is it disease of any kind? No; the whole explanation may be summed up briefly under two heads: 1st. *The physical degeneracy of females;* and, 2d. The settled determination among a large portion

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of them in married life *to have no children, or a very limited number.* The first cause has been accumulating about half a century, but the second is of modern origin. Both causes result from the positive violations of the great laws of life and health, as well as the express teachings of Revelation. How sad and humiliating such an acknowledgment! No language can adequately portray the terrible effects which have already resulted from these violations of law, and no imagination can fully comprehend the nature, or extent, of the disastrous consequences which are yet to follow in the same train. Where in the whole range of politics, education, philosophy and religion, is there a theme which, in the magnitude of its bearings, can present stronger claims for exposure, for discussion and reform—with particular reference to New England—than this subject?"

[Written for The Herald of Health.]

Hints about Dressing.

We mean what is useful rather than what is fashionable. First, we should dress as lightly as possible and keep the cold off. Keep warm in winter; that is the main requisite. But do not wear heavy, burdensome clothes, woven too tight, or what is worse, with material twisted too hard. This will take from the warmth, however much it may add to the wear. Remember every ounce of weight in clothes will be felt as so much burden to carry, though we may not regard it, or even know it at the time. Yet it will tell. It is the mite that by its constant effect shortens the term of life. In the end, depend upon it, it will tell. How few people ever realize this! You will see them with heavy boots, heavy overcoats, like so many mantles of lead weighing them down; heavy cloth in pants and vests, and so on. There are from three to ten pounds of excess in a suit of clothes. This is carried daily whenever the individual goes out (in winter). And indoors the same thing is continued except the overcoat. Heavy boots are generally kept on in a close, warm room; and, so are thick warm wrappers and drawers. The weight is constant, whether indoor or out—a life-burden it may be said, from which there is no escape save by night, and not then, as the same indiscretion is carried out there. Clothes are piled on, and the sleeper is almost suffocated. This mode of life is not only burdensome and depressing, it is deleterious. The health is affected by it, colds which it is intended to avoid are the more readily incurred, by accidental exposures, which it is difficult at all times to avoid.

What then is to be done?

We are to wear light clothing while indoors. The temperature of the room is expected to be mild. Off with the clothes then in a room, and you will be so much the more comfortable, not alone from the ease which less weight occasions, but by coming in contact with the free, warm air of the room—taking your comfort. When you go out, fling your shawl about you, or put on your overcoat, unless the air is moderate and you walk. Then brace yourself for the exercise. There is no danger of taking cold if the action is spirited, even if your garments are light.

To particularize, it is best to wear thick, warm drawers, two pairs at a time in mid-winter. These may be lighter than when but one pair is worn. Have them as soft and as light as it is possible to get them and have decent service out of them. The reason why two pairs are recommended is this: The legs have no extra protection when the person goes out, as the rest of the body has. Hence the change from a high to a low temperature is readily felt, and, as the writer knows to his cost, is hurtful as well as unpleasant. Double drawers will remedy this in a measure. The addition in weight is not much, and will greatly promote comfort, as well as security.

Another thing. Let the inner back lining of your vest be of wool—light, soft, warm. This will protect the back-bone, no portion of the clothing is so inconsiderable and at the same time so beneficial. We mean of course for a winter vest. Then a light coat may be worn with impunity indoors. For the arms it matters not so much, these are accustomed to exposure during the night, but should be protected then. The writer has an extra jacket made for this purpose, with large, warm sleeves, equal in its protection, if not superior to a night-cap for the head, which needs that guard against the few nights of intense cold which usually occur. Right dress for the feet is very necessary. The great point is to avoid dampness, particularly in winter. The writer wears rubbers when he goes out; he takes them off as soon as he re-enters the room. Some prefer over-shoes, some heavy boots lined with some dry material, keeping out the wet and retaining the warmth. For this purpose soles cut from an old woolen hat will do. Cork soles are used by some. The great requirement is to keep the feet dry, especially the soles.

Overcoats for riding should be warm, but as soft as possible.

F. G.

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[Written for The Herald of Health.]

Hints for Improving the Voice and Strengthening the Lungs.

BY PROF. C. S. ROYCE.

For many years we have been taught that weak lungs can be strengthened, as other parts of the system can be, by exercise. Experience has shown that this is not mere theory, for thousands to-day are enjoying good health, who, but for such exercise, would have been in consumptives' graves. The exercises prescribed have, for the most part, been devoid of other interest to the sufferer than that which arises from a hope of restoring health. It is an acknowledged fact, that "walking for the health," without any other object in view, is by no means as valuable as taking the same amount of exercise with some object of utility or pleasure in view.

Believing that the same principles apply to exercises of the lungs, the writer proposes, in a series of articles, to give some directions, which, if followed faithfully, shall strengthen weak lungs, restore those that are diseased, and, at the same time, improve the conversational, the reading and the speaking voice. That there is an almost universal necessity for such improvement, our daily experience in using our own voices, and in listening to the voices of others, gives sad proof.

Like the instruction and practice referred to above, this is not mere theory, for every successful teacher of vocal gymnastics and elocution has seen, as the result of his teaching, all these benefits.

In order that the directions to be given may do the desired good, the writer must be excused for assuming at once the didactic style. The general reader, it is hoped, will pardon this, while those who are suffering from weak or diseased lungs, and those, too, who desire to strengthen and improve their voices, will, it is believed, find this the style best adapted to their necessities.

It will be difficult, if not impossible, to give such specific directions as to the frequency of the exercises, length of time to continue each exercise, and the circumstances under which to exercise, as shall meet every case. This, however, can be said: no one should practice in an atmosphere rendered impure for want of proper ventilation, nor immediately after a meal. The clothing should be so loose as to allow perfect freedom of movement. The atmosphere should be cool, but not uncomfortably cool. Those who are quite weak will be able to practice but a few minutes at first, while others will be able to practice fifteen, twenty, or even thirty minutes at a time. The rule should be not to continue until exhaustion is the result. If dizziness is produced, as in many cases it will be, it should be received as proof that the practice is needed; but it should not be persisted in at that time without resting a few minutes, when the dizziness will cease, and the practice may be resumed. In this manner the dizziness will gradually wear away.

With this rather long introduction, we will proceed to give directions which we hope will be followed faithfully during the month; at the end of which time, we hope to lay before our readers directions for another month.

Stand quite erect, with the hips and shoulders drawn well back, the hands on the hips, the elbows thrown back, and the chest pressed upward and forward. In this position, inhale forcibly through the nose, with the mouth closed. Let this be done by enlarging the abdominal cavity, while the upper part of the chest is pressed upward and forward. Now, with the chest kept up, exhale forcibly through the nose by contracting the abdominal muscles, thus diminishing the size of the abdomen. The directions with reference to the chest and abdomen are of the utmost importance. In this manner the action of the diaphragm, a muscular "partition across the body just below the lungs," the muscles of which are contracted when the abdomen is enlarged, and relaxed when the abdomen is diminished in size, will aid in giving free exercise to the lungs from their upper to their lower extremes. Thus, inhale and exhale ten to fifteen times, according to the ability to endure the exercise. After a few minutes rest repeat the process. Let this be done, at stated intervals, several times a day for the first week.

The manner of breathing here described is the natural manner, as may be seen by looking at a naked infant, when laughing, crying, coughing, etc., or at a dog, horse, ox, or other mammal, when breathing forcibly, with or without the utterance of sound. By modes of dress which prevent the free action of the abdominal muscles, and by bad habits formed at home, at school, and in social circles, a majority of us use only the upper part of the lungs in respiration and for vocalization. The necessary result is weak lungs and sharp, superficial voices.

During the second and the subsequent weeks of the month, add to the above exercises that of mechanically enlarging the throat, in the manner that all have seen birds enlarge theirs when

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singing. This is to be done by a tension of the muscles that lead from the neck downward. In men this will draw the *Pomum Adami*—"Adam's Apple"—downward. In both men and women there will be a protruding of the upper part of the neck, that will be very perceptible to the eye, or to the hand if placed on the neck. It is the movement that is often made by ladies when desirous of ascertaining whether the bonnet-strings are tied just tight enough. Having thus enlarged the throat, relax the muscles made tense in the above action. Repeat the action several times until there is a slight sense of fatigue. Let these two movements be repeated several times a day during the second week.

During the third and fourth weeks of the month there may be a combination of these two movements. Inhale through the nose, then—retaining the air in the lungs for a few seconds, where the heat of the body will cause it to expand and press the air-cells gently—enlarge the throat as above, and expel the air forcibly through the open throat and widely-opened mouth. Repeat this many times.

Next, inhale and exhale, with very moderate force, through the mouth and throat, opened as above; again do so with moderate force, and again with great force. Now, fill the lungs quite full, and, opening the mouth and throat freely, let the air escape very slowly, and with a noise in its passage through the throat like that heard when a sea-shell is held close to the ear. It will require much patient practice to do this last in such a manner as to keep the emitted sound soft and regular like that of the sea-shell. In all of these exercises be sure to keep the upper part of the chest elevated and pushed forward.

The exercises here described are not only invigorating and health-giving, but they form the basis for strong, deep, smooth tones of the singing or speaking voice. In the next article these exercises will be applied to the formation of voice.

An honest rustic went into the shop of a Quaker to buy a hat, for which twenty-five shillings were demanded. He offered twenty shillings. "As I live," said the Quaker, "I can not afford to give it thee at that price." "As you live!" exclaimed the countryman. "Then live more moderately, and be hanged to you!" "Friend," said the Quaker, "thou shalt have the hat for nothing. I have sold hats for twenty years, and my trick was never found out before."

[Written for The Herald of Health.]

How to Bathe—No. II.

BY E. P. MILLER, M. D.

There are certain general rules which should ordinarily be observed while taking baths, the first of which is that no bath should be taken within at least one hour before a meal, and in most cases two hours is still better; and not within at least two, or better still, three hours after a meal.

The reason for this is, that in bathing the blood is brought to the surface in large quantities and circulates freely in the capillaries of the skin, being drawn away from internal organs and generally diffused through the whole body, and the more freely this external circulation and warmth is kept up, the more refreshing and invigorating the bath becomes, and the greater the benefit to be derived from it; whereas when the stomach has recently been supplied with food, the blood is diverted from the external circulation and goes in large quantities to the digestive organs, to supply the secretions and juices necessary to carry on the digestive process.

From these facts it will be evident, that if you take food into the stomach too soon after a bath you direct the blood to the stomach before a full reaction has taken place from the bath, and thus interfere with its beneficial effects, while on the other hand, if the bath is taken too soon after a meal, the blood is diverted from the digestive organs before digestion is completed, and thus a very important function of the body is interfered with.

These rules should be rigidly observed by those whose digestive powers are weak, or whose external circulation is feeble. There may be some persons who are so vigorous and strong that they can go directly from the bath to the table, or from the table to the bath, without experiencing any important inconvenience thereby, but a continued violation of this rule would eventually derange the most robust constitution.

In cases of active congestion or inflammation, in fevers, or in severe pain and distress, it may be necessary to make water applications irrespective of this rule.

A bath should never be taken when the body is exhausted or too greatly fatigued by exercise, as a person in such a condition would not be likely to secure the proper reaction and warmth.

Moderate exercise before a bath is usually beneficial, as it accelerates the circulation and secures a comfortable degree of warmth, which is always desirable before taking a bath.

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There is no danger from taking a general bath while in a perspiration, providing there is no fatigue accompanying it; for the sitz and foot baths, however, it is better that the body should be warm, but not perspiring. It is best always to bathe the head and face before taking a bath.

All general baths should be taken rapidly, and although there may be attendants present to assist in rubbing, yet the bather, if able, should rub himself as vigorously and hurriedly as though he was working for dear life, so that he may quicken his circulation and respiration, and thus secure that warm and glowing reaction that is so essential after every bath; this should be observed, not only while in the bath, but in rubbing dry after it.

As soon as the bath is completed, the bather should immediately dress, and if able, get out in the open air for exercise, and not loiter in his room for any purpose; if not able to exercise, it is a good plan to cover up warm in bed for a half hour or so.

For drying the body after a general bath, a strong linen or cotton sheet is much better than towels; this should be for an adult at least two yards square, so as to envelop the whole body like a cloak; he should be rubbed or rub himself with this till thoroughly dry. By using this dry sheet for *wiping*, the body is protected from the air, the evaporation of heat is prevented, and there is much less liability to feel chilly afterward. Some prefer a sheet large enough to extend from the floor up over the head. This sheet is not necessary except for general baths, as towels will do for all local applications.

Persons who are very nervous, or whose digestion is much impaired, or whose circulation is imperfect and feeble, should be careful not to use cold water to any great extent in bathing; it may have a temporary beneficial effect, but in the end their sufferings will be likely to be increased.

Soft water should always be used for bathing when it can be obtained, and in these times of cheap cisterns and good filters, no one need be long without it. Farmers who use hard water for washing, are liable to have chapped hands, while those who use soft water are seldom troubled in that way. The effect upon the skin elsewhere is similar. Hard water should not be used for drinking purposes either, as it is very injurious to the mucous membrane lining the alimentary canal.

Nearly all have observed how hard water, when boiled, will form a thick coating on the tea-kettle; this does not take place with soft water.

THE RUBBING WET SHEET.

The next most convenient, mild and useful forms of bath to the sponge, towel, or hand, both described in THE HERALD for September, is the rubbing wet sheet. This bath may be made applicable to persons who are quite feeble, as well as to those who are in vigorous health. It is one that can be administered in almost any place, or under almost any circumstances. There is scarcely a cottage, however humble, but can furnish a sheet and a quart of water, which will do in the absence of better appliances. It can be given in the sleeping apartment, or on the parlor carpet, or in any place where there is room enough for two persons to stand, and move around, without disturbance or inconvenience, and without soiling the furniture or floors. This bath may be given so as to produce a mild tonic, or gentle stimulating effect to feeble patients; or it may be so vigorously applied as to produce sensible effects upon the most powerful athlete. It is one of the most convenient forms of baths to give after a wet sheet-pack, or a sweating bath. There are two or three forms in which it may be administered, and the one chosen should depend upon the condition of the bather, and the amount of water necessary to be used. If the bather is feeble, the water should be tepid or warm, and the sheet wrung nearly dry. If the bath is to be taken where you do not wish to soil the carpet or wet the floor, the sheet should also be wrung so that it will not drip. If the requisite amount of moisture and friction is not secured by one application, the process can be repeated the second, or even the third time if necessary. If you wish to make the bath more thorough, as it may be necessary in fevers, or in persons with vigorous reactive powers, it is better to prepare a rubber or oil-cloth, or let the bather stand in a tub, or some suitable vessel, and use the sheet *dripping*, either with a partial wringing or without wringing at all. Where a very vigorous bath is required a second or third application of the dripping sheet may be necessary.

In applying the rubbing or dripping sheet, it is well to have a sheet large enough to completely envelop the body, and when it has been wet and prepared with the requisite amount of moisture, the attendant should take it by the corners of one end, and then quickly throw it over the shoulders, folding the edges over each other in front, so as to cover the whole body, and then he should rub very rapidly and vigorously, with the hand *over* the sheet *not with* it, touching repeatedly *every part* of the body, not forgetting the feet and hands; he should rub

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quickly in that way for two or three minutes; then, unless the process needs repeating, the wet sheet should be removed and its place supplied by a dry one, and active rubbing kept up till the whole body is dry and warm. The bather should assist in the drying process, although it is not always convenient to do so while enveloped in the wet sheet. Some bathers prefer to assist during the whole process.

Some practitioners have the wet sheet long enough to cover the head and body, but if the head is wet before the bath I think it is better to leave it free.

Some practitioners also prefer to have the patient stand with their arms by their side, and then have the attendant throw the sheet on in front, first lapping the edges over upon the back. I prefer the method first described, as the cool sheet applied over the spinal column gives a gentle shock that secures a quicker reaction after the bath.

The rubbing sheet may be made applicable to those feeble, nervous patients that could not well bear a full bath; also to cases of general debility, and nervous dyspepsia, when the hands and feet are cold and the circulation feeble; and in cases of fever and local inflammation, where the patient is able to stand this bath it is considered a tonic, a stimulant, an alterative and an anti-spasmodic. The good effects, however, depend entirely upon the quickness and skill with which it is administered.

Windship Outlifted.

THE WRITER LIFTS 2727 LBS. 12 OZ.

MR. EDITOR—*Dear Sir:* In reply to your inquiry concerning my system of Physical Culture, I would say that several years ago it occurred to me, from time to time, that persons had more control over their health and physical condition than scarcely any one with whom I conversed on the subject was willing to admit. I believe we are responsible for health—unavoidable accidents excepted—as much as for conduct. For health and strength depend upon conduct in relation to immutable laws, and it is our duty to ascertain what they are and obey them. We have no right to squander health and strength, nor waste the resources upon which they depend.

On the other hand, we ought to become intellectually and physically developed, brain and body together, for only in this way can the highest culture be attained.

Any system of education which does not appreciate and take into consideration the mutual relation and dependence of mind and body, is defective and unworthy of patronage. Numerous instances are on record where persons of the highest talents, the noblest qualities of mind, have made life a failure in consequence of such inharmonious systems of education.

After acquiring those conditions, they ought to be maintained until old age, not disobedience, brings on the decline of life. If we disobey statutory law, there may be pardon and escape from punishment, but for every sin we commit against physiological law, we are ultimately, if not immediately, brought to punishment, and one of the greatest errors of mankind from which such a multitude of evils arise, is in neglecting to observe cause and effect in relation to health and disease.

Pain seems to be regarded in the light of unfortunate affliction, not as punishment for the purpose of bringing the offender to obedience.

Having full confidence in the above-mentioned opinions, I set myself to work to investigate and ascertain if they were not facts, and my experience has verified them.

I very much desired to know to what extent the physical system could be developed. I commenced several years ago to increase the power of my muscular system, as a means of acquiring and maintaining high health.

Although I had no reason to complain, yet I enjoy higher and more vigorous health than I did previous to training. I think persons can not learn the laws of health faster than by measuring their strength day by day, and calculating upon the causes which operate in favor and against development. I have found no limit to muscular development, and I am yet capable of increasing my strength in an undiminished ratio, and I am firm in the belief that I can develop my strength to all that my frame is capable of sustaining with safety. With regard to my method, I have sought employment outdoors, breathed much pure air, very little that was impure, ventilated my sleeping apartment the year round.

For some years previous to my lifting experiments I had succeeded in developing my endurance to a high degree by laboring in the agricultural business.

I then commenced practicing heavy gymnastics. Regularly and energetically I went through with such exercises as I deemed most favorable to development. I have preferred a low temperature for vigorous exercise.

I have preferred the autumn and winter, to the spring and summer months, because the physical system manufactures vitality more

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rapidly during a change from warm to cold weather, which gives greater size to the muscles. Quality of muscle can be increased after size has reached its maximum. But size of muscle can not be increased after quality has reached its maximum.

I have endeavored to avoid over-training, which I consider one of the great secrets of success.

A person will become more highly developed to ascertain their proper limits in quantity and frequency of exercise, and keep within those limits, because the vital system, after a long series of training, will still be as able as ever, or even more able (if the endurance is properly developed), to supply the waste material, and enable the circulatory system to distribute as rapidly as ever the particles to increase the size and density of the parts desired to be developed. Muscles should never be trained in quality at the expense of size. Though individuals may gain at first, they can not continue to long.

My usual custom has been to divide the number of exercises into two classes, and perform each class on alternate days, thus giving vigorous exercise daily.

I have avoided the use of tobacco and all stimulating drinks, and have drank freely of cold water.

I have eaten plain, simple food—few kinds at a meal, avoided knickknacks, pork and condiments.

I have used mostly vegetable food and milk when that would answer, but I have found it necessary a portion of the time to introduce solid animal food into my diet. I regard beefsteak as containing the best muscle-making principle, because it is muscle, and more readily distributed as such throughout the system.

Breakfast and dinner have been my principal meals.

The influence that the mind has over the body is remarkable. One of the most essential requisites for the development of strength is to maintain a cheerful, happy state of mind. I could not have believed the difference so great but from experimental knowledge in my own case.

I will express myself in regard to some of the conclusions which I have arrived at, and I am aware that different views are entertained by some whose opinions are entitled to respect and consideration, but it will be unnecessary in this letter to enter into a discussion on the subject.

I. As a means of attaining high health, I am in favor of heavy gymnastics, if properly conducted—the heaviest kind of gymnastics, which is heavy lifting.

II. Persons can over-train, but can not overdevelop themselves physically.

III. The highest development of muscle is compatible with the greatest amount of brain power.

IV. Heavy lifting, with lighter gymnastics, will contribute more to health and longevity than light gymnastics only.

V. Heavy lifting, properly conducted, will not make persons slow, inelastic nor inflexible.

VI. No persons can obtain the highest physiological conditions with light gymnastics only.

VII. No person can obtain the highest physiological conditions without the largest size of muscle, as well as the highest quality.

I look forward to the time when there will be less drugs and poisons used for the cure of the sick; when there will be less skepticism in reference to what can be accomplished by obedience to dietetic hygiene and physiological laws; when physical education, the foundation of all education, will be regarded by the great mass of mankind as of paramount importance; when it will be more effectually reduced to a science, become a branch of learning and raised to the dignity of scholastic duty, from the district school to the university. The work is moving onward, but there needs to be more lecturers in the field who are able and competent for the task; who are willing to devote the energies of their lives to the cause; who are willing to stand in bold defense of the right in the midst of skepticism and false-opposing theories. If we desire high health, we must become highly developed. We are, as a class, a less than half-developed race of people. I trust the time will arrive when highly developed men and women will be the rule instead of the exception; when it will be popular and common for persons generally, to be as determined, energetic and persevering to acquire and maintain the highest health as they now are in acquiring property, and when they will feel proud to compete with each other in such acquisitions as they are now in other pursuits. Certainly we have every facility in this country favorable to the attainment of the highest mental and bodily culture.

I consider THE HERALD OF HEALTH a very valuable journal. A large proportion of the great work for the cause of Physical Education is being accomplished through its instrumentality.

Truly yours,

A. A. BUTTS.

AUBURN, O., *October* 8, 1866.

THE TOBACCO-CHEWER is said to be like a goose in a Dutch oven—always on the *spit*.

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Home Treatment of Disease.

BY E. P. MILLER, M. D.

☞ *In this department we shall give, from month to month, plain, practical directions for the home-treatment of various diseases.*

Diseases of the Liver.—The liver is one of the most important of the vital organs. It performs a very conspicuous part in the great phenomena of life. Upon its integrity and healthful action depend the health and harmony of nearly all the organs of the body and the faculties of the mind. The impairment of its structure, the disturbance of its function, or the obstruction of its action, has been the cause of very many of "the ills that flesh is heir to." Some of the most intense sufferings that the human race are compelled to endure arise from disturbances of this organ.

So universal are the diseases arising from its derangement, that some physicians, when finding a case that is a little difficult to diagnose, have the habit of referring it to a torpid liver; and in a majority of cases, probably, they are not far out of the way.

The location of this organ in the body, its proximity to the lungs and stomach, and the purposes it serves in the digestion of food and in promoting regularity of the bowels, renders it absolutely necessary that it should always maintain a normal and healthy action.

Many people who have disordered livers, and who are constantly dosing themselves with drugs, in the vain hope of restoring it to a better condition, have not the remotest idea as to its location, form, size or structure.

This organ is located upon the right half of the body, rather in front, in the upper portion of the abdomen, the upper border being just below the nipple, the lower extending a little below the ribs. It is the largest gland in the body, weighing, in an adult, from three to four pounds; its transverse diameter is from ten to twelve inches, and its antero-posterior from six to seven inches. There is about four inches of its anterior surface that lies against the ribs, and if percussion is made over that portion there will be marked dullness in the sound. When this organ is in its normal position, this dullness commences about two inches below the right nipple, and extends for four inches down toward the thigh. If the liver is enlarged, the space over which this dullness occurs will be from five to eight inches. The size is as easily defined and the difference in the sound over the liver and that over other parts of a healthy subject as apparent, as the difference in the sound produced by pounding upon a full and an empty barrel.

The liver is divided into five lobes—the right lobe, the left lobe, and three small lobes called *lobus caudatus, lobus quadratus* and *lobus spigelii.* The right lobe is about six times as large as the left; the other three lobes are small, and contain but an insignificant portion of its substance, compared with the right and left lobes.

The liver has also five ligaments, five fissures and five vessels.

The most important of its known functions is that of secreting from the blood the constituents of bile. It also forms a certain amount of sugar, which enters the blood and is destroyed in the lungs. It also forms a small amount of fat as well as sugar, even when neither of these substances are found in the food. Although the bile is composed of substances filtered out of the blood, which if left in would be injurious to the tissues, yet, when this substance is thrown into the duodenum, it aids in the digestive process, neutralizing the acids of the stomach, assisting in the emulsion of fats, and promoting the discharges from the bowels.

When from obstruction of any kind the bile is not taken out of the blood, its presence in the circulation is apparent in the yellow tinge given to the skin and white of the eye, and in general derangement of the whole system. The term hepatic relates to the liver. The five vessels that belong to the liver are: the hepatic artery, the hepatic vein, the portal vein, the hepatic duct and the lymphatics. The gall-bladder, *ductus communis choledochus,* and the gall duct, are also accompaniments of the liver.

Disorders of the gall bladder and its duct, of hepatic artery and vein, of portal vein and of hepatic vein, are usually classed with diseases of the liver. There are about thirty different diseases, or different manifestations of disease, of this organ and its accompanying vessels.

Of the derangements of the body of the liver we find acute and chronic congestion, acute and chronic inflammation or hepatitis, cirrhosis, syphilitic inflammation, acute and chronic atrophy, enlargement, either general or partial; also, changes in its structure, such as fatty liver, waxy liver, pigment liver, tubercles, hydatids and cancer. Then we have several distinct derangements of the biliary passages, such as inflammation of the gall-bladder and gall ducts, closing of these passages, dilitation of the gall-bladder, morbid growths, foreign bodies and impacted gall stones. Beside these, we sometimes meet with cases of suppurative in-

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flammation, or coagulation of blood in the hepatic artery and vein, or in the portal vein.

There are a number of other diseases that are often caused by the derangements of the liver, the most common of which are piles or hemorrhoids, dropsy, hemorrhage from the stomach and bowels, and enlargement of the spleen.

I should have stated in the descriptive part of this article that the hepatic artery carries the arterial blood to the liver which is used for its sustenance and growth, while the portal vein carries the blood to the liver which has been used in the capillaries and tissues of the stomach, the spleen, the pancreas and the large and small intestines; from this blood the bile is made. After the blood has been used for the formation of the bile, sugar, fat, etc., it is transferred from the little cells where this process is carried on to the terminal branches of the hepatic vein, and by this vein it is carried to the ascending *vena cava*, and from thence to the heart. The hepatic duct, on the other hand, takes the gall from the little cells where it is formed, and conveys it along to the gall-bladder, where it is retained for use, while the *ductus communis choledochus* conveys it from the gall-bladder to the duodenum as fast as it is needed. A clear understanding of the duties of these vessels will enable the reader to see how diseases of the liver that cause obstruction to the flow of blood may cause enlargement of the spleen, piles, dropsy, or hemorrhage from the stomach and bowels.

The blood which supplies the spleen with its elements of nutrition must afterward pass through the portal vein to the liver, and if from disease of the liver obstructions are interposed, the blood is stopped in its progress and dammed back, distending the capillaries in the spleen, causing congestion, inflammation or enlargement. The same difficulty, also, will prevent the blood returning from the intestines, and thus causing the veins in the mucous coats of these parts to become distended with blood, and finally enlarged into hemorrhoids or pile tumors, which, when they inflame, are exceedingly painful, and often require excision to effect a cure. This damming up of the blood in the veins of the abdomen often distends its sides and weakens its coats, so that the watery portion of the blood exudes through into the cavity of the abdomen, causing dropsy; or it may so distend these vessels as to cause the blood to ooze into the stomach or bowels, which may be discharged by vomiting or purging.

From these observations it will be seen how important it is that the system should be kept in such a condition as to prevent any derangement in the functions of this organ; and, to do this, proper attention must be paid to diet, bathing, exercise, to breathing and sleeping, and, in short, to all the habits of life.

The medicines which are being so freely swallowed by all classes are a frightful cause of disturbance in this organ, as they destroy its power to act normally, and render it a burden to its possessor; for we can not violate a law in any part of our organization without incurring the penalty for such violation.

Of the symptoms and treatment of the disease of this important viscera we shall speak in the next number.

Treatment of Corns.—There are three varieties of corns—hard corns, soft corns and bunions. Hard corns commonly occur on the top of the toes, being formed by the pressure of the leather. Soft corns occur between the toes, and come in consequence of pressing the toes upon each other by narrow-toed boots or shoes. Bunions usually occur upon the joints of the great toe. Like corns they come from pressure. When a corn is full grown there is usually a thin membrane between the corn substance and the true skin; this enables a person to remove them without drawing blood or causing pain. They can generally be lifted out, by the use of a sharp-pointed knife, by working down next to the true skin, commencing at the outer edge and completely surrounding it, gradually working from the circumference to the center. You should work down as deep as can be done without drawing blood or causing much pain. The feet may be soaked in hot water for an hour or more before the operation, and a little glycerine or sweet oil applied after it is removed.

If the corn is inflamed, the feet must be soaked in hot water several times for two or three hours, being wrapped in soft, wet cloths during the intervals, and when the inflammation has subsided, the corn should be peeled out as above directed.

Another method is to soak the corn for two or three hours, then shave off the horny part and apply a drop of nitro-muriatic or of glacial acid. A sharp-pointed stick should be used, and the smallest drop placed upon the center of the corn, care being taken not to drop it on the skin surrounding tissues. This may be repeated several times, if necessary, after which keep it moistened with glycerine or oil for a few days, when it will come out. The acid should not be applied if the corn is inflamed. Wear easy-fitting shoes if you do not want them to return.

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[Written for The Herald of Health.]

The Dying Year.

BY HELEN MAR.

"We live, we die!" brief history of man
Upon the fleeting stage. *We live, we die!*
Let this be written on our daily acts,
To keep before us still the awful chasm
Of "something after death!" 'Tis not Death,
Grim monster tho' he be, that makes us pause.
'Tis that illimitable world beyond,
Where Doubt and Faith alternate scepters wield.
"The Dying Year" will make such thoughts recur,
But Hope will spring from the abysmal shades.
We pass away, but each returning spring
Brings back the flowers in recreated bloom;
The harvests ripen for the reaper's scythe,
And swift descending on his viewless wings,
The Angel of Destruction sweeps us hence;
Yet other *forms will rise as strong* and bright,
To wait the sure return of harvest-time.
Behold this great sarcophagus—the world!
It holds the generations who have lived
And loved and slept the dreamless sleep;
'Twill hold us, too, altho' our hearts be gay,
And we have thrown around us walls of hope.
The coffin has been measured, and the worm,
A chrysalis now, will soon a conq'ror be,
And rule his narrowed realm in kingdomed pride.
But still the universe moves ever on!
The great heart of the world still proudly throbs;
Its restless beatings pause not with the flight
Of winged years adown the course of time.
Upon the spring-board of the hopeful *Past*,
The *Present*, like an eager athlete, stands
Prepared for nobler palms than yet has graced
The victor's triumph. All along the years
Have bright, anticipative whispers come
Of *what the Future* might evolve.
We tip-toe stand upon the Mount of Hope
To catch a Pisgah view of *what will be.*
The *world is one*—a *chain electric* binds,
In nuptial pomp, the Orient and the West;
Swift messages of *love* speed through the *waves*,
As if an angel on refulgent wing
Brought some bright blessing in the starry hours.
Down the dim vista of the Future gleams
The new-born glories of our *sunset realm;*
The iron horse now spurns his track of fire,
And startles quaint old forests from their sleep
Primordial. Proud cities will spring up,
Like Tadmor, in the wilderness, along
The iron belt that girds this pluvial land,
And prairies rich, now decked with em'rald grass
And shaking tresses bright with stellar flowers,
Will teem with golden harvests.
And *our stricken Southland, like gold*
When *tried by fire*, shall *yet come forth*
Resplendent for "*Freedom, Peace and Union!*"

Back we go
To linger on the Past—a written book,
A song that echoes deep within the heart,
A *harp* Memnonian, giving utterance
To hymnic music, and the sweetnesses
Of melancholy beauty, and of love.
O'er the soul bright, golden memories break
With spray-like radiance, and yet dark thoughts
Will gather, like a shroud, o'er all the Past.
The *lov'd of other days* have passed away
To the dim land of dreams. The "passion flowers"
That *grew within the soul* and perfumed life,
Bloom nevermore through all the wintry years;
The hopes which swam in beauty's silver tide,
Like sportive dolphins o'er the tepid waves,
Now lifeless lie upon the Lethean sands
Of cold oblivion—they flush no more
The buoyant heart of youth with splendid dreams.
It is a time to read the past aright;
It is a time for high and firm resolve;
It is a time to recast wayward life,
Till, like a pillar of Corinthian mould,
'Twill fill the ideal of a perfect man.

MADISON, *December*, 1866.

RECTIFICATION OF FRANKLIN'S EXPERIMENT.—Every body knows of Franklin's experiment—placing cloths of various colors on snow, from which he concluded that the lighter the color of the body the less its power of absorption. But the conclusion was fallacious, for as it is the dark or caloric rays of the sun to which the effects were due, Tyndall's experiments have shown that the absorption of them is sometimes most with white substances and sometimes greater with black. Now, snow itself, which is perfectly white, absorbs those rays with greater greediness than any other substance; hence, Franklin's white cloth, which absorbs less than the snow, really intercepted those rays from the snow underneath it, and hence the cloth itself sunk but little. It is thus the latter rectifies the earlier science.—*Ex.*

A CHILD was poisoned to death in Paris, by the application of tobacco juice mixed with lard to its head.

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NEW YORK, DECEMBER, 1866.

WATER.

"To the days of the aged it addeth length;
To the might of the strong it addeth strength;
It freshens the heart, it brightens the sight;
'Tis like quaffing a goblet of morning light."

☞ THE PUBLISHERS *do not hold themselves as indorsing every article which may appear in* THE HERALD. *They will allow the largest liberty of expression, believing that by so doing this magazine will prove to be more useful and acceptable to its patrons.*

☞ *Exchanges are at liberty to copy from this magazine by giving due credit to* THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

TOPICS OF THE MONTH.

BY M. L. HOLBROOK, M. D.

THE CLOSE OF THE YEAR.—The date of our present number reminds us that the close of the year is fast approaching, and that very soon the last page of its book will be finished, and the volume of 1866 laid away as a part of the history of the world. To many the record will be one of sadness, one which they would gladly hide away from their memory; but to the world the year has been one of progress. Slowly and surely the public conscience has been improved, and the laws of truth and right have become better known and appreciated. Slowly and surely we believe the world is growing better; old errors are being eradicated, new truths promulgated, and the light of heaven is shining into many dark places where a year ago all was filthy and unclean. So far as THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE has had an influence in this country and in the world, it has been the aim of the Editors and Publishers to make it a true journal of progress in all that relates to human health and human life. It has broadened and enlarged its field of inquiry, and, at great expense, procured contributions from ripe scholars and deep thinkers, and it may well be doubted if there is a magazine of its class anywhere in the country, or perhaps in the world, that has been able to present to its readers so many articles from the best writers of the age. Of the past we may well be proud hat—with the sprea d of knowledge on the subject of human health, physical culture, and all that relates to the improvement of the race, physically, intellectually and morally—our influence has borne with it so much weight in favor of Temperance. Of the future we may promise, at the close of the year, when many of our subscriptions expire, that, as in the past, its course will be onward! We shall waste no energies in quarreling with those who have done what they could to misrepresent us, but strive to do all we can to make a journal that shall be a necessity in every family in the land. We are sure that wherever our journal is read there will be less intemperance, less sickness, less premature death, less vice, less physical and mental deformity, less dependence on drugs and poisons when sick, and more reliance on Nature and her agencies to restore health. We are sure that wherever THE HERALD OF HEALTH goes more children will be born in better health, and grow up beautiful and strong, because parents will rear them more in accordance with Nature. We ask the co-operation of the wise and good everywhere in aiding us in extending our circulation, and thus aiding human progress in temperance, virtue and perfect life.

TWO DOCTORS CAUGHT.—We find the following in The Spectator. It is a good Temperance argument:

"When our friend Perry lay on his sick bed, and the family doctor brought with him a medical brother, that they might talk over his dangerous case, they consulted together for some time, and thought the poor man was so near gone that he did not hear; so the one last brought in began to advise as follows:

"'You must have wine, or there is no hope.'

"Mr. G., the man's master, being present, and being anxious to preserve the life of a good workman, told the doctor he would find the wine if it were needed. So he sent the doctor two bottles, and the doctor put some in a smaller bottle, and labeled it in the usual way, so much to be taken at such times. So the patient told his wife to bring a large bottle that they had, and put the quantity as directed at different times out of one bottle into the other, and say nothing about it. As the doctor came to see his patient day by day, he looked at the bottle, and saw it diminishing as per order, and all seemed right. The sick man in time began to mend, and when sufficiently recovered went to his work again. His master said to him one day, 'I am glad you gave way and took the wine. I was talking to some friends the other day, and I told them you had but two bottles, and that could not be much in a case of life or death.'

"The restored man said, 'Did you tell them that I drank two bottles?'

"The master replied, 'Yes.'

"'Then,' said the restored man, 'you told them wrong, for I have never tasted it.'"

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TRIAL OF STRENGTH BETWEEN A VEGETARIAN AND WATER-DRINKER, AND A BEEF-EATER AND BRANDY-DRINKER.—It is often questioned whether men can endure as much exposure and labor without flesh food as with it. The following trial of endurance between a beef-eater and a bread-eater is reported in the October number of The Vegetarian Messenger:

"DEAR SIR—Thinking that the following incident may be interesting to the readers of The Alliance News, and especially so to our noble friend Dr. Lees, I now send it to you. Early this season there met by accident at Chamouny two gentlemen, the one an American, and the other an Englishman. The American was a beef-eater and a moderate brandy-drinker, and in every respect physically much the stronger man of the two. The Englishman was both a vegetarian and a teetotaler. Both agreed to ascend Mount Blanc together, and being the first ascent of the season great interest was awakened in the little village, and that interest was deepened when the personal habits of both gentlemen became known. Having procured two guides and a porter, they started on their journey, and kept both together until, within twenty minutes of the top of the mountain, the beef-eater and brandy-drinker was compelled by exhaustion to give in and lie down. When the villagers of Chamouny observed that only one of the travelers had reached the top of the mountain great interest was awakened, and strong betting began among them as to whether it was the moderate-drinking American or the total-abstaining Englishman. On their descent it was soon perceived that the water-drinker had the victory. What will our alcoholic-stimulating medical friends say to this? And I have much pleasure in informing you that the English gentleman was none other than William Lawson, Esq., younger brother to our excellent and honorable friend, Wilfrid Lawson, Esq., late M. P. for Carlisle.

"I am, dear sir, yours respectfully,

"ROBERT SIMPSON."

The above letter called forth the following interesting testimony from another Alpine tourist, again illustrating the fact that a Vegetarian diet is most favorable to enduring toil:

TEETOTALISM AND STRENGTH.

"DEAR SIR—A few weeks since a paragraph appeared in The Alliance News to the effect that a teetotaler and non-teetotaler had tried their strength in climbing Mount Blanc, with decided advantages to the former. My own experience in mountaineering has always gone to the same issue, *i. e.*, *cæteris paribus*, the teetotaler will win in all cases of enduring toil. This midsummer I and seven of my boys have had a month's run in Switzerland. We were on our feet 21 days, and of these the boys would only take one of absolute rest, and then the most of us took a stroll. The least distance we walked in one day was 15 miles, the greatest about 36 miles. Altogether we walked over 500 miles, and during fourteen we reached heights varying from 7,000 to 12,000 feet, ten of these involving considerable work on snow and ice. The boys were so eager to see, that they would not rest. The party was almost wholly teetotal—two were vegetarians, and these undoubtedly outstripped all the others in power, being always the most eager to go on, and often saving a fourth of the time in making a stiff climb.

"THOMAS WYLES.

"ALLSLEY PARK COLLEGE, *August* 29, 1866."

TEMPERANCE OF ROMAN WOMEN.—There is much said of the increasing habit among American women of using wine, and with much truth it is said that the effects of this habit will be disastrous to American children. Women need to return to the good old Roman custom of Temperance. It is said that "at the time of the labors of our Saviour on earth, and for a long period after, it was considered infamous for a Roman woman to taste of wine. For a guest to offer a glass of wine to one of the women of the household was looked upon as a deep insult, as it implied a want of chastity on her part. History records several instances where women were put to death by their husbands because they smelt of 'temetum.' The consequences of this physical training and abstinence from all intoxicating liquor was that the Romans were noted for their endurance and strength. Had we the same habits, with our superior Christian civilization, we should astonish the world by our physical health and strength. Manufacturers of patent medicines, which are no better than so much rum, would be compelled to resort to some honest means of gaining a livelihood."

SHORT DRESS.—A matter of notice to persons in the vicinity of the yard gates of some of our manufacturing companies when the operatives are going to or returning from their work, is the number of female operatives who have donned the short dress and trowsers, considerably in vogue years ago. So popular has this costume become among "mill girls," while about their work, that it is believed the adherents of "Bloomerism," in this regard, are now numbered by hundreds in this city. The operatives present, as a reason for the change, that the newly adopted dress is more comfortable while at their work than the old style.—*Lowell News.*

HORSE-FEEDING.—Bonner, who has the best stable of fine horses in the world, feeds them upon Hygienic principles. They are not allowed to eat, except at regular hours of the day, and then they are fed with all the system which pertains to a well-ordered family. The horses are kept muzzled during the hours when not feeding, and thus can only be kept in condition. It would be a good thing if people would feed themselves and children with the same care.

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CRUELTY TO ANIMALS.—The benevolent feeling of the American people is truly on the increase. Recently a very effective organization was started under the auspices of Legislative enactment and distinguished persons, for the purpose of preventing cruelty to animals. The lowest animal to which they have as yet given their attention is the turtle. With a view to settle the question if it were possible to be cruel to animals, Henry Bergh addressed a letter to Prof. Agassiz. He says:

"Believing that the turtle, low as it is in the scale of animated creation, is, nevertheless, not beneath the attention of a society which professes for its object the suppression of cruelty to all animals, some few weeks ago I had arrested the captain of a vessel laden with turtles from the Florida coast, for inflicting cruelty upon them.

"The turtles were lying on their backs, kept without food or water, and having holes bored through their fins or legs, with cords run through, to secure them. On the trial of the case, a Dr. Guernsey testified that the turtle experienced no suffering from the want of food; that it was more cruel to place it on its belly than on its back, for it would live longer in the latter position; and that boring a hole through the leg of a turtle inflicted no more pain than the bite of a mosquito on a human being. The Justice regarding this as the testimony of an expert, dismissed the case. Subsequently, however, the Grand Jury found a bill against the captain, and the subject again comes up.

"This case created considerable discussion in our city papers, as to whether the turtle is an animal so endowed with sensation that it can be he subject of cruelty; and some consider that this society is going beyond the scope of its proper duties 'in refining the humanities so far down in the scale of being.' By one of our most respectable weeklies it was seriously stated that so little can the turtle experience pain, that it will quietly submit to the most extensive mutilations with feelings more akin to pleasure than suffering."

In answer, Prof. Agassiz says:

"I need not tell you that men have always excuses enough to justify their wrong-doings. So it was with the Slave trade; so it is to-day with the turtle market. And though black men are more likely to be protected hereafter, their former sufferings during long sea voyages are on record, and humanity shudders at the tale. Whether men may ever be refined enough to feel their guilt when they torment animals remains to be seen, and your society will no doubt do its share in educating them in that direction. But to say that turtles do not suffer when dragged from their natural haunts, tied that they may not be able to move, turned upside down, etc., is simply absurd. It is true that they can live for a long time without food or drink; but they do feel pain, and are indeed very sensitive to some injuries. That of turning them upside down among others is sufficient, for instance, to prevent their eggs from hatching. Their suffering may be inferred by the violent and convulsive movements to which the perforation of their fins gives rise. And yet to this proceeding dealers in turtles generally resort in order to tie them more closely and pack a larger number in a smaller space. Of course, when tied in this manner, they may suffer less by being turned upon their backs, because the fins are thus relieved from the pressure of their whole weight; but the best evidence I can afford that they suffer in that position is that they die if it is much protracted; and yet turtles are among the animals which resist longest privations of all kinds. Is not the fact that they may die merely from the attitude in which they are forcibly kept, the most complete evidenc of their suffering? For what else would cause death, if not pain and the unnatural pressure of parts brought into unaccustomed positions?"

WE find the following tribute to our monthly in The New York Tribune of recent date:

"The HERALD OF HEALTH presents an agreeable and instructive miscellany of popular reading, in addition to the lucid expositions of Hygiene, to which it is specially devoted. It aims to accomplish the work which is usually neglected by the schoolmaster, and to lay before the American people, especially the younger members of the community, a plain account of the principles and laws which are at the foundation of physical well-being. Without maintaining any ultra system of abstinence, it makes war on alcohol, tobacco and the unclean social habits which arise from their use, and earnestly sets forth the importance of purity of body as well as of purity of mind. The value of frequent bathing, regular exercise, wholesome cooking, and other ordinances of muscular Christianity, is insisted on with apostolic zeal, and the best methods of turning them to practical account are fully explained and illustrated. Among the contributors to this journal, we observe the names of several distinguished writers, whose able pens give peculiar variety and interest to its pages. The arrangement of the matter evinces not a little editorial experience an skill, insuring a valuable family journal which deserves a kindly welcome as an efficient aid to the progress of popular education."

From Demorest's Monthly we quote:

"HERALD OF HEALTH.—This excellent journal has greatly improved under new management. It has secured a very able corps of writers, and every article is telling and full of valuable practical information. It is worth several doctors to every household, provided doctors were as good as they might be."

EXERCISE FOR TREES.—Herbert Spencer, a writer of note in England, thinks the wind has much to do in producing the upward rise of sap in both tree and shrub, by its influence on the boughs and twigs of the plant; and experienced gardeners, who train fruit trees upon walls, etc., find it necessary to loosen them occasionally, and let them blow about a little for exercise.

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Answers to Correspondents.

BY A. L. WOOD, M. D.

☞ *The readers of* THE HERALD *are invited to ask such questions as will be of general interest for this department, where they will be briefly but comprehensively answered.*

Unventilated Cars.—"Why is it that the ventilators in railroad cars are almost always kept closed, and what is the best course for a traveler to pursue who wishes to breathe pure air?"

They are kept closed because the conductors and passengers are ignorant of the fact that man is a breathing animal, or else are careless of their own and others welfare. Railroad cars are almost universally poorly ventilated, even when the ventilators are open, which is seldom the case, and the fatigue and lassitude produced by riding in them is to be attributed, for the most part, to breathing impure air. The best authorities on the subject of ventilation consider that ten cubic feet of pure air per minute are necessary for healthful respiration. In an ordinary car, when the seats are all filled, there are less than sixty cubic feet of air to each person, so that in six minutes the whole body of air in the car is rendered unfit to breathe, and, unless this impure air is conducted away and fresh air takes its place, the passengers must continue to breathe over and over again not only the poisoned air they have once breathed, but a mixture of the air from the lungs of fifty or sixty other persons, many of whom are diseased, to say nothing of the emanations from their bodies, clothing and tobacco quids. The ventilators in cars should be so constructed as to be unclosable, and should be capable of admitting at least ten cubic feet of air per minute to each passenger. Until this is done, passengers must look out for themselves as best they can. If the ventilators are closed, open them, and if you are accustomed to fresh air, open your window. It will do you no harm unless you are one of those nervous, fidgetty individuals who are always fearful lest a breath of pure air from the great reservoir of Nature shall come in contact with their delicate, hot-house-nurtured bodies. If you are one of those unfortunate persons, lose no time in learning and obeying the laws of health, at least to such an extent as to prevent a little pure air from hurting you.

Movement-Cure.—"What is the difference between Movements and Gymnastics? To what classes of disease is the Movement-cure treatment specially applicable?"

1. Gymnastics are for the healthy, to keep them so and to strengthen and develop their bodily powers. Movements are for the sick or deformed, to restore them to health and symmetry, and thus to fit them for the gymnasium. Gymnastics are quick, active motions. Movements are slow, steady motions. Gymnastics are general in their effects, calling into action, indiscriminately, all parts of the body. Movements are mostly local, being directed to particular muscles, parts or organs. Gymnastics diffuse the nervous energy. Movements concentrate it upon those organs which are deficient in nervous force. Gymnastics are practiced indiscriminately by all alike. Movements are carefully prescribed—such processes being employed as the peculiarities of each may indicate; the kind, quality, quantity and manner of application depending upon the condition of the patient.

2. The Movement-cure treatment is applicable and useful in all forms of chronic disease and deformity.

Running.—Running, when properly performed, is an excellent means of physical culture. It calls into action a large proportion of the muscles of the body, equalizes the nervous forces, greatly promotes the healthful circulation of the blood, and strengthens and develops the lungs. To derive the greatest benefit from it, it should be practiced regularly every day, commencing moderately at first, and increasing the distance and speed as the running power increases. One of the most important rules to be observed is to always keep the mouth shut and to attempt to run no faster than is compatible with a free and easy respiration through the nostrils. With many this will be difficult at first, but perseverance will remove the difficulty. While running, the body should be slightly inclined forward, the hips kept back, the chest well out in front, the shoulders back, and the elbows bent at right angles, with the forearm directed across the chest.

Symmetrical Development.—"For a healthy, well-formed person, what should be the measurement of the chest, compared with the height and weight?"

A man twenty years of age and five feet in height should weigh one hundred pounds and measure at least half his height, or thirty inches, around his chest. For every inch in height above five feet he should increase five pounds in weight, and more as the age increases. The circumference of the chest should never be less than half the height, and it may be two-thirds. The weight should increase with the size of the chest as well as with the height.

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Cause of Decayed Teeth.—At a recent meeting of the Society for the Advancement of Science and Art at Cooper Institute, Dr. Griscom stated that he believed the deficiency of phosphorus was not only the cause of diseased teeth, but of nervousness and even insanity. He said that in his professional experience he had seen many instances to confirm him in this belief, some of which he related. In the bran of wheat, which is rejected, there is fourteen times as much phosphorus as there is in the fine flour which is eaten. Hence, brown bread is fourteen times as nutritious as superfine-flour bread. There is, no doubt, a great deal of truth in Dr. Griscom's statement, and it is a powerful argument in favor of the use of unbolted wheaten flour. But there are other causes which tend to produce decay of the teeth, such as breathing through the mouth, hot drinks, uncleanliness of the teeth, etc. The Asiatic and African nations are not troubled with decayed teeth.

Know Thyself.—Yes, the Creator evidently designed that man should be happy, and created him with all the powers and faculties necessary to secure happiness. The reason why he suffers is because he does not use aright his God-given powers. If he would obey the laws instituted for his control, he might be happy. If through ignorance or perverseness he does not obey them, he suffers. Man studies and understands the laws which govern the motions of the planets, but neglects to obtain a knowledge of the laws which regulate the functions of his own body.

Bonnets in Church.—"Why is it that ladies always wear their hats and bonnets in church, and at lectures? Why should women wear headdresses at such places more than men?"

They wear them for the same reason that they do many other foolish things—because it is the fashion. It is an injurious custom, as it keeps the head too hot and causes much of the congestion of the head and headache to which women are so much subject in public gatherings. You who suffer thus, try sitting with the head uncovered and note the difference.

The Good Time Coming.—"Do you believe the time will ever come when mankind will be free from disease and suffering?"

I do, but it will be in the "far distant future." The law of progression declares it, our own intuitions proclaim it.

> The ideal longings of the soul,
> Which through the mind, prophetic, roll,
> Proclaim that man shall reach the goal
> Of his highest aspirations.

Cholera.—"I have seen it stated that cholera originates *only* 'from filthy habits.' Now I would like to know why the cholera is not as bad one season (year) as another, or do people all of a sudden become so much more filthy in their habits?"

In order to raise dough with yeast a certain degree of temperature is necessary, together with a small quantity of yeast, to start the process of fermentation. So with the cholera; a certain condition of impurity of the physical system, caused by filthy and unhealthful habits, is an essential condition for its production; but it is also necessary that some of the peculiar cholera poison should be communicated to the individual from others.

Vails and Beauty.—"I see by the November HERALD that you disapprove of the use of vails. I suppose you will admit that they render the face more beautiful, and will not that compensate for the injury they may do to the health?"

Vails may be beautiful in themselves, but I do not admit that they make the wearer more beautiful; they only make her appear so, for the time, by hiding the imperfections of form and expression of the features. Better strive to heighten the beauty of the face by increasing the beauty of the spirit within, than to try to make people think you are handsomer than you are by hiding your homeliness and impairing your health by wearing vails.

Warm Sleeping-Rooms.—"Is it injurious to sleep in a room where there is a fire?" What is the best way to warm and ventilate sleeping apartments?"

It is better to sleep in a room comfortably warm than it is to sleep in a very cold room, provided there is good ventilation, for the reason that less clothing is required to keep comfortable. The less clothing consistent with comfort, the better, whether awake or asleep. Warm air is just as pure as cold air, and ventilation is more easily secured when there is a difference of temperature between the air in a room and that outside. The best way of warming and ventilating sleeping-rooms, is to have an open grate fire and open windows.

Congestion of the Brain, Etc.—"How would you treat chronic irritation and congestion of the spinal cord and brain?"

By such movements, baths, frictions and manipulations as will call the blood and nervous influence from the congested parts to the skin, muscles and integumentary tissues. Friction, stroking and percussion of the spine are among the most useful movements. They should be commenced very gently and be applied more vigously as the tenderness disappears.

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Healthy Spices and Condiments.

THE ONLY ADMISSIBLE HYGIENIC SEASONINGS.

A PERFORMER OF SOME NOTE—Jim Nastics.

THE right man in the right place: A husband when he is at home in the evening.

WHY is a note of hand like a bunch of grapes? Because it is matured by falling dew.

ALWAYS be as polite as you can with your parting bow; your last speech is the one remembered.

JINKS says that prejudices against color are very natural; and yet the prettiest girl he ever knew was Olive Brown.

THE phrase, "Fixed as the everlasting hills," is quite inadmissible; there never was a hill that didn't slope.

HARTLEY COLERIDGE, once being asked which of Wordsworth's productions he considered the prettiest, very promptly replied, "His daughter Dora."

"I EXPECT," said a young physician, on hearing exaggerated rumors of the cholera, "to witness a great many death-bed scenes this summer." "Doubtless," replied a friend "if you get much practice."

THAT was a beautiful idea in the mind of a little girl, who, on beholding a rose-bud where on the topmost stem the oldest rose was fading, while below and around it three beautiful crimson buds were just unfolding their charms, at once artlessly expressed to her brother: "See, Willie, these little buds have just awakened in time to kiss their mother before she dies!"

TOO MUCH AT ONCE.—Lord Chesterfield, one day, at an inn where he dined, complained very much that the plates and dishes were dirty. The waiter, with a dreg of pertness, observed, "It is said that every one must eat a peck of dirt before he dies." "That may be true," said Chesterfield, "but no one is obliged to eat it all at one meal, you dirty dog."

DRIED APPLES.—Little Freddie was told one day that he mustn't eat raw dried apples without chewing them up very fine, or they would swell in him and make him very big. Two or three days afterward he ran home in a great hurry to tell that he had seen a great big man, "more'n so big!" stretching his arms at full length; "and I suppose he'd been eatin' dried apples without chewin' 'em!"

"WHEN a man of sense," says Mrs. Hannah More, "comes to marry, it is a companion he wants, not merely a creature who can paint, and play, and dress, and dance. It is a being who can comfort and counsel him; one who can reason and reflect, feel and judge, act and discourse, and discriminate; one who can assist him in his affairs, lighten his cares, soothe his sorrows, gratify his joys, strengthen his principles and educate his children."

Publishers' Department.

To Our Readers.—The present number of this journal closes our labors for the year 1866, and completes the Forty-first Volume of THE WATER-CURE JOURNAL and Eighth Volume of THE HERALD OF HEALTH AND JOURNAL OF PHYSICAL CULTURE.

In the early age of this journal we were but readers of its pages, and believers and admirers of the truths it taught. Well do we remember with what interest we anticipated its monthly visits, and with what eagerness we perused its pages, selecting and appropriating from each number such ideas as we thought best calculated to make us healthier and happier, wiser and better.

Although we did not indorse every thing that appeared in its columns, yet the majority of its teachings we believed to be true, because we thought the principles advocated and the practices recommended were founded upon Nature's laws, which were established in the physical, mental and moral organization of man, and if understood and put in practice would rid the world of sin and its consequences, disease and premature death.

To-day we are as strong in the faith as when we first enlisted in the cause, fully subscribing to the doctrine that disease and premature death are the results of certain causes; that they arise from interference with the natural laws of the human organization; we believe that these laws are under man's control, and that health, happiness and long life are the rewards of obedience thereto.

There is a grand harmonious chain that binds together all the great truths of the created universe; those which are revealed in the great book of Nature are linked indissolubly with those revealed in the "sacred page," and what the world most needs is "wisdom," "knowledge" and "understanding" of both the works and Word of God, and of the laws which He has established to govern and control His wondrous works.

It will be in the future, as it has been in the past, the object of this journal to teach mankind to know these laws, that the evils which result from interfering with or ignoring them may be done away; that sickness and all its attendant sufferings may be banished from the world, and that "all may know the law from the least to the greatest," and reap the rewards conferred upon those who shall obey.

To what extent we have succeeded in the past we leave our readers to judge. For the future we can only promise to do our best. We shall constantly add to our already acquired knowledge and experience all that we gain from the experience of others. We shall "seize upon truth wherever it may be found," and appropriate it for the benefit of our readers. We do not claim perfection, nor are we so arrogant as to deem that we can solve all the mysteries of human life. We are learning constantly, and, with the immortal Newton, we feel that we are "near the shore, while a vast ocean of truth lies unexplored before us;" but with our ship strongly built and well manned, with hoisted sails and compass poised, and Truth for our guiding star, we shall ride safely over this unexplored sea, and even penetrate its depths, making new acquisitions and discoveries which shall aid us in spreading health and happiness, peace and joy, before our patrons and the world at large.

It is now two years and a half since we became the sole Proprietors and Publishers of THE HERALD OF HEALTH, and although our business and reputation have been unjustly maligned and maliciously traduced, yet we have reason to feel encouraged at the patronage we have re-

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ceived and the approving words spoken by our readers, as well as the flattering notices bestowed upon us by the public press.

Our love for the cause has constrained us to pass over in silence the injustice that has been done us, trusting that our patrons will judge us by our merits and not by the misrepresentations of others. Our success in the future depends upon the co-operation of our friends, and we trust that all who have read our journal in the past will not only send us at once their subscriptions for another year, but will each send the name of at least one new subscriber with their own. We hope that all who feel an interest in the great cause of physical regeneration will aid the good work by getting up Clubs. You will see, by looking over our Premium List, that we do not ask this without remuneration.

A Club that will win a Premium can easily be obtained in almost every neighborhood. Show a copy of this number to each of your neighbors, pointing out the object of THE HERALD, with the able list of contributors; tell them of the time and money it will save them in preventing sickness and promoting health; tell them of the thousands of families—for there are many thousands of such—who have never employed a physician since they began to read its pages, and we feel sure that you will swell our list till it shall be more than doubled the coming year. Who will send us the first list, and who the longest? Let all who love the good cause try!

Lectures and Lecturers.—The following gentlemen are familiar with the great question of Physical Culture, and we suggest to our friends in the country that they form clubs and raise funds to secure, if possible, their lecture service: Horace Greeley, George W. Bungay, Dr. M. L. Holbrook, Dr. A. L. Wood, Dr. E. P. Miller, F. B. Perkins, Dr. Snodgrass, Dr. Dio Lewis, Moses Coit Tyler, S. R. Wells, Nelson Sizer.

Applications for the services of these gentlemen may be sent to us (stamp inclosed for the payment of postage) and we will endeavor to secure an engagement from them. Persons applying will please name two, three or more of the gentlemen whom they would prefer, so that, if the first person of their choice can not be obtained, the second or third may. Address MILLER, WOOD & Co., 15 Laight Street, New York. Any lyceum or school near New York city, and convenient of access, which will give us a club of fifty subscribers for THE HERALD OF HEALTH, shall have a gratuitous lecture from some one of our lecturers.

Premiums.—Any person sending us fifty subscribers and one hundred dollars shall be entitled to fifty dollars' worth of treatment at the Hygienic Institute, 15 Laight Street, and any one sending us one hundred subscribers and two hundred dollars shall receive one hundred and twenty-five dollars' worth of treatment. This offer is open to all, but designed particularly for invalids who can not well afford to be at the expense of paying for board and treatment. By accepting this offer and putting forth a little effort they will be enabled to pay their way.

Agents Wanted.—We want agents, local and traveling, to canvass for THE HERALD OF HEALTH and Sexual Physiology. Our agents are meeting with excellent success, and there is plenty of room for more. We want them everywhere throughout city and country. For special terms to Agents address the Publishers.

A Sewing-Machine for Nothing.—It will be seen that we give a Sewing-Machine of Wheeler & Wilson's make, worth $55, for 30 subscribers and $60.

This Number.—This number closes the volume and the year of 1866. The first article, by Mr. Sims, on the "Longevity of the Aborigines," though lengthy, will bear a careful reading.

The continuation of Henry Ward Beecher's article on "Amusements" will not be regretted. It alone is worth the price of the entire volume.

The "Letter from Dr. Dio Lewis," though brief, is very instructive, and upon a topic on which much more should be written.

The letter from Mr. Butts, who has paid so much attention to muscle culture, contains many valuable hints which could be practiced by all without injury.

"How to Cultivate Weak Lungs," is the first of a series of articles from Prof. Royce, and they will, we know, be very instructive. Every person whose family tendency is to consumption will find in these articles the way clearly pointed out how they may become strong in chest and in wind by vocal culture, and at the same time improve the voice.

Topics for the Month, remarks on the Home-Treatment of Disease, Notes to Correspondents, etc., are full of information valuable to all.

Special Request.—Our friends will oblige us, and benefit others, by sending us the names and post-office address of all invalids with whom they are acquainted; also, all friends of Temperance, Health Reform and Physical Culture. Any one who will send us a list of 25 *bona fide* names of such persons shall receive free by mail a copy of Prof. Wilson's work of 75 pages on the "Turkish Bath."

Announcement.—We take pleasure in announcing a series of articles from our London agent and correspondent, Mr. J. Burns, on "The Care of Children." Mr. Burns understands his subject well, and will make the articles most valuable. We hope to have the first article for the January, or, at furthest, the February number.

Sexual Physiology.—Our new work on Sexual Physiology is already meeting with a rapid sale. Agents wishing to canvass for it should address us for particulars. The price of a single copy by mail is $2, which, considering the style of binding and the large number of engravings which illustrate the work, is very cheap. We are very sure that no person ordering a copy will ever find reason to regret it.

Clubs.—Every friend of our magazine and the cause we advocate should see to it now that our cause is nobly sustained for the coming year. We are bound to make the journal a good one, and one that can safely be put in the hands of all with the assurance that its teachings will improve their health and habits. Let each one not only re-subscribe, but get one, two, ten or twenty new names.

Write Plainly.—All letters should be directed very plainly, and all names should be carefully spelled. Sometimes people write so *they* can read the names easily, because familiar with them, but others can not do so. Mistakes may arise in this way. The address should also be well defined and written plainly.

Herald for 1863, 1864 and 1865.—We have a few bound volumes of THE HERALD OF HEALTH for 1863, 1864 and 1865 on hand, which will be sent free by mail on receipt of $2 25.

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PREMIUM LIST FOR 1867!

As will be seen by our Prospectus on the fourth page of the cover, our Premium List is more valuable than ever before. The following is an abstract of it:

For 30 *Subscribers and* $60,

We give a "Wheeler & Wilson Sewing-Machine," worth $55, or a Silver Watch of the same value and of American manufacture;

For 15 *Subscribers and* $30,

"Webster's Pictorial Unabridged Dictionary," worth $12;

For 10 *Subscribers and* $20,

Each member of the Club will receive a copy of "Lincoln at Home." This Picture is 19x24 inches, and a very valuable one, being well engraved on steel;

For 6 *Subscribers and* $12,

One copy of the "Hydropathic Encyclopedia," worth $4 50.

For 4 *Subscribers and* $8,

A Gold Pen worth $3;

For 3 *Subscribers and* $6,

A copy of the "Hand-Book of Hygienic Practice," worth $2;

For 2 *Subscribers and* $4,

[One of whom shall be a new subscriber], one copy of "Lincoln at Home," worth $1.

These Premiums are all valuable ones, and priced at just what they sell for in market. Owing to our taking a large number, we are enabled to offer very great inducements to our patrons. We hope our friends everywhere will help to extend our circulation.

Job Printing.—We are prepared to execute in neat, substantial styles, various kinds of JOB PRINTING: such as Pamphlets, Circulars, Envelopes, Billheads, Letter-heads, Cards, Labels, Small Handbills, etc., at the same rates as in all first-class New York printing establishments. Stereotype work done to order.

☞ Our friends in the country who wish neat and accurate printing, can rely on first-class work, by sending plainly written and well-prepared manuscripts. For terms, send sample or copy of work, state quality of printing material to be used, and the number of copies wanted, inclosing a prepaid envelope for a reply.

Index.—Our Index will show what we have given during the year for the price of subscription; enough to make several $2 books.

Please Observe—Through mistake, several copies of THE HERALD for October were mailed to a few of our subscribers in place of the number for November. By informing the Publishers, they will be pleased to mail the proper one.

Circulars.—Those of our subscribers who wish to aid us in extending the circulation of THE HERALD, should obtain our circular to exhibit to their friends. Every invalid who will send a stamped envelope shall receive in it one of each of our circulars for THE HERALD, Books and Baths.

Canada Subscribers will please send 12 cents extra to prepay postage. Quite a number of new subscribers have forgotten to do so.

Advertisements.

☞ ADVERTISEMENTS of an appropriate character will be inserted at the following rates: Short advertisements, 25 cents per line; thirteen lines, for three or more insertions without change, 20 per cent. discount; one-half column, $12; one column, $22; one page, $40. All advertisements must be received at this office by the 10th of the month preceding that on which they are to appear.



A PLEASANT RESORT.

Persons visiting New York who desire to avoid the bustle of hotels will find ample accommodations, with first-class rooms and good Hygienic table, at No. 63 COLUMBIA STREET, Brooklyn Heights, New York, three minutes' walk from Fulton Ferry, being nearer to the business center of New York than most of the best hotels in that city.

Connected with this establishment is the

TURKISH BATH,

One of the greatest physical luxuries, nor is there any agent so powerful to renovate and restore the enfeebled or diseased system. For terms, etc., address

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The BEST SHORTHAND may be thoroughly and easily learned from Graham's *Standard Phonographic Series*; [1] SYNOPSIS, 39 c.; cloth, 54 cents. [2] HAND-BOOK (presenting every principle of every style of the Art), $2.16. [3] FIRST READER, $1.58; KEY, 33 cents. [4] SECOND READER, $1.87. [5] STANDARD-PHONOGRAPHIC DICTIONARY (shows the best way of writing in either style 120,000 words and phrases), $4.36.

Phonographic Visitor, Vol. I, Nos. 1-7, 62 cents; unbound, 40 cents.

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STANDARD PHONOGRAPHIC LIBRARY, for 1866-7, 600 pages, $5.

Address ANDREW J. GRAHAM,
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BARTLETT & DEMOREST'S ELASTIC

STITCH FAMILY SEWING MACHINE.—This new and perfect Sewing-Machine combines all the advantages of the best and most popular Sewing-Machines, greatly simplified, with other essential improvements. Runs either way; uses a short, straight needle; is extremely simple; sews all kinds of goods; runs very still; has only one threading; most perfect tension, and performs easily with less instruction, and more perfectly and efficiently, all kinds of family sewing than any Sewing-Machine ever introduced. If you want the best, do not fail to examine this machine. Licensed to use the Wheeler & Wilson feed, Singer tension and Howe needle. $25. EMPORIUM OF FASHIONS, No. 473 Broadway, New York. Agents wanted. Send for Circular. dec-tf

N. D. THOMPSON, M.D., HYGIENIC

PHYSICIAN, Swedish Movements, No. 140 West Sixteenth Street, N. Y. A few invalids can find a pleasant home, with skillful physicians and favorable surroundings for restoring to health. Hygienic boarding. dec-2t*

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$700 A YEAR, WITHOUT EXPENSE. 250,000 WITNESSES.

PURCHASERS of Sewing-Machines will be interested in the following statements:

Mrs. H. B. of Rockford, Ill., writes to Messrs. Wheeler & Wilson:

I send you a Wheeler & Wilson Machine, No. 10,426, to have attached the recent improvements—the improved loop-check, tension, glass foot, new style hemmer, braider and corder. I have used this machine for six years *without repairing*, and in that time it has earned for me a little over $4000.

Mrs. F. H. F. of Elizabeth, N. J., writes: I have had one of the Wheeler & Wilson Sewing-Machines, No. 6,352, for ten years. It has been used by myself, family and friends constantly, with *no expense for repairs.*

Two hundred and fifty thousand witnesses might be called (the number of machines manufactured by the Wheeler & Wilson Co.), but these two testimonials are sufficient to direct attention to a very important particular. Simplicity in the structure of a machine is of prime importance, as regards its comprehension, facility of working, and need of repairs. Friction from complication of parts and movements is sure to work mischief. A sewing-machine should be able to make 1000 stitches a minute, say eight hours each day. This would give annually about 150,000,000 of stitches, or, in ten years, 1,500,000,000, and, of course, require a corresponding number of movements. Hence, the bearing and moving points and surfaces should be carefully observed. Are there many points to oil, or is much oil required? If so, the machine will soon want repairs.

In the testimony before the Commissioner of Patents, the witnesses, mechanical experts, well qualified from observation and experience, directed his especial attention to the simplicity of the Wheeler & Wilson Machine, and its consequent freedom from wear and need of repairs.

John Sibley deposed: I must declare the Wheeler & Wilson to be the most wonderful and comprehensive sewing mechanism ever put into the American market. It is the simplest as well as the most cunning in principle. There is genius and high mechanical ability in its arrangement, and therefore it is most reliable and easy to keep in order. There is a directness of connection between the power and the result never found by me in the devices of any other inventor, and the mechanical results follow of the highest possible speed, quiet and easy movement, which make it a delight to mechanicians. I think it just to denominate it one of the marvels of the age.

Geo. H. Collins deposed: I have long regarded the Wheeler & Wilson Machine as the most ingenious in plan and the most remarkable in its performance. The wide range of work to which it is adapted, the great rapidity of its movement and its almost noiseless execution, are due to its peculiar construction. I am satisfied that one of these machines will do eight or ten times as much as can be done by hand, and quite one-fifth more than any other two-thread machine will do. With very trifling repairs it will run ten years. No machine of equal merit has ever been under my observation.

Charles A. Durgin deposed: I have been familiar with sewing-machines for many years. The Wheeler & Wilson Machines are vastly superior in their adaptation and use upon all classes of work for domestic purposes. One great consideration in the use of Sewing-Machines is the expense of repairs. From the ease of all its mechanical movements, the Wheeler & Wilson Machine is subjected to but slight wear, and the expense of repair is very slight in comparison with other machines. I am fully convinced that they do not cost one-fifth of that of any other two-thread machine.

N. D. Stoops deposed: I have visited all the sewing-machine manufactories, and have had the best facilities for finding out not only what was best, but why it was best. The Wheeler & Wilson is the simplest in parts, the most direct, quiet and rapid in action of any two-thread machine. Other machines can not keep up with it. I now sell all kinds, and sell ten of these to one of any other. Others come back for exchange with many murmurs and complaints; these never. Once sold, they are gone, and as an article of merchandise they are always salable.

Sewing with a machine is such an advance upon hand-sewing that it should not be surprising to hear any machine commended. Those, however, are best qualified to judge of their comparative value who have tried more than one thoroughly. A machine may, by some peculiarity, be well suited to a special work, and yet poorly adapted to the general purposes of sewing. Many of what are called *selling* points in a machine are simply frivolous, and intended to tickle the fancy of those who are *sold*. It is no great recommendation in a horse for family use, that it can walk on three legs; and so useless tricks in a sewing-machine should be ignored. Substantial excellencies only can stand the test of time and use. Are the offices it performs useful? and does it execute them well?

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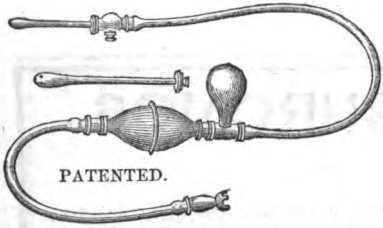
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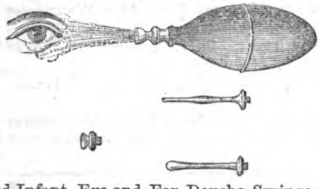
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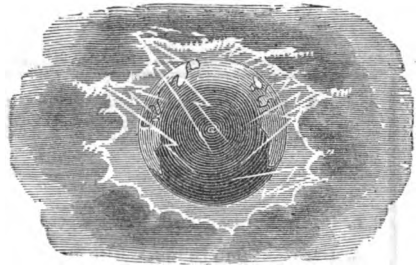
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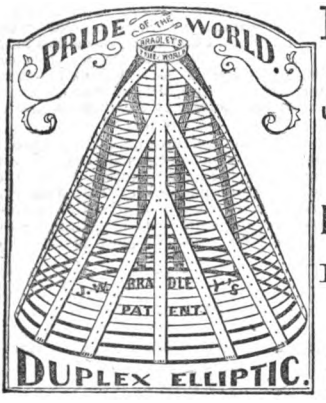
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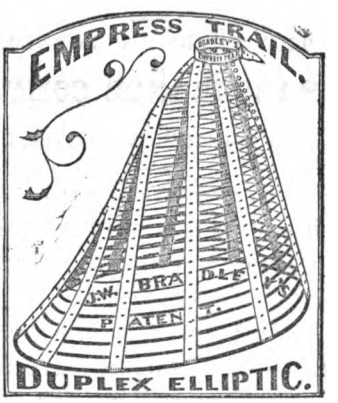
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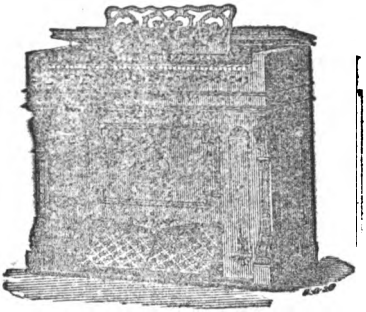
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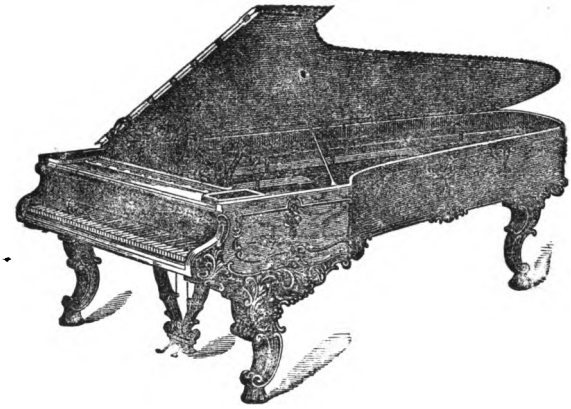
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