

Bagg, Joseph H.

BAGG

ON

MAGNETISM,

OR THE

DOCTRINE

OF

EQUILIBRIUM:

BEING AN ATTEMPT TO PROVE THAT NOT ONLY THE HEALTH OF VEGETABLES AND ANIMALS, BUT ALL SYSTEMS AND PRINCIPLES IN NATURE, DEPEND UPON AN EQUILIBRIUM OF ACTION BETWEEN TWO EXTREMES, AND THAT THE IMPULSE OR FORCE BY WHICH THEY ARE PRODUCED, AS WELL AS DESTROYED, IS OWING TO THE MAGNETIC FLUIDS WHICH OPERATE BOTH AT THE SAME TIME, ON THE SAME OBJECT OR PRINCIPLE.

"THE PROPER STUDY OF MANKIND IS MAN."

IN TWO PARTS.

DETROIT:

BAGG AND HARMON, PRINTERS.

1845.

DISTRICT COURT OF THE UNITED STATES }
FOR THE DISTRICT OF MICHIGAN.

DISTRICT OF MICHIGAN, ss.—Be it remembered that on this twelfth day of December, A. D. one thousand eight hundred and forty-four, Joseph H. Bagg, of the said District, hath deposited in the office of the Clerk of said Court, a book the title of which is in the words following, to wit; "Bagg on Magnetism, or the doctrine of Equilibrium," being designed to prove that not only the health of vegetables and animals, but all systems and principles in nature depend upon an equilibrium of action between two extremes, and that the impulse or force by which they are produced, as well as destroyed, is owing to the magnetic fluids which operate both at the same time on the same object or principle. The proper study of mankind is man." In two parts, the right whereof he claims as author and proprietor, in conformity with an act of Congress, entitled "An act to amend the several acts respecting copy rights."

In testimony whereof I have hereto subscribed my name and affixed the seal of the said court, this twelfth day of December, A. D. eighteen hundred and forty four.

L. S.

JNO. WINDER, Clerk.
By GEO. G. BULL, Deputy.

DEDICATION.

To those who are not blinded by prejudice; have the desire to attempt, patience to continue, and wish to investigate the laws of nature, and dare view her as she really is, without reference to beaten tracks or the common highway of the schools, and have the firmness to sustain the result of their convictions, whether practicing the healing art, or are engaged in any operations of mind with matter, the subsequent pages are with respect inscribed by the Author.

J. H. BAGG.

PREFACE.

THE origin of the following pages may be attributed to an universally confessed and acknowledged want of general principles to guide us in the practice of the healing art. From witnessing, in a more or less extensive practice, for the last twenty-five years, all kinds of diseases attempted to be cured by one kind of medicines, and one kind of disease cured by all kinds of medicines, the diseases, being as different from each other as the poles, and the remedies, many of them, apparently also opposite in effect, with as numerous a corresponding variety of advocates for each, we were led to believe, that, all, operated in one uniform manner, agreeable to some general law hitherto not understood, and the result of our investigations has justified our most sanguine anticipations. The cause of animal life and the law by which it is governed, has never as yet, been satisfactorily ascertained, much less demonstrated. While one class of philosophers have accounted for it on mechanical and other has on chemical principles; a third has attributed to the union of the two, while a fourth has denied the whole, and contend that the vital principle is peculiar to itself and dependent on neither. The object of this work is to prove that not only all absolute mechanical force and chemical affinity, but all other motions, actions, and effects in nature, in compositions and decompositions, as well as the vital principle of vegetables and animals is owing to one and the same cause and governed by the same law—the magnetic fluids by the

law of attraction and repulsion. While engaged in the investigation of the cause of animal life, we found matter, although so diversified in nature by her various combinations, as to produce an almost endless variety, yet reduceable to a few elements, and all, whether found in the animal, vegetable, or mineral kingdoms, whether solid, liquid or æriform, whether of mind or matter, all indebted to one principle and governed by one immutable law, and only differing from each other by a different arrangement of their ultimate atoms or elements in the compound; and that man differs from the rest simply by being the engineer of his own destiny, and therefore not only stands highest in the scale of being in the chain of animals, but forms the connecting link between mortality and immortality. Like an adventurer then who starts only to explore an island, but discovers a whole continent, in our examination into the cause of animal life, we have not only succeeded but fortunately discovered that the cause as well as the law by which it is governed, is the cause and law of the whole universe. Instead then of being obliged to become a perpetual book-worm, and crawl through all the musty volumes of antiquity, as well as those of modern ingenuity, and wade through a mass of more than useless rubbish, spending the greatest share and best part of our time reflecting on the imaginations of those who never observed for themselves, or groping our way through the dark labyrinth of uncertainty, culling isolated facts for ourselves, or take them on hearsay from those who pretend to have discovered and chronicled them, and thereby overburdening the memory with an illimitable minutia, and thus like children playing "blind harry," now blundering against this object and now against that, sometimes guessing right and sometimes wrong—we give a general principle, which, when understood will be found to be so plain and simple in its nature and so easy of application, but yet so general and universal, that all can

readily see, understand and appreciate. If generalization in any science be its essence, this general principle will constitute the very essence of all science. It would indeed seem to constitute the very golden ladder itself, of the patriarch of old, on which to climb from nature up to nature's God—man situated between the extremes of brutes and angels. It will constitute a perpetual mental compass, to guide those who attempt to investigate any subject, system, or principle of nature in any science or art, and stands the same relation to these, in guiding the mind to truth, that the compass needle does to the adventurer in an immense wilderness, or the mariner in the trackless ocean to guide him to port.

Our main purpose is to adapt the principle to the more perfect practice of the healing art, give a clear and rational theory of that condition of man upon earth termed somnambulism, as well as every other stage of magnetism, prove its truth, show its phenomena, mental and physical, prove the truth of Prenological science by the latter, and come to the rescue of the Homoeopathists, by giving in addition to their numerous collection of facts, a general principle, as a perpetual light to encourage them onward toward the perfection of the only true system of practice in philosophy, and establish their two general principles on which their whole system is based—the doctrine of Similia-similibus, in the application, and the exaltation of the powers of some remedies, beyond the fear of contradiction. As these comprehend the science of man, it became necessary to examine him in connection with the external world, or those objects on which he acts and is operated upon, and will form our only apology for generalization. It will therefore be found in addition to these, to be more or less beneficial to all, particularly to those engaged in the study, teaching or use of rhetoric and logic, as it is but nature developing herself in the most eloquent manner by her own arguments. Our self-esteem is not so prominent as

to induce us to believe that we can write the whole book of nature in a work of three hundred octavo pages, which would form a universal history or system of itself, or that we have exhausted, or scarcely commenced to exhaust in detail, the particular branches which is the design of this work. What we have said however, we know to be true, and feel confident that enough has been said to attract a portion of the scientific to an investigation of the subject. We anticipate then, from the simplicity of the rule, the universality of its application, the collection of interesting cases of cures effected by magnetism direct, together with those produced by the exaltation of remedies, with the most numerous and interesting collection of cases of clairvoyance ever yet given to the public, with the proofs of the truth of Phrenology, all of which are from our own experience during the last three years, with the utility that must flow from each, aside from all other subjects and considerations, will claim for it a favorable reception. Animal Magnetism and Phrenological science are about to revolutionize the world, of mind and matter. Both are true, based upon philosophy, must be believed and will prevail. The time is not far distant and they would ere this have been believed, applied to the cure of disease and the suppression of vice, immorality and crime, but for the erroneous and unfortunate, but honest report of the illustrious Franklin at the Court of Versailles. But no matter how high the source, or powerful the engine by which truth is crushed to earth, it ultimately rises and becomes predominant. Will it not then commend itself to the attention of an intelligent and thinking public, or is our position like the gentleman of Philadelphia and the Chinese farmers? They plow their fields with a crotched stick. An adventurer from Philadelphia on an occasion observed the great loss of labor from its use upon the farm of his friend and on his next trip surprised him with the presentation of one of our best modern plows, be-

liaving that thereby he would subserve the interest of humanity, and his friend, and further gain upon his esteem and friendship. But witness his astonishment and chagrin, when it was absolutely and peremptorily refused. What, said he, "looking daggers," and with every hair erect, do you think that I would exchange my plow for this? Do you think that I am wiser than my ancestors? My grandfather plowed with this plow. My father plowed with this plow, and I plow with it. Do you think that I am wiser than they? No barbarian, I will still plow with the plow of my fathers.

To that portion of community who believe with the Chinese, that our first parents were all wise as well as all happy, and that it is not only unwise but sinful and useless to attempt to improve, this work is not intended. We leave such to the enjoyment of their quiet and negative state of bliss without molestation. But to those on the contrary who believe it to be a duty to investigate the laws of nature, discover truth and strive to improve the condition of man upon earth, this volume is offered as a tribute to their respect and esteem and our mite to the general contribution.

The coincidence of that part of this work that endeavors to establish the identity of the imponderables, with the "New Philosophy of Matter," a work published some time last year, by Mr. Geo. Brewster, is a circumstance which goes to establish its truth, as the conclusions of both were conceived of, and arrived at by different motives, manners, and courses of reasoning and investigation. So far as we are concerned, it is well known to our friends that that part of the subject was in manuscript as early as 1839, and that in 1840 we published, in the recommendation and prescription of a homoeopathic pill which was circulated not only throughout this, but other States, the following: "This pill and its operation is based upon the principle, that human life is produced and continued by attraction and repulsion

from magnetism, that galvanism, electricity, magnetism and oxygen are identicle, that good health is the result of a certain or due degree of action or motion, from that principle, that it forms the secondary soul of the universe and pervades all bodies, and that the above diseases arise from a want of this due attraction, and repulsion, which operate both at the same time, in the same space, or on the same object." On further investigation and as we progressed, we were, from our convictions of its truth, obliged to add light, caloric and oxygen, with hydrogen gasses. Throughout we have endeavored to tax our own resources, and have studiously avoided the beaten track of others, except to occasionally exhibit them in contrast or confirmation. We shall give no credit whether borrowed or purloined except to *them*, as not knowing where we get our ideas. Did we attempt it we should perhaps be worse off in our blunders, by robbing Peter to pay Paul, than to stand convicted of the crime. Instead of stringing the beads of others, we have manufactured our own, although our bump of order in the arrangement may not be sufficiently developed to so please those of greater manifestations, as to elude criticism. We make no apology for the *matter* or *manner* as it is the very best production under the circumstances, from the novelty of the subject, want of time, occupation and habits, we are able to give, but such as it is, we usher it forth to the world, well aware of the old but trite saying of those who seek for revenge, "O that mine enemy had written a book."

PART FIRST.

CHAPTER I.

The knowledge of Magnetism of the ancients was so narrow and contracted, and their views so limited, that they defined it to be that *force* which in iron under certain circumstances, when left free to move like the compass needle, turned to the poles of the earth. This was the result of their labors, the extent of their observations, and definition of the principle. But from the experiments of Franklin upon the electric machine, and those upon the Galvanic battery and Voltaic pile, by Galvani and Volta, together with the labors of Wallaston, Arago, Prout, Brewster, Sir Humphrey Davy, Harvey, and a variety of others, both in Europe and America since their day, and last, not least, recently in our own country, the efforts and exertions of Davenport and Cook in their application of the principle to the propelling machinery, and Dr. Sherwood of the city of New York to the cure of disease, with our own observations and reflections, we have come to the deliberate conclusion that instead of their being in nature as taught in the schools, five imponderable fluids, that there are but two, the Magnetic fluids, and that Galvanism, Electricity, Light, Caloric and oxygen with hydrogen gasses, are but the different effects upon the corresponding five senses of the body, produced by one principle—the Magnetic fluids, and are therefore identical. That the seeming difference between them upon the mind and upon matter is owing to the construction of our organs, to the different mechanism of the senses, and not to the principle, and

that these different sensations, like the five different witnesses in a court of justice, all tending to one point to give correct testimony, to establish truth, are but the different modifications of the Magnetic fluids themselves, one and the same, one in principle, action and effect.

That God, although thus manifold in his varieties is yet simple in his primary principles, and that these seemingly different imponderable agents, are but so many twinsisters of sensation, belonging to the one common parent Magnetism.

And first, with regard to Galvanism and Electricity. The only seeming difference worthy of remark between these fluids, is that more power can be got up on a Galvanic battery than an Electric machine, and that they differ in the *manner* of collecting and concentrating the power, one being excited into action by chemical affinity, and the other by friction. In *matter* they are the same. They are both governed by the same law, and produce the same effects, both upon animate and inanimate matter. Galvanism is of two kinds, positive and negative. So is Electricity. Electricity has in matter a constant tendency to an equilibrium, so has Galvanism. Galvanism is at all times repulsive towards its fellow, and attractive towards ponderable matter; so is Electricity. The mechanical effects of Electricity consists in motion produced by attraction and repulsion; so does Galvanism. With Galvanism in matter, attraction takes place between two substances charged, one with positive, and the other with negative Galvanism, and repulsion with two substances filled either with both positive or both negative Galvanism. Precisely so with Electricity. Electricity will compose substances that will not unite without its agency and influence, and decompose those already united by chemical affinity; so also with Galvanism. The best conductors of Galvanism are also the best conductors of Electricity. Non-conductors of one, are also non conductors of the other.

The effects of electricity or its intensity are in an inverse proportion to the square of the distance; so with Galvanism. The effects of Galvanism upon animate matter the living system is to produce motion, sensation, thought and heat; so also with Electricity. Electricity has been successfully applied to the cure of disease; so has Galvanism. Nothing can resist the decomposing influence of Galvanism; the same may be said of Electricity.—Galvanism will produce a sudden extinguishment of life; Electricity will produce instantaneous death. In a word, they are the same principle, the same fluids, and never for a moment would have been thought dissimilar, but one was produced, or excited by chemical affinity, and the other by friction, or in other words the equilibrium was broken in the former by chemical affinity, and in the latter by friction.

CHAPTER II.

MAGNETISM AND ELECTRICITY COMPARED.

The force between two magnets of attraction and repulsion, or between their poles at different distances, varies in an inverse proportion to the square of the distance. So does the force of the electric fluid vary in the same manner and proportion from an electric body. Magnetism is of two kinds, austral and boreal, positive and negative. Electricity is also of two sorts, vitreous and resinous, positive and negative. In both, these two principles of positive and negative, are diametrically opposed to each other in effect, and in both, those of the same names as positive and positive or negative, and negative repel one another, while those of different names as positive and negative, or negative and positive attract each other. The principle in both has a constant tendency to an equilibrium in matter, and are at all times

governed by an immutable law—attraction and repulsion, a law governing no other principles or fluids. The objections as to the identity of Electricity and Magnetism, and the reason why they have been taught to be different in the books, are, say they, Electricity is capable of being excited, communicated or transferred from one body to another, and Magnetism cannot be. The directive properties of the magnet North and South, as well as the declination, dip, and annual and diurnal varieties, together with the different intensities in different parts of the earth, are peculiar to the magnet, and do not appertain to electrified bodies. These objections are triumphantly and in wholesale answered, by admitting the fact by us asserted and partly proved as above, by their general and minute analogy in their laws of government and their being one and the same fluid or principle and effect. For it will be readily perceived that admitting them to be one and the same fluids, or the electric fluids, to be the magnetic principle, it only shows that iron, nickle, and cobalt, are so effected by the electric fluids, that when left free to move like the compass needle, points North and South, and so far from proving them to be a distinct principle, it only shows a characteristic trait of the electric fluids when applied to these metals. Should we follow up this idea by the light of this principle, we should find that the effects of Magnetism or Electricity are as varient throughout matter, as they are different in density, shape, color, and texture, and that their being excited into action by friction, percussion, chemical action, oxydation, the suns rays, and chemical affinity, was the reason why they have hitherto been considered and treated as two distinct principles.

We might here cite the alkalies and acids, the metallic oxides, oxygen and hydrogen gasses, and the whole class of metals, and show their union and color to be the effect of this principle, but forbear, and will add but one other argument which will for ever put the matter at

rest and beyond a doubt. If we connect a piece of iron or steel, bent in the form of a horse-shoe, wound with copper wire insulated by being covered with silk or cotton, and unite their terminations at each end with the wires or poles of an electric machine, galvanic battery, or leyden vial, in operation or charged with fluid, the piece of steel or iron will immediately become a magnet. That end of the magnet that is connected with the copper plate of the battery or the positive wire of the electric machine will become the North pole of the magnet, and that of the negative wire of the electric machine or the wire attached to the zinc plate will become the negative or South pole of the magnet, and when communicated by induction to steel needles left free to move, will point to the poles of the earth, its positive pole to the South, and its negative one to the North. When strong magnets are thus charged, they are made by a rotary wheel set in motion by attraction and repulsion, and so constructed as to pass through thimbles of quicksilver at each quarter section of the circle, to throw off an electric spark like the prime conductor of an electric machine or leyden vial. Thus then, showing and proving at once, in this small compass, the identity clearly of all the imponderables. The commencement of the action of the galvanic fluids from the battery was caused by the decomposition of water which is formed of hydrogen and oxygen gasses, together with the action of the acid upon the mettle. When the fluids passed along the wire from the galvanic battery we will term them, for the sake of illustration, the galvanic fluids. When they passed spirally around the bent piece of iron upon the covered copper wire, we will call them magnetic; when they were made to reassume their lost equilibrium, or their chain was broken up, by passing through the cups or thimbles of murcury, they were electricity, as was shown in their being given off in sparks. These sparks were made sensible to the ear

by an audible cracking noise. They were intensely hot to the touch, which showed they were coloric, and these same galvanic, magnetic, hot, shocking sparks, produced upon the eye from its construction, the sensation of light. The sound, and the light and heat, together with the contraction and expansion or attraction and repulsion which produced the spark, were all produced by one and the same principle, operating upon the mind through its different sentient organs.

Do we not then clearly see, that the electric fluids directly excites magnetic phenomena, and the magnetic fluids produce electric effects, proving clearly and beyond the fear of contradiction, both to be identical, one and the same, and reduced to a demonstration so certain that they need only to be stated to be assented to. For one is as clearly proved by the other as addition is by subtraction, or multiplication by division, and vice versa. In this manner, by the galvanic battery alone, can magnets be made that will lift tons, and may be increased without doubt, to almost any extent.

We might here add were it necessary, numberless observations and experiments both by land and sea, of the effects of lightning or electricity, upon the compass needle during thunder storms, as well as upon the tools of silver smiths, rendering them useless, the one by the reversion of its poles, and the other by converting them into permanent magnets, as well as the effects of the Aurora-borealis or Northern lights upon the human system, producing electric phenomena, so as to be able to give off sparks, but conceive it not necessary, after what has been said upon the subject. In conclusion, we observe that every substance or principle that is governed by the law of attraction and repulsion must be magnetic. Electricity is governed by no other law whatever, in any of its operations. Electricity then, must therefore be the magnetic fluids themselves.

CHAPTER III.

OXYGEN WITH HYDROGEN GASSES.

Having, as we believe, not only established successfully by analogy, but by positive proof, the identity of electricity and magnetism, we pass on to the consideration of oxygen and hydrogen gasses. The former of these, according to Sir Humphrey Davy and all our best modern chemists, has never been obtained free from light. Oxygen gas then, is a compound of oxygen and light, and is so subtle that it must be judged of by its effects only. We find that this material is necessary for exciting the magnetic fluids from the galvanic battery, eliminating the same from the electric machine, and is always combined with iron ore, to form a natural magnet. In the first, the water is decomposed as well as the zinc and copper oxydized. In the second the rubber as proved by Dr. Wallaston, is an oxide of metal, and the latter when found natural in the earth, is invariably an oxide of iron. It would then appear that after the strictest scrutiny, we possess no means to get up, show and make sensible, the phenomena of electricity, galvanism or magnetism but by the use and agency of oxygen gas. And when we take into consideration the fact, that oxygen gas, forms at least one fifth part of the atmospheric air of our globe; that it unites with every simple substance in nature in one or more proportions, forming with them all compounds, variant in proportion to its quantity; when we reflect that the seeds of vegetables will not germinate without its presence; the plant grow and thrive without its influence; that its color is owing to its effects; that it is one of the causes of animal life; that no animal can live in an atmosphere without it; that it is the cause of, not only the color of arterial blood, but all other substances in nature; the cause of heat, light, sound, motion, and sensation, that it is one of the causes of combustion; that it forms a component part of all we

eat and drink; that it is united in one proportion with nitrogen to form atmospheric air; in another with hydrogen to form water; with all the metals to form oxides, and with each to form different compounds of the same metal; with the metallic bases of one class to form alkalies; with another to form acids, and with the same in different proportions, to form different acids of the same class, we are struck with its illimitable diffusion, its ever varying combination, use, and presence in the material world. If oxygen gas unites with any combustible, light is thrown off and heat becomes sensible. In a word, it is so universally diffused and combined with every material substance in nature; its presence so necessary, active and decided, that we are constrained to believe, and therefore assume, that oxygen gas is a compound of oxygen and positive light or the fluid of positive magnetism.

CHAPTER IV.

HYDROGEN GAS.

Hydrogen, like oxygen gas, forms a component part of almost every material substance in nature. It is the lightest as well as the most combustible of all material substances known. From these and other characteristics, it would seem that like oxygen gas it is a compound of hydrogen and light, and that its imponderable part bore so large a share in the proportion of its compound, that it is made up of almost latent, or if the expression were allowable, of condensed light itself. It was proved by Sir Humphrey also, and confirmed since his day by the most able modern chimists of both Europe and America, that hydrogen is always found in a positive state of electricity or magnetism, and that it has a greater affinity or attraction for oxygen gas than any other known substance (except potassium.) Like oxygen gas

It is ever-varying in its combinations as well as its universal diffusion, and like that substance sometimes it exists in a solid or liquid, and at other times in a gaseous state, and when united with oxygen gas in a state of perfect neutralization or equilibrium forms water. It also unites with that substance in another form in a different proportion to form a class of vegetable products such as gums, sugar, starch, &c. In another class where the oxygen is in excess to form a class called acids, and another class where the hydrogen preponderates, to form a class of compounds which are the most combustible of all vegetable products, such as oils, resins, and alcohol. It forms also the base or enters largely into all the compounds of the most combustible substances known. We therefore assume that hydrogen is united with an imponderable base similar to oxygen which is light, and that this light is the positive magnetic fluid.

CHAPTER V.

TWO KINDS OF LIGHT.

It will be perceived by what has been said, that we make but two kinds of light, the positive and negative, and that these constitute and form the magnetic fluids themselves. Indeed the beautiful transparent form, and appearance of water itself, would, simply presented to the sense of vision, go far to establish the truth of this position, without farther proof. It looks like latent or condensed light itself, held together in a liquid form by the mutual attraction and repulsion between their basis and other constituent elements. That light enters into all and every substance in nature, is absorbed and becomes latent, will not be denied. The different colors of different material substances in nature agreeable to the Newtonian theory proves it. Decomposition, chemical

action, friction, percussion, and combustion demonstrate it. Were it necessary to still further confirm it, we would merely mention that it forms a component part of all water whether, in the ocean, seas, lakes, rivers, bays, the vapor of atmospheric air or surface of the earth.— Being thus universally diffused it would not be material whether they were united with oxygen or hydrogen or not. Certain it is however that both, and all, are so equally diffused, present and existant that the idea of their identity is hardly seperable. It has been mentioned that oxygen and hydrogen do not always present themselves in gaseous forms, as they are the constituents of an unlimited number and variety of substances both solid and liquid, therefore each may exist like the two electricities and be obtained in an attractive state without the phenomena of light, heat, and motion, but like the two principles when brought together, and united by attraction they give out by repulsion these fluids with such powerful action, and in such a condition, that motion, heat, and light are produced. The appearance of light, heat, motion, and detonation of a mixture of oxygen and hydrogen gasses, in the proportion to form water, by compression, heat, or any other means, are analagous, to the phenomena of an electric shock from a machine, or thunder and lightning from the storm cloud. They are the same in principle and effect, and only differ in form. The rationale of their action, as well as every attribute or effect is the same, to wit: an effort of the magnetic or electric fluids to regain their lost equilibrium. Although light is made apparent or produced by friction, percussion, electricity, decomposition, combustion, and chemical affinity, its original great source is the sun's rays. They consist of two kinds distinguished by two primary colors, the red and the blue. In what manner they are produced, emitted and repelled from the sun and attracted to our earth, we shall not now stop to inquire. It is sufficient for our present purpose to know,

that such is the mutual action between the sun and this earth, that two distinct kinds of light, alike as to illumination, but different in some other respects, are conveyed to this earth, and produce by their joint action with each other, and upon ponderable matter, that illuminating sensation upon the eye called light, and upon matter, such effects both animate and inanimate, organic and inorganic, as to entitle them to the appellation of the vivifying principle or that of life.

CHAPTER VI.

LIGHT THE MAGNETIC FLUIDS.

That the rays of light are the magnetic fluids we infer from their being the animating, stimulating or invigorating principle of nature. From their appearance and presence on every electric or chemical action, combustion, or composition.

From their being with oxygen and hydrogen the cause of all the variegated colors in nature. From their being governed by the same laws that govern the magnetic fluids; from their rendering iron and steel magnetic, simply by the exposure of those metals to their influence. From their being the cause of what is called caloric or the matter of heat, and from the effects of the electro magnetic machine, as described and explained in chapter second of these lines. That they are the animating principle of nature, is apparent from their being the magnetic fluids themselves, as no vegetable or animal ever lived, thrived, or grew without action or motion of its vessels necessary to its nutrition and assimilation, and as there is no motion in nature except by magnetism, as we shall show at its proper time and place, they must grow from the action of these fluids and no other, therefore their being the magnetic fluids is an ar-

gument of their being the animating principle. Why do not vegetables thrive and grow in winter as well as summer? Is it not owing to a deficiency of light? Why do they not grow as well under the frigid as the torrid zone? Is it not light and heat that stimulate all nature into action in the spring by the more concentrated action of the rays of the sun upon this earth? What is it that stimulates the blade of grass to shoot forth, as well as the bear, the dormouse and the myriads of creeping things and flying insects into action in the spring? It is the genial rays of light producing a motion and action upon the whole face of nature. All vegetables are attracted towards the light. All flowers in nature are attracted by light and follow the sun in his course during the day and to his retreat, and in the morning meet his rising lustre with the same unerring law. The leaves of plants are changed in position during the day by this principle. Plants that grow in the shade or dark, are pale, sickly, and without color, such as cabbage, celery, potatoe vines, &c. Vegetables that grow beneath stones, or places devoid of light, are well known to be white, soft, and aqueous. Thus then, their color is owing to light. Not only their color but their taste and odor are derived from it also. Light contributes greatly to the maturity of fruits and seeds. Under the burning sun of Africa, vegetables are more odoriferous, of a stronger taste and more abounding in resin. Animals also in general, droop, become unhealthy, and sometimes die when deprived of light. Persons confined from light become sickly, sallow, feeble, and watery pustules break out upon the skin. Worms, grubs, and caterpillars which live in the earth, or in wood, are of a whitish color, being deprived of light. The parts of fish exposed to light, as the back and fins, are uniformly colored, but other parts which are not exposed to light are white. Birds which inhabit tropical climates, have much brighter plumage than those of the North. The feathers upon the

back and breast which are exposed to light are colored and more bright than those not exposed. Rabbits and weasels in the North become white in winter from want of light, and change back to brown in summer. In the mineral kingdom the effects of light are not less striking. Metallic oxides become combustible when exposed to light, as well as a mixture of oxygen and chlorine gasses. "From their appearance on electric action and combustion, as well as chemical affinity." If we charge an electric machine or galvanic battery, and bring the wires within a certain distance of each other, an equilibrium is formed, an attraction takes place, followed by repulsion, and heat, and light is produced, and the machine is discharged. The atmosphere of this earth is said to be healthy when, besides its due proportion of oxygen and nitrogen, the two electricities are in a state of equilibrium. But that these are occasionally interrupted, and vary from this equilibrium, none will deny. All have witnessed thunder storms, which are nothing but an effort to restore this lost equilibrium between the electricities. The result is characterized by a noise called thunder, and a series of illuminations termed lightning. Now we know that the causes are attractions and repulsions between the electric or magnetic fluids, and are seen by the eye to be light, and heard by the ear to be thunder. If it strike us we could have felt it. It produces in the air an odor not unlike sulphur, and if conducted to our mouths might be tasted, as shown by applying the wires of an electric machine to our tongue, when one pole is presented, the taste is an acid one, when the other, it is alkaline. Thus then, the magnetic fluids are seen as well as heard, felt, smelled and tasted. Like so many witnesses in a court of justice, A, is sworn first, then B, next C, then D, and E. The eye is the first witness, simply from its peculiar construction, and to that the organ of vision, the magnetic fluids, gave the sensation of light. To the ear, the next witness,

these same fluids from the same impulse, gave the impression of sound, called thunder, and owing to its construction, the impression was subsequent to that of the eye. The shock or heat, had it been felt, would have been next, and then taste, and last smell. These several sensations, were all produced as we have before said, by one and the same principle—the magnetic, or what has hitherto been called the electric fluids. In chemical affinity and combustion, to say nothing of friction or percussion, these magnetic fluids are seen to be light. In chemical affinity, where the attractions and repulsions are powerful, as in the union of oxygen and hydrogen gasses, or of potassium with oxygen from water or ice, these fluids are seen to be light, and will be acknowledged. In combustion, which Sir Humphrey Davy defined to be a series of powerful electrical attractions and repulsions, they are invariably seen to be light. No process then, of combustion takes place, from that of a burning taper, up to Mount Vesuvius or Etna, but light is evolved and becomes more or less luminous and abundant. Indeed such has been the ingenuity and perseverance, of some of the French chemists, in the last five years, that they have at length succeeded in producing and continuing a constant and uniform light from electricity or galvanism, and at so cheap a rate, that it is less expensive than the common gas lights. So successful have been their experiments, that at this moment they are lighting the streets of Paris in that manner. The following is copied from a Washington paper, on the subject: “A letter from Paris dated Oct. 21st, gives the following account of the first public trial of an experiment which has been more than four years in preparation for fixing at a given point the electric fluid, and making it applicable to the purposes of lighting the streets and private houses. On one of the bases of the statues called the Pavillion de Lille on the Place de la Concorde, a glass globe of apparently twelve or thirteen inch-

es diameter, with a moveable reflector, was fixed in connection with a voltaic battery, and a little before nine o'clock was thrown into it by a conductor. At this time all the gas lights of the place, about one hundred in number, were burning. As soon as the electric light appeared, the nearest gas lights, had the same dull, thick, and heavy appearance as oil lamps have by the side of gas. Soon afterwards the gas lamps were extinguished, and the electric light shone forth in all its brilliancy.—Within one hundred yards of the light it was easy to read the smallest print—it was in fact as light as day. The astonishment of the assembled multitude, was very great, and their delight, as strong as their astonishment. The estimate made by scientific persons, who were present, was, that the electric light, was equal to twenty of the gas lamps, and consequently, that five of these lights, would suffice to light the whole Place, most brilliantly. As regards the expense of production, nothing positive has transpired, but I think I may safely assume, that it would be considerably less, than that of the generation of gas, whilst the first outlay for machinery and conductors, would not amount to one twentieth part, of that required for gas works. There would be also another great advantage in the electric light. It gives out no bad smell ; it emits none of those elements, which in the burning of gas, are injurious to health, and explosion would be impossible. The only danger that would arise, would be at the battery itself, but that would be under the control of competent persons ; and even in this respect, there would be no danger, even to unskilful persons, with an apparatus of moderate size. Internal lighting would be as practicable as external lighting, for by conductors, the fluids would be conveyed to every part of the house. The experiments performed last night, was with a voltaic battery of two hundred pairs, composed as follows: 1st, an outer globe of glass; 2d, in this globe a cylinder of charcoal open at both ends

and plunged into the nitric acid, contained in the outer globe; 3d, in the cylinder of charcoal a porous porcelain vase, containing acidulated water with sulphuric acid, this replaces the cloth in the common battery; 4th, in the porcelain vase a cylinder of amalgam of zinc and copper, plunged in acidulated water. The pile was on the Pavillion de Lille, the two copper conductors from the two poles and pointed with charcoal, lead to an empty globe from which the air had been exhausted. The two fluids on meeting, produce a soft, but most intense light. I understand the experiment was considered highly successful by the authorities, who were present, and that it is to be repeated on a large scale. Should the thing work, as well in a general way, as it did last night, and the cost be less than that of gas, which it must be, there will be a dreadful revolution in gas works. I have heard it asserted by persons, who are acquainted with M. Achereau, the gentleman who performed the experiment last night, that a company for the supply of the electric light, would realize a handsome profit, on charging only a sixth, of what is now paid for gas. The strength of the electric light, did not appear to me, to exceed that of the hydro-oxygen; but is much more simple in the apparatus required, and much less costly in the expense of the production. The hydro-oxygen light requires a double, and more expensive apparatus, and is only applicable to a few localities. The electric light, may be applied externally, and internally, in any place. Thus then, art has succeeded at length, in so imitating the attractions and repulsions between the sun and earth, between the poles of the two magnets, or galvanic battery, that an artificial, constant, luminous, atmosphere in all respects like that of day, is produced and kept up.—Need then, any thing more be said to prove the identity with the electric or magnetic fluids? Do we not see that the sensation of light is owing to the peculiar construction of the organ, and not to any difference between

what has been termed light, and the magnetic fluids.— We have said that the law of government for one, was that of the other. Magnetism obeys no other law but attraction and repulsion ; neither does light. Magnetism converges to a point, in the centre of all objects, and diverges from the centre in all directions, towards the circumference. The former is produced by attraction, the latter by repulsion. Light is attracted or converged by a denser medium, and separated or dispersed by a rarer one ; so are the magnetic fluids. The former as before is produced by attraction, and the latter by repulsion, in both instances, in both fluids. The absorption of light is effected by attraction, and reflection by repulsion, precisely the law of magnetism. In a word, refraction, dispersion, the correspondence and equality of the angles of incidence and reflection, as well as the different colors of objects governing light, are produced by the well known and established law of magnetism, attraction and repulsion, and are but different terms to express the operations of the same law of both light and magnetism through different media. Well may the schoolmen declare, that light is polarized, when it is governed in all its varied operations by no other law than that of magnetism, the great characteristic of which consists in nothing else but motion, produced by an antagonizing principle, the extreme points of which are termed poles. To go further into the subject, would carry us into optics ; which is inconsistent with our present limits ; our only object, being at this time to prove the identity of magnetism and light.

CHAPTER VII.

MAGNETS FROM LIGHT.

We have said that light was the magnetic principle,

and in the former chapter, have made an attempt to prove it. In addition we would observe, that magnets from steel have been made, both in Europe and America, by exposure to the direct rays of the sun. Dr. Morrischini, a respectable physician of Rome, discovered this remarkable property in the violet rays. Prof. Playfair saw the experiment by Dr. Carp, in the absence of Morrischini, before a party of English and Italian gentlemen, an account of which was published in the Edinburgh Journal of science. In one hour's exposure, the needle had acquired polarity, and when put upon its point, traversed with alacrity, and attracted and supported a fringe of iron filings. The extremity of the needle that was exposed to the violet rays, repelled the North pole of another magnet, or compass needle. This effect was so distinctly marked, as to leave no doubt in the minds of any who were present, that the needle received its magnetism from the action of the violet rays. The subject remained in this situation, when Mrs. Summerville directed to it her attention, and succeeded in about two hours, of rendering the needle magnetic. The exposed end, acquiring North polarity, from the violet rays. This experiment was often repeated, and always with the same result. By a similar process she ascertained that the indigo rays, had nearly as great effect as the violet, and that the blue and green rays, produced the same effect, though in a less degree. Mrs. Summerville applied the same method to watch and clock springs, and they were found to receive a stronger degree of magnetism, than the needles. She next exposed as before, half covered, to the sun's rays, through glass, colored blue by cobalt, and they were distinctly magnetic as before. Needles exposed under green glass received the same property.

In addition, in corroboration of the above, we would state, that previous to reading any thing upon the subject of the description here detailed, or any other, we

conceived the idea of the identity of light and magnetism, in eighteen hundred and thirty-nine, and procured watch springs, as well as needles, and broke the former into pieces of two inches in length, and exposed them to light behind the windows of our office, suspended by a single fibre of raw silk from the cocoon, in the month of August, and they invariably became magnetic in eight or ten days, and pointed to the poles of the earth, North and South, as well as attracted in a sensible manner, magnets resting upon bits of light wood, upon the surface of water, so as to bring them in contact, as well as to separate them to the greatest distance compatible with the room, from the vessel containing the water.

It remains only to be observed further upon this part of the subject, that from the observations of the most observing and scientific surveyors, as well as mariners, that the needle undergoes a diurnal as well as annual revolution. That is, that it is affected so by light, at different times of day, as well as different times in the year, as to cause a manifest, and marked variation of its course. And more recently it has also been observed, that moisture, fog, vapor, or water, will also produce a variation, thus showing the effect of oxygen and hydrogen gasses upon the same principle. Thus much for inductive facts in support of our position, as to the identity of light and magnetism.

CHAPTER VIII.

CALORIC OR MAGNETISM IN A STATE OF REPULSION.

We next come to the consideration and examination of that principle which produces the sensation of heat, or what is termed in the books, caloric, or the matter of heat. We have in the preceeding chapters, endeavored to prove the identity of galvanism, electricity, light,

oxygen, with hydrogen gasses, and magnetism, and with what success, we leave the reader to determine, not however, without the consciousness, that we have convinced some, and at least staggered others, in their former faith in the doctrine, of the variety and multiplicity of the imponderable agents in nature, as taught and inculcated in the books. We labored in chapter seventh to prove, and brought forward many facts to substantiate it, that light was absorbed by all ponderable bodies. That it is at all times repulsive towards its fellow, and attractive towards material substances, and that they have constantly, under all circumstances, and at all times, a tendency towards an equilibrium in nature.— That in vapor, or gaseous media or substances, when in this state of equilibrium, they invariably produce to the organ of vision, the sensation of light, like that of day, or as that mentioned, produced by the galvanic battery in lighting the streets of Paris, but again being absorbed by, and uniting with imponderable matter, which it so effects, modifies, and controls, that it subjects it to three varieties of form, states, or condition, and but three, solid, liquid, and aeriform, or that of gas. Although all ponderable matter is indebted to the influence of these, for its form, color, and nature, yet it in return, so modifies and effects them, as to produce different appearances to the organ of vision, and that of touch, or organ of the sense of heat, in the change from one to the other. These fluids, it will be remembered, are governed throughout nature, by the immutable law of attraction and repulsion, and carry the same arbitrary law into all ponderable matter, on which it depends for its government and action. When these substances are in a state of attraction, or the magnetic current is strongest from the circumference towards the centre, we term it attraction, and when the current or force is strongest from the centre towards the circumference, we term it repulsion. It will be readily seen, that in solid substan-

ges, attraction predominates over repulsion. In liquids, as water, they are neutralized, or in a state of equilibrium, and that in gasses or aciform substances, repulsion prevails. The change from one form or condition to the other, is governed by this invariable law, that where a substance becomes solid, or more dense, attraction or the centripetal force prevails, the temperature of that body is lessened, and where the centrifugal force predominates, or that from the centre to the circumference, (repulsion) is increased. This term temperature then, is the name of a feeling of opposite or antagonizing sensations. They are called heat and cold. Heat then, instead of being a substance, an imponderable fluid, is simply that change, action or motion, in the sentient organ of sense, from that condition of matter called repulsion, and cold, that sensation produced by attraction. They are opposite in principle throughout nature, and antagonized to each other. For centuries then, what has been taught by the schoolmen, to be a matter, or an imponderable fluid, is simply a quality or condition of matter, produced by a change in material substances, by the magnetic fluids, and stands the same relation to the nerves of temperature, which Sir Charles Bell has wisely and properly separated from the sense of touch, that light does to the sense of vision, both being simply sensations induced upon the mind, through the organs of body, by this principle, modified by the different conditions of ponderable matter, from the particular arrangement or their ultimate atoms. Their differing from each other, is owing to the different construction of the organs, and not to the principle. The difference in the sensations is caused by the different conditions of matter, produced by the imponderable principle. All substances in nature, while occupying the condition of attraction, so far as they are tested by sensation, are generally dark, hard, solid, heavy and cold. Those on the contrary, that are characterized by that condition term-

ed repulsion, are generally soft, luminous, light, and hot. Those occupying the middle state or condition between the extremes, in a state of equilibrium, are what may be termed temperate, or neutralized between the two.

These then, are the results of different states of the same matter in a state of nature; but by artificial means, such as the galvanic battery, combustion, or other causes, these may be so changed, that their line of demarcation is not so perfectly apparent; as they run more or less into each other, from the point of equilibrium to that of the extremes. It appears then, that light or the magnetic fluids, are absorbed by all material substances, enters into their combination, and so operates upon them, as to produce that kind of change which communicates to the nerves of temperature, the sensations of heat and cold; terms implying a quality of matter, from the change in the arrangement of their ultimate particles rather than a positive substance or principle. Terms, instead of being positive in their signification are entirely relative. There is no such thing as positive heat, or positive cold in nature. Both depend upon sensation, and are therefore relative. Both, the names of two extreme points, or poles like the compass needle, of one continuous line, the middle of which forms the equilibrium point above mentioned. For not only what appears to be hot, to one person, is to another cold, but to the same person, feels differently at different times, but also different to different parts of the same body at the same time.

If I immerse one of my hands in water at the temperature of one hundred and fifty Fahrenheit, it feels warm or hot, and if I also immerse the other in the same manner, at the same time, in the same element, at the temperature of one hundred and ten, it will feel warm also. But if I now change them from one to the other, the one that was immersed in the fluid at the temperature of one hundred and fifty, feels cold, although the water is still twelve degrees above blood heat, and the other

will become warm; if I again change them, they will be again changed in feeling, and vice versa.

The rays of light, or the rays from the sun, although they illuminate the horizon in their passage to the earth, do not produce heat until they are attracted, and enter into the combination with ponderable matter, and are again repelled. The air is not heated by these rays in coming down to us. On the contrary, the nearer we approach the sun, or recede from the earth, the colder it is, which would not be the case were the sun either a large ball of fire, a mass of caloric, or these rays the matter of heat, mixt up with, and jumbled together, (agreeable to the books) with the calorific and chemical rays.

The limits of this work will not permit us to go further into this branch of the subject, at this time, than to observe, that we object to their being primarily in nature, in the solar spectrum, seven colors, but on the contrary believe, and therefore assume, that there are but two, the red and the blue, from which, with their combinations with ponderable matter, by reflection and refraction, the others are produced, as well as every other variety and shade of color in nature.

We are induced to come to this conclusion, from the fact, among a variety of others, that the solar spectrum, previous to its analysis by the prism, is absorbed, and twice reflected and refracted, and that in these operations, it meets with other light, at these points of attraction and repulsion, as well as ponderable matter, and that all these dispersions, reflections, refractions, are the result of attractions and repulsions, which presuppose changes, and therefore, that the very means employed to separate them are, from these considerations alone, sufficient to produce the different appearances, of color upon the organ of vision.

Added to this, and what has great influence upon our mind, at this time, is the fact, that we have, and can at

any time produce them all, in mixture and diffusion in a liquid form, from the red and the blue. Light we know also to be the magnetic fluids, and, therefore must agree with them in their nature, number, principles, laws, attributes, and qualities. The whole of nature is a system of antagonizing principles, and we cannot subscribe to one single exception.

Who was ever so acute in perception, as to discover a perfect point or well marked line of demarcation, between blue, indigo, and violet? Who was ever forcibly struck with a surprising contrast between orange and yellow? What causes the change of color in the changable silk, or the peacock's tail? It has been showed by Sir David Brewster, that the changes which light undergoes by absorption, when viewed through various colored media, will change the color of the spectrum, as well as its intensity also. He therefore, from this and other considerations, concludes that there are but three primary colors in nature, the red, yellow, and blue.

Dr. Herschel was of opinion, that the point of greatest heat and deoxydizment was outside, and beyond the limits of the visible spectrum, which confirms our position, that it is the action of light upon matter by repulsion, that produces the sensation, or sensible effects of heat. Were there distinct rays of caloric, mixed with those of color, it would be preposterous to think, much more to say, that they had more effect where they were not, than where they were. Subick and Mellone demonstrated, that the point of greatest heat, was dependent on the nature of the refracting ponderable medium, which is in perfect accordance with our views, and laws of magnetism. The best modern writers of the present day divide the solar spectrum into three distinct kinds of rays, the colorific, calorific, and chemical.

We have now disposed of the two first, and will make an attempt at the last, when we come to speak of the

magnetic fluids, and prove chemical affinity to be based upon them also.

CHAPTER IX.

THE SUBJECT CONTINUED.

From what has been said, it will be seen, that we make heat and cold, to be the result of the impressions upon the mind, from sensations produced, by the operations upon matter by the magnetic fluids. That from their action, it is constantly varying from an equilibrium to two extremes. That one extreme is produced by attraction and the other by repulsion; that one produces one sensation upon the body, and the other an other; that attraction produces that of cold, and repulsion that of heat, and therefore, what the books term caloric, is a result instead of the cause of repulsion, and at all times, and under all circumstances, directly opposed, and diametrically antagonized to attraction.

This being the fact, the books on this subject have largely begged the question, and only made the small mistake of putting the cart before the horse, by making caloric a substance, an imponderable fluid, instead of a result of matter, from the operations of the magnetic fluids, and that what Dr. Black labored a whole lifetime to establish, (latent caloric) is nothing but magnetism in a state of attraction, and therefore falls to the ground, as well as all that worse than senseless jargon of the books, such as "caloric of fluidity," "specific caloric," "capacity of caloric," "conduction of caloric," &c. &c., as well as all the other no less confused, and confusing terms; such as "attraction of gravitation," "attraction of cohesion," "attraction of aggregation," "capillary at-

traction," &c. &c., and will soon be expunged from the vocabulary of literature as worse than useless.

After having removed this mass of rubbish from our path, and established upon its ruins the simple foundation, the truth of the identity of all the imponderables, with the light of magnetism for our guide, we cannot but anticipate, that we shall be able to show more clearly than has hitherto been done, the various operations of nature, and the laws by which they are governed ; and although in our sail into the vast ocean before us, our compass may sometimes oscillate for a time, we trust that it will yet ultimately settle towards the positive pole of truth, and guide us through the dark labyrinth of nature, as she presents herself in the three kingdoms, to correct results. It will be conceded by all, even by the sticklers for the old theory, that caloric is at all times antagonized to all and every species and variety of their family of attractions, from cohesive up, to that of attraction of gravitation. Now is it not a little singular, that for centuries, knowing and acknowledging this fact, authors should have called one of these diametrically antagonizing principles, a subtle imponderable fluid, and the other a property inherent in ponderable matter, such as attraction of cohesion, and attraction of gravitation? Now to us it would be like yoking a brute with an angel, or which would be about the same in comparison, to yoke a dead body with a living spirit, and look to the span, for results of labor and action.

Ponderable matter of itself, would be nothing but a cold, void, sluggish, lifeless mass, without form, color, or action, without the influence of the magnetic fluids. It is to them, and them alone, as we shall see, when we come to speak in the next chapter, more particularly on magnetism, that all ponderable matter, depends for its laws and impulse of attraction, or gravitation, as it is called, as well as repulsion. Believing therefore with Rogers :

"That very law, which moulds a tear,
And bids it trickle from its source;
'That very law preserves the earth a sphere,
And guides the planets in their course,"

we have in our vocabulary, but one kind of attraction, and one of repulsion, and these depending on the magnetic fluids. The same principle which attracted the saline particles together to form the tear, when formed and perfected, attracted the whole as a body, to the earth, that, from its quantity of matter, being the stronger magnet, caused the tear to approach its surface.— Thus showing in the simplest manner possible, that attraction of cohesion or aggregation, is precisely the same as gravitation, and governed by the same law. If we take a themometar properly made, the attraction of the mercury will occupy a point, say 32 degrees above zero. If we now immerse the bulb in boiling water, the mercury immediately mounts up to 212. If we now immerse it in a freezing mixture, it is again attracted, and falls to 32. If we again put it into boiling water, it again rises to 212. This example may be taken as a diagram for the two antagonizing principles of all nature.

CHAPTER X.

MAGNETISM.

Magnetism then, is that principle, which not only forms the nature, but is the cause of all the compositions and decompositions, of all material substances. It resides in two imponderable fluids, alike as to illumination, but different as to color, and other respects, from each other. One is probably thrown off from one pole of the sun, and the other from the other. They are mutually at all times repulsive of each other, and attractive towards ponderable matter, agreeable to fixed and immutable laws.— Whether they find their way down to this earth by re-

pulsion between themselves, solely, or by attraction from the earth, or both, is immaterial ; certain it is, that they come down to us, stimulate with their presence, are absorbed by opake bodies, and repelled by others, and have such an effect upon ponderable matter, as to divide it into minute little atoms, magnets or globes, too minute for the naked eye to discover, which are each endowed with a positive and negative pole, and obey the law of magnetism, to which it is indebted for its motion, nature, color, and texture. The minute atoms of matter from this agency, are subject to three varieties of arrangement, (chapter ix.) attractive, semi-attractive, semi-repulsive, and repulsive. When they arrange themselves with the positive pole of one, to the negative pole of another, they constitute that condition of matter called attraction, and solidity and diminution of temperature is the result.

When they arrange themselves with the positive pole of one, or the negative pole of another, to the equatorial or middle line of another, they may be said to be neutralized, or in a state of equilibrium, and constitute that condition of matter called liquid, and the temperature is generally temperate.

When the minute atoms are so arranged, as to have the positive pole of one, correspond to the positive pole of another, or the negative pole of one, correspond to the negative pole of another, they may be said to be in a state of repulsion, and constitute that condition of matter called gaseous or aeriform, and the temperature is increased, and light, and levity is the effect.

These three then, are the only conditions of matter upon earth. Although all matter occupies one or other of these states or conditions, and is by nature, and may by artificial means, be changed from one to the other, yet all at the ordinary state of the atmosphere, are not alike, some are found in one state or condition, and some in another. Hence it may be said to be natural for some

to be in a solid state, others in a liquid, while others, are found in a gaseous state. When a solid is changed to a liquid, the motion of the minute atoms from the change, produces an increase of temperature, and if so changed as to produce complete repulsion, (which produces a gaseous condition,) the temperature is still further increased, and levity is produced, warmth is felt, and light becomes visible. When a gas on the contrary, is converted into a liquid, or solid, or both, the very reverse takes place, and cold is the result. If we take any solid substance, iron for instance, or any other metal which is solid at the ordinary state of the atmosphere, and apply to it the magnetic fluids in a state of repulsion, or what is commonly called caloric, the minute little atoms or magnets are changed in their arrangement, and they are turned half around, and it is reduced from a solid to a liquid state in consequence of the change. If we now expose to more magnetism, or caloric, as it is called, they are moved still further around, until they become perfectly antagonized to what their first arrangement was, and the iron or metal, is thrown into a gaseous state ; but there being a constant tendency to an equilibrium in matter, with the magnetic fluids, and the natural condition of iron being a solid state, the magnetic fluid is radiated, and attracted to the surrounding air, and other objects within the sphere of its influence, and the metal is again attracted back to its natural state, and becomes solid. This arrangement of the minute particles or ultimate atoms, or magnets, of the metal in its natural state, were the positive pole of one, to the negative pole of the other ; and in the middle state, or when in common language, it was melted, or in the liquid state, either the positive or negative pole of one, to the equatorial line of another, and in the last or gaseous state, the positive pole of one, to the positive pole of another, or the negative pole of one, to the negative pole of another.

That metals, may be melted and thrown into gas, will not be denied, as witness the eruption of volcanoes. The lava rises in the form or condition of gas, and falls down in the form of cinders. This description and elucidation; of the different states or conditions of iron, and the detail of its changes, may be taken to exemplify the different states, condition, and rationale, of all material substances in nature. It appears then, that the minute particles or ultimate atoms of matter, in either condition, have each a positive and negative magnetic pole, and that the cause of these different conditions, is the angle of these poles situated in the mass, relative to each other, as we have seen as above, and that the varieties of nature in material substances of color, nature, texture, and temperature ; are owing to these angles.—This being settled, and these little minute atoms, being magnets to all intents and purposes, having poles like the compass needle, and governed by the same principle, we infer an other general and immutable law of matter—that the law that governs them separately and individually, governs them collectively, or when attracted or collected into masses, and therefore that the law of the parts is the law of the whole, and conversely, that the law of the whole, is the law of its parts. If I make a magnet of iron or steel, and find and mark its poles, and then cut it into small pieces, as small as the senses can determine, each piece, will still be a magnet, and each and every piece in the order they occupied in the magnet before being severed, will conform with its poles to it. The law of the whole then, is the law of the parts, and the law of the parts, is the law of the whole. The same law of motion, that governs my whole system, governs my arm, and the law that governs my arm, governs my fingers, and the law that governs my fingers, governs my arm, and the law that governs all, governs the whole system. Again, that law in this country that governs one individual, governs the

whole nation of individuals. The law then, that governs the whole earth, must be the law of its integrant parts. The earth is a large magnet, has a North and a South pole, and being repelled on one side by light, while it is attracted on the other, (as we shall see at the proper time and place,) revolves it on its axis, from West to East in such a manner, every twenty-four hours, as to produce day and night. It likewise from the same cause, differently applied, revolves around the sun once a year, in such a manner, as to produce the alternations of summer and winter, spring and autumn. In this revolution around the sun, the angle of the poles of the earth, with those of the sun, is constantly changing, so that in the middle of winter, in this latitude, the poles of the earth, are almost at right angles, with those of the sun, and in midsummer, they are almost parallel with it. Spring and fall, are also produced, in the same manner, and depend upon this angle of the poles with respect to those of the sun. In these alternations, winter is antagonized to summer, and spring to autumn.— Winter is the result of the attractions from the earth towards the sun predominating over repulsions, and summer by repulsions from the sun, or attraction towards the earth overbalancing the repulsions from the earth. Spring is the effect of semi-attraction and semi-repulsion, as well as autumn. Now if the whole earth is so effected, by the simple fact, that the magnetic axis of its poles, is differently situated, relative to those of the sun, is it not good logic to infer, that the relative angles, or position, of the ultimate atoms of all matter, in the three, different conditions, solid, liquid, and aeriform, are owing to the same cause, and of all the results, which we have shown to arise from the different conditions? If so, our point is gained, and our coast is clear; for what warms the whole earth in summer; warms a particular body upon that earth, and is the cause of the heat in a particular compound; and the cause of cold upon

the earth in winter, is the same also. Spring and fall will also correspond to those bodies in which the magnetic fluids are in a state of equilibrium. We shall then adopt the term attraction for gravity, and repulsion for caloric.* The effect of the former, produces the sensation of cold, and the latter heat. There is no absolute weight, or levity, heat or cold. They are changes produced upon mind, and matter, by the magnetic fluids. Weight, or gravity, is simply that condition of matter, which disposes it to approach the centre, or surface of the earth, (attraction) and levity or lightness, that condition of matter which disposes it to recede from the centre, (repulsion) which conditions are both entirely dependent, upon the magnetic fluids for impulse and motion. The former, the current, from the surface or circumference, to the centre, (centripetal) and the latter, the current from the centre to the circumference, (centrifugal). That substance which contains the greatest quantity of matter, being in the condition, or having the proper arrangement of its particles to constitute attraction, is the heaviest, and that substance, which contains the greatest quantity of matter, having the proper arrangement of its ultimate atoms to produce repulsion, is the lightest. This is owing to that universal law, that the greater always attracts the less, and is antagonized to repulsion which is at all times adverse in its operations. The only reason then, why any substance or body, falls to the ground, and is called heavy, is attraction simply, and why the same substance or body, recedes from the earth and flies into atmospheric air, is repulsion. This law is the cause of composition, and decomposition; which, are constantly going on, in the great laboratory of nature, and are but other terms to express the same ideas. Chemical affinity, attraction of cohesion, aggregation, capillary attraction, (chapter ix.) and all other attractions, mentioned in the books, are owing to the same cause, and governed by the same law; which mul-

tiplicity of names and divisions, are productive of no good, but on the contrary perplex and bewilder the reader, and by us are therefore discarded.

When therefore we speak of any substance, simple or compound, we shall use the terms attraction and repulsion, without reference to mode or manner, believing that that principle, which holds an apple to the tree, by its stem, is the same that holds its particles together, as well as formed it round, and caused it to fall to the ground, when the attraction is overcome in the stem, by the superiority of its repulsions.

CHAPTER XI.

DIGRESSION—INTRICACY OF THE SUBJECT—REASONING FROM EFFECTS TO CAUSES.

We have now examined separately, the imponderables of the books, with oxygen and hydrogen gasses.—From our reading, and course of education, the great influence of the force of habit upon the mind, together with the intricacy of the subject, the mysterious connection of mind with matter, the effects of imponderable agents upon material substances, the novelty of our doctrine, with the prejudices of the people, against innovations upon established usage, the attempt to bring forth and establish a new system of physics and metaphysics, is a task next to Herculean, requiring firmness like the rock of Gibraltar to carry us onward. To stem the torrent of prejudice, of the indolent and ignorant, as well as the interested and designing, who have from habit, trod in the footsteps of their illustrious predecessors, in the beaten track of their ancestors for ages, for one humble individual, is not unlike an attempt, to stem the cataract of Niagary in a bark canoe. Regardless of these, but trusting to the candor of some, and the charity of oth-

ers, our course is still onward, not exactly like "him" of the poet, where he says, "onward he trudged not knowing what he sought, and whistled as he went, for want of thought," but more like a body, so equally operated upon by the forces, for which we are contending, that it requires our whole concentrated energies, to keep us momentarily, from flying off in tangents. Our subject being as boundless as the universe, and as variegated as nature, we can hardly expect, to do more in our passage through its book, than, to take a passing glance chronicle our observations, and thereby sufficiently interest others, to bring them to our aid, in the investigation of the subject. But to the subject itself. There has not yet been found, a substance, that has successfully resisted, the decomposing energies, of the electrifying machine, or the tremendous power of thunder and lightning. Caloric is the great decomposing agent of nature, and breaks down all attractions, and forces them asunder. All substances yield up their attractions, and are decomposed by light, by the agency of the convex lens Sir Humphrey burnt the diamond at Gottengien; and nothing has yet been experimented upon, but what has given way to the decomposing influence of a stream of oxygen with hydrogen gas, through the medium of the compound blow pipe of Dr. Hare.

In reasoning then, from effects back to causes, we find them similar, and therefore identicle, one and the same. They are all, the whole family, but magnetism in a state of repulsion, directly antagonized to attraction, and appearing different to the mind, from the different construction of the organs of sense which conveys them or their impressions to the brain.

CHAPTER XII.

MECHANICAL FORCE OR POWER.

From our definition and what has been said, it will be perceived that magnetism is the primary cause of all motion in nature from the leaf that flutters in the breeze, the smallest insect that crawls, up the motion of not only this earth, but of the heavenly bodies themselves. It not only comprehends, and is the cause of all absolute mechanical force, or power, of chemical affinity, of the growth of all geological formations, of mathematical, and all other sciences, but the cause of vegetable and animal life. What are the sources of all absolute mechanical force or power? To the superficial unthinking observer, at first thought, there would seem to be many, but on a moment's reflection they are simplified to two, attraction and repulsion. To speak from the simple principles for which we are contending, and in common language, our saw, grist, and other ordinary mills or machinery, are propelled by water falling down hill, or tending to the centre, the centripetal force (attraction). Whereas our steam mills, boats, and some other machinery, are propelled by a diametrically opposite and antagonizing principle, (repulsion), the centrifugal force, or tendency from the centre. Beside these two, there are no other sources of absolute mechanical force or power known, except wind power, and that from the elasticity of the spring. And how is wind power produced, but by the agency and influence of both these, alternating with each other.

The magnetic rays of the sun, are attracted or repelled, or both, by that luminary, to the earth. Here meeting with, and uniting by attraction, with ponderable matter, repulsion succeeds, and water in the form of vapor, is thrown into atmospheric air, and forms clouds. One cloud or portion, becomes positively electrified or magnetized, and the other negatively, or one is charged

with one kind, and the other, with an other. By a law of the principle, within a certain sphere of influence, they attract each other, and come together, an equilibrium is formed, which changes the position of the minute particles, it becomes more dense, in one part, and more rare in an other, light, or lightning is seen, thunder is heard, attraction succeeds over repulsion in one part, and repulsion over attraction in an other, water in the form of rain is attracted to the earth, motion is produced, a current of air is set in action, winds are thereby generated, which sometimes blow in one direction. and sometimes in another, which continue, until all the clouds are dissipated, or a perfect equilibrium in atmospheric air is produced, which is the cause of force or power from that source. In the elasticity of the spring, it will be readily seen, that both these forces, operate at the same time, one on one side predominates, and then the other. On the convex side, repulsion between the minute atoms predominates, while on the concave side, attraction prevails. Extra of these, there are no other sources of absolute mechanical power or force known, except from magnetism direct, as, the revolving wheels of Davenport and Cook, Brewster, Henry, and others. All other force from weights, as that of clocks, it will be readily seen, is resolvable in that of attraction, as well as that from chemical compounds, as powder, air, and elastic fluids, into that of repulsion. It will thus be seen, that motion, which constitutes the elasticity of the spring, depends also upon these forces, alternating with each other. It can be explained on no other principle.

CHAPTER XIII.

CHEMICAL AFFINITY.

That chemical affinity, is dependent upon the same

principle, there can be no question. No two or more simple substances, unite and form a compound, without one be in a negative state, and the other in a positive. All substances in nature are mixed with two classes, alkalies and acids. Between these two opposite classes there exists in their natural state, so powerful an attraction, that when brought together, they unite and form an entire new compound, called a neutral salt, differing from either ingredients. It is found on examination, that alkalies are naturally in a negative state of electricity, and acids in a positive state, and that their union, is in consequence of their obeying the law of magnetism, that those of the same names, (chapter x) repel each other, and those of different names attract one another. Sir Humphrey, demonstrated that electricity will not only suspend, counteract, and control chemical affinity, but that it was the most powerful agent for the decomposition of chemical compounds or compound bodies, that were so powerfully united by attraction, that previously had never been decomposed, and therefore were believed to be simple substances. It was by this agent that he succeeded in decomposing potash, soda, barytes, strontites, magnesia, lime, and various other compound bodies. During these experiments he also succeeded in establishing the fact, that alkalies and earths, as well as oxygen gas, was in a negative state of electricity, and acids in a positive state.

He found and demonstrated also, that when an alkali, was, by artificial means, put into the same state, (positive) of electricity, as an acid, they would not unite by chemical affinity, but become repulsive of each other, and was therefore believed and considered by him, as the cause of chemical affinity itself, and the rationale of their decomposition by that principle. He also found, that rendering by electricity, both of the same kind, (positive,) in water, they would not unite, or dissolve in that element. The most delicate tests could not disco-

ver in the water, the least particle of either. The celebrated Dr. Lardner tells us in his lectures, that no good reason has ever been given for this, to wit: "That when natural bodies, are under the influence of electricity, they behave themselves very differently from what they do in their sober senses." He thus, tacitly acknowledges, that electricity at least, overacts, or controls, chemical affinity, and we conceive it, magnetism, to be a good reason, why they will, and will not unite, the former depending on one's being positive, and the other negative, and the latter, both being positive, or both negative, agreeable to our law of attraction and repulsion. Is it not owing to craziness, or want of the sober senses of the teachers of philosophy, themselves, instead of the "natural bodies?" Are not all bodies in nature, simple and compound, naturally magnetized, or, at all times, in one state or the other, of electricity? If so, will it not sufficiently account for this "will, and won't" principle of chemical affinity? If not, will they please to tell us in what it consists? Whether a fluid, or an inherent principle of matter? If the former; why obedient to caloric, to light, to electricity, to magnetism? If to the latter, why does it submit to be, like a scimeter of two edges, to be worked both ways by the magnetic fluids—composed and decomposed—finished, and undone—united, and separated? Should the Doctor chance to meet with our views, he will undoubtedly, have to pronounce one of two things, that matter is at all times out of their "sober senses," or that the mind that conceived that chemical affinity was dependent upon magnetism solely, for its action was out of his. He is free to judge. The recent discoveries in taking miniature likenesses by the daguerreotype, goes to corroborate and establish the principle, that chemical affinity, depends upon electricity for its action and effect. Light is the pencil by which it is accomplished, color is the effect of attraction, and shade of repulsion. The outline,

form, features, and expression, are repelled from the original, and attracted to the plate, where it stamps an image of itself. Light which is the magnetic fluid of itself, produces the color, by inducing attraction among the minute particles of the iodine or what not, upon the plate, precisely in the same manner, that it commences chrystylization in solutions, by changing the ultimate atoms, to the condition of attraction, (chap. ix) from their condition of equilibrium in the solution. If a solution of muriate of ammonia, and prussiate of potash, be placed in such a situation, as to let in a ray of light, at any particular point, it will immediately commence to chrystylize, from that point, and no where else in the solution. This fact goes to prove, both the identity of light and magnetism, as well as to prove, that the latter is the cause of chemical affinity. The chrystylization of these salts, may be directed at pleasure, by the introduction of light to any one side of the vessel, or point, of the surface of the fluid. The same results may be obtained from a solution of camphor, it having a great attraction for light. If light will dispose one substance to chrystylize it will others. The law is general. Light then is the great agent in the chrystylization of all substances in nature, as well as in solution. When a substance is chrystylizing it also throws out light, heat, and electricity, which is the cause of its decreased temperature, and increase of the surrounding medium.

CHAPTER XIV.

THE EARTH'S FORMATION.

Various theories of the formation of the earth, have been brought forward, most of which have had their day and generation, and like their authors, have been

consigned to the tomb, and now sleep in oblivion. Of all that have been advanced, but two survive, the Plutonic and Neptunian. The advocates of the former, suppose heat to have not only been the cause of production, but of reproduction also. It also supposes a regular alternation of decay and renovation, and that fire is the great universal solvent of nature. That decay is induced by light, air, and other gasses, rain and other waters, upon rocks by which they are worn down, and that renovation depends upon an immense subterranean fire which operates to fuse, and melt and recombine the separated materials by sublimation and otherwise.

The latter, the Neptunian, that two substances, oxygen and hydrogen, were evolved out of chaos at the formation of the earth, in proportions, so as to produce water, which compound was in such quantity, as to hold in solution, all other materials necessary to the earth's formation. Of the materials held in solution, granite is supposed to have been formed first, and in great abundance, and that owing to its consolidation, it formed the nucleus, or foundation, of this globe, and that all other primary rocks so called were formed on the same hypothesis. It matters not which of these theories be true, or both, or neither, as we have already shown, that heat, fire, or what is called caloric, is nothing but magnetism in a state of repulsion, and a sensation upon the organs of sense, operating in a peculiar manner. If we take the latter, the Neptunian, we shall find, that that theory is also based upon our principles. How could water be formed by the union of oxygen and hydrogen, but by our law of attraction? How could rocks and other solid substances, such as the supposed nucleus of the earth, granite, be formed but by that peculiar arrangement of its particles, necessary to constitute a solid?—In either case, no matter which was the solvent, or which preceded the other form, solid or liquid. If there had been a solution, there must of necessity have been an

attraction, and a new arrangement of the particles, so as to have formed a solid, for chrystalization could not have taken place without it. Solution implies a liquid, and therefore there must have been a change. Nothing could have produced it, but the magnetic fluids. We have seen that light produces chrystalization. What are rocks but the chrystalization of matter? What form of matter is chrystalization but a solid. We have seen (chap. ix) that the minute atoms of matter under a particular arrangement of its poles relative to each other, in a compound produced a solid. We showed also, that the law of the parts was the law of the whole. The solid parts of the whole earth, then, must be the result of that particular law of magnetism, upon ponderable matter, which produces attraction, and the solvents, whether fire, or oxygen and hydrogen, the effect of that law, termed repulsion, chrystalization shows, in the mean time, that nature has a geometry of her own, which performs her work with the greatest precision, and that the great agent by which it is produced, is light, the magnetic fluids. The uniform, color, shape, and density of the various salts and rocks forming the globe, in such natural lines, speak volumes in confirmation of the fact. It appears then, that the compound substances forming the earth, are made from carbon, hydrogen, oxygen, nitrogen, and perhaps a few more elementary substances, by an almost unlimited variety of arrangements of their ultimate atoms, with respect to each other, by the operations and agency of the magnetic fluids.—Whether the earth originally was a nucleus formed from the umbra of the sun, as some suppose, and was propelled into space by the union of the magnetic centripetal and centrifugal forces, disposing it, like the stone from the sling, to fly off in a tangent in the form of a comet, and gradually cooled upon its surface, and wound up its tail, or train, by revolving upon its axis, from that continued impulse from these forces, which first gave it

motion and direction from the sun, and as it cooled upon its surface, formed a crust of granite, and condensed the vapor of its atmosphere into water, from hydrogen and oxygen, which so operated upon this granitic crust, as to oxydize and disintegrate, a sufficient mineral mould or soil, to start to grow grasses first, and then other small shrubs, and then these again decaying, and undergoing decomposition, and producing another class of vegetable productions, and so on from class to class, rising in the scale by what is called "discreet degrees," until man was formed in an infantile state, from the decomposition and reorganization of the elements of the noble oak, black walnut, mahogany, or cedar of Lebanon, as well as the little insects, vermin, and creeping things, from other smaller grasses, and shrubbery, agreeable to a minute law of delicate correspondencies of each class of the vegetable producing its corresponding class, in the animal; or whether the Mosaic account be correct, "that the elements were created, and remained void, and without form, and that darkness was upon the whole face of the deep," until God created the great magnet of the universe, the sun, and placed it in the heavens, and brought order out of chaos by the attractions and repulsions from its influence, and by the same forces also, revolved the whole, upon its axis from West to East every twenty-four hours, thus dividing the darkness from the light, the day from the night, and that man was created out of these elements, an adult or not, one thing is certain, that such is the influence of the sun upon all matter, (chap. ix) as to produce life, action, motion and order, and to divide by the influence of its light, all ponderable matter into three varieties of form, two of which are perfectly antagonized, and the third between the two extremes, or the point of equilibrium. That these constitute the mass of the earth which is divided into land, water, and air, and that they are constantly changing from one form to the other, which change consti-

tutes its life. Philosophers as well as miners have for centuries observed, that the earth's crust is made up of alternate layers of different materials, such as rocks, soils, and other mineral substances; that granite commences first on the series, or lies nearest the centre, and selenite last, or nearest the surface, with moulds or soils interspersed; and that each of these layers have uniformly, when examined, been found to be charged with electricity or magnetism; that each alternate layer is charged with different kinds, one with positive and the other with negative, like the alternate plates of a galvanic battery, and that soils, when ever tested, have been found to be in the same alternate condition, and show the same magnetic results. We have seen (chap. ix.) that the ultimate atoms of all ponderable matter are magnets, had each a positive and negative magnetic pole, and obeyed the laws of magnetism, to which it was indebted for its action, motion, form, texture, nature and color. We also adverted to the general principle that similar causes produce similar effects, whether in simples or compounds, and laid down another unchangable rule, that the law of the parts, was the law of the whole, and conversely, that the law of the whole, was the law of its parts.

From what has been said, and in light of these principles, can we not clearly see, that all geological formations, are owing to magnetism? The earth then, composed of these myriads of little magnets, disposed into an almost infinite variety of simple, compound, and complex arrangements, composing strata of alternate magnetic layers, up to the composition of the whole is a magnet, having a North and a South pole, or a positive and negative magnetic pole, and governed by the principle as a whole, in the same manner as its ultimate atoms,

It has a force from the centre to the circumference, (repulsion) and an antagonizing one, from circumference

to centre, (attraction). These forces both operate at the same time, but sometimes one predominates, and sometimes the other, and sometimes they are equally balanced. When attraction predominates, the surface of the earth and the atmosphere is cold, as in winter.— When repulsion prevails, it is warm upon its surface as in summer. When they are equally balanced, (state of equilibrium) it is temperate, as in some parts of spring, and some parts of autumn. Although the first part of spring and the latter part of autumn from the change, participate more or less with both, the former with summer, and the latter with winter, yet these general divisions are sufficient for our present purpose. These inward and outward currents create by their joint action, or impulse, a force at right angles between the two, which we shall for the sake of distinction term the resultant force. This is that force or current, which forms a line between the two, North and South, the extreme points of which are termed poles.

The rays of light from the sun, upon their attraction and union with ponderable matter, so operate upon the whole earth, as to tend to move it upon its axis from West to East every twenty-four hours, which causes day and night. When these rays, fresh from the sun, first strike the earth, they are positive, but by their union with ponderable matter become negative, and after having traversed the earth they are repelled by it, attracted by the sun, and return to be renewed, are again repelled by that luminary, and attracted to the earth, thus pulling or attracting it on one side, and pushing or repelling upon the other, which gives it its revolving motion upon its axis. This ceaseless change of attractions upon one side, and repulsions on the other, will account for the diurnal revolution of the earth, in the simplest, yet most satisfactory manner.

The resultant force from the centre to the poles will also account for the annual revolution around the sun,

in the same manner, which divides our year, as we have before seen, into summer and winter, spring and autumn. Summer is produced by the attractions from the sun overbalancing its repulsions, and winter by the repulsions overbalancing its attractions. Spring and fall participate more or less with both as we have seen as above. These preponderating attractions and repulsions continue each, for one half the year. In summer and spring the current towards the earth from the sun is strongest. In winter and fall the current is strongest towards the sun from the earth. It is also during the day strongest towards the earth, but during the night the current is strongest towards the sun. That these magnetic rays of light are attracted back, after having been absorbed and traversed the earth, we infer from the following considerations. If the sun is obscured by clouds, it becomes dark. The light that was upon the earth, has fled, vanished, gone.

As soon as the sun has set, as it is called, it begins to grow dark, and if clouds obstruct the light from the stars, and there is no moon, it becomes quite dark.—What has become of the light received from the sun during the day? Where gone? If we then create artificial lights by electricity or combustion with wood, coal, gas, lamps or candles, and suddenly extinguish them, it becomes dark. What has become of the light? We answer it is absorbed by all ponderable matter, by which we are surrounded and with which the earth is formed, traverses it in every direction, and then returns from whence it came, by the immutable law of the principle, of repulsions succeeding to attractions, or those of the same name repelling each other, and those of different names attracting one another. Were this not the fact the sun must have long since become impoverished, and agreeable to the present theory of the books, the earth must have become a ball of fire, and withered and burnt every thing upon its surface. . . . But the sun is not a ball

of fire, but a vast magnet governing the whole planetary or solar systems, by attraction and repulsion, through the agency or by the influence of the magnetic fluids. Springs and brooks are constantly flowing from the centre to the surface, these are partly thrown by repulsion into atmospheric air, and there form clouds, attraction again succeeds over repulsion, and it again descends in the form of rain, sleet or snow, to fertilize the earth, a part of which is attracted or absorbed and flows again to the centre, while the remainder is again repelled into the atmosphere, or flows through streams, rivers or brooks into the ocean, or is decomposed by vegetables and animals, and enters into their composition, or inorganic matter and forms limestone, salts, earths, acids, alkalies or other mineral substances, and thus this ceaseless round of attraction and repulsion, contraction and expansion, composition and decomposition, and recombination through and by the agency of the magnetic principle is the cause of all geological formations. If the earth were not a magnet, how could the ocean be traversed by artificial magnetic guides?

How could the earth's equator, its poles, the latitude and longitude of any place or point on land, or vessel at sea be determined? In what manner, and by what expedient, could continents, nations, kingdoms, states and even farms be bounded, marked, lined, registered and preserved, by contract, deed, mortgage or otherwise?

CHAPTER XV.

THE SCIENCE OF NUMBERS.

In the days of Pythagorus, that ancient but eminent philosopher, compared the existence of matter to the science of numbers, represented by arithmetical figures. So precise was he, that he even separated unity from

one. "One says he; appertains to things that can be numbered and may be compared to matter rendered visible by arithmetical figures under a particular form, while unity is an abstract conception resembling primary or incorporeal matter in its general aggregate. Number is not infinite any more than matter, but nevertheless it is the source of that divisibility into equal parts which is the property of all bodies." By numbers then, matter is divided into almost an infinitude of equal parts. The method of reducing them to their elements, is by analysis, and the rule by which it is governed is called subtraction. The method of aggregating or collecting them in mass, is by synthesis, and the rule by which it is governed is called addition. These two rules then, addition and subtraction form the general and fundamental rules, on which is based the whole science of numbers. Multiplication and division are but shorter methods of performing these operations, and are therefore secondary in their effect. All other operations and rules are based upon these two fundamental ones. Synthesis and analysis then, are but other terms for composition and decomposition, and these again but others denoting the particular form or manner by which they are produced, attraction and repulsion. Philosophically speaking, what is addition but the natural attraction of the representatives of the particles of elementary matter, to form a mass, compound, or aggregate; and subtraction but the separation or repulsion of the signs of the particles of the same from each other, in aggregation or masses to reduce them to their elements or unity?

Numbers were not any more used as types, signs, or representatives of our mathematical ideas, for elementary matter by this profound philosopher, in his day, than they are at the present. All our best modern chemists make use of, and teach them, in our best colleges of instruction. Sir Humphrey Davy, the great Newton of that science, taught to his last breath, that the ele-

ments of all compounds are in certain definite proportions to each other, which ratios may be expressed by numbers, and are at this moment, taught in our text books on chemistry. The revival of this theory was probably owing to Dalton, in his well known and established doctrine of atoms. No matter, whether determined by measure or weight, by quantity or by the numerical proportions and ratios of elements, or ultimate atoms relative to each other in the compound, the general principle is the same. It is a science expressing the elements of matter, and computing their aggregation, quantities, as well as qualities, by numbers, which is governed by two fundamental rules, addition and subtraction. These numbers are but signs, standing for the minute particles, or ultimate atoms themselves, and stand the same relation to each other in compounds, that ideas do to each other in the compound or formation of mind. Both governed by the same law, addition and subtraction, attraction and repulsion. Both showing the same antagonizing principle in each, the one being but the perfect correspondence of the other, which we shall show more particularly when we come to analyze the mind, and reduce it to its elements. So also with algebra, or that branch of mathematics, in which the quantities are represented by letters, and their operations by signs. Although thus represented, the general principle is the same, and performed in the same manner, by these two fundamental rules—the base of all mathematical science, plus and minus, but other terms for addition and subtraction. It was probably, from the observance of this principle in connection with this science, that lead the celebrated Dr. Franklin to adopt the one fluid principle, in his theory of electricity; thereby making the law of attraction and repulsion to depend upon the excess or diminution of one fluid, in ponderable matter, instead of two. It will then be conceded, for we shall take it for granted, that all compounds are formed by

simples, in definite proportions of their elements to each other, and will show a few examples which may be taken as an illustration, for all compound bodies. It is well known that the rusts or oxides of iron and other metals, consist or is made up of a certain quantity or portion of oxygen, with a certain quantity or portion of metal. It is also well known, that many if not all the metals are capable of two or more degrees of oxydation, and are generally distinguished by different colors; like the black and red oxides of iron, the white and red oxides of lead, which are all equally oxides of the two same metals, and differ only in the proportions of the oxygen in the compound. Now in whatever proportion it unites in, to form an oxide of one kind, it invariably unites by a multiple or divisor, (addition and subtraction,) of the same proportion to produce every other kind of oxide, belonging to the same metal. It has been discovered that antimony has four different points of oxydation.—The lowest contains four and a half parts of oxygen, to one hundred of metal. The second, eighteen parts of oxygen, to one hundred of metal, which is four times four and a half. The third, twenty seven parts to one hundred of metal, which is six times four and a half.—The fourth contains thirty six parts oxygen, to the same quantity, which is eight times four and a half. Tin has three different degrees of oxydation. It has for its lowest proportion, seven parts oxygen, to one hundred of metal. For its second fourteen, and for its highest point twenty one parts oxygen to one hundred of metal. Iron has but two oxides, the one black, the other red. The first contains twenty parts oxygen, to sixty nine parts of metal, and the last, thirty parts to the same quantity.

These metals and their union with oxygen, may be taken as so many diagrams, to explain all other compound bodies. They not only unite like these and form compounds in definite proportions, but cannot be made to unite in any other, or in any intermediate degrees

between. This law of definite proportions and light as the agent, accounts for, or is the key to the whole hitherto mysterious science of chrysalography, and gives us the cue to the cause why all salts assume a shape peculiar to each class. When we find these oxides, salts or chrysalts, we know them to be of uniform strength, as agreeable to the atomic law of definite proportions in compounds, they cannot be made to vary. Showing at such a point we have in the same elements attractions, and at another repulsions, and yet at an other point still higher attractions again, and new compounds entirely different in their natures and action, such as sugar, starch and vinegar, all from the same ingredients but different in proportions. So also with calomel, corrosive sublimate, and red precipitate. This law of definite proportions runs through all nature; through solids, liquids and gasses, as well in the animal, as vegetable and mineral kingdoms. Not only in these but in the formation of mind, friendships, social circles, societies, parties, clubs and juntos. It will also be seen that color depends upon it. The only reason why the black oxide of iron was changed to red, is the addition of ten more parts of oxygen in the compound. "Hence, these proportions though constantly true to their respective series, are diversified in different substances, their radical figures or numbers may be, and now are, actually employed, and that very generally. They are in perfect coincidence with the system of Pythagorus as the synonyms of the simple forms of substances whose progressive they describe. This curious coincidence of ancient and modern philosophy may be regarded as a marvellous proof of the truth of the atomic theory. And it is not the least important of this discovery, that not only in the union of simples, as well as in their separation also, this very theory is applicable and proves true, but in all well known and more complicated compounds, so far as the experimental series have been carried, the elementary

bodies which enter into them, exhibit proportions equally definite and invariable."

Thus affording another proof of close connection between the phenomena of nature, and the occasional developments of revelation, the philosopher beholding now, as did the prophet of old, that the Almighty Architect has literally adjusted every thing by weight and measure ; that he has measured the waters and meted out the heavens, accurately comprehending the dust of the earth, weighed the mountains in scales, and the hills in a balance."

CHAPTER XVI.

GEOMETRICAL SCIENCE.

The science which has for its object the measurement of magnitudes, consists in finding the sum or difference between the extremes of the antagonizing angles, varying from the equilibrium of a right angle. The antagonizing extremes are called acute and obtuse angles.—The tools or machinery are straight and curved lines. The calculation of aggregation or diminution in the reduction to right angles, is performed like all other mathematical operations by the rules of addition and subtraction—plus and minus, attraction and repulsion. The whole science is based upon equality and difference, and therefore as far as regards principles is in the above nutshell. A perpendicular line drawn so as to stand upon a horizontal one, and cut it at right-angles in the science of geometry, is as much a point of equilibrium between the extremes of the machinery of the circumference and centre of the science, as the equator is to the poles of the earth, the middle of a compass needle, or a neutral salt between an acid and an alkali. All right angles are equal to one another, therefore there is no differ-

ence. An acute and obtuse angle in due proportion, are equivalent to a right angle. All geometric lines are either straight or curved. Magnetism moves in straight lines or curves. Attraction or repulsion is performed in straight lines. Both united and operating upon each other mutually, produce a curve. The union of the two forces at all times tend to form a sphere or circle.

If we load a cannon with powder and ball, and overbalance the attractive force of the powder by communicating to it magnetism in a state of repulsion, or what is called caloric, the repulsive force will project the ball into space, seemingly in a straight line, but the attractive force operating upon the ball at the same time, it approaches and lodges upon the earth. Here, when the powder was in a state of attraction, the ball was at rest, but by adding magnetism in a state of repulsion, in an artificial manner, the repulsive force predominated for a time, but attraction again overbalanced the repulsive force, and it fell to the ground. Had there been no antagonizing force to repulsion, and had the ball met with no resistance, it would have continued in a straight line on a line drawn parallel with eternity. But although these forces are antagonized, yet their immutable law is, for first one to predominate and then the other, as exemplified in this instance. The ball then, from their united forces described the segment of a circle, like all other bodies operated upon by these united forces. It is these same forces which dispose solid substances to crystalize in different forms in nature upon the surface and in the centre of the earth, into spheres, cubes and so forth, with geometric precision. From the present state of the science of chemistry, the imperfect knowledge we have of the atomic theory of definite proportions, of crystallography, with the novelty of our doctrine and the unsettled state of the public mind upon general principles, from the vast and rapid improvements in every branch of science and art, at this time, we are

somewhat after all, like the aged prisoner released from the bastille—in darkness, though surrounded by an excess of light. But from the fact of the evolution of light during crystalization, of its disposing effects to commence crystalization in compounds, as well as to break them down and decompose them, can we not reasonably infer that light is the great agent by which all forms, figures, colors and textures in magnitudes are produced?

The great variety in nature, which are as numerous as the various figures from the successive throws of the calidascope, is undoubtedly owing to some peculiarity in the primary molecule, in the particular class of crystals. Can we not at least imagine that from some yet unknown law, from the primary molecule, connected with the known law of light, (the angle of reflection equal to the angle of incidence) that light, the magnetic fluids, is the cause of all geometric lines, and that the present science is but art attempting to imitate nature? Do we not clearly see that the lines, angles, extremes and point of equilibrium in the science, in comparison, as well as the laws by which it is governed, and rules by which it performed, correspond with the rules, laws and operation of the same lines, angles, extremes and centres in ponderable matter from the operation of the magnetic fluids? The former performed by addition and subtraction, and the latter by attraction and repulsion? Both philosophic synonyms; the one appertaining to matter, the other to mind, which is but the correspondence of the internal with the external, and therefore is but art mimicing nature. Crystallization is one of the most beautiful and grand results of the operations of nature, and when understood, will reveal to us wonders hitherto inconceivable.

Nature here divests herself of all mystery, throws off the complicated mantle of intricacy, and undisguised, presents herself as she really is, and leads and assists us to learn her by the light of her own natural science—

geometry. Will it not then delight genius to follow her in her devious paths, behold her wonders, and treasure up her knowledge in the great store-house of intellect? Let the wise and reflecting judge.

CHAPTER XVII.

ELEMENTS OF LANGUAGE—GRAMMAR.

It has been shown that magnetism is governed by the law of attraction and repulsion, that either move in straight lines, but when both operate together they produce in matter, a circle, curve or sphere. This law is general and regards all motions, or effects, in either the animal, vegetable or mineral kingdoms, and is as applicable to the operations of mind, as matter. In the very elements of language, the signs of our ideas, which form the chain of correspondence between spirit and matter, the medium of connection between the internal and external, we find this characteristic operation of the magnetic fluids; and no matter whether the operation be upon organized or inorganized matter, their effect is the same. The signs of ideas in every written or printed language are formed by direct straight lines, curves or circles, and whether the impulse from the volition of man, be carried to the paper or plate through the extremity of the fingers, to make the impression, or by the type or pen, the effect is the same. All signs of our ideas then, printed or written, mathematical, chemical or mechanical, conform to the same results, and are governed by the same law that governs matter, and correspond with it. The combined effect of the magnetic forces in matter, as we have seen, is to produce a sphere or circle; therefore, the same cause that enables a man to make a cypher, the letter o, or make a tub, forms a globe, or generates a world. The archetypes or symbols of things

which form language, then, are produced by these forces. When formed they are divided into two classes, antagonized to each other, like the poles of the magnet. Orthography teaches two kinds of letters in the formation of words, vowels and consonants, which, when united (attracted together) form syllables, syllables form words, words sentences, and sentences discourses, which form books. No word can be formed with one class, no more than a compass needle can be made to traverse with one pole—a tune in music without a variation of sound—a galvanic battery to operate with one plate, or a bird to fly with one wing—it would be like attempting to propel a steamboat with all cold, or all hot water, or anticipating a splendid speech from an individual perfectly and universally palsied throughout one half the body, or making all the signs of our ideas of straight lines or circles. No word can possibly be formed from all vowels or all consonants. It requires both to make them, as much so as it does both magnetic forces, to form an egg or grow an apple. Syllables then, are compounds of letters—the antagonizing signs of ideas, and in words are philosophically governed by the law of attraction and repulsion. For example in spelling and pronouncing the word di-vis-i-bil-i-ty, as well as all others, the sound is divided into distinctions of time, forming a marked contrast between the commencement of one and termination of another. In this point of distinction the vowel is positive and the consonant negative; both repel those of their kind, or name, but attract each other, so as to produce an effect, and make sense; whereas the former cannot be made to make a word, or sense. No word can be made exclusively of all one, or the other, but require both. Thus oo bb means nothing, spells nothing, are nothing, but two o's and two b's; but if we put them together they naturally attract, make sense and spell, and are pronounced ob and bo. So also of the whole of both classes. In pronouncing, the sound is al-

so not only antagonized, but the very organ of the mechanism of the articulate sound also. The sound of the consonant, is made or perfected from within outward, and the vowel from without inward. The machine has two antagonizing extremes of locality, of commencement and termination, of sound, as well as two others of manner. The two former the mouth and throat, the latter is characterised (as in music) by *crascendo* and *diminuendo*. A syllable then is a compound of the integrant particles of mind, attracted together so as to form a word. A word is a compound of syllables attracted together to form parts of a sentence. A sentence is composed of words, and are attracted together to form discourse. Discourses form books. These discourses are compounds of the elements of mind or ideas under a variety of combinations of letters forming them, precisely like the combinations of the various simple substances of matter, of which they treat, represent, or are the correspondences of, attracted together by the same principle and governed by the same law. Every law that governs the operations of matter is applicable to that language which expresses the operations of that matter, for the latter is but the representative of the former.—The theory of Dalton is as applicable to the ultimate atoms or elements of language, (letters) as it is to the ultimate atoms of matter. They will not unite but in certain definite proportions or combinations, to form sense, and are multiples, or divisors of each other, and cannot be united according to rule (agreeable to orthography,) in any other manner.

In the second part of grammar this principle is also apparent. The main constituents of a sentence are the noun and verb, opposite in nature as the poles, yet to make sense and be grammatical, they must agree with each other in number and person. The one the name of something that exists, the other to be, to do, or to suffer from, or for what does exist. Yet these diamet-

rically opposite parts of speech to make good language, and pass the ordeal of scrutiny, must be attracted together and agree with each other in number and person. Number comprehends one or more ; if one it is called singular; if more than one, plural. Here we find the principle of attraction in the plural, and repulsion in the singular; but other terms for unity and aggregation; showing like matter, composition and decomposition, and governed by the same law. Person also is antagonized from the same principle—spoken to, and of. In case, we find the same principle ; nominative, possessive and objective. The two, extremes; and the other the line between the two. The one active, the other passive, and the third the equilibrium point. We observe two kinds of conjunctions, conjunction attractors, or connectors of the sense, and conjunctions repellers or contrasters of the sense. Prepositions are antagonized to each other, as above-below, over-beneath, up-down, to-from, by-of, over-under, before-behind, off-on, within-without. Adverbs are also modifiers, or contrastors, as once-twice, first-secondly, here-there, anywhere-nowhere, upward-downward, to-day-to-morrow, soon-never, wisely-foolishly. Verbs are active, passive and neuter, showing the two extremes, and the neutral point between the two. Even the moods of verbs, as well as tenses, are antagonized. The imperative with the potential, as he may go, go thou; the indicative within itself, as he loves, he is loved. In philosophy, there are but three distinct moods of verbs ; the imperative, *go thou*; potential, *he may go*; indicative, *he goes*—between the extremes of the two others. The subjunctive and infinitive are but modifications of the indicative, between which the line of demarcation is not to us apparent. So also there are properly but three tenses ; past, present and future.—Here we have the extremes and the equilibrium point of time—the present. The other parts of speech, and some of the above, are but so many substitutes, modifiers, con-

trastors, qualifiers and definers to sustain the substantive and verb, and when examined by our magnetic test, show the same principle running through the whole.— But we are not writing a philosophic grammar, but showing the universality of the magnetic principle, and that all sciences and arts are based upon it, and governed by the same law that governs the matter, which is the subject of those sciences and arts.

CHAPTER XVIII.

LOGIC.

If we examine into the art of reasoning, or logic, we shall find the same general principle running through that also, or that the filtration of truth from error is produced or performed, by comparing extremes of both, and reducing them to an equilibrium as a test to discover one from the other. “There are three operations of the mind connected or concerned in argument. Simple apprehension, judgment, and discourse or reasoning. Simple apprehension is the notion or conception of any object in the mind, analogous to the perception of the senses. It is either incomplex or complex. Incomplex apprehension is of one object, or of several, without any relation being perceived between them; as of ‘a man,’ ‘a horse,’ ‘cards.’ Complex is of several, with such a *relation*, as of ‘a man on horseback,’ ‘a pack of cards.’ Judgment is the comparing together in the mind, two of the notions (ideas) which are the objects of apprehension, whether complex or incomplex, and pronouncing that they agree or disagree with each other, or that one of them belongs or does not belong to the other. Judgment is therefore either affirmative or negative. Reasoning, or discourse, is the art of proceeding from one judgment to another, founded upon that *one*, or the re-

sult of it. Language affords the signs by which these operations of the mind are expressed, and communicated. An act of apprehension expressed in language, is called a term; an act of judgment, a proposition; an act or reasoning, an argument; which when regularly expressed is a syllogism, as *e. g.* Every dispensation of Providence is beneficial;

Afflictions are dispensations of Providence,
Therefore they are beneficial,

is a syllogism; the act of reasoning being indicated by the word 'therefore.' It consists of three propositions each of which has (necessarily) two terms, 'as beneficial' 'dispensations of Providence,' &c. A syllogism being as aforesaid, resolvable into three propositions, and each proposition containing two terms, of these terms that which is spoken of is called the subject, that which is said of it, the predicate; and these two are called the terms, (or extremes) because logically, the subject is placed first, and the predicate last; and in the middle the copula, which indicates the act of judgment, as by it the predicate is affirmed or denied of the subject. The copula must be either is, or is not, the substantive verb being the only verb recognized by logic, all others are resolvable by the verb to be and a participle or adjective; *e. g.* 'the Romans conquered;' the word conquered is both copula and predicate, being equivalent to 'were' (cap.) 'victorious' (pred.). A term may consist of one word, or more." A proposition then in logic is composed of two extremes and a copula or middle term, with which these extremes are composed, and by which result the inference or truth of a given question or subject is discovered and noted." Although somewhat mechanical, it is natural in its operation, and in comparison perfectly analogous to a compass needle in its mechanical operation, and correspondence. The needle has its two extremes; a positive pole, and a negative one. So has

a proposition in logic. It has its two extremes and a middle term with which each of them is separately compared, to judge of their agreement or disagreement (attraction or repulsion) with each other. If the middle term agrees with the first it is affirmed of the question or subject; if with the third it is denied. Now what is this agreement but attraction, and disagreement but repulsion, philosophically speaking. Is not the truth then entirely dependent for its discovery on attraction? and error on repulsion? Does not the whole mechanism of a proposition in the effort to arrive at truth or error depend entirely on attraction or repulsion of the middle term or copula with the first? Does not the copula stand the same relation to the extremes of a proposition, that the equator of the earth, or a compass needle does to their extremes, or poles? The extremes of one are termed positive and negative; in the other affirmative and negative. Is there philosophically any difference in the meaning, nature, or name of these extremes? Do they not all hold the same relation to their extremes one with another? Is there any difference? The effect and detail of both are the same, and governed by the same law. A proposition then is a sentence which affirms or denies a thing, principle or subject. It is therefore like the compass needle positive and negative. With regard to matter it is true or false, (positive or negative). It is also universal or particular (singular or plural—addition and subtraction—simple and compound). "With any given subject and predicate you may state four distinct propositions A, E, I, O, any two of which are said to be opposed. Hence there are four different kinds of opposition; contradictories, contraries, sub-contraries and subalterns," recorded in the books, the machinery of which is complicated, hard to be understood, seldom used, and never should be, as they are not true in fact, and are but the mere scintillations of ideality, and confusing to the student. The whole of logic in its simpli-

city, consists in an antagonistic principle of two extremes, varied like the compositions and decompositions of matter. There is but one kind of opposition, and that stands opposed and diametrically antagonized to attraction—repulsion; and this law is the governing principle of the art, under its different names and appearances. Syllogisms like propositions are made up of three terms or two extremes, and a middle term which is twice separately compared with the extremes. Of these the subject of the conclusion is called the minor term; its predicate, the major term; and third the middle term.—This comparison with the extremes is to judge of its agreement or disagreement with each other. If they agree, it is affirmed, if they disagree, it is denied of the subject, which is shown by the conclusion. Who cannot see that the machinery of a syllogism to elicit or discover truth is precisely analogous to the magnet or compass needle? both depending on the agreement or disagreement, attraction or repulsion?" It is made up also, of three propositions and but three; the major premiss in which the major term is compared with the middle; the minor premiss in which the minor term is compared with the middle; and third the conclusion, in which the minor term is compared with the major." A proposition then in logic stands the same relation to a syllogism, that a simple apprehension does to a proposition. The conclusions of both, are arrived at on comparison as above determining on the agreement or disagreement of the extremes, or poles with the middle term. In the first it is comparison between simples, in the second between compounds, and in their various operations, stand the same relation to each other, that an elementary particle of matter does to the most complicated compound. The atomic theory of definite proportions is as applicable to these apprehensions, in their formations into discourses or compounds of judgment, as to matter. The discovery of truth then, is the result of attraction, and error of repul-

sion. In other words truth attracts, or agrees with truth, but repels error ; whereas error or falsehood repels truth, and disagrees with itself, and is therefore at all times and under all circumstances universally repulsive. But there is another mode or manner of reasoning at the present day, which is more in general use, because more simple, and better understood, and less liable on that account to mislead. It is that of induction—the logic of common sense which consists in establishing a proposition, subject or position, by a collection of facts from the evidence of the senses.

The God of nature has given us five, and probably six senses, (the sense of temperature as distinguished from touch) to test a subject or principle, which senses are so many evidences to the mind of the truth or falsehood of a proposition, and following up nature in the light of these senses, five well established facts, one from each sense, is at all times sufficient to establish the truth, If they agree it is affirmed of the proposition, if they disagree it is denied, as thus ; some fluid or principle causes vegetables to grow. They will not grow naturally in our climate in winter, but will, in summer. Summer is caused or produced by such a relative position, and action between the sun and earth, that more light is produced upon the earth than in winter. Light then makes vegetables grow. But it has been found from observation and experience, that what is called caloric is necessary for the growth of vegetables, for in summer there is more heat than in winter, as well as light. From experiment it has been found that electricity and galvanism will grow vegetables, rapidly. Oxygen and hydrogen gasses are necessary to the germination of seeds, and the growth of vegetables ; moisture is an indispensable requisite in the germination of seeds and growth of plants. Electricity is light, and light is galvanism, and galvanism is oxygen with hydrogen gas, and these are caloric, and caloric is magnetism in a state of repul-

sion. Therefore magnetism in a state of repulsion is the cause of the growth of all vegetables. These are facts from observation, experience and experiment, agreeing with each other, as touching one effect—the growth of vegetation, which concludes the subject, or proposition, and establishes the fact, from the decision of judgment, that they all agree in producing the same effect, and that similar effects are produced by similar causes, and therefore that they are identical, one and the same principle—magnetism.

Again we are lead to examine an individual, and observe that he is cold and shrivelled, that he cannot see, hear, touch, taste or smell, that his pulse does not beat, nor his lungs heave, that he is destitute of motion, and thought ; comparison at once contrasts these facts with those known to constitute life, and judgment instanter decides that he is dead. The conclusion here is arrived at, by the disagreement of the symptoms or facts with those of life, and judgment pronounces accordingly.—Again, if we observe that an individual is warm, that his pulse beats, that he has respiration, as well as motion, but that he cannot hear, see, touch, taste or smell, except through the senses of another, after deliberation and reflection from these facts, judgment decides that one half agree with those of life, and the other half with those of death, and is therefore in a dilemma. To extricate itself causality seeks for new ones to prove one or the other. It then further discovers, that although the natural senses are dumb, catalept'd or palsied, yet the mind, by the fact, is exalted far above its natural state, so much so, that time, space, distance, magnitude, texture, &c., are annihilated, or a new sense by the concentration of all these into one, is instituted, so that the individual cannot only read at the top of the head, pit of the stomach, tips of the fingers, but can see through an opake solid, as well as gas or liquid, can look to the moon, and scale heaven itself. After reflection

has labored in vain to find an agreement with either condition, life or death, judgment decides that it is a state hitherto unknown, an entire new condition of man upon earth, and impels causality and comparison to further investigate the subject. This new condition is produced by animal magnetism, and is one of the subjects to be examined in the sequel.

Can we not then see that the whole art of reasoning, whether by syllogism or induction, is based upon the natural attraction or repulsion of the facts, or evidence together or from one another, for or against it? That in the latter or common sense system of proofs, by observation, experience, and what not, if a sufficient number agree, it is affirmed, or proved, if they disagree it is denied; thus showing the antagonistic principle in logic, as well as every other science, or principle in nature.

CHAPTER XIX.

VEGETABLE LIFE.

That the germination of seeds, and growth of vegetables, are owing to the magnetic fluids, admits of no doubt,

Plants or trees will not grow in winter without artificial heat and light, neither will they thrive, keep healthy, and come to maturity in the dark with heat alone. A certain or due quantity of both, then, are necessary for the cultivation and growth of all vegetables, of different classes in nature. Such is the relative situation of the earth with respect to the sun in spring, that a greater quantity of light or magnetism beams upon, or is attracted to the earth, where being absorbed by imponderable matter, attraction and repulsion recommences with increased energy, and the seeds of the new, as

well as the roots of the old, begin to grow and shoot forth up and down, laterally and around, or between the extremes of the two. If the season be favorable, and proper care be taken to cultivate them, some come to maturity in one season, some in part of a season or summer, while others take longer, varying from these to a century for their perfection. "The seed or egg of a plant is sometimes naked, and sometimes covered with a pericarp, from whence plants are divided into two grand arrangements, of gymnospermous and angiospermous. The pericarp is of various forms and structures. On taking off the pericarp we find the seed to consist internally of a corculum or heartlet, and externally, of a fleshy, or parenchymatous substance, surrounded with a double integument, sometimes single, sometimes bifid, and sometimes more than bifid, and hence denominated monocotyledonous, dicotyledonous, polycotyledonous. In common language these are called seed-leaves or seed-lobes. It was formerly supposed by some, that there was some orders of plants destitute of cotyledons, but it is now believed to be universal, as it seems to be necessary for the germination and future growth of the seed, and hence has been denominated its lungs or placentule. Like the perfect plant it possesses lymphatics and air vessels. Through the former it absorbs moisture from the soil in which it is plunged, decomposes a part of it into its elementary principles, and conducts those principles, together with the undecomposed water, to the corcle or heartlet, which becomes stimulated to the process of germination, by the oxygen thus set at liberty. According to experiments detailed at the National Institute (London) by Mr. Mirble, the soil and albumen in the cotyledon are both concerned in the development of the germ, and both contribute conjointly, till the albumen is entirely absorbed, at which time the plant has strength to derive from the soil or atmosphere the nourishment it requires from this period.

It is the corcle which is the true *punctum saliens* of vegetable life says Dr. Good, and to this the cotyledon is subservient. The corcle consists of two parts, an ascending and a descending ; the former is called its plumule which gives birth to the trunk and branches, the latter named its rostel which gives birth to its root and radicles. The position of the corcle in the seed, is always in the vicinity of the *hilum* or eye, which is a cicatrix or umbilicus remaining after separation of the funis or umbilical cord from the pericarp, to which the seed has hereby been attached. The first radical or germinating branch of the rostel uniformly elongates, and pushes into the earth, before the plumule evinces any change. Like the cotyledon, the radicles consist chiefly of lymphatics and air vessels, which serve to separate the water from the soil, in order that the oxygen may be separated from the water. Hence originates the root the most important part of the plant, and which in some sense may be regarded as the plant itself ; for if the root remain uninjured, if any other part of the plant be destroyed, this organ will regenerate and the whole plant be renewed ; but if the root perish, the plant becomes irrevocably lost, yet there are various phenomena in vegetable life that manifest a smaller difference in the nature of the root and the trunk, than we should at first be disposed to suppose ; for there are several species.

Willoughby observed more than a century ago, that in several species and especially the *prunus* and *salix*, cherry and willow tribes, if the stem branches be bent down to the earth, plunged into it, and continued in this situation for a few months, these branches will throw forth radicles, and if, after this, the original root be dug up, and suffered to ascend into the air, so that the whole plant becomes completely inverted, the original root will throw forth stem-branches and bear the wild fruit peculiar to its tribe. The solid parts of the trunk consists of

cortex, cuticle, or outer bark; liber, cutis, or inner bark; alburnum, or soft wood; lignum, or hard wood; and medulla or pith. The pith was supposed to correspond to the spinal marrow of animals; at any rate it seems to be an admirable reservoir for moisture, and of the greatest importance to young plants that are more or less destitute of leaves, to preserve them from drought. Its surface is covered with air cells and lymphatics. This pith as the plant grows older and acquires leaves is of less necessity, becomes obliterated by the surrounding lignum which grows in concentric circles, and the trunk enlarges by the formation of a new liber or inner bark every year. The whole of the liber of one year, excepting indeed its outermost layer, which is transformed into cortex, becoming the alburnum of the next, and the alburnum becoming the lignum. Such is the common theory of the growth of plants, and it seems to be well supported by observation and experiment." The age of a tree may be known by counting its concentric layers or circles; one circle for each and every year. Independantly of these more solid parts of the trunk or stem, we generally meet with some portions of parenchyma or cellular membrane, and always with the different systems of vegetable vessels disposed in common and uniform arrangement. The lower order of plants, indeed such as the annuals, and biennials, consist almost exclusively of parenchyma or cellular substance, with an inner and outer bark and the respective vessels of the vegetable system. These vessels are adducent and reducent, or arteries and veins. Many of these may be seen by the naked eye, and especially the sap vessels; and the vascular structure of the whole has been sufficiently proved by Gessner by the means of the air pump.—The reducent or returning vessels are stated by Sir E. Smith, to bring back the elaborated sap from the leaves to the liber for the new layer of the existing year. The lymphatics lie immediately under the cuticle and in the

cuticle. They anastomose in different ways through their minute intermediate branches, and by surrounding the aperture of the cuticle, perform the alternating economy of inhalation and exhalation. Their direction varies in different species of plants, but is always uniform in the same species. Immediately below these, lie the adducent vessels or arteries, they are the largest of all the vegetable vessels, arise immediately from the root, and communicate nutriment in a perpendicular direction, and when the stem of a plant is cut horizontally they instantly appear in circles. Interior to these lie the reducent vessels or veins, which are softer, more numerous, and more minute than the arteries; and in young shoots run down through the cellular texture and the pith. Between the arteries and veins, are situated the *air vessels*, as they were formerly called; but which Dr. Darwin and Mr. Knight have sufficiently proved to contain, not air in their natural state, but sap. They seem to be the genuine lacteals issuing from the root, as in animals, they issue from the villous coating of the intestinal canal. They are delicate membraneous tubes, stretching in a spiral direction, the folds being sometimes close to each other, and something more distant, but generally growing thicker towards the root, and especially in ligneous plants. These vessels are very minute, and according to numerous observations of Hedwig made with the microscope, seldom exceed a 290th part of a line or a 3000th part of an inch in diameter. The lymphatics of a plant may be often seen with great ease, by merely stripping off the cuticle with a delicate hand, and then subjecting them to the microscope, and in the course of the examination, we are also frequently able to trace the existence of a great multitude of valves, by the action of which, the apparatus of the lymphatics are commonly found closed. Whether the other systems of vegetable vessels possess the same mechanism, we have not been able to determine decisively. The following ex-

periment, however, should induce us to conclude that they do. If we take the stem of a common balsamine, (or of various other plants,) and cut it horizontally at its lower end, and plunge it so cut into a decoction of Brazil wood, or any other colored fluid, we shall perceive that the arteries or adducent vessels, as also the lacteals will become filled or injected by an absorption of the colored liquor; but that the veins, or reducent vessels, will not become filled, of course evincing an obstacle in this direction to the ascent of the colored fluid. But if we invert the stem, and in like manner cut horizontally the extremity which till now was uppermost, and plunge it so cut into the same fluid, we shall then perceive that the veins will become injected or suffer the fluid to ascend, and that the arteries will not; proving clearly the same kind of obstacle in the course of the arteries in this direction, which was proved to exist in the veins in the opposite direction; and which reverse obstacles we can scarcely ascribe to any other cause than the existence of valves. By this double set of vessels, moreover, possessed of an opposite power, and acting in an opposite direction, the one to convey the sap or vegetable blood forwards, and the other to bring it backwards, we are able very sufficiently to establish the phenomenon of a circulatory system; and according to several of the experiments of Wildenow, it seems probable that this circulatory system is maintained by the projectile force of a regular and alternate contraction and dilatation of the vegetable vessels. But their great minuteness must ever render it extremely difficult to obtain anything like absolute certainty upon the subject."— Thus then, from the anatomy and physiology of plants, we discover that they have two sets of vessels throughout their whole systems like animals, antagonized to each other. The adducent and reducent, the absorbents and secernents, the veins and arteries, or the attracters and repellers, one set to absorb nourishment

from the earth and carry it to every part, and another set to return it again, another set to absorb from the surface and carry it to the centre, and another set to carry it from the centre to the surface ; showing like every other system in nature, that they have a centre and circumference ; that there is constantly a force going from one to the other, both operating at the same time, but that sometimes one predominates, and sometimes the other, that, that force which operates from the circumference to the centre is attraction, and that from the centre to the circumference repulsion, and that from the joint action of these antagonized to each other, the plant thrives, grows, and comes to maturity, or are interrupted or broke up in their action, and the vegetable dies and goes to decomposition.

It will also be seen and remembered that the *corcle* is the true *punctum saliens* of vegetable life, and that it consists of two parts, an ascending part, and a descending part. The ascending is called its plumule, and its descending, its rosetel. The plumule gives birth to the trunk and branches ; the rosetel to the root and radicles. The radicle like the cotyledon is possessed of lymphatics and air vessels, and the first action to be discovered is the decomposition of water by this function or organ, the oxygen and hydrogen gases are separated from each other, the two electricities are set at liberty, the play of affinities and repulsions commence, the radicle is attracted to the earth and elongates into its bosom, its stomach, and the plumule is repelled by the root and attracted by the sun to elongate and grow into atmospheric air. This then, is the commencement of the growth of all plants in nature, and the manner and process by which they commence life. We have seen also that the development of the germ, is a mutual effect from the joint action, or sympathy or attraction between the albumen of the cotyledon and the soil, until the former is entirely absorbed. This absorption by the soil is at-

traction, and all attractions are succeeded by repulsions, in nature, at all times and under all circumstances.—Vegetables then, commence their growth by the attraction between certain constituents of the seed, with a certain principle of the soil as above, and its life and animation commences and is carried on by the two antagonizing forces of magnetism or electricity. These air cells, lymphatics, vessels and all, correspond very materially with the organs and systems of animals, and burst into life in the same manner, or by the same necessary primordial process, of first attraction and then repulsion. These vessels carry and return the sap to every part of the plant which constitutes its nutrition. The sap then stands the same relation to the plant, that the blood does to animals. Its growth from the sap or blood, is produced by the action of its organs in the same manner.—The plant is a system of cognate systems, a grand system of centres and circumferences, united and forming one compound system of centres and circumferences, into one plant of one centre and circumference. In the round of circulation, each organ or part, attracts what is necessary for its use, and parts with some of its own, and thereby, and by this system of attraction and repulsion, selects from the general stock a material for its own use and sustenance, and contributes to the maintenance of the whole.

This sap or blood is composed differently in different classes of plants. In some the bitter principle prevails, while in others the saccharine is predominant. In some a redundancy of acid prevails; in others alkali. These are a few of the most prominent classes, but their variety is as extensive as their orders and species. These plants, having as proved by Hales, perspiratory vessels, secrete upon their skin or surface, different substances, as sugar, acid, gums and resins. He proved that some vegetables perspire an immense quantity. “It was determined by this philosopher, by experiment, that a sun-

flower weighing only three pounds throws off by that cutaneous emunctory, twenty-two ounces of perspirable matter in twenty-four hours ; whereas Keil by a very accurate set of experiments ascertained, that in his own person, he perspired in the same time, but thirty-one ounces." Keil ate and drank four pounds and ten ounces in the twenty-four hours, seventeen times more nourishment was taken in by the roots of the sunflower than was taken in by the man, which shows the enormous expenditure of plants, and that they require a larger quantity of nourishment than animals.

Various have been the conjectures and numerous the theories in reference to the circulation of the blood or fluids in vegetables. Grew ascribed the ascent of the sap to its levity ; as though acting with the force of a vapor ; Malpighi, to an alternate contraction and dilatation of the air contained in what he erroneously conceived to be air vessels ; Perault to fermentation ; Hales and Tournefort, to capillary attraction not one of which theories however, as Dr. Thompson has ably established, will explain the fact better than another ; and himself is as wide of the mark perhaps as either the others, as he has also a probability of a contractile power in the various vessels distributed so wonderfully over the vegetable frame, that a contractile power may exist independently of muscular fibres, we have abundant proofs even in the animal system itself. We see it in the human cutis or skin, which though totally destitute of such fibres, is almost forever contracting or relaxing upon the application of a variety of other powers ; powers external and internal, and totally different in their mode of operation. Thus, austere preparations and severe degrees of cold, contract it very sensibly ; heat, on the contrary, and oleaginous preparations as sensibly relax it. The passions of the mind exercises a still more powerful effect over it, for while it becomes corrugated by fear and horror, it is smoothed and lubricated by plea-

sure, and violently agitated and convulsed by rage or anger.

Yet, could it be proved even, that the vessels of plants are incapable of being made to contract by any power whatever, still should we have no great difficulty in conceiving a circulatory system in animals or vegetables without any cause, while we reflect that one half of the circulation of blood in man himself is accomplished without any such contrivance ; and this too the more difficult half, since the veins through the greater extent of their course, have to oppose the attraction of gravitation instead of being able to take advantage of it. It is in the present day however, a well known fact and has been sufficiently ascertained by the late Dr. Parry, of Bath, and on the continent by Prof. Dollinger that the contractile power of the muscular fibres is not called into action even by the arteries in the course of the ordinary circulation of the blood. Since, as we shall have occasion to observe, no increase of size or change of bulk of any kind takes place in arteries, either in the contraction or dilatation of the heart's ventricles in a state of health, unless they are pressed upon by the finger, or some other cause of resistance." "In what part of the plant the vital principle chiefly exists, or to what part it retires during winter, we know not, but we are just as ignorant in respect to animal life ; in both it operates towards every point. It consists in the whole, and resides in the whole, says Dr. Good, at the commencement of the eighteenth century, one of the best writers of Europe. Had he lived to become acquainted with the fact of the identity of the imponderables, he would have been at no loss to account for the phenomena. The vital principle does not retire to any particular locality in winter ; it is only attraction predominating over repulsion, whereas in summer repulsion predominates. The tree does not die in winter, but like the bear or dormouse comparatively sleeps by the above preponderance of at-

traction over repulsion. The same cause that produces the cold of winter, the cold fit of fever and ague, is the cause of the quiescence of the plumule or trunk of a tree (attraction) and the cause of heat in summer, the hot fit of fever and ague is the cause of the [activity and growth of the plumule in summer (repulsion). Both forces operate at the same time, yet one predominates over the other in summer, the other in winter. Hence these forces are the cause of all formations, animal, vegetable, and mineral, their joint action as we have seen is to produce a circle, a ring, a tube, a globe, a world.

In proof of this we cite the rotary magnetic wheel of Davenport, Cook and others ; the ball shot from the cannon, the spherical form of rain, shot, globules of mercury, the ultimate atoms of the earth, and the earth as a whole, to be in this form, and we might add the eggs of all oviperous, as well as the young of all other animals, to participate of this form, as well as all plants, flowers, leaves and seeds.

The anatomy of vegetables shows that they have antagonizing vessels like animals, to carry the sap or blood to the extremities and to return it again ; (veins and arteries,) and the force or impulse and nourishment, is heat, light and moisture. The first commencement of germination is an attraction of the albumen of the seed with the water of the soil, and that agreeable to the immutable law of magnetism, that repulsion succeeds to attraction, and that this principle of action and reaction, based upon this principle, was the cause of the growth of all vegetables as well as animals. Were it owing to any other principle but light and heat, (and by these agents, the decomposition of matter,) vegetation would flourish and come to maturity in winter as well as summer.—But vegetation in our climate without artificial light and heat, cannot be made to grow in winter. Thus then, plants are made up of centres and circumferences, with vessels going to, and coming from, every minute part

through which the sap is circulated by the force or impulse from the magnetic fluids. These centripetal and centrifugal forces, produce, agreeable to the laws of magnetism, which we have seen to be the cause of all mechanical power, a resultant force in a perpendicular direction from the centre both ways, like the current towards the poles, or that from the stomach of animals towards the extremities, which elongates the plumule in one direction into atmospheric air, above the surface, and the radicle in another, into the bosom of the earth. These forces also increase its bulk laterally, as may be seen in the onion, and concentric circles of the tree.— They also send off shoots which start off in tangents between these horizontal and perpendicular forces, termed branches. It is admitted on all hands, published in our best botanical works, and taught in our schools, that plants, shrubs, trees and all, absorb oxygen during the night and repel it during the day, and absorb carbonic acid during the day, and repel it during the night; thus showing, that they are the absorbing and secreting surfaces, and so far as the material or principle is concerned must be produced by these forces, by the law of attraction and repulsion.

None will deny the necessity of moisture for the germination of seeds and growth of trees and plants; experience has long since settled that question. Moisture is a compound of oxygen and hydrogen gases, compound substances of oxygen, hydrogen, and the two different kinds of light or electricity, and the manner they contribute to the nourishment of the plant is by the decomposition of their elements, and a liberation of the electric fluids in their passage through these vessels, which constitute their life; for that consists in motion produced by this principle. But in another light, "carbonic acid" is absorbed during the day and repelled during the night." This substance is composed of oxygen and carbon, and by the experiments of M. Puolett, is shown to

be positive, or in a different electrical or magnetic state from oxygen gas. It is also said that light unites with the oxygen in vegetables during the day, which causes it to fly off in gas, and is attracted back in the night, thus alternating or taking turns with carbonic acid in its attractions and repulsions. However this may be, it is clear that either from the plant, or the light of day, contrasted with night, or both, that the plant like the lungs of animals, and the earth, as we have before seen, so operates as to change the light or magnetism from the sun, from a positive to a negative state, and that from the law of the principle, as soon as the equilibrium takes place in the vegetable with these forces, repulsion takes place, and its opposite, the carbonic acid is attracted, an equilibrium again takes place between the plant and the electricity or magnetism of this compound, and that, from the same law is repelled, and oxygen is attracted, and thus these motions, actions and effects, from these alternations of attractions and repulsions, governed by the rule as before mentioned, of first one preponderating and then the other, is the cause of the germination and growth of the vegetable kingdom. Plants like animals, seem to rest or sleep during the night and awake in the morning to meet the smiling beams of his rising Majesty with attraction. Many of them like the morning-glory, open and expand on the absorption of light, and contract to rest during the night in its absence.—Light renders them healthy, gives them color, and makes them thrifty. Many blossom and come to maturity soon, in a few weeks; others require a season, or summer, while others require two, others three, (annual, biennial, &c.) while others like a hoary headed veteran, take a century like the flowering aloe, to grow, blossom, come to maturity, death and decay. In conclusion, we will observe that the tender saplings, twigs and leaves, like iron filings upon the repulsive pole of a magnet, standing out in all directions like radii from the centre, are

all thrown off and stand in every direction (except down,) but in winter by the antagonizing force of attraction overbalancing repulsion, the leaves fall off, it ceases to grow, the sap current is attracted towards the earth till spring, when the stimulating beams of the sun again causes the repulsions to overbalance like the balance beam of a pair of scales, the attractions, and it again shoots forth into atmospheric air and grows, and comes to maturity. Ladies and those who are in the habit of rearing house plants for health, ornament, and the cultivation of the science of botany will bear witness to the attraction of plants for light, for the sun. Unless they are frequently changed in position, they grow crooked, ugly and ill formed. From what we have seen, is not the irresistible conclusion of the mind, that the magnetic principle or fluids is the cause of vegetable life? Is there any principle except a self equalizing one that could bring from the germ, a plant to maturity? What other self equalizing imponderable agent can be found in nature, but light, caloric, magnetism and electricity? Have we not clearly demonstrated these to be one, identical, to be magnetism? Magnetism then, is the cause of vegetable life.

PART SECOND.

CHAPTER I.

ANIMAL LIFE.

We have said that animal life was the result of the action of the magnetic fluids. In order to prove it, we choose man as the animal best fitted for our purpose.—The anatomy and physiology of his system, and the formation of his mind, are not only of the greatest importance, but best understood. The mind and body are so intimately connected and united that when one is diseased and disturbed the other is affected also. A living and dead man differ by the former having heat, thought, sensation and motion, while the latter is destitute of all these characteristics. Life then, consists in heat, thought, sensation and motion. That agent that produces these, is the cause of life. Man then, thus animated is endowed with an aptitude or susceptibility of being so operated upon by external objects, and internal agents, as to produce heat, thought, sensation and motion. When an object produces this but once, it is termed an impression; but when it is frequently repeated and associated with other impressions, we are said to accustom ourselves to them, and when these have been continued for a sufficient length of time to give laws to the system it is termed habit. Habit therefore is only the result of custom, and stands the same relation to it, that custom does to impressions, and all stand the same to conduct and character, that letters, syllables and words do to sentences. The circle of these associated habits form, the conduct

of the individual, and this conduct, character, which forms, makes and marks the man. Whenever an impression is made upon the system, it is either pleasant or uneasy, pleasurable or painful. This feeling is termed sensation. Thoughts are either good or bad, virtuous or vicious. Motions are either upward or downward, to or from, east or west, north or south, or between the two, which in each and all, show them to be antagonized. If in sensation the impression be agreeable, we will to receive, and repeat it; if painful, we desire to dislodge, shun it, and cease to have it again produced. The former is from without inward, and the latter from within outward. The former constitutes the centripetal force; the latter the centrifugal; the former is performed by attraction, the latter by repulsion; either of which produces motion. This motion which is the effect of will, is termed volition. Volition therefore is the effect of sensation, and is antagonized in itself, as we have before seen. Sensation commences in the circumference or extremities, and terminates in the centre. Volition on the contrary commences in the centre and terminates in the circumference or extremities. Sensation and volition are not only antagonized in themselves, by two extremes, but antagonized to each other also. All our original ideas, education and knowledge, are the effect of sensation, and are obtained by attraction. All our efforts and display of conduct from our education and knowledge, are produced by volition, and the effect of repulsion. After having received from sensation our original ideas, volition recombines them and by the union of the two, forms compound and complex ideas. This is termed reflection. From these two centripetal and centrifugal forces, arise not only the operations of mind and body, but the phenomena of life itself. The cause of these are the magnetic fluids, which we shall endeavor to show from his anatomy and physiology, as well as by comparison with the vegetable world, and the earth

itself. These forces both constantly act, not only on every minute part, but upon the whole system at the same time. Sometimes they are equal to one another in force, and sometimes one predominates over the other. When their force is equal in the system to one another, they may be said to be in a state of equilibrium. When the centripetal predominates over the centrifugal to any great extent, the system is languid, oppressed, cold, and the mind impotent and thoughtless. When the centrifugal predominates to any considerable extent in the system, the person becomes thoughtful, hot, and strong. Good health consists in their being equally balanced, or when they are in a state of equilibrium. Ill health on the contrary when they are in either extreme, or when one overbalances the other, and continues for any considerable time. Direct debility is the result of the predominancy of the centripetal force over the centrifugal, and indirect debility from that of the centrifugal over the centripetal. Life is called a forced state of existence, for unless we eat, or drink, or both, or take nourishment we die. What we take for nourishment produces excitement; this excitement is the sum of motions, or actions of the vessels from these forces. The manner in which it is produced is by attraction and repulsion on the decomposition of the force and the action between its elements, and the elements of the system, thereby setting into motion the magnetic fluids. Although the food of man is different, and is presented in a variety of forms, solid, liquid, and aeriform, yet it may be reduced, to generally but four elementary principles, carbon, oxygen, hydrogen and nitrogen; the three former compose the most, or greatest share by far, the elements of the food of man. The human system then, may be called a large circle, made up and composed of almost innumerable number of smaller circles. Every circle is composed of a centre and circumference, and but one. These smaller circles then, have each a cen-

tre and circumference of their own, distinct in one sense, but alike in another, receiving from the general system a material for its own use, benefit and support, but yet in its turn contributing to the support and benefit of the whole. They are so arranged in the system by the animal economy, by their situation and action, that they form a scale of degrees, rising one above another in a continuous line from the alimentary canal up to the brain and nerves. They are as different in their texture, structure, form, and mechanism, as they differ in their action and number, but yet so connected and influenced by all, and one another, as to contribute by their harmonious action, to the general support of the whole. There are in the body no two alike, (except its antagonist on either side) yet the action of the whole individually, or collectively, is performed by the same means, the same principle.

The action of each, like that of the whole, is performed by two forces, both acting at the same time, and, as before observed, of the whole system in the same manner, and vary from an equilibrium to two extremes, and vice versa. The first circle on which the food commences to operate, as well as be operated upon, is the alimentary canal, and from this to the brain in the following order: Alimentary canal, absorbent circle, pulmonary circle, general arterial and venous circle, capillary circle, membranous and lymphatic circle, glandular circle, portal circle, pancreatic circle, splenic circle, and last and not least, the nervous circle. We commenced in the order in which the food was received and propelled, or attracted throughout the system, but find it difficult, as from the simultaneous action of all from the moment the food passes into the general circulation, to follow it through all its successive circles; but enough have been mentioned to give an idea of this complicated system of heterogeneous organs, of circles made up of centres and circumferences. The centre of the alimen-

tary canal is the stomach ; of the obsorbent system, the thoracic duct; of the pulmonary system, the right heart; of the general circulation, the left heart ; and to pass over the remainder, which will be sufficient for our present purpose, the centre of the nervous system is the brain. The food then received in at the mouth, and in its passage, operated upon by all these organs, as well as operating upon them in such a manner as to be decomposed, recombined and refined through all this concatenated chain of circles, until it arrives at the brain, where it is so sublimated and exalted as to be made capable for the operations of mind.

CHAPTER II.

ANATOMY AND PHYSIOLOGY.

The anatomy and physiology of man both go to show that life is produced and continued by the operation of the magnetic fluids. Anatomy demonstrates that man, so far as his organs of sensation and voluntary motion are concerned, at least, is made double. We therefore find that he has a right and left side, and in one sense, two brains, (two hemispheres,) two ears, two mouths, two eyes, two noses, two arms, two legs, and two sets of muscles and nerves, one on either side, as well as two sets of arteries and veins, as well as absorbents, lymphatics, secernents, glands, membranes, &c. &c. &c. In addition to this double arrangement, we next remark that each and every organ of the body, even to the heart itself, has a vessel conveying red blood to every part of it, and another, commencing at the terminations of these minute branches, taking it up again and carrying it back to the general mass, leaving in the organ what by attraction it required for its use, and parting with some of its own in return. This organ, we per-

ceive, has another set of vessels, of a less size, carrying a different kind of fluid, separated from the red blood by the membranes and glands called lymph, and another set to carry back to the general mass what is not needed for use. If we commence at the centre, at the right heart, or ventricle, we find the pulmonary artery terminates in minute ramification too minute for the naked eye to discover, and where these minute arteries terminate, equally minute veins commence, to carry the blood back to the heart. The blood being changed in the lungs, and attracted back to the heart, the latter being in a negative state and the heart in a positive, the moment the blood comes in contact with it, an equilibrium takes place between them, they both become positive, and the heart immediately contracts again upon, and repels it to every part of the system, to every minute part of the circumference, to the capillary circle, which is a system between the extremes of the arteries and commencement of the veins, where it is again absorbed by the veins, and returned to the right auricle, from thence to the right ventricle, where it is again repelled to the lungs through the pulmonary artery as before, and so on. A short distance from the heart, in its passage back, it receives the chyle or food, in a milky form and color, both of which are mingled together, and are attracted to the right auricle, repelled to the right ventricle, an equilibrium again takes place, the ventricle again contracts and repels the blood through the pulmonary artery to the lungs, where it is again renewed and altered, it is again absorbed by the pulmonary veins and returned to the heart. The circulation then, of the blood, is performed through two sets of vessels, antagonized to each—the arteries and veins. The former, the tubes or vessels of repulsion; the latter, those of attraction. The former the medium of centrifugal force, the latter, the centripetal. Thus then, the anatomy and physiology of the circulation of the

blood shows that it is performed by two forces antagonized to each other, through two kinds of vessels, also antagonized to each other. In addition to the veins and arteries, we remark another set of vessels, also antagonized in their action, diametrically to each other: the absorbents and secernents: The former are probably conterminations of the veins, and the latter of the arteries; and bear the same relation to each other that the arteries and veins do to one another. They accompany every part of the frame, and being thus extensive, form no inconsiderable part of the system itself. They are also divided into lymphatics and lacteals, from the particular fluids they convey. The secernents separate and throw out a fine lymph from the surface of all membranes to keep them lubricated, and the absorbents to attract and take up the superabundance, or remains of what is left. The nice balance and harmony between the action of these, as well as the arteries and veins, constitute good health. Disease, therefore, is a want of this equilibrium between them. If the secernents act with too much energy and violence, while the absorbents are too inactive, congestions, dropsies and swellings, or enlargements ensue. If the absorbents act, on the contrary, too powerfully, and the secernents are torpid, a wasting and reverse takes place. If both act at once with an increased energy, to a certain extent, inflammations are the result. Thus then, the process of nutrition and assimilation, as well as the general health of the system, the former of which constitutes no inconsiderable part or portion of the animal economy of human life, are produced, continued and kept up by the action of two sets or classes of vessels, antagonized to each other, the health of which depends upon a due balance or relative action between them, or what we have termed an equilibrium; which equilibrium or equality of forces depends upon the magnetic fluids. All the organs of the body have absorbent and secre-

ting faculties, are assimilating organs, or are capable of separating from the blood its own nourishment, and converting it into its own nature, for its own use, and also in addition of secreting a material different from its own, for the subsistence of the general system, as well as what is noxious to itself and whole system. These vessels and organs may, relatively to each other, be classed and called attractors and repellers, corresponding with the centripetal and centrifugal forces before mentioned, and by which they were originally in the chick or ovum produced. Of the former, are the stomach, liver, spleen, pancreas, lungs and brain., each of which secrete a material, besides that for its own use, a matter absolutely necessary for the general system—as the gastric juice, the bile, the pancreatic fluid, the nervous fluid, and the oxygen of the the lungs. There are various other organs of a smaller kind and lesser import and simpler texture, which perform the same double office, and secrete materials of a much more local use, or are repelled from the system as noxious, such as the kidneys, the intestinal tube, the minute perspiratory follicles of the skin, the organ that separates the saliva, ad mucus that lubricates the mouth and nostrils; and those that elaborate the tears, the wax of the inner ear and the fat. The organs that perform this double office of secretion, or attraction and repulsion, are called secretory glands, and they are distinguished into different sets, as salivary, mucuos, lachrymose, conglobate, glomerate and conglomerate; all of which operate upon, and are operated on by the same means or agents, the magnetic fluids, by attraction and repulsion.

CHAPTER III.

THE DIGESTIVE CIRCLE.

If we examine the digestive circle more particularly, in common language called the alimentary canal, we shall find that it is performed or produced by the same agent, in the same manner, by the same means, and on the same general principles. The stomach, which is placed in the centre of this circle, is also the centre of attraction and repulsion. The food, after being masticated in the mouth, and mixed with the saliva, is attracted to the stomach. There, after having been operated on by the gastric and other juices, and decomposed in part, is repelled from that organ towards the extremity of the alimentary canal. In its passage, the lacteals attract the nutritious portion, and the residue or residuum passes on, and is repelled from the body. In its process, progress, and passage, every thing is performed by these forces. The process of mastication is performed by two sets of muscles, antagonized to each other, the flexors and extensors of the jaws, the adductors or abductors, the mechanism of which is contraction and expansion (attraction and repulsion) of that function or organ; the flow of saliva by attraction, and swallowing by the antagonizing operation of the muscles of the throat, under the operation of the will from the brain through the medium of the nerves. It is next partly decomposed by the electric battery of the stomach and gastric juice, passes through the intestines by the resultant force or currents of the magnetic fluids from the equally contributing centripetal and centrifugal forces, or what in the books is termed the peristaltic action of the bowels, by contraction or expansion of alternating portions of the omentum, the lactals attract drink up, and carry the nutritious part of the food to the centre of that circle, the thoracic duct, from whence it is repelled and attracted to the vena cava, mingles

with the venous blood, is attracted to the right auricle, repelled and attracted by the right ventricle, repelled through and attracted by the pulmonary artery to the lungs, is repelled from the circumference of that circle, is attracted back to the left auricle, into the left ventricle, and is repelled all over the system, and is again, after undergoing as many changes as there are different organs, returned by the veins, as we have before seen, (chap. XIX.). But to be still more explicit, the blood having been repelled to every minute branch or ramification of the arteries, terminates in that reservoir called the capillary circle, and the mucous follicles of the skin, where the veins, absorbents, or attractors commence; here another separation or secretion takes place, a portion of which is repelled from the system in the form of perspiration and carbonic acid, and the other attracts oxygen gas from the atmosphere, and is in part assimilated, and the remainder attracted back through the veins to the right auricle, a short distance from which it is renewed by another augmentation of electricity or magnetism, in the form of chyle, from the thoracic duct; is again sent to the lungs, attracts oxygen, and repels and expels its carbonic acid in proportion to the oxygen received, and thus, by this ceaseless round of circles, from centres to circumference, to and from, every part of the whole system giving out its magnetic fluids throughout the whole extent, sometimes in a state of attraction, at others in a state of repulsion, the two forming an equilibrium, and varying again from it as soon, and by this motion, heat and action, thus produced and continued with sensation and thought, all of which phenomena constitute life itself.

Thus then, the anatomy of the digestion and assimilating circles or systems, consists of various sets of vessels, but each set diametrically opposed or antagonized to each other, in the manner of their actions and operations; and physiology shows them to be produced

by two antagonizing forces, centripital and centrifugal, from the action of which two forces a third is produced, which we have heretofore termed the resultant current or force,—that of the alimentary canal. When these outward and inward forces are equal to one another, or in a state of equilibrium, the resultant force in the system or individual is regular, and repeated motions of the bowels are produced at intervals, which is a sure indication of good health, of not only the digestive and assimilating systems, but of the whole system itself. But when one of these forces predominates over the other, for any considerable length of time, and thereby the equilibrium is long suspended, the resultant force, or the peristaltic action of the bowels, as it is termed in the books, is either increased or diminished, and disease is the consequence. If the centripetal force, or attraction predominates, costiveness, sluggishness, cold, and diminished action of the voluntary motions of the whole system, as well as thought and action, is experienced. But on the contrary, if repulsion prevails over the attractions, the centrifugal force, the resultant force is increased, and the peristaltic action of the stomach and bowels are therefore made to move the oftener, and disease is the result of this overbalance, if long continued. Among the former, as a cause, may be reckoned all that class which terminate ultimately in dropsies, inflammations and spasms, and the whole class termed by Brown, *sthenic*; and among the latter, that numerous catalogue, termed by the same author, *asthenic*, or those of debility direct, such as dysenteries, diarrheas, catarrhs, hemorrhages, fluxes, &c. That these forces do predominate in the system, there can be no question. They will not, nay, they cannot be controverted. That good health is the result of the equilibrium of their action, will not neither be questioned. Were we to take, for instance, a paroxysm of fever and ague to show the rationale or manner of operation, it will become so ap-

parent, that even the most dull and unobserving of the profession will readily see and acknowledge it. Others more acute, who "*observe what they take notice of,*" and are not blinded by prejudice, or sunk into the arms of sluggish ignorance, can not fail to detect it in all acute and chronic diseases, as well as in the operations of mind. Preceding a paroxysm of intermittent fever, the patient is languid, listless, inactive, and stretches and yawns. Soon he begins to feel a numbness in the fingers and other extremities, and they sometimes turn blue. He now begins to feel the sensation of cold creeping along the spine and back; the chest becomes tightened, and a general sense of languor and weight is felt all over the body. He now begins to feel cold throughout the system; the muscles of the throat, as well as all over the body, are thrown into involuntary action, and produce what is called shaking. No external heat or internal stimulus can warm him; the bulk of the external part of the body is diminished. The fluids of the surface, blood and all, are attracted to the centre; the brain is oppressed; the equilibrium of the mind is broken up. The patient who ordinarily was of a happy disposition, now becomes peevish and irritable; from a rational state of mind, he becomes delirious. He is, in this stage, totally unable to think; can not put two ideas together, much less associate them; on the contrary, he appears like an idiot, lunatic, or madman. If this continues without change, the patient dies from what is called congestion of the books, a term little understood and less attended to. But if the centrifugal force begins to act, and overbalances the attractions, which is always the case, if the patient lives, he becomes warm, the blood and other fluids are repelled to the surface, which becomes hot, red and swollen. The bulk of every external part of the whole circumference is enlarged beyond its natural size, he becomes thirsty, the skin, from being shrunk and cold, is now dry and

hot; the yawnings and stretchings cease; the pulse, which before was small, irregular and contracted, now becomes full, slower and firm. The brain, although somewhat oppressed, is freer, as well as the respiration. The mind, although not yet restored, is relieved in proportion to the other symptoms of the body; the ideas begin to start and language to flow; he becomes eloquent, and combinations are formed which constitute a kind of delirium, the brain, however, is more or less oppressed, until now an equilibrium is formed between the magnetic fluids, perspiration comes on from the union of oxygen and hydrogen gases, which continues until a perfect equalization takes place, and the patient is relieved, and returns toward the standard line of health, and but for the debility from the exhaustion from these alternating extremes, from and back to an equilibrium feels comparatively well. During the intensity and predominacy of first one of these forces and then the other, the resultant force, or that of the bowels is perfectly impeded, interrupted and sometimes inverted, as vomiting in either case is not an unfrequent occurrence, so much so that medicines, cathartics given on the accession of the fit, scarcely ever can be made to operate; although quadrupled in quantity, until the equilibrium is restored. So regular are these paroxysms, or alternations of attractions, repulsions and equilibriums, that they come on many times, when left alone, at just such an hour of the day, or just such a point of time every other day, or at such a time twice a day, or sometimes every three days, which shows them and these forces to be under the effect and control of planetary influence, or that of the sun. That the human system is subject to and liable to planetary influence, is no novelty. The effect of the seasons shows it as well as day and night, for there is as much a diurnal revolution of the body as there is of the earth. The feelings, the mind, the body, and the pulse prove it, being gene-

rally five or six more beats in a minute in the evening than in the morning. We are active during the day in exercise, and expend something which we lay down at night to accumulate. What is that something? It is the magnetic fluids, light, the spirit of animation, the nervous fluid, the spirit of life itself. It is absolutely as necessary to sleep and rest at night, as it is to be active during the day, hence the body is more or less under the influence of the sun, the great magnet and luminary of the universe. Sacred and profane history both concur in giving testimony to establish this position. From the days of Josephus down to the present period, the east wind has been regarded as one that not only blew locusts and other insects, but mildew, pestilence and famine.

An attentive, observing practitioner, while treating diseases both acute and chronic, will never fail to discover the effect of what is called the *weather* upon his patient, in diseases of both body and mind. In nervous diseases as they are called, and such as rheumatism and dyspepsy, he will find during cold, damp, moist, and dark foggy days, his patient always worse, but in good dry weather, with a brilliant light from the sun, that he is always better. Do not influenza's, catarrh's, colds, coughs, dysenteries, diarrheas, as well as diseases of the skin and fevers, become epidemical in certain years, and at different times of the year? If so, what influences the state and condition of the atmosphere but planetary influence? The author himself in 1823 in the north part of the State of New-York, saw in his own practice a relapse of thirty cases of fever and ague on a certain day in the month of January, after they had been treated with success in the fall by quinine and bark, on the prevalence of an easterly wind that blew uninterruptedly for five days in succession. Before the cholera made its appearance on this side the Atlantic, the wind blew constantly and uninterruptedly fresh, for the space of

twenty days amongst us. After it had commenced its ravages, its virulence was modified by a western or south-western wind, and heightened again by an eastern direction.

The black death, which many years since, devastated the best parts of Europe, was the result of planetary influence upon man, through the medium of the atmospheric air. After twenty thousand poor Jews had been put to death, for the jealousy and suspicion, that they had poisoned the fountains of water, the faculty and French philosophers, and others met at Paris to investigate its cause, and after great and grave deliberation, they pronounced it to be in consequence of the influence of some stragling planet (which I now disremember,) in conjunction with the sun, and thus affecting the earth, and so published it to the world, and thus saved the remaining Jews. An observing, nervous dyspeptic, in this or any other country, can tell by his feelings when an east wind prevails before he rises from his bed, and has no difficulty after he has gone forth. It never fails to repel from the surface and produce the centripetal force, producing dulness, inactivity, sluggishness in the well, and heightening all the symptoms in the sick. Now, whether it be the east wind that produces this effect or not it is difficult to determine, certain it is that they both appear together; the one upon the atmosphere, the other upon the human system. Whether it be the wind that produces the repulsion from the surface and attraction to the centre, or whether the same planetary influence that produces a current from the east towards the west, produces a current from the surface to the centre of the system, is not in the present state of our knowledge known, but we hazard the opinion that both are produced by negative magnetism, let what will produce them. We have said (chap. xix) that no vegetable enlarges and grows without the repulsions prevail over the attractions; neither will a child. From that

period to forty five, the repulsions taken as an aggregate prevail over the attractions, but after that period, the attractions prevail over the repulsions and he still continues to grow but in a contrary direction—down hill. This is general, for the whole surface of the body becomes shriveled and shrunk, the hair comes off, the teeth drop out, he goes into dotage ; hence the saying that once a man and twice a child ; thus showing in the duration of human life itself, two extremes and the meridian or equilibrium line.

CHAPTER IV.

THE MUSCULAR CIRCLE, MEMBRANES, AND GLANDS.

The muscles are active and moving powers of the body. The greatest number are situated upon the surface of the body, forming what is termed the flesh and covering of the bones, and perform what is called locomotion. Others are situated within the cavity of the body, and instead of performing locomotion, perform most important functions of the system ; such as the heart and arteries, the gullet, the stomach and bowels, which are termed hollow muscles ; they are however, composed of muscular fibres. Although their appearance is nearly the same, they differ in situation and function. Of the locomotive muscles there may be reckoned four hundred and thirty six, which, like the nerves are antagonized to each other and arise in pairs. Hence we have the adductors and abductors, the flexors and extensors, the levators and depressors, the ascendens and descendens, the superior oblique and the inferior oblique, the perpendicular and transverse ; in short, they occur throughout the system like the nerves, in pairs, and are antagonized to each other. They are the moving powers of the body, and produce this effect by contraction and expansion.

(attraction and repulsion). When we move the arm or leg, the muscles on one side contract, while the other expand, as may be seen or felt by the most common observer. From their origin and insertions, or their extremities or extremes, being inserted or attached to certain fixed points in the bones, by the brain, through the medium of the nerves by attraction and repulsion, are the immediate cause of all the motions of the body.— They are composed of fleshy bundles of fibers formed according to Sir Everard Home and others, by minute little globules, arranged generally parallel to each other, and separated by cellular membrane which connects them together, and favors the distribution of numerous blood vessels, lymphatics and nerves, with which they are supplied. These minute fibers are sometimes arranged in one direction, and sometimes in another. Sometimes they run in direct lines parallel the whole length of the muscle; they are then called straight muscles.— Sometimes, although parallel, they run in an oblique direction and the muscle is called oblique. Sometimes they take a circular motion, as in those that surround the eye and mouth; they are then termed orbicular muscles. Thus much of this class. The hollow muscles, such as the esophagus, in addition to its glands, mucous membrane, villous coat, or cellular membrane, are composed of a muscular coat of two layers; one set are arranged longitudinally and the other circular, with a central membranous lining. By the agency of the brain, through the medium of the nerves upon these, is the action of swallowing produced. The operation of these two forces from, or of the magnetic fluids, upon this structure or machinery, or arrangement of fibers, agreeable to the laws of mechanics, would be, and is, to propel the food onward to the stomach. The several membranes as intermediate substances, as we shall show at the proper time, contribute also to assist their operation. The stomach, the next portion of the alimentary canal,

is a large and expanded portion, likened to a bagpipe, largest towards one end and tapering towards the other, its situation is well known. It is connected above with the esophagus, and below with the intestines. Its structure is like the esophagus, composed of three coats or layers. The outer coat is composed of a serous membrane which is a reflection of the peritoneum. Within it, and connected by cellular substance to it, is a layer of muscular fibers, forming the muscular coat. This muscular coat like the esophagus, is made up of two sets of fibers, one longitudinal and the other circular. The next or internal coat is the nervous coat. The mucous coat is connected with the muscular by cellular substance, which is sometimes termed the nervous coat. The stomach has numerous blood vessels and absorbents, and receives its nerves which are very numerous, from the great sympathetic and par vagum. It is also studded over its surface with numerous glands. The intestines commence from the pyloric orifice of the stomach, and their being the same, we shall describe their structure, (which is only here intended) without going into that arbitrary division mentioned by anatomists. The structure of them then, is made up of three coats, like the stomach, though varying somewhat in the length, thickness or sparseness of their muscular fibers; a serous coat, a muscular coat with two sets of fibers, one longitudinal, the other circular, and a mucous coat. The muscular coat differs somewhat in different intestines or portions of this canal. In the small intestines there are but few longitudinal fibers. In the colon they are disposed in three bands, to facilitate its division into cells. In the rectum they resemble those of the gullet. The inner or mucous coat of the intestinal canal is important, for on this membrane it is that the action of the intestines, or preparation and separation of chyle depends. It is very voluminous and its surface increased by numerous doublings and puckerings, or what are called val-

intestines. The intestines are abundantly supplied with blood vessels, absorbents and nerves; part of them arise from the par vagum, but they are mostly supplied by the great sympathetic nerve. Between the mucous membrane and muscular coat, there are found a large number of glands, both single and compound, or solitary, single and conglobate. "The intestinal canal possesses a motion backwards and forwards, or a waving motion, to subject and expose its contents to the action of the exhalents and lacteals that open on the surface of the mucous folds. This is called the peristaltic motion of the bowels. The food after being masticated in the mouth, passes through the gullet into the stomach, where it is retained till it is reduced to a pulpy mass commonly called chyme, from which in the pelvic portion of the stomach the chyle begins to be separated. The chyfication is completed in the duodenum, and while the alimentary mass is traversing the small intestines. The greater part of the chyle is taken up by the lacteals, while the more solid and excrementitious part passes through the colon and rectum to be evacuated by the anus. Thus we have touched upon the muscles of the body, the object is apparent; to show from their anatomical structure, use and action, that they occur in pairs and are antagonized to each other, and must of necessity have a corresponding antagonizing principle or force for giving them impulse and motion, and that this principle is the magnetic fluids.

In addition to these, and the other circles touched upon, and partly explained in the preceding chapters, we find a vast membranous and glandular system no less adapted by their formation and extent to assist in the galvanic or magnetic operations of the system. The former are comprised of three distinct membranes. The skin which covers the external surface of the body; the mucous membranes which line all the internal parts that communicate with the external, and the serous

membranes which lines all the periphery of the internal cavities. These membranes, their use and action, are so well described by Dr. Sherwood in his admirable little work on motive power, that we avail ourself of its details. "On viewing the human system we find it covered with a complex membraneous structure, called the skin. Besides three membranes classed under the general term skin or integuments, there are found in it an innumerable number of minute globular bodies called papillary glands. These little globate bodies, are found to be highly organized, having minute arteries terminating, and minute veins commencing in their structure. They are found out by means of magnifying glasses of great power, to have minute ducts issuing from them, and terminating every where with open orifices on the surface of the skin. On examination of the organs as the brain, lungs, liver, spleen, pancreas, kidneys, cystes, uterus, stomach and intestines, we find them all without an exception covered with a kind of skin called a serous membrane, in which is enclosed an incalculable number of minute glands or elementary organs, with ducts terminating in open orifices on the surface of their membranes, like those of the common covering of the body. The glands of both structures are formed on examination of the orifices of these ducts to secrete an aqueous or watery fluid, by which these surfaces are constantly maintained in a humid or moist state. The great quantity of this fluid seen running off from the skin, and its accumulation in the cavities containing the organs, when these glands are excited to inordinate action attest both the perfection of their mechanism, and their fitness for their specific use. If we now proceed to examine the membrane which lines the internal parts of the body, we shall find it with slight modifications, characterized by the same structure as the serous membranes. This modification principally consists in its having what is called a villous, instead of a serous surface, like the se-

rous membranes. We find the whole track of the alimentary canal, including the mouth, esophagus, stomach, and intestines, lined with this membrane, as well as the internal parts of every organ, including even the ventricles of the brain. On a minute examination of the structure of the mucous membrane, we find them like the skin and serous membranes, enclosing numerous little round or oval glands or villi as they are termed, having like the papillary glands of the skin, their appropriate arteries, veins and ducts, terminating with open orifices on the surface. They are further characterized by numerous little cavities, crypts or follicles, as they are called, which have more or less a spheroidal shape, and which also open upon the surface of these membranes. These ducts and follicles are found to be filled with a semi-fluid or mucous, which is constantly issuing from them, and which spreads upon these membranous surfaces. In pursuing this subject, we have thus found two different kind of surfaces disposed in two different ways, and thus covered by two different kinds of fluids. These are extraordinary results of our investigations thus far, and will encourage us to proceed in them, for it is easy to see that there must have been some object in this order and disposition of these different kinds of matter. On investigating the nature and qualities of these fluids, it is found that the excretion from the skin and serous membranes are more or less acid, and those from the mucous membrane more or less alkaline. They are sometimes so strongly acid and alkaline, as to excite the curiosity of the most common observer. The acid is found to be muriatic, and the alkali-soda or muriate of soda or common salt. The acids and alkalis which possess the most directly opposite properties and have at the same time the strongest affinities for each other, are universally diffused in the earth as well as in the vegetable and animal kingdoms. They constitute two great and principle divisions of matter, one of which

the acid for the sake of distinction is called negative matter, and the alkali positive. Now it is satisfactorily ascertained from repeated experiments that each of these different kinds of matter gives out constantly an innate and different kind of force. It is also ascertained in the same manner, that the alkaline or positive matter gives out the magnetic force, and that the acidified gives out the positive. The positive matter then, on the internal surface of the body and organs, is constantly giving out the negative force, and the negative matter on the external surfaces of the body and organs, the positive force. On a further examination of the human structure, we find four hundred and twenty-six muscles of different forms disposed in different ways for the purpose of producing motion. We know that they are formed for this purpose, for we can see that some of them expand and others contract when we move the limb or limbs. For when we bend our arm, we find that the muscles on the out side of it expand, while those on the inside contract. On extending the arm we find this order reversed, for then the muscles on the inside expand, while those on the outside contract with equal force. One end of these muscles is attached to the lower part of the bone belonging to the upper part of the arm, called the humerus, and the other ends are attached to the lower ends of the bones of the lower part of the arm near the wrist, called the radius and ulna, so that while the lower part of these bones is pushed on one side, when the muscles of that side is extended, it is pulled at the same time on the opposite side, when the muscles on that side are contracted, and thus motion is produced by the simultaneous action of these muscles. Now it is a remarkable fact that every one of these four hundred and thirty-six muscles which thus produce motion in different parts of the body, is covered with a membrane the outer surface of which has a serous, and the inner side a mucous surface; hence these membranes are called muco-serous mem-

branes; all these different surfaces then, like those of the skin and membranes of other parts of the body, are covered with different kinds of matter, presenting together immense surfaces, from which constantly issue two forces of different kinds." The reader who has seen a common galvanic battery, cannot fail to observe that this arrangement of surfaces corresponds with that of the different metallic surfaces of the battery. He will also notice that these forces thus maintained on these surfaces, exactly correspond with those necessarily maintained on different surfaces of the battery. The two forces are conducted from the two metallic surfaces of the poles of the battery, by two metallic wires, and if we can now find conductors to convey the forces from the skin and different membraneous surfaces to the poles, the resemblance will be complete and satisfactory. In pursuing this subject we find numerous minute threads called nerves, penetrating the little glands of the skin surfaces and mucous membrane, and every fiber of a muscle. On tracing these nerves, we see them uniting together and increasing in size, in proportion to the distance from these surfaces, and at length conjoining with the spinal cord. The spinal cord is formed into four columns, united first with a broad base and then with the brain. These forces are therefore conducted from the skin and membraneous surfaces and concentrated in the brain to form poles or a motive power, to put in motion this apparently complicated yet really simple machinery. This structure, arrangement and order of the different parts of the human body, was well known to Malpighi, Ruysch, Haller, Hunter and Bichat, and are recognized by every anatomist of the present age, and now present to our view a galvanic battery altogether superior to any other constructed by the ingenuity of man. The forces collected from the surfaces, the mucous and serous membranes, including the skin, and conducted to the brain, are identicle with those collected from

the surfaces of these circles of copper and zinc, and conducted to the poles of the battery, as seen in the following article copied from the *Medico-Chirurgical Review*, for January 1837.

On the chemical properties of the secretions in health and disease, and on the existence of electric currents in organized bodies induced by the *acidity and alcalinity* of their different membraneous surfaces, M. Donne, whom we have repeatedly occasion to mention with praise, is the author of some curious statements on this subject. All that we propose to do, is merely to present to our readers the leading results of his inquiries. They are contained in the following corrollories :

1. The whole of the ligimentary surface, secretes an acid humor. It is however to be noticed that the sweat instead of being as generally stated more acid in the axilla and around the organs of generation than in other parts, is frequently of an alkaline character.

2. The alimentary canal, from the mouth to the anus, except the stomach, (the gastric juice of which is strongly acid, as has been proved by Prout, Tiedman, and Gemelin,) secretes an alkaline mucous. Thus the saliva and also the mucous of pharynx and œsophagus, as far as the cardia, and of the intestinal canal from the pylorus to the anus, are alkaline in health, and becomes acid only in consequence of disease.

3. The serous and synovial membranes secrete an alkaline fluid, in disease it sometimes becomes acid.

4. The external acid, and internal alkaline membranes of the body, represent the two poles of a galvanic pile whose effects are appreciable by a galvanometer. For if one of the conductors of this instrument be placed in contact with the mucous membrane of the mouth, and the other conductor be applied to the skin, the magnetic needle will be found to show a deviation of 15 to 20, or even 30 degrees ; and the direction of the needle proves that the mucous or alkaline membrane indicate a nega-

tive electricity, and the cutaneous or acid membrane, a positive electricity.

5. Independently of the two great surfaces, exhibiting opposite electrical states, there are other cognate systems, which are similarly opposed. Between the stomach, for example and the liver, we may discover energetic electrical currents.

6. The acid humours of the system may become alkaline, and the alkaline may become acid in a state of disease.

7. The abnormal acidity is usually the result of a phlegmasia, and this change may take place in an organ at a distance from an inflamed part; thus the saliva becomes strongly acid in gastritis.

8. The acid developed during the existence of inflammatory disease appears to be most frequently the hydrochloric. The presence of this acid may very possibly determine the coagulation of the albuminous part of the lymph, or serosity which abounds in all inflamed structures, and we know that this coagulation is the cause of the false membranes, of specks and opacities of the cornea, and of the induration and hypertrophy of many parenchymatous organs. Purulent matter is produced by the action of an acid upon albuminous lymph. It is a species of combination of acid and albumen. Although we cannot always discover traces of a free acid in inflammatory effusions; and although pus does not always redden, the blue paper of turnsol, we are to remember that by far the greatest number of the humors of the animal body in health are strongly alkaline, and that in this way the generation of acid in disease may be masked or concealed for some time, in consequence of the neutralizing of the original or primary alkali.

9. The operations in the chemical nature of the secretions must react on the different functions of the system. They will be found to constitute an interesting group of lesions, or symptoms hitherto but little regard-

ed, and the diligent investigation of which may very possibly lead to some important theraputic results.— These changes will probably be found to induce certain modifications in the electrical currents, which exists between the different organs of the animal economy.”

Thus it will be seen, that the needle obeys the forces of these different surfaces of the copper and zinc in the battery. When the body is lightly charged with the forces, strong poles are sometimes formed in the ends of the fingers, which the needle obeys like the poles of the magnet. Here then, we discover in the anatomy of the membranes this same antagonizing principle produces ~~and~~ opposite principles, generating opposite forces. By testimony as we have quoted, we obtain facts that these forces are the magnetic ; that they are measured and tested by the magnet itself ; that these currents of electricity varied the needle to the extent of fifteen, twenty and thirty degrees. Thus not only in addition to our other facts, positively proves them to be the magnetic fluids, but it also goes to prove the identity of electricity and magnetism. The structure and natural arrangement of these membranes are perfectly analogous to the galvanic battery. The currents are shown to be electricity, and by the magnetic attractions are proved to be the magnetic fluids ; thus adding further testimony to the identity of these fluids or principles, but also establishes the fact of correspondencies, to wit : That alkalis correspond to the positive pole of magnetism, and that acids correspond to the negative pole, as the forces are shown to flow from these states or conditions of matter. It now only remains for us to examine the brain nerves and some few other organs, when we shall pass to the consideration of nutriment, or the food of man.

CHAPTER V.

THE BRAIN AND NERVES.

The brain is the centre of all the other circles and systems of circles of the whole system, and communicates with, influences, and controls the whole, through the medium of the nerves. It is not only the organ of mind, of sensation, but volition and muscular motion. The nerves are its appendages or machinery. The brain and nerves are so intimately connected and associated, that they might with propriety be termed a whole, for one is as necessary to the other as the mental is to the physical system. The brain, although dependent relatively upon the whole system for its healthy state and action, and particularly upon the assimilating and circulatory, for nutrition and support, stands like a monarch to every other part of the system, sight, sound, touch, taste, temperature and smell, are an effect or changes upon the brain through their several nervous organs. They may be compared or likened to so many avenues or windows of the organ of mind, towards the external world, through which the brain communicates with external objects and internal agents. It is divided into two hemispheres, one on either side; originating from which are two sets of nerves, one from each hemisphere, arising in opposition to its antagonist. Thus the brain and nerves, as well as the general system, are double, the reason of which will be explained in the sequel. All the organs of sense, (chap. xix,) as well as muscular motion, are also double. The nerves are long slender threads, which branch out and ramify into such an infinitude of little fibrils, and are spread so upon the internal part of the body, as well as upon the skin, that the point of a needle can not be touched to the skin, but they will be disturbed, and yet each has its antagonist. The brain, in its operations, is characterized by two fundamental laws, sensation and volition. The

combinations of the two produces association. Sensation is that change that takes place in the organ from objects that are external to it, and commences in the circumference, and terminates in the centre, (chap. vii.) Volition, on the contrary, commences in the centre and terminates in the circumference or extremities. The former we term the centripetal, the latter the centrifugal force of the brain. The former is produced by attraction, the latter by repulsion. If I prick my finger with a pointed instrument, the brain, through the medium of the nerves, instantly feels it, which begins in the extremity and ends in the centre. But if I will to raise my hand or finger, the change or force commences in the centre and terminates in the circumference or extremity. With the first, sensation was painful; in the last, motion was upward. Thus we have seen that the nerves are long slender threads which arise from different portions of the brain, and are radiated in every direction, so as to communicate and form a connection with every part of the system. As they arise they are arranged into pairs. Anatomists have discovered and noted thirty-nine, nine of which arise from the great dimensions of the brain, called cerebrum, cerebellum, and medulla oblongata, and the remainder from the spinal marrow. These nine are chiefly diverted, but not wholly so, to the local senses, the remainder, thirty pair, are distributed over the body to produce the fifth sense of touch and feeling. There is another part of the nervous system, which is the sympathetic or intercostal nerve, which, although not distinct, is so peculiar as to claim almost the term of system of itself, a circle between the two other circles of cerebral and vertebral influence. It is connected with both. It is an offshoot from the six pairs of nerves of each side, and in its passage receives branches from the fifth, and all the vertebral. From this union it is studied with numerous ganglions or integuments like brain, of which there are

not less than three in the neck, "alone tinted" by an addition of cineritious substance. a large number in its line through the chest, and others as it descends still deeper, independently of various confluences of smaller branches, that unite and form extensive networks. Having reached the hollow of the oscocygis, it meets its twin from the opposite side, which has pursued a similar course, and received contributions. Thus equally enriched with the nervous stores of the brain and spinal marrow, it sends off radiations as it takes the course of the aorta, to all the organs of the thorax, abdominal and hypogastric regions to the lungs, the heart, the stomach and intestines, the bladder, arteries, and testes, and thus becomes an emporium of nervous commerce and enlargement of general sympathy, and what is of infinite importance in so complicated a frame as man, furnishes to the vital organs streams of nervous supply from so many anastomosing currents, that if one or more than one should fail or be cut off, the function may still be continued. To this it is owing, in a very considerable degree, that the organs of the upper and lower belly exhibit that nice fellowship of feeling which often surprises us, and that most of them are apt to sympathise in the actual state of brain. As the brain consists of three general divisions, besides that of hemispheres, it might seem, at first sight, that each of these were allotted for some distinct purpose, different from the other: but anatomy, by the hand of the dissector, shows differently, as both nerves of general, as well as particular purposes, arise from the same portion of brain. Thus the cerebrum gives rise to the nerves of vision and smell, as well as the oculorum motorii, which serves for the purpose of muscular motion. So the cerebellum gives rise to nerves that convey motive as well as sensible power. While from the medulla oblongata, originate the auditory, the par vagum, and lingual. The first a nerve of hearing; the second of feeling; and the third

of motivity. At the same time that many parts of the brain maintain an interunion with other parts by means of ganglions commissures, and decussations of nerves, whence injuries on one side are often accompanied with loss of motion or feeling on the other side. Thus then, a sensorial communication is kept up between some part of the brain and every part of the body, and that this communication is conducted by the nerves is unquestionable, from the following facts. If we divide, tie, or cut, or merely compress a nerve of any kind, the muscle with which it communicates becomes almost instantly palsied, and if the cerebrum, cerebellum, or medulla oblongata be irritated, convulsions take place all over the body, chiefly, however, when the irritation is applied to the last of the three mentioned parts. From the best sources of information within our reach, from such men as M. Bauer and Sir Everard Home, and others, as well as from the assistance of the best microscopes, the substance of the brain appears to be made up of a delicate fibrous tissue of minute globes, or globules, precisely of the size of those of the blood when deprived of their coloring principle or matter. It appears then, that the brain is naturally divided into two hemispheres or portions, and from these, and corresponding with them, are two distinct sets of nerves, antagonized to each other, but connected after their universal ramifications and radiations upon the skin and internal parts, together by the great sympathetic nerve, besides their general distribution all over the system. Anatomists and physiologists attribute this connection, as well as the brain and nervous system, to the wisdom of the great architect, as a provision to guard against accidents, or the reason why it was made double, was the necessity of a substitute, in case one side or set should happen to be injured so as to become useless, the deficiency could be supplied by the other. Were this true, we should be led to believe that in following up

the principle, in the economy of nature, certain individuals that have appeared upon the stage of action, and evidently intended by Providence to perform great exploits, would have endowed them, not only with double organs, but with triple and quadruple. We should be led to believe that such men as Moses and Sampson, Cromwell and Bonaparte, Washington, Jefferson, Jackson, and others, would have had at least four sets of organs, for fear others might have, from action, been incapacitated; but the argument is not tenable, not supported by fact, or any plausibility of truth. It is too weak and feeble for more consideration.

On the contrary, the great reason for man, as well as other animals, being formed double, with two sets of muscles, nerves, &c., is from the very nature and cause of his existence itself. The whole system is but a galvanic battery, an electricizing machine, a great magnet, or like the solar system. Who ever got electric fluid from a machine without a rubber? Who ever saw a magnet with but one pole? Or who ever saw an effect from a galvanic battery with but one plate, either the zinc or copper, separate from the other? On the contrary, it is well known that no appearance of light, or heat, or motion, or effect, ever takes place from the poles of a galvanizing or electrizing machine, unless the poles be brought within a certain sphere of influence or contact. But that the electric, or galvanic, or magnetic fluid passes up the wires before we can see or feel it, or any sensible effect is produced, we know, because we test it with a compass needle. If we apply it to the wires separately, before the battery is charged, or before the acid commences to operate on either plate of metal; it will point lengthways, or in a line with the wires; but as soon as the process commences, it will stand and point across it at right angles; and as soon as we have brought the poles together, and an equilibrium is obtained, and a spark is seen, it will again become lengthways,

or point in that direction. The reason why it was necessary then, to form man and other animals double, was to give them action and life, which they could no more have had without having been thus constructed, than could an electric spark have been obtained from one plate and pole of a galvanic battery, or of an electrizing machine.

Thus then, one hemisphere, as well as one side of the whole system, secretes, excretes, and puts into operation positive magnetism, while the other puts into action negative magnetism, and by the operation of which, by attraction and repulsion, like the galvanic battery, produces heat, motion, sensation and thought. This we conceive to be the simple and only cause why man was made, in his organs of sense, volition, and muscular motion, double, as well as accounts more particularly and clearly for the peculiar construction, formation and connection of both sides, or systems of nerves, through the medium of the great sympathetic. We observed when upon matter, (chap. x.) that the minute atoms of all material substances, were in the form of globes, globules, or magnets, and that they were liable to a change of their poles, and that the varieties of matter were owing to this law, and that this change was produced by the influence of the magnetic fluids.

What is the structure of the brain? Of what composed? What its form and shape? It is spherical. They are so loosely put together by a delicate cellular substance or tissue, so tender that it will scarcely stand the force of a syringe, the mere suction of which is sufficient to derange and reduce them to a chaotic mass. Sir Everard endeavored to show, by these and other disclosures, that muscular fibres are formed by an attachment of one globule of blood to another, as well as granulations by pus, which M. Bauer confirmed. Dr. Philip showed that spirits of wine, applied to the posterior part of the naked brain of an animal, had the

same effect upon the heart as when applied to the heart itself. The anatomy of the brain then, beneath the knife of such eminent dissectors and anatomists, shows the very elements of the composition of the organ of mind to be globes, spheres, or magnets, and therefore, instead of our theory being hypothetical, it is established by fact, for if the ultimate atoms of the brain be globes or magnets, none will doubt but what its operations, in its sensations and volitions, reflections, judgments and associations, from simple notions or impressions up to the compounds of discourses, is the result of the operation of the magnetic fluids. Can there yet be those who intrench themselves behind the breast-work of ignorance, notwithstanding the light of established well known facts, turn up their noses in mock wisdom, with their interesting countenances drawn to an angle of forty-five degrees towards the horizon, from the organ of self-esteem, and exclaim that the vital principle is beyond our conceptions and past finding out? What looks more reasonable, clear and convincing, than that those quick perceptions, thoughts, motions and actions of lightning speed, are performed by lightning, electricity, magnetism, operating upon those little magnets, and producing action by the law of attraction and repulsion, like the motion of all other matter in nature.

The animated system only differs from matter by its having heat, thought, sensation and motion. These are its grand characteristics. Now all motion in nature is either chemical or mechanical. Have we not clearly demonstrated that all absolute mechanical force and chemical affinity, are dependent upon this principle for their motion, action and effect? Who then knows of any other kind of motion but from this principle? Have we not shown that the action of these two forces in nature was agreeable to all philosophers, the laws of mechanics, and observation, to produce a sphere, a ring,

a tube? What other force or forces can produce this effect? Are not, in fact, all substances spherical or round? How is it in both the animal and vegetable kingdoms? Who ever saw a plant that was not circular in some form or other? Did any one ever notice a square apple, potatoe, or any other fruit, seed or root? Are not all the organs, vessels and functions of animals round, circular or sphericle, more or less? Are not the very component particles of the blood, which in sacred history is termed the "life of the animal," made up of little globules or magnets, as well as the ultimate atoms composing the brain itself? Is not blood made from the food by these forces, as well as the brain also? These forces then, in every sense in which they may be considered, are shown to be the cause of life? The seeds of all plants, and the eggs of all animals are spherical, as well as the plant when growing, and the animal when living. We have the authority of Sir Isaac Newton, that the form of all the planets is owing to these forces. We then again repeat, that every thing is globular or spherical, from a dew-drop up to a world, by the action of these forces. That rain falls in drops, melted lead into shot, water into hail, and that water crystalizes in atmospheric air in the form of the planet Herschel, and falls to the earth in the form of snow, as pointed out by Sherwood, from Blackwood's Magazine. Do not the two forces revolve a machine, like Brewster's or Davenport's, in a circular line? Does not the cannon ball describe a segment of a circle when propelled by these forces? Is it not projected by repulsion, and drawn to the earth by attraction? If we apply the north end of a magnet to the north end of a compass needle, it repels it, and attracts the south pole, so as to reverse them. These poles now, in this motion of reversal of their extremities, perform a perfect circle: this circle we will take as the diagram for the operation of the magnetic forces in all matter in nature, and the law by which

they are governed. Is it derogatory to nature to believe that by the union and operation of these forces from one magnet, she can make and perfect one of the same kind, or by a little modification of them, to make one of a different kind? In fact, is not this the philosophy and rationale of all propogations? Some of the lower order of animals have neither brain or nerves, and how are their muscular motions commenced and propogated? What their anatomy? They are destitute of a vertebral column also, as the transparent polypii. When they are examined by the best magnifying glasses, are found to consist of nothing but a congeries of these globules in a granular form, like boiled sago, surrounded by a gelatinous matter. In some tribes they are connected, and even in others they are perfectly separate. Now whatever motion or sensation these worms possess, must and can not but be from these globules. M. Virey has hence divided all animals into three classes, according to the nature of their configuration, "1st, those of two nerves, one on either side. or a nervous system and a sympathetic nerve; 2d, those that have a sympathetic nerve alone; and 3d, those that have nothing but nervous molecules, as the Echni, Polypii, and infusory animalcules, corals, madrepores and sponges; all of which are included in the term Zoophites." Anatomists judge of the use of a part or muscle by its looks, appearance, origin and insertion, which is said to be good inductive logic. Why not judge of these globules of the brain in the same manner? Their form must indicate their use as well as those of the blood, and the force that made, and when made, moves them also. The nerves in the lower order of animals being, instead of brains and nerves, simply globules, sometimes connected and sometimes loose, show to any candid mind, that motion can not be produced in any other manner but by the agency of magnetism or electricity, for there is no communication between them but a loose gelatinous substance.

Now as these animals move themselves, like all others, by the will, by this principle (by attraction and repulsion) is it not reasonable to suppose that the other two classes are moved in the same manner? Does not nature, through all her works, in all her operations, act by general laws? When was she ever known to act counter to a general principle? It is admitted by all, and has been from Galen down to the present time, that the brain is a gland, and secretes the nervous fluid and excretes it. Darwin called it the spirit of animation. Girtanner believed it to be oxygen, and all believe it to be a subtile impondurable fluid. Philip almost proved, and believed he did quite, the identity of it with electricity. And why is it not, after what has been seen and said, the most reasonable conclusion? Let us look for a moment to another low order of animals, to fishes. There are many animals in the tribe of fish that will give out electricity or magnetism sufficient to benumb the hand of man so as palsy it completely. We will at this time mention but those that have the most power, such as the Torpedo Ray, and the Electric Eel or Gimnote, which inhabit the Mediterranean, and was once imputed to magic. The ancients believed that when they bit at the hook, they could throw the influence through the whole length of hook, line and pole, so as to palsy the arm, and thereby escape being caught, as described by Oppian, in Greek verse, and translated by Dr. Good:

"The hook'd torpedo, with instinctive force,
Calls all his magic from its secret source ;
And through the hook, the line, the taper pole,
Throws to th' offending arm his stern control.
The palsied fisherman, in dumb surprise,
Feels through his frame the chilling vapours rise,
Drops the vain rod, and seems, in stiffening pain,
Some frost fixed wanderer o'er the icy plain."

Indeed, it is believed by naturalists of the present day, and without doubt is true ; and would have such an

effect if a spear were used instead of hook and line. The influence is voluntary, and can be communicated at will, as the animal will sometimes allow of being touched without exciting or communicating the influence. "He occasionally loiters on the moist sands of the shore, after the tide has gone out, and buries himself under it. By a brisk flapping of his fins, he seems to fling this material all over him, and in this state he is said to inflict, at times, even through the sand that covers him, a torpor so severe as to throw down the astonished passenger that is inadvertantly walking over it. The voltaic eel is also obviously known and acknowledged to be more powerful than the torpedo. The latter making a series of shocks, of less or greater violence, as from a more highly concentrated battery; and the torpedo by a numbness or torpor, whence its name, produced by small but incessant vibrations of voltaism, seldom, excepting in severe cases, amounting in the aggregation of shocks, and precisely similar to what is felt in a limb on applying to it a great multitude of weak shocks or strokes, rapidly repeated, from a Leyden vial. The more formidable power of the gymnote, enables it, upon the authority of most experimentalists, to give not only severe shocks, both in the water and out of it, when in actual contact with another animal, but to convey them, as we have seen that the Torpedo is said to do, though upon doubtful testimony, through long poles. It is probable that these poles must be wet before they would become good conductors; for both the Gymnote and Eel are found to be limited to precisely the same conducting and non-conducting media as are met with in common electricity.

Thus then, in addition to the anatomy of the minute structure of the human system, as well as the lower class of animals, as well as their double brain, and sets of nerves, muscles, &c., we have at least two species of animals that not only exist, and whose functions of life

are carried on by this principle, but are endowed with the power of making it a species of defence against their enemies. But the power of giving out shocks of electricity is not confined to these lower order of animals. The human system is capable, under certain circumstances, of giving out shocks of electricity. The following is from Silliman's Journal.

On the 28th day of January 1839 during a somewhat extraordinary display of northern lights a respectable lady became highly charged with electricity, so as to give out vivid electrical sparks from the end of each finger to the face of each of the company present. This did not cease with the heavenly phenomena, but continued several months, during which time she was constantly charged, and giving off electrical sparks to every conductor she approached. This was extremely vexatious, as she could not touch the stove or any metallic utensil without first giving off an electric spark, with the consequent twinge. The state most favorable to this phenomenon was an atmosphere of eighty degrees Fahrenheit, moderate exercise, and social enjoyment. It disappeared in an atmosphere approaching zero, and under the debilitating effects of fear. When seated by the stove with her feet upon the fender, she gave sparks at the rate of three or four a minute, and under the most favorable circumstances, a spark that could be seen, heard or felt, passed every second. She could charge others in the same way when insulated, who could then give sparks to others. To make it satisfactory that her dress did not produce it, it was changed to cotton, and woollen, without altering the phenomenon.

The lady is about thirty, of sedentary habits and pursuits, and delicate state of health, having for two years previously suffered from acute rheumatism and neuralgic affections, with peculiar symptoms. Here then, we see that under certain circumstances, the human system like a charged electerizing machine, has been known to

become a living or walking one, of galvanic battery; giving out like the electric eel or the prime conductor of a machine, shocks to every thing with which it came in contact. But the human system has always been known as well as other animals to be filled with electricity. In young persons, in dry cold weather, in winter, when the tone of the system is good, the animation lively, and the circulation quick and energetic, the hair on the head of the young will stand erect, upon end, and become dishevelled, by it in a state of repulsion causing it like the twigs and leaves of the vegetable, or the iron filings upon the "repulsive pole of a magnet," to separate from each other and stand in every and any direction. Who, when a boy, has not amused himself by the sparks of electricity from the dog or cat's back, on rubbing it simply with the hand so as to break up its equilibrium.

This principle is, and can be tested, by every school boy throughout the city, daily, when the atmosphere is not too moist, in either summer or winter with the preceding results of the body mentioned. If we insulate a person, and then gently pat or rub him between the shoulders for two or three minutes, with fur, and then fetch our finger in contact with any part of the body thus insulated, a spark precisely like that from the electrizing machine will ensue, which will not only be distinctly visible and heard all over the room, but will so contract the part, or produce a shock, as to become almost insufferable. This may be produced by any one upon an other, at any time sufficiently severe for all medical purposes. Whoever attentively observes the operations of the system both in health and disease, natural and excited, cannot but confess its agency in the operations of life.

Why do we with the diurnal revolution of the earth, which produces day and night, note a change in our strength and feelings? Why do we lay down at night to rest, to sleep? Is it not to accumulate something was-

ted during the day? What is this something? We affirm it to be electricity, magnetism; that the brain or galvanic battery of the whole system, has expended during the day. Why is it that a high latitude, as well as high lands, are calculated to produce inflammatory diseases, while in low latitudes, and low fenny lands produce fever and agues, and other diseases from debility? Is it not owing to more electricity or oxygen in the atmosphere in the one region, than the other? In what consists the great benefit of gestation in the open air, in long journies, for restoring health, but this principle accumulated and changed by the different varieties consequent to those journies? Is not electricity absolutely necessary to life? Can an animal live in an atmosphere without it? Why is it absorbed by the lungs and given out throughout the whole system? Why is it that preceding a thunder storm within a certain sphere of influence, animals breathe with difficulty, and frequently pant laboriously, and after a few claps of thunder, and shocks of electricity or lightning, they can breathe with ease and freedom? It is owing to the want of that equilibrium in the electricities in atmospheric air, in the first instance being wanting, and in the next place having been accomplished at the time of the shocks or lightnings, which are nature's means to reproduce the equilibrium. Since the days of the immortal Franklin, it has been used more or less for the cure of disease. In what manner does it act? This we shall explain when we come to speak of disease. In conclusion upon this branch of the subject, on reflection from our stock of facts, from the consideration that the whole system throughout, is a set and series of antagonizing organs, performed by antagonizing motions, by antagonizing forces, added to the phenomena of electricity produced by the electric eel and torpedo, and upon the human system; that the whole system and every part of it has an absorbing and secreting surface; that it will accommodate itself to almost

any circumstance and condition by habit, together with the irregularity of the habits of sleeping and waking, heat and cold, pleasure and pain, poverty and sickness, fulness and inanition. What other principle for a day, yea for an hour, but that principle so mysteriously antagonized in itself between its fellow, so as at all times to tend to an equilibrium, and when gained, is as instantly broken up, could produce and sustain life? Could mechanics, hydraulics, or chemistry, or all combined produce it? Could any other principle in nature produce it but magnetism? Is there existing in nature any other self moving equalizing principle but this? There is no other, or need be, for this is abundantly qualified to produce all the varied operations of nature. It is this principle that runs through all, and regulates and gives to it life and activity.

It is that same principle which regulates all matter and all principles in mind as well as matter, and constitutes the principle on which is built the system or doctrine of equilibrium—a doctrine on which depends the health of not only vegetables and animals, but the regulation, health and stability of principles in religion, morals, politics and law, as well as trade and every thing else. There is no principle in nature but what has its poles, or extremes, and oscillates from one to the other, and back to the equilibrium. Every artificial principle as well as natural, is built upon it. It is the cause of all excitements of body as well as mind. Every subject or system has its poles or extremes, and its equilibrium line. All the preaching from the pulpit upon religion and morality may be, or ought to be reduced to two points or poles. There are but two manners or modes of converting sinners. The one to attract them to do good for the consolation it affords, by attracting them towards Heaven, by painting and portraying the goodness of God, his benovolence, the beauty of Heaven, its pleasures, consolations and happiness. The other by holding

up the vengeance of God, hell, its blackness, torments and horrors, comparing one with the other in the mind; comparing God with the devil, man with both, and showing the difference; the reward of one to induce sinners to repent, and the other course to frighten them to desist from evil. This is the base of all preaching. We cannot arrive at perfection; we cannot act so but we shall fall infinitely below God. We should so act as to rise infinitely above the devil, and thereby elude the extreme of what is called "hell." The true course is to keep our positive pole towards God, and our negative one towards the devil—and in our attractions and repulsions towards one, and from the other, endeavor to have our conduct so regulated, at least as to attract us to Heaven, from their very affinity, and by the same law repel us from the devil and his so called flaming regions. Thus, virtue and vice both lie the same road, one could never be prized without a knowledge of the other.—They are but the extremes of a continuous line like the compass needle.

The lawyer carries up his case to court, the parties are present before the Judge. The plaintiff affirms such and such premises; the defendant denies every word of it. The plaintiff then calls his witnesses to establish his position; the defendant then calls his to antagonize him in his proof. The Judge after hearing all, reduces them both in his mind to an equilibrium, by comparison, and judgment decides which side predominates in the scales of justice, and the case is thus disposed of.

The Physician is called to a patient; he knows that good health depends upon a just and proper balance of all the vessels and functions of the body, which state is called the equilibrium of the system. He examines the patient, and finds this equilibrium is broken up, that either the centripetal or centrifugal force has got the balance, one over the other, that in consequence other lesser equilibriums in other organs are broken up from these.

He knows what effect should be produced to restore it. He knows what medicine will produce that effect. He goes to work, reproduces the lost equilibrium of the vessels or forces in the particular organ, or whole system of organs, and the patient is restored and returns to a state of health. There are upon earth but two kinds of unmixed governments. Where one man governs the whole ; the other where the whole govern themselves. In both cases they are performed by agents. Every other government is but a mixture of these, and therefore vary from a democracy down to an absolute monarchy. A government composed of a part of each, like that of Great Britain would constitute an aristocracy.

In our own government, a democracy, where the people govern themselves by their agents, we have certain prescribed rules and regulations for the action of all departments, called constitution and laws. These laws are construed by some in one manner and by some in another. Now if these agents, through ignorance, or through party influence transcend the laws, and thereby encroach upon the people's rights, or squander the property or money of the people, they arise in their majesty, one party takes one side, and the other the other ; one party justifies their agents, the other condemns ; one party holds up another agent as better qualified by intelligence, honesty and other requisites to do justice to the people. The friends of one party by eloquence and persuasion attract individuals from the ranks of the other, until it becomes the strongest ; the Ins are turned out, and others are elected. Thus the majority govern, an equilibrium is produced, government becomes healthy, and our happy government is thus perpetuated.

It will be seen that the equilibrium is formed through the medium of the ballot box, from the extremes of both parties. Parties I say, for parties are as necessary as the questions which create them. Every question has two sides or extremes, a positive and a negative one.

From the very nature of things then, there must be a party to correspond to those sides. Questions having philosophically but two sides, no third party can ever long exist. We might go on, and show from the theory of our government, that its formation was philosophically correct from our theory, from its executive, judicial and legislative departments, to operate as checks and balances, one as helping the other to restore lost equilibriums, or continue those already produced, but our limits will not permit. Trade depends upon this principle for its healthy action. The prices of all commodities are always more or less fluctuating from the extremes to a state of equilibrium between the two.— This depends upon two causes only; the plentifulness or scarcity of the article, on the one hand, and the circulating medium on the other, by which it is priced or measured. If the price of an article from want of cultivation, bad seasons, or manufacture is raised to an extreme above its ordinary relative value and price, the agriculturist, the manufacturer, or mechanic bends his energies to raise, produce or manufacture the article, until it becomes as much too low as it was too high.

From self interest then, he ceases to produce it altogether, or in such quantities, and directs his time and resources to some other object and article, and an equilibrium in quantity and a corresponding one in value and price succeed from these extremes.

But the most common fluctuations of prices especially in this country, have been caused by the circulating medium, by which all prices are measured. That circulating medium has been paper money, having no intrinsic value, and therefore instead of producing in trade, health or an annual equilibrium, has contributed, by its manner of operation, to hinder those from taking place; or in other words, has been the direct cause of all our commercial embarrassments from this alone. The manner by which it was produced was from its capa-

bility of being expanded and contracted from and to the centre, operating like a lever upon the circumference with double, triple, and quadruple force, and thereby producing daily, weekly and monthly, extremes of prices as opposite as the poles ; and thus instead of contributing to produce an equilibrium in prices, defying their taking place. To day it is said to be worth the face of it, dollar for dollar. To-morrow it is in the hands of a receiver, and declared not worth a groat. Thus then, an equilibrium from simple imitation of intrinsic value, the shadow for the substance, can never take place, is unphilosophical, ruinous to trade, and should therefore be discarded. On the contrary, if the circulating medium have intrinsic value, like the constitutional one of the nation, gold and silver, it can never be expanded and contracted, made plenty or scarce at will, and therefore raise and depress prices as correspondingly sudden. And although there may be slight fluctuations during the year from bad seasons, pestilence, wars, bad government, excitements of the people, or the influence from foreign nations, it will annually produce that equilibrium in prices that constitutes the health of trade. Like water from its weight and resistance finding its own level, gold and silver, raise and depress the prices of all commodities to its own standard or level, and thus produce that equilibrium in the extremes, on which the health of trade depends for individual and national prosperity and happiness. In view then, of this principle, and thus applied, it will be seen as a general rule that if we depend upon trade for our living, prosperity and livelihood that the true course is, when the extremes of prices are too low, purchase, and on the contrary when too high, in the other extreme, sell. By following strictly this course or not, agreeable to this general principle, will make the difference through life in the pecuniary affairs of an individual or nation, of poverty or riches. These are some of the different principles and subjects

in the affairs of human life, in the condition of man to elucidate the general principle, or doctrine of equilibrium throughout all matter as well as in mind. The catalogue might be swelled to almost infinitude, at least to an extent corresponding with the variations and combinations of both mind and matter for it is general and universal.

CHAPTER VI.

FOOD, NUTRITION AND ASSIMILATION.

Although there is great variety in the form of the food of man, it is composed of but few elements. By careful analysis of the best of our most modern chemists, it is made up of four elements or simple substances, oxygen, hydrogen, carbon and nitrogen. The three former are the most constant ingredients, for although nitrogen is to be found in such "products as pease, lentils and cabbage, it is not a component of starch, sugar or bacon." The food after having been masticated and received into the stomach, is decomposed, which is but a separation of these elements from each other. The decomposition is not completed in the stomach or bowels, but there commences, is not completed till it is mixed with the blood. Throughout the whole track of the alimentary canal, not only the lacteals absorbents, secernents, but in the arteries and veins, attractions and repulsions, compositions and decompositions, are constantly going on not only between the tissues of the body and blood, but between all the solids, liquids and aeriform substances of the body, external air, and food received. This constitutes the metamorphose of Lebeig and others; the former of whose system although rich in facts, is yet so complicated and confusing from the multiplicity of his positions that they are of no use except to give

us facts to corroborate us in our general principle of attraction and repulsion.

We find also that the components of the system, solids, liquids and gasses, are also made up of these same elementary substances, together with some few others. That consequently the blood which is the immediate product of the food as well as other fluids, is also composed of these elements. That they in the form of chyle are poured into, and mingled with the blood, and thrown over the whole system, to every part on which they act, and are acted upon, and then as we have before seen, returned to the heart. In the passage of these elements in the form of chyle, blood, and other fluids throughout the system, commencing at the gullet, they attract new elements or compounds, in the form of saliva, from the glands and other surfaces, and in return, give out in their course from the blood, these elements for their nutrition and sustenance. Having traversed every part of the system of circles from centre to circumference, what is not attracted for the support of the individual organs, together with what is imparted to the blood in return from those organs (except what is separated in the lungs, capillaries and kidneys, and repelled and expelled as noxious,) is again returned and again renewed by these elements of food. What effects take place we know not at present, except by the agency of some imponderable antagonized in itself, and so operating upon the whole body that it is endowed with an aptitude or capability of attracting such elements or agents for its use as is needful and necessary, and repelling others; and that every organ being differently constituted in its texture and arrangement of its elements, has the same capacity to attract out of these elements, materials, and arrange them into its own organized texture whether solid, liquid or aeriform, and that the three different classes of matter are by these means and operations, constantly changing from one to the oth-

er, and vice versa ; and that sometimes by the union of these and other elements, other and more complicated compounds are produced.

What is the peculiar use and effect of carbon and nitrogen in the system besides contributing to sustain the solid parts, we cannot so well understand, as we can oxygen and hydrogen, for persons have lived for months, yea for years, without taking in their food either. From the experiments of our best chemists, we find that carbon after having traversed the whole assimilating and circulatory systems, is thrown off, or repelled by the lungs and skin, in a volume in direct proportion to the oxygen received. We know also that the liver secretes bile from the blood which is eighty per cent. carbon, that carbon colors the blood as that in the veins dark, and that oxygen restores its color to a florid red through the medium of the lungs. We know also that venous blood has to pass as it were, through the custom house of the liver, before it is returned to the heart ; and that arterial blood has to undergo the same operation through the kidneys, during which process they attract, secrete and repel, along with oxygen and hydrogen with other salts, nitrogen. Thus then, we see that these important organs or functions of lungs, liver, capillaries and kidneys, as well as all the minor glands, are attracting and repelling surfaces.

The lungs attract oxygen gas, and repel carbonic acid. The liver attracts a material from venous blood, and repels bile. The kidneys attract arterial blood, and repel the compound called urine, and the skin attracts arterial blood, from which it repels the venous ; it also like the lungs absorbs oxygen, and repels carbonic acid, water and other acids, in the form of perspiration.— Now as carbon seems to have so great an agency in the motions of the human system by attraction and repulsion, by its being a constituent of all the food of man as well as of all his organized compounds, solid, liquid and

aeriform, and as the bile in the track of the alimentary canal is reabsorbed and passes again into the blood, and is diffused thereby again throughout the system, it seems with oxygen and hydrogen to have a share in the production of animal heat.

The tissues of the body, as well as the blood and other fluids, are composed of these elements. The blood is composed of them in nearly the following proportions of each, in one hundred parts :

Carbon,	-	-	-	-	-	-	51,96
Hydrogen,	-	-	-	-	-	-	7,25
Nitrogen,	-	-	-	-	-	-	15,07
Oxygen,	-	-	-	-	-	-	22,11
Ashes,	-	-	-	-	-	-	4,42

The tissues vary but a little from this arrangement or proportion from these elements.

It will be thus seen that carbon bears a much larger share in the proportion among these elements, in the compound, than nitrogen; for animal albumen is made up of something like in one hundred parts of

Carbon,	-	-	-	-	-	-	53,850
Hydrogen,	-	-	-	-	-	-	6,983
Nitrogen,	-	-	-	-	-	-	16,673
Oxygen,	-	-	-	-	-	-	22,00

This albumen constitutes the serum of blood, and the fibrin which constitutes the hard part of blood or cressamentum, contains

Carbon,	-	-	-	-	-	-	53,671
Hydrogen,	-	-	-	-	-	-	6,878
Nitrogen,	-	-	-	-	-	-	15,72
Oxygen,	-	-	-	-	-	-	23,68

While albumen from eggs contains, in one hundred parts:

Carbon,	-	-	-	-	-	-	53,72
Hydrogen,	-	-	-	-	-	-	7,53
Nitrogen,	-	-	-	-	-	-	13,60
Oxygen,	-	-	-	-	-	-	23,13

And from the yolk of eggs,

Carbon,	- - - - -	53,45
Hydrogen,	- - - - -	7,66
Nitrogen,	- - - - -	13,84
Oxygen,	- - - - -	25,55

The middle membrane of the arteries contains,

Carbon,	- - - - -	53,720
Hydrogen,	- - - - -	7,790
Nitrogen,	- - - - -	15,360
Oxygen,	- - - - -	23,811

The composition of lactic acid or that of milk, is

Carbon,	45,92	} 100 and no Nitrogen.
Hydrogen,	6,11	
Oxygen,	48,97	

The composition of the chief constituents of the urine of man and animals, according to Lebeig, is

Carbon,	- - - - -	36,083
Hydrogen,	- - - - -	2,441
Nitrogen,	- - - - -	33,461
Oxygen,	- - - - -	28,126

Composition of the flesh of beef, according to Playfair, contains

Carbon,	- - - - -	52,500
Hydrogen,	- - - - -	7,886
Nitrogen,	- - - - -	15,214
Oxygen,	- - - - -	24,310

Composition from the buds of germinating potatoes, according to Blanchet, is

Carbon,	- - - - -	60,26
Hydrogen,	- - - - -	5,50
Nitrogen,	- - - - -	1,30
Oxygen,	- - - - -	32,74

Composition of Quinine, according to Lebeig,

Carbon,	- - - - -	75,76
Hydrogen,	- - - - -	7,52
Nitrogen,	- - - - -	6,11
Oxygen,	- - - - -	8,62

Composition of hog's lard,

Carbon,	-	-	-	-	78,098
Hydrogen,	-	-	-	-	11,148
Oxygen,	-	-	-	-	9,78

Composition of mutton fat,

Carbon,	-	-	-	-	79,988
Hydrogen,	-	-	-	-	11,780
Oxygen,	-	-	-	-	9,304

And the composition of human fat,

Carbon,	-	-	-	-	79,000
Hydrogen,	-	-	-	-	11,416
Oxygen,	-	-	-	-	9,584

Composition of cane sugar,

Carbon,	-	-	-	-	42,251
Hydrogen,	-	-	-	-	6,328
Oxygen,	-	-	-	-	51,315

Starch, which forms a large share of our vegetable food, is composed of

Carbon,	-	-	-	-	44,26
Hydrogen,	-	-	-	-	6,70
Oxygen,	-	-	-	-	49,05

This analysis is from wheat, and although starch from the different substances, such as potatoes, peas, beans, lentils, rice, rye, horse chestnut, buckwheat, roots and seeds, vary a fraction: this is the general analysis of starch.

The leaves of that shrub called tea, and the seed called coffee, are identical in their constituents of elementary principles, which consist of carbon, hydrogen and oxygen, [Lebeig]. Thus then we find that all food, animal and vegetable, is either composed of carbon, hydrogen, nitrogen and oxygen; but that the greatest share of food is made up of carbon, hydrogen and oxygen, and that when it does form a constituent, it is in a smaller proportion than the other elements. It appears then, that the human system is made up and composed of these simple elements, arranged by the mag-

netic fluids in endless variety, like the various figures of a kaleidoscope, of forms, and that digestion is nothing more or less than a decomposition of these elements of the food, which we have seen are composed of these in almost the same varying ratios, and assimilation and nutrition the carrying to and from the various functions, organs and tissues, whereby their attractions and repulsions their elements combine and separate and thereby sustain and support the system. Besides contributing to form the blood, juices, and solid tissues of the human system, what is the effect of carbon and nitrogen? We find the bile is nearly seventy per cent. carbon, and that the urine contains the largest proportion of nitrogen of all other compounds.

Does the liver secrete the excess of negative magnetic matter, and the kidneys the excess of positive magnetic matter? In the present state of our knowledge, it is hard to determine with regard to these substances or elements. We know that nitrogen forms a large proportion of the atmospheric air of our globe; that it permeates the pores of the skin and membranes, and forms a constituent of the blood and tissues; and that the seeming excess is thrown off by the kidneys. Does it act as it is supposed to do in atmospheric air, to simply give mechanical form or support? or does it in some manner contribute to produce repulsion from its elasticity as a medicine?

We know that carbon, besides being a large constituent of the food of vegetables, is absorbed by them during the day and repelled during the night; that it traverses every part of the animal in the passage of the blood throughout the system, and that it is repelled by the lungs, skin and kidneys. Now the unceasing tendency towards an equilibrium of the magnetic fluids, from their extremes, would seem to require a point or line of union. Does carbon constitute that point? Does it act, as it were, like a mediator, and assist to produce the equi-

librium between the oxygen and hydrogen gasses in their equilibrium, in the formation of water? And if so, does not nitrogen assist to break up that equilibrium, or produce repulsion? Does not carbon stand at the halfway house of attraction to facilitate or produce an equilibrium, and nitrogen as an agent to break it up, and assist to produce repulsion?

Besides its every where presence in the system, and vegetable products, as well as in the growth of them, we find that we can not make a permanent magnet of iron, and are obliged to use steel, which is rendered such by the addition and union of carbon with iron. We know that carbon is antagonized to nitrogen in a variety of ways, such as gravity and elasticity, besides many others. We find that every magnet has its poles, and its equinoctial line. Does carbon contribute to this equinoctial line, and nitrogen to the extremes? Carbon and hydrogen are in extremes of opposition in many compounds. They are in extremes in the principle of volatilization. Carbon is the hardest substance in nature to volatilize, and hydrogen the easiest, and can not be condensed. Although there is an affinity between carbon and hydrogen, and they form many compounds, yet the affinity of hydrogen for oxygen is vastly superior to it, and will take it from certain compounds in certain proportions. This great affinity between them, their appearance in the compound called water, their refracting powers, and their great influence and agency in the decomposition of all substances through the medium of the compound blow-pipe, thus imitating perfectly and completely the poles of the galvanic battery in effect, as well as appearance upon the organs of sense, with various other considerations not less analogous and imposing, inforce upon us the conviction of the fact of their being both compounds; the one of oxygen and negative magnetism, and the other of hydrogen and positive magnetism. Can we not then discover that

throughout the system, upon the solids, liquids and gasses, through the operation of these magnetic fluids, changes are constantly going on in these elements, and when attraction prevails, cold or diminished temperature takes place, and when repulsion, heat or an increase of temperature is the result, and all from this principle antagonized in itself. Digestion has hitherto been considered a complicated and laborious process, requiring great muscular force from the muscular coats of the stomach. A kind of grinding triturating process; but it is not so. It is simply a decomposition, or separation of the elements from each other, and an assimilation of them to the various organs and tissues of the body, that stand in need of them, and therefore in the round of the circulation attract them from the blood, and give out at the same time, in exchange, some of their own. The appetency and satiety of which depend upon the motion of the magnetic fluids, produced by attraction and repulsion, by the light of which we may see how the temperature of the body is kept up, equalized and preserved, as well in the torrid as the frigid zone, as well in summer and winter as in spring and autumn; attraction producing contraction and cold, or diminished temperature, and repulsion an increase of temperature, or the sensation of heat. It will be admitted that the effect of all food is to produce motion, thought, sensation and heat, that is, to produce life, which consists simply in these phenomena. Ether, nitrous oxide, oxygen gas, brandy and water, as well as other alcoholic solutions, produce motion, heat, sensation and thought, and not only so, but much quicker and more intensely than common food. Now will the sticklers for the old theory of digestion, please tell us how many hundred pounds power it takes to grind down and triturate these above mentioned and other kindred diffusible stimulents. Surely all can easily see that digestion is a simple separation, throughout the whole digestive, absorbent and circula-

tory circles of these elements from each other. Alcohol then, operates as well as food to keep up the flame of life, precisely as it does, or would, to keep up a flame out of the body when set on fire in the atmospheric air. "The lamp of life," is a very common expression; and is a very just and appropriate one, for both are produced in the same manner, by the same materials or elements, and are governed by the same law. Combustion then, may be compared to digestion; in both it is a simple decomposition of a compound substance, separating its elements, and forming new combinations. The heat of the system is kept up and sustained by the attractions and repulsions, decompositions and recombinations between the same elements, that with fuel or food in atmospheric air, heat is produced and continued, to wit: carbon, hydrogen and oxygen, with nitrogen. Combustion is nothing but a series of powerful and active attractions and repulsions between the above elements or substances. Decomposition, whether in the stomach or other parts of the system, repels; and its union with the various tissues of the body, is precisely the same process. In the one, the flame of heat is produced; in the other, the flame of life. The one external; the other internal. Oxygen has erroneously been called a supporter of combustion, to the exclusion of all the rest; for hydrogen and carbon both mutually contribute to the phenomena of these attractions and repulsions as much so as oxygen.

To besure oxygen unites with more substances in nature than carbon; but hydrogen is as everywhere present as oxygen. Alcohol and other diffusible stimulants stand the same relation to quickness and want of permanency of excitement in the system, that they do to other fuel in combustion in external air. Both are fleeting and transient, and destitute of that permanent durable action, which is produced by more solid food or fuel. Many just, striking and analogous comparisons might

with increasing interest be drawn between the two, to further and more fully elucidate the subject ; but our limits forbid. We have shown in addition to the human system being formed double, that the whole system of circles, from the digestive and alimentary, up to the last, but most important of the brain and nerves, are performed, on minute anatomical investigation, by a system of antagonizing vessels and organs, and that one side was the repository of positive magnetic fluid, and the other for negative ; that the food is made up of four elements, which by the operation of these, forming a variety of compounds, produced by their action the magnetic fluids, which constituted life. These circles operated on, and operating upon the food, are so many cognate systems forming a whole, which generated and eliminated from the food the pores, lungs and so forth, like so many galvanic batteries, the magnetic fluids, which is accumulated in the blood and sent by the arteries to the brain, which gland secretes them sufficiently refined and sublimated for the operations of mind and muscular motion. This accumulation then, from the series of circles, perform by the action of the magnetic fluids, from the brain through the medium of its nervous appendages, all the phenomena of mind and body. The brain then, the organ of mind thus relatively situated, the grand centre of all the circles of the system, stands as a monarch to the whole receiving support and sustenance from all, but governing and dispensing law throughout the system. This system thus animated, moved and controlled by the brain, is very analogous to the circles of the planetary system, moved and controlled by the sun ; as well as the vegetating system of circles upon its surface. Every system in nature from the sun itself, down to the lowest vegetable, has an innate propensity to beget, and propagate something from itself, in image of itself. From the annual and diurnal revolutions of the earth, it would seem to have been sent off from the

bosom of the sun in a tangent between the mutual centrifugal and centripetal forces of that magnetic luminary, and that it has preserved its motion, and imitated in its rotation, its parent fountain, since, and that it was formed in degrees or circles, as mentioned in (chapter xiv.) on geological formations.

The circulation of the blood in the human system is performed in the same manner that the diurnal and annual motions of the earth are produced, and by the same forces, and on the same principle. The heart is the centre of the circulating system. It is a solid, and the blood a fluid. They are both in the positive state, and by the law of magnetism, from the mutual repulsion, the blood is repelled to the lungs, and thereby throwing off carbonic acid, and imbibing oxygen, is changed from a positive to a negative state, from an equilibrium between it and that function, and by the same law that repelled it from the heart to the lungs, is repelled in turn by that organ and attracted by the heart, where again arrived at; an equilibrium again takes place, and it is repelled all over the system to every part of the circumference, the capillary system; which is a second lungs, is there changed by the repulsion of carbonic acid and attraction of oxygen through the pores, from the atmosphere, is repelled by that system, attracted to, and through the kidneys, parts with its redundancy of negative magnetic matter, in the form of nitrogen and other salts, and is again attracted back to the right heart; and after again going to the lungs and liver, (which we omitted to mention above) the latter of which separates the excess of positive magnetic matter in the form of bile or carbon, and acids, is again returned, and thus by these changes from positive to negative by attraction and repulsion, is this ceaseless round of circulation produced, till death. Thus, like the motion of the earth from the change of light from a positive to a negative state, by the operation of ponderable matter upon the magnetic fluids, is

the motion of the circulation produced from the same changes in the lungs, and capillaries. When the current is strongest towards the earth, we have day, light, and warmth, and when it is strongest towards the sun, night, darkness and cold. So also when the current is stronger towards the surface, the system is increased in temperature, action, motion and thought, and when it is stronger towards the center, it is diminished in all these characteristics of body as well as mind.

It will be remembered throughout that we make heat to depend upon repulsion, in the system, and cold upon attraction ; and the tendency to an equilibrium of these, is the simple cause why the uniform temperature of 98 Farenheit, is maintained as well in summer as winter, day as night, or under the scorching sun of the equator as the frigid zone. Is there any other principle but this self equalizing one of magnetism, that could produce and continue the motion of the earth, the health and temperature of the animated machine, or of vegetation for an hour ? Mark the perfect coincidence between the effects upon the earth, of day and night, heat and cold, with the same effects upon the body and mind, as well as sleeping and waking. Each have a diurnal and annual revolution. So also has the vegetable creation.—What affects one, affects the other ; the cause is the same. Thus truths always agree, but errors never.—It not only disagrees with truth, but with itself. The test for truth then is attraction, and of error repulsion. By strictly adhering to this simple rule, we can never be mistaken. We have compared the human system to an electric machine, to a galvanic battery, and to the solar system, not inappropriately. The comparison might justly be extended to the steam engine, which performs its mechanical operations, or motions, by attraction and repulsion, producing contraction and expansion. Even the machinery itself, furnace, boiler condenser, tubes, valves and all, might be compared with the sto-

nach, lungs, vessels and valves in the arteries and veins, and other organs of the system. The one is but a little more complicated than the other. Who is not forcibly struck with the analogy of the puffing and blowing of a high pressure steam engine, and the function of the lungs of man? The great and only material difference is, that one is animal and has a brain of its own, impelled by a portion of immortality, for an engineer, and the other a machine, constructed by man, and requiring an engineer to superintend its operations. The principle of locomotion in both are the same, and governed by the same law, attraction and repulsion. We have seen that the earth is rendered healthy or otherwise by the sun. It is said to be in a healthy state when its magnetic or electric fluids are in a state of equilibrium. When the equilibrium is disturbed or broken up, we become sensible of its being reproduced by a commotion in atmospheric air, denoted by thunder and lightning, and is made more apparent by rain descending or being attracted from the clouds to the earth. Precisely so with the human system. The equilibrium cannot long be broken up between the magnetic forces, before an effort is made to reproduce it, and fevers are the result, denoted by cold chills alternated with hot flashes, and the equilibrium is made apparent by a copious flow of water from both skin and kidneys. A storm then in atmospheric air with lightning and thunder, stands the same relation to the earth, that a fit of fever and ague does to the human system, both the result of an effort of the magnetic forces to regain their lost equilibrium.

As the moon so effects the earth as to produce an attraction and repulsion, or an ebbing and flowing of the waters upon its surface. It also so effects the human system as to produce periodical results of attraction and repulsion in the same regular manner. No one however, will deny the great effect of planetary influence upon the body and mind of man; for spring and fall, sun-

mer and winter, day and night, extra of all other considerations will prove it. If there be planetary influence upon the human system, how is it possible to produce an effect, except by the agency of the magnetic fluids. There can be no other. But to corroborate it still further, we will remark that the life of animals are in some species, entirely dependent upon it. Some animals live and thrive on nothing but air; while others live and grow on nothing but water. Of those that live on the latter, may be reckoned the various catalogue of fishes, tad poles and leeches. Rondlet kept a silver fish in pure water for three years, and at the end of that period it had gained and grown as large as the glass globe that contained it.

Various other classes of fish like the carp, gold fish, and pike, have a similar power to live in that element. There are various insects, which live on the nectar of flowers, while others are sustained upon air alone, like the snail and chameleon, which have been known to live upon it for years. Dr. Good informs us that Gorman asserts that spiders will live upon air for months, and that Mr. Baker tells us in the philosophical transactions that he had a beetle which lived in a glass, confined for three years without food, and then fled away by accident. "The larves of ants are not only supported by air; but actually increase in bulk, and undergo their metamorphose without any other food. The luminous centipede which has been seen illuminating the air, and falls into a ship one thousand miles from shore, lives on air. Lizards and especially the newt species, have been found imbedded in chalk rocks apparently dead and fossilized but have assumed living action on exposure to the atmosphere. The experiment has frequently been tried on toads for two years, and on rattle and other snakes, and vipers, for years without change in their bulk. A friend assures me that on getting a portrait taken and framed, by accident a spider crawled beneath the glass

and quietly seated himself upon the forefinger where he was permitted to remain twenty years, when on removing the glass, his majesty awoke, rubbed his eyes, and marched off triumphantly with a dignity proportioned to his age. But living upon air and water is not confined to fishes and vipers. History shows us that man and other animals can, and do exist without food for a long period of time upon air or water, or both, such as in cases of madness where a patient absolutely refuses to take food, to eat or drink. There is a most extraordinary case recorded of Cecelia D. Ridgeway, preserved among the records in the Tower of London, which states that in the reign of Edward III., having been condemned for the murder of her husband, she remained for forty days without either food or drink. This was ascribed to a miracle, and the King condescended in consequence to grant a pardon. The Cambridgeshire farmer's wife, who about twenty years ago was buried under a snow storm, continued ten or twelve days without tasting any thing but a little snow which covered her. In the Edinburgh Medical Essays for 1720, Dr. Eccles makes mention of a beautiful young lady "about sixteen years of age," who in consequence of the sudden death of an indulgent father, was thrown into a state of tetanus or rigidity of all the muscles of the body, and especially those of deglutition, so violent as to render her incapable of swallowing for two long and distinct periods of time. In the first instance for thirty-four, and in the second which occurred shortly afterwards for fifty four days; during all which time her first and second fastings, she declared, says Dr. Eccles, she had no sense of hunger or thirst, and when they were over, she had not lost much of her flesh. In our own days, says Dr. Good, we have a most striking instance, in the case of Ann Moore, of Tutbury in Staffordshire, who in consequence of great and increasing difficulty in swallowing, at first limited herself daily to a very small

portion of bread alone, and on March 17th, 1807, relinquished even that, allowing herself only occasionally a little tea or water; and in the ensuing September, pretended to abstain altogether from liquids as well as solids. From the account of Mr. Granger, a medical practitioner of reputation, who saw her about two years afterward, she appears to have suffered very considerably either from her abstinence, or from the general morbid heat which induced her to use abstinence. He says, indeed that her mental faculties were entire, her voice moderately strong, and that she could join in conversation without undergoing any apparent fatigue; but he says also that her pulse was feeble and slow, that she was altogether confined to her bed, that her limbs were emaciated, that convulsions attacked her on so slight an excitement as surprise, and that she had then very lately lost the use of her limbs. Hildanus and Haller have collected cases of much longer duration of abstinence, some of them extending to not less than sixteen years. In the numbers of the Philosophical Transactions (London) there are found numerous cases of the same kind, apparently drawn up with the most scrupulous caution, and supported by the best kind of concurrent testimony.

In one of the earlier volumes, we meet with an account of four men who were compelled to subsist upon water for twenty-four days, in consequence of their having been buried in a deep excavation, by the fall of a superincumbent body of earth, under which they were working, and its being that length of time before they were extricated. The water they drank was from a spring at hand, and they drank it freely, but tasted nothing else. A still more extraordinary case is related in the same Journal for the year 1742, and consists of the history of a young man, who, at the age of sixteen, from having drank freely of cold water when in violent perspiration, was thrown into an inflammatory fever, from which he escaped with great difficulty, and with such a

dislike to food of all kinds, that for eighteen years (at the time this account was drawn up) he had never tasted any thing but water. He uniformly enjoyed good health, and appears to have had ejections but seldom." A multitude of hypotheses have been offered to account for these wonderful anomalies, says Dr. Good, but none of them do it satisfactorily; and I confess my utter ignorance upon the subject. Water appears to be necessary in most, but not in all cases, for Hildanus, though somewhat imaginative, but honest in the main, assures us that Eva Flegen, who had fasted for sixteen years, when he saw her in 1612, had abstained entirely from liquids as well as solids; and in the case of impacted toads, especially those found in blocks of closely crystallized marble, the moisture they receive must often be very insignificant. Perhaps one of the most singular cases, and at the same time, the best authenticated on record, is that of Janet M'Leod, published in the *Philosophical Transactions* by Dr. Mackenzie. She was at this time thirty-three years of age, unmarried, and from the age of fifteen had had various epileptic paroxysms, which had considerably shaken her frame, rendered the elevator muscles of the eyelids paralytic, so that she could only see by lifting the lids up, and produced so rigid a locked jaw that her mouth could rarely be forced open by any contrivance. She had lost very nearly her power of speech and deglutition, and with this, all desire to eat or drink. Her lower limbs were retracted towards her body; she was entirely confined to her bed; slept much, and had seldom any other ejections than periodical discharges of blood, apparently from the lungs, which was chiefly thrown out by the nostrils. During a very few intervals of relaxation, she was prevailed upon, with great difficulty, to put a few crumbs of bread, comminuted in the hand, into her mouth, together with a little water, sucked from her own hand, and in one or two instances, a little gruel;

but even at these attempts, almost the whole was rejected. On two occasions, also, after a total abstinence of many months, she made signs of wishing to drink some water, which was given her immediately. On the first occasion, the whole seemed to be returned from her mouth; but she was greatly refreshed by having it rubbed on her throat. On the second occasion, she drank off a pint at once, but could not be prevailed upon or forced to drink any more, notwithstanding that her father had now fixed a wedge between her teeth, two of which were hereby broken out. With these exceptions, however, she seems to have passed upwards of four years without either liquids or solids of any kind, or even an appearance of swallowing. She lay for the most part like a log of wood, with a pulse scarcely perceptible from feebleness, but distinct and regular; her countenance was fresh; her features neither disfigured nor sunk; her bosom round and prominent, and her limbs not emaciated. Dr. Mackenzie watched her with occasional visits for eight or nine years, at the close of which period, she seems to have been a little improved. His narration is very precisely as well as minutely detailed, and previously to its being sent to the Royal Society, was read over before the patient's parents, who were known to be persons of great honesty; as also before the elder of the parish, who appears to have been an excellent man; and when sent, was accompanied by a certificate as to the general truth of the facts, signed by the minister of the parish, the sheriff-depute, and six other individuals of the neighborhood, of high character, and most of them justices of the peace. Yet with the freest use of water, what can we make of such cases upon any chain of chemical facts at present discovered? What can we make of it, even in conjunction with the use of air? The weight and solid contents of the body are derived chiefly from the principle which modern chemists denote carbon; yet neither

water nor air, when in a state of purity, contain a particle of carbon; nor is it hitherto, by any means established, that even the nitrogen of the animal system is in any instance derived from the air, or introduced by the process of respiration; for the experiments upon this subject, so far as they go, are in a state of opposition, and keep the question on a balance—*factis contraria facta*. Let us then confess our ignorance rather than attempt to be wise upon the base of conceit. All that we do know, is that bodies of all kinds are reducible to a few elementary principles, which appear to be unchangeable, and are certainly invisible; and that from different combinations and modifications of these proceeds every concrete and visible form; hence air itself, and water; hence animal, vegetable and mineral substances. Air, therefore, and water, or either separately, may contain the rudimental materials of all the rest.” Thus spake the learned and celebrated Dr. Good, to a London audience; one of the most learned and scientific men of the age. Had it been known at that time that the imponderables were identical; that they only presented to the organs of sense different sensations; that they were but the different variations of the magnetic fluids upon these sentient organs, his views would have been entirely different, and at no loss to determine the cause why animals could subsist comparatively without food, upon air or water. Aad he had positive proof that magnetism and electricity were the same principle, as we have at the present period, the problem would have been readily solved, and instead of declaring his ignorance of the cause of animal life, would have opened a new field for his gigantic mental powers. Had he have known that water, which is formed of oxygen and hydrogen, carried in its compound the two opposite electricities, and that these were given out on their decomposition in their elements, it would readily have suggested the cause of life, and the rationale of their sup-

port from this element. In respect to the support of air, we can easily see, that made up as it is, of oxygen and nitrogen, with some carbon, in the form of carbonic acid gas, and hydrogen (for moisture is always present in the atmosphere) how these elements are attracted to the system through the lungs and pores of the skin, and unite with the same in the various tissues of the body, liberate the magnetic fluids, and thus contribute to sustain life. Thus these facts to sustain our position, crowd upon us on every side, and not only cheer us onward triumphantly, but lead us to believe that we are permitted to ascend in the chain of causes from earth, a link higher in the scale than we have hitherto been accustomed. Light is always present, and is always a stimulant to animals, as well as vegetables, is absorbed by all ponderable matter, enters into its combination, and produces heat, and thus would contribute to sustain life. Have we not clearly shown light to be the magnetic fluid, as well as the cause of stimulating the blade of grass, the bear, the dormouse, insects and creeping things into life, and animation in the spring? It must, from what we have seen and shown, be conceded that a large share of animals, insects, &c., are sustained by air or water alone. If some are sustained, can not all be? When and where did nature ever work by partial laws?

CHAPTER VII.

CONNECTION OF MIND AND BODY—FORMATION OF MIND.

The mind and body, we have seen, are so intimately blended and united, that when one is operated upon, the other is affected also. Indeed, we can have no mind without organization, the vigor and capacity of which is much modified and characterized by it. The

brain, which is the organ of mind, varies in capacity in different nations, and with individuals of the same nation; so much so, that no two individuals are in all respects exactly alike. The mind of man has for ages been considered a unit, or as manifesting itself as a whole, until the days of Gall, Spurzheim, Combe, and others, and recently by the light of magnetism, as applied to animals and to the mind itself, we know that it is made up of a compound of different organs, characterized by different manifestations of brain; and that these are but so many poles of the great central magnet—the brain; or as so many little cognate magnets, controlled and operated upon by the great one. This magnet, the brain, has a capacity over other magnets in matter of having an aptitude or capacity of setting itself in operation, engineering its own operations, and controlling its own motions, as well as the motions of the body. This engineering faculty is mysteriously superadded by the cause of causes, and is termed Spirit, Essence, Soul; but we term it WILL. This is what constitutes man a free agent, and has the power or faculty to act, and to be acted upon. It is therefore both active and passive. That particular state or condition which characterizes its passive state, we term sensation. That particular state or condition which characterizes its active state, we term volition. The former regards impressions from without, as a prime cause of its change; the latter from within, as a cause of impulse. The former is produced by attraction: the latter by repulsion. This is the only fundamental law of mind. All our original ideas are obtained by sensation. All our actions and conduct flow from volition.

An object strikes the senses, it produces by a change a certain arrangement of the little globules of the brain. This arrangement is either pleasurable or painful. If the former, we exercise the will to receive, retain, and have it again repeated. If painful, we will to dislodge,

cease to have it repeated, or not have it again produced ; this brings into operation volition.

If we have a second impression, if agreeable it is attracted to the other, and so on, like letters forming syllables, syllables words, and words sentences, and so up to discourses or books ; for this book is a facsimile of my brain, or a chart of it. If it be muddy in spots, such is my brain. If it be clear in others, such is my intellect. To be better understood, the letter A, for instance strikes my vision through the influence or operation of that imponderable fluid called light ; the little globules or magnets of the brain, are at once by the power of attraction, combined into the exact form of that letter, and corresponds exactly with it. Next, B is presented, the same little magnets or globules are separated by repulsion that formed A, and re-combined by attraction, by the effect of light into the exact form of B, and so on through the whole alphabet. The formation of these letters separately we term a notion, apprehension or simple idea. Having had our little globules moulded into the forms of all the letters of the alphabet, and dispersed or taken down, or distributed like the forms of the printer, we exert the power of the will (volition) to recombine them into the form or shape of them without the original letters being present. If we succeed in reproducing them in the brain we are said to be good scholars, and that faculty by which they are reproduced is called in the books memory. Memory then, is that faculty of will by which we can reproduce the original figure in the little globules of the brain which has been once produced. Having produced these singly, we are presented with two connected, or associated together. A and B, and by an other exertion of the will, we read the word ab, which is compounded of the two, from this another is attracted and reads abel, from this to absolom, and thus are the little globules from the diversity of their combinations, from impressions through the

senses to give us our ideas, first single like A, and then B, then compound, like A and B, associated or attracted together, then complex like Absalom riding on horseback through the wood and getting his hair entangled in the branches of its trees. The manner by which these are formed and associated is by attraction, and changed from one to the other by repulsion, for all our ideas are expressed by symbols or signs, and when thus associated and expressed, is called language, which we have examined in another part of this work (chap. xvii).

The single, compound and complex divisibility and forms of matter, and its recombination, or what are termed our mathematical ideas, are obtained in the same manner, as well as all our ideas of solidity, extension, sound, motion, taste and smell. We have said that compound ideas were produced by attraction from the formation of single ones into compound; our complex ones are formed by this same principle of attraction, but by the union of the testimony of different senses to the mind. A lump of loaf sugar strikes the eye with its form and white color, we feel of its texture and find it to be hard and rough; we then taste it, and find it to be sweet, we then pronounce it to be loaf sugar. So also with brown, or any other substance. Thus, in the first instance, the white color, shape and taste attracted together produce the idea of sugar, which idea instead of being simple, is complex, for one kind of sugar has different characteristics by which it is distinguished from another. It might seem that color could not be produced by a change in these globules of the brain; but is not color owing to the attraction and repulsion of light, or in other words, its absorption and reflection. Does not the peacock's tail produce different colors, and shades of color, by changing from attraction to repulsion? Are not colors changed by the change in the arrangement of their particles? Does not the addition of ten parts more in a hundred of metal of oxygen, change

black oxide of iron, to red? Have we not shown already, that chemical affinity was based upon the principle, that one substance, or simple, was in a positive state of magnetism and the other in a negative? Do not acids redden vegetable blues, and alkalies restore them? Have we not shown when on the metals, that all colors of the oxides were changed by a greater or lesser quantity of oxygen; and what are all of these but changes or reversions of the poles of these ultimate atoms or globules? Thus are our first or original ideas obtained and linked or associated. It will be observed that sensation has its extremes or poles. It is divided into pleasure and pain; both lie the same road, and are but the names of the extremes of a continued line, and are thus antagonized in themselves.

Volition is also characterized by antagonistic principles. We make but two sets of motions as has been before explained, in opposition to each other, as to and from ourselves. Sensation is that law of the mind by which we obtain all our original ideas; and volition that law by which we assist to recombine and originate new ones, as well as put them into action, in the operations of life, which is called conduct, which gives character. That act by which the will is impelled to produce new combinations, is termed reflection. That act of the mind by which it perceives the difference of things is called comparison, and by which it ultimately decides—judgment. All our knowledge of things is obtained by sensation, and the making use of it for our benefit or detriment, by volition. Thus then, we have the commencement and progress of mind. We have said that much depends upon organization. Much also depends upon volition; unless we make application we shall not make progress. The two then are necessary, organization and application, to obtain an education or habitude.—The mind like the body, has its antagonizing principles, and is governed by the same law; hence we find an-

tagonizing poles to every attribute of mind. From our present limited knowledge of Phrenological science, we have discovered but about seventy manifestations of mind developed upon the head, which will hereafter be enumerated, located and illustrated. The passions are divided into two classes which are primarily antagonized. They are desire and aversion; desire depends upon attraction, and aversion upon repulsion. Desire is from the positive pole of pleasure, and aversion from the negative pole of pain. The will is called into action in both cases, whether we wish to obtain or reject an object, thing or principle. The motive depends on sensation. These (desire and aversion) are the primary or (elementary) as it were, passions of the human mind, which is like the simple notions, apprehensions of mind, or motions of body, are associated, combined and swelled into almost an infinitude of complex arrangements, which have different names according to their appearance and effect. But numerous as they are, they are resolvable into two classes antagonized to each other, some of which are marked, and manifest themselves upon the face and other parts of the body, which we shall show when we come to speak upon phrenology. The attractive passions are characterized by an inviting, soft, pliant, supplicating expression of the features of the face and muscles; the repulsive by a rigid, tense, forbidding expression of the countenance and action of the extremities. Hence the maxim that "actions speak louder than words." The natural signs of the attractive passions are denoted by dimples in the cheeks, smiles, laughter, placid looks, a lively speaking sparkling eye, and a winning look of the whole outline. The repulsive on the contrary by tears, frowns, erections of the hair, and a cold, repulsive appearance; but it is not our purpose to describe the passions, but merely to show that they are antagonized to each other. We therefore find pride and vanity, joy and grief, love and hatred, hope and

fear, modesty and impudence, placidity and peevishness, adhesiveness and inconstancy, confidence and jealousy, firmness and timidity, ambition and indolence, in a word, all the emotions, feelings or passions of the mind are antagonized, and dependent on the same cause. Not only is every attribute of mind antagonized to its fellow within itself, but the effect of mind upon mind in the transaction of business, in the formation of habits of conduct, by influence, or persuasion to do, or not to do, to perform or leave undone, every or any of the transactions in human life. We find individuals of the same views, feelings and sentiments attracted together to form societies, and repelled from others, obeying the same law that governs matter. Hence the old and true maxim, that,

“Birds of a feather, flock together.”

These are also constantly changing and undergoing new combinations, like those of matter. Nothing is more common than to see two individuals of the same sex on the most extreme terms of friendship, become at once the most bitter enemies ; one extreme exactly proportioned to the other. So well is this general principle understood by the observing, without knowing the cause, that when they discover the extreme of friendship in social circles, they anticipate and prognosticate a sudden blow up, or extreme of enmity. Hence the old maxim, that “hot love is soon cold.” It is accounted for upon our general law of mind and matter—that one extreme not only, at all times, follows another, but the quickness of the change is in a direct ratio to the intensity of the action of the extreme. Attraction or repulsion at all times, alternate with each other, which is but a reversion of the poles, from the action of the magnetic principle.

From unknown and unconscious causes, prejudices will arise between individuals, and continue, but by the slightest cause, as it were by accident, a reconciliation

takes place, the poles are reversed, they become friends, and the other extreme is the result. But not only are our minds formed from simple apprehensions associated together by this law, but mind as a whole, is governed by the same law in its operations in society in the formation of friendships.

CHAPTER VIII.

THE EFFECT OF MIND UPON MIND.

We have seen in the preceding, but more particularly in the last chapter, in what manner mind is formed. Our present purpose is to show the influence of one mind over another, and in what manner they are formed into social circles, parties, societies and churches. One mind operates upon another in such a manner as to control it in its action and operations, or is incapable of exerting an influence over it; the former is the effect of attraction, the latter repulsion; for in the union and sympathy of minds when associated to form friendships, societies, &c., there is as much attraction as there is between an alkali and acid in their formation of a neutral salt, or one magnet upon another. Philosophically speaking, every thing in nature is a magnet, and has its poles, or antagonizing extremes, and communicates with other objects in no other manner. On an acquaintance of one individual with another of even the same sex, they are both so well pleased with each other, that they continue to frequent and enjoy each other's presence and society, or they have a mutual dislike, and separate and elude one another. One or the other of these effects always take place. The former is the effect of attraction, the latter of repulsion. Among those of different sexes, it forms the base of all courtships, and neutralization in marriage, as well as the cause of all the rebuffs that

take place. In both instances, they are more the effect of passion and prejudice than judgment. Who, but has witnessed unsuitable and seemingly mysterious matches which were to say the least, any thing but the effect of good judgment.

How often have parents attempted to break up attachments that had already taken place, and create new ones in their stead, which good judgment dictated, and failed. How often have attachments been formed between individuals and continued, which their own judgments told them were wrong, and pernicious to their permanent happiness and prosperity. How often have the attachments between individuals been so strong, that it has not only resisted the advice of relatives and friends, but parental authority itself, and arose to such a pitch of intensity, that walls, locks, and bolts were no barrier to the approximation of the parties, who steal away and consummate their union, under the full belief that all that is necessary in this life is the union of their minds, the cement of their affections, and presence of each others persons. For a time they enjoy themselves and each other, but at length attraction gives way, and repulsion permanently predominates, their behavior to each other is changed, love is turned into hatred, they quarrel and separate, and remain no longer one twain. Indeed, in a portion of community, these lesser attractions and repulsions, quarrelling and "making up again" are daily alternating with each other, without permanent or final separation. But these attractions and repulsions are no less apparent in domestic, social and neighborhood circles. It forms the base of all the attachments and friendships, as well as prejudices and dislikes, in community.

Mind therefore, has an effect over mind, to control its actions and operations, and the law by which this is produced, is the same as that governing matter—depending on the doctrine of definite proportions.

One individual wants a certain favor of another, his influence is not sufficient to obtain it ; he applies to another individual who has sufficient influence to accomplish it, who intercedes, gets the favor granted, while the first could have no effect. The cause is obvious ; like oil and water the two first individuals were alike—in the same state of magnetism, either both positive or both negative ; their definite proportions were not in a condition agreeable to the law, to produce attraction, and was therefore repulsive of each other ; but on the interference of the third, like the addition to the water of the alkali, they are changed into a different state of magnetism, and attraction takes place, and the favor is granted ; a new compound is formed, or a new association commenced, which continues until another change takes place philosophically between them. So also with individual friendships. Persons frequently, simply from external appearance, hearsay, or some other equally trivial cause, will take of each other the most deep-rooted prejudices and continue to indulge them for a time, but by slight causes, from accident as it were, or by the intercession of a third person, a change takes place, attraction takes the place of repulsion, and the most perfect friendship ensues ; and vice versa from one to the other. Parties, societies, clubs and juntos, whether political, moral, civil or religious, are formed in the same manner and governed by the same law. A simple apprehension or idea of mind, stands the same relation to mind as a whole, that an individual mind does to a society, party or club as a whole ; both are formed by attraction, and dissolved, separated or broken up by repulsion. It is then the cause of all the excitements in community, in politics, morality and religion.

The mind of one individual, besides operating upon another, and controlling in a great measure its actions through the medium of speech, by eloquence, argument, or by what is called persuasion, has another language

or medium of communication, through the passions, and the eye has no inconsiderable share in the effective effects of this species of communication. The influence of parents, teachers, and others, upon the young, afford striking examples of this line of communication and effect. If a child is brought before its teacher or parent, and interrogated or questioned in respect to certain facts of conduct, while he gives it, a searching look as if to read its very soul, the true answer is sure to be given, although prevarication almost amounting to falsehood, before others, had been practiced.

But it will not be denied that one individual has an effect over another in controlling it, in the transactions of life. All our original knowledge comes by custom and habit, and these are obtained by sympathy, and imitation. What is sympathy but attraction? and what is imitation but an effort to do as others do, or have done, by the power of volition? An idea or apprehension is as much an integral part of mind, as a particle of phosphate of lime is an integral part of bone. An individual mind is as much an integral part of society or party, as an idea is of mind, and is as essential to the formation of each, as a fraction is to form a whole number. The formation of both is owing to the same law, attraction. It is therefore universal, and runs through all nature, and is the law on which the whole is based. Can we not then see a most perfect analogy in the formation of mind from simple ideas, and the formation of societies and parties from individual minds, and the formation of compounds from simples, in material substances? Can we not see why they are easily and readily found in some instances, and why they can not be found at all in others? Attraction in the first instance, and repulsion in the latter; and these again depending upon the proportions of their ultimate atoms relative to each other. It will be recollected, that from our present chemical knowledge, we have between fifty and sixty simples,

from which all compounds of material substances are formed. It will also be remembered, from our present knowledge of the science of phrenology, we reckon about the same number of manifestations of mind. The simple substances will not unite to form compounds at most, but generally in four proportions, and these are always a multiple of each other. Do we not discover an analogy in formation of friendships between the different temperaments, corresponding to these? Are not the individuals composing political parties characterized by particular manifestations of mind? Can not a good, well skilled phrenologist, by examination of the manifestations of mind, point out to which society or church an individual belongs, or that he has never joined himself to any, or ever will, from his particular manifestations? If so, is not there sufficient analogy to corroborate our general theory in this respect? We showed (chap. XIII. part 1) the different points of union of antimony, iron and tin with oxygen, and that they invariably united in the proportions of multiples of their first point of union. These metals may be taken to exemplify, not only the whole of material substances in nature, but the formation of mind from simple ideas, and societies from mind. This law of matter and mind, upon which both are based, is the cause of that endless variety and uniformity of nature which philosophically constitutes beauty itself.

It is no less then the cause of the variety of nature in her various compounds, textures, natures and colors, of varieties of intellect and societies, but the cause of the change or dissolution of all. It is also, as we have seen, the cause of the influence of one mind over another, as well as why it can not have influence: Some persons can not be made readily to acquire knowledge on a given subject or science, but will make great and rapid improvement in some other. Some persons can not acquire from a certain author or teacher, knowledge

on a given branch or science readily; but of another author or teacher, will make rapid proficiency; while this same author or teacher will advance others more rapidly than even those that are last mentioned. This difference of instructors as well as instructed, is owing to our law of attraction and repulsion, and these, as we have before said, are the definite proportions of their nervous energy or magnetism, rendering, in the first instance, where they learn readily, one positive and the other negative, and in the last, both positive or both negative. The former the precise condition to attract or acquire, and the latter the particular condition to repel, and therefore prohibit, necessarily, acquisition.— Thus, compounds of ideas, which form mind, are governed by the same laws that govern matter. We have shown this principle to be the base of logic, and from our definition, it will be readily seen that eloquence, which is the great lever of public opinion, is but the effort of one mind to attract to itself or to its manner of thought, feeling, sentiment and action, other minds, and thus influence and control their actions and course of conduct, although there is another language, which, although mute, and speaks through but two senses, is nevertheless not the less potent, and probably influences and controls a large portion of community. I allude to the language of the passions, which communicates itself through the medium of the eye and touch. Thus then, both mind and matter are formed and governed by this law of magnetism. Substances will not then unite in all proportions to form compounds. Neither can all be convinced by the arguments and eloquence of one speaker. One orator will convince and persuade a certain portion of an audience, and disgust another, and have but little effect either way upon a third. The cause we have before explained. We said (chap. xix, part 1) that there was no absolute weight, or levity, or heat, or cold, that all were relative, and resulted from

attraction and repulsion. The only reason why a substance falls to the earth, and is said to be heavy, is its attraction to the great magnet, and the force by which it attracts it is called its weight; but this attraction or what is called its weight, is and can be overcome by repulsion. Iron, by the magnetic fluids, is attracted together and forms a mass. The same magnetic fluids from the earth and iron attract it to the large magnet, and the force or intensity is called its weight; but this same attraction can be changed to repulsion from the earth, and the iron made to recede into atmospheric air, and again be attracted back, for iron can be melted and thrown into gas. Every substance that is attracted to, or repelled from the earth, is naturally magnetized.—Every substance in nature has one or the other of these qualities, not excepting even man himself. Every substance then, or thing, upon the earth, as well as man himself, is naturally magnetic.

Iron, which like all other substances, is in a naturally magnetized state when left free to move, is simply attracted to, and falls to the earth, but if by induction, an increased quantity of magnetism is communicated, and then left free, it points to the poles of the earth, one extremity to the north, and the other to the south. So also between individuals. In the common, everyday transactions of life, they sympathize and attract, or become prejudiced and repel, convince or disgust each other in affairs of daily intercourse, which are so common and habitual, that they pass unnoticed; but if we, through the medium of the will, communicate an increased quantity of the magnetic fluids, like the iron, the individual becomes exalted in all his faculties or attributes of mind, and we perceive this principle of attraction and repulsion more clear, and its operations more striking. We allude to that peculiar condition of the system produced by what is called Mesmerism, or Animal Magnetism.

These fluids in the system, in a natural state, are subject to accumulation and diminution, are expended during the day, and accumulated during the night, and that it can be repelled by one individual, and attracted by another, to such an extent beyond the natural condition, as to catalepsy, palsy, or render insensible, the external senses of the body, and thereby create, institute, or make apparent a new sense, which, for the sake of distinction, we term the magnetic sense.

CHAPTER IX.

MAGNETISM, MINIMUM AND MAXIMUM DEGREES OF, BY CON-
VERSATION AND ELOQUENCE—MANIFESTATIONS;
DIFFERENT DEGREES, TEMPERAMENT.

In the ordinary intercourse then, of life, in the communications of one with another, through the medium of the senses, in our progress in the sciences by sympathy and imitation, as well as the original or new combinations by reflection, the effect of one individual upon another to excite, convince, persuade and influence another, is produced by the magnetic fluids, according to the immutable law of the principle of attraction and repulsion. An individual is inclined or persuaded to perform a certain act, or take a certain course of conduct, from the anticipation of its beneficial results, or is deterred from it, or taking the course, from a fear of its consequences. One individual can convince about so many, such a portion of an audience, and prejudice the remainder against him and his subject. Another will convince another portion, and another another, and so on, until all are convinced; but not, however, to the belief of one creed or subject. This depends upon temperaments, which differ from each other by a different arrangement of the constituent elements of the body,

and quantity of nervous fluid. A person of one temperament will have an effect upon a person of another temperament different, and this again upon another, and so on. A methodist, for instance, will convince, from an indiscriminate audience of free thinkers, such a portion; a presbyterian another; an episcopalian a third; the catholic a fourth, and the baptist, and universalist or unitarian the remainder, except some small fractions, whose organs of self-esteem are too large to be *disgraced* by the conviction of the truth of, and assent to any subject.

These conversions of one portion, and non-conversion of the others in society, are governed by the immutable law of magnetic attraction and repulsion, as much so as matter, or the magnetic needle itself. Individuals in society are changing in body and mind momentarily, and he who can not convince to day, may to morrow, and he who can not be convinced this week, may be the next, as the ultimate atoms of our systems are constantly changing as well as mind, so that him that is positive to day, may become negative to morrow, and vice versa, for we find strong intellects operated upon by weak ones, and weak ones by strong ones. Many a strong intellect has resisted for years the whole artillery of the scholastic intellects of the most eloquent and argumentative discourses, but yet have been convinced by an illiterate, weak and feeble speaker, without eloquence or logic, simply from the conditions of both minds being in the right relative capacity to be attracted by one another. Thus then we find that the intellect of man varies in sympathies and prejudices with each other in the natural state, or ordinary business of life, not only with each other, but are constantly changing in their own, to as great a variety and extent as the various combinations of material substances. This natural state of sympathies and prejudices, which is the result of the principle for which we are contending, for

illustration we will term the *minimum*, or naturally magnetized state of the human system, the lowest degree or communicating link in the chain of magnetic phenomena, up to the state or stage where a person can be so filled, affected, or operated upon by another person, as to close up or suspend all his natural sensations and volitions, and create in their stead a new sense, which, for the sake of distinction, we term the *magnetic sense*, and the particular stage in the chain of magnetic phenomena the *maximum* degree of effects; which degree stands the same relation to the minimum stage or link in the chain, that getting drunk does to the "stiverer" who takes his three or four drams a day.

This definition, and these degrees, are more or less arbitrary, as throughout the whole chain, no two individuals are exactly alike, and vary in point of abilities and exaltation, or in brilliancy and profundity. One will excel in one branch, and another in another, and occasionally one will excel in all; but this seldom happens. It will not be denied that there are different degrees of magnetic effect, on a moment's reflection, in the naturally magnetic subject. To deny this, would be to say that all persons were equally operated upon by a certain oration or discourse, which, were it the case, would constitute all on a par, of not only quickness and aptitude of thought and action, but make them equal as to intellectual acquirements. Two persons of different temperaments go to church, for instance: the speaker is endowed with the gift of God, called eloquence.—The one, instead of being interested in the discourse, begins to nod from sleep, and gives no attention, and is not the least affected by the effort; while the other becomes attracted to the speaker, follows him in every idea, marks and feels every gesture, becomes excited, convinced, and retires determined to conform in conduct to his inculcations. How is this? What the rationale? The speaker, by his eye, his gesticulation,

and through the medium of atmospheric air, by his voice, throws the magnetic fluid from himself throughout the room, and some being in the proper condition, receive it by attraction, which produce the same feelings and sentiments in them that this same fluid produced in the speaker; while others, being in a different condition, (positive or negative, as the case may be) repel it, and are not the least affected, or what is more generally the case, become deeply prejudiced against it: thus philosophically sustaining the parable of our Saviour in his similitude of the kingdom of Heaven to the husbandman sowing his seed. Some fell by the way-side, some among thorns, and some upon good ground, and it brought forth in different ratios, according to their faith and will. So also with the spirit of life, or truth, or the magnetic fluids, in every day's intercourse of man with man. It is in proportion to faith, belief, will, that the influence is felt or not. All persons who have been magnetized to the maximum degree, will attest, that so long as they remembered their sensations, the manipulations produced a pleasant aura, or cool sensation like pleasant slight chills. Who is there that has not felt, while listening to an eloquent sermon, oration, or what not, these same pleasant chills or aura? Can we not, then, see that eloquence consists in the speaker's throwing from himself the magnetic fluids upon the audience, and like the seed of the husbandman, some will take root and produce such a yield, and in another such another crop, exactly proportioned to the relative condition of each to effect and become effected? This work will convince about so many, such a portion of mankind, by attraction, and disgust another portion by repulsion, and have no effect upon others, because they have not sufficient faith to begin to read it.

All those who have been magnetized, or put into the maximum state, can at any time throw themselves into that condition by their own will, by looking at a piece

of metal that has been magnetized for that particular purpose. Patrick Henry magnetized by his eloquence the whole American Congress, at the commencement of the revolution, and moulded the majority of their minds, by attraction, into his own patriotic enthusiasm for liberty, and that same speech, then given, will produce, in a degree, the same effects, when read at the present day. Thus much upon the *minimum* degree, or the naturally magnetized effects upon society. Now for the maximum state or stage. If we place ourselves in a position opposite to another individual, and be connected in such a manner as to grasp gently the hands, so that the ball or extremity of the thumbs shall come in contact with his at the same point, with our fingers brought into the centre or inside of his palms, and at the same time look him steadily in the eye, with a fixed determination of the will to throw through them and our eye the magnetic fluids from our system, and if the individual be passive or willing, and attract from us at the same time, with a concentrated energy, until an equilibrium of temperature takes place between us, then raise our right hand slowly, carrying the palm outward, describing a segment of a circle, to the head, so that the index finger shall rest upon the junction of the parietal and frontal bones, and the thumb upon the organ of individuality, and hold it in this manner until an equilibrium of temperature also takes place; then draw it slowly down the right side of the face, over the cheek, to the top of the shoulder, and from thence lightly down along the arm to the thumb again, three times in succession, in the same manner, and then take hold of the thumb with the right hand as before, holding on, and perform the same with the left hand. Then raise both to the head at once, and perform with both together three times, as before, and clasp the thumbs again, as at first, and continue to hold them about the length of time it took to perform these three last manipulations;

then carry them up in the same manner to the top of the shoulders, and hold them there for about the same period, drawing them lightly and slowly down to the thumbs as before; then raise them to the face on a level with the eyes, at one or two inches distance, and hold them in that position three minutes; then slowly draw them within two or three inches of the body to the pit of the stomach, on which press or touch gently the thumbs, while the fingers of each hand rest upon the sides. Hold them here three minutes, and then bring them down again to the thumbs, and clasp them the whole time with a fixed, determined and concentrated will, the individual will close his eyes and fall into the first stage of magnetic sleep, which consists in doing away with natural sight, or catalepsy of the eye. We may then go on with the same, over and over again, or make use of such of them as appear to have the greatest effect. If we now think him to be through the first stage, which can only be known positively by asking the somnambulist himself if he is through, he will either awake and open his eyes, or tell you the truth. If he is not through, and does not awake, he will tell you which manipulations effect him most, and have the best effect to facilitate the operation, as well as give the precise time it will take, to a minute, by the watch,—should it be five hours, which was the case with one subject of mine, about two years since, who told on being asked during that period, forty times, and the several forty periods of time, amounted to a minute, to the five hours. When the subject says he is through with the first sleep, then change your manipulations by putting your thumbs and fingers of each hand, drawn together in the form of a cone, upon veneration, and draw them slowly down to the pit of the stomach, or a little below, (which point at this stage, the subject will point out) in such a manner as to describe a circle, carrying back with the palms turned outward, and thus on, in

this manner, until the subject is rendered incapable of hearing through the ear, and says himself he is through the second stage, which consists in doing away this sense. Again change your manipulations by placing the left hand upon the side of the head, so that the thumb will correspond to the upper part of the organ of caution, while the root of the little finger shall be in contact with destructiveness, while at the same time you place the right hand as before, upon the organ of veneration, and draw it down to the pit of the stomach in such a manner as to describe a semi-circle; continue in this manner until the senses of taste, touch and smell of the right side are catalept'd or palsied; then reversing your hands by placing your right upon the side of the head, and perform the manipulations with the left in the same manner as was done with the right, until the senses, as before mentioned, of that side are palsied or closed up. Your subject is now magnetized, or so affected by your will and manipulations, which are the effect or mere tools or machinery of volition, that he has no natural sensations or volitions. He can neither see, hear, feel, touch, taste or smell, except through his magnetizer.

All the avenues or windows, as it were, to the external world are closed, shut or cut off, while the *vegetative* system and the vital organs perform their office.—All the external senses are by this operation concentrated in one, or a new one is instituted or created, which we term the magnetic sense. A good clairvoyant or subject perfectly magnetized cannot hear even his magnetizer, except he be in contact, and although he cannot see, through or by the eye, can see by the new sense through a solid, as well as before through atmospheric air.

This is the most regular and best course to take the first time, with all who present themselves to be magnetized. But there are those of congenial temperaments,

and whose atoms or proportions of magnetism are so perfectly proportioned to that of the magnetizer, that they will readily become magnetized in a few minutes; while others will take as many hours, while still others will require three or four sittings, on as many different days, as well as others who cannot be made to go into the perfect state at all. But there are none but what can be affected in a greater or less degree, although to himself or the bystanders it does not become sensible without close observation. There is no person but what, if we put our fingers upon the pulse, and *will* to throw directly into the blood or artery the magnetic fluids, but whose pulse can be sensibly increased in fullness, strength, and frequency, from five, to ten or twenty beats in so many minutes, without any appearance of sleep. Sometimes we sit down to magnetize, and after going through the above, in nervous and bilious temperaments, all the sensible feelings produced are a heaviness over the brow, a nervousness, or fidgets in the feet and limbs, with almost constant yawning; but in these partial cases, in a few minutes the patient is as much refreshed as though he had taken hours of common natural sleep. In temperaments of easy influence, like the lymphatic, we need not ask the patient to look at us, neither need we look into his eyes. We can magnetize him by looking at any part of the body, as the finger, and after it is once or more times done, we can do it by the simple will alone without looking at, or touching him, but more of this in the sequel. To return to our perfect state of magnetic sleep as it is termed, the maximum state of effect in the chain of influence. The subject sets erect as in the natural state, breathes as usual, countenance natural, but if asked a question without contact cannot hear. If we now *will* him to raise the right arm, to place it upon his head, to straighten it from the body, to walk across the house and touch a certain

point, and then *will* him to return without a word being spoken, it is performed.

CHAPTER X.

MAGNETISM AS MORE PARTICULARLY APPLIED TO MAN, OR
WHAT IS COMMONLY CALLED ANIMAL MAGNETISM,
CLAIRVOYANCE, CATALEPSY, PALSY, &c.

I magnetized a subject and patient suffering under a spinal neuralgia, in the family of H——n, who said that a certain other person, who took more than common interest in his welfare, had pledged him not to be put into the somnambulic state without his being present.—That day, having a very severe headache he consented to go to sleep, (as we call it) and therefore waived the pledge. After getting into a clairvoyant state, and while I was exciting some of the phrenological organs, he suddenly darted from me and ran rapidly to the top of a long, and high flight of stairs, having no banisters, and beckoned me to come to him. I was taken by such surprise by this act (as the subject had been heretofore in pain and uneasiness when only removed but four or five feet distance,) that I fancied him insane, but on reaching the top of the stairs where he stood, he immediately informed me of the cause. While sitting there below, he saw his friend three or four rods from the door in the road approaching the house, and having promised never to be magnetized when he was absent, he ran to the top of the stairs, and beckoned me to come up and take off the influence before he came in, but said he, “he has now gone, and you need not take it off,” and I led him down again for fear he might fall, to where we were sitting when disturbed. A minute or two after I went to the head of the stairs, the lady of the house hearing a knock at the door, opened it, and the friend made an

inquiry after the health of the person in sleep, and passed on, corroborating what had been said by the subject. Now such was our relative position as to his, any where in the street, at the time of his perceiving his friend, that he must have looked through two lathed and plastered walls, as well as the clapboards on the outside of the building. Of this there can be no mistake. It could not have been otherwise. There can be no prevarication, no escape from the truth as above stated.

I have repeatedly been seated in my office with different clairvoyants when there would be a knock at the door, and not knowing whether it was some one who wished to come in on business, for medical aid, or merely to gratify an idle curiosity, have made enquiry of the clairvoyant, and in nine cases out of ten would tell the fact, what was wanted, as I would learn by opening the door. One of my subjects was so easily effected, or so thoroughly magnetized that on exciting the organ of imitation he would at the same instant of time perform any, and every motion of the muscular system that I willed and did myself. If I revolved one hand over and around the other with the greatest celerity, he would do the same at the same instant, and if I changed with the quickness of thought, from revolving in one direction, to that of the other, he would at the same, instantly change also, so that no perceptible difference between the two could be discovered. If I arose and walked he would do the same; if I walked erect, he would walk erect also; if I walked in a stooped, limping, halting manner, he would do the same; if I writhed or contorted the muscles of the face, cried, laughed, sung, or spoke, he would perform the same, at the same instant of time; if I spoke or made a speech on any subject he would speak the same, use the same modulation of voice, observe the same accent, emphasis and cadence, in a word, he would imitate all, every and the most minute action or motion, not only of myself but of

any other person with whom he was put in communication. I at one time put him in communication with an infant six months old, and he imitated every little motion of the hands and fingers that they usually perform in their cradles at that age. When the babe cried he would cry also. This subject was the best on imitation and some other characteristics, of all that I have magnetized, in not less than two thousand, particularly on time and reading at the top of the head and pit of the stomach. When the weather was good, and that is when it is the best for the electrizing machine, he would at any and at all times when asleep, put his hand to the pit of the stomach and tell correctly the time of day or night, even to a second, and this without he or myself, or any one in communication, looking at a time-piece of any kind. He could appreciate time the best of any I have magnetized out of over two thousand. This subject when well magnetized, would read a common bank bill or any thing else of the size of common bills at the top of the head or pit of the stomach, while in the somnambulist state, with the eyes securely bandaged, so as to preclude the possibility of seeing. I have never had but four among those I have affected, that could read in this manner. Clairvoyants all vary in their capacity of reading and travelling as it is called. They differ also in many other respects and in their own capacity at different times. This depends upon a variety of causes and contingencies, such as the temperament of the magnetizer and magnetized, of their health, their relative amounts of electricity, the condition of the atmosphere, and on the extent as well as manner of their being magnetized. Much has been said upon clairvoyance or second-sightedness. While some believe that magnetism or electricity, which we have shown to be light, is thrown by repulsion and received by attraction into their systems, so as to illuminate the organ of mind in such a manner that they are increased and exalted in every

faculty by a superabundance of this principle ; others believe that it is the union of two minds, and by this means is doubled in perception and capacity ; while others believe that it is a process which, in a mysterious manner so operates as to separate soul and body, mortality from immortality, and that when perfected, we converse with the soul direct, isolated and detached as it were, from the dross of corruption—the body. We confess from our present knowledge, from the great difficulty in obtaining and keeping in employ clairvoyants, from the ignorance and derision of a large share of community upon the subject, that it is still enshrouded in mystery, and perhaps ever will be. All we know is, that something is imparted from us to them, which weakens us, and strengthens them, and that in proportion to the quantity imparted, or their becoming effected they become exalted in mind and soul. Subjects describe their magnetic vision as long as they can remember, as a white silvery gleaming light, like that from the reflected rays in a frosty morning from a field of blades of grass. When we move our hands over their heads, they describe it like bands or streams of white silvery light. When we ask them to walk with us in clairvoyance and bid them examine, they frequently excuse themselves, by saying it is too dark, but on having a few passes repeated, they will go on as desired, expressing themselves as able to see and tell correctly. Thus it appears to be light—the magnetic fluids. Those who can be so effected as to not be able to see, hear, touch, taste or smell, except through the magnetizer are at all times good clairvoyants and may be depended upon ; whereas those that have one of these senses remaining entire are poor ones, will sometimes tell the truth, and sometimes the contrary, and are therefore never to be depended upon. Although they will sometimes break out and astonish all with their lucidity, with their almost miraculous powers in travelling or giving certain

facts infinitely beyond the comprehension of mortality, perhaps the next breath they will come wide of the truth. It is this, their imperfect magnetic sleep, owing to various collateral circumstances as before mentioned, together with the most prominent one, of the ignorance or rather want of knowledge of the magnetizer upon the subject, which brings clairvoyance into disrepute and causes it to be disbelieved by the multitude, and even questioned by those who float upon the surface of the science, or pretend to be magnetizers. Magnetism is governed by the law of attraction and repulsion, is controlled by the will alone of both the magnetizer and the magnetized. Hence a subject magnetized is attracted or repelled by every person within a certain sphere of influence, such as throughout a common sized public lecture room. Those who believe in the science, attract, while those who disbelieve repel the magnetized. When we cataleps an arm, many present of an audience have the curiosity to convince themselves by handling it, and the tendency of the magnetic fluids to an equilibrium, like what has hitherto been termed caloric, abstracts it, and is transfused to the officious handler, and the clairvoyant becomes incapable of correct sight, and fails on that account. Therefore a clairvoyant will never, from this and other causes, such as the exhausted air, and too large proportion of carbonic acid floating in the room, perform so perfectly in a large audience as in a small familiar circle. They seldom long, in a large audience point to the positive pole of truth, but vacillate and turn to the negative one of error. Whoever has amused himself by playing with a dozen small compass needles in a sufficient distance, or sphere of influence to effect each other, can form some idea of, and appreciate the embarrassment under which a magnetizer labors in attempting to prove the truth of clairvoyance under these circumstances. Many times a whole audience will not only be crowded into a small room, but

are noisy disbelievers, call it all a humbug, distract the mind of the magnetizer, and added to these, absolutely outwill the magnetizer, in their wish to bring odium upon the science, and carry their points and gain their ends. In union or attraction there is strength, but in its opposite, weakness. There was a time in Ireland when there was but one individual *will*, to will the repeal of the union, and it was of course impotent for effect, but that individual attracted others and so on until now, the whole concentrated will of the Island is for repeal, and if they stand firm, it must and will come; it forms the omnipotence of the public sentiment of Ireland. When the patient, or subject rather is magnetized, the several external senses catalepted, or palsied, and the new one instituted, the whole mind becomes so exalted and enlarged, as to at least break over the circumscribed boundaries of mortality, and presents us with phenomena truly surprising, astonishing, wonderful, and full of interest. A good clairvoyant well magnetized, will not only look through a solid as well as atmospheric air, but the sight is lengthened immeasurably beyond our comprehension. He will look into, and through the system, tell the location of disease, describe the feelings, thoughts, the appearance of the part effected, the cause, and if curable the most appropriate remedy, correctly, even better than the patient can describe his own feelings, and call to mind transactions in life that transpired years before. In a word, time, space, texture, distance, magnitude, locality, and all the other attributes of mortality, are annihilated.

After a lecture in a certain village in this state, for the benefit of a few select friends, on returning to my room, I magnetized my subject. A young man of the party in company, had left the room unperceived by me, and the clairvoyant broke out in a digression, saying that he was then drinking a glass of beer at the bar. I desired a gentleman present to step to the bar and test

the truth of the assertion. He immediately returned with the young man who owned the fact to his disgrace, as he was a te-totaller and this was the first he had taken in our route, which was a month in duration.

Now such was the situation of the bar relative to the room we occupied, that the clairvoyant must have looked again through two lathed and plastered walls, as a hall intervened between the bar-room and the one we occupied, and both doors were closed. It was very unlikely to be guessed at, or anticipated, for it was the first he had drank in the journey.

In our route I chanced to magnetize a man so that he became a clairvoyant, at the village of S—e, who had an affected spine. I assured him if he would accompany us I would cure him. He accordingly became one of the party, and I magnetized him as often as twice a day for thirty days, at the end of which he was perfectly cured and had gained the first twenty days a pound of flesh per day. This subject read with his eyes bandaged, at the pit of the stomach, at one time a handbill, but never read afterwards. He was a good clairvoyant, could at all times when well magnetized describe correctly the feelings of a patient better than he could (in the generality of cases) himself, give the cause, duration of the disease, prognosticate and prescribe, if curable. He never failed to tell when in communication, indiscriminately from an audience, to what political party they belonged correctly, which frequently amounted to a dozen during one lecture, and all perfect strangers to both him and me. He also told their business and occupations in life, and never failed to point out ministers of the gospel, (the number examined was five) and to what sect or denomination they belonged. The day before he left us while thoroughly magnetized, in a high state of clairvoyance, I asked him if he could not tell me something new about magnetism; if there was no better manner to induce sleep. He said there was

no better method, that we must concentrate and *will* strong. I asked him what was the cause. He replied it was electricity and that was life itself. I then asked him if there were any more degrees of sleep than we then practiced, that a subject might be put into. After a few moments, said he, if you lay your thumbs on veneration, hold them there a minute, then draw them down each side of the head, neck, shoulders, and along the arms to the thumbs, and repeat six times; after which hold them just below the ear against the great arteries about the same length of time that you are performing the manipulations, concentrate well, and *will* strong, "I can see into Heaven." I immediately commenced and added as directed, this degree of magnetic sleep to the three others already produced. As soon as completed, I *willed* him to Heaven, and never shall I forget the scene that ensued. He raised his head steadily upwards, muttering unearthly and sepulchral sounds, seemingly conversing with, (to us,) invisible spirits, became convulsed, shed tears profusely, was choaked and troubled for breath; but by great effort cried out, Doctor, don't, don't. Don't what, said I. Don't will me to Heaven; "they don't like to have me go there." "O! such a sight!" here he cried aloud, sobbed, and became so convulsed that I feared the consequences, and took off the last influence. After waiting a few minutes and finding him uninjured except very tired, I affected him as before, and willed him again to Heaven. He became affected as before, panted for breath, trembled, sobbed whispered, and gesticulated as though in the most earnest conversation but at length became more calm, and after a few minutes said, "thanks be to God Doctor, my friends are here, some of whom I never believed would have got here." He then broke out to exhort us to become better, to live better lives or we should never get there, and said he was determined to live a better life himself, and begged me to let him return, and

that when I returned if I came through his village, he would consent to let me will him as strongly as possible again to Heaven. He was so affected and weak, and fearing consequences should I persist, I took off the influence and awakened him. When awakened he saw that some eyes were still wet with tears, and enquired the cause; but could not remember a word that had passed. He was very serious all day, frequently sighed, and repeatedly enquired what made him feel so weak and bad. The next morning he took the stage for home. In two weeks I returned that way, called on him, and in presence of some five or six persons put him again into the same state as before, and took him at his offer and *willed* him as strongly as possible again to Heaven. His appearance was exactly almost as before, and such was his look, exaltation, and description of Heaven, with his exhortation to the company present, some of whom might be called emphatically "hard cases," that they will never forget it to the day of their deaths. I will add that it produced upon all a greater impression of the necessity of living correctly, than the most eloquent sermon from the pulpit.

On my return, I also put into the same state and will-ed him to Heaven, a man affected with palsy who had been for years a member of the church of —— in good standing. His appearance and description was almost exactly the same as above, and constantly begged me to return as "they did not want him there."

I again put another gentleman into the same condition, who was a most exemplary member of the church of a different denomination of christians, who begged so fervently to be brought back and awakened, that at the almost peremptory solicitation of friends, I was obliged to take off the influence.

In the winter of 1843, I magnetized C——o who had been partially twice magnetized previous. I magnetized him systematically, and he became insensible to all

external objects through the natural or ordinary avenues, and was therefore a good clairvoyant. I sat down and asked him to travel with me to my house, which he described externally, yard, and front steps. I told him to count them and tell how many there were. He replied, four. I thought there were but three, and told him to look again and be particular. He said there were four, and could not be beat out of it. I then led him inside, and asked him who were there. He said there were three ladies and a little girl whom he described, but made out one more than composed my family of adults at the time; and I told him to look sharp and be particular again, when he replied that one of the ladies had her "things on" and was going home; "there said he," she has gone. I told him to follow her and see where she went, and find out who she was. He followed her up Woodward Avenue to the corner of Grand River street, and along that street to the next corner, to a house which he said she had entered. I bade him go in and ask who lived there which he did, and gave the name as Mrs. S——l. I then brought him back, and took off the influence. To my surprise and astonishment, on arriving at home, I found as near the time as could be ascertained that evening, that the lady described had been there, and that he was right about the number of steps, which proves one fact, that it is not the reflection of the magnetizer's mind, but that they actually do see for themselves. The next evening a friend of mine took him again to my house, when he described the furniture as well as I could have done myself, which again goes to corroborate their actual sight instead of sympathetic reflection, as the friend who led him had never been but once in my house in his life and could remember but little the appearance of the furniture. It is proper to state that the clairvoyant had been in the city but a short time, was a stranger to me, and had never been at my house.

The next day, a gentleman of the city wished me to take him to his house, and examine his wife, who had been some time ill. Accordingly we called, and found a small circle, consisting of two ladies, two gentlemen and two children. I made no introduction, but in a few minutes put him into a magnetic state. Immediately after he was magnetized, a young lady who was absent, entered the room and made one of the number. I then asked him how many persons were present, which he told correctly; then seated the lady near him, put him in communication simply by her touching his hands, without saying one word by the way of introduction, directed her to ask if she was unwell, and if so, to have him describe her symptoms, and prescribe the remedy. After sitting a few minutes as if reflecting, he raised the right hand in a slow manner, so as to describe a semi-circle, by carrying it backwards and raising it as high as the length of the arm would permit, (which was afterwards always his manner) this being the first patient he ever examined, and brought it upon the head, with his thumb upon individuality, and fingers of the right hand resting upon benevolence, while he applied the point of the left thumb to the tips of the left fingers in succession, one after the other; then examined the pulse, changed hands, applied the left to the forehead, and the right to the pulse and fingers as before. As soon as this was accomplished, he told her her symptoms and feelings, where the diseases were located, the cause, and prescribed for the cure, for which he recommended some roots. The lady asked him where they could be found. Said he, "dont you see them there," at a certain piece of woods, (only four miles off) as though they were present. I told her to say that she could not see them, and to ask him if they could not be procured in some of the drug shops of the city. He looked into them from where they were sitting, and said no; but said there were so many in such a garden, and

one root in such an one, "dost you see it?" as though present. The husband went to two of the gardens next day, and found he was correct, and as it was during winter, and he a stranger, and had never lived here in the summer, it excited astonishment that he should be so correct. The other gardens mentioned he never examined, as he found sufficient for use in the others. The lady was through, and the husband took him by the hand, and asked him how many children he had. He replied instantler, three, but the next moment corrected himself, and said "two; you had three, but one is dead!" When did it die? About a year since. Was it a boy or girl? It was a girl, dont you see there? Where? In heaven at meeting; dont you see her? What is she doing? She is singing and praising God before the Throne. Who is on the Throne? God, dont you see, with Moses on one side and Jacob on the other. Where is Jesus Christ? He is on the Throne; Christ is God. Where is God the Father? He is never seen; he is in the fourth Heaven, *concentrating* all on Christ. He was then asked about Hell, which he described as a place out of the immediate presence of the Almighty, where there was no pleasure or happiness, but pain, misery, want and discontent. He was then put into communication with the other gentleman, whom he examined, told his feelings and symptoms exactly; located his pains, which were rheumatic, and prescribed for *their* cure. I then simply put the point of my fore finger upon the organ of veneration, and he immediately fell upon his knees, and made, in a full clear voice, one of the best short prayers I ever heard, with language that would do credit to our best divines, and produced a solemn effect upon all. I then suddenly withdrew my finger, and he stopped in the middle of a word. I then touched the organ of tune, and he sung two or three verses of an appropriate hymn. The organ of locomotion was now excited, and he sprung to his feet. I

then set him a chair, and willed him to set down, mesmerized the organs, took off the general influence, and he awoke. It is proper to state that this subject is a simple, honest, illiterate young man, a hard case, and quite often throws out expletives not exactly compatible with the commandments, was a stranger to all present, had never seen them before, does not remember a word that has been said, or what has transpired; was loth to be put in sleep, and does not believe in magnetism. He is of the lymphatic temperament, and when well magnetized, has never failed to tell the truth when led by one that could concentrate, as far as could be ascertained.

A few evenings after, a gentleman from Cuba called at my office, and desired to lead my clairvoyant to that island, to ascertain the health of his family, and when they would leave for New York, as he had been for some time expecting them. I immediately threw him into a clairvoyant state, and he commenced, having no difficulty in getting there. After landing, the gentleman desired him to ride with him about four miles, to the plantation; but he utterly refused, and said he would walk. The gentleman pressed him to ride; he again refused, and became quite vexed that he should want him to ride one of those little, ugly, long eared animals, (mules) and could not be prevailed on, and walked. He described the plantation, trees, houses and scenery, expressed a lively surprise to see so many large piles of bags of coffee; gave the style of building their houses high, with no chamber floors, to let the heat escape; complained of the great heat of the climate, &c., all of which, together with the number, ages, sex and health of the family, the gentleman declared to be true; not one word of which was suggested by the leader. The next evening, the same gentleman took him across the Atlantic to Paris, to the residence of his son, and to the Place Vendome, where he described the pillar erected

by Bonaparte, from the cannon taken in his victorious battles.

During one of the evenings of 1843, a small party of ten or twelve gentlemen were assembled at my office, to witness experiments in magnetism. My clairvoyant was in a magnetic sleep, when a friend came in, accompanied by a stranger to the whole company. After sitting awhile, and witnessing some experiments, the friend informed me that the stranger would like to lead the subject. I immediately put them in communication. He then asked him if he would travel with him to the city of New York. He consented. They started, and travelled by the usual route and manner, by steamboat. Having arrived, he became much elated with the appearance of the city, the Astor House, City Hall, and then went on to the gentleman's dwelling, the exterior of which, and the adjacent buildings, he described correctly, and then went to the front door, read the gentleman's name on the plate, rang the bell, a servant opened the door, and they were ushered in. After describing the hall, some of the rooms, furniture, and so forth, he came to the piano forte, and said there was a lady playing upon it, whom he described, told the color of her hair, eyes, complexion and dress. The gentleman told him to promenade with her. He whispered something to himself, and then replied that she refused to walk with him. He then told him to sit down and observe her walk while he promenaded with her. He immediately exclaimed that she could not walk, that she was lame, had a stiff leg. He told him to look sharp and examine it closely. He said it was a wooden—a corked leg; all of which the gentleman, after giving his name and residence, affirmed to be true.

A gentleman of property, character, and good standing in society, called at my office in company with five or six friends, (members of the Legislature) to test the truth of animal magnetism. I proposed to put my sub-

ject to sleep. They said they wished to test it upon their own systems, and selected this gentleman as the subject. We sat down as usual, and in a few minutes his eyes became red, suffused, the lids began to tremble, and at length closed. After making a few more passes in the usual manner, believing him to be so far advanced as to be unable to open them, I put my fingers upon causality, comparison and time, and asked him how long it would take to put him through the first stage of sleep. He replied five hours. The great anxiety of his friends induced me to go on and see how it would terminate. I therefore continued to manipulate him for two hours. I then awaked him, and in the evening recommenced, and continued until he was through, which took five hours to a minute. Of this there could be no mistake, as two or three of the company held their watches, and noted the time, as I interrogated him every half hour, fifteen, twenty, ten and five minutes, how long it would take from each period asked, during the whole time, which he shortened down each time from the other, so that all the parts between the interrogations, added together, made in the aggregate, to a minute, five hours; and his appreciation was such that he told correctly three minutes before the time expired. Now whether he was actually through or not, is immaterial; the great interest in this case, as well as others of a similar nature, consists in his being able, without looking at some time piece, to be so correct, not only from point to point, but to the whole period of time. This gentleman being a hard subject, (all nervous-bilious) I did not again attempt to magnetise him further. Some days after this, the same gentleman called with a friend, to be examined for disease. He was put in communication with my subject, and after describing correctly his feelings and cause of the disease, he began on the cure, and first recommended him to take some pills. I told him to enquire what kind of pills, which he did. He immediate-

ly broke out and said he must take "such a pill," made and kept by Doctor —, at Milwaukie. Said he, pointing in that direction, "dont you see him there, there he is; a little small man, with a fur cap on, and large black whiskers; get them, and they will cure you." The company and myself had a hearty laugh on his length of vision, in modestly looking over across the Peninsula and Lake Michigan, into a drug shop at Milwaukie for medicine, and after a little further examination of his family and home, which he described correctly as the gentleman stated, I severed the communication, and took off the sleep. I then asked him if he had ever been at Milwaukie. He said no. I asked him if he was acquainted with any one living there, and he said he was not acquainted with any one, and here the matter ended as I supposed, and was by me forgotten among the great multiplicity of my daily clairvoyances; but these gentlemen having a great curiosity to know whether there was such a man residing there as described, wrote to an acquaintance and received for answer that there was such a physician and druggist, by that name, that the description was correct, and that he kept the particular pills, and whether he got and took them I did not learn, as the gentlemen live in the interior of the State, distant eighty miles. We were all satisfied that he had never been, or was acquainted with any one residing there. I had forgotten to mention that this gentleman was still so doubting upon magnetism, that I told him that if he would sit a few minutes, I would give him a demonstration upon his own system. Accordingly he sat down, and I commenced to make passes, and in about twenty minutes I put him through the first sleep or stage. I then awakened him, and told him to put his two middle fingers together. I then made five or six passes at them and told him to separate them if he could. He tried, and tried, and tried again, but could not separate them, they remained fast. I then desired him to

stand up, and nailed him to the floor so that he could not move. After liberating him from this position, I pointed my fore finger at him, and *willed* him to come to me, or rather attempted to attract him to me. He resisted with his whole energy, and was encouraged by those present so to do, to carry their points of disbelief, but I attracted him inch by inch, not only across the floor, but out of the room into the hall, and could have made him follow me about the city. But this convinced him of the truth of animal magnetism, as he informed me last summer that his extreme resistance lamed his whole muscular system for three months.

Shortly after this case, an other of the party led my clairvoyant to a village west the extent of the railroad. He had never rode in the cars before. They stopped and got out at the usual stopping places, took occasionally a glass of beer, or hot cup of coffee, read the signs correctly, made other observations as they went along, and the subject appeared as much delighted with the ride and country, as would have been anticipated had his mortal frame accompanied his spirit. At length they arrived at the residence of the gentleman, and they alighted, jumped into a post-coach and landed at the door of the gentleman's office which he described to his satisfaction, and more or less minutely, such as the library, stove, &c., and among the rest which is not exactly furniture for a law office, ten or a dozen barrels of flour. He then made an effort to take him to his dwelling, but owing to the want of concentration or some other cause had some difficulty, at length he described the exterior, opened the door and walked in; after describing the furniture he asked him if he saw any one in the room. He replied that there was a lady sitting by the cradle rocking it with one hand and reading a newspaper, and that the other child was asleep on the floor just beyond the cradle, the ages and sexes of which as well as the lady he described to a tittle. I suggested

to have him ask what newspaper she was reading, which he did, and he replied that she was reading a newspaper printed in this city. I then told him to ask him what particular matter she was reading, and he instantly replied that it was Mr. MacLeod's speech, which was rather musical, and had been delivered in the Representative Hall, a few days previous. He then led him back in the same manner as before, stopped, drank, eat, and conversed on all they saw, as when they went out, read the signs correctly and landed at the city, and after exciting some of the phrenological organs, I took off the influence and he was awakened. I thought no more of this case as it had ceased, from my every day habit of proving clairvoyance, to excite that interest that to those who had seen less would have done, and did do.

A few days after this, the gentleman in writing to his lady facetiously said, "you must keep yourself correct," for Bagg's clairvoyant can tell at any time what your deportment is, and what you are about, and then mentioned what he said as above. The lady in her next, replied in answer that it was true, that she was reading at, as near as could be ascertained, the precise time, in the Free Press, a newspaper printed in this city, the particular speech mentioned, and that the particular position of herself and children at the time, was as described. I have the gentleman's letter before me on the subject. This case is valuable in again corroborating the principle that they actually see for themselves, and that it is not simply a reflection of the imagination and memory of the one who leads or is associated.

About this time I received an invitation to lecture on the subject of animal magnetism at a village some twenty miles distant. I accordingly sent on my bills, and when the day came, started for the purpose, and on my route called at the half-way public house, to feed and get some refreshments ourselves. As soon as we entered, the gentleman of the house limped along, and

pointed up to the wall, and said, it is Doctor Bagg, I suppose. You are going to M——s to give a lecture on magnetism. I believe it's all a humbug, but if you could cure my rheumatism, "I would give you any thing." I have have had it for three months; have not been able to go to Detroit this winter. I have taken almost every thing and can't get help, but I believe it's a humbug, and have no faith in it. Aware of the prejudices of the people, and that if I could not essentially help him, I had better let him alone. I looked at him scrutinizingly to discover whether I thought I could affect him, and made up my mind I could. I was determined however, not to touch him unless I was sure I could bring him so under its influence as to *tell* for the science, for in nine cases out of ten, they will want you to try them, and when they find they are about to be influenced, will exercise all their energies to counteract its influence, and then go about retailing slander and abuse without measure. The bystanders will also generally make all the diversion possible, from the concentration of both, by winks, nods, noise, laughter and derision under the general license of ignorance and impudence, to make you fail if possible. I found on observation however, that he was inclining to corpulency; was of the nervous-sanguine temperament, and having the rheumatism, together with the peculiar state of the weather which favored me, I made up my judgment at once, that I could put him to sleep. I told him in a careless, familiar kind of manner, if he would sit down I would see if I could relieve him. That it was a good way to effect the general system a little first, and then draw it throughout the limbs. I then began by putting my hands upon his head, so that my thumbs corresponded to individuality, while my index finders lay on the organ of benevolence, and with a concentrated energy, and firm *will*, in two minutes, without touching any other part or making a pass, his eyes closed, and he began

to make deep inspirations and show symptoms of deep sleep. I then made passes as usual, and magnetized him for twenty minutes by the watch precisely. While in this situation, the bar-room (although in the country) became full. The stage stopped, every door was opened and his family were peeping in to see what was going on. While in this situation, I made the necessary passes to cure him of his rheumatism, and then took off the influence. I then asked him how he felt; he said he felt rather curiously; said it "was kind of strange." I asked him to put the points of the middle fingers of each hand together. I then made a single pass and told him to separate them if he could. He tried for two or three minutes, but in vain, and gave it up. I then asked him to rise and walk about the floor. He did so. I asked where his rheumatism was. He walked about and around the room without a limp or feel of it, ejaculating, is it possible? "gentlemen, it is gone," strange! (kicking and throwing out his limbs,) I can feel none of it. I am as well as ever; curious! strange! I then asked him to stand still, made a pass at his feet, and asked him to walk. He was immovable; he could not stir. His volition was in me; he was under my control. I then made a reverse pass and he was liberated; he could walk. I then desired him to put the index finger of the right hand upon his nose, and then made a most powerful pass at the finger, which not only stuck it to his nose, but put him to sleep and knocked him completely over backwards, which would have done him injury had I not caught him when near the floor, in the fall. I then sat him up like an old fashioned clock, as he was perfectly and universally catalepted (as we term it,) all by one pass with a *will* which concentrated all my energies. I then willed to take off the influence except to keep the finger to the nose. When awake and reflecting upon all that had so quickly transpired, standing with his finger so attached to his nose that he could not separate it,

with his rheumatism cured; and standing also not as the living monument of humbuggery, but as the living witness of the effects of magnetism, not only on disease, but the actions, volitions, and sensations of man, he broke out with emotion and cried like a child. I then took off the influence, asked him what was to pay, and ordered my horse. He replied by asking my charges. We parted even, and we went our way, and arrived at the village in time for our lecture, which was given at the Court House. Nothing unusual transpired; there were but few present. After I had shown by my clairvoyant, phrenology and the general effects of magnetism upon him, I found in the audience six or eight little boys, from five to twelve years old, that had been somewhat previously affected with magnetism. I then with the consent of their friends, stuck all their fingers together, each with each, and all together, and with my finger attracted them thus attached as high as they could reach, and then as low as the floor. I then dragged them by the attraction of the finger all about the room. I had almost forgotten to mention that during my lecture a gentleman wished to lead my subject in clairvoyance to his house. I accordingly put them in communication and proceeded to take him to his house. After describing the exterior, he took him inside and went through with the general description of the most prominent articles of furniture and so forth, and among the rest said there were two persons in the house, a lady and gentleman, and said they were both sick, told what ailed the lady first and then the gentleman, and described their looks, dress and appearance. After he had got through, and returned, I called on him to state to the audience whether it was correct. He assured them that it was all correct except the man, that his wife as they knew was well described, that she was unwell, but that when he left home there was no man in the house, and he presumed there was none there then. This cre-

ated a smile upon the audience, and was rather against my clairvoyant. The lecture closed, and we repaired to the public house and staid through the night. Early next morning the gentleman called, wished me to go over to his house and let my clairvoyant examine his lady for her disease, being full in the faith, for on returning home from the lecture, to his surprise he found his wife's brother, had soon after he left for the lecture arrived, and that he had a swelled neck as the clairvoyant described, and was the gentleman mentioned. We accompanied him and examined them both, and he described correctly all the symptoms and feelings of both, told the cause and prescribed for the cures. This case also goes to corroborate the fact that they see themselves, as this gentleman did not believe there was any person but his lady in the house at the time.

A few days after this, in the morning after a lecture over night, in another village distant some twenty miles, a respectable physician of reputation as a practitioner, called on me to consult on himself in respect to a harassing cough, which was very troublesome. Knowing that he placed no confidence in magnetic remedies, I prescribed bleeding, and took twenty ounces from the arm, after which I prepared to let my subject examine him. He objected, saying he had no faith, but his lady *had*, and having a curiosity to see me excite the manifestations of mind, I put him into the magnetic state, and put him first in communication with the Doctor and told him to look at his lungs and see what state they were in. Shortly after, just having been bled, he began to vomit and to elude throwing the ejections into the lap of the clairvoyant, he turned his head to the right side, at the same instant of time the clairvoyant from direct attraction vomited also and turned his head to the right to elude the Doctor's, when one heaved, the other did also, to an instant of time. The Doctor groaned and throwed up again, so did the subject, and would have

continued so to do, as long as they were in connection, and the Doctor had continued sick, but I broke up the connection, excited the organ of alimentiveness and he was immediately relieved and the poles of the stomach restored. After chewing aloes, and various other drugs behind the back of my subject at the distance of six or eight feet which he at once detected, pronounced, and desired me to spit out, I awoke him, and we left. The Doctor however became a convert from that transaction, and moment, and is now engaged in investigating the subject.

In the spring of 1843, a young man called on and wished me to cure him. I prescribed for, and gave him some medicines for which he paid me two dollars.—Some six or eight days after, my indoor sign was pulled off and thrown across the hall. I suspected a young man strongly, almost amounting to certainty, who had previously pulled down and carried off my out door one, six months before. About a fortnight after this while my clairvoyant was in the magnetic state I asked him who it was that took it down. He reflected for a few minutes and then said, "there he is, walking on the bank of the river, (a half mile distant and through two thick brick walls,) don't you see him?" Yes, said I, but I have forgotten his name, will you mention it? He took his forefinger, which is always his manner, and wrote in the palm of my hand, and then pronounced it L——B. Are you sure that this is the man? Yes, he called on you to be cured, of you know what, and gave you an *Oakland County* two dollar bill and you gave him some medicine which almost cured him, and he came here five or six times and you happened to be out, and the last time he came, he was mad and took hold of your sign, tore it off and throwed it across the hall saying, "damn you," you are never at home, and went to another Doctor. I could not the first moment recollect the bill and asked him if it was not a three dollar one,

that I had taken. No, said he, it was a torn two dollar Oakland County bill. I then distinctly remembered the bill, and the man, just as he said it was, an old torn, almost worn out one.

The nature of this case was such that no one on earth but the patient and myself knew any thing about it; and his having told correctly the name, and described so perfectly the bill, as well as hinted at the nature of the disease, while I suspected another individual, could not but impress on my mind the conviction that all he said was true, and adds further testimony to prove that they see of themselves, instead of being the mere echo of the mind of the one in connection. I will but add that I know that he was not, nor is at present acquainted with the individual, and when awaked said he had never heard of such a person, and does not remember one word that he has said upon the subject, and appears astonished at the recital.

In the fall of 1842, while lecturing on magnetism in a certain village in this state, not quite one hundred miles distant, two or three physicians of the place informed me that they had a standing patient, that they, as well as other neighboring ones, had attended for years without being able to restore him, and that if I would cure him they would all believe in animal magnetism and give the cause an ardent support. I immediately repaired to the house, got the history of the case, examined the patient, found that some three years previous, while in good health, he was attacked with a paralytic fit, which terminated in a palsy of one side, that remedies had been administered in vain, that he had only so far recovered his sensation as to be able to feel, but not volition so as to be able to walk, and that about eighteen months since he was seized with what they termed the shaking palsy, and at this time could help himself but little better than an infant. He could neither raise nor hold up either leg or arm. That his

wife was obliged to raise him up in bed, slip him off into a chair and draw him to the fire and back again to bed, raise him up, back him against it, set him down and wheel him round upon his back; in short, he was almost or quite helpless. I found on looking him in the face, that he would fall into a most singular and an apparently foolish fit of laughter, although he had been a man of good sense and judgement, and belonged to the Methodist society of christians.

Believing that this disease consisted in some obstruction of the nervous fluid from the brain, or in an unequal distribution of it from the brain; that some organs were magnetized while others were destitute of a sufficient quantity of the magnetic fluids, and that the look of any one into the face excited this already over excited organ into extreme action, and thereby produced the immoderate laughter, I laid my finger on the organ of mirth (below the malor bone, where I locate it) in the face, and he immediately bursted into a most violent fit of laughter, which convulsed his whole frame. I then placed my finger on veneration, and he was instantly as sober as a deacon, and as dignified as a judge upon the bench. Next I touched combativeness, and he struck at me with some force, although when not excited, he could not raise the arm. Other organs were now tested with less effect, but I was convinced that if I could thoroughly magnetize him, and thereby produce an equilibrium in the organs of mind, and restore the poles from the brain upon all the organs, I could cure him, and so expressed myself to his estimable but desponding lady. It being near evening, on which I had advertised to lecture, I proposed to call immediately after, and make an attempt to thoroughly magnetize him, and let him lie all night in the sleep.

After the lecture, I again repaired to the spot, and commenced operations. Within a few minutes, three physicians made their appearance; others came in one

after another, until the house was filled to a "jam." I soon found he was through the first sleep, and I observed to his lady, that his eyes were closed so that he could not open them. One of the physicians behind me, in the true anti-magnetic spirit, characteristic of the people of those times, spoke out audibly, and said "no wonder he can not open them, he is so tired." I made no reply but went on with my manipulations for the next sleep, (the ear) as heretofore mentioned (chap. ix, p. 2d). I soon believed him through this also, and whispered his wife to call him by name to find whether he could hear. She called him: he answered not. I said louder: he spoke not. Louder, said I, and she repeated at the top of her voice, and yet he was silent and as mute as a statue. I then turned around and said, in rather a sarcastic mood and manner, "he's so tired he can not *hear*, and soon he will be so tired he can not feel, taste or smell." I then changed my manipulations for the other senses, as described further, (chap. ix, p. 2d) and soon the remaining senses went by the board, one after the other, and were extinguished or suspended. He sat erect in his chair, breathed natural, pulse was full, a little quickened, but firm, his countenance was sedate, and his silly laugh had vanished and gone. I then took his lady aside, and whispered her to get some vinegar, sugar, allspice, pepper and other things she could find that had a well marked taste. I turned my back, and at the distance of eight or ten feet, filled my mouth with vinegar. He instantly spoke, and said, in an angry tone and manner, spit out that vinegar, and shuddered, as it was sharp and made me shudder. After rinsing my mouth, I put in a bit of loaf sugar. That's good, said he. What is it? said I. It's sugar. What kind? Loaf sugar. I then tried the various other things, in the order mentioned above, and he as readily told correctly the whole. Having got through with these, said I, you say he can not hold up his arms or legs, do you? Yes.

How long has he been in this condition? Eighteen months or two years. Poor man, said I, can not hold up his arms or legs! I immediately took hold of the hand of the left arm, and raised it to a point at right angles with the body, and gave it three rapid passes the whole length, from the shoulder to the fingers, and willed it to be catalept'd and remain in that position. I then served the right one in the same manner, and both remained fixed. I next raised up one leg at nearly right angles, and in the same manner, and with the same celerity, fixed that as well as the other, in the same condition, and then folded my arms and promenaded the room with an air of triumph. The reader can imagine that his attitude and appearance must have been somewhat ludicrous, but I was determined to show the multitude, as well as the "plow-jogging" sons of Esculapius, that magnetism, by the will of another, could hold up both his legs as well as arms. After remaining in this position some ten or twelve minutes—a monument of magnetism, the house perfectly still, all in breathless astonishment, his wife enquired how long I was going to let him remain so, if it would not weaken. I assured her it would not, but on the contrary, strengthen him; but in a few minutes more, as it was getting late, made two or three reverse passes towards each, at the distance of six or eight feet, and arm after arm, and leg after leg, dropped and resumed their natural positions. I now helped him to bed, willed him to sleep until I should call and awake him in the morning. Next morning at eight, I called and took off the influence, when he expressed himself much better, appeared refreshed, more natural, and laughed none. I now demesmerized the organs of mirth and combativeness, and left him promising to return as before after the lecture, and magnetize him again for the night, which I performed. I stopped at this village about a week, put him into the magnetic state every night, and awaked and catalepted

his limbs every morning, during which he so far recovered as to be able, with the assistance of a person by his side to lean upon, to walk up a common flight of steep out-door stairs, to my lecture room, where I operated upon him before the audience, in company with five or six others I had put into the somnambulic state since my arrival. The doctors gave it up, were convinced, and had in two of their families, one in each, put into the magnetic state. I then left for the next village, distant some twelve miles, and he followed me, and took lodgings, and staid as long as I remained in that village. I daily operated upon him as well as night, at the lecture room before the audience. With a look, or with the will, I could palsy his tongue or any part of his muscular system. He continued to gain as long as I saw him. I have never heard from him since, except on my return, I stopped over the sabbath at the village again where he resided, and that night, between the two villages, three trunks were cut off and stolen from the stage, and they came to me and desired I should put my subject into the clairvoyant state, and try to find out who stole them, and where they could be found. I did so. but he could see nothing, although generally he was an old one. I then called on this subject, but a half mile distant from the public house where we stopped, put him into a clairvoyant state, and told him to examine the road and see who stole the trunks. In a few minutes he described them, told where they were taken off, by whom, and where they could be found—in a certain field; described the men, and said they were that very moment drinking whiskey in a certain distillery, which he described and located. A couple of gentlemen, from this description, started and proceeded to the spot where he said they were, and they returned in the afternoon, saying that they had been found just before they got there, on the very spot mentioned. Whether the men were detected I never heard, having

left early on Monday morning, and did not arrive at Detroit under a month.

: While lecturing in one of the villages of this state, I chanced to affect a young lawyer. He was of a nervous sanguine temperament, and very susceptible. One day, immediately after dinner, while standing in the bar-room, which was pretty well filled, the young gentleman chanced to come in. Some one said, "Doctor, cataleps him." Another said "stick him to the floor." I looked at him, when he put his thumb upon his nose, and played with his fingers after the manner of "the invisible flute," in defiance saying "you can't come it." At the instant I made a pass at him, and willed to stick it to his nose, and catalepsy it; and although at the distance of twenty feet, it was perfectly successful. His thumb pressed so severely against his nose that it caused a good deal of uneasiness, and he begged to be relieved. With a reverse pass and *will* corresponding, he was at once restored.

These are some of the many instances and proofs of the truth of the influence of magnetism, as shown by catalepsy and clairvoyance. Subjoined are copies of papers certifying to other cases, during my route, of the truth of animal magnetism:

MARSHALL, October 28, 1842.

DOCT. BAGG,

I take pleasure in saying to you, that having attended your lectures on animal magnetism, in this village, with much satisfaction to myself. I consider the experiments performed by you, both in public and at your own rooms, to be at least difficult of explanation on any other principle than that of magnetism. I have also to say that the experiments in clairvoyance of M. A—, with me are sufficient to make me believe in that part of your performance.

BARTHOLOMEW BANKS,
Marshal of Marshall.

MARSHALL, October 17, 1842:

DOCT. BAGG,

Dear Sir,—It is due to the persecuted cause of animal magnetism, and to yourself as one of its advocates, that honest and impartial judgement should be exercised by those who witness your astonishing experiments. Having attended a part of your lectures at this place, as well as having had an opportunity to visit your private room, to view experiments, I feel constrained to believe the science (if it may be so called) of animal magnetism is destined, ere long, to command the respect and excite the wonder of the community, rather than to draw forth ridicule and sneers from those who judge without investigation. Your clairvoyant this evening, in a state of magnetic sleep, described three rooms of my dwelling, with all the articles of furniture contained within them, with as much precision as I could have done myself, and I know it must have been performed without the least possible knowledge of the premises.

J. A. VAN HORN,
Clerk of Calhoun County.

Having witnessed, with no little interest, the experiments made by Dr. Bagg in this place, on Animal Magnetism, I take pleasure in stating my conviction of the truth of the above science. The experiments made upon six or eight of our citizens, who had been put in the magnetic sleep by Dr. Bagg, fully satisfied me, as it did all others who witnessed the experiments, of the truth of Animal Magnetism. I further certify that I took his clairvoyant, when in a mesmeric sleep, to a house twenty miles distant I had in mind, and that he described the house, and the furniture in the room I willed him to, as minutely as I could have done it myself.

GEORGE MONROE.

ALBION, Oct. 31, 1842.

DOCT. BAGG:

Sir,—I most sincerely congratulate the public on the prospect of acquiring a splendid improvement in the means of promulgating the principle of Animal Magnetism. It is not only to yourself, as an advocate, but to the cause of science, (if it may be so called) that an impartial investigation, divested of prejudice, should judge of its merits, particularly those who witness your astonishing experiments. Having attended two of your lectures, one at Homer and another at this place, as well as being favored with an opportunity of visiting your private room, to witness experiments, I am fully persuaded that animal magnetism is destined, at no distant period, to command the admiration of the American people. Your clairvoyant, last evening, in a state of mesmeric sleep, described the exterior of my dwelling, a cottage with wings, to the satisfaction and astonishment of a large and popular audience. I also accompanied him in my will to the principle room in the house, when he described every article contained therein (with one exception) with as much precision as myself or any of my family could have done, and I know it must have been performed without any knowledge of my premises.

DOCT. E. E. GARDNER,

JONESVILLE, Nov. 2, 1842.

DOCT. BAGG:

Sir,—I attended your lecture last evening on Animal Magnetism, and am perfectly satisfied that your subject performed clairvoyance in the description of two rooms and their furniture, when led by my wife, without any possible chance for deception. He described the rooms and their furniture as perfectly as any person would have done if they had previously visited them for that purpose.

H. S. BROCKWAY.

JONESVILLE, Nov. 4, 1842.

It is here proper to state that the above gentleman was a keen, sagacious, learned and discriminating practitioner of medicine, and that his lady led the clairvoyant, not to her own house, but to that of her neighbors, and that she could not be familiar, and was not, with the furniture of the house, that the clairvoyant saw and described correctly what *she* did not know, as *she* stated, and consequently that this is another fact of actual sight in the clairvoyant, instead of its being simply the reflection of the leading mind.

DOCT. BAGG:

Dear Sir,—I take the liberty of presenting some facts in regard to your lectures at this place, on Animal Magnetism. M. A—— was put by you into a magnetic sleep, and I was put in communication with him, and led him in imagination to my house, where I know he had never been when awake. He described the outside *perfectly*. Then the hall, and then a room, with most perfect accuracy, table, carpet, looking glass, pictures, and a quantity of sea-shells that were on the shelf over the fire place. Not an article of this furniture had been in this room over a week, and I am sure he had no means of knowing in what house or what room I was in, and I have no other room in my house that would in any way answer the perfect description he gave. The same evening, I was again put in communication with him, and in imagination took him to another room in my house, when he exactly described my parlor and all the furniture, carpet, piano, tables, fire place, pictures, &c., with the most perfect exactness. He read, in my presence, two bank bills and a slip of paper, upon the top of his head, on which the word house was written, and all this reading was done with his eyes perfectly blinded with a handkerchief, and held down on his eyes by Mr. Hughes and Dr. Patterson, citizens of this village. The few days Dr. Bagg was

with us, he put into a mesmeric sleep six or eight of our citizens, and some of these men of as much respectability as any in town.

My son-in-law, Mr. Hughes, was put in communication with him last night, and he described a *third* room in my house, with even more exactness than the two first. Dr. Bagg has delivered three lectures at this place, and from his lectures and experiments, nearly all of our citizens that have had an opportunity of attending them, have been made perfectly satisfied that there is no humbug in this affair, and that we have not been deceived, and that there is a reality in Animal Magnetism. You are at liberty to make what use of this hasty and imperfect statement you please, hoping that it may bring the attention of more scientific men to the investigation of the subject.

Respectfully yours,

J. W. BROWN.

TECUMSEH, Oct. 9, 1842.

The following is a certificate of Drs. Patterson and Bills, a committee appointed by the citizens of the above village, to examine the experiments at my lectures, and report. Dr. Patterson is now the Senator from that district.

Dr. Bagg's experiments in Animal Magnetism, performed in this village during the last few days, were of a singularly interesting character; his power of catalepting different portions of the human body, in rapid succession, without even touching the person, and his developements of Phreno-Magnetism afforded conclusive proof that there is something in Animal Magnetism worthy of a candid and careful examination.

Dr. Bagg's experiments were conducted openly and fairly, and were unusually satisfactory. It is time that the medical world should commence investigating this

subject, and no longer, under the scornful epithet of "humbug," pass by results as remarkable as they are unaccountable, unless we attribute them to the influence of electricity, or some of its modifications, acting in a peculiar manner upon the nerves of the human system.

M. A. PATTERSON, }
 PARLEY BILLS, } Committee.

TECUMSEH, Oct. 9, 1842.

The following is copied from the Marshall Statesman:

ANIMAL MAGNETISM.

This science, so called, has at length taken up its abode in our village. One of the disciples of this school of philosophy, Dr. Bagg, of Detroit, is now here, and is performing wonders in the mysteries of magnetism. He has lectured with great success and good satisfaction for two or three evenings, and will continue to lecture a few evenings more. We refrain at this time to speak upon the subject. A committee of four or five medical gentlemen were appointed, who are expected to report to the public, at the end of the exhibitions, the details of their observations. Unbelieving as the writer of this has ever been upon this subject, he is now constrained, by the indisputable evidence of his senses, to give up entirely his incredulity, and can honestly declare his firm conviction of the truth of what is called Animal Magnetism. The physical and mental effects produced on the subjects operated upon by Dr. Bagg, are enough convincing to put aside all scepticism on the subject. If a person in magnetic sleep, with eyes securely bandaged, is enabled to *read* from a piece of printing placed on the top or at the back of the head, then we may ask, what is too extravagant or wonderful for belief? This act the clairvoyant performed, and not only that, but many others equally as extraordinary

and incredible. The Phreno-Magnetic performances were striking, and go to establish the truth of the science of Phrenology beyond contradiction. But we can not here enlarge. The lectures of Dr. Bagg have been well attended by our citizens, and excited among them intense interest. His operations in the lecture room are performed with openness and fairness. He will lecture one or two evenings more, giving those in the vicinity of this place an opportunity of witnessing the astonishing effects of the magnetic fluid, brought under the control of human agency, and directed by a skillful operator.

B.

These are a few of the numerous instances of clairvoyance that have come under my observation during the time that I have been engaged in the investigation of the subject of magnetism, which is but little over two years, preceding which, no man was more incredulous than myself. To be sure I had never seen a subject put into a mesmeric state and never wished to do so. It was so repugnant to our every day's experience that I was determined not to believe it, until, by the assurance of an old acquaintance and friend, on a visit from Ohio, I made some passes, and to my surprise my subject went into a magnetic sleep. This was done without reading any thing upon the subject, but simply upon the assurance of my friend. Witness my astonishment that after having practiced medicine for twenty-five years, and that more or less extensively, I had made at this period of my life, the discovery that by the will and certain manipulations or motions of the hand of one individual, another could be made blind, deaf, and destitute of taste, touch and smell, and at the same time, from this very operation exalted in mind, in soul, to an extent beyond comprehension. That although the sense of touch was so completely palsied and dead that a tooth could be extracted, a limb amputated, or any other pain

ful operation upon the physical system, could be performed without the patient being conscious of it, and yet through a new sense, instituted or made apparent by this operation, by contact as the medium, a communication can be kept up as well as though the external senses were as active as in their natural state. That the mind is exalted in the magnetic state, no one will deny, who has witnessed cases in clairvoyance, or question, after having dispassionately investigated the subject.—In all the cases I have seen, which are not few, (over one thousand) they are grave, sedate, and dignified, full of integrity, and can never be made to vary from expressing the truth. No falsehood, prevarication, or hypocrisy ever escapes their lips, or characterizes their conduct. On the contrary, like the needle true to the pole, they are true to the truth and cannot be diverted from it. They are never disturbed by gusts of passion of any kind; and never have I witnessed a subject laugh, weep, or show the least symptom of passion while in the magnetic state, without the organs were separately excited by the magnetizer. Although the natural sight is interrupted, the subject can, not only see through a solid as well as through the common medium of sight, but it is lengthened illimitably. They can also not only be led, but sent to any distance. We are aware that this will be disbelieved by some, and ridiculed by others, but that is nothing when one gets used to it. We are aware that it will be said by some who are too lazy to investigate for themselves, and by others who are too wise already to learn, and therefore stand at a distance and cry “humbug,” that the author is mad, insane, enthusiastic, and should become the inmate of an insane asylum. Aware of all these, and knowing well the prejudices of the interested as well as the ignorant, the effects of both of which we have already felt our full share with an unsparing hand, from the great family of the “McNabbs” of “quality street,” down to the little

"John Johnings" of "dirty lane." Yet we have the ineffable consolation of pitying the one, and cherishing a most suveran contempt for the other.

Having set out to chronicle a true history of the effects of magnetism upon mind and matter from our own observation, nothing but the *Great Magnetizer* of the Universe shall deter us from communicating what we have collected upon the subject, and expressing our inferences drawn therefrom. Clairvoyants vary in being good or bad, perfect or imperfect, exactly in proportion to the perfect extinction of all the external senses or not. I have never witnessed one go wrong or tell false where he was perfectly magnetized. We have said they will look through unnatural media and to a great extent. They will also when well magnetized, tell the time correctly at all times to a second, without clock or watch, without any one in communication knowing the time, either, and will tell correctly what has taken place for years heretofore. This we know for we have the proofs.

Nothing was more common than for my clairvoyants at night when put into the magnetic state, to tell what I had been doing through the day, to tell me what conversations I had held, what language I used, and what was said in return, as well as to warn me from certain pretended friends, (enemies in disguise) which proved true in the sequel. In reference to the truth of a clairvoyant I wish to be here understood to mean, when left free, and not willed by the magnetizer, and when the equilibrium of mind is not broken up by insulating the organs; for we can give a subject water and will it wine, and he will believe it. We can give him a handkerchief and excite philoprogenitiveness and will it to be a babe, and he will believe it; but of this when we come to speak of its application to the proofs of Phrenology.

We now come to speak of its application to disease,

We have shown that life is the result of the operation of the magnetic fluids; that good health consisted in an equilibrium of these fluids, and that when the equilibrium was broken up, disease was the result; that all we eat and drank produced and imparted to the system these fluids, while the grosser part entered into the formation, growth and preservation of the system; that the human system like every other system in nature, animate or inanimate, had a centre and circumference; that there was constantly a force going from the former to the latter, and from the latter to the former, and that the magnetic fluids were the causes of these forces, that attraction produced the centripetal force, and repulsion the centrifugal; that these forces were constant, both going on at the same time in the same organ, and that sometimes one predominated over the other; that when repulsion prevailed over the attractions an increase of temperature was the result, and that when the centripetal got the upper hand, diminution of temperature was the consequence, or cold produced.

CHAPTER XI.

DISEASE A WANT OF EQUILIBRIUM OF THE MAGNETIC FLUIDS—HOMŒOPATHY—ALLŒOPATHY.

To elucidate our theory of disease when on anatomy and physiology, we took a paroxysm of fever and ague. We endeavored to show that the cold fit was the predominancy of the centripetal force, or that of attraction, and the hot fit of repulsion, and that the sweating stage was the result of the equilibrium formed between these extremes, and that oxygen and hydrogen gases were neutralized, and produced the perspiration as well as the flow of urine from the kidneys, and by that means restored the equilibrium. We might here notice the an-

alogy of these phenomena, with that of the storm cloud, which is produced by the same forces, in the same manner, and compare the rain of one, with the perspiration of the other; both produce a diminution of temperature, and both serve to produce healthy states; the one of the system, the other of the atmosphere. Nine times out of ten, when a patient complains of sickness, it is attributed to taking cold, whether true or not, and the treatment is regulated accordingly, of which now-a-days it is divided into four kinds; that of the matron with her catmint and tansy, gill-grow-over-the-ground, featherfew, cato-comstock, and christopher-catnap;" the Thompsonian with his lobelia, cayenne, steam and other preparations, mathematically numbered to correspond with the number of the disease; the homœopathist with his exalted infinitesimal doses, under the motto of "*similia similibus*;" and lastly the allœopathist with his jalap, calomel, and the lancet, under the motto of *contraria, contrariis*. These four classes of practitioners embrace pretty much the whole of the practice of medicine of this country. The theory of the two first are the same and only differ with each other by differing in gender, and occupying the extremes of the same system of practice. The two latter are antipodes in theory and practice and as different as the poles, and as far apart in their prescriptions.

In what manner does cold operate to produce disease, but by breaking up the equilibrium above alluded to, by increasing the centripetal to predominate over the centrifugal force, and thereby producing an extreme, from which, agreeable to our law, the other extreme soon follows, which alternations of extremes from these antagonizing forces constitute the disease itself. Have we not already clearly shown that cold is the magnetic fluids in a state of attraction, and must of necessity tend when applied to the system, to produce attraction or a tendency to the centre, while magactism, in a state of

repulsion or what is called heat, applied to the system, produces its kind—repulsion, or the force from the centre to the surface to predominate? Hence, when the good old matron goes to work with her hot drinks, teas, steaming bricks and billets of wood, it is to reproduce the lost equilibrium in these forces. The system by being exposed to too much magnetism in a state of attraction or cold, has given way to that particular force, and becomes diseased, and the good benevolent soul goes to work to balance it by increasing the antagonizing one repulsion, but full as often produces the other extreme with such increased force as to produce consequences worse than to have left nature to reproduce her own equilibrium. If her teas or infusions are not too strong however, or loaded with too much magnetism in a state of repulsion, (heat) being composed of carbon, hydrogen and oxygen, they contribute to restore that equilibrium that cold has broken up, and are therefore beneficial. These equilibriums show themselves by perspiration and an increased flow from the kidneys. Not so with the Thomsonian steamer, ignorant of both anatomy and physiology as well as the operation of the various remedies, his faith is predicated upon as he supposes, the great friend of man, heat or caloric, and having confidence and enthusiasm in himself and his theory above the matron, proportioned to his gender, ignorance, self-esteem and organ of wonder, he throws into and around the system, his *friend*, without judgment, stint or stopping place, from cayenne pepper, capsicum, hot water and blocks, up to the most extreme heat sufferable.

Thus they, knowing nothing of the powers of life or in what it consists, disregard the vital principle, pour in the universal friend in every form both direct and indirect, and were it not for this self equalizing principle of magnetism, life many times could not remain for an hour, and like the steam engine without a safety valve, would soon burst and become destitute of animation.—

In diseases of that class where the centrifugal force wants increasing, which cannot be known without a knowledge of at least physiology, this treatment is good and if conducted with prudence and stopped when the equilibrium is produced, is valuable, but is as detrimental to the other class depending on the antagonizing force, as it is beneficial in this. Hence in the general treatment of all kinds of diseases, of directly opposite symptoms and effects, by one remedy, it sometimes cures surprisingly quick, and in others, as suddenly kills. The results of the former have been lauded to the skies, and the latter buried with their unfortunate victims; for dead men tell no tales. Thus they go on with the greatest assurance imaginable, literally verifying the proverb that they who know nothing, fear nothing, but yet have their disciples and advocates. If by this treatment they fail both to cure or to kill, their next and only resort is to lobelia, as an emetic; and how does this as well as all other emetics operate to cure disease?—Notwithstanding this, as well as all other classes of physicians will tell you, that they throw up the cause of disease, and will harp over, give a philosophic disquisition on, and gravely point out in the ejections themselves the cause of this, and that disease. Emetics never act in any other manner, than to produce an equilibrium in the magnetic forces by the simple process of a reversion of the poles of the stomach, and the shock and agitation of that organ and those associated. They are therefore valuable when other things fail, and sometimes are hard to be dispensed with, but should never be given till other means fail, as they are the most indirectly debilitating remedies for the stomach, known. But still to the ignorant who are at a loss what to give from a want of a sufficient knowledge of the cause of animal life or the law by which it is governed we would recommend them, (like Murray, in his grammar when he could not parse a word agreeable to his rules, to throw it into the

common sink of adverbs, and call it that part of speech,) to give an emetic as the best equalizer of the magnetic forces in the system, of the same kind. The only objection to their use is their great debilitating influence upon the stomach. This class of remedies are probably the cause of more dyspepsias than all other causes put together, but a patient had better have these than die, if we are acquainted with no better method.

The homœopathic system of practice consists in giving, in a diseased state, that remedy that, in a state of health, will produce the same condition that then exists, or a similar disease for that which it is given to cure. The author of this system, as well as his disciples, tells us frankly, that they have no theory, but give us a collection of facts to substantiate the principle and doctrine. We have been fortunate enough to discover that it is based and predicated upon the magnetic fluids for its principle of cure, and is therefore reduced to a general principle from which it can never vary, is philosophical, must be believed, will prevail, and ultimately become established as the only true system of practice of medicine throughout the civilized world. They prescribe upon the principle, that when the equilibrium that constitutes health is broken up, and they wish to restore it, that the only course is to push that extreme force with another similar, and that one will antagonize the other, and produce the equilibrium, whereas that if a remedy is given contrary to the one that already exists, agreeable to the law of reaction, it will attract and produce the other extreme, and instead of obtaining that equilibrium on which health depends, it will serve to perpetuate and continue these alternations of extremes which constitute disease itself. Hence their general rule in the exhibition of remedies of *similia similibus*, instead of *contraria contrariis*. In other words, the homœopathic system of practice is based upon the principle, that if a patient is affected with a diarrhea, give an infinitesimal dose of

that medicine that would produce a cathartic effect in a natural state. If constipation is present, give an astringent. If pain is present in the stomach, give that remedy, that in a healthy state, would produce the same disease. If a patient is burned or scalded, hold it to the fire or apply hot alcohol or spirits turpentine. If a patient is frozen, apply cold snow, or scraped potatoe, or any other cold remedy. In a word, the theory of the homœopathic system of practice is general, and so far as the nature of the remedy consists, is based upon the principle of not giving remedies that are opposed to the effects they produce, but to give those that produce a similar affection to the disease for which they may be prescribed.

Thus much with regard to the nature or principle of the remedy. They have another point, and these two form all the general principles of their practice. It is of giving their remedies in very minute doses, and repeating or changing to another until a cure is affected. For instance, if one homœopathic remedy does not produce a cure, or raises up another set of symptoms different from what preceeded, give another homœopathic remedy, or a medicine that will imitate in its action in a healthy state these present symptoms. Should this fail, and raise up symptoms not exactly corresponding to the symptoms of health, give another, and so on, until you arrive at the cure. The theory of giving minute doses, and carrying it to such extremes as inculcated in Hannaman's Organon, is based upon the atomic theory of Dalton, or at least may be accounted for by that law, and is therefore philosophical and true. The great length to which it is carried—to the millionth part of a grain, is probably an extreme which is not likely to be serviceable in the cure of disease. It matters not, perhaps, whether the material substances be large in quantity, or be exalted by agitation or trituration. If medicines are exalted by shaking in a vial, or by rub-

bing with a pestle, we can not see by what manner, except by infusing into the material substance the magnetic fluids. This we know can be done, because we have scarcely ever put a patient into a magnetic state without magnetizing for them a piece of money or metallic substance, such as a gold piece or quarter of a dollar, or something of the kind, to put them to sleep whenever they wished, which, when well done, never fails so to do. We also magnetize other material substances, and will them, when applied externally or taken internally, to produce certain wished-for results, which, in those susceptible of influence, never fail. Now whether these minute atoms are exalted by attenuation, by friction or exposure to light, or both, or by the power of the will of him who agitates or rubs them, conveyed through the fingers and eye alone, or all together combined, we are not able to determine. He who thus rubs them in a mortar with pestle, or agitates them in a vial, must at least desire to have them become exalted, or he would be acting without motive; but this is the very motive that impels him to act upon them at all. The will, therefore, must have more or less effect in producing what is called their exaltation, and probably all. Again, we know that a grain of calomel will operate more severe at some times as a cathartic upon a person than a dozen, and more severe upon one person than twenty will upon another. This can not be explained on any other principle than that of definite proportions, touched on in part first. Substances and principles and things must have a right relative action on each other for effect. This depends upon their ultimate atoms, which must be in certain proportions to each other. Now we can readily conceive that these can be exalted separately by the will, by infusing or throwing into them an increased quantity of magnetism, so as increase their operation, and perhaps also they may be increased by the absorption of light by friction, which is the same,

thing, as light and magnetism are one and the same principle. No matter in what manner remedies act, they are all calculated to produce or break up that equilibrium on which health depends. Now if we can magnetise a substance so as to put a subject into the maximum state of mesmerism, can not we magnetize other substances so as to produce effect sufficient to remove disease? Certainly we produce a physical change in the one case; can not we so operate upon a natural remedy as to produce such a physical change as to cure disease by the same means? If we can throw these fluids into the system through the nerves, so as to produce this effect, is it not reasonable to believe that we can throw it into material substances, and give them by the mouth, and produce the same effect by this avenue? Do not certain medicines produce spasms and convulsions? Has not the sight of frightful objects produced the same effects? Has not the same consequences ensued from harsh and improper language falling upon the ear? Are not the same consequences produced by the inhalation of certain effluvium? Will not certain substances, applied to the skin externally, produce the same symptoms that it will when swallowed? How does tobacco and other narcotics operate, but in this manner? Mr. Hannaman, the discoverer of the homœopathic system, tells us that disease is the result of the spirit of life operating upon the immaterial part. Speaking of the healthy condition of man, he says, "the immaterial vital principal which animates the material body, exercises an absolute sway, and maintains all its parts in the most admirable order and harmony, both of sensation and action, so that our indwelling rational spirit may freely employ these living, healthy organs for the superior purposes of our existence." "The material organism deprived of its vital principle, is incapable of sensation, action, or self-preservation; it is the immaterial vital principle only animating the former in its healthy

and morbid condition, that imparts to it all sensation, and enables it to perform its functions. In disease, this spontaneous and immaterial vital principle pervading the physical organism, is primarily deranged by the dynamic influence of a morbid agent, which is inimical to life. Only the vital principle thus disturbed, can give to the organism its abnormal sensations, and incline it to the irregular actions, which we call disease; for as an invisible principle, only cognizable through its operations in the organs, its morbid disturbance can be perceived solely by the means of the expression of disease in the sensations and actions of that side of the organism exposed to the senses of the physician, and by-standers; or in other words, by the *morbid symptoms*, and can be indicated in no other manner. It is solely the morbidly affected vital principle which brings forth disease." Again, in a note to the above last paragraph, he says, "In what manner the vital principle produces morbid indications in the system, that is, how it produces disease, is to a physician a useless question, and therefore will ever remain unanswered. Only that which is necessary for him to know of disease, and which is fully sufficient for the purpose of cure, has the Lord of life rendered evident to his senses. Disease, therefore, considered as it is by alceopathists as something separate from the living organism, and the vital principle which animates it as something hidden internally and material, how subtle soever its nature may be supposed, is a non-entity, which could only be considered in heads of material mould, and which for ages hitherto has given to medicine all those pernicious distinctions which constitute it a mischievous art." Again, he says, "the organism is indeed the material instrument of life, but without that animation which is derived from the instinctive sensibility and control of the vital principle, its existence is as unconceivable as that of a vital principle without an organism. Consequently both constitute a unit, al-

though in case of comprehension, our minds may separate this unity into two ideas." This then, constitutes the theory of the great father of the Homœopathic system. That man is composed of spirit and matter. That they are so united as to form a whole, an individual, a man. That he is liable to disease. That this disease is an affection of the spirit, showing itself upon the material machine, and consequently that remedies should be given to operate upon the spirit to cure all diseases. That the symptoms of this spirit show themselves upon the material body, and never can be detected by the natural man; and that it is useless in the physician to attempt to look for the proximate cause (as we suppose) because he mentions in other parts of his work, of getting "a history of the case, his social habits, and other causes, because he can never arrive at it, and must give his remedies so as produce health, by giving that medicine which, in a healthy state, will produce the symptoms then existent upon the system, "*similia similibus*." This spirit he calls the nervous fluid, and therefore uses these terms as synonymous. In bringing forth his remedies to operate upon this spirit, (or "Dynamic Virtual") he speaks of giving it in small minute doses, and exalting them by shaking and by trituration, we give his own words. "The homœopathic healing art develops for its purposes the immaterial (dynamic) virtues of medicinal substances, and to a degree previously unheard of, by means of a peculiar and unheard of process. By this process it is that they become penetrating, operative and remedial, even those that, in a natural or a crude state, betray not the least medicinal power upon the human system. If two drops of a mixture, of equal parts of alcohol and the recent juice of any medicinal plant, be diluted with ninety-eight drops of alcohol, in a vial capable of containing one hundred and thirty drops, and the whole twice shaken together, the medicine becomes exalted in energy (*potenzirt*) to the first development

of power, or as it may be denominated, the first potency. The process is to be continued through twenty-nine additional vials, each of equal capacity with the first, and each containing ninety-nine drops of the spirits of wine, so that every successive vial, after the first, being furnished with one drop from the vial, or dilution immediately preceeding, (which had just been twice shaken) is in its turn to be shaken twice, remembering to number the dilution of the vial upon the cork as the operation proceeds. These manifestations are to be conducted thus, through all the vials, from the first up to the thirtieth or millioneth development of power, which is the one in most general use. All other substances, excepting sulphur, are exalted in energy by attenuation in the form of powder, by means of three hours' trituration in a mortar, to the millionth degree. Of this one grain was then dissolved and brought through twenty-seven vials, by a process similar to that employed in the case of vegetable juices, up to the thirtieth development of power. Thus then, the medicine he supposes to be exalted in energy, by friction or agitation in vials, and by attenuation by pestle and mortar. In what manner consists the rationale of this exaltation? It can not consist in the increase of its material part. The medicine is no heavier. In what then does it consist? Is it in consequence of infusing into the mass an increased quantity of the magnetic fluids, and thereby, by the attenuation, separating or reducing the mass into a greater quantity of ultimate molecules or atoms, by the greater quantity of these fluids, and if so, do these smaller minute atoms possess as much or more power than those of greater magnitude? Is this produced by the simple mechanical means only, or, as we have before said, by the power of the will from the extremity of the fingers, and through the medium of the eye, or all? Does light mix with and enter into its pores? And if by these, are we sure it will produce the effects wished,

without the power of the will? Does the natural medicinal effect of the medicine control its action? Must it have a kind of primordial propensity to produce an effect of a certain kind discovered, or is that controlled by the influence of the will? That it might be produced by the infusion of the magnetic fluids, through and by the will, we have shown as above, and might add that various substances, such as milk, whey, water, calomel, and less inert substances, have been magnetized by us to complete success, which we shall show or mention when we come to speak of Antipathic remedies. Some might suppose that it was an objection that the fingers did not come in contact with the medicine, or within the sphere of influence sufficient for an effect. But when we reflect that a magnetized patient can be effected in an adjoining room, across the street, or at the distance of a mile, so as to be put into a perfect magnetic state, when we know that every pass we make at a subject at the extremity of the room, he will attract or repel it, so as to give it a distinct motion; that at that distance, we can will up or attract his arm, and bring upon a line at right angles with his body, then raise it as high into air as it can be stretched, or depress it to the floor, and there fix it beyond his will. When we are assured of all these things, and sum them up as a collection of inductive facts, with a variety of others that might be mentioned, coupled with the known fact that we can make our passes through a cane or pole, to even better execution than the hand itself in contact, and recollect that the Electric Eel has the power to throw electricity through the hook, line and pole, in shocks with such force and intensity as to palsy the arm of him who is fishing for them; we can not but believe that the "exaltation" of the homœopathic remedy is in consequence of the magnetic fluids infused by the power of the will, and that alone. But again, we find all material substances governed by the magnetic fluids.

All substances are either attracted to, and fall to the center of the earth, or are repelled from the center and fly, in the form of vapor or gas, into atmospheric air. This is owing to these immaterial fluids, and not to the material, for without the immaterial part, all matter would be a cold, sluggish mass, without motion or action. All substances, then, are of a mixed nature, material and immaterial. Their form, color and texture, are owing to the immaterial imponderable part, and the raw material the material part. If then, in a state of nature, we find these results, these magnetic fluids filling all immensity, moulding all matter into various shapes, forms and dimensions, by the immutable and eternal law of their government, can we not see that by a process of the will, and perhaps by agitation and trituration, exposed to light or these fluids, all substances can be exalted in their natural propensity or condition to produce a greater effect? Can we not see that remedies are made like the body itself, constituted of two natures, spirit and matter, and that when taken into the system as medicine or food, their spiritual part supports life and animation, while the material is attracted, enters into, maintains and sustains the material part, while that which is unnecessary is repelled from the system by the various emunctories of the bowels, kidneys, liver, lungs, and skin. Substances then, possess, in a natural state, a power to produce a medicinal effect. Some possess more magnetism, and others less, and by this means are more medicinal. Others, compounded of simples, with their elements differently arranged, operate on a function, with its particles also arranged in a particular form, in a peculiar manner, and produce certain results. This is owing to a different arrangement of their ultimate atoms. For sugar, and vinegar, and starch, as well as alcohol, are made of the same elements, although so different in effect, as well as different in taste. This is owing to the different proportions of the elementary

atoms in the compound. It is then owing to the peculiar arrangement of the particles in the compound or simples, relative to the particular arrangement of the same ultimate atoms of an organ of the body, on which and through which it passes, that causes it to have a certain effect, together with the particular quantity of the magnetic fluids in both, for all medicines are resolvable into astringents, or the contrary, which is in effect attraction or repulsion. Thus much in regard to the exaltation of the homœopathic remedies. It now remains to account, by our theory and principles, for the truth and utility of the principle of *similia similibus*. It will be kept strictly in mind that our theory or principle is that all motion or action throughout nature, animate and inanimate, in the three kingdoms of mineral, vegetable and animal, is that every organ, function, or simple body, operated upon and moulded as it were by the magnetic fluids, has a center and circumference, from a dew drop up to a globe, and that these fluids are constantly in motion from center to circumference, and from circumference to center, and that both are in operation at the same time, in the same substance or ultimate atom; that they are constantly tending towards an equilibrium, and as constantly tending from it, and that that force which it possesses of tending from the center to the surface, we term repulsion, and that tendency which it has of approaching to the center, we term attraction; that these forces are sometimes equal to one another, and when this is the result, they are said to be in a state of equilibrium, but that this is more or less always varying, and that consequently sometimes one predominates, and sometimes the other, as shown in chap. ix, and this varying from one extreme to the other constituted the health or disease, as well as the composition and decomposition of all material substances. We also showed that good health consisted in this equilibrium by the action through the medium of

the vessels. That the animal economy showed through the whole a series of antagonizing vessels, in proof of our antagonizing principle. Showed that heat was the result of the centrifugal force, (repulsion), and cold the result of the predominacy of centripetal force, (attraction), and that when in either extreme, disease was the result, dibility direct from attraction, and indirect from repulsion. Now all the physician has to do, when called, is to produce the equilibrium which constitutes good health. This is to be done by agents best calculated for the purpose; by remedies internal and external. These remedies, we labored to prove, act and operate through one common medium, or by one principle, magnetism. We stated as a law regulating these fluids, that one extreme always follows another, and the quickness of the change or opposite effect being produced, is in proportion to intensity of the action. This is upon the immutable law of magnetism, that those of the same names or conditions, as north and north, or south and south, or positive and positive, or negative and negative, repel each other; whereas, those of different names, natures or conditions, attract one another. If we apply the north pole of one magnet to the north pole of another, left free to move like the compass needle, it repels that end from it, turns it completely around upon its axis, and attracts the south end. So also with all other substances, charged in the same manner, one positive and the other negative, attract each other; whereas, in substances charged or filled with both positive or both negative, repel one another. That in nature, one extreme always follows another, has long since been known, acknowledged as an axiom, and passed into a proverb. If the weather is uncommonly sultry and hot to day, look to morrow or sooner, (depending on the intensity) for an extreme of cold in exact proportion. If it is uncommonly calm and still, not a breath of air stirring, look out for a gale immediately. If, on the

contrary, the temperature is moderate and temperate, with a little motion in the air, it will continue a longer time, or until gradually an extreme takes place, and when at its height, the other extreme rapidly follows as a natural result, and in a direct quickness of transition, in proportion to the intensity of the preceeding extreme. This law, we have before shown, is general, and therefore applicable to all objects, subjects, principles and systems of objects in nature. We have seen its application in theology, law, medicine, friendships, and all the transactions of human life, and goes to substantiate the homœopathic principle of *similia similibus*.

Where is the benevolent man who has contributed to the pecuniary relief of an object, but has been sooner or later paid off, and that in direct proportion to the sacrifice, by ingratitude, by actual injury in return, by being paid as the cat did the owl? Where is the politician, who has contributed by every effort in his power to elevate to office his friend beyond any other, but who, when he had "come into his kingdom," had paid him off with ingratitude, and elevated one instead who stood opposed to his elevation? Do a man a favor to day, and he is your enemy to morrow. On the contrary, do him an injury, and then put yourself in his way with the olive branch, and he is your friend. Men and brutes are alike, at least in one respect. "The more you whip a dog the better he will like you." The more you injure a man, and then extend to him the hand of friendship, the better he will like you also. The globe can be circumnavigated in going in either direction, east or west, but if two vessels of equal speed should make the attempt in starting, both in one direction, and one should get the start twenty-four hours, one could never overtake the other, or have any influence over its operations. It has long since passed into a maxim, that in "fighting Indians successfully, you must give them their own play." It is no less true with civilized man. An

eye for an eye, and a tooth for a tooth, was the inculcation of the Jewish law; life for life, blood for blood, is that of our own; both founded upon philosophy and our general principle, or law of mind and matter. Self preservation is the first law of nature—this can not be discharged without following our rule, and oppose force to force.

It has long been the practice of hunters and travellers on the extensive prairies of the west, when they find them on fire, and fast approaching, with the fury and speed of the war horse, instead of throwing cold water, to set another fire to counteract or oppose it, as the most successful and sure. One repels the other, and mutually neutralize each other's force and rapidity, and stops its further progress in that direction. From the novelty of the subject it is impossible to define the exact proportions or law of this revulsion or reversion of the poles, but we anticipate that it will yet become reduced to a mathematical certainty, and be well understood.

In 1838, while travelling upon one of the almost interminable prairies of the Northwest Territory for five or six days, a friend and myself were suddenly struck with what, to us, had we been in a region of water, we should, and did at first, deem a water spout. The prairie was on fire, but to our security, had passed over the direction of our path, and was then burning towards the north. The sky was clear, not a cloud to be seen for five days save over this blaze of combustion, issuing from which was vapor from a broad base, extensive as the fire in action, rising into the atmosphere like radii, and converging to a point at about two miles height, and issuing from this point were the most black, dense and angry looking clouds (like pent smoke from the combustion of fire-proof roofed buildings, in cities) imaginable. These again diverged in every direction, from which water in the form of rain was constantly de-

ascending for five days, and probably continued as long as the prairie burnt. It was in the form of an hour-glass, or two cones with apexes turned together. It was a sublime spectacle to behold, and only required the lightning's flash and the thunder's bolt, to render it perfect. Here, then, upon a large scale, with the naked eye, was seen the attractions alternating with repulsions; prairie grass and the oxygen of the atmosphere producing repulsion, and by the process of combustion, liberating the magnetic fluids from a broad base; these converged to a point by a certain law of medium, to converge in an intensity of repulsion, and when united to a point at once changed to attraction, and by this means, the hitherto ascending vapor, changed to rain, and was attracted to the earth. Thus attraction and repulsion were both going on at the same time, and produced by the combustion of the prairie grass. This was the only case that I have ever discovered by the naked eye, so as to be distinctly seen.

This case, with others less clear to the sense of vision, but substantiated by an innumerable number of results, prove to us that the moment these magnetic rays are converged to a point, they at once separate and are the cause or point between attraction and repulsion. The law governing this convergence and divergence, attraction and repulsion, at the present state of science, we are not able to explain, but these poles are reversed with a rapidity in proportion to their intensity, for one extreme at all times rapidly follows another. In the human system, if a person become stimulated to an excess, by wine or ardent spirits, the corresponding debility is in direct proportion to the preceeding elevation. If a person is excited by combativeness, he becomes correspondingly meek. The passions are all indebted to this law of reversion of the poles; love and hatred are only extremes of a continuous line of feeling, like the poles, and so of all the rest.

While lecturing publicly at the City Hall in this city, I commenced to excite upon my subject the organ of philo-progenitiveness, and when about to respond, a gentleman called for some other manifestation. I left this and gratified the auditor, and then recommenced on that organ again, but to my astonishment, destructiveness responded, and instead of fondling "little sissy," as he called her, threw her from him saying: "I will kill her, take her away." I then excited destructiveness, and up came philo-progenitiveness, thus showing a perfect reversion of the poles, which are but the extremes of the same feeling. I then demesmerized both, and again excited philo-progenitiveness, and it responded correctly, as did also destructiveness. I accounted for this to the audience by stating, that having left that organ excited to a point almost sufficient to cause a reaction, and then, throwing upon it a second charge, both were sufficient to over stimulate the organ, and produce a perfect reversion, and produce the other extreme; but our limits will not permit us to pursue this branch of the subject further, (although it would afford matter for volumes) except to say that nothing is more common in persons naturally modest and unassuming, when stimulated to an excess with wine, to have a reversion of the poles of the manifestations of mind, and become impudent and boisterous. It makes the irreligious give lectures on morality and religion, and the religious to take the name of God in vain. It opens the fist of the miser and closes that of the benevolent. In a word, the poles of the system are all liable, by excess of stimulation, to a complete reversion, like the compass needle, which we have seen, is produced in a particular manner, agreeable to a particular law, the which may be taken to elucidate and exemplify all other cases in nature. A compass needle points, for instance, in one direction; if we wish to reverse its poles, how would we go to work? Would we apply the north end of another mag-

net to the south end? No, not at all, for that would increase the difficulty, and fix it more firmly in its present position. How then? We would apply the north pole to the north pole, or the south pole to the south pole, or those similar to those similar, (*similia similibus*) and by the immutable and fixed law of the principle, it would repel one end and attract the other, and thus produce the extreme desired. This law of magnetism, regulating the compass needle, and here exhibited, may be taken as a general diagram for the operations and effects of substances of all matter in nature, animate or inanimate, of whatever state or condition, for magnetism being the cause of all motion in nature, obeys the same law, whether in a bit of steel, balanced on a pivot, like the compass needle, or in the human system, balanced by antagonizing vessels; all have poles or extremes, and both and all are subject to the same law. This compass has but two poles or extremes, but the human system is a collection or series of poles, as we have before shown. Hence the homœopathic system of practice is philosophic, and the only true system of practice, and is indebted to our principle of magnetic attraction and repulsion for its certain results. If any one wishes to learn that system of practice correctly, and understand it philosophically, he must necessarily become acquainted with the laws of magnetism, and their operations in the three kingdoms of matter, before he can become skilled in that science.

CHAPTER XII.

DISEASES—ALLĒOPATHIC REMEDIES, OR THE COMMON
PRACTICE OF MEDICINE, AS TAUGHT IN
OUR COLLEGES.

The practice of medicine, as taught in the schools at the present day, is a great share of it on the homœopathic principle. Every remedy, except emetics, and cathartics that are given internally, that are not given according to that principle, are detrimental to the patient. This result is, however, accidental and unknown, and not appreciated by those who administer them. Instead of going on and prescribing upon a well settled general principle, they, with great gravity, affect to single out the cause, and then throw their darts, selected from the jallap and calomel quiver, at the supposed object. This cause they believe to be a material substance, and therefore use material agents for its removal. Now, if our theory of disease be correct; if life be the result of the action or motion of the magnetic fluids, operating upon material matter, and if good health consists in an equilibrium of this action, and disease the extremes or want of it, then the enquiry after material causes is worse than useless, and every departure from giving remedies from the general principle of *similia similibus*, or those that will produce in the healthy state a disease similar, is detrimental to the patient, and should not be administered. The science of medicine falls far short of perfection, and probably, from the nature of things, ever will. Death, from a bold but ignorant and unfeeling practitioner, is easily produced in a summary manner, even under the imposing seal of a diploma. Our best authors tell us that diseases are constantly changing, from year to year, and almost, we know by our own experience, with the moon and wind. What is the cause of this change? Is it not produced by a change in the seasons—the weather? What is

the cause of these? Is it not planetary influence? And what is planetary influence but the manifestation, variation, or effect of the magnetic fluids, producing one or other of the extremes which constitute disease itself, produced by the influence of the sun, moon, and other planets, operating in a peculiar manner upon the earth and all animals and vegetables upon its surface. Was not the black death of Europe, the plague, the cholera, and many other sweeping epidemics, the result of planetary influence, operating upon our earth in a peculiar manner? Do we not find dysenteries, diarrheas, catarrhs and common colds to be epidemical, and dependent upon a particular state of the atmosphere? Have the planets any other action or influence upon each other than through the medium of the magnetic fluids, by attraction and repulsion? If the earth is affected in a particular manner by a neighboring planet, does not every thing, animal and vegetable, upon its surface participate of the same influence? Does one planet operate on another through the medium or by the influence of any thing material? If not, disease is at all times from an immaterial imponderable cause.

We have said that a great share, and we will here add the only valuable share of remedies that are administered for the cure of disease, as taught in our colleges, and in common practice from the disciples of these, are *homœopathic*. The best remedies of this practice for scalds and burns are hot alcohol, spirits of turpentine, or holding the part to the fire. For inflammation of the eyes, camphor, opium, spirits of wine, infusion of cloves and cinnamon, and other hot stimulating washes, are decidedly preferable to the antagonistic class. Calomel and ipecacuanha for diarrhea, in small doses. Emetics for sickness and nausea of the stomach; cathartics for dysentery; bleeding for active hemorrhage; wine and brandy, and camphor, for typhoid or typhus fevers; preparations of mercury for the psora or itch;

stimulating washes for all ulcers and sores; for acidity of the stomach, hard cider, vinegar, vitriolic and other acids, and for thirst, hot teas instead of cold water. These are some of the homœopathic remedies used by the allœopathists daily in practice, simply from habit, without knowing the wherefore, and without a general principle to guide them.

Practitioners of this class believe calomel, jallap, scammony, aloes, buckthorn, salts, senna, and other cathartics, will operate, when given, as physic, but this is not certain, for sometimes they will not operate at all, and at others, directly in opposition to this, by reversing the poles and operate as emetics. So also with that class called emetics, they are not certain; they often operate directly reverse to their anticipations. Here we find our theory again exemplified. It depends upon both the state of the stomach and the quantity given. If we increase the attractive force beyond a certain point, we at once get the other extreme, vomiting. If, on the contrary, we increase the repulsive force to intensity from the stomach, it produces the other extreme, and increases the difficulty. Generally, however, if given with judgment, in regard to these forces in their then present state, connected with a discriminating knowledge of the temperament, they will operate peculiar to their several classes, and vomit or increase the natural resultant force of the stomach and bowels, as the case may be. No remedy is certain. It is all, from first to last, more or less the effect of experiment. Why do they fail? Is it not owing to the particular state of the nervous, the magnetic fluids, and who can operate on these with a material substance to a certainty? No one. It is the condition of mortality. Will not one half, yes, a tithe of what will operate upon one produce the same effect upon another? Will not the same dose that will operate upon a person at one time scarcely produce little or no effect at another? To

what is this owing, but to the predominacy of one or other of these forces at the time, in the general system, or particular organ, and the dose or quantity not being adapted to the particular state of that system or organ; hence, if a general rule, sure in its action, and certain in its results, such as anticipated in our theory of life and disease, termed homœopathic, can be given, it can not but be desirable. We have said that disease itself consisted in the predominacy of one or the other of these forces over the other, and that when these extremes take place, the resultant force of the two—the peristaltic motion of the stomach and bowels was increased or diminished from its natural action, which when, in a state of health, produced a movement as regular as the alternation of day and night, once in twenty-four hours, any departure from which showed that these centripetal and centrifugal forces were unequal. This fact being the best index to health, have led physicians to look to results rather than causes, and to indiscriminately, on all occasions, under all circumstances, to give cathartics, and prescribe for secondary results rather than regulate primary causes. Hence, when a physician is called now-a-days to a patient, no matter what the disease or condition, he is almost sure to give a cathartic, and in this country, calomel.

If this does not cure, another, and if this fails, it is again repeated; should this not succeed, sometimes an emetic is given, or perhaps they bleed, and so on from day to day, till the patient is dangerously debilitated or death ensues, which suggested the sarcastic epitaph to be placed over the grave of one of their patients, of that great delineator of the human mind, the immortal Shakespeare, in derision of this class of practitioners—"Once I was well, wished to be better, took physic, and here I lie." Generally in accute diseases these are given, one after another, perhaps alternated or combined with Dovers powder, until the patient becomes so debilitated,

that no more can be given, for fear of death, and still the disease continues, and the physician is brought to a stand. He then changes, from necessity, his treatment, and gives wine, brandy, and other stimulants, to just keep the breath of life in him, until he can produce a sore mouth with calomel and opium, and prepare him for a dentist, should he recover. This latter course is called an "alterative one;" thus he holds him up with one hand, and cuffs him with the other, until he has touched his "gums," and his teeth seldom fail of getting "touched," too. If he succeeds, he then takes another two weeks to cure the artificial disease, after which the patient gradually recovers, so as to be able to leave his room, but does not regain his strength for months, and is rendered for life more susceptible of changes of temperature, or what is vulgarly termed catching cold.—At other times, or with another class of practitioners, they commence and continue in this manner, and debilitate and weaken the patient down to death's door, and finding they can pursue this course no farther, they are obliged to tack about, and make an attempt to fetch him back again where they found him. If he gets well, it is good luck; if not, he either dies or goes into the hands of some "root concern," whose boldness and ignorance are on a direct sympathy, who generally put on the quietas in a very short time, and relieve him of his troubles. Thus they commence and lead him down stairs, and then back again up stairs, and if he does not faint on the way, or the disease leave him on the road, they know not what further to do. I appeal to the honest and candid, as well as to the scientific of the profession, if this is not the case in a majority of the common cases of the country? Is there any scientific skill in all this? Cannot a woman, yea, a minor, do as much? At any rate, cannot a yankee apothecary of one month's experience, perform the whole? We acknowledge these emetics and earthartics, under certain circumstances, to

be valuable remedies, and have experienced ourselves their beneficial consequences; but their indiscriminate use, on all occasions, for all diseases, under all circumstances, is what we object to. Although they often cure disease timely, they as frequently leave consequences upon the organs, that remain through life. Three-fourths of the diseases they are given for, can be cured in an hour, by directly restoring the balance of these forces, and that without weakening the stomach and bowels, or deranging their regular action or motion.— They have yet to learn, that the force from mouth to anus, called in the books, the preristaltic motion of the stomach and bowels, is resultant of the two centripetal and centrifugal forces, and that they attack the branches instead of the root. They have yet to learn, that if they restore the equilibrium of these, the resultant force must, of necessity, be regular and healthy. They have yet to learn, that material causes never produce disease. They have yet to unlearn a multitude of gross errors, which have so slowly and slyly crept into practice, that habit and custom has rendered them almost invulnerable to the reason and judgment of both physicians and patients. Both are too much in the habit of thinking and believing, that in order to cure disease, something material or corporeal must be removed from the system. This is their fatal error. Nothing is more common than to hear quacks, both *upland* and *lowland*, talk of, and tell of vomiting up, and carrying off and out of the system, the cause of disease in a sensible, tangible shape, and form, which is never the truth. To look to the ejection from the stomach the contents, or discharge from the bowels, or the urine from the kidneys, for the cause of disease, they might as well direct their lucid philosophical material enquiries, to not only the perspiration of the skin, the sputa from the mouth, the wax from the ears, the tears from the lachrymal gland, the dandruff upon the hairy scalp, but the spirit of anima-

tion expended in a sally of humor or wit, or the effervescence from an immoderate fit of laughter. What skill can there be, when we know not what to do, to resort to mercurials and make a patient's mouth sore? Does any one know, or can tell, how calomel acts upon the system, in the kill or cure of diseases? It produces great irritability of the nervous system, and an increase of the membranous and glandular systems, and is this all? "O, no; it unlocks the whole system, and thereby cures diseases." But does it operate upon the spirit of life, or the material system? "It operates upon both and all—it is heating and cooling, irritating and assuaging, weakning and strengthening; in a word, it is the universal panacea, the great antagonist of Pandora's box itself." It *does* unlock the system, and not unfrequently in conjunction with pounded ice, lets life itself slip out too easily altogether! But the other class of these allœopathists, whose organs of self-esteem and firmness are a size or two less than the former, reminds one of the lady with her cook-book. She has her recipes for such and such kinds of fashionable cake, eat in such and such families, so much flour, eggs, butter, nutmeg, allspice, pepper, salt, cinnamon, cloves, &c. makes up the compound of a certain cake, but who knows or cares whether it is healthy or not, if it be but fashionable and have the right taste, and is well gilded. The cake is not made for stomach, but the stomach must take the cake, regardless of consequences.

So with this class of physicians, batches of pills in imitation of Lee's and others, are made up and composed of antimony, jallap, calomel, gamboge, scammony, ipecac, aloes, soap and other ingredients, and if a patient complains and calls for aid, two or three of these are crammed down his gullet, regardless of the particular state or action of the stomach or vessels, simply like the cook-book practice, because they will operate as physic. If this does not cure, they are repeated again

and again, until he becomes so debilitated, that it becomes necessary to take another course. This is the fashionable practice of the day, and is frequently continued for months, until they cease to operate, or produce consequences which prohibit their administration.

Although there is an innumerable variety of remedies for disease, they are all divided into two general classes, astringents and laxatives. The former operate by attraction, and produce contraction, and the latter by repulsion, and produce relaxation. The action of these are general, and no matter on what organ or circle they act or operate, this is their action. One increases the centripetal force, the other the centrifugal. In their effect, the former upon the bowels, produce constipation; the latter operate as cathartics or laxatives. From the more particular effect of some remedies upon particular circles and organs, they are said to have more or less a specific effect upon them, hence they are called sialigogues, stomachichs, laxatives, diuretics, diaphoretics and emenagogues. There is another class called narcotics and their opposites, which are resolvable into the same as astringents and laxatives, or those that produce sleep and those that produce wakefulness, such as opium, stramonium, &c., of the first class, and guac and calomel, in small doses, of the last. This class operates more particularly upon the brain and nerves, and are generally called nervines. Why does a particular medicine, when taken as above, operate in this specific manner on a particular organ? We have never heard it explained, or believe it can be, except on our theory. It will be recollected (chap. VI.) when on the elements of food and organs, we showed that all the organs or circles of the body were of different textures; that the liver, for instance, was different from the kidneys; the skin different from both; in a word, that although they were composed of the same elements, carbon, hydrogen, oxygen and nitrogen, they were in different pro-

portions in each, and that not only their texture, but their form also varied throughout. We also showed that being in this different condition, in the round of the circulation, they attracted from the blood a material for their use, and imparted something for the general support of the whole system. Now these various remedies are also, although composed of the same elementary particles or principles, different in the quantities or proportions to each other in the compound, and are thus made, in that particular state of magnetism, to favor their immediate attraction to these organs, and when so attracted, produce by their peculiar action of either attraction or repulsion, the particular partial specific action, known from the exhibition of them. That a little difference in the proportion of these elements to each other in compounds, make a compound in nature perfectly antagonized, we do know, and therefore infer the same of the rest. Oxygen and hydrogen will unite in one proportion and form the most intense flame, that nothing can resist; in another proportion, they will unite and form that compound called water, which will quench fire or flame; and are also constantly changing from one compound to that of another.

"Water restrained, gives birth

To grass and plants, and thickens into earth;

Diffused, it rises in a higher sphere,

Dilates its drops, and softens into air;

These finer parts of air again aspire,

Move into warmth, and brighten into fire:

That fire, once more, by denser air o'ercome,

And downward forced, in earth's capacious womb,

Alters its particles, is fire no more,

But lies metallic dust, or ponderous ore."—PRIOR.

It is also well known that sugar and vinegar are composed of hydrogen, oxygen and carbon, and only vary in their relative proportions to each other in the compounds, as well as those substances called alcohol and carbonic acid. Now, although a medicine acts agreea-

ble to the characteristics of the general class in a particular organ, (that is, astringents or laxatives) they carry these throughout the whole system, for a diaphoretic is as much a laxative to the perspiratory vessels as a cathartic is to the bowels, or a diuretic to the kidneys, or calomel in small doses to the glands. The truth is, as will be seen on reference to the classification of our old as well as present writers, that all remedies, either general or local, are by them divided, and properly so too, into these classes, which are but other terms for increasing or diminishing the centripetal or centrifugal forces, from the natural action or healthy state of the system.

Physicians at the present day are too apt to look for causes which they can never discover, and imagine them to be material, to be from bile, mucus, or something that is tangible, cognizable to the mind through the senses. These are not the true cause of disease. It is owing to the spirit of life, the nervous fluid, the magnetic fluids, that at all times are the cause of disease. The machine is not the cause of life, and therefore can not be the cause of disease; it is the spirit animating that machine. The material body stands the same relation to the action and motion in the system, that constitutes life, that the zinc and copper plates do to the magnetic or galvanic fluids that produce the phenomena of motion upon rotary magnetic machines. We have already shown in what consisted life and disease, and need not again repeat it minutely. Can a material substance produce motion of and from itself? Never! The magnetic fluids are at all times, and ever have been, and will continue through all coming time, in motion. Lastly, we will observe the manner that medicines are given, or taken by families, with and without the advice of physicians now-a-days, might be illustrated by relating the general observations of a good old *plow-going* physician, who at all times, when in consultation at the

bed side, after an examination of the patient, made use of this expression. Ask him, under the circumstances, what was best to do for him, he would invariably reply, "Wall, I don't hardly know; I know of so many *good things*, I don't know which to give him *fust*." So with families and physicians, they know of so many good remedies, they had as live give or take one as another. Instead of discriminating and discovering which force predominates, and producing an equilibrium, they haphazardly give or take what they have compounded and made up, trusting to good luck for the result.

Our young physicians read the European authors, who describe the symptoms of such and such diseases to be so and so, and to have, in their artificial division, such a name, and to that name they have, as almost specifics, remedies attached. Thus, all they have to do is to find out the name of a disease, and prescribe to that, instead of the disease itself, or the particular state or condition of the system. Thousands have gone to their untimely graves from this cause alone. Disease is always changing; what will help to day will hurt to morrow, and even what is beneficial in the morning is pernicious in the evening. Who can believe, after a moment's reflection, that authors can prescribe through a prescription book, two thousand miles across the Atlantic, for disease, where climate, food and habits are so different from ours, much less for its different stages? They can not do it, and yet they are followed with as much precision in the treatment of disease, as their works on grammar and arithmetic are followed in college as text books on those branches of science. There is a story told of an individual of this class of practitioners, of Troy, New York, which is so applicable to the whole class and to the subject, that we can not forbear to give it to the reader.

In the early settlement of that city, while it was yet a small village, a certain shrewd, but ignorant person,

by chance commenced to give medicine, and by degrees he became considerable wealthy from its practice. The village was now just commenced, and at that day, physicians were more like "angels visits" than at present, and having no competition, he soon gained a competency, and as there was no druggist at the village, he was obliged to go to Albany for his supply of medicine, where he paid promptly. After getting the simple medicines, such as pikery, salts, senna, rhubarb, &c., put up, knowing him to be good pay, and the druggist anxious to sell him as much as possible, would ask him if he did not give such and such medicines, saying that the most eminent physicians of that city gave them with great success. To hide his ignorance, (as he could hardly read or write) he would reply that he gave them, and purchase them; but when he arrived at home, would cram them indiscriminately into a large three gallon jug, filled with whiskey, which he kept constantly sitting in the corner for that purpose. Soon he would be called to patients laboring under diseases that he was as ignorant of as he was of the nature and use of the remedies. When this happened, he would go to the Big Jug, and prescribe the tincture of this heterogeneous compound. Sometimes they would get well; but oftener were suddenly sent to "Davy Jones's" by this death-seed, sown, as it were, broadcast upon the spirit of life. When it was fatal, he would, with great gravity and veneration, lay it to an organic affection of the heart, "liver complaint," consumption, or the "orful" dispensations of Providence. If they chanced to get well, he would claim them as living monuments of his consummate skill and knowledge. Thus he went on from year to year, rode a good horse, was the first man at weddings, and the last one at funerals; said at all times "yes marm," to the ladies; not only praised up, but kissed the children; charged nothing for doctoring the nurses but their eternal puffing in return, and in matter

where he went on Sundays, invariably left upon his slate that he had gone to church. In this manner and by this course his business increased, and he became one of the most wealthy inhabitants of that comparatively new city. Are there any *big jug* practitioners at the present day? Let the reader judge.

There is one fact that, on reflection, all will acknowledge, without perhaps being able to account for the cause, and that is, that that physician who loses the most patients, not only gets the most business, but is the best paid. Whence comes it? What is the cause? Is it owing to a want of discrimination by the people? the complicated nature of disease and remedies? sympathy with the physician; believing him honest, though ignorant? or because "dead men tell no tales?" Now we lay it down as a fact, demonstrable, and we think somewhat demonstrated, from what has been said, that not only food, but all remedies, act upon the system in a two-fold manner, that the magnetic fluids in food and remedies go to and support the sum of these fluids in the system, which constitutes its life, while the material part is attracted to the material part of the system, for its support and maintenance. The one then, supports life, and the other supports the machine on which that life or animation acts and controls. In this view, then, of the subject, they all operate by imparting the magnetic fluids to the system. This being established, it follows that disease, being a unit, or being the equilibrium line between antagonizing forces, in antagonizing organs, if we can produce this equilibrium without oxidizing or injuring the galvanic battery by these powerful remedies, it is a desideratum to be wished. In the next chapter we shall endeavor to show, by facts unimpeached and unimpeachable, that we can produce this effect much quicker, with no pain or prostration, but that the patient will become stronger at every attempt, until the equilibrium is perfect, or he is restored to

health. In the mean time, we will simply observe that all matter in the natural world is composed of two parts, spirit and matter, or the magnetic fluids and the material substances; and that consequently, a common pill of any kind, or any other substance, has a little or sufficient quantity for its form and action, of this spirit of life, as the human system, has in proportion to its quantity and kingdom to which it belongs. Were it not for this spirit, it would have no form, but be a shapeless mass. The only difference between the human system and material substances is the arrangement of their ultimate atoms, and one being animal and the other vegetable or mineral, and the former so constituted, constructed and endowed as to be the artificer of its own actions, by the superaddition of a will or power, and capacity to put itself into action.

CHAPTER XIII.

CURE OF DISEASE BY MAGNETISM. EXALTATION OF
NATURAL REMEDIES. EFFECT OF THE WILL.

We have shown that the effect of all natural remedies in the cure of disease was owing to their imparting to the system the magnetic fluids, and so operating as to produce an equilibrium in the magnetic forces. We will now show that this material virtue of these remedies can be increased or exalted by the power of the will, to say nothing at this time of attenuation and minute division, producing the same effect. We have magnetized, within the last two years, over two thousand persons, and there has been scarcely a single exception, when we have put them to sleep, but what we have magnetized some metallic keep-sake for them to go to sleep on, or by, in our absence, such as a piece of gold, or a quarter of a dollar. The manner in which

this is done is to make passes and look at the piece, in the same manner that we do a subject, with a concentrated will, and at last breathe upon it, willing that it shall put the possessor to sleep for the length of time that he wills so to do. In ninety-nine times out of one hundred it will succeed. They sit down looking steadily at it, saying mentally to themselves, "I will myself to go to sleep for three minutes," or hours, or days, as the case may be, and it never has failed with me more than once or twice, but what they would go to sleep for the length of time desired, and wake up to a second. I have had this tested when and where I have been lecturing, by dozens, holding different watches, and they would not only go to sleep, but awake when the minutes or length of time had expired that I had given them to sleep on. Indeed, this is so common, and so well understood where they are in the habit of seeing patients go to sleep, that none deny it. It has passed long since into a notorious fact, and acknowledged by all who are not so blinded by prejudice that they are determined not to believe it, even if they see it with their own eyes, which some are so hardened as to declare. This being conceded, on which there is or can be no question, does it not look reasonable that we can increase the natural medicinal virtues of a known remedy, as well as make a new remedy from a comparative inert substance, by the same means and process. We say, to be well understood upon this particular point of the subject, if we can, by the power of our will, put a patient to sleep by manipulations, which is nothing but a secondary effort from our will, or a means to convey the magnetic fluids to a certain point; if after having accomplished this, we can, by the same process, operate upon a metallic substance so as to put a subject to sleep from their own will, for a definite period of time, is it not likely that we can increase a well known remedy in effect upon the system, by the same process? Now

what is this sleep; what does it consist in? It is a perfect catalepsy or palsy of every external organ of sense or motion, from the predominacy of the centripetal force of attraction in the subject over repulsion, with a corresponding internal exaltation, and nothing else.— Now, for instance, we wish to cure a patient who has a disease from too much lethargy or sleepiness, can we not take water, milk, wine, or almost any vehicle, and by our will, by the same means, produce a contrary effect, and produce wakefulness, by infusing into it magnetism in a state of repulsion, or that kind, rather, that will produce that effect when swallowed? Would it require a larger manifestation of credulity to believe one than the other—to believe that we could render dead or insensible, as it were, all the senses of the human body, by looking at a metallic magnetized substance, than that we could produce the opposite effect, and cure a palsy of one or all these organs of sense, or any other organ, by taking internally a magnetized substance? Wine increases directly the force, frequency and fullness of the pulse. By putting our index fingers upon the wrist of each arm, we can increase the pulse of any one (some more than others) from ten to fifteen beats in a minute, in as many minutes, as well as in fullness and force. Would it require any greater stretch of credulity to believe that we could throw this same fluid into a glass of water, and will it to produce the same effect, in that manner, after being swallowed in imitation of the wine, than to raise them by directly throwing the magnetic fluids through the skin and coats of the artery, into the blood, and producing the frequency, force and fullness in that manner.

We have shown that every substance in nature, that tends towards the centre of the earth, or recedes from it, is in a naturally magnetized state, and that all substances have a capacity to do one or the other. Every substance, then, is naturally magnetized. Cannot these be

increased or exalted, by imparting or infusing more into them of the magnetic fluids? Iron, in a natural state, if left free to move, will be attracted to the earth with great force, and so will steel, but if we exalt it by infusing a greater quantity of magnetic fluids into it, it becomes so sensible, that it will not only attract other iron to itself, but will become more sensible to the currents of light from the sun, and turn north and south. The human system has certain natural capacities and abilities, but if we magnetize it, these are all universally exalted. Then, we repeat again, is it not reasonable to believe that the natural virtues of a remedy or medicine, may be increased, after all that has been shown, as above. We have also shown, that in all the affairs of human life, in the formation of domestic circles, societies, churches, and parties, that the influence that one person has over another, by persuation, by argument and eloquence, is produced by magnetism, and was what we termed (cap. ix.) the minimum degree, or what we may here, in illustration, term the natural magnetism of the system; but by infusing more, giving it an increased quantity, we have them perfectly under our control, and can attract them, like the magnet, to perform their natural capacity more perfectly. Can we not, then, see in every light in which this subject is viewed, that medicine can be exalted in their natural medicinal virtues and action, to a greater or less extent?

We have already shown, (chap. ix.) that in a natural state, such is the effect of one individual over another, that they are controlled or led to take a certain course of conduct, or through spite or prejudice, take an opposite course. This is produced by attraction on the one hand, and repulsion on the other, or by what is called sympathy and imitation, or by prejudice, which are but other terms to express the same results. Not only this, we have shown in addition, that the natural magnetism, or the natural capacities, may be so exalted, that time,

space, distance and magnitude, as well as medica, are annihilated, and that the volitions and sensations are entirely catalepted or palsied, that they are dead or dormant. This seems to be produced by such a change upon the system, that all the five or six senses are concentrated in one, and that when so done, the mind is exalted in every faculty. At any rate, when the external senses are thus closed to the external world, the mind of the clairvoyant becomes exalted greatly above the magnetizer, and will look far beyond what the concentrated mind of a thousand persons, in a natural state, could do, if associated together for a similar purpose.— Thus we see that iron or steel, from the mineral kingdom, as well as even the intellect and corporeal system of man, are exalted by the will of one person over another, by the influence of this principle. But farther; we so operate on the body, that we can, by a look, touch, and, in some cases, without either, catalept or make rigid, not only every voluntary, but some involuntary muscles of the system; can attract a patient, by our will, to not only follow us out of the room, and about out doors, but so operate upon the mind, as to call singly into action, every organ or manifestation, can produce desire or aversion, pleasure or pain, grief or joy, quiescence or motion, make him hot or cold, perspire, or the reverse, operate upon his bowels or not; can cause him to sing, to talk, to laugh, to cry, to be serious and pray, or the reverse and swear; to steal all he can lay his hands on, and give it all away the next moment; in short, we can at will, make him do and perform all that mortals are capable of doing in a natural state, and during which he will perform what is infinitely above mortality to perform, as we have seen in clairvoyance. Thus we break up the equilibrium of the mind, palsy the body, analyze the intellect, and recompose it by restoring the equilibrium which it depends for sanity, health, or rationality, we excite and compose the passions at

will, singly or in connection; make him delirious or rational, operate upon the reason and judgment, and make him hungry or loath food. All these we have done and performed before assembled thousands, and for the reflecting few in private circles, and yet the masses, from habit and education, together with the perversions, sneers, sarcasms, and falsehoods of the interested, who have trod, and are still like to do so, in the foot-steps of their illustrious predecessors in the practice of giving a drastic cathartic to a patient the first dose, let the symptoms be what they may, and follow that with either the pounded ice or the Thompsonian cayenne; they cannot be made to believe that we can in the same manner, and by the same means, produce that equilibrium in the physical system, by this influence, on which good health depends. Will any one, at this day, after what they have seen, have the audacity or hardihood to deny but what we can do all we have here enumerated? We trust not. If there is, we will simply say, that he is so palpably led by interest, or blinded by prejudice, that such a person is not worth convincing. Amateurs, farmers and others, are at this time, not only all over the United States, but in Europe, performing them on one another, without knowing the reason, or being able to give the rationale, whys or wherefores, but yet they know them to be facts. If, then, we can perform what we have above enumerated, with a thousand others on a par with them, with others superior, cannot we produce with the will an equilibrium sufficient to cure disease?

These operations, although performed by the spirit of life, the magnetic fluids, by the will of one person over or upon the spirit of life of another, are what are yet called physical effects. When we cataleps an arm, for instance, which consists in making it rigid, and putting it upon its utmost stretch, the minute particles composing the muscles, are forced as far from each other as

possible, to such an extent that the whole muscles, membranes and skin, are put upon the most extreme stretch; this constitutes repulsion, and is produced by moving our eye or fingers, or both, from the brain to the extremity. When we restore it, we take the opposite direction with our eye and fingers, and move them from the extremities towards the brain, thus showing, besides our centripetal and centrifugal forces in this process alone, that we produce an extreme with our will, to wit: a state analogous to disease, (palsey,) and restore it again, by the same influence, to the equilibrium where we found it. Here we can also see, without any fear of contradiction, that it is not a physical cause that produces disease, but a particular arrangement of the ultimate atoms composing the muscles, from the operation of the magnetic fluids. Again, we make the patient hot or cold at will; what is a fever but the alternations between the extremes of first centripetal and then centrifugal forces? What produces health or stops these alternations, but an equilibrium between these forces?—Is not perspiration, and a secretion, and an excretion from the kidneys, the sequel or effect of this equilibrium? Have we not shown, that we can readily produce this effect by the will? Indeed, it is the most easy result to accomplish, of any other process or phenomena. We make the patient laugh or weep, with our will—is not this a physical effect? Who believes that it takes a physical cause, or that it ever produces mirth. On the contrary, is not mirth the result of the ebullition of what is commonly called the animal spirits, as well as crying and grief the depression of them. Now, the index of physicians, as taught in the schools, to discover the particular state of the patient, whether he wants bleeding or not, or tonics, or weakening, by cathartics and other debilitating remedies, is the pulse. Now, we aver that this is a very poor guide, and not to be depended upon; and the reason is simply this, that the moment we place

our fingers upon it, that moment, by the stimulus of the magnetic fluids thrown through the coats of the skin and artery, produce an increase, fullness, tension and frequency. So much are they, by this simple operation, changed, that they will make a sufficient difference to indicate bleeding, and thousands have been injured by this operation, from this cause alone, and been debilitated when they required tonics. This fact was observed by Dr. Rush, without knowing the cause, as may be recollected, by his teaching his pupils to examine the pulse of their patients at least twice, when they first entered the sick room, and when they retired. He attributed it to the excitement or the anxiety of the patient about his condition, and the judgment formed from the doctor's looks, as to the final termination of his case; but, although this might have some effect, the other is the main cause. After having practiced medicine twenty-five years, and taking the precautions recommended by Dr. R., while attending a little girl eight years old, in a collapsed state of scarlatina, by accident I took hold of both wrists at the same time, and found that the pulse, from being weak, and tremulous, came up full, strong, and less frequent, and she, from being delirious, restless and uneasy, fell into a gentle sleep, which she had not been blest with since she had been attacked. I took the hint, and continued to keep hold of the pulse for a little longer, and then changed to the thumbs, after the common manner of magnetizing, and she went into a magnetic sleep, which continued two hours, and awaked calm, collected, and every symptom better. In the evening I took hold of the pulse in the same manner, and with the same effect, and continued to magnetize her for a few days, until she recovered, since which time we invariably operate first upon the blood, through the medium of the arteries; we can, on any one who has confidence, a right temperament and concentration, raise the pulse or depress them, at will. Now, if we can con-

trol the pulse by the will, raise or depress them from fifteen to twenty beats in as many minutes, does it not speak volumes towards not only the curing by that simple means alone, but towards the general effects of magnetism upon disease, from the will of one person over the will of another? These are some of the physical effects produced upon the body by the will of one person upon another, through the influence of the magnetic fluids, as well as some of the phenomena of mind from the same cause and influence. That diseases can be cured without debilitating the patient, but, on the contrary, leaving him in a better condition than before he was taken with it, as well as those of the mind also, we do know from experience. This is not confined to chronic or nervous diseases, or that particular one called rheumatism, but is general, as well as local. We have cured fevers, during the last year, in thirty minutes, without a medicine, external or internal, that would have resisted the common treatment for days, to say the least. When we are called to a patient laboring under a fever now-a-days, when they have confidence, we invariably set down and never leave the patient until he is cured, if it takes me two hours; but to others, from the prejudice of the people, I am obliged to give cathartics, and do what they call, "cleanse the stomach and bowels," which is rarely necessary, and especially to the extent practiced, and then gradually and by degrees, advance with the magnetic remedy of manipulations, &c. The following, among the various cases that have come under my observation, are some that have been cured through the influence of the will alone, or by the exaltation of remedies through the influence of the will, or both combined with natural remedies.

CHAPTER XIV.

CASES CURED BY THE WILL, DIRECT AND INDIRECT.—
OTHERS HELPED, AND NATURAL REMEDIES
ASSOCIATED WITH THEM.

From what has been seen, is it not the irresistible conclusion of the mind, that the human system, by the influence of the will alone, is changed from one extreme action, to that of another, and from these brought to a most perfect state of equilibrium? and that not only the natural virtues of medicine are increased and exalted, but that any inert substance may be so magnetized, or changed by the influence of the will by this principle, and taken internally or applied externally, that it will produce the same effect. The practice in this city, (and has been for the last year,) is so common, for one to cure another's pains and aches in this manner, such as head aches, pains in the side, rheumatism, &c. that mere novices are called upon, and cure daily, from this cause alone. Indeed, it is so general and common, that it has ceased to produce excitement, having long since lost its novelty by repetition. But let facts speak for themselves.

May 10. Called to Mrs. M——, who was confined five days since; has local discharge suppressed, high fever, pains all over throughout the system, pulse quick and tense, furred tongue, a dry, tickling, harrassing cough, with extreme tenderness across the abdomen.—Prescribed twenty grains calomel, followed with epicac in nauseating doses.

May 11. Calomel has operated well, but patient has pains in the head, neck, back and eye balls; soreness across the abdomen a little abated; fever continues, but somewhat moderated; lochia still suppressed. Continue epicac, combined with small doses of calomel.

May 12. Lochia yet suppressed, fever continues; tongue remains furred, with the pains in the head,

neck and back. Commence and magnetize the whole system; in twenty minutes closed her eyes so that she could not open them, and then drew or took of the influence, by long passes, made the whole length of the system beyond the extremities. While under the influence, the pulse became fuller, slower, and less tense, a slight universal perspiration came on, and she was entirely relieved from all pain; the tickling cough was relieved, but still continued. I then magnetized some water to cure her cough, act as an anodyne, and operate as an emenagogue, and cathartic next morning, and gave her. While I was magnetizing the water, she went into sleep, precisely as though I had been making passes at herself, although I was, perhaps, fifteen feet from her, where she could not see me or my manipulations.

May 13. Medicine, (that is, water, having prescribed nothing else,) has operated precisely as desired. She has rested well all night; has had a passage from the bowels, and the lochia has made its appearance; the bad symptoms have all left her, and she is perfectly comfortable and easy, and much stronger than yesterday; directed her to take nothing but light nourishing food, and left her.

May 16. Again called; patient has relapsed, and all the former symptoms returned, with suppressed lochia. Magnetize her in the same manner, and prescribe magnetized water as before, with no other medicine.

May 17. Find the magnetizing and magnetized water has had the same effect as on the twelfth, even to bring on the lochial discharge; the patient is again happy and easy, except a little remains of the tickling cough; prescribed magnetized water for that, and to keep the bowels open.

May 18. Called and found her comfortable, and convalescing, and discontinued my visits and attendance.

June 1. Called to see a child of Mr. P's; found it in

a most perfect comatose or cataleptic state. It lies insensible, with the head and extremities, from spasms yesterday, drawn back so as to touch the head with only these, forming a kind of semi-circle, with stomach and bowels projecting in a very unusual manner; is fourteen months old, and has been in this condition over twenty-four hours, preceding which, had had spasms, more or less, for twenty-four hours. Although I had never magnetized but two patients previous to this, finding that she was so insensible that she could not swallow, I immediately commenced to magnetize, and in about thirty minutes succeeded in affecting her, as near as I could judge by the pulse, breathing, and relaxation of the permanent contraction of the muscles that had thrown her into this peculiar condition. The pulse became more full, slow and firm, the somewhat stertous breathing changed to unimpeded and full respirations, and the muscles gave way, so that she lay natural upon her back; I then left her with no prescription, not even to food, and told the parents to give her nothing.

Afternoon, called again; learned that she had remained quiet and calm for two hours, but is now restless, and writhing, and moaning, and evidently delirious.—Go on, as before, and succeed in a less time, in again putting her into a magnetic sleep, and she became calm, and the symptoms were all changed as before. Thus did I go on, twice a day, and sometimes three times, for a week, with my will and manipulations, when the little patient broke out all over with the scarlet fever rash, which showed the disease, or symptoms, to have been caused by a suppressed scarlet fever eruption; I then continued for a day or two longer, and she recovered and got well. While magnetizing her and making manipulations from head to the extremities, I found that on stopping at the stomach a moment, and then moving in the direction of the arch of the colon, that there was an evident motion or movement created at each time,

in the bowels, and taking the hint, I persevered; and moved her bowels in this manner, from day to day, and never gave her a particle of medicine during the whole time, but one dose of castor oil. At this time I was ignorant of the fact, that water and other substances could be magnetized, and might be given so as to assist a patient in a diseased state. She had been sick so long when I was called, that it was impossible to find out the cause, and it was only after the rash made its appearance that the complaint was understood.

July 25. Called on C. D. Has a most violent and severe attack of the scarlet fever. Is eight years old. The excitement high, throat ulcerated, submaxillary glands much swollen, pulse one hundred and ten per minute, thirst insatiable, tongue covered with a whitish yellow fur, laborious respiration, skin as red as a "boiled lobster;" has been effected twenty-four hours; family increased the bad symptoms by an attempt to sweat her, and has taken a portion of salts, which has operated and given no relief. I immediately gave her a large dose of calomel, and directed her to be constantly washed in water, with the cold just taken off, until it should bring down the heat to the natural standard.

Evening. Calomel operated well; ablutions have been employed according to directions, yet the patient is worse; pulse quick, weak and tremulous; breathing irregular; skin dry and hot; tongue dark and dry, and she is restless and delirious. Continue ablutions; direct the throat to be washed with salt and vinegar, and to gargle with the same, and to give wine whey if there should be a flagging of the pulse and coldness of the extremities, but not to give any without absolutely demanded.

26. Patient worse; heat continues; pulse weak, quick and irregular, as well as respiration; skin red and hot; tongue clean but red, smooth and shining; submaxillary glands and throat so swollen that nothing can be got in to the stomach, with restlessness; delirium and con-

stantly turning in bed, pawing the air with the hands and moaning. In this situation, while examining the pulse critically, I discovered, while holding them, (one hold of one wrist and the other the other) that they became more full and slow, and that she seemed more calm. I then took hold of the thumbs, after the common manner of magnetizing, and held them a few minutes, and the effect was increased. I then stated to the parents that their child was very sick, that under the common treatment I was afraid I should lose her, but if they were willing, I would attempt to magnetize her, believing, from what I had seen, it would help her. They consented, and I proceeded to make long passes from the head to the extremities for over an hour, during which she sunk into a calm refreshing sleep, and the respiration became natural, and the pulse fuller and slower. The heat, which could not be counteracted by cold water, gave way, and with it the scarlet hue in a great measure subsided. I continued this operation twice a day for three days, and afterwards once a day for two days longer, with certain transverse passes upon her throat and neck, which the bystanders could see lessen the tumor in the first operation very materially, and she gradually recovered.

All the medicine she took after I first commenced magnetizing was one dose of castor oil. After she had obtained an appetite and got about the house, from over eating or some other cause, she relapsed, and congestive fever came on, but three times magnetizing broke it off, and she again became convalescent, and got well without a particle of any medicine except magnetized water for her bowels.

This case was as severe a one as we generally find in this or any other country. It ran its course from inflammatory action down into a collapsed state, with black tongue, in forty-eight hours. It was so severe that the fingers peeled all over, as well as the skin upon other

parts of the body. I am very sure she would not have recovered by the ordinary treatment, having had considerable experience in scarletina the last twenty years. I learned from observation upon this case, which I have since confirmed upon others, as well the former case spoken of in this chapter, the important fact, that I can raise or depress the pulse at will with the will, to such an extent as to make or cure disease. Every person can be more or less affected, but the maximum degree of magnetizing is to put the patient to sleep, to perfectly catalepsy or palsy every organ of sense of the whole body, like drinking ardent spirits, a person can take two or three glasses a day, and an ordinary observer would not detect it, but let him increase it in degree or strength, to eight or ten glasses, and he becomes drunk and falls down catalepted or insensible. The former three glasses per day may be called the minimum degree of drinking and the latter the maximum.

Aug. 1st. Called to a child of Mr. F., ten years old, has a well marked scarlet fever, of the middle degree, (Anginosa); is hot, red and feverish; sore throat and all the characteristics of that disease. Without giving him a particle of medicine, I proceeded and put him into a deep magnetic sleep, and made long passes the whole length of the system, to equalize action, and transverse ones across the throat to cure that; these I continued for thirty minutes, and directed his parents to let him remain all night without waking him, and until I came in the morning.

Aug. 2. Called and found him awake and about the house. I directed his diet to be light, said that he might take soft toast and roast potatoes, which I should not have dared to give him under common treatment, and put him into the magnetic state, and drew off the influence with long passes, made beyond the extremities.

Aug. 3. Called again, and found my patient as well as ever, and his mother (an Irish woman) said she "did not believe he had had the scarlet fever." I asked her why she thought so. She said, "he had got well so quick, the neighbors said he had'nt had it." What, then, did you call me for? said I. "Why, he was sick, to be sure and he was, but the neighbors said it could'nt be the scarlet fever." Was he not very hot, and did he not want to drink all before him? "Yas." Was he not as red as red morocco? "Yas." Did he not constantly call for drink? "Yas." What then makes you think he has not had the scarlet fever? "Why, the people said if he'd had the scarlet fever it would have lasted two weeks, or such a business, and may-be died, too." So you believe your neighbors, who never saw him, instead of me or your own senses? "I don't know." Knowing from the first that I should get no pay, and finding now I should get no credit, my combativeness came so suddenly up that I began to soliloquize by thinking aloud in the following strain: O ignorance! blest power! whose wide extended field diffuses like the radiant source of *night*! God pity the *rich* and *intelligent*. The *ignorant* are happy and the *poor* can beg. They who *know* nothing *fear* nothing, and will *learn* nothing! when she interrupted me, and said, "she wished I would put her to sleep, and pull her teeth, they ached so." Are you sure they ache? "To be sure and I am, whin they ached all the long night so that I could take no *pace* at all at all a-most." No, said I, you are mistaken; they don't ache at all; the people, the neighbors, say they don't ache, and do you think you know as well about it as they do? You are mistaken, they don't ache at all, and I opened the door and left her, and have not seen her since.

Aug. 4. Called to C. A. Has lain for two hours in a comatose insensible state; can not speak or open his eyes; his pulse irregular. Now he groans and raises his hand

to his stomach; jaws are closed and locked; teeth clenched, and could therefore take nothing. I immediately put the index finger of each hand upon each wrist, and in a few minutes his pulse rose and became fuller and firmer. I then shifted to the thumbs, after the common manner, and magnetized him in twenty minutes thoroughly, and the pulse became full and of natural frequency, breathing easy, the jaws became limber, and he could whisper. I asked him if he felt comfortable; he said he did. I then made a few more long passes to equalize the action, and left him, telling them not to give him anything until I came in the morning.

Next morning, at eight o'clock, I called and found him in the same magnetic state. I took off the influence, and he awoke and got up, ate breakfast, and has never been confined a moment since.

Feb. 19. Called to T. G. Has a psoas abscess. Took along my clairvoyant, in company with five or six others, to her residence, two miles out of the city. Nothing was said to the clairvoyant about the case, only that we were going to see a sick woman. I did not even know myself what ailed her until he examined her, never having seen her before. As soon as we arrived, I put him to sleep, in another room from where the patient lay, and willed him to follow me, without saying a word, into her room, set him a chair by the side of the bed, and willed him to set down by and examine her, which he did by simply taking hold of her hands. He immediately described it, told what was the cause, what had been applied, and what it was then dressed with, how much it discharged and what the color and character of the matter was. I asked him if she could be cured; he said no, she could not be, that magnetizing would relieve her some, but it would not, or any thing else cure her; that to ease her and keep her comfortable, it would be well to magnetize milk whey, and give her for drink, and wash the sore or ulcer with it, to keep it clean and

allay the soreness; but that when the leaves put out in the spring she would die. I then took off the influence and we left, without making any prescription. Her husband employed one of the most skillful surgeons of the city until the time foretold; when she died.

June 24. Called to E. N. Has a troublesome cough, indicative of subacute inflammation; prescribed bleeding and cathartic of calomel.

June 25. Patient relieved, but cough continues; gave nauseating doses of antimony, and bled her again, and applied ointment tartrized antimony externally; finally all the usual remedies were given for three weeks, as well as a slight "touch" of the gums from calomel, but all to no purpose. I then commenced and magnetized her—put her to sleep nights, and let her lay in that condition all night. As soon as she was put into that condition, she ceased to cough and remained quiet, but as soon as the influence was off, the cough would commence again. This I continued for two week, until the cough gradually subsided, but did not entirely cure it until she took a journey.

Although magnetism did not put the perfect finish or cure upon this case, it gave her rest nights superior to all anodynes that were tried, which were Dovers powders, parigoric, hyoscyamus, &c. and preserved her strength, so that she did not get down, so but what she was able to be about the house during the latter part of the time without any tonic medicines. It is truly astonishing to see how its influence will restore the strength of a patient insensibly, as it were, and almost instantaneously, and we might almost add miraculously.

June 28. Was called to P. N——, a patient who has been laboring for three weeks under the most perfect hemiplegia or palsy of one side of the body. Has been attended by a good physician of this city for that time, but has only succeeded in keeping her where she is, without giving sensation or motion. Commence and

attempt to magnetize her, but can not affect her sufficient to close her eyes, but after magnetizing her more or less for two weeks, she so far recovered as to be able to walk across the house, and out doors with a staff, and to raise up her arm almost as high as her head. Having had to be necessarily absent from the city for two months, she fell into the hands of others, and when I returned I learned she had been sent to the poor-house. I have never heard a word from her since. I presume she recovered, for as soon as you can give them a little motion, it is easy to get more, or in other words, it is hard to get the limb under the influence of the will, but when once they have got so they can even move it all, even to start it, they improve rapidly.

Aug. 29. Called to a patient, A. F. who has had delirium tremens for six days, during which he has not slept a wink. I found his brain in a state of chaos, his mind was all in broken fragments, with a perfect repulsion between his ideas and muscles of locomotion. It might be justly said to be in a state of decomposition: here was a paragraph of morality and there one of obscenity, here one on religion and there one disgusting in the extreme. Now his vision is on heaven, now on hell; now he is seeing angels and now devils; now he soars into the sublime, now descends into the ridiculous; now he is gay and humorous, now gloomy and peevish. In a word, there was a perfect dissection of the association of the ideas forming mind and muscular motion. In short, it was like a printer's form knocked into pi.

I succeeded in getting hold of his hands, and by the assistance of a friend, attempted to get his attention, but it was vain. He was too much taken up with his conversation with invisible spirits to have any communication with me, and although he was at the jail, he wanted "to go to jail," and kept constantly teasing to do so, to get rid of his "persecutors." I manipulated

and made long passes from head to foot, for about thirty minutes, or until I was somewhat exhausted. I thought he appeared to be less wild, but no symptoms of sleep. I directed them to put him into a room alone, and try to get him to lay down, and I would soon return and try him again. They did so; in about an hour I returned, and to my agreeable surprise, found him in a deep sleep. I left him, and never have seen him since but once. He, however, slept all day, awaked rational and perfectly recovered, without the least medicine, and has never had a return of it since, which I learned on enquiry of his father a few days since.

March 10. Called on D. S. Has had a rheumatic affection of the right limb for three months; is unable to walk except with a cane to hobble about in doors; has been bled, took physic, followed by gum guac and tinct. colchicum, and applied the whole catalogue of external applications for that disease, to no purpose. Commence magnetizing, and in twenty minutes, by the clock, put him into a perfect state of somnambulism. I then made passes along the limb from head to extremities, six or seven times, and awaked him, and to his astonishment, he could walk as well as ever, without the least feel of it. I saw him three months after, and it had not returned.

Oct. 20. Called twenty miles into the country, to a patient who is laboring under spasmodic fits or paroxysms. Has had at this time three different physicians, one pronouncing the disease hysteria, and the other two epilepsy, but between them all, the disease continues. This day the fits commenced in the morning, and have been constant all day. I arrived at precisely ten o'clock in the evening; she had just come out of the fit as I entered the door, and lay in an insensible state. I found crowded about in the room, fifteen or twenty persons of all ages and sexes, expecting her every fit to be the last by death. I had scarcely got off my overcoat,

when they cried out "doctor, she is going into another fit." I sprang to the bed, took her by the thumbs, and used the utmost concentration of my will to counteract that paroxysm, which I succeeded in moderating so much, that they said it was but a shadow of what they had been. In this manner I struggled with repeated lighter spasmodic action for at least an hour, when she sunk into a complete magnetic sleep, and lay perfectly quiet for two hours. She then began to be restless and moan, although she could not then speak so as to be understood. I again put her into sleep as before; she became again quiet, and continued so for about three hours, when she again became restless. I again put her to sleep, in which condition she remained until day-break. Having set up all night, at sunrise, I took a walk into the wood adjoining, and on returning at breakfast time, I found her dressed and setting up, apparently as well as any of the ladies of the family, (three in number) and on expressing my surprise, she said she felt as well as ever. After breakfast, of which she partook with us, I again put her into a most perfect state of somnambulism. She became clairvoyant, and said it would cure her. I then took off the influence, got on to my horse, and rode home. I have since repeatedly heard that she has remained well, and has never had a spasm since. I did not give her the least particle of medicine of any kind whatever.

Nov. 20. C. S. called on me to day. Has a badly sprained wrist; is a laboring man, and has a certain job to perform, which he says this sprain of the wrist throws him out of. Knowing he had been an unbeliever, and had been lavish of his abuses upon myself and others, who practiced magnetism, calling it all a humbug, &c. I objected to do any thing for him, as he did not believe in it, and therefore I could not help him. He replied that he did now believe in magnetism, and appeared serious. I told him if he would come three times I

could cure it, and if he would not agree to come till I could cure it I would not touch it. He agreed to come until it should be cured, I then sat down and began to magnetize the wrist and the whole arm from the elbow down. After going on for about twenty minutes, I stopped, and he began to rub it with the other hand. I asked him what that was for; he said it was very numb. I told him then I should cure him, as I had produced the effect I wished. I took off the influence and restored it by a few reverse passes, and he left with an appointment to call again at six o'clock in the evening. He did not come, however, and I saw him next morning and lectured him for not coming as he agreed, for I was fearful he would not give me a fair opportunity, and then go off and say I could not cure him, as a thousand others will and do, if they can but pervert facts and circumstances with regard to magnetism, but he said there was no use of coming, for what had been done had cured it entirely, and it was then as well as ever.

Jan'y 1. Was called to T. B.; has had cold chills; is now hot and feverish, with cough and pains all over him, particularly in the head, neck and back; pulse full, tense and throbbing, and ninety in a minute; has taken pills, which have operated slightly. I took from his arm twenty ounces of blood, and gave him twenty grains of calomel, and directed his body to be sponged all over with water as cold as he could bear it, until the heat came down to its natural standard.

2d. Find him better, but not free from pain. Gave him Dovers powders, and direct the ablution with tepid water to be continued.

3d. Pulse increased since yesterday in force and frequency; has too much excitement; tongue coated with a greyish fur; head is confused, and complains of great debility, and has slept none through the night. I recommended magnetizing. He disbelieves in it, the only

reason why it was not tried first instead of bleeding, but now submits. I closed his eyes in a few minutes, made passes over his head, neck and back, and then took off the influence with long passes in the usual manner. After it was taken off, he said he was free from pain, was much stronger, got up and went about the room, which he was unable to do previous. In the evening I called again, and put him in the magnetic state, and in this manner for three days longer, when he was able to walk about the city, and soon went to work.

Feb'y 25. Called to Mrs. P. Has had, for the last twenty-four hours, chills alternated with flashes, is now permanently and universally too hot; tongue furred; complains of sore throat and nausea at the stomach. Direct her to take an emetic of ipecac, which operated well, but nothing was ejected from the stomach but food and mucus, and this afternoon is not much better, and has had no perspiration. Direct a saturated solution of salt in warm vinegar to be applied to the throat, and to gargle with alum water.

26th. Found her no better; throat worse. Put her into the magnetic sleep, equalized the excitement with long passes, applied transverse ones to the throat, and continue the gargle.

27th. Again magnetize her as before, and make transverse passes across the throat.

28th. Expresses herself well and cured, and able to go to work, and does so.

Feb'y 28. Called to Mrs. W; found her with a fever; was taken last night with cold chills alternating with heat; now she is hot, face flushed, tongue furred, pain all over and throughout the system, but most severe in the back of the neck and back; has a sore throat; skin is dry and hot; breathing hurried and laborious; pulse, by the watch, ninety-four, and indicating to the feel bleeding. I commenced and magnetized her, and in ten minutes closed her eyes so that she could not open them.

When made long passes to equalize, and brought her into a gentle perspiration. Every bad symptom now vanished, the pulse came down to seventy-four and softened in force and increased in fullness, and she declared herself free from thirst, soreness and pain, and as well as ever.

29th, She continues well, and has not taken a particle of medicine.

This same day, called to a servant girl in the same family, who broke out with the eruption of the small pox. I immediately magnetized her, and brought the pulse down from ninety per minute to seventy-four, and brought her into a perspiration, and her sore throat and all her disagreeable and febrile symptoms vanished. It took but five minutes to magnetize her. At five o'clock I called again, vaccinated four of the family for the kine pox, and although she was comfortable, and her pulse but eighty, I again magnetized her, brought on perspiration, and the pulse down to seventy-four again. Thus I went on with this patient, and two others who came down in the same family with the small pox, for three weeks, and every day put them into a magnetic state, until they went through with its natural course, without even so much medicine as a dose of physic of any kind. The two first were three weeks before they began to scale off, and the last, being easier effected, I shortened his one week in duration, but all, although they were covered as much as they generally are with eruption of the distinct kind, and had severe symptoms when it first made its appearance, were made comfortable by magnetizing, so much so, that they could and did eat any and all kinds of vegetable food, with as good appetites as ever, and were about the house, and did not lie down except for two or three of the first days. I found I could control the pulse and skin with magnetizing, and therefore "put the ship before the wind and let them sail," without medicine, and the effect was that they

were kept in as good strength as usual or natural, without raising fever.

April 23d. Was called suddenly to a child five years old, said to be dying. On arriving, I found the little sufferer had been for two hours in an apoplectic fit, without any thing having been done, although a physician was present, and had been for an hour. All were expecting to see him breath his last. The house was filled with neighbors and friends, all anxious to help by both action and prescription. Some were for doing this and some that; some said he had worms, some one thing and some another, and it appeared to me to be more like an ant heap than any thing else, where the little animals or insects are crawling one over another; each had a prescription of his own, and were determined it should be used. I immediately caught the patient by the wrists, placed my fingers upon the pulse, and concentrated my will to throw into the little sufferer's arterial blood the magnetic fluids. I soon found that I raised the pulse a little, and continued on. I then, after ten or twenty minutes, shifted to the thumbs, and then made passes in the usual manner, from the head throughout the system, to endeavor to restore the poles of the system from the brain, and notwithstanding the talk and noise incident about such cases, I concentrated as much as possible, and continued manipulating about an hour and a half, and a warm bath having been prepared, I consented and put him into it. He had remained there but six or eight minutes, when I discovered, by the pulse and other symptoms, that it injured him, and took him out and recommenced my manipulations, which again raised the pulse which had sunk while in the bath. During all this time he had unequal, and more or less, alternating spasmodic action of the muscles of the head, neck, face, arm and leg of the right side, which now had subsided in a measure. From the history of the case, (having been costive all winter) together with the

hurtful effects of the bath, I reasoned that his head was very much congested, and believed it to be an almost hopeless case. The doctor and bystanders looking on me with not only pity, but derision and contempt, to think that I should believe that magnetism could have any influence to help him. Partly to gratify them, and take off the responsibility should the case prove fatal, I made four incisions into different veins upon his arms and hands, without obtaining over a tea-spoon full of blood. I also cupped his temples and obtained a little more. Injections had been given while I was magnetizing; mustard poultices were now applied to his feet, legs and stomach. All these did not change him in the least; he remained in a comatose state, insensible, with light spasmodic action of the muscles of the right side. I now made up my mind that nothing would save him but magnetism, and therefore shut my senses to the thousand and one prescriptions that were made, and constantly making for the little sufferer, over and around me, gratuitously, as is always the case by the knowing ones in such cases, abstracted myself, and concentrated upon the child with all the energies of soul and body. After a little time, the pulse became fuller and slower, the heat was increased and diffused throughout. In this manner, encouraged by the symptoms, I unremittedly continued my operations for four or five hours, until I became exhausted, when I sent for two young gentlemen of the city, whom I knew to be good magnetizers. They came, and relieved me by turns, and while one of them was magnetizing him the spasms ceased. They then retired, but I continued on. The whole time, without cessation, amounted to seven hours that I exerted myself in this manner. At length I succeeded in getting him into a magnetic sleep, and he lay two hours calm and composed, and I retired to rest. He then became restless, and I again put him into the magnetic sleep. I continued in this manner, as soon as he awaked, to put

him again into the magnetic sleep, for forty-eight hours, when he got so that he had sense and could speak, but was yet restless and could not move or feel, either with the left arm or leg, or in other words, the apoplexy had terminated in a complete hemiplegia or palsy of one side. Having been perfectly exhausted with my exertions, and the patient somewhat relieved from immediate danger, although in this situation, at day light I went home to get rest, telling his parents, as his bowels were still not free, that when I returned I should give him calomel for a cathartic. Soon after I had left, the physician that was first called, finding that I had got him, by my operations, so that he would probably recover, called, and found on enquiry, that I was to give him calomel on my return, and kindly volunteered to give it himself, so as to have a hand in the cure, although he had said from the commencement that he would not recover, and it was no use to give him any thing. What he gave him made him extremely restless, uneasy and painful, and I was sent for before I had got any rest. On arriving, I found him threatened with spasms again, and asked how much calomel he had taken. They said it was a spoonful. I expressed surprise at the quantity, when they said it was not a spoonful of clear calomel, but that he dissolved it in water, and said some of it was left in a teacup. I examined it, and as near as I could ascertain, believed it to be strychnine. He also gave him some paragogic. I then put him again to sleep, and he became calm. I continued to do so all day, when he awoke, which was once in about two hours, until night, or until about twelve o'clock, when a gentleman sitting one side of the bed, and being an unbeliever, and his arm and leg remaining both palsied, I pinched them, and showed him that he had neither sense or motion in that side, and he was pitying the poor child, when I took hold of the right hand with my left, and placed the point of my thumb to his, after the man-

ner of magnetizing, and took the fingers of my right hand, converged to a cone, and placed them upon the left organ of firmness, held them there until an equilibrium of temperature was established, and then, in as slow a manner as I could move them, brought them down in a circular manner across the head, down the left side, past the external ear to the point of the shoulder, along the arm to the extremity of the thumb. This I repeated three times in this manner, and at the last time touched my thumb to his, and willed him to raise his arm, and to my delight, as well as his astonishment, he raised it immediately up. This I did a few times, and then went behind him, and placed the fingers of both hands, one on each organ of firmness, and willed to send the magnetic or nervous fluids to the extremities so as to produce motion, and he drew up both hands and arms, and made them fly in the air like drum sticks, and continued to do so for a few minutes. I then put him deeper into the sleep, and he rested quietly for two hours; we would then wake him up, give him bread-coffee, toast-water, or gruel, and then put him to sleep again, as he was extremely restless when not under the influence of magnetism. The next morning he broke out in spots with a rash, more or less diffused, which resembled scarlatina, which came and went for two or three days. During this his bowels were obstinately costive, and in conjunction with clysters, castor oil and magnetism, I gave him eight grains of calomel, which was all the medicine he had during his illness, except after two or three days more, I prescribed magnetic drops for him, to regulate the bowels. After taking them three or four days, in conjunction with injections, they became regular, and he now appears as well and as healthy as ever, which is a year since.

Oct. 10th. Was called to J. H. Is of a lymphatic and sanguine temperament. Has had for four hours a most violent fever; complains of a very severe pain in

the head; eyes suffused, and can not set up a moment. Commence and put him into a deep magnetic sleep in twenty minutes, during which he sweat profusely. I then awaked him, and he was free from fever and pain, and expressed himself as well as ever, and has not been confined since.

Was called to Mrs. L.; has had severe cholic all day; can not lie down in bed; has taken various medicines, but finds no relief. I immediately placed the tips of the fingers of my right hand upon the stomach and clasped the left thumb with the other; in six or eight minutes I perceived her eyelids began to lop, and I told her she had better lie down. She said she could not, as she had frequently tried during the day. I told her she could now do so without pain. In a few minutes after getting into a recumbent posture, she fell into a deep sleep, and was so easy and still, that her father, an aged gentleman, said she was dead, and cried "Mon Dieu! Mon Dieu!" I told him that she was so easy that he must look sharply or he could not see her breathe; that she was not dead, but easy; but he crossed himself, and paced the floor, shedding tears and ejaculating "Mon Dieu! Mon Dieu! she has gone! she has gone!" Soon the husband, who had been sent for, returned, and he satisfied the old gentleman that she was only sleeping. I then left, telling them to let her alone until I should come back and awake her myself, which was about two hours. During my absence she never moved a limb, and breathed so easy that you could hardly see her breathe at all. I awaked her by making three reverse passes at the distance of six or eight feet. She now said she was as well as ever, and I left her and have not seen her since.

C S. is attacked with apoplexy, which terminated in palsy of one side; has not spoken or moved the muscles of the right side of the body and limbs for two weeks,

and at last was incapable of swallowing. She is now perfectly recovered by the use of magnetism alone.

P. N. a child eighteen months old, had the measles four months since in the state of New York, which left her with a cough which has continued since. The family expect her death daily from consumption; doctors say they can do nothing for her; the family have purchased in this state, and are obliged to move, and are now on the road to the interior; were in hopes the journey might help her, but are now in despair. She is emaciated and pale; coughs and cries constantly; her pulse fly like quicksilver violently agitated in a vial. Well knowing she could take nothing, I raised my hand and brought it down upon her head, but before I had got it within six inches, she fell into a profound sleep. Believing it must be an accidental natural sleep, I placed my hands each side the head, bringing them within two or three inches of its sides, and pulled and pushed backward and forward, and to the surprise of all present, it followed my hands backward and forward, which proved it to be magnetic. I then directed the mother to lay her down upon the settee, and I continued my manipulations until they had taken tea, which was ready when I commenced. She now lay in a most profound sleep, pulse became full and slow, and she breathed so easy and natural that she almost seemed to be dead. I then left her to sleep until she should awake of her own will, and agreed to see her next day, when I called and found that she was so much better that her mother has carried her out to visit a connection. Next day she was so much better that they started on their journey, and I never again saw the child. I have since learned from their friends that the child commenced to get better from that moment, and is now well.

Called to O. P.; has a most violent headache, which was preceded with cold chills, and indicates inflammation. He disbelieves in magnetism; I therefore took

from the arm thirty-two ounces of blood. The bleeding produced no relief. I then told him to recline upon the sofa, (which was at six in the evening) and I would try to relieve him with magnetism. In less than five minutes he was in a profound sleep, from which he did not awake till four in the morning, bathed in perspiration, and perfectly recovered, went to work, and has continued well since.

July 5th. Called to a child two years old, who has chronic bronchitis; is cross and petulant; has been sick six weeks; has had three or four different physicians, and is in this condition; does not sleep a moment without laudanum, and then is obliged to take physic, thus alternating between these, with a severe cough and laborious breathing; will not let me come sufficiently near to examine the pulse. I at once put her to sleep by manipulating the top and back of the head. Fearing she might wake in the night from her cough, I magnetized two table spoons full of water, to be given in the night when she wanted drink, to continue her asleep, and to produce two motions of the bowels next morning. In the forenoon of the next day I called, and found the medicine (magnetized water) had operated as I wished, and my patient running about out doors. A few more sleeps and magnetized water produced a cure.

Oct 2d. Called to a child six months old, that has been attended for the last month with the bowel or common summer complaint, until it is reduced to the verge of the grave, and is nothing but skin and bones. The attending physician had given it up, saying "its head is full of water, and it must die." I commenced and magnetized once and twice a day for five or six days, gave it magnetic powders, magnetized all its drinks, and it soon recovered, and is now an interesting child.

Jan'y 1st. P. H. has had, for the last six days, a most violent periodical pain over one eye; has had a physician who has bled and cathartised him in the usual

allœopathic manner, three or four times, but all to no purpose, except to debilitate the general system. Commence and magnetize the part by making passes and breathing on it. After repeating the operation, he immediately went about his work, and has continued perfectly well since.

C. D. is effected with crysipelatous inflammation of one limb, from the knee to the extremity. It is hot, red and swollen, so that she can not walk. Twice magnetizing perfectly cured it, without the least medicine.

Dec. 15th. Was called to O. P.; has had the delirium tremens for two weeks; has been attended by three or four of the best physicians in the city, who succeeded in mitigating the disease and giving him some sleep, but has now relapsed; is so delirious as to be bound down to the bed with cords, fastened around the wrists, that have now imprinted themselves into his arms the thickness of the cord; has torn his bed all to rags. Commence on Monday morning, and in ten minutes put him to sleep and left him. Called at noon and found that he had slept but one hour, and then awaked as crazy as ever. I then put him to sleep and he slept till night, when I awaked him and found him rational but weak; gave him some chicken tea, put him again into a state of somnambulism, and he slept till morning.

Tuesday morning. Found him rational, and able to walk about the house, but put him to sleep, and he slept till noon. Called again and awaked him; gave him some chicken tea, put him to sleep and he slept till night. At night made some long passes over him, but did not put him to sleep, as he was rational, had strength to walk about out doors, and had a good appetite. It was now six o'clock, and fearing he might not sleep well, I told him to go to bed at nine, and that as it was some distance, half or three quarters of a mile, to my house, I would put him to sleep from thence. This, on being told by him to the family, excited them and friends to

congregate and watch him at the time. He, however, went into so deep a sleep at nine that they or their friends could not wake him by crying fire or shaking him severely, and slept all night.

Wednesday morning. Made long passes over him, and told him, although the weather was cold, to go out. Evening. Called and made some more long passes, magnetized a wine glass full of common pump water, told him to go to bed at nine, drink the water, and it would make him sleep well all night. On going home, I met two gentlemen who wished me to return and touch his phrenological organs. I declined, saying he was too feeble, that I had left him for the night, and could not alter my directions. They asked me if I could put him to sleep again from home; I told them I would try, and nine was the hour fixed on. I proceeded homeward and they went their way. At nine I commenced and concentrated, and put him so deeply to sleep that they (some seven or eight gentlemen) could not wake him. One of them pinched up the skin and thrust a pin three times through and through, but could not wake him. To astonish them still more, while I had him asleep, I willed him slowly to raise his arm, and bring his hand as high, and almost on to the top of his head, as also to raise up his right leg in bed. Believing that some of the party would be at my house, I set up till ten minutes past ten, when three of the gentlemen called, and assured me that I had succeeded as above, but that two or three of the gentlemen present were yet sceptical, but if I would awake him at precisely half past ten, keep him awake ten minutes, and then put him to sleep again, so that he could not be awaked, it would convince all, and *tell* loudly for animal magnetism. We compared clock and watches, and they retired. When the time arrived I endeavored to awake him, and three minutes before the ten minutes were up, I thought I would commence to concentrate to put him to sleep, in order to perform it

to a minute, but next morning they informed me that all was performed as agreed, but that he fell asleep three minutes before the time. He had now recovered his health, and I have never seen him but once or twice since.

It is well known to all who have read medicine and surgery with the celebrated Dr. Joseph White, of Cherryvalley, or received lectures of him at the college at Fairfield, that friction with animal oil was his universal remedy for almost every disease of a surgical nature, where external applications were used, and they will further attest its efficacy, above all others, as a general remedy. Now we can at once see that the oil was of little or no use, and that the cure depended on restoring the equilibrium by animal magnetism.

Holstead, of New York, became celebrated for curing the dyspepsia by only *kneading* the bowels, which we could not then understand, but now know it to be from animal magnetism, as well as all those old fashioned cures or remedies, such as charms, talking out fire from burns, healing old sores and ulcers with the sweet apple or hazlenut sticks, cut on the end into the form of a triangle, as well as the stroke of the seventh son. In each case, the hand was passed over the part, and he who operated had a motive, which impelled him onward, that amounted to will.

Perkins became celebrated with his tractors or metallic points, and justly so too, for it was acknowledged that he performed the cures; but he was doomed to oblivion by a certain other physician, curing in the same manner, with *wooden* points or tractors. But we now can see that it was the hand back of both, with the will, that produced the cures in both instances. All the cures that have been performed by the most common hand up to the Boston blacksmith, related by Dr. Warren, either with or without washes or liniments, with the flesh

brush or the naked hand, may be attributed to animal magnetism:

1. Gaping, yawning, stretching, coughing, sneezing and hiccough, are but nature's efforts to restore lost equilibrium in the muscular and membraneous systems, as well as stomach. They act like so many galvanic batteries to the various systems they equalize. These we have but to mention to the ingenious and observing to be believed and appreciated.

Such are some of the numerous cases that have been treated by me with magnetism, for the last two years. To detail one half of the cases that have come under my observation and treatment, would swell this volume vastly beyond our prescribed limits. To disabuse the public mind of an impression that has become general, we would observe, that magnetism is as applicable to one disease as another, and therefore not confined, as some imagine, to rheumatism and palsy.

If disease be a unit, what will cure one disease under certain circumstances, will cure another. It is but very late that magnetism has been used at all for the cure of disease, in this country, and where it has been, (except now and then by a physician in practice) it has been in those cases that have been thrown upon the shelf by physicians as incurable. Hence it has been used or applied more in those diseases than any other, because the most severe and least understood. But where it has been used in acute diseases by myself, I can not now remember a case where it has failed, if timely administered. Generally, we can cure a common fever in from twenty minutes to an hour. I make it a standing rule, where they have sufficient confidence to let me use it, never to leave the house, in acute diseases, till they are cured or made comfortable. Some will say, why then did you not cure the above cases without giving medicines? The truth is, as we have attempted to explain, it is a doctrine of attraction and repulsion, as well with

regard to mind as matter, and if they have not at least confidence sufficient to remain passive, it is useless to attempt to affect them. Many persons, through fear of being injured or laughed at by their neighbors and friends, resist the influence and repel it from them, and then if they are not cured, go off and call it a humbug. Such are the prejudices of the people, that if a medical man, of good standing in society, of acknowledged skill in the old fashioned practice, attempts to cure by magnetism, he loses his practice, and becomes a laughing stock to community. They are so accustomed to ride to the grave upon the calomel hobby-horse, that they can not be made to believe in the efficacy of a different method. They had rather continue and risk themselves under that treatment, than be cured by a shorter and better process. Those who have attempted to establish the new practice, have met with the common fate of all who ever attempted to establish or make any improvement in science or the mechanic arts, recorded in history. Gallileo was thrust into the inquisition for conceiving and teaching that the earth revolved upon its axis every twenty-four hours, although the most ignorant of the present day would be thought silly indeed to disbelieve it. Dr. Harvey, for discovering and teaching the present theory of the circulation of the blood, lost a lucrative practice in the city of London. Fulton, of our own country, was called insane for years by the would-be intellectual aristocracy of New York, and was called an old hair-brained fool by the dandies of Albany, in his failure on his first attempt to get his steam vessel across the Hudson to Greenbush; and although he was ultimately completely successful, and conferred such great and lasting blessings upon his country and mankind, he died poor, and his country has seen his heirs in poverty, without relieving their necessities. Whitney, the young collegiate genius, who invented the cotton-gin, the machine for picking out the green seeds from

the cotton, and thereby gave a new era to the agricultural, commercial and manufacturing world, as well as by making it the great staple, and thereby enriching the whole south beyond comparison, as well as the whole world, was paid by being cheated, sued, harrassed and robbed until the day of his death by the very persons he most benefitted.

Dr. Elliottson, President of the Royal Society of London, was removed for declaring his convictions of the truth of animal magnetism and phrenology; but like a true philosopher, he chose to hold fast the truth let what would come, and is now in the ascendant, looking down upon his persecutors with pity, still contributing to both. It is then absolutely necessary, with all our boasted intelligence, liberal spirit and toleration, to commence and advance step by step in a gradual manner, by slow and insensible degrees, as it were, in any new science, art or practice. Had I, in many of these and other cases, commenced at the onset with magnetism, I should at once have got my dismissal, and some other, who would have pandered to their pampered jallap and calomel appetites, would have been called.

There are many considerations in this democratic land, why a man can not, in the miserable vassalage of the practice of medicine, take and maintain an independent course, and "live and thrive," and carry out any new system, however important and true. There is such a thing as being so free and independent, as to be your own divine, your own lawyer and doctor, and own paymaster, and make your own laws for the time to pay in too. There is such a thing as to be so liberally educated, and so wise in our own estimation, as to not be able to see the truth at noonday. Man is emphatically the creature of habit and custom, and of all the struggles that a professional man has to encounter, and particularly the physician, is ignorance and the prejudices that spring and flow from that most fruitful source. Were a man

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independent of all pecuniary considerations, he might set ignorance at defiance. But money is the god that the great majority worship. The man is measured by the cloth in his coat, whether spun so many skeins to the pound or less.

In former times we read that it was manners and intelligence that made the man; but now it is changed to ignorance, impudence and wealth. Did the masses believe in the influence of magnetism to remove disease, the results would be infinitely more successful. We have now to contend with, not only the prejudices and the wills of the patients, but the whole neighborhood, ministers, doctors, judges, schoolmasters, lawyers and "*lawyer's apprentices*." What success has a speaker in convincing an audience, if they go to hear him with a deep rooted prejudice not to believe a word he utters? A few years since, and a few persons in Massachusetts were attracted together to form a temperance society; mind after mind, individual after individual, has been added, until now, not only the majority of this nation is temperate and abstinent, but like an epidemic, it has spread throughout Europe, redeeming and confirming multitudes in the wisdom and necessity of the "*sober second thought*." So also with magnetism. It is so big, fraught with results so astounding and novel, so incomprehensible to the indolent and ignorant, who find it much easier to stand at a distance, and look on and cry humbug, than to approach and investigate it. To enforce conviction under all these circumstances, is truly an "*uphill business*," but it must and will, like all others akin to it, ultimately succeed, for "*truth is mighty and must prevail*." It is, I repeat, a doctrine of attraction and repulsion, and requires belief, conviction and faith. I know the ignorant and interested will sneer and turn up their noses, even at this, at the mention of belief and faith, but it forms the very essence of success,

THE END OF THE FIRST

and is taught in the sacred scriptures and all profane history.

Does not the longest journey that was ever made require the first step? and was that step ever taken without a motive sufficient to move the subject to take it? Can it be done without the exercise of the will? and what attracts the person to a decision of that will? Is it not *belief* of some interest or benefit to be gained—*faith*? The mind has, from the first dawn of medical science, been known to have great influence in not only curing, but producing disease. It is in reality, at this time, if we look about us, no novelty, except that magnetism demonstrates it with mathematical certainty. It has been known and acknowledged from time immemorial, that fear directly debilitated the system, and produced diseases of different classes, as dyspepsia, hypochondriasis, hysteria, &c, and that confidence stimulated and cured these diseases, as well as a variety of others. Is fear a corporeal material substance, or confidence, either? Joy will directly strengthen, and grief weaken or debilitate the system. Is there any material cause in joy or grief? All the other passions of the mind operate in the same manner, the one to raise, and its antagonist to weaken the system. Can we not all see in what an awkward position it places those who believe that material substances are the cause of disease? Do we not see that from the very nature of things, that material causes are never the cause of disease? Are not (even among the common writers on the present systems of the practice of medicine) nine tenths of the causes of all diseases attributed to colds and heats, and passions of the mind, and irregularity of sleeping and waking? Are the sensations of heat and cold material substances? Have we not clearly shown them to be sensations of the body, from the effects of the magnetic fluids, over and over again, in a variety of views of mind and matter?

So well has this general principle been understood by the medical faculty, that teachers and writers deem it indispensable, and therefore inculcate it to their pupils as the first point to be accomplished—to get the confidence of their patients. Is there any corporeal substance in the confidence of the patient? Why is this confidence necessary, if the cure is to be performed by a known material remedy, acting on the physical or material system, at all times in a particular manner certain and decisive? Is this confidence any thing but a different term for belief or faith? and what is this faith but sympathy or attraction? Many a physician who is ignorant of his profession, but excels in a smooth speech, gift of gab, as it is called, or has persuasive eloquence, will have better success than one of better reading and knowledge, who is destitute of these natural gifts. “Eloquence,” says Daniel Webster, “is the gift of God, and can never be acquired by art; without this gift, or when it is wanting,” which is true to the letter.

Among the writers upon confidence, may be recorded that scientific, good man and skillful practitioner, Dr. Rush, who tells us that it is essential that we make our patient believe that a medicine will have the effect we wish it, or if you please, *will* it to have; and that a doubtful remedy, with this premonition, will have a more decided effect, than another, of more general certainty, without preparation of mind. The sacred writings are full of these axioms or sayings, to prove the necessity of first operating upon the mind, or to show that the mind has the controlling influence over the body. Indeed, it shows it to be the cause and cure of not only diseases, but knows nothing or inculcates nothing of the body, but a mass of matter, animated and moved by an ~~essence~~ or spirit.

We make a few quotations from Christ and his apostles, such as “according to your faith, be it unto you;” “as a man thinketh, so is he;” “thy faith hath saved

thee, go in peace;" "as thou hast believed, so be it unto you;" "stretch forth thy hand, and he stretched it forth, and was healed;" "O thou of little faith, wherefore did'st thou doubt;" "O woman, great is thy faith, be it unto thee as thou wilt;" "because of your unbelief you could not cast out devils;" "if you have faith and doubt not, you shall do this which is done to the fig tree, but also if ye shall say unto this mountain 'be thou removed, and be thou cast into the sea,' it shall be done;" "for it is the power of God unto salvation to every one that believeth," Paul; "for therein is the righteousness of God revealed from faith to faith, as it is written the just shall live by faith;" "for what if some did not believe? shall their unbelief make the faith of God without effect;" "do we then make void the law through faith?" "God forbid, yea we establish the law;" "Abraham believed God, and it was imputed unto him righteousness;" "therefore, being justified by faith, we have peace with God, through our Lord Jesus Christ;" "so faith cometh by hearing, and hearing by the word of God."

Thus, then the book of revelation and the book of nature, both go hand in hand to establish the principle of the great necessity of faith or belief, a necessary requisite for the accomplishment of an object, or obtaining an end or effect, and thus the divine and philosopher justly labor to inculcate the same general principles, the one toward God and the invisible kingdom of heaven, the other toward man and his invisible spirit or mind. The doctrine, then, of equilibrium, as taught by magnetism, and the operations of mind, as illustrated and explained by our principle, confirms, sustains and elucidates the principle of the christian religion, inculcated in the sacred writings, better than any other system of philosophy hitherto disseminated among mankind. Indeed it is in perfect coincidence with the general principle of conduct inculcated throughout the scriptures by Christ and his apostles.

No man can become a good christian, and walk righteously, without faith, for faith is the very governing principle of the will, the motive which determines the action. No person can be affected by the will of another without sufficient faith to accomplish the cure, or belief to attract them to the commencement of a trial. "Though I speak with the tongue of men and angels, and have not charity, I am become as sounding brass and tinkling cymbals. And although I bestow all my goods to feed the poor, and give my body to be burned, and have not charity, it profiteth me nothing. Charity suffereth long and is kind. Charity envieth not; charity vaunteth not itself; is not puffed up; doth not behave itself unseemly; seeketh not her own; is not easily provoked; thinketh no evil; rejoiceth not in iniquity, but rejoiceth in the truth; beareth all things, believeth all things, endureth all things. Charity never faileth. And now abideth faith, hope, charity, but the greatest of these is charity."—Paul.

Charity, then, appears to be the natural impulse that sets the will in motion to perform the conduct of a christian, from the natural affinity to truth, to do good for the consolation it affords. Charity, then, directs the acts of the will from the natural attraction of virtue as its own reward. Charity, then, seems to be a word comprehending all the christian virtues, and is synonymous with general benevolence. Charity, then, stands antagonized to hypocrisy and the whole cohort of vices flowing from vanity and self-esteem. Thus, then, hope, faith, belief, charity, are all twin sisters, inculcated by the sacred scriptures as necessary to salvation. They are not the less necessary to accomplish events in the common course of conduct in life, and the cure of disease.

History informs us that those who have performed the greatest exploits, accomplished the most powerful actions and results among mankind, are those who were

endowed with an unshaken and abiding faith, which gave energy to the most powerful and concentrated volitions, amounting to a perfect conviction of their accomplishment before commencing to perform them—a kind of intuitive certainty or earnest of their success. No man can or will concentrate his will to the successful accomplishment of an object, without he has an internal belief, amounting to conviction, of its ultimate certainty.

To pass over Hannibal, Alexander, and the Roman generals, Bonaparte conquered because he “was resolved to conquer.” He had great discrimination, and but few could stand the piercing glance of his magnetic eye, and when he had once formed his judgment, never pondered or reconsidered, but put his indomitable will into execution, and this was the great secret of his success. Like some rules in courts of law, where we are not permitted to look behind the record, he never looked back or behind, a judgment once formed, but on the contrary, like a mad ox, who shuts up his eyes and pushes with his horn, he shut his eyes to all other objects but the accomplishment of his purpose. He willed and it was done; and thus from a rapid series of judgments to the most determined volitions, almost as rapid as the thunder follows the lightning, from object to object, constituted him the most successful general and greatest man upon record in the annals of history.

Although he might be called the greatest, Washington of our own country, was the best, and stands unrivalled as the great benefactor of mankind. He was also characterized by a faith amounting to almost certainty. Nothing but his abiding faith could have kept him for years struggling, with a handful of half-starved and half-clad patriots, against the armies of England, and our own Tories almost equaling in numbers his entire army; but yet, by his hope, faith, characteristic and determined will, he succeeded in being the liberator of his coun-

try. In our time, the conduct of General Jackson, whether at the head of the army or the government, was distinguished by a great decision of character, which is synonymous with volitions. It was his particular trait of character, which in both situations, whether at the head of the government or the army, in the cabinet or the field, stamped him emphatically as a great man, and will carry his name down to posterity as such. David Crockett, the hunter, but hero of the Alamo, had all the characteristics of a great man; sagacity, firmness, and a determined will to carry his judgments into execution. His well known motto, "be sure you're right, then go ahead," is the true principle, and although laconic, comprises the whole, and all that is necessary to constitute a great man. In a word, man is successful or otherwise, in the events of human life, in proportion to his faith and the strength of his volitions. His conceptions or knowledge is obtained by attraction, but carried out by volition, or by the law of repulsion. Whatever, then, we do, to be best done, should be done "with all our might."

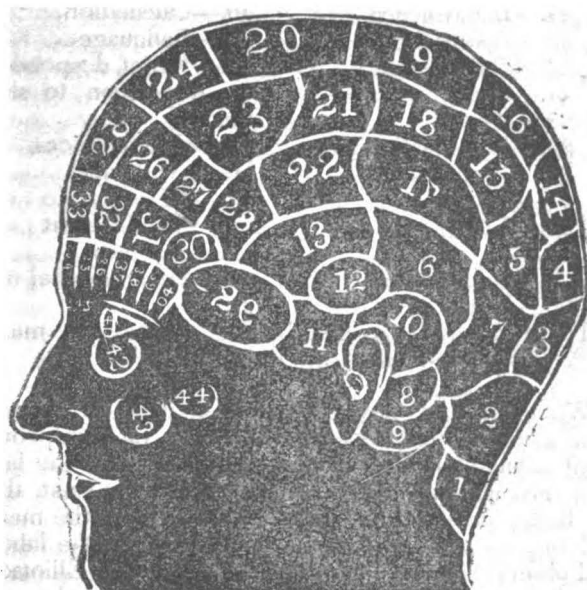
From what has been seen, it must be inferred that life is commenced and continued by the operation of the magnetic forces. That food has no other effect than to keep the galvanic batteries of the system of batteries in repair; that all remedies, although in a natural form, have no other effect, if beneficial, than to restore the lost equilibrium, (which is disease itself) and when medicine acts detrimental, to break up that equilibrium, and produce one or other extreme; and that disease is at all times a unit, and is never caused by material substance or ponderable matter. That remedies, like the magnet, can be exalted in virtues, or increased from their natural condition by the magnetic fluids, and that these can be communicated by the will of one person by repulsion to that of another by attraction; and that, from facts which we have collected by great labor, disease can be

cured much quicker and easier, and the system left better, by the will, than in any other manner, and that in former times it constituted the only method of practice. This being conceded, it will at once be seen that instead of the ordinary practice of reducing a patient down to "death's door" to cure a disease, and then bring him up again above the natural standard, is unnecessary, wrong and pernicious. Does not the disease itself from its inequality, dililitate? and to add more, will it cure it? Will two wrongs make one right? Will two errors make a truth? Never! Is there any skill, when a patient is debilitated, to go to work with remedies to weaken still more, in order to strengthen him? If a packhorse is staggering under a load he is unable to carry, should we increase that load to remove the evil?

The new system has not only the superiority of curing in a few moments, many times, where the other will take as many days; but the patient is left in as good strength as when attacked by the disease. Will it not, then, commend itself to the suffering community? We have only further to say, on this branch of the subject, that what we have detailed in regard to the cure of the various cases of disease, is every word minutely true, mostly occurred in this city, and could have been substantiated by unimpeachable testimony were it deemed necessary.

CHAPTER XV.

PHRENOLOGY PROVED BY MAGNETISM—REVERSION OF POLES.



No. 1.—*Locomotion.

" 2.—Amativeness.

" 3.—Philoprogenitiveness.

" 4.—Inhabitiveness.

" 5.—Adhesiveness.

" 6.—Secretiveness.

" 7.—Combativeness.

" 8.—†Vitativeness.

" 9.—*Satiety.

No. 10.—Destructiveness.

" 11.—Alimentativeness.

" 12.—†Imitation.

" 13.—Acquisitiveness.

" 14.—Concentrativeness.

" 15.—Approbativeness.

" 16.—Self-esteem.

" 17.—Cautiousness.

" 18.—Conscientiousness.

" 19.—Firmness.

- | | |
|-------------------------|-----------------------------------------------------------|
| No. 20.—Veneration. | No. 36.—Size. |
| " 21.—Hope. | " 37.—Weight. |
| " 22.—Ideality. | " 38.—Color. |
| " 23.—Marvellousness. | " 39.—Order. |
| " 24.—Benevolence. | " 40.—Calculation. |
| " 25.—Comparison. | " 41.—Language. |
| " 26.—Causality. | " 42.—*Grief, despondency, disposition to shed tears. |
| " 27.—Humor. | " 43.—†Mirthfulness, laughter, levity. |
| " 28.—Tune. | " 44.—*Faculty to discriminate different things by taste. |
| " 29.—Constructiveness. | " 45.—*Instrumental music. |
| " 30.—Proper names | |
| " 31.—Time. | |
| " 32.—Locality. | |
| " 33.—Eventuality. | |
| " 34.—Individuality. | |
| " 35.—Form. | |

Those organs discovered by the author, are marked *. Those re-located, are marked †.

Whatever may have been the opinions of writers upon mind, for past centuries, from the rapid improvement in anatomical science and physiology for the last, they now all generally agree in one point at least, that the brain, including the organs of sense, are the material organs of mind. More recently, from the labors and observations of Gall, Spurzheim, Combe, Elliotson, Fowler, Jones, Parnel, Grimes, Collier, and others, a considerable portion of community were inclined to disbelieve in the old theory of the unity of mind, and believe that it was the result of a plurality of organs. While the science was thus fluttering in the breeze of public opinion, some believing one way and some another, the mysterious influence of magnetism, after the lapse of ages, (with a few exceptions) was called to its aid, and we now know, by the light of that principle, that phrenological science is not only true, but are enabled to detect the reason why its advocates failed in

pointing out some of the manifestations of mind; the organs were not rightly located.

It had been known and acknowledged for ages that those persons that looked alike acted alike, that children of the same parents, with the same education, (as near as possible) were different in talents, conduct, virtue, vice, quickness of perception, reflection and retention of what they had acquired, as well as ingenuity in combining new associations of thought, and inventing new systems, fabricating new objects, or taking new or unmarked trains or courses of conduct in life. If I give my friend or enemy a blow, he at once ("similia similibus") becomes as it were monimaniacal, and combativeness is excited to return it, to chastise me for the assault, (repulsion to repulsion). But if I commence to laugh, my friend will also commence by sympathy, and laugh also, (attraction). In both cases the equilibrium of the mind is broken up, and reason and judgment are lost or wanting; but soon the equilibrium is restored, previous to which the antagonizing extreme is produced, as the patient, if not perfectly hardened, feels compunction from conscientiousness on the one hand, or grief is produced as antagonistic to the other. We might go on and enumerate the whole of the manifestations of mind, and show them all to be dependent upon the same law, and to operate in the same manner in a natural or ordinary state, in the common transactions of human life, or in what we have termed (chap. ix.) the minimum degree of magnetism. But it is not our purpose here to go into detail, or to bring forward other proofs of phrenological science than those afforded by magnetism itself. We therefore have only to say that phrenology teaches and proves by magnetism that not only the brain is the organ of mind, but that it is a result of an equilibrium of action between a plurality of organs, and disproves the principle inculcated for ages, that mind is a unit.

July, 1842. C. M. was put into a magnetic state. We were totally unacquainted with phrenology, and did not know the location of a single organ, having never attended but one lecture upon the science or subject, and like many others, from sheer prejudice alone; determined not to believe it, and therefore eluded every opportunity of informing ourself upon the subject. This day in the morning, on which I magnetized him in the evening, a friend placed in my hands a Philadelphia paper, giving an account of some phrenological experiments that had been exhibited in that city, from touching or insulating the organs, while in a magnetic state, by the will of the magnetizer. I was therefore determined to try the experiment this evening, although I had not much hope of succeeding, believing it to be a kind of second "moon story." The time arrived, and I put him into a complete magnetic sleep, but not knowing the location of the organs, I knew not where to touch. I had a work on phrenology with a chart, in the office, but it could not then be found, but by some cause or other, I asked him where I should touch him to make him laugh. He immediately raised up his arm and took a circle with his forefinger and brought it under the cheek bone, directly at the point marked 43 in the chart. I placed my finger upon the point indicated, and he immediately broke out with a most hearty and loud fit of laughter. I then told him to point out in succession all the most important manifestations spoken of by phrenologists, and to my surprise, wonder and astonishment, he did it with great accuracy, as I afterwards learned by comparing them with Jones, Grimes, and others, both on his own head and mine, with the exception of the organs of mirth and imitation, which he located as we see in the chart, 43 and 12, which by this clairvoyant, and confirmed by at least fifty since, I claim to have rightly re-located, as well as having discovered *satiety, taste, instrumental music, grief and lo-*

relation. This evening, by putting my fingers on the organ of time, he told correctly at different times to a minute the time of night, without any one or himself looking at a watch or clock. This subject was but sixteen years old, poor in his education, simple and honest in his demeanor, and when awaked could not remember a syllable that had transpired while in the magnetic sleep, and knew no more of phrenology than he did of algebra or geometry, which he had never studied. It could not have been a reflection of my mind, or produced by my will, as I was at that time perfectly ignorant of the location of any organ, having studiously avoided it from prejudice against the science, believing it incurred fatalism and led to infidelity, except that I knew or believed that mirth was somewhere on the top of the head, whereas he located it at 43, and where we shall endeavor to prove it to be located in the sequel.

A few weeks after this, while lecturing upon the subject of magnetism, and endeavoring to prove phrenology by its mysterious light, and convincing the audience by contrasting one organ with another in succession, such as philoprogenitiveness with destructiveness, secretiveness with benevolence, mirthfulness with veneration, combativeness with both, &c., the thought occurred to me that there must be an organ more diametrically opposed to mirth, and which would give a greater contrast before an audience. Accordingly, after the lecture was closed, and we had retired to our lodgings, I put him to sleep and asked him where I should touch him to make him cry. He immediately raised his arm, performed a circuit, (which they generally do) and put his finger upon the point below the eyeball, marked 42. I then excited it by placing my finger upon the organ, and he cried like an infant. I then awaked him, but he remained gloomy and downcast all day, or until I had again put him to sleep. We had not at this time learn-

ed the necessity of demesmerizing the organ, or taking the influence off completely.

C. D. of the village of ———, called on me, and complains of pain in the back shooting occasionally into different internal organs. Doctors call it spinal muralgia. Has taken the usual remedies for the last year, without relief. Is examined by my clairvoyant and pronounced to be susceptible of the magnetic influence, and says that it will cure him. After the lecture closed and I had retired to my room, I commenced to magnetize him, and in about two hours succeeded in throwing him into a complete state of perfect somnambulism. I then asked him to point out, one after the other, the organs on his own head, as well as mine and others, which he did in the most perfect and systematic manner, confirming the new locations of mirth and imitation, and the one discovered called grief. Being in a clairvoyant state, I directed him to examine himself and see if he could be cured by magnetizing, when after a little time, he confirmed the judgment formed by my clairvoyant. I then touched the organs, and he reacted or responded so quick and with such a loud tone of voice, as to be audible all over a large room, indeed, as loud as is necessary for any speaker before an assembly, in order to be well understood. I found him so susceptible to the influence of my will, that I engaged him to accompany me as a clairvoyant, promising to cure him of his disease before we should return, which I did do. He gained in flesh, as could be seen, and was proved by being repeatedly weighed, a pound a day for twenty days, and perfectly recovered his health. He was put to sleep on an average three times a day for thirty or forty days. This clairvoyant, as well as the other, was perfectly ignorant of the location of a single organ when awake, but when in a somnambulant or magnetic state, were good phrenologists, and could not in their waking or natural state remember a word or incident that had

transpired in the magnetic state. I was therefore very particular to keep them ignorant, and directed them not to learn on any considerations, as it spoke volumes in favor of the science, and of its mysterious operations when applied to that science. It was this somnambule that never failed to tell correctly the politics of every one he examined in my public lectures, sometime ten or a dozen an evening or a lecture. He at all times distinguished clergymen, and told correctly what particular doctrine they preached or taught.

Sept. 10. Put into the magnetic sleep an Irish boy, eight years old; he was of a strictly lymphatic temperament, and went into a perfect state. I touched or excited the organ of mirth, and he immediately became convulsed with laughter. I then bid him point out, on both his own head and mine, the phrenological organs, and he did it with so much skill and precision as not to suffer in comparison with a Fowler or a Parnell. I then excited the organs promiscuously, and he responded with great effect, convincing all who witnessed the experiments of the truth of phrenology, and astonishing all with the results of that mysterious influence, which like supernatural intelligence, should, when under the influence of magnetism, enable an ignorant boy, eight years old, who could neither read or write, to become a good phrenologist, and when off, could not even give a name to an organ, or remember a word that had transpired. All who witnessed the experiments knew him; that he belonged to their village; That he was, in short, as ignorant a boy as could be picked out of the streets, and that I had never seen him until he was brought into the room by themselves, and that I had never been with him alone a moment.

Oct. 11. Put O. P., of the village of A——n, into the magnetic state; a girl thirteen years old. Excited combativeness, and she immediately clenched her fists and dealt out her blows with the dexterity and adroit-

ness of a sailor. I then asked her to point out, one after the other, the manifestations of mind, which she did with distinctness and precision. All who know her, attest that she knows nothing of phrenology in her natural state.

Oct. 11. Called to C. S. of the same village; is the patient spoken of in chap. xxxii, who when looked at in the face by myself or others, can not resist immoderate fits of laughter, which is immediately succeeded by fits of peevishness and fretfulness. On examination, believing these organs magnetized or unnaturally excited by an undue and unnatural quantum of magnetic fluid, or that the disease consisted in a want of equilibrium in the organs or manifestations of mind, that some had too much, others too little, I immediately applied my finger to the organ of mirth, and he became convulsed with laughter. I then changed it to the organ of combativeness, and he clenched his fist and made a pass at me, although in the natural state, or without this organ thus excited, he could not raise up his arms. I then excited destructiveness in the same manner, and he became more enraged. Finding him in this state of unequal action, with the poles from the brain reversed, and increased in some and diminished in others, I concluded by magnetizing the whole brain and system, and thereby producing an equilibrium, exciting some organs and demagnetizing others, I could by these means restore him. Accordingly he was put into a most perfect state of somnambulism, became clairvoyant, said it would cure him, and directed the operations. As soon as he was put into this state he ceased laughing and even to smile, and looked grave and dignified instead of looking and acting foolish as before. I then asked him to point out the most prominent organs of mind, which he readily did, one after the other, as though he were a Gall or a Spurzheim, not one of which he could locate when the influence was taken off.

Oct. 12. P. S. a gentleman high in office of the village of A——n, is now perfectly magnetized in one hour by my clairvoyant. On asking he points out all the prominent phrenological organs. When excited by me, he responds in a natural good audible tone of voice. He is now awaked, the influence taken off, and he is asked to point out the manifestations of mind, but knows nothing about them, can not tell where a single one is located, and remembers nothing that has transpired.

Oct. 13. C. H. a young lady, sixteen years old, was put into a state of somnambulism. While under its influence, she pointed out the most prominent manifestations of mind. The influence is taken off; she remembers not a word of what has transpired and can not point a single manifestation or organ.

Oct. 20. P. S. in the village of T——h, is put into a perfect state of magnetic sleep or somnambulism. On simply touching my finger to combativeness, he became so excited that he darted among the audience and commenced to deal out his blows with such skill and precision that it would have baffled the most skillful pugilist, although I was constantly attempting, as soon as I could get my hand on benevolence, to counteract its influence, as well as to excite veneration. When quieted, I asked him to point out before the audience the various organs, which he did correctly without the least faltering. The patient was an Irish boy, sixteen years old, could neither read or write, and knew nothing of the name or location of the organs than he did of Greek or Hebrew, but yet told correctly all I asked him. His combativeness, destructiveness and secretiveness were so large in proportion to consciousness, veneration and benevolence, I foretold certain propensities that largely predominated, and either to prove me a good phrenologist, or revenge my telling the truth, I became the object of their undue enlargement by the loss of property.

to the amount of twenty-five dollars, which I never again obtained.

Nov. 1843. Called to C. D. a child twelve years old. Has an influenza. Recommend magnetizing. Commence and put her to sleep. The family are disbelievers in magnetism. After I had got her into this state, I asked her father if she understood phrenology. "Why no," said he, "she knows nothing about it of course, nor I either, and what's more, I don't believe any thing in it." I then asked her where I should touch her to make her laugh. She at once, without hesitation, put her finger on 43. I then excited the organ by simply touching it with my finger, and she laughed intolerably. I then asked her to point to all the most important organs in succession, which she did correctly, to the astonishment of her parents, who were convinced of the reality of both magnetism and phrenology. Her influenza was almost cured also, and by applying it twice more, without medicine, she became in better health than when attacked.

I have, during the last two years, magnetized over two thousand persons, for disease and otherwise, and I here solemnly aver that not one subject that I have put into a perfect magnetic state or that of clairvoyance, which consists in rendering all the external senses dead or dormant, or palsied, or catalepted, so that they could neither see, hear, touch, taste or smell, but what they all pointed out the manifestations of mind, or bumps, as they are vulgarly termed, and not only this, but many would tell their relative size, and the conduct that must necessarily flow from such and such manifestations. In a word, while in a magnetic state, they are the most perfect phrenologists, and when awake perfect novices, and worse than novices, for they know nothing of the science.

I hold, from what I have seen, that no man in the natural state can ever become a perfect phrenologist,

but these can. I have a clairvoyant that will give, as I believe, a most perfect chart. Indeed, all that he has as yet given, are proved correct by not only the persons themselves, but by their acquaintances and friends. Their increased capacity of judgment and discrimination are surprising and wonderful, and beyond comprehension. These are facts demonstrated and daily demonstrable, not only by myself, but by many others, all over the country, in every state in the Union, as well as in Europe.

Now if a child eight or ten years old, who knows nothing of phrenology, perhaps has never heard the word or understands no more what it means than he does of the Chippewa or Pottawatomy language in a natural state, will when magnetized, not only point singly to all the organs of mind, or its manifestations, but take into comparison their relative size, and judge of and determine what kind of conduct must necessarily flow from such relative proportions and developments, and judge correctly, superior to our best phrenologists, who have studied years in the science, what does it show? what prove? It proves at least two things. That phrenology is a true science, and that magnetism is the means or the logician by which it is established with mathematical precision and certainty.

The above facts, then, prove the truth of both magnetism and phrenology. Should we publish a tithe of all the facts that have come under our observation, it would swell this volume to an enormity.

C. H. was put into a magnetic state, and on exciting veneration, No. 20, by simply putting the point of the fore finger upon the organ, he threwed himself from his sitting posture in his chair, upon his knees on the floor, and commenced and made an interesting prayer, audibly and distinctly heard all over a large public hall. I then took off my finger so abruptly as to stop him in the middle of a word. I then excited tune in the same

manner, and he sung a hymn as loud as is usually sung in church. Mirth, No. 43, was now excited, and he broke out in peals of hearty convulsive laughter. I then again excited veneration, and he commenced the prayer where he before left off. I then excited imitation, No. 12, and for twenty minutes he mimicked men, white and colored, and almost all other animals, grunting like a hog, squealing like a pig, neighing like a horse, braying like an ass, whistling like a quail, quacking like a duck, cackling like a hen, and crowing like a cock. Amativeness, No. 2, was then excited; he straitened himself up, looked extremely tender and affectionate, said some soft things, and cried "what a beautiful angelic form!" kissed his hand with the most extreme politeness toward his ideal beauty. Combativeness, No. 7, was then excited, and he clenched his fist, darted forward, and cried "come on, you coward; I am ready for you. I'll knock you into the middle of next week." Imitation was again excited, and I willed him to imitate the dandy, which he did in the most perfect manner by straightening himself up, throwing out his legs and crossing them in a particular manner, spat sparingly through his teeth while the jaws were closed, and cried out "see him all strapped down, there; if you should cut those straps, he would fly up and break his neck. See him picking his teeth with a silver pick, upon the steps of the National, to make people believe he boards there, when he eats at the groceries and sleeps at the market. See him prinking along the streets with that lady; O dear, how he feels all over. Look at his waist, it isn't bigger than a bodkin." Secretiveness, No. 6, was then excited, and he felt around for something, when one of the audience put a handkerchief near his hand, and he immediately, with great secret care, doubled it up and put it into his bosom, saying to me "let's go, come let's go." Where, said I. "Home," said he. I then excited benevolence, No. 24, and he pulled the

handkerchief out of his bosom and gave it to me, and took out his wallet, and while in the act of giving it to me, I excited acquisitiveness, No. 13, and he put it back, saying he would not let me have it. Self-esteem, No. 16, was next excited, and he cocked back his head, and said he knew more than all of them; that he had the most farms, the handsomest wife, the prettiest children, the best horses, the most cattle and more money at interest than any one else, or all put together, told of his stores at different villages in the state, and made himself out to be richer than Cræsus. Firmness, No. 19, was next excited, and he settled himself, and said no man could move him, he was as firm as the rock of Gibraltar, no man must trifle with him. He could not be driven from his position. The next organ excited was philoprogenitiveness, No. 3, and he began to tend what he called "little sissy." He folded her in his arms, fondled her, dandled her upon his knee, sung to and kissed her, and shifted her from one knee to the other, and while in the act of kissing her again, I excited grief, No. 42, and he began to cry aloud, and shed tears. On being asked what was the matter, he said "little sissy was going to die; the doctor said she had got the scarlet fever." While in this situation, I again excited mirth, and in a twinkling he was roaring with laughter. Destructiveness, No. 10, was now excited, and he throwed her from him, exclaiming "take her away, take her away; I'll kill her." The finger was removed, and all was calm and quiet. I then excited order, No. 39, and he said he would have that harness hung up where he could find it in the night, and the curry-comb and brush too, and many other things which I have forgotten at this time. Color, No. 38, was now stimulated, and he exclaimed "red, green, blue, orange, violet, light green, pale blue, speckled red and white, black and blue," &c. I then put my finger on number, No. 40, and he commenced at one and counted up to forty. Some one then

called for ideality and marvelousness, Nos. 22 and 23, and he soared aloft almost beyond mortality, broke out with original poetry, and went into the most beautiful descriptions of scenery, of groves, bowers and landscapes. I then again touched number, No. 40, and he began at forty, where he left off, and counted back to one. Tune and humor Nos. 27 and 28, were then excited together, and he sung a comic song with great glee and merriment. I then touched instrumental music, No. 45, and he broke into whistling the same tune that he had been singing. I then rapidly changed my fingers from one to the other, alternately, and he would change as rapidly from singing to whistling the same tune, thus keeping continually the same tune, and commencing to whistle where he left off singing, and vice versa. I then excited together locomotion and instrumental music, Nos. 1 and 45, and he sprang to his feet and commenced dancing, "cutting it down" and whistling his own tune, in the right old fashioned country dance style, and would have continued until he had dropped down or become exhausted by the most extreme exercise.

Oct. 20. D. M. was put into the magnetic state. He became at once clairvoyant, and read common print at the top of the head. I then excited his organs and found them very easily affected, many of which, ideality and combativeness, I could excite at the distance of two or three inches. I asked him to describe his feelings and sensations. He said his whole head appeared to be filled with light, and that every part of it glistened not unlike frost upon the grass at the rising of the sun. That when I moved my hands about his head, it seemed to be like bands of light, or flat streaks or stripes like broad ribbons, and that these appeared to be wound one over another, in different directions. He was then took, in clairvoyance, to a house well known, where he had never been before, and told correctly even to two buttons that lay upon the table in the dining room. After

he had returned, without saying a word to him, I willed him to arise from his chair and make a speech upon animal magnetism. I put one finger upon concentration, one on self-esteem, and two on ideality. For five minutes he remained silent, and I was about to despair, but at length, in the most natural manner, he slowly raised up his right arm, and commenced by saying that "Animal magnetism was yet designed to revolutionize the world, although at this time it was derided and sneered at. Why," said he, "it is mortality and immortality shaking hands; yea, it is David shaking hands with Gabriel." He went on in a strain of the most impassioned eloquence, for the space of twenty or thirty minutes, that I ever heard come from the lips of any man. It would almost beggar description.

Jan'y 20, 1843. O. P. was put into a perfect magnetic state at a public lecture. After travelling in clairvoyance to the city of New York, to the Astor House, (where he had never been) which he described more or less minutely, and all correctly; and with another gentleman to St. Clair, to his dwelling and office, both of which, outside and in, together with furniture, descriptions of his lady and children; their dresses, even to the color and figure of that of the lady, and to the color, fashion and even buttons of his little boy's clothes, also correctly, (which the gentleman wrote me on his return, and I have the letter now before me) even to a broken brass ball in his office, laying on the top of his stove. I touched and excited his organs with great success and the manifest applause of the audience. A gentleman then desired me, upon a slip of paper, to will him to make a speech against capital punishment. I put one finger upon language and another on concentrativeness, and willed him to commence. He went into a long argument to prove that "it was wrong, and wicked in the sight of God. That it was the prerogative of high heaven to take life, and did not belong to man."

"Vengeance is mine, saith the Lord," quoted he in the sequel.

After he had spoken awhile on this side of the question, another gentleman sent to me, upon another slip, to have him make one in favor of it. I then changed my fingers to self-esteem, No. 16, firmness, No. 19, and destructiveness, No. 10, (lightly and occasionally) and he went on eloquently as long as desired, in favor of it, and in direct opposition to his former one. He was so savage and fierce that he said he believed in the Lynch law. That when a man had taken away the life of another, he was in favor of hanging him up on the first tree, without judge, jury, or the benefit of clergy. This patient, in his natural state, was the very last one to expect a speech from on any subject. He was never known to make an attempt before. His natural talents were poor and his education nothing. He can scarcely put two ideas together, as a large share of the audience well knew from acquaintance with him. He was incapable of making a speech, much less an argument.

These are a few of the many facts that have come under my observation within two or three years, in proof of the truth of phrenological science. It is the product of magnetism applied to man. The developments and confirmations are touching, interesting, and calculated to completely revolutionize the world of science. Can there be any thing more interesting to man than the study of himself? Is there any thing more wanted or asked to establish the truth of phrenology? Is it not established, from what has been seen, upon a basis as enduring as the rock of Gibraltar? Who can stem the impetuous current of such a torrent of facts? Is it not clear that certain manifestations of brain indicate certain propensities of mind? When we can put children of twelve years of age into a state of somnambulism, to say nothing of adults, who have never heard or even thought of phrenology, and in that condition,

witness them point out the manifestations of mind with a precision, judgment and correctness superior to an old and skillful practitioner in phrenology, of ten or fifteen years experience, can there be any thing more asked to establish the truth of either animal magnetism or phrenology? If there is, to any portion of community, nothing less than divine inspiration would produce conviction. Such we are not laboring to convince, but leave them to the murky repose of their habitual midnight darkness.

It will be observed that we have re-located the organs of mirth and imitation, and claim to have discovered locomotion, taste, grief and satiety. Mirth and imitation, according to the location as laid down by phrenologists, have heretofore been a stumbling block to thousands, for practical phrenologists have been generally observed to fail in delineating correctly the character from their former locations. From their present locations none can fail. Imitation naturally belongs to the neighborhood of constructiveness and secretiveness. Mirth, on the contrary, belongs to the face, in the neighborhood of taste, grief, &c. Do mothers ever touch with their fingers the top of the head while chirping to their young, to excite them to laugh? On the contrary, do they not intuitively and invariably touch them near the dimple in the cheek? Can not many recollect, while at school, of rubbing one boy's ears to make him combat with another? Who is there, of adult age, who has not, after dreaming of fighting, awaked and found that he had lain upon his hand in such a manner as to excite the organ of combativeness? Who that has long lain with his hands upon the pit of his stomach, but has awaked with nausea and vomiting? And yet, after all, when we exalt the natural system from the minimum to the maximum degree of magnetism, and thus come to the aid of nature, in addition to these proofs of phrenology with those almost superhuman, such as insulating or ex-

citing singly or in connection the organs, and thus analyze the mind, by showing, as it were one by one, the various ingredients by which it is composed, these same "ornaments of mortality" cry out, "O, it's all a hum-bug; he's only learned, trained for the purpose; a stool pigeon. Why does he not take one from the audience. I'll give him a hundred dollars to put me to sleep." Thus, like "the dog in the manger," from ignorance or lazyness, they will neither learn and investigate themselves, or let others, over whom they hold influence, receive the benefits that would result from its attractive influence. They can not comprehend that it is a doctrine of attraction and repulsion, and that if they make up their minds not to be affected, they repel it, which is agreeable to the general laws of nature. Who should be relieved from pain and sickness when they had rather bear it than suffer the disgrace of being cured in a *certain manner*? Who ought to have blessings showered upon him, when he was ridiculing, sneering at, and *cursing* the source from whence they come? He must be deep in logic, as well as have a great share of common sense, who will offer to bet that he can not be put to sleep, or to think one so silly as to attempt it, under that state of circumstances, when the very nature of the case, will, from interest, produce repulsion, which will preclude his being affected. A person would be silly indeed to bet that another could not, with the power of his muscles, stand up or walk, when to gain the wager he might do either, as he pleased? Wise bipeds these! how sage! how transcendently luminous in precocity and profundity of intellect!

Magnetism is characterized by benevolence, and who ever are the subjects of its benign influence, must be not only in a situation to need relief, but not too proud to receive it from any source. These same "consistent geniuses," are of that class whose organs of self-esteem and want of conscientiousness, are perfectly pre-

dominant, and were firmness, combativeness and destructiveness on the same line or size, to give them courage, would now be found in the penitentiary. Were there not a change at death, they would probably make an attempt to storm heaven itself. They can not be made to believe much of any thing, but what little they have, induces them to believe that it is like fighting, wrestling, or lifting, governed by the law of force; that he who could lift the most, or was the best wrestler, or could fight the hardest, could put the most subjects to sleep by overpowering them. Can a man be convinced against his *will*?

"Convince a man against his will,
And he's of the same opinion still."

Who ever saw a person convinced in direct opposition to his will, on any subject? Do children learn at school when they are determined not to learn? What kind of progress should we expect from such pupils? Who was ever convinced in favor of any principle or subject, when they were constantly operated upon by prejudices against it? It is therefore a contradiction in terms, and whoever offers to stump or bet that another individual can not affect him with magnetism, but shows his ignorance or knavery. It is not a subject of strength or weakness, but one of belief, faith, will and concentration. It is not a subject of gain or lucre, for it is too benevolent in its nature, and was given one to help another. A boy twelve years old, in this city, put a lady of thirty-two to sleep. "He that is not for us, is against us." So with magnetism: he that does not desire to be magnetized, in a great measure repels it, and if his will is concentrated against it, can never be thrown into complete somnambulism, although all can have their vital organs or functions, which are not under control of the will, more or less affected, such as the pulse, heart, stomach, and other vegetative organs, as well as the muscles of locomotion catalepted. One fact I have

learned and confirmed by experience, that those that are sick can at all times be affected, whereas the same person in a state of health can not be. Whether this arises from the fact that it is easier to restore the lost equilibrium than to break it up, or from the greater desire when sick, from the hope of relief from pain, or both, is at present difficult to determine, but such is the fact.

CHAPTER XVI.

THEORY OF MIND—MANIFESTATIONS—POLES—REVERSION OF POLES.

Having brought forward our facts, we will now offer a few remarks with regard to the theory of the mind's formation as connected with matter. It will be recollected that we showed (chap. II.) that the system was composed of a concatenated circle of circles, each having a circumference and center, and that the brain and nerves formed the last of these, and that the brain formed not only the center of this nervous circle, and was the grand center of the whole system, but the center between the external and internal world. It is therefore the central point of spirit and matter, and forms the link in the chain of spirits and animals between mortality and immortality. We have seen that it is both active and passive; active in volition, and passive in sensation—and thus characterizing man above other animals—constituting him both mortal and immortal. The manner by which these changes are produced is by the magnetic fluids. The organ of mind, then, may be termed a great compound magnet, composed of numerous cognate ones, controlled by the central one—the brain, which is endowed in some mysterious manner, above the comprehension of mortality, to set itself in

operation, and thereby, in a great measure, is the artificer of its own destiny, and constitutes man a free agent. This free agency is dependant upon the will, and distinguishes him from matter by his being the engineer of his own motions and actions. Will, then, is the great regulator of the whole, and characterizes man, not only above other animals, but distinguishes one man above another. Mind is the result of magnetic motion or action. Light and magnetism being identical one and the same thing or principle, are governed by the same law. Light is governed by the immutable law of radiating in every direction, from the center to the circumference, subjected by another equally unvarying one, that of being bent to and from the perpendicular by media, producing reflection and refraction, and converged to a point from the circumference to the center, and from the center to circumference. In either reflection or refraction, the angle of reflection is equal to the angle of incidence, or in other words, light is reflected off in the same angle with which it entered or approached a body. As light radiates in every direction from the center to the circumference, it must form poles at every point of that circumference, up and down, laterally and around the whole area. Hence there must be points upon the surface in every direction, which are but the extremities of those currents of light. These poles, then, are to be found, not only upon the superior parts of the skull, but upon its posterior part and sides, as well as upon the whole surface of the body, face and internal organs.

The poles of the passions are in the face, as we see by the expressions of the features indicating each, as well as by the examination of the manifestations themselves. Thus physiognomy, which has been acknowledged from time immemorial, by this view of the subject, is seen to be but phrenology itself, and will therefore add further proof of the truth of phrenological

science. These currents of light diverging from the brain in every direction from the laws of light, are directed in such a manner as to form two sides of innumerable triangles, with their apices terminating in the center of the brain, and one of its sides toward the circumference, and constitutes the centrifugal force, or that of volition. Light coming from the external world is converged also to a point, forming also two sides, with their apices terminating in the ciniritious part of the brain, like the optic nerves. Thus light, in currents, traverses the brain in both directions, and unite so as to produce an equilibrium throughout the brain, as well as the whole system. Where these currents meet and mingle, or operate to neutralize each other, perhaps will ever remain involved in obscurity; but one thing is certain, that time and excessive stimulation, as well as other causes, such as disease, will reverse their poles so that combativeness will take the place of benevolence, love of hatred, grief of joy, destructiveness of philoprogenitiveness, &c. (chap. XI.) We have seen them in the science of geometry and when speaking upon crystallography, to be the cause of all figures or forms in magnitudes, as well as bounded by these lines, the extreme points of which are termed poles. The organs of mirth and grief are so connected that they form two sides of a triangle, with the apex in the center, and by that means of connection are liable to reversion. How often are these reversed? How often, both in health and disease, do they rapidly alternate with each other? If I tickle a person it will excite mirth, but if still continued, it will soon produce grief. In hysteria, these alternate rapidly with each other. So also with other manifestations. Philoprogenitiveness and destructiveness; destructiveness and benevolence; benevolence and acquisitiveness; secretiveness and ideality; amateness and combativeness; self-esteem and veneration; weight and resistance; time and tune; form and size, &c. In

a word, this appears to be the manner of connection between the organs of mind, as well as with its communications with the external world. We might go on and enumerate the whole, and show their connection to be a series of complicated triangles, the lines so crossing and intersecting with each other as to form a most perfect connection. The optic nerves form two sides of a triangle, with apex toward the center, as well as all other external avenues of light. Thus life itself—which consists in motion and thought—is the result of light, both internal and external. From the digestion of the food and its assimilation, as well as by the absorption of oxygen at the lungs and pores, the internal current is put in motion, and from the light of the sun and other objects, the external produces an affect, and by attraction, meets in the medullary matter with its antagonist, and thus produces mind by the motion of its minute globules or magnets. It will then be seen that all the manifestations of mind, whether upon the skull, face or elsewhere, are but poles formed by the points of these rays of light, which manifestations are but monuments or results of the action of the magnetic fluids.

"Thus the vital light

Pervades the swarming seas and heaving earths,
Where teeming Nature broods her myriad births;
Fills the fine lungs of all that breathe or bud;
Warms the new heart and dyes the gushing blood;
With life's first spark inspires the organic frame,
And as it waxes, renews the subtle flame.
Leaves, lungs, and gills, the vital ether breathe,
On earth's green surface, or the earth beneath.
Thus life discordant elements arrests,
Rejects the noxious, and the pure digests;
Combines with light the fluctuating mass,
And gives awhile solidity to gas.
For this the moon through Heaven's blue concave glides,
And into motion charms the expanding tides.
While earth impetuous round her axle rolls,
Exalts the wat'ry zone and sinks the poles,

So turns the faithful needle to the pole,
Tho' mountains rise between and oceans roll.
With arm invisible, by steam afar,
Drags the slow-bergs, or drives the rapid car.
Soon will, on wide waving wings, expanded bear
The flying chariot through the fields of air,
And thoughts invent, attract, reflect, repel,
With lightning speed, o'er mountain, hill and dell.

APPENDIX.

This shall certify, that about the middle of the month of November, A. D. 1844, C. F. B. in my employment, was found laboring under an attack of the delirium tremens—that on learning the state of his case, I immediately employed physicians distinguished for their practice in such cases—that they administered the usual remedies—that in about ten or twelve days, from the most violent forms of the disease, the patient exhibited evidences of approaching convalescence by sleeping for a few hours, followed by rational conversation—that for some three days he was every few hours vacillating from a state of derangement to reason, when a relapse took place, by which he became not only worse than he had been at any previous stage, but a raving maniac. All hope of his recovery was now abandoned, although every attention was paid him by physicians, nurses and friends. It became necessary to prevent self-destruction, and to keep him in a state of warmth, (he having torn his bed and bedding in pieces) to bind him with strong cords firmly to his bedstead.

At this stage, one of the gentlemen who was in the habit of visiting him during his sickness, suggested the propriety of calling in Dr. J. H. Bagg, and experimenting with the Mesmeric influence. Accordingly at the

time, the 9th of December, when the patient had not slept nor spoken rationally for some days, Dr. Bagg commenced his operations by conveying him from his bed into an adjoining room, in so weak a state that when his feet touched the floor he evidently possessed no more strength than an infant. At about ten o'clock, after a very few minutes exercise on the part of the Doctor, he was put to sleep, and in that state *walked* back to his bed room. Having remained in this sleep about an hour, he waked in nearly as deranged a state as ever. At 10 o'clock the Doctor again visited him, and put him into a sleep which lasted three hours, and from which he waked somewhat rational. He was then again put to sleep, and rested quietly till morning, when I found him in every respect rational and sensible of his situation, although very weak.

On the morning of the 10th, Dr. Bagg again put him to sleep, to lay in that state, as he said, until noon, which he did, and at one o'clock he was much refreshed, and evidently gaining strength. The Doctor now, after administering as in the morning, refreshing teas, put him into a sleep in which he remained till night. At six o'clock the Doctor called, and after practising with what he termed "equalizing long passes," was leaving him without putting him to sleep, when I remonstrated, urging him to do so, inasmuch as his nurses and attendants were worn out with fatigue. He, however, convinced me that it was better that he should remain awake until nine o'clock, when he said he would "*will him to sleep from his own house,*" a distance of three-fourths of a mile. This I ridiculed, and with some friends awaited the result with anxiety and interest. But at the precise hour named, much to our surprise, the patient, by the *spasmodic twitching* of the nerves throughout the whole system, showed us that the Doctor was working upon his promise, and in a minute he was in a sound sleep,

from which we found it impossible to awake him, either by noises or shaking his person.

On the morning of the 11th, the patient came out of his sleep, perfectly sensible, and much stronger, but with an eye highly inflamed and suffused with red blood. The Doctor continued his "long passes," breathing upon the eye, and making passes over it. At six o'clock in the evening, the same treatment, when the Doctor left him to be put to sleep at nine o'clock. Meantime, I had stated to my friends the fact of Dr. Bagg's *willing* the patient to sleep from his house the night previous, and they expressing a doubt as to the possibility of one man possessing such control over another, and anxiety to see the experiment tried, I invited them to visit the patient between the hours of six and seven o'clock, when I supposed they would meet the Doctor, and enter into an understanding upon the subject, but he had made his visit, and met them on the street on his way home. The request being made that he should return, and afford them an opportunity to witness his experiments, he stated that he had parted with the patient for the night, and declined to do so; but some one of the party bantering him as to his ability to *will* him to sleep from a distance, he agreed, that instead of returning to the patient, he would proceed to his own house, and from thence *will* him to sleep, at a quarter before the nine o'clock he had named. The party then proceeded to the lodgings of the patient, where they found him up, and conversing freely. At half past 8 o'clock, I advised him to go to his bed, and at quarter before 9, the evidences of being put to sleep were obvious to us all, and he was soon so sound that no noise could awaken him. Agreeably to the promise of the Doctor, the right arm then raised gradually, bringing the hand nearly in contact with the head—also, the right leg, raising the foot. An ineffectual experiment was then made to awaken him, by thrusting a pin into the fleshy part of his

shoulder. It made no impression whatever, but some yet suggesting their doubts, a committee from the number volunteered to visit the Doctor, and ask him if it was in his power to waken and put him to sleep again, within a stipulated time. The Doctor at first doubted his ability to bring him out of his sleep at that distance, never having tried the experiment, but said he would exert himself to do so. The time was then fixed, and after comparing time pieces, the gentlemen returned, stating the particulars of the arrangement. Accordingly, at half past ten o'clock, the time named, the patient awoke, and conversed rationally for ten minutes, when he was suddenly put to sleep, and although great efforts were made by noises, pricking, pinching, &c. he slept soundly till morning.

On the 12th and 13th, the Doctor administered the same treatment for the general complaint, and for the eye, as on the morning of the 11th; and on the 14th the patient was perfectly cured and walking the streets, and is now a strong healthy man.

E. J. ROBERTS.

The undersigned certify that they were witnesses of the most material facts contained in the above statement.

ANDREW MACK,
S. McKNIGHT,

I. S. ROWLAND,
M. L. CARDELL,
R. GILLET.

Dated Detroit, Feb. 20, 1845.

NOTE.—From the haste with which the preceding pages have been committed to the press, many errors have undoubtedly crept in, but we trust they are mostly typographical, and not calculated to change the sense.

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