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THE VIOLIN:

ITS CONSTRUCTION

THEORETICALLY AND PRACTICALLY TREATED;

INCLUDING AN EPITOME OF THE

LIVES OF THE MOST EMINENT ARTISTS,

A DICTIONARY OF VIOLIN MAKERS AND LISTS OF VIOLIN SALES,

BY P. DAVIDSON,

Author of "The Caledonian Collection of Music," "The Philosophy of Man," "Masonic Mysteries Unveiled," "The Book of Light and Life," "The Mistletoe," "Mountain Musings," etc.; Editor of the "Morning Star," "Member of the American Society for the Prevention of Cruelty to Animals," Hon. Member of the Poona "Gayan Samaj," Hon. Member "Bengal Academy of Music," etc.; Hon. and Cor. Member "Groupe Indep. d'Etud. Esoteriques," Member "Frater de l'Etoile," "S.·.I.·." etc.

ILLUSTRATED WITH PORTRAIT OF THE AUTHOR, NUMEROUS WOOD-CUTS, AND HALF-TONE ENGRAVINGS.

Fifth Edition, Revised and considerably Enlarged.

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PREFACE.

AFTER an interval of fifteen years since this unpretentious work first appeared in print, I have been called upon to prepare anew this, the Fifth Edition, renovated but still defective, and beg to further gratefully acknowledge the liberal and cordial appreciation with which it was met by the public press and Violin connoisseur, when first launched into the world. I am in a measure regardless of criticism, for I write not for fame, my only desire being to produce a work likely to be understood by the common workman, as well as by the owner of the classic instrument—a book of plain and unadorned directions, avoiding all high-flown language, therefore I desire not to ground its claims upon any literary merits, but upon those of a useful and practical handbook. I feel justified in placing the volume, with modest confidence, before those who are in a condition to require it, without any danger of leading them astray, for the information contained therein has been derived chiefly from my own experience, corroborated by the communications and opinions of many others who are of such standing as to give high value to their authority.

It is a well-known fact that this is *the* country of Plagiarism *par excellence*, and that many American Authors and Publishers think little or nothing of publishing a book, by transcribing the

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matter from the Volume of some Author, whose writings they deem worthy of gaining them a supply of the "Almighty Dollar!" so dishonorably acquired thus, and this without the slightest acknowledgment upon their part to the Author from whom they have plagiarised—whose ideas they have picked up wholesale, without the faintest thought of "by your leave." Scarcely had my last edition been issued from the Press, than an eminent Musical Publisher—Jean White, of Boston—published an exact copy of all the Chapters save one (the Eleventh), even *to the typo. and other errors!* and christened it:—"THE VIOLIN AND HOW TO MAKE IT, BY A MASTER OF THE INSTRUMENT"!! but whether a Master-Player or a Master-Maker, he does not say, although I claim no distinction to either, never having had the opportunity or the desire of embellishing every page of my humble efforts with fragments of Latin, French, German, Italian and other languages, as some of our more pretentious and better learned Authors have so ostentatiously done, but for what earthly or unearthly utility to the amateur Fiddle-Maker, is more than I can imagine. No, I never received either a "Lesson" in Violin-Making or Violin-Playing, hence my Readers will the more readily understand that I am rather an "original" character.

One rather amusing Plagiarism of the above-named Publisher is that upon page 67 of his book, where he informs his Readers —transcribing my words of course—that they will find a *Vignette* containing the Violin outlines of the three most celebrated Cremona makers, whilst he never even gives the copy of my Litho. Vignette, hence there is no such Lithograph inserted, as he falsely leads his Readers to imagine. But all this plainly shews that *Dollars* had been more in his mind than Duty! and my sole object in alluding to this literary trifle is merely to vindicate my right to the credit of my own literary work, crude and faulty even as that work is.

There are but few *genuine* Cremona Violins in this country, and as a general rule the owners of such store them up like antique China—just as old Mr. Gillott the pen-maker used to

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do—only to look at them now and again, for the great majority of such Collectors can't play a single tune on them to save their lives. They wish to be considered great Art-Virtuosi; the Picture-Dealers adorn their walls with Pictures, and many of the Fiddle-Dealers supply them with trash. Truly, as Ole Bull used to say:—"I can count upon the fingers of one hand all the genuine Cremona Violins throughout the United States." As a general rule the great majority of Dealers charge quite outrageous prices for old Violins, and in addition to this, you have not the slightest certainty, very often, that what you purchase is genuine, for, in by far the greater number of cases, you have every reason to suppose otherwise, but the fact is, it would doubly repay any "Cremona" aspirant to go to Europe and make his purchase—which in reality the leading connoisseurs of this country do, instead of running the risk of being deceived and defrauded as well.

My reason for inserting so many Violin Sales in the Appendix, is to shew the Reader the enormous rise in the prices of Violins, within those past 30 years. Our American and English friends may well be surprised to learn that Scotland claims such a large share of *authenti* Cremonas, musical pearls of high price, inclusive of that unparalleled gem, the finest Violin in the world—the "Messiah" Strad.—now owned by Mr. R. Crawford, of Trinity, Edinburgh, illustrations of which are given on pages 284 and 285.

Trusting that the warmly-cherished friends who have so obligingly responded to my solicitations, during the preparation of this edition, may derive as much gratification from its perusal as I have pleasure from their papers, my heartfelt wish to them is that of the poet:—

"Hale be your heart, hale be your Fiddle;
Lang may your elbow jink an' diddle,
To cheer you through the weary widdle
O' warly cares,
Till bairns' bairns kindly cuddle
Your aul' grey hairs."

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With an earnest desire that this little work, briefly and feebly submitted, may prove useful to the inexperienced amateur, and that it also may afford some slight information, whereby the unskilful purchaser may avoid the spurious rubbish so often palmed upon the unwary by disreputable Dealers, as well as furnish to the uncertain Violin-owner some slight idea of what he may possess, is the fervent wish of

THE AUTHOR.

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CONTENTS.

CHAPTER I.

PAGE

The Early History of the Instrument, ... 1

CHAPTER II.

Theoretical Principles of Construction, ... 40

CHAPTER III.

Experimental Researches upon the Theory of Violin Construction, by the Illustrious Savart, as given in the French Paper "L'Institut," 54

CHAPTER IV.

Remarks upon the foregoing Theories of Savart, relative to the Violin, ... 75

CHAPTER V.

The Construction of the Instrument, ... 84

CHAPTER VI.

Mathematical Method of Modelling and Constructing the Violin, . 115

CHAPTER VII.

Description of Savart's Box-Fiddle, ... 121

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CHAPTER VIII.

PAGE

The Appearance, Qualities, etc., of the Violins of the most Celebrated Makers, including an Epitome of the Lives of those Eminent Artists, ... 128

CHAPTER IX.

The Bow, the Rosin, and the Strings, ... 158

CHAPTER X.

Varnishes, Stains, etc., ... 173

CHAPTER XI.

Miscellanea, ... 186

ALPHABETICAL LIST OF VIOLIN-MAKERS, ... 248

APPENDIX.—The Finest Fiddle in the World. Violin Collections, Sales, etc., ... 284

GENERAL INDEX, ... 295

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THE VIOLIN.

CHAPTER I.

THE EARLY HISTORY OF THE INSTRUMENT.

BOW-INSTRUMENTS exist from an early date, some of which approximate closely in form to our modern Violin, whilst others are of the rudest description, but still possess one important distinction from other stringed instruments, viz., that of being played upon by a bow, as those truly possess a character and quality essentially their own. Amongst such instruments may be ranked the following, although a great many more might be enumerated:—The Ravanastron of India and Ceylon; the Rouana of the same countries; the Urh-heen, or Fiddle of China; the Omerti and Kemangeh-a-gous of Arabia and Persia; the Rebab, also an Arabian instrument; the Goudok of Russia; the Soorunga and Taráu, or Thro of the Burmese Empire; the Koba of Tartary; the Single-stringed Violin, or Monochord, of Egypt; the Fidla, Langspel, and Sumphion of the Icelanders; the Gue of the Shetlanders; the Guhue of Africa; the Crouther, Crwth, or Crowd, of Scotland, Ireland, and Wales; the Linterculus; and lastly, the Viol species, which bear the nearest resemblance to the Violin proper.

Let us rapidly glance over some of the foregoing instruments, whereby we may trace a slight similitude to that of the Violin. The Ravanastron and Rouana are constructed almost precisely similar, both being formed of a wooden cylinder, over one end of which a piece of skin or thin wood is fixed, serving as a

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sounding-board, upon which is placed a small bridge, whilst attached crosswise to the wooden tube is a handle, containing two pegs for retaining the two strings of this primitive instrument. The Urh-heen, or Chinese Fiddle, is constructed with a cylindrical body, over which is stretched a piece of snake's skin, upon which rests a bridge, over which four strings are stretched, terminating in the pegs, which are inserted in a line in the longitudinal and cylindrical hand of the instrument. The four strings have the bow attached to them instead of being held free in the hand of the player. The Omerti is a somewhat similarly constructed instrument; but having a body formed from the shell of the cocoa-nut, part of which is removed and replaced by skin or wood to form the belly of the instrument, whilst holes of fantastic shape are cut through the body of the shell, forming a communication with the internal air. This also is a two-stringed instrument, as well as the Kemangeh-a-gous of the Arabs, which is of the same form and construction. The Rebab and Goudok are somewhat similar, but each having four sides, upon the under and upper edges of which pieces of skin are stretched to form the back and breast. The Goudok is of a more advanced construction than the Rebab, possessing a curved head, tail-piece, finger-board, and sounding-holes in the breast, whilst the body of this instrument is better adapted for volume of tone. The Soorunga is a three-stringed instrument, having the body and neck formed from a solid block of wood. The back of this instrument is very convex, being almost a semicircle, and is exquisitely hollowed out, whilst the neck is of a somewhat similar pattern to that of the Violin, but instead of a scroll there are generally carvings of birds, etc., below which are the pegs. The front of this instrument is entirely hollow, except near to the extreme end, where a small piece of parchment is stretched which forms the belly, upon which is placed the bridge sustaining the three strings which are united to a tailpiece as in the ordinary Violin. Part of the convex sides are cut away in graceful curves, whilst upon the surface of the back a few variegated figures are carved.

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The Tarau, or Thro, of the same country, is of an elongated form, somewhat resembling the common Violin, having three strings and a finger-board carved in wood or ivory. The Koba is an instrument somewhat analogous to the former, and having two horse-hair strings. The Monochord, or single-stringed Violin, (from which the Violin has undoubtedly been derived) is common throughout Egypt, but the ancient Egyptians appear to have been acquainted with a two-stringed instrument at a very early date, as Graham, in his account of the first Edinburgh Musical Festival, relates, that upon an Egyptian obelisk brought to Rome by Augustus, and which was supposed to have been originally erected at Heliopolis by Sesostris, four centuries previous to the Trojan war, is a representation of an instrument twenty-one inches in length, having a neck and two strings, and an outline resembling a guitar. The Fidla of the Icelanders was a rudely fashioned instrument, having six wires or strings of brass or copper, whilst the Langspel and Sumphion were of a similar construction, the former having four and sometimes five brass or copper strings, with a fretted finger-board beneath. All those instruments were in use in Iceland from an early date, but are now almost extinct. The Gue was an early musical instrument in use amongst the Shetlanders, along with another species of Violin having two horse-hair strings, which probably was derived from Iceland or Norway, and which was performed upon in a manner resembling that of the Violoncello. The Guhue is an instrument of rude construction used in Africa, having five hair strings. This instrument is sometimes used as a guitar, at other times played upon by a bow, as custom or fancy may dictate. Another instrument, somewhat similar in form to the Guhue, is also used in some parts of Africa, having a large single string formed from a number of twisted hairs, and having two holes cut in the breast, which is a piece of skin stretched over part of the instrument. Such are a few of the earliest bow-instruments, some of which are supposed to have been in use from a very remote period, as the Ravanstron of India has been traditionally ascribed to

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have been known there several thousands of years anterior to the birth of Christ.

We now arrive at what is supposed to be a more modern European instrument, although certainly very old—the Crwth, or Crowd. Some learned authors are of opinion that those two names do not imply a synonymous instrument. but this must be left to those deeply versed in antiquarian lore. This instrument at an early date was very common throughout Wales and the Scottish Highlands, as well as in other parts of Europe. The earliest mention made of the Crwth is in the poems of Venantius Fortunatus (Book V.), who was Bishop of Poitou, where, in an address to Lupus, Duke of Champagne, he states:—

"Plaudat tibi Barbarus harpa,
Chrotta Britanna canat."
"Let the barbarian praise thee with the harp,
Let the British Crwth sing."

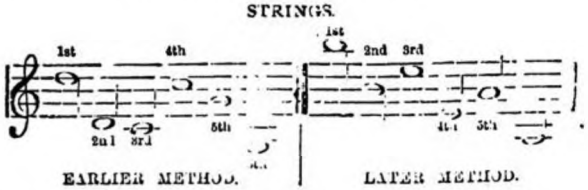
This reverend poet wrote about the year 560, but it is generally supposed the Crwth is of a much anterior date to this; but at the same time it must be particularly observed that this writer who thus mentions the *British* Crwth was an Italian, as also, that one essential and important distinguishing feature used by him to designate the style of music belonging to the Crwth, is in using the word *canat*, sing, thereby implying a quality in the instrument somewhat synonymous to the human voice. The word appears to be of Celtic origin, although we find a remarkable resemblance between the word Crwth and the ancient and modern Irish term *Cruit*, signifying a harp, a Violin, also *Cruisigh*, music, song; *Cruitcoş*, a female harper, *Cruitire*, a harper, fiddler, crowder. The distinction between those ancient musical instruments is one of the utmost difficulty, as most of the sculptured representations are much defaced, and little care bestowed sometimes in the cutting of them. From decayed relics, monumental sculptures, ancient manuscripts, and other documents, we learn the form and construction of the ancient Crwth. In the writings of Montfaucon, a picture is given of a five-stringed Violin, which is represented

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in the hands of a player, this drawing having been copied from a monumental statue upon the Church of Notre Dame in Paris. This is the *Rota*, the instrument by predilection of the French Trouveres. This statue is supposed to have been sculptured about the same period as that in which Venantius Fortunatus wrote, but this is doubtful. Of the Crwth there have been different kinds, the most ancient having had three strings, whilst the number subsequently was increased to six. One distinguishing feature between the Crwth and the Viol, is in the almost equal prolongation of that part of the instrument through which the openings are cut for the admission of the fingers whilst playing. It will be seen from the following that this instrument, although of the same class, is widely different from the Violin, but is nevertheless an early though primitive type of the same family. From dimensions taken from several specimens of the British Crwth, the following measurements may be taken as a mean:—Length, 20½ to 22½ inches; breadth at bottom, 9½ to 10; breadth at top, 8; depth, 2; length of finger-board, 10 to 10½ inches. The back and breast were generally made of maple, the breast sometimes containing only two circular sound-holes at the bottom, about 1¼ inches in diameter, but some other instruments of the same type had two additional round holes cut through the lower or opposite end. The bridge was made of a peculiar form, having one foot much longer than the other, which passed through one of the sounding-holes, and rested on the inner surface of the back, whilst the shorter foot rested upon the breast as in the Violin, being placed near to one of the circular openings. Two elongated openings were cut through the narrow end of the instrument parallel with the sides, to allow the thumb and fingers of the player to pass, whilst the solid piece left in the centre served as a hand, upon which was placed a finger-board. Six vertical holes were cut for the pegs near to the extremity of the instrument, and in a line with the outer edge, whilst the tail-piece was often made of different patterns, and attached in various ways to the breast. The bridge supporting the six

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strings was placed diagonally across the breast, four strings passing over the finger-board, whilst the remaining two were placed at some distance from the others, to the left of the finger-board, and were intended to be played by the thumb. There were several methods of tuning the instrument, amongst which the two following may be mentioned :—



The Honourable Daines Barrington, in an interesting paper on the Crwth, presented to the London Antiquarian Society, states that he heard the instrument played upon by John Morgan in Anglesea, about 1770, and even at that period, he observes, the instrument was almost extinct; but we learn from another authority, who had frequently heard the instrument, that it was in use at a period thirty years later amongst some of the old Welsh peasantry.* The Crwth is stated by some authors to be of British origin, whilst others erroneously fancy it belongs originally to France, and from thence passed to Britain.

The next instrument claiming attention is the Viol, which was also known at a very early date, and was in common use throughout Britain during the fifteenth and sixteenth centuries. Its origin is attributed to one, Alcuin or Albinus, who lived in the eighth century. The earliest Viols appear to have had three strings, but the number was changed at later periods to four, five, and six. Viols were made of all sizes and shapes, from the diminutive three-stringed favorite, to the voluminous Violone, and were a highly esteemed class of instruments, inasmuch as in every household of the wealthier classes a chest of Viols formed an indispensable requisite. The accompanying

*W. Bingley.

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illustration of the Viol, as used in Scotland in the fifteenth century, will convey to the mind of the reader a better idea of the appearance of this instrument, than the most detailed written description. The chest or quartett of Viols bore a similar analogy to our quartett of Violins, viz., two treble, two tenor, and two bass-Viols, which important combination arose from forming a set of instruments approaching in harmony to the various grades of the human voice, viz., Soprano, Contralto, Tenor, and Bass. At a period subsequent to this, the bass variety was distinguished by the name of Viol di Gamba, from its position between the legs when played upon, whilst finally the terms Violone, or Contre-Basso, Violoncello, Viola, and Violin, comprised the distinctive titles of the Viol family in its perfected state. The finger-board of the Viol was fretted for the proper stopping of the strings, as in the guitar, whilst various methods of tuning were adopted, but the most prevalent system in Britain, at least, appears to have been that by Fourths.

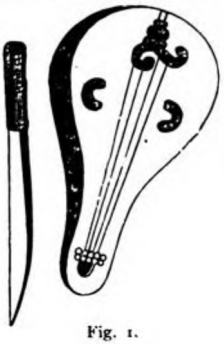


Fig. 1.

So great was the supremacy of this instrument amongst our ancestors, that for several years after the Violin had been introduced, the Viol always held the preference, until the former became more widely known, and its qualities truly appreciated. The Viol, although a pleasing, was a soft instrument, the sounds possessing little loudness or intensity. For a period of many years after the Violin began to be first introduced, and thus to supplant the Viol, we learn from a contemporary writer the struggles it had to encounter ere it attained priority. In allusion to a concert of various instruments, the author remarks :—

"The scoulding *Violins* will out-top them all;"

and whilst he is willing to admit a couple of Violins amongst the other instruments adapted for a "merry-making," he takes

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the precaution to have also "*a pair of lusty well-sized theorboes*" —the reason being that the Violins "*may not outcry the rest of the musick, the basses especially.*"* Violers, or performers on the Viol, were quite numerous throughout Britain during the sixteenth and seventeenth centuries, and even formed a part of the Royal Household. They wore red bonnets, were clothed in livery, and received a small gratuity. The terms *Fiddle* and *Fiddler*, so frequently mentioned by some of the early authors, sometimes certainly refer to the Viol and Violer, as well as to the Violin and Violinist, as those words have been, by many ancient historians and poets, used without any due regard to proper distinction. The Viol was in universal use throughout Scotland in the seventeenth century; but at this period it must not be supposed that the Violin was unknown, as frequent reference is made to it several centuries earlier. From ancient documents we learn that four Violers played at the Cross in Edinburgh on the day of the Coronation of Charles II, 1660; and many more quotations might be cited, verifying the common use of the Viol in Edinburgh and other Scottish towns. In concluding the few preceding remarks upon the Viol, it may not be out of place here to include, also, a species of Viol which ranked as a particular favorite throughout Britain, about the commencement of the eighteenth century, and which was known under the name of the Viol d'Amour. It was a delicate and sweet-toned instrument, having generally seven upper (playing) strings, under the bridge were seven lower (sympathetic) metallic ones, tuned in unison with the above, the whole vibrating sympathetically, although anterior to this period a good many modifications in the form of the instrument had taken place. The quality of the tone of the Viol d'Amour is faint and sweet; there is indeed something rapturous in it, it at once partakes of the depth of the Viola and of the harmonics of the Violin. It is peculiarly suitable to the expression of religious feelings. This choice instrument ought never to be allowed to become obsolete, any Violinist might learn to play upon it in

*Mace, Musick's Monument, 1676.

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a few weeks. It appears, also, to have erroneously passed under the name of the Psalter, to which it certainly bore no resemblance, and was publicly used in London in 1716, Ariosti having played his solos upon it at the King's Theatre, in the Haymarket. In 1752, Passerini, a teacher of Music in Edinburgh, is mentioned as having been an excellent player upon the Viol d'Amour; and a few years later, another Italian performer, Pasquali, gave a concert, in which this instrument took a prominent position. About 1800 it seems to have been almost disused, as there was but little reference made to it about this time, but since then it has become reinstated again. At the late Jullien's Concerts there was an excellent performer upon this delicate-toned instrument. It has been revived in Paris by the late celebrity C. Urhan, who died in 1845; Meyerbeer composed for it in his Opera, "Les Huguenots," whilst at the present day M. Van Wacfelghem (Viola Solo in Lamoureux Orchestra), Messrs Saint George, Lawrence, Dolmetsch, and Shneider, have renewed the popularity of this beautiful instrument in London.

We now arrive at the most perfect instrument of all, and which has been aptly denominated the "King of instruments"—the Violin. At what time this elegant instrument first came into use, or emerged from the workshop, it is almost impossible to decide; but it must be universally admitted that to Italy it derived its chief improvement, about the middle of the sixteenth century, although it is to the ancient Atlantis that we must not only look for the origin of the primitive stringed family, but for being the birth-place of the ancient arts and sciences. Long anterior to the days of the famous Greek architect Archimedes, did the ancient Atlanteans discover hydrostatics and the properties *attributed* to the Grecian, viz., that every body plunged in water loses of its own weight a weight equal to the volume displaced. The ancient Brahmins derived their early knowledge from the same ancient source, they calculated the velocity of light, and from the writings of Surya-Siddartha, we learn that they knew and calculated the

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force of steam. They formed a most marvellous language—the Sanskrit—from which a great part of the idioms of the Orient and Indo-Euporean countries are derived. They had at that early age the gamut with its difference of tones and semi-tones, long, long before the days of Gui d'Arezzo. The Hindu scale runs thus:—*Sa*, *Ri*, *Ga*, *Ma*, *Pa*, *Da*, *Ni*, *Sa*.

The Violin family has been known from the remotest times, we find the *primitive* Violin amongst the *ancient* Egyptians, under the name of the *Chelys*, and upon ancient medals we find Apollo represented as playing upon an instrument with three strings, similar to a Violin. The form of the Violin bears a considerable affinity to that of the Lyre, and this favours the impression of its being no other than a Lyre brought to perfection, so as to unite, with the facilities of modulation, the important advantage of expressing prolonged sounds—an advantage which was not possessed by the Lyre. M. Baillot, in his Introduction to the "*Methode de Violon du Conservatoire*," speaking on the origin of the instrument, says:—"It is presumed to have been known from the remotest times.... Whether it be to the God of Harmony that we should attribute the invention of this instrument, or whether it claim some other origin, we cannot deny to it somewhat that is Divine. The form of the Violin bears a considerable resemblance to that of the Lyre, in fact it is a perfected Lyre." A bow had been used for what the ancients called the Lyre, as Philostratus, who lived during the reign of Nero, informs us that "Orpheus supported the Lyre against his left leg, whilst he beat time by striking his foot upon the ground; in his right hand he held the bow, which he drew across the strings, turning his wrist slightly inwards." But the fact is that the primitive Violin owes its real origin to the ancient Druids, from whom it afterwards passed to the Bards of Scotland, that, from this obscure beginning, it made its way through the dark ages with slow but certain success, till the beginning of the seventeenth century, when it attained the first rank amongst musical instruments. The ancient Druids sang all their Poems and accompanied the

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voice by the sound of an instrument, which, according to some Authors, resembled a Lyre,* according to others, a Guitar,† Harp, etc., but this so-called Lyre, etc., was played upon by a bow. The music was accompanied by different kinds of dances, which were always of a lively nature.

The most primitive nations had their stringed instruments, the Damaras, the Hottentots, etc., and a very early model approaching to the *Geige* is even yet prevalent amongst the Buddhist Priests; it is a wooden cylinder, formed from the mulberry fig, having catgut strings from the gazelle, and a bow strung with horse-hair. Pages upon pages, Chapter upon Chapter, might be written on the much disputed question as to whether Gaspar Duiffopruggar, (or Tieffenbrucker) was, or was not the first maker of the Violin proper. He appears to have made Violins in Bologna, Lyon, etc., from about 1510 to 1530. There is also an account of a Violin made by *Joannes Cesarum Domenicus*, in the year 1510. In our humble opinion and judgment the fact has been pretty well established that Duiffopruggar merits the palm of being, if not the first—at least one of the first makers of the real Violin. Many writers however maintain that Gasparo di Salo was the first maker, but it is now well known that there are Violins of Duiffopruggar fifty years anterior to the oldest known ones of di Salo. There are many proofs for this assertion. In the "*Wiener Presse*" of Nov. '72, Dr. E. Schebeck of Prague discusses this special subject very clearly. His first Violins are dated from Bologna, he left that for Paris in 1515; soon after this he went to Lyon, as a Bass Viola and Lute confirm, by containing the label: "*Caspar Tiffenbrucker a la coste, St. Sebastien—Lyon.*" The

* See Diodorus Siculus, p. 210, note 11, also Ammian. Marcell. p. 211, note 13.

† See the passages of Jornandes and Bede, p. 215, notes 23 and 24. Vossius in *Poematum Cantu* p. 107, believes that it was a Harp. It is unquestionable that the Music of the Greeks, as well as the greater number of instruments which were used in their concerts, came originally from the *Scythian* people. (*Athen.* xiv, 5; *Pollux Onom.* Lib. iv, Cap. ix, p. 187; Pliny vii, 56; Strabo x, 470, 471, also Chap. xiii, and Pelloutier, *Histoire des Celtes*, Vol. ii, p. 218).

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oldest Lute maker that we find any mention of is Lucus Maler, in 1414, and in Mace's "Musical Monuments," published in 1676, this maker's instruments are said to have been valued at $500 (£100). Prince Lobkowitz, of Bohemia, owns two of those instruments, as well as one made by *Magno* Tieffenbrucker in 1607.

M. Neiderheitmann, in his work "*Cremona*," gives us a description of six Violins of Tieffenbrucker. The whole of those six Violins are very much alike in quality of tone, they are formed broad in the breast, and the middle curve is rather flat at the corners, the arching also flat. But the Author was rather surprised when he discovered the very old Violin, bearing the same date as the oldest of Duiffopruggar's instruments, made by J. C. Domenicus, in 1510, as already referred to. The First and oldest instrument referred to by M. Neiderheitmann, is dated 1510, and is in his own collection at Aix-la-Chapelle; it was made for King Francis I of France, has the French crown and two F's interwoven upon the back. Traces of gilding are found upon the belly, ribs and neck. This instrument has a powerful and sympathetic tone. The Second, dated 1511, is owned by a private family in Aix-la-Chapelle. On the back is a fine painting representing the Mother and the Redeemer, the ribs bear an inscription in gilt letters. The Third, dated 1514, is owned by a Bologna gentleman. The Fourth, dated 1515, belonged to Prof. Meerts of Brussels. The belly of this Violin and that of No. 1 appear to be cut from the same piece of wood, as proved by measurement, year circles, and other marks of the wood. The Fifth, dated 1517, at one time belonged to an old Musician, who played it at the Masses, in the Cathedral of Aix-la-Chapelle. This Violin is of a remarkable interest, for instead of a scroll, it bears a carving of the head of the maker, the belly bears a picture of a town. Upon the ribs are inscribed the curious legend:—"*Viva fui in sylvis, cum vixi tacui, mortua dulce canto*," or "Formerly I lived in the wood or forest, I kept silence when I lived, now that I am dead I sing sweetly." The Sixth and last

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is owned by Prince Joussopow, of St. Petersburg. The ribs are covered with gilt inscriptions and the back ornamented with a fine portrait.

But wishing to have further confirmation upon this much mooted subject, I wrote to a gentleman in Pentwater, Michigan, (Dr. Blitz) an excellent Violinist and Composer, and who at one time possessed a rare sample of this old artist's workmanship. Here is the greater part of his reply :—

"* * * Yes, indeed, Duiffopruggar made *Violins*. I have an authority which no one under the sun will deny, viz., the engraving made in 1562, representing the Luthier with a compass in his right hand, the neck of a Luth in his left, before him stand Ruths, Luths, and Viols, but in the centre is a Violin with *four* keys for *four*, and only *four* strings. It has the primitive shape of the Violin—and not of the Viol—and has no frets.

"When Francis I, King of France, stopped at Bologna, in 1515, to establish a Concordat with Leon the Tenth, he heard the workmanship of a Tyrolean Violin-maker extolled with the greatest enthusiasm; this was *Gaspard Tieffenbrucker*. The King became attached to him and summoned him to the Court of France, along with Leonardo da Vinci (who is said to have died in the King's arms), Salai, Benvenuto Cellini, etc., a select circle of Artists, Poets, etc. But it was not long before Duiffopruggar withdrew to Lyon, utterly disgusted with the tumultuous French Court, whose pomp and profligacy bewildered this modest man of simple and peaceful manners. It was from Lyon that some of his early instruments proceeded.

"He gave a very pleasant shape to his instruments, they were long, almost oval-shaped—not square like the Violins of Maggini, which, however, approach more closely in his first workmanship in similarity and quality of tone. The Violins of the Lyon Master are larger than those of Stradivarius, and remind one a little of the shape of the modern alto. From this there results a noble and stately tone, especially upon the intermediate strings, the D and A, which is an extremely rare quality; as to the G, it approaches so closely to the tone of the Bass, that it seems to vibrate to the lower octave; the first string is limpid and melodious, really sharp and piercing. The whole sound is velvety, mellow, and rich, and to a certain extent rivals even the Cremonese Violins, although it does not possess their sparkling brilliancy. If the Stradivarius is the Violin of the Virtuoso, the Duiffopruggar might well be called the instrument of the Musician.

"As you know, I at one time possessed an authentic Violin of this expert workman; unfortunately the portion of the breast situated under the feet of the bridge was deeply hollowed and worm-eaten. This instrument bore in inlaid work the picture of one of the gates of Lyon, the carved head represented the features of Duiffopruggar, an exact imitation of the portrait of this artist, engraved in 1562 by Voeirot. The ticket was written with the

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hand, it was almost illegible, one could only read the date 1527 or 1529, along with a few letters of the maker's name and that of Lyon, there was also discovered in a broken corner a portion of his characteristic mark—a cross with an X upon the top and two D's at the lower end of the cross facing one another. Moreover, upon this admirable instrument the "Darkies" scraped their Hornpipes prior to the war of the Secession.

"Thus you will understand that the Violin which I had in my possession was not a Viol converted into a Violin, by merely changing the neck, as was commonly done, but had a genuine neck for four strings only. If Hart called such an instrument a 'fossil whose merits are of the slenderest kind,' it must be that he had never possessed, or seen a Duiffopruggar in his lifetime. Fetis saw and heard one which belonged to Meerts, Prof. of the Violin, in Brussels, from the period of 1835 until his death. Emil Neumann, a musicologue of the greatest repute and one of the best authorities as a Musical Historian in Germany, who wrote in 1885, speaks highly of the *Violins* of Duiffopruggar. Mr. Hart advanced ideas of his own, the Luthier capable of making such a Violin as I had would have been very stupid, had he placed the name of another maker in his own instrument, but this Violin was over three centuries old, there was no mistake about that."

A *Gigue* or *Rebek*, played like a Violin, was known in the eleventh century, and some writers have suggested that as the Violin was at an early period used for dancing, its name would partly account for its origin. Its name *Geige*, or *Gige*, the Italian *Giga*, dancing, as well as in the common word *Jig*, as also the name *Fiddle* or *Videlaere* for *Vitulari*, to dance confirms its early employment as a dance instrument. An old document of 1203 contains the following:—"At Whitsuntide the curate fiddled (viddelte synen Buren) his peasants to the dance. Thereupon came a clap of thunder, struck off the curate's arm with the (viddelbogen) fiddle-bow, and killed twenty-four of the people on the green sward." The middle Latin expression for this instrument is *Vitula*, which can only be derived from the old Latin, *Vitulare*, to skip, dance, frisk about, and the Violin was the most popular instrument for jovialty, hence the poet Ducange calls it *vitula jocosa*. Skipping, dancing and making music are relative conceptions, therefore it is not strange that the substantive *Vitula*, expressing the concrete idea of an instrument, should arise from the verb *Vitulare*. Thus the German *Geige* arose from the verb *Geigen*,

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meaning to strum, and not the verb from the substantive. Then from *Vitula* arose the Portuguese *Vitula*, but changed in accent, and at length *Viula*, *Viola*, from which comes the Italian *Vidla*, which could not have arisen directly from *Vitula*. The Spanish is *Vihuela*, the *h* being introduced to preserve the hiatus between *i* and *u*; the French is *Viole*, but the old French is *Vielle*, or *Viele*, (trisyllabic). Is it not probable, as Wackernagel really assumes, that the old high German *Fidula*, which occurs in Otfried, and the new high German *Fiedel*, might have the same origin as Viola, for the Roman *v* was frequently sharpened into *f*. If so, then we might have in this German form of the word a more ancient testimony for *Vitula*, than the middle Latin literature gives us for it.

The word *Violina* appears to be for the first mentioned in a work of G. Lafrancas, Brescia, in 1533. Towards the end of the above century the Violin is referred to in some Italian scores:—"*Piccoli Violini alla Francese*," the little Violins proceeded from France. (Lyon is probably alluded to). In the "*Life of St. Christopher*," written about 1200, occurs the following passage:—

> "* * * * Cristofere hym served longe;
> The King loved melodye of *fithele* and of song."

The Saxon word *Fidle* is therefore of considerable antiquity, we have the middle High German *videl*, *videloere*, *videln*, to fiddle, *videlboge*, fiddle-bow; the Icelandic *Fidla*, the Danish *Fedel*, the Dutch *vedel*, *veel*, *viool*; the Flemish *vedel*, *vedele*; the modern German *Fiedel*, *Fidel*, *Giege*, and the Celtic *Fidil*; *Fidileach*, a fiddle-maker, *Fidileir*, a fiddler, *Fidileireachd*, playing on a fiddle, *Fidilin*, a small fiddle.

But we shall endeavour to go a little further back as regards the derivation of the word *Violin*. Those who regard human audible language as a living organism, individual languages as organs, and articulated sounds as cells and fibres, will have no difficulty in accounting for the permutations and transpositions which these sounds experience in their migration, in words from a primitive language through relative languages in the course of

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ages. The consonantal elements of the word Vio Li N are the same in the Hebrew נבל, Nai Ve L, only transposed. This word denotes in Hebrew, a pouch, or cavity, which may contain a fluid, or air. In the latter case it has given its name to the instrument which has a hard pouch-like resonating cavity, or body, to which a fingerboard was attached, over which strings were stretched. Let the finger of one hand be pressed down upon the string of such an instrument on to the fingerboard, and whilst the other hand sets the string in vibration let the former finger slide down the fingerboard, then a regular succession of tones and semi-tones of the musical scale, or a portion of it, will be produced, perfectly imitating the human voice, an imitation which no other class of instruments is capable of. Hence it is to this family alone that the word זמר, Ze Me R applies, which is also used for the human voice. Compare *Psalms* xcviii, 5; *Isaiah* li, 3; קול זמרה *voice of song*, with זמרת נבליך, *songs of thy Violins*, in *Amos*. v. 23.

Let the truthful, unbiassed, and earnest student search where he may through the archives of history, and he will find that there is not a fragment of modern philosophy, whether Newtonian, Cartesian, Huxleyian, or any other, but what has been dug from the Oriental mines. There are strange analogies in Nature which modern scientists refuse to recognise. The Rosicrucian theory, that the whole Universe is a musical instrument, which is the Pythagorean doctrine of the Music of the Spheres, *may* be not so foolish after all, for sounds and colours *are* spiritual numerals; and as the seven prismatic rays proceed from one spot in heaven, so the seven powers of Nature, each a number, are the seven radiations of the Unity, the Central Sun of all. In the god Heptaktis—so hideously and malevolently misrepresented by our ignorant Missionaries—the seven rays of the Solar Spectrum are represented concretely. The *Seven* epitomised into *Three* primary rays, viz., Red, Blue, and Yellow, form the Solar Trinity, typifying respectively Spirit,

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Matter, and Spirit-Essence. Science of late has reduced the *seven* rays to *three* primary ones, and thus corroborates the scientific conception of the ancients of at least one of the visible manifestations of the invisible Deity, and the seven divided into a quaternary and a trinity. The Seventh ray of the prismatic spectrum—the blue-violet—which is the most powerfully chemical and magnetic of all, corresponds with the highest note in the musical scale, and like this scale the chemical rays increase in power as you ascend the spectrum from the Red to the Violet.

Experiments made by that delicate acoustic re-agent, the sensitive flame, prove the analogy between the sympathy among the same notes of a gamut and the sympathy among individual colours in the spectrum. An incandescent body that produces a particular bright band in the rear of the spectrum, will, when in a gaseous state, absorb light and cause a dark band in exactly the same part of the scale. As all the complex music of an orchestra is the result of a few simple notes variously combined, so all the tints of a picture are the results of a few simple colours varied. The musical scale asserts the complex notes in one case, the spectrum asserts the complex colours in the other. If we express the wave-lengths of the notes by relative measurements, adopting Listing's determinations of wave-lengths, and take C as 100, then all the other notes have these wave-lengths expressed in percentages. Similarly Red is taken at 100, and the wave-lengths of other colours are expressed in percentages. Upon comparison, D and Orange are each 89; E and Yellow, 80; F and Green, 75; G and the average of the Blues, 67; A and Violet, 60; B and Ultra-Violet, 53; C and the obscure rays (Black), 54. Further, the comparison of harmonies comes out in an interesting manner. Low C and upper C sound well together, so Red and Black go well together. Red and Green, and C and F harmonise fairly well; but Red and Orange no lady would wear, and C and D make a combination by no means harmonious. Red and Blue, or C and G, also go well together.

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Sounds which harmonise to the ear produce regular acoustic figures to the eye; as, for example, segments of the circle, ellipses, ovals, circles, or straight lines; but if the sounds do not harmonise, the figures are confused, unsteady, and complicated, presenting an appearance as if the wave-lines were contending with each other. Again, mathematically speaking, the relations of musical notes are, that regular simple forms being produced by combinations of these notes which result from vibrations bearing a different ratio to each other, while irregular and unsteady figures are caused by notes which have no such ratios. The primary colours are Red, Yellow, and Blue, corresponding to the primary sounds C, E, and G. Every two produce a colour, and the three produce white, making Seven as in the diatonic scale; and as white light may be decomposed into three colours, so every sound is a component of three tones.

There are deep, then, within the affinities of Nature, singular and mysterious alliances between colour and sound, for there are Seven pure sounds in the diatonic scale, consisting of five tones and two semi-tones, because the harmonic octave is on the margin, or border, or rythmic point of the First and Seventh, like the chemical dark rays on the margin of the Solar Spectrum. Red is the deep bass or slowest vibration of ether, whilst violet or purple is the high-treble vibration, like the upper C in music. During spring-time, as photographers well know, we have this ray most in abundance, and under this ray both animal and vegetable life manifest an inordinate development.* Musical tones even have a wonderful effect upon the growth of vegetation. It may be herein observed, that to the real and profound student of Nature the allegory of the seven-rayed rainbow to Noah, has a rather deeper meaning than that so generally and childishly believed in, viz., to refresh the memory of the Jewish Jehovah with the patriarch and people.

Another strange "freak of Nature" is this: In Southern California there are certain places on the sea-shore, where the

* "On the Influence of the Blue Ray on Vegetation." Genl. Pleasonton.

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sand, on being disturbed, produces a loud musical ring. This is known as the "Musical Sand." The Editor of Marco Polo's travels thus observes:—"The sound of musical instruments, chiefly of drums, is a phenomenon of another class, and is really produced in certain situations among sandhills when the sand is disturbed." From Remusat's "Histoire du Khotan" I quote the following:—"A very striking account of a phenomenon of this kind, regarded as supernatural, is given by Friar Odoric, whose experience I have traced to the Reg Ruwan, or flowing sand, north of Kabul. Besides this celebrated example, I have noted that equally well-known one of the Jibal Nakics, or "Hill of the Bell," in the Sinai desert; Gibal-ul-Thabul, or "Hill of the Drums." A singular phenomenon is this "Musical Sand" of Jebel Nagus, a sandy hill lying to the west of the mountain usually called Sinai. According to Captain Palmer, an English traveller, the sand of this hill possesses the marvellous property of giving out musical sounds whenever it is set in motion. The sandy slope is two hundred feet in height, the sand being very much the same as that in the desert around. When any considerable quantity of this sand is set in motion, it is seen to move in undulations, and, simultaneously, a singular sound is heard, which is first feeble, but may be heard at some distance when it has attained its maximum intensity. The sound is not easily described. It is neither metallic nor vibratory. It might be compared to the sharpest notes of the Æolian harp, or the sound produced by forcibly drawing a cork over a wet glass. The phenomenon attains its greatest intensity during the day in summer, when the sun is hottest, and while the wind blows from the North West. Captain Palmer has observed it on all sides of the hill, and the only differences he has found are such as depend on the direction of the wind.

The emission of queer noises from the sand of the sea-shore has been known for ages, but the first scientific (?) investigation in that line, in America, was made by the Coast Survey Corps within the past ten years, when it was found that

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"Singing Sand" could be found at twenty-six different places along the Atlantic, Pacific and Gulf coasts. One of the most remarkable, as well as the largest and best known banks of "Singing Sand" in the United States, is that on the beach of Manchester, Mass., where for about a distance of one-fifth of a mile the sand gives forth a distinct sound when walked upon, or even if stirred with the cane or a finger. What are called "Scientific" explanations as to this phenomenon do not make us much the wiser. Prof. Julien, of Columbus College, says that the sound is caused by friction between the angular particles, the conditions necessary being perfect dryness and uniformity in size of grain; Prof. Bolton, of Trinity College, Hartford, Conn., who made a trip to the Sandwich Islands in the summer of 1890, for the sole purpose of examining the sonorous sands of that country, tells us that the sound is due to pellicles or films of air or gas, the sand-grains being thus separated by elastic cushions of condensed gases! A Chinese narrator of the tenth century mentions the phenomenon as known near Kwachau, on the eastern border of the Lop desert, under the name of "Singing Sands."

But not to digress further, by a comparison between the instruments now in use in India and those played upon by the ancient Europeans, it can be easily demonstrated that the Indo-Celtic races must have transported the original models Westward from the East. The different sizes of this type, Violin, Viola, Violoncello, and Double Bass, have supplanted the whole host of Viols, whilst, from an identity of form, along with perfect intonation, a similarity of quality has been attained, which renders this class of instruments to approximate closer to the human voice than any other. This excellency in the Violin arises chiefly from its power, quality, and flexibility, due chiefly to its outline, material, and proportions, greater thickness, with smaller number and increased tension of the strings, as well as to the improved form and greater strength of the bow used with the instrument. Rude approximations to the Violin are to be found decorating monumental tablets and illuminated manuscripts throughout Britain and the Continent at an early

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date, but those illustrations chiefly represent the Rebec with one, two, and three strings, although some representations certainly possess a close analogy of parts, as incurvatures of sides, bridge, tail-piece, fingerboard, and extended hand. The earliest representation known of any instrument truly approximating to the Fiddle or Violin, is contained in the "De Cantu et Musica Sacra" of the Abbot Gerbert, and is assigned to the eighth century. In this figure the instrument has but one string, but possesses a bridge and tail-piece, two sound-holes, and something like a finger-board, whilst a bow rests on the string, and a portion of the right hand shows that it was held as the Violin.

A somewhat similar instrument, having four strings, with two circular sounding-holes near the top, illustrates an ancient illuminated manuscript—"Liber Psalmorum"—assigned to the Anglo-Saxons of the tenth century. This illustration represents David with a harp upon his left knee, a dove descending, around which are inscribed the words, "Spiritus Sanctus," whilst upon each side is a figure; one an ancient juggler performing a favorite feat of tossing up knives, while the other is playing upon this rudimentary Violin, with four strings and two round sounding-holes near the top. Much impaired characters distinguish him as *Idithun*, whilst the juggler in named *Ethan*. Idithun is repeatedly specified in Scripture history as the chief Jewish Musician, and classed with the Cymbal and Trumpet players a thousand years anterior to the Christian era. In the "Liber Psalmorum," the four principal Musicians here indicated are *Isap*, *Eman*, *Jettian*, *Idithun* (p. 19), those appearing in Scripture as *Asaph*, *Heman*, *Ettian*, *and Jeduthun*, the composers of the Psalms. In "Strutt's Sports and Pastimes" is to be found a somewhat similar illustration. Another illustration graces the cover of an ancient Scriptural manuscript known as St. Jerome's Bible, formed of the finest vellum, not to be procured at the present day. Certain stains partially deface it, which are ascribed to the aspersion of the Holy, or Consecrated Oil, used in the ceremonies pertaining to the Church. This

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picture contains three figures, the centre one being an acrobat, standing head downwards—one upon the left is represented as playing upon a two stringed Fiddle or Rebec; the other figure, upon the right, appears to be performing on a Tambourine. This copy is ascribed to the thirteenth century, and is supposed to have originally belonged to the celebrated Abbey of Dunfermline. Amongst the ornamental *bas-reliefs* upon the Abbey of Melrose, there is a representation of an instrument supposed by some to be of the true Violin type, by others, the Crwth. But the latter err in describing the instrument upon this venerable Abbey as the Crwth; it is assuredly different, nor according to the relics of the Crwth preserved, can it have been in any probability moulded to this instrument, although several writers consider the two—the Crwth and Crowd—as synonymous. This venerable structure was the work of a Parisian architect, and was founded by King David I of Scotland, in 1136. Dauney in his work, "Ancient Scottish Melodies," concludes that no such instruments as the Violin prevailed in Scotland about this time, as Giraldus Cambrensis, who wrote in 1187, only speaks of the Harp, the Tabour, and the Bagpipe, in use amongst the Scots, but from other sources, we are inclined to think different—but this is a matter more suitable to the researches of the antiquarian, than to the general reading of the Violin amateur.

Many other ancient representations of the Violin species might be enumerated, of which the following must suffice for the present:— Upon one of the stained glass windows of the Chancel of Dronfield Church, in Derbyshire—an edifice which was erected in the sixteenth century—there is depicted an instrument of the Violin kind; of Staple Church, Kent; of St. Denis, near Paris; upon the portico of the venerable Cathedral of Notre Dame, at Paris, where there is a figure of King Chilperic, with a kind of Violin in his hand; there is another, having six strings, on the facade of the Cathedral of Amiens; upon the carved seats of Worcester Cathedral there is a figure of an Angel playing upon a Crwth of the twelfth century,

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having five strings; and in the "Musurgia" of Lucinius;—all the foregoing being ascribed to a pretty early period.

As previously remarked, the term "Fiddler" cannot be accepted to signify "Violinist" at all times, although it was evidently used by many ancient writers to designate a player on the Violin; yet in numerous cases, where early mention is made of the word, it is impossible that it can be classed as Violinist. The term Vidulator, for Fiddler; Violer, or player on the Viol; Crowder, or Crouther, all appear in a single document of the year 1306.* In the Song of the Nibelungen, which is considered the most ancient of all the Teutonic poetical romances which have been preserved entire, we find the following:—

> "Folker knight of courage, bold by his side sat he;
> A sharp and mighty *fiddle stick* held the hero free;"

again:

> "Raging like a savage bear; a *fiddler* mad is he;
> Praised be my luck that from the fiend safely I could flee"—

where thus the fiddle-stick is made to represent the sword of the warrior. This poem is ascribed to the eleventh century; and again, in the following century, in the life of St. Christopher, mention is made of "*the fithele* and of song." Fiddlers also formed a part of the Royal Household in the fifteenth century,—their number about this time having been limited to three, and in the same century mention is made of several throughout Scotland, as "the *fidelar* of Dunbar," "the broken-bakkit *fithelar* in Sanct Androws," whilst at the commencement of the following century every Scottish town possessed a "*fithelar*," as various ancient documents testify. In 1505 a "hielan *fithelar*" is spoken of as having received gratuities in Perth. In this same year, there was "ane Ersche fithelar in Sanct Johnstown," and "Sir Alexander Jardenis fithelar" in 1506; also "three fithelars in Dumfries." In the following year, "ane fithelar in Craill played all night before the King's lugein." A "French fithelar" and his son went to France in 1508, where he got

* Bottfield, ut sup., pp. 143, 144.

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"xii French crownis." In 1526 there was "Anton, fydlar," and "Cabroch, fidlar" in 1530-1533. In the "*Houlate*" we have mention made of "the fydill in fist," and Gavin Douglas, speaking of the Musicians in the Palace of Honour, 1522, says :—

> "Thair instrumentis almaist were fidillis lang,
> But with a string guhilk never a wreist geid wrang."
>
> *Part II.*

The Violin appears to have been one of the many instruments used about this time in accompanying the marriage-guests to the Church, as from a work in 1543, we read :—"Such folks also do come to the church with all manner of pompe and pride, and gorgiousness of rayment and jewels. They come with a great noise of harpes, lutes, *kyttes*, basens and drommes, wherwyth they trouble the whole church," etc.* Leonardo da Vinci, the celebrated Painter, who died in 1723, was a famous performer on the Violin, his favorite instrument having had a silver neck carved with a horse's head. In the "Cena di San Giorgio," in the Museum at Paris, Paul Veronese, the Artist, has preserved for us the form of the instruments then used. In this beautiful painting representing the guests at the Marriage of Cana, Titian is playing on the Double-Bass, Paul Veronese and Tintoret on the Violoncello; a man having a cross upon his breast is playing on the Violin, Bassano is blowing the Flute, and a Turkish slave the Sackbut.† We have Julian Tiburtina and Louis Lasagrino playing the Violin at Florence in 1530, and Baltazarina left Piedmont for France in 1577, where he superintended the music of Catharine de Medicis and delighted the Court by his skill as a Violin-player. Upon the return of Queen Mary to Scotland in 1560, Violins and Rebecs were used in Edinburgh to celebrate her arrival; and in the following year we have mention of Violins being used to accompany the plays in the Court of Queen Elizabeth :— "First, the music of violins began to play, during which came

* Christen State of Matrimony.
† Lives of Haydn and Mozart.

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in upon the stage six wild men clothed in leaves,"* and a few years later a Violin is described belonging to this Queen, with a hole cut through the hand for admitting the thumb of the player. In a rare tract, written during the reign of this sovereign,† the author, referring to the ancient Morris-dancers, observes:—"Footing the Morris about the May-pole, and he not hearing the minstrelsie for the *fidling*, the tune for the sound, nor the pipe for the noise of the tabor, bluntly demanded if they were not all beside themselves, that they so lip'd and skip'd without any occasion," from which it may be presumed that the "fiddlers" in those ancient times sometimes combined to render their playing a work of "*strength*." The Violin was introduced in the music of masques, as in 1607; and again in 1617, "the drunke fidler" is introduced in another masque, with this description by Bacchus, one of the characters:—

> "The fidler's Croud, now *squeakes* aloud,
> His fidlinge strings begin to trole;
> He loves a wake and a wedding-cake
> A bride-house and a brave Maypole."‡

In the records of Orkney is a passage referring to the execution of a murderer in 1616, who had killed "ane, David Sandie, *fidler*, with ane durk;" and about this time the Violin was also well known in the Shetland Islands. From a quaint author in 1634,§ we cite the following referring to country wakes:—"They hate the laurell, which is the reason they have no poets amongst them, so as if there be any that seeme to have a smatch in that generous science, he arrives no higher than the style of a ballet, wherein they have a reasonable facultie, especially at a wake, when they assemble themselves together at a towne greene, for then they sing their ballets and lay out such throats as the country *fidlers* cannot be heard."

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* Hawkins, Origin of the English Drama, V. II.

† Plaine Percevall, the Peacemaker of England.

‡ White. Masque of Cupid's Banishment. Bride-house, a wedding feast.

§ A strange Metamorphosis of Man transformed into a Wildernesse deciphered in Characters. 1634.

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A contemporary author* relates the following on marriage-feasts:—"Some cannot be merrie without the noise of *fiddlers*, who scrape acquaintance at the first sight; nor sing, unless the divell himself come in for a part," etc. And from another author, about the same date,† we learn the following:—"Next morning come the *fidlers*, and scrape him a wicked reveillez. The drums rattle, the shaumers tote, the trumpets sound ton ta ra, ra, ra, and the whole street rings with the benedictions and good wishes ot *fidlers*, pipers, and trumpetters."

Shirley, in his Lady of Pleasure, written about 1635, makes one of the characters say:—

> "The case is alter'd since we lived i' the country;
> We do not now invite the poor o' the parish
> To dinner, keep a table for the tenants;
> Our kitchen does not smell of beef; the cellar
> Defies the price of malt and hops; the footmen
> And coach-drivers may be drunk, like gentlemen,
> With wine; nor will *three Fiddlers* upon holidays,
> With aid of bagpipes, that called in the country
> To dance and plough the hall up with their hobnails,
> Now make my lady merry."

From a superficial point of view, one would be led to imagine that the Violin was about this time used as a military musical instrument in France, Spain, and several other parts of the Continent, as well as in Britain. In the "Memoirs" of Count Grammont, a description is given of the siege of Lerida, in 1647, by the Prince de Conde, who "ordered the trenches to be mounted at noonday by his own regiment, at the head of which marched *four and twenty Fiddlers*. Night approaching, we were all in high spirits, our Violins were playing soft airs, and we were comfortably regaling ourselves," he thus pleasantly goes on; whilst in the British army there was also a complement of Violinists, and who at this time were spoken of as being anything but a "Teetotal Society." Twenty-four was the number employed in the Royal Household of King Louis

* Griffith's Bethel, or a Forme of Families. 1634.
† Comforts of Wooing.

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XIV of France, as well as in that of King Charles II, and Mersennus in his "Harmonie Universelle," written in 1636, confirms this. But this idea of the Violin being used purely as a military instrument is quite erroneous. It is a well-known fact that through the influence of the Italians, who had introduced their artistic foibles into France, the grand Nobility of the seventeenth century had their regiments, their bands, actors, and mistresses. When they went to war they brought all the foregoing along with them; the twenty-four Violinists of Conde were his *private band*, and not a portion of his *regiment de champagne*. In the above narrative of the siege of Lerida, it must be understood that the Prince had no other view than that of bravado, in thus appearing before the Court of Versailles, for never was the Violin used as a military instrument.

In a letter of King Charles to his aunt, the Queen of Bohemia, written at Cologne, he complains of "the want of *good Fiddlers*, and of some capable of teaching new dances;" and this sovereign, adopting the French fashion, "would have twenty-four Violins playing before him while he was at meals, as being more airie and brisk than Viols." In France, almost every one of the wealthier classes had Violinists attached to their household, and from an authoress who wrote about this time, we learn the following particulars relative to King Charles:— "At his second visit, he begged of me to let him hear my band of Violinists which was reckoned particularly good."* The Violin about this period must have been quite common throughout Britain, as even *toy Fiddles* formed a part of the wares disposed of in the fairs, as in a pamphlet dated 1641,† the author, after describing several of the characters, states:— "amongst these, you shall see a gray goose-cap (as wise as the rest) with a 'what do ye lacke' in his mouth, stand in his boothe, shaking a rattle, or scraping *on a Fiddle*, with which children are so taken, that they presentlie cry out for these fopperies." We also find about this period a letter from Lord

* Autobiography of Mademoiselle de Montpensier.
† Bartholomew Faire.

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Lothian to Lord Ancrum, whilst with the Scottish army at Newark, in 1641, which contains the following:—"I cannot out of our armie furnish you with a sober *Fidler*. There is a fellow here plays exceeding well, but he is intollerably given to drink." * The few following remarks from the amusing Pepys, relative to the coronation day, may prove somewhat interesting:—"A great pleasure it was to see the Abbey raised in the middle, all covered with red, and a throne (that is a chair) and footstool on the top of it, and all the officers of all kinds, so much as the very *Fiddlers* in red vests..... I took a great deal of pleasure to go up and down, and look upon the ladies, and to hear the music of all sorts, but above all, the *twenty-four Violins*." And in reference to the improvements of the stage a few years later, 1666, the same author observes:—"Now wax candles and many of them; then not above three lbs. of tallow; now all things civil, no rudeness anywhere; then as in a bear-garden; then *two or three Fiddlers;* now *nine or ten* of the best; then nothing but rushes upon the ground, and everything else mean, now all otherwise. 'Hermitt Poore' and 'Chevy Chase' was all the music we had; and yet no ordinary Fiddlers get so much money as ours do here, which speaks our rudeness still. That he hath gathered our Italians from several Courts in Christendom, to come to make a concert for the King, which he do give £200 a year a-piece to." Amongst the common customs prevalent previous to, and during the reign of this merry monarch, may be mentioned the following one from an author in 1659,† where, speaking of taverns, he says:—"Your L. will not believe me that the ladies of the greatest quality suffer themselves to be treated in one of these taverns, but you will be more astonisht when I assure you that they drink their crowned cups roundly, strain healths through their smocks, dance after *the Fiddle*, kiss freely, and term it an honourable treat;" and amongst the numerous odd devices used on tavern

* Prefatory notice to Lawe's Memorials, p. 63.
† Character of England, p. 31.
‡ Richard Flecknoe's Enigmatical Characters.

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signboards, the Violin formed one, as in a work in 1665,‡ treating of "fanatic reformers," the author observes:—"Such ridiculous work they make of their reformation, and so zealous are they against all mirth and jollity, as they would pluck down the sign of the *Cat and Fiddle* too, if it durst but play so loud as they must hear it." Playford, in 1683, distinguishes the "*treble Violin*" as a "cheerful and spritely instrument, much practiced of late." The art of playing by the different shifts appears to have been introduced into Britain during the reign of this sovereign, by Thomas Baltzar, a native of Lubeck, and leader of the Royal band of Violinists, whose performances are graphically depicted in the amusing works of Anthony Wood.

We may now consider the Violin as a standard and common instrument throughout Britain about this period; and a few years afterwards, mention is made of it as being used in the Highlands of Scotland at the lyke-wakes, where a melancholy ball, attended with dancing and greeting, preceded the wails and ejaculations of the mourning-women in attendance. About the commencement of the following century, the supreme merits of the Cremona Violin were appreciated in our northern metropolis, for in 1708 mention is made of "*two Cremona Violins*, along with a parcel of fine music books," to be sold. Pasquali, who arrived in 1752, had "*some Cremona*" and other Violins for sale, and here about the same period several other *Cremonas* were advertised for sale in the same city. A few years after this we are told of a Violin by Klotz, being so much coveted by a nobleman, that he offered £500, and a life annuity of £100, for the instrument, which was rejected. The Violin sold at the owner's decease for £40.* Numerous have been the various so-called improvements in the Violin by some of our modern makers and repairers, but in reality few of them are of any essential importance, as assuredly no artist, by means of any different proportions or combination of parts dissimilar to those used by the chief Cremona makers, has reached anything like the same perfection. Doubtless Violins have been made closely approximating in character to our Cremonas, but those

* Parke. Musical Memoirs, Vol. I, p. 301.

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have been formed upon a similar system, without any extra additions or peculiar changes of construction. A few of those fantastic and diversified changes may be herein enumerated. The first, and perhaps the most ridiculous of all, is the following, as related of J. J. Hawkins, the inventor of the Claviol, or Keyed Violin. In 1800 this gentleman patented an invention applicable to pianofortes and other stringed instruments, including the Violin, whereby the belly of the Violin was exposed on both sides, the instrument having no back, but a firm wooden rib or bar placed under the breast, and a spring underneath the sound-post, for the purpose of resisting the tension of the strings. Such was the enthusiasm of the inventor, that he actually carried this process into execution upon a Stradivarius Violin, by removing the back and substituting the foregoing contrivances, and with what result may be easily imagined, as the instrument was rendered utterly worthless so far as quality of tone was concerned, although the mere loudness was little diminished. For the particulars of his invention, see Patent No. 2446, Nov. 13, 1800. In 1788, C. Claggat patents an invention, whereby the tail-piece of the Violin may be brought to any desired angle, and as a consequence, a diminished pressure on the breast of the instrument may be produced, with greater facility of fixing and altering the sound-post, No. 1664, August 15. Another invention for keeping the strings of the Violin and other musical instruments always in tune, was patented during the same year by Peter Litherland; for description, see No. 2430, July 31; whilst an invention for a somewhat analogous purpose was patented by Jubb in 1805, No. 2838, April 5.

Perhaps the strangest of our English bow-instruments was that of Mr. Edwards, announced in 1823 as the "*Semi-Luna*, and yielding a fine tone without the aid of wind or strings." Nothing could scarcely have been more simple. A number of short iron pins, or stout wires, are set on the edge of a half-moon, or curve, which curve forms the exterior of the half transverse section of a hollow cylinder, to which a bow is applied which produced a feeble tone from each.

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In 1835, T. Howell claims certain improvements in the construction of the Violin, Violoncello, and Double-Bass, by increasing the length of the neck for greater facility of fingering, whilst the upper ends of the instrument are proportionally shortened, No. 6964, Dec. 21; and two years afterwards an invention is patented by J. F. Grosjean, consisting in the application of vitreous or crystallised substances to the surfaces of stringed instruments, including the Violin, No. 7450, October 20, 1837. In 1852, R. H. Brooman patents an improvement in the Violin and other similar instruments, by a contrivance for lengthening or shortening the strings, by a double fingerboard and keys, No. 567, October 29; whilst in 1854, W. E. Newton claims an improvement of tone in the Violin, by the insertion of a horn or trumpet into the body of the instrument, No. 186, January 25; whilst an invention for attaining a similar effect is claimed by G. Jacque in 1856, by placing a box, containing a number of strings, in the interior of the Violin, No. 1684, July 17. A Violin, in which a small frame is inserted between the back and breast, as a substitute for a sound-post, by which means the sound of the instrument can be modified, was invented and claimed provisional protection in 1857, by De Laphaleque, No. 2373, September 12; whilst an improvement for increasing the volume and richness of tone, by grooving the back and breast, was patented in 1858 by John Robertson, No. 2587, November 17; and on December 9, H. Bell has a specification for the improvement of the Violin, by the insertion of a glass elliptical chamber into the body of the instrument, No. 2823; and a modification of the above by the same gentleman is specified in 1866, No. 207, August 13. Improvements respecting the fingerboard and other parts of the instrument may be seen by obtaining the following descriptions of patents:—1776, December 7, No. 1140, by Charles Claggett; 1802, March 24, No. 2594, by Peter Litherland; 1811, April 24, No. 3436, by William Bundy; 1827, August 1, No. 5533, by Eugene du Mesnil; 1845, June 12, No. 10,719, by Robert Brooks; 1854, January 11, No. 65, by Daniel Semple; and on August 8, No 1738, by Antoine Corvi;

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in 1856, September 19, No. 2195, by William John Bisseker; in 1858, May 16, No. 1217, by John Jones; and in 1867, January 25, No. 198, by William Pain.

In addition to the Patents already specified, there are up to the present time nearly one thousand Specifications connected with instruments of the Violin type. To detail such would require several volumes, but for the present an abridgement of a very few of the most important must suffice. In 1871, A. V. Newton, acting for the inventor, Wildman, U. S., patents an improvement to increase the volume of sound, by making the pierced apertures close to the sides, and of a crescent shape, thus diminishing the cross-cutting of the woody fibres as in the common *f* shaped holes of the Violin, No. 1002, April 15. In 1874, J. B. Hamilton (and others), patents an invention to give the strings a means of compensating for the variations and derangements of pitch, induced by atmospheric and other displacements. In the Violin this is accomplished by forming detachable compensators between the points of attachments of the strings and their bridges, or bearings, No. 4049, November 25. In 1875, Hamilton, Wade, Okes, Voysey, and Balfour, of Soho, claim protection for the construction of stringed musical instruments of the Violin class, which can be played *without the use of a bow*, for setting the strings in vibration. Each string is connected to the tongue, or vibrator, of a free reed, and the tone is produced by causing a strong current of air to act on the tongue or vibrator, thus imparting a vibrating motion to the tongue and string in connection therewith. See Specification, No. 1585, April 29. In 1876, No. 3723, September 23, is a continuation of Semple's present patent already referred to. In 1876, William Haydon Cooke, of Woolwich, patents an improvement for regulating the tension of stringed instruments. This invention consists in constructing the Violin-pegs of two portions, a fast and a loose, fitted with a clutch, and in combination with such improved pegs, the use of the ordinary pinion and ratchet micrometer adjusters for delicate adjustment. See No. 4525, November 22. In 1877, Michael Henry Collins, Mass., U. S., patents a new instrument of the Violin class,

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which he terms the "Echolin." The body, as well as the sounding-board is circular in outline, and of dome-shaped arching, being formed by the turning-lathe. The patentee states that it has all the properties of a Violin, though much superior thereto in the volume, power, and sweetness of its tone, and in its sensitiveness as respects the bow. See Specification, No. 2118, May 31. In 1878, Robert James Rae, Hampstead, claims an improvement relative to the Violin, etc. Upon the bridge, small pulleys, or rollers, of metal or hard-wood are fitted, over which pass the strings, and, instead of attaching the ends of the strings to the tail-piece, as at present, metal springs of spiral, or other suitable form, are interposed between the ends of the strings and the tail-piece. Another improvement is, in making the string of metal—preferably bronze metal, or alloy, coated with gold or other heavy metal—instead of catgut. See No. 4042, October 12. In 1879, Herbert John Haddan, acting for Sprenger, of Stuttgart, claims Provisional Protection for an invention consisting in bending the cover of Violins by means of a bending-staff inserted into the instrument. See No. 140, January 13. In 1879, Sydney Pitt, for the celebrated Violinist, Ole Bull, of Bergen, Norway, patents improvements in Violins, for increasing their resonance, by the chin and other rests, which prevents the chin and clothing from coming into contact with the vibrating portions of the instrument. See No. 1604, April 23.

Whilst upon this subject the Author must also note a patented improvement of Mr. A. Walker of Williamston, Mass., for regulating the proper height of the bridge. In a letter received from this gentleman, he observes:—"Although I am not at liberty to give details on the matter, I may herein state that I have an instrument constructed, which I fix the Violin into, face upwards. A Dynamometer with a pincers, or clip attached, retains hold of the bridge—the Violin being at concert-pitch—and is screwed up until the bridge leaves the breast of the Violin, so as to admit the edge of a sheet of thin writing-paper, clear between the bridge and belly of the instrument. This of course must indicate a strain of so many lbs.

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pressure, as is the rule in the case of the *longest sustained* and sweetest notes, which should at least last for 7, 8, or 9 seconds. This can only be attained by the strings forming a certain angle of deflection, as they pass over the bridge; thus, when you know the angle of deflection, you can know what weight is sustained by the breast, whilst the strings are at concert-pitch, and *vice versa*. Give me the angle of deflection—on a Violin not reduced to my principle—and I will tell what pitch to put the said instrument to, in order to produce the best tone, which can in such a case be produced from such a height of bridge. I have generally found it to be from F to G, to bring out the best tones, but some very high-pitched bridges would require F (natural) as the proper pitch, to get the most capable beauties of tone from it; but then the instrument is out of range for using along with others, as a performer would be always playing so much below pitch. Generally speaking, the bridges are too high, and the pressure too heavy on the breast of the instrument."

About the commencement of the present century, a Violin-maker in the South of Scotland (Sinclair) exhibited a number of Violins, or rather boxes, of his own production, having extraordinary peculiarities of construction. Some were of the ordinary size, but the outline almost triangular, others of smaller dimensions; one had twelve vibrating wires stretched across it, and tuned to correspond to the tones and semitones of the scale; in addition to the ordinary strings for the purpose of augmenting the tone of the bowed strings by vibration, whilst another had two bridges, one being so much higher than the other, as to allow a free passage for the bow to pass, and play upon either set of strings. Other fanciful artists have doubled each string, and tuned in unison, or in octaves, purposing thereby to augment and enrich the tone.

Another Scottish maker, a few years later, formed another fantastic "double-breasted" instrument with common sides and two necks, separated by an opening for the hand of the player, with a duplicate set of strings, but having only a single enlarged back, which corresponded with both breasts, some-

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what resembling a double Violin. This Violin, as might be expected, produced *loudness* of tone, consequent from its increased area and number of strings. An eminent Scottish amateur purchased a fine Stradivarius Violin for *one hundred guineas*, but considering it of too large a pattern, he purposed lessening its dimensions, and at the suggestion of the celebrated performer, J. P. Salomon (who died in 1815), he practically carried out this experiment, and as a result, the instrument was irrecoverably injured, and was sold a few years afterwards for *fifty-six pounds*, a sum which was given perhaps more for the mere purpose of obtaining a STRADIVARIUS, than from the changed and deteriorated quality of the instrument.

In addition to the foregoing, we cannot refrain from mentioning a firm in Indiana, called the "Pierce Tone-Aging Co.," who profess to have invented a plan by which the aging of a Fiddle is accomplished in a short time by constant machine work. It is claimed that "the instruments are rapidly and constantly vibrated on all the strings from thirty to sixty days, the latter of which is equal to 82,620,000 full and heavy strokes of the bow, and the same amounts to a little over 100 years of constant playing by hand!" But this mode of condensing the effects of a century into a couple of months is not altogether new, for Otto devised a similar plan.

A Monsieur Masson, of Paris, has recently made an attempt to improve the Violin, by placing eight strings upon it, each string of the present Violin having a duplicate, so fixed on nut and bridge as to allow the bow to play on two instead of one, and to increase the sonority of the instrument. The belly as well as the back are made thicker, to counteract the additional pressure, the neck being a little wider to allow of sufficient space between the adjacent pairs of strings, but the shape and size of the Violin are not much altered. It will remain to be seen whether this whimsical concern will become popular among players.

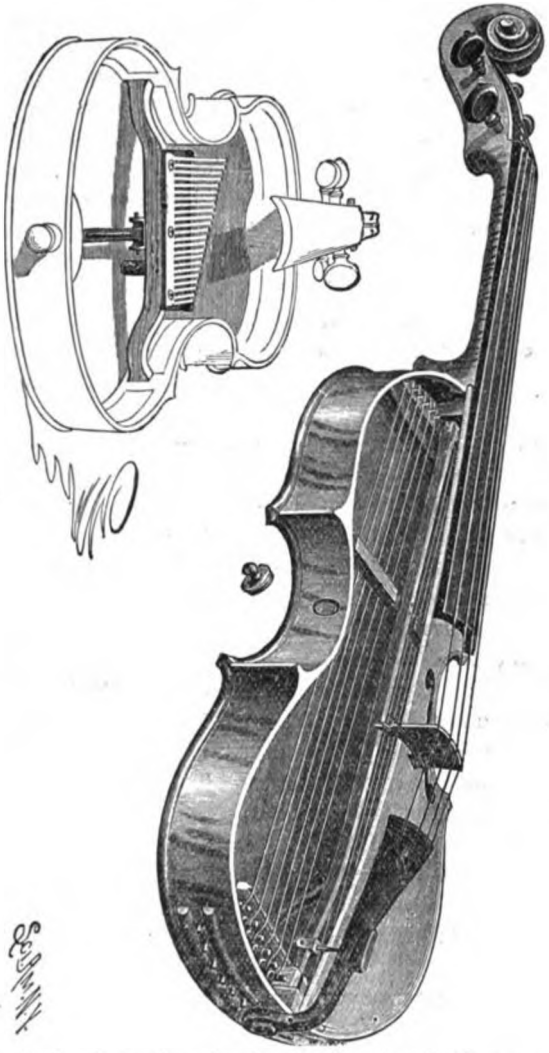
We might herein also briefly refer to the Triple Bass-Bar of J. K. Monk, of London, whereby it is claimed that very common Violins may be much improved, acquiring great power

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and beauty of tone. The method is this, inscribe a triangle inside the belly of the Violin, having its obtuse angle at the point where the sound-post is placed, and the acute angles at the two ends of the place where the common bass-bar would be. The length of the three bars will correspond with the distances between the two sides of the triangle. As mean lengths and sizes the following may be adopted: make the bar under the G string, about 9½ inches long, that under the D string, about 6½ inches, and under the A, about 3½ inches, giving a total length of 19½ inches; the respective depths of the bars to be as follows: the First, ½ inch, the Second, ⅜ inch, and the Third, ¼ inch, giving a total of 1⅛ inches. But this device of Monk's may be said to be only a modified variation of that of Victor Rambeaux, of Paris, who tried to give to the Violin a stronger tone, by providing it with a second bar fixed inside to the back.

Out of the many hundreds of Patents which have been granted during the past few years in this country, I shall only mention one of quite recent origin. It is patented in the United States and the leading foreign countries by Professor Bruno E. Wollenhaupt, of 1837 Madison Avenue, New York City, and is adapted for the improvement of Violins, Violas, Violoncellos, and similar stringed instruments. It will be readily understood from the accompanying Illustration which has been kindly furnished me by the Patentee. The appearance of the instrument is the same as that of the ordinary Violin, but within its body is arranged an auxiliary vibrating device sounding sympathetically and in unison with the outside strings, when the latter are played on by a bow. The auxiliary vibrating device consists of twelve metallic strings representing an octave of twelve half-tones tuned from C–B, or from G–F sharp, and these strings are stretched longitudinally within the body, and can be tuned to the required pitch from the bout by a key, the strings being sounded by means of a short thin stick passed either through the *f* holes, or through openings in the sides of the body; the openings being, however, normally closed by small plugs, as shown in the Illustration. A very important

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feature of the invention is the dampening device, completely under the control of the player, and consisting of a transverse brush or dampening bar supported on a lever pivoted in the

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body, and carrying on its rear end an upwardly extending rod, passing through apertures in the top of the body and tail-piece, to be engaged at its upper end by a small block held on a flat spring. This block can be pressed by the player's chin to cause a swinging of the lever, so that the brush or dampening bar is moved in contact with all the strings of the auxiliary vibrating device, thus stopping the sounds emanating from the latter. When the player lifts the chin, then the brush falls back to its normal position, that is, out of contact with the vibrating device, and the latter again sounds sympathetically as soon as the outside strings are played on by the bow. Instead of using strings for the auxiliary vibrating device, a metallic comb may be employed, as shown in the smaller Figure.

When the instrument is played, every tone, from the highest pitch to the lowest, will cause the corresponding auxiliary string, or prong of the comb, to vibrate sympathetically, and therefore, cause a prolongation and increase in volume of the tone played. All harmonics, natural or artificial, respond and prolong the sound produced by the bow passing over the main strings, but in succeeding chords it is advisable to apply the damper to prevent inharmony.

The first Violins were made according to Professor Wollenhaupt's invention by the Violin-maker G. Gemunder, Sr., of Astoria, New York. During a trip to Europe last summer Professor Wollenhaupt played on his new Violin before the King of Violinists, Professor Joachim, in Berlin, and this authority speaks in the highest terms of the improvement. A like Testimonial is given by Professor J. Von Bermuth, in Hamburg, and Doctor Koenig, in Paris, the well-known authority in acoustics, considers the invention a perfect success.

American inventors have certainly been very prolific in their strange ideas in regard to Musical Instruments. Patents have been sought for Violins made not only out of Metal, but of Earthenware, Glass, Leather, and Glue, but plain wood will always maintain its proper place as being the best and most

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suitable material for this purpose. But we have still one other extraordinary specimen of the Fiddle family to mention, after which we shall close this subject for the present. One of the strangest musical instruments that even American wit and curiosity could devise—and perhaps the only unique specimen of its kind—is in the possession of a Mr. H. C. Atkinson, of Greeneville, in the adjoining State to this—East Tennessee. This queer instrument is a Violin made from a Gourd—yes, from a Gourd shell—and is about forty years old. The strangest, weirdest music on earth comes from it, and the older it is, the better it gets. The tones are fine and soft and float on the air like the distant chimes of bells. James Anderson Taylor, Governor of Tennessee, and uncle of the famous Taylor boys who fiddled their way through Tennessee during a recent gubernatorial campaign, used to play on it. He made music from the Gourd Fiddle at the reception to Andrew Johnson, by the people of Greeneville, his native town, just after he was made President of the United States. He played the "Old Virginia Reel," "Fisher's Hornpipe," and many other things, and the President "hoed it down" with everybody present, and enjoyed it more than he could tell. The Gourd grew at Johnsonville, in said State, and it, along with the neck, which is of poplar, is sixteen inches long. The pegs are common Violin pegs, the strings catgut, and the sounding-board of leather from a stitch-down shoe, while the bridge is of poplar. The bow is made from some dark wood and the hairs are black, having been plucked from a horse's tail.



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CHAPTER II.

THEORETICAL PRINCIPLES OF CONSTRUCTION.

IN THE Violin the theory of construction, according to acoustical laws, is understood in a less degree than in any other musical instrument. In a purely elementary work like the present, space will not permit of entering into all the scientific details which have been at various times set forth, as tending to clear up this difficulty, neither would some of them be of much benefit; but those experiments of a leading character, and which are now known to be of the most advantage, those alone will the reader find the most generally useful. To susceptible and highly cultivated natures, music is capable of awakening every emotion of the human soul, from the most rapt devotion to the mildest exhilaration, from the most passionate grief to the excess of mirthfulness. The opinions upon music of that remarkable Association—the Rosicrucian Brotherhood—defined in such obscure language, are, to say the least of it, *strange*, but perhaps not so foolish as superficial thinkers may imagine. The following are a few fragments culled from the philosophy of this sect, and which are only varied modes of expression of the opinions of the Kabalists, Gnostics, Pythagoreans, and Platonists :—

"The whole world is a musical instrument, a chromatic sensible instrument; life a chromatic and diatonic scale of musical tones. The axis or pole of the celestial world is intersected by the Spiritual Sun, or Centre of sentient being, and from thence stream forth rays of light, which, divided, form colour, which, by motion, give off tones of music, filling the Universe with celestial sound. Every man has a spark, or

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microcosmic Sun in his own being, and thus microcosmically diffuses rays of light, and tones, broken by the incoherencies of matter 'tis true, but still, in essence, musical tones. Earthly music is the faintest tradition of the angelic state. It remains in the mind of man as the dream of a lost Paradise.

"Music is yet master of man's emotions, and therefore of man. Heavenly music is produced from impact upon the paths of planets, which stand as chords or strings to the rays of the Sun; hence, light and heat, travelling between solar centres and circumferences, waken tones, notes, chords, the sum of which is ethereal music..... Thus is earthly music a relic, a dream, a memory of heaven, an efflux from the motion of planetary bodies, a celestial speech, whose dim echoes are heard and imitated on earth, and thus are light and tone, colours and music, inextricably combined by one producing cause." *

Now, all this unusual speculation, contradictory to common sense as it may appear, *may be* nevertheless true when we examine it carefully, and, as it were, dive deep into our own soul-depths, with the wondering effort, if possible, to find it, suspecting that there *may be* something after all in these views, and in the re-iteration of a relic of a Paradisaical and possibly lost music, lost at least to us. As Professor Leslie well observes:—"The doctrine of sound is unquestionably the most subtle and abstruse in the whole range of physical science;" indeed, so much so, that we might almost expect to find it classed under the "Occult Sciences," instead of in the rank assigned it among the secondary mechanical sciences; but the vast and illimitable Universe itself is based upon principles of harmony, for:—

> There's not the smallest orb that thou behold'st,
> But in his motion like an angel sings,
> Still quiring to the young-eyed cherubim;
> Such harmony is in immortal sounds!
> But whilst this muddy vesture of decay
> Doth grossly close us in, we cannot hear it.

* Robertus di Fluctibus' "Mosaical Philosophy," and H. Jenning's "Rosicrucians."

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One of the chief requisites in Violin-making is to have in our mind a theory of what we are about, of the accordance of action with design. Other makers who achieved results that we value sought out the method by asking of Nature how she linked cause and effect; they approached seeking to know, with open eyes and open mind, and by *thinking* of the "why and wherefore" of the phenomena presented them in many and multiform variety of changes, they became masters of the open secret of Nature. The pathway is open to others as to them—as the fine fancy of the old Greek religion symbolised it—that Nature demands us to go barefooted to her Temple, not in other men's shoes. We must think and make experiments to verify the truth of our thinking, and then found other thinkings upon the *connection* of our observations with the experimentings. What if we go seventy-times wrong, if once we gain the path of one thread to the labyrinth whose centre we seek. Let us take up the finest Violin the world possesses and what will it tell us?—only how far old Strad went in his pursuit of the beautiful in the world of tones—not how he arrived thereat. What a man has done that is excellent, it little profits us blindly by rule of thumb to copy; the value to us is in showing us what may be accomplished, and exciting our emulation to equal, or excel—making us dissatisfied with lesser attainments. Only mediocrity copies—the artist originates, and excellence, like beauty, is not limited to stereotyped patterns. Nature is not sterile; every day new beauties greet us; we see faces and sunsets like no other that have gone before. Art has the same prerogative. Demosthenes did not exhaust eloquence, nor Titian impoverish the sources of colour. We must believe in new re-creations of genius and industry, and as relates to the Violin, we should ask ourselves not, What are the measurements to be by rule and callipers?—no; but we should ask, Why are such and such proportions good?—what is it renders them necessary? Step by step we should feel the artist had a purpose in view, that he sought to culture his material into a shape suited to a certain perfection of aim—that aim being to cause an *equilibrium* or *harmony* of vibration in the mass of

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wood, that it should give a clear, sonorous tone without jar or roughness. We should, therefore, try what difference is perceptible in a rough plate of wood, and with jagged edges, as distinguished from one rounded and thinned away at various places—just as the blade of an oar is thinned away and a flexibility given it to damp the jar of its stroke. The floor of a room weighted with furniture does not vibrate as when devoid of weight, the sound of the foot is fuller in it, music in the room has a steadier quality than when it is empty, and thus we can reason that this graduated thickness of wood in the Violin prevents an uncertainty and shivering, under the variety of forms of vibration which course through it—it steadies the tone—therefore we can work with this aim in view and rely on our touch and ear, without dependence upon the callipers of another man. We would thus discover how our wood attains a well-balanced sonority. Then we have to consider how the parts have to be related to each other. The belly is connected with the back by the sides, through which the vibrations pass, and then both back and belly simultaneously excite the resonance of the enclosed body of air. Any amateur can easily prove by experiment that a smooth interior surface aids much in the clearness of sound from a pipe or cavity, for a ragged or spongy interior influences the tone emitted—it makes it dingy and foggy. A story is told of an American who once observed that a Violin accidentally injured was much improved after repairs, and better than it had been in its original condition. He attributed this in a great measure to the amount of surface covered with glue, and, acting on the impulse of the moment, he determined on making an instrument entirely of glue. The Violin thus fashioned proved of marvellously fine tone, and showed the sonorous properties of the material to be of no mediocre quality. It was too costly and troublesome a fancy probably to be repeated, and too fragile a mode of construction to be adopted for manufacture. The foregoing must be taken, however, *cum grano salis*, as barometric changes would in all probability be an insurmountable impediment, causing variations in resonance with every change of weather; but be this

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as it may, we know that hard gutta-percha and vulcanite make flutes of the purest quality of tone. Numerous scientific experiments unmistakably indicate the value of a smooth surface in aiding the production of a clear, free tone.

Ranking foremost amongst all the learned men who thus investigated the theoretical construction of the Violin, and who also combined his theory with practice, was the learned French philosopher, M. Savart, born in 1791, who, for a period of twenty years, ardently and thoughtfully studied those laws of construction, from which laws have been attained the most pre-eminent practical results. To avoid the parrot repetitions, or stereotyped teaching and unmethodical systems of books upon this subject, based upon the shallowness that rests content with assertions, leaving causes uninvestigated, I merely refer the reader to the rough translation of Savart's lectures, as given in the following Chapter, for therein will the student find much valuable matter, both interesting and instructive. For the present, I shall merely glance over a few other particulars, several of which are not included in the lectures above referred to. The Violins of Stradivarius were chiefly those which Savart experimented upon; but ere he made those important discoveries, afterwards detailed, he had recourse to almost innumerable trials, in every manner which his keen and learned mind suggested.

Taking the Violin as a whole, we find, from Savart's researches, that every element of the instrument was beautifully and skilfully made in a proportionate degree, to maintain the necessary sonority and vibration. In a few, but indeed very few, of the Violins of the Cremonese makers, we find some of those rules have been a little departed from; but assuredly, the more they deviate from those well-known facts, the worse they are in quality, and even in those few which have been found dissimilar, it has been always to attain some required peculiarity of tone, which the maker wished his instrument to possess.

Referring to the woods chiefly used in the formation of the instrument, we find that if we make two equal-sized rods, one of

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pine and the other of maple, with the grain running similar in each, and nip one end of each in a vice, by drawing a well-rosined Violin-bow across the upper end, we put each in vibration alternately,—we will find that the pine rod gives a more acute sound than the maple one, and consequently possesses the highest normal tone. The number of vibrations given by a vibrating plate is in direct proportion to its thickness—thus, a plate twice the thickness of another, other conditions being similar, will give twice the number of vibrations. Previous to the commencement of forming a back or breast, a rod ought always to be cut from them of standard size, as a sample, and its tone found, when the woods giving the highest tone are always the finest for Violin-making.

This method may be adopted:—Cut an elongated, rectangular piece of the wood, having two sides parallel to the fibres, with the edges cut perpendicular to them, and find its centre; after which obtain a small piece of cork, and place it near to the edge of a bench or table, to allow the Violin-bow to freely pass the cork; then place the wooden plate exactly at its centre, upon the cork, and press with the finger to keep it firm, and draw the Violin-bow across the edge of the wood at any of the angles, when the sound thus obtained is the lowest that the plate can produce, and is consequently its normal tone;—or we may obtain the same result by a simpler method, viz.:—Merely hold the centre of the plate between the finger and thumb, and draw the bow across one of the corners of the plate edgewise, when it will give the same sound. We may obtain various sounds from the same plate, by changing the position of the damping, and place of bow, but the foregoing is quite sufficient for our purpose. If the reader wishes for information upon the sounds of plates, I refer him to either Chladni or Professor Tyndall's works upon sound, the latter being a work of much interest.

We can easily observe for ourselves that the old makers made a difference in the sound of back and breast. If I hold with my fingers the back of the Violin at the part where the sound-post would be, and strike it as a bell, it will give forth a

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tone; if I do the same with the belly, it will also give forth a tone—but a tone different. Now, this is as it should be; the portion first conveying the vibration has the initiatory advantage, and rules the next portion, compelling it to accept its vibrations, and deliver faithfully the message, merely modifying the quality of tone in which it is uttered—husband and wife:—

> For woman is not undevelopt man,
> But diverse; could we make her as the man
> Sweet love were slain, whose dearest bond is this;
> Not like to like, but like in difference.

Music and Harmony were brought to this earth of ours by the first Soul that came from Heaven. It is generally well known that two instruments, tuned to the same key and placed sufficiently near each other, are in such harmony that when one is struck the corresponding note in the other vibrates in unison. Through this very principle it is that Adepts and Seers endeavour to reach a certain octave of vibration in perfect accord with the Eternal and Absolute Powers of Nature. Upon this very principle was based the whole Occult Science of the Rosicrucians. In the Oriental world there is a certain hidden secret known as the "*Divine Inward Breath*," which consists in certain respirations in octaves of numerals, very similar to music as the thirds and fifths upon the scales. In other words, there is a chromatic musical scale in true breathing of the atmosphere, which corresponds with the musical scales. Some run by numerals, as 1, 3, 6, 9, 12, 15; others as 1, 5, 8, 14, and others again running in higher octaves of vibration. Musical sounds differ very greatly in their vibrations per second, from the deep bass of 27 to the high treble of 48,000, and it is these vibrations which cause rapture, or a kind of abstraction to those whose hearts have gone into sympathy of love, hence it is that music exquisitely expands sensitive persons to loftier, more advanced thoughts, and sublime and noble sympathy with the sufferings of Divine Humanity.

When men have developed those powers—those soul-faculties—which throughout life remain latent in the great majority of

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mankind, they will begin to understand the Mysteries of Sound and the Laws of Vibration; yea, they will not only *hear* a Colour but they will *see* a Sound! In the Astral, or Soul-World of Causes, the Initiate finds one common and universal language, which expresses everything either in the Cosmos or in the Spiritual World. It must be remembered that those semi-intelligent Forces of Nature do not communicate with mortals through spoken words, but by Sounds, Octaves of vibrations, Colours in correlation with Will. Those Sounds, Octaves, Colours, and Odylic correlations with Will, are main factors in forming those grades of Intelligences and Entities, of whose very existence and being, few, few persons have any conception, nor are many permitted to be enlightened in regard to them. The poor, quivering, and bleeding dove that flutters in its death-agony in the hands of the cruel "sportsman"(?) will not be felt alone, but heard like a plaintive, wailing song sung in a minor key. The rustle of the wind, as it heaves into billows the waving fields of hay and grain, will seem to us as a ceaseless flow of waves of colour, blending and interblending in the most harmonious manner, for the "Music of the Spheres" is not alone a poet's fancy; the world moves on in grand symphony, in which atoms, suns, systems, constellations, and Man the microcosm are all surely but gradually marching on towards that CENTRAL SUN and SOURCE OF BEING, whose centre and circumference is universal and overflowing LOVE. Since the ominous year 1881, in which one soul-cycle ended and another commenced, the seventh note of the old gamut has ceased and the new octave has begun, for the time has come to prove and confirm the grand truth of the prophetic words long since uttered:—"When man becomes attuned to the music of the celestial spheres, his thought can heal at any distance," and the rule is, by simply changing the vibrations.

The whole world is as a musical instrument, a chromatic, sensible thing; in youth unattuned to the Light. Our harp chords are deep away down to the greater and grosser elements, but by culture of the Soul through Spiritual things, the chord grows and expands, and under the hand of the Spiritual Tuner is

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worked into a perfect vibration, in concord with God our Father. The two are one; the perfect chord becomes a limitless power overleaping all the barriers of space.

If we make both parts of the Violin of same wood and same normal tone, we get the dull quality; but by making a judicious difference in wood and tone, we attain to just that tinge of variation and blending of reciprocation as would be more agreeable to the ear—not overfresh, but ripe and quickening. It is all in vain for us to be mere copyists, for were we to gauge every thickness of a reputed perfect instrument with the exactitude of the micrometer, and make one of precisely the same measurements, the result would be but very mediocre in quality, and in no way to be compared with the original instrument; for as no two faces are fully alike, or two trees exact counterparts of one another, so neither are two pieces of wood innately the same, nor two Violins by the same artist precisely alike. We would therefore learn that the artist worked freely and according to the disposition of the material he had to fashion; thus we must modify the thickness according to the quality of the wood, its resonant properties, etc.,

We again may ask ourselves, why is the wood of the back and belly cut so as to have the grain parallel, and perpendicular to its position on the instrument? If we take a small cube of pine, place it upon a table, and try its conducting power by placing on it a vibrating tuning-fork, we find its resonant powers vary with the three different positions in which we may place it, proving to us the three different velocities of sound through it—first, quickest along the fibres; second, slower across the fibres, and across the layers which mark the growth of the tree; and third, slowest of all across the fibres and along the layers; and in acoustics we have a law of the transmission of vibrations at right angles, perhaps analogous to the law of magnetic currents crossing at right angles to the currents of electricity; or of the undulations of the waves which produce light, and which are so constituted that the vibrations happen at right angles to the rays.

Some may object to the preceding remarks, as certainly we

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find some of the old Violins with the back cut slabways, with the grain running from side to side, parallel to the centre of the tree, and those made, too, by Maggini, as well as several of the Amati family, but let us take into due consideration their properties—fine, mellow, and silvery tone, but of no great power or intensity; and a few years afterwards, we find the illustrious Stradivarius changing his method of working, by cutting the backs and sides with the grain vertical, the plate of wood being a section cut from the centre to the outside of the tree, with the woody fibre running in straight lines from end to end, as seen on the surface. We find his Violins thus changed in quality, still possessing their former ethereal purity and sweetness of tone, but now having also the required brilliancy and intensity of sound, which seems to penetrate into every corner of the largest music-hall. Such are the valuable acquisitions which the Violins of Stradivarius possess—power, along with brilliancy of tone.

When the air is put into a state of sonorous vibration, by any means, as by a note sounded on the Violin, by drawing the bow across a string, a series of concussions are produced causing vibration of the string, which accumulate at the part resting on the bridge, these become transmuted, sending down vibrations through the bridge to the surface of the Violin, thence slightly through the sound-post, and more so through the sides, which, acting like so many tuning-forks, transmit them to the back, and the whole body of air within increases the sound, by taking up the simultaneous vibrations in resistless impulse, and spreads them in innumerable spheres of motion, and thus the original note is thereby strengthened in intensity. From beginning to end, concussion and oscillation repeated and re-repeated; and these, as we know, are rythmic and periodic, and reproducing their impulses on the tympanum, vibrate the nerves of the ear and are then made audible to us as music. As subsequently stated, we find in the best instruments of the Cremonese makers, the contained mass of air equal to C of 512 vibrations, the back and breast being formed to correspond, so as to produce the tone of difference.

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According as the wood is thick or thin, so must the mass of air be ordered for reaction in simultaneous vibration. If we have got too much air, it will be slow in resonance, weakening the notes on the bass side of the instrument, whilst the treble notes will be thin; if too little air, the quickness will be detrimental, and mingle dissonantly successive sounds, causing a coarseness in the lower notes of the instrument, whilst the sounds of the first string lose all brilliancy.

The air should be absolutely and implicitly obedient—it has merely to carry out commands, not to join in executing a given task; but the wood is active, and both portions are engaged in completing one act, and all Violins more or less carry out the design of their construction—in conveying a tone from the string to the bridge, to the belly, through the sound-post to the back and to the mass of air within.

Yet there is a vast difference in Violins, and this difference we call quality; pitch may be unerring, but one will give harsh quality, another dull, another mellow, another bright. Evidently the quality is referable to the construction, and to that nicety of regulation, which is analogous to the voicing of wind instruments. What is that ethereal quality that makes us prize the Violins of the great makers, a quality that seems to us as if each tone was tinted with other colours, rich in blended beauty as a sea-shell with its rainbow hues, luscious as the peach, sweet yet acid, lovely as summer eves with their soft and balmy breezes? Merely from the exact relationship of all the parts of construction, whilst the finest woods were employed in the formation of those cherished instruments. The artist devoted his lifetime to his labours; he found the shape and thickness he designed in ripened experience gave him the desired excellence, and imprisoned in willing captivity the beauty he sought and won. If we hold a vibrating tuning-fork over the *f* holes of the Violin, as we pass it over the hole, we will hear the tone swell louder from the resonance of the mass of air within; and if we use three forks, as C, G, A, one or other will be more reinforced, it ought to be C of course, next to that G strongest, and A least, and so on with the other notes; or if

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we use pitch pipes, we merely have to blow across or into the holes. The Violoncello responds best to F, so that from the instrument the tones nearest related to the F, as tonic, would always sound the fullest: same with all instruments, certain notes have a predominance of brightness or of sonority. In testing the resonant mass of air in the Violin, we may either adopt the method employed by Savart, viz., the conical tube, or by the following method:—Professor Helmholtz has invented a series of glass tubes which are made to correspond to every note of the scale. They consist of glass globes, or very wide glass tubes, with an opening at each end, one being smaller than the other. The smaller opening is to be covered with heated wax, and an impression of the ear taken whilst the wax is soft, when by this means the tube will be found to fit the ear very accurately. They possess the property of intensifying and resounding the same sounds as are derived by blowing across the widest opening, being the note to which they correspond. When one of these instruments, say answering to C (512), is applied to the ear, and the other ear closed, then if the air contained in the Violin thus to be experimented upon gives C, we have merely to blow with the mouth over one of the *f* holes, when the resonant sound will strike loudly upon the ear wherein we have placed the instrument. By having a scale of those tubes, we can easily ascertain what tone the air in our Violin will give; they are sold under the name of "Helmholtz's Resonators."

How beautifully do the very softest *piano* passages from a good Violin fill a large hall, every note will be as clear and distinctly heard as when played *forte*; this peculiarity of tone is alone one of the many most wonderful powers of the Violin. Upon an inferior instrument this singular far-reaching quality of tone is very much lessened, for this carrying property of tone is characteristic, and belongs only to those Violins whose air-mass and normal tones are correct, being caused by the intense vibrations given out to the surrounding atmosphere. The fact is the Violin may be considered in one sense as a living instrument, whilst the pulsations of the bass-bar and

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belly may be compared to the heart-throbs of the living organism of man, for those pulsations cause the air-mass of the Violin to vibrate with extraordinary vigour. When the air-mass is in proper relation with the balance of construction in the instrument, it re-inforces the tone power throughout the complete range of the instrument. We may safely say that inferior Violins are soul-less, dead things, for no matter who may play upon them, they fail to respond to the infusion of life into his music. But let the performer change that instrument for a perfect one, one in which the air-mass and plates harmoniously correspond, then he can, so to speak, freely mingle his own soul with that of the instrument, and either sink his listeners into sorrow and tears, or upon the contrary elevate them to joy and pleasure; those weird effects being impossible upon any other kind of musical instrument, or even species of music, except the human voice, to which as every one knows, the Violin approaches in a very remarkable degree.

If the air-mass does not respond to middle C, but gives a higher or lower sound, it is insufficient to correspond with the material used in a well and proper shaped instrument, hence the tone suffers. Why did Strad. make his Violins narrower in the sides of the upper bouts, was it not to correctly adjust the air-capacity of his instruments, which he purposely made larger? It is not a matter of great difficulty to test a Violin as to whether the air-capacity is correct or not, and to readily pick out the best instruments from several, even suppose they are unstrung! Take the Violin in the left hand, with the fingers spread out over the back, and the thumb on the belly, now strike the middle C of a Piano with the right hand, if correct, you will at once feel the Violin vibrate freely in your hand; if incorrect, it will vibrate to that note to which its air-capacity corresponds. You can make this trial with instruments strung up and tuned; but note this strange fact, that as the notes G, D, A, E--to which the strings are tuned—are struck, the Violin will be felt to vibrate more or less; but if the air-capacity is correct, when the C is struck, its vibration will be more intensified to this note than to any of the other four,

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this being caused by the air inside taking up and re-inforcing the note. If you place your ear close to the *f* hole, the harmonics will be heard distinctly from this vibration. If the air-capacity is right, the middle C on the G string (when played with the bow) will be the richest and fullest note on the instrument, and the G string in particular will be good and full in tone. The upper notes will also be so clear and brilliant in tone—especially the D, C, E—that a listener, unless looking at the player, could not tell whether they were not played on the A string. Why did the celebrated Norwegian Violinist, Ole Bull, breathe warm air into the *f* holes of his Violin, previous to his playing at a Concert? was he not well aware that the heated air inside increases the intensity in a remarkable degree, and do not the experiments of our scientists confirm this?

In the instruments of the ancient masters, it is surprising how carefully every element of the instrument had been studied, from which arose their vast superiority. In reference to the breast of the Violin, I shall detail the following experiment, which will be found worthy of the amateur's notice. Having procured a piece of well-seasoned and sonorous pine, a breast was formed out of it in the usual manner, adopting the plan of thickness according to the method used by Stradivarius. This plate, when thus finished—the *f* holes not as yet being cut—gave the note C. Subsequently the *f* holes were cut of the usual size and pattern, when the sound was found to be lowered a tone, being now B. A bass-bar having afterwards been glued on of a somewhat larger size than commonly employed, the plate gave the note D, but the bar having been reduced to its proper dimensions, the sound was lowered, and now the breast gave the same tone as originally, viz., C. We can now easily perceive that the bar perfectly compensates for the difference of tone arising from the cutting of the *f* holes, the stronger the bar the higher the tone, and if the other parts have been proportionally and correctly formed, then will the breast give forth the same tone as previously, and those combined elements will thus harmoniously act as a whole.

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CHAPTER III.

EXPERIMENTAL RESEARCHES UPON THE THEORY OF VIOLIN CONSTRUCTION, BY THE ILLUSTRIOUS SAVART, AS GIVEN IN THE FRENCH PAPER "L'INSTITUT."

THE MOST beautiful of all instruments is the Violin; it has been termed the king of instruments. It is composed of two plates or tables, the upper one of those is always of deal, strengthened by a longitudinal bar, the lower one always composed of a different wood from the upper, is called the back. They are united round their edges by thin plates called the sides, strengthened by thin strips of wood termed the linings. There are also in the angles formed by the different parts of the sides small pieces of wood, destined to give solidity to the instrument, called corner-blocks. To the body of the instrument is attached, as every one is aware, a neck, at the end of which are placed the pegs, upon which the strings are wound. The form and dimensions of the neck are of great importance in the construction of Violins. Lastly, between the two tables, and near the piece which supports the strings, and which is called the bridge, is found a small cylinder of wood, which puts the two tables in communication, and is called the sound-post. This small moveable piece plays a very remarkable part in a Violin, for without this piece it gives only feeble and poor sounds. It is to its influence upon the intensity of the sounds that this piece owes its name—*l'ame*, or *the soul*. We can hardly admit that it serves only to propagate the movements of vibration from one table to the other, since they are in communication by the sides and corner-blocks. The sound-post has functions far more important, which we shall examine with care.

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Maupertuis has given a theory of the Violin, which is nothing more than a grave error, and which at present we must reject. He assumed that all stringed musical instruments ought to be composed of fibres of different lengths, in order that the number of vibrations given by the strings, might be reproduced by some one of these fibres vibrating in unison with the string, and would thus re-inforce the sound. Arguing thus, he maintained the idea (which has become a prejudice still existing), that by breaking a Violin and mending it again, the instrument was improved, for in doing this the number of fibres of different lengths was greatly increased. But it is easy to see that this explanation of the re-inforcement of the strings produced by the body of the instrument is false. The two tables vibrate in the whole of their length, which can be proved by sprinkling sand over their surfaces, and a body which has been broken and re-glued, vibrates before and after its rupture in precisely the same manner; it produces still the same nodal figures with the sand, as one can prove with discs of wood, metal, or rock-crystal, etc. It is also a natural result of the laws of the propagation of vibratory movements. A Violin presents upon both its upper and lower surfaces, nodes and ventral segments, where we see the sand strongly agitated. The tables then are composed as plates, and not of fibres vibrating separately.

A Violin is composed of a great number of elements, each having its proper function, and which we shall now enumerate successively.

Let us first examine the part played by the sound-post. If we take away this piece the sound loses its intensity and quality, and becomes poor. It regains its strength and purity as soon as we restore this important element. We cannot suppose that the sound-post acts as a conductor of the sound, or serves only to propagate the movement, for we can place this piece, not in the Violin itself, but upon it, and its action remains the same; its influence is not changed.

We place upon the Violin a kind of arch of wood, glued upon the corner-blocks, and we place the sound-post between

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this arch and the belly of the instrument; the effect produced is the same as in ordinary circumstances, when the post is in its place inside the Violin. The arch is formed of two uprights glued over the corner-blocks and supporting-bar, at right angles to them. Instead of the post, a screw is fitted to this bar, which can be made to press more or less upon the belly. The effect of the sound-post is strongly produced when we apply the pressure of this screw. We now place a similar arch between the Violin, and pierce a small hole in the back, to allow the screw to pass, so as to impinge upon the belly without touching the back at all. On applying the pressure of the screw the same result will be obtained, as if the post were in its place. Still more, if we simply place upon a Violin, without a post, a heavy body, the Violin resounds as though the post were there, provided the weight surpasses a certain limit. The exact proper weight can be found by means of a small cup containing a greater or lesser quantity of mercury. The effect of the sound-post is *above all relative to the belly* of the instrument, for the effect can be produced in a Violin without a back, by causing a screw to press upon the single table of the instrument. The post does not play a part similar to that of the bridge in the marine-trumpet, for if we glue it in its place the effect is not altered. We arrive at the same results either by pressing the post against the belly by means of the arch already described, or by pressing the table upon it in a clamp.

The function of the post is to render the vibrations of the two tables normal. To prove this, let us take a disc upon which reposes a bridge destined to sustain a string. When we cause this string to vibrate in a direction parallel to the disc, the sound has little intensity, but it gains considerable power when the vibrations of the string are normal to the disc. We take a Violin, of which the tables are pierced so as to allow the passage of a bow, and we remove the post. If we now excite the strings parallel to the surface of the tables the sound is very weak, but if, passing the bow through the Violin, we cause the strings to vibrate perpendicularly to the tables, the sound

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is considerably strengthened, and as good as with a post. Let us now replace the post, and we shall find that there is no change in whatever way we cause the strings to vibrate. Again, let us take a Violin having the form of a trapezoid, and instead of having the strings upon the top, let them be placed upon the side. The strings will now vibrate perpendicularly to the belly, and we find that a post makes no difference in such an instrument.

It is evident that the role of the post is to render the vibrations normal to the belly, and that it does not produce an effect of beatings as is the case with the left foot of the trompette-marine bridge, nor an effect of communication between the two tables.

We can prove by a decisive experiment that the role of the post is to render the vibrations of the tables normal. We have made a cylindrical Violin, containing very nearly the same mass of air as ordinary Violins. Now we know that a cylindrical vase always divides itself into several vibrating parts, which vibrate normally, and in the case of the cylindrical Violin we have the same conditions. If in such an instrument we place a post, the sound is stifled, and has less intensity than without, the post in this case only tending to check the vibration.

But how is it that the post renders normal a movement which in appearance ought to be tangential? To explain this, let us revert to an experiment already cited. Taking a rod vibrating longitudinally, we touch it with another rod at right angles. Now, under certain circumstances, this second rod will vibrate longitudinally also, instead of normally as it should, in conformity with the general laws of the communication of vibrations already stated. We have shown, in fact, that in a rod which is the seat of longitudinal vibrations, there are contractions and dilations which give rise to semi-transversal vibrations, having the same duration as the longitudinal vibrations. Consequently, if we touch with another rod a vibrating segment of the rod which vibrates tangentially, the contractions and dilations will be communicated to the perpen-

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dicular rod, which will also become the seat of longitudinal vibrations. The same phenomenon is produced in the Violin. The transversal oscillations of the tables produce in the post a longitudinal movement, which, reacting upon the movements of the tables, determines in them a normal movement. It is an exception, as we have seen, to the general laws of the communication of vibrations. The post acts as a kind of bow with regard to the tables. If the original exciting cause was only instantaneous, as in the guitar, the effect of the post would be to stifle the sound; but in the Violin the originating cause is continuous, and it is the sum of very small movements which produces in the end an effect very intense and pronounced. The post acts like the bow, and produces a shock corresponding to each vibration produced by the latter. It is to be noted that the nature of the deal renders the transverse flexions of the belly more easy. In fact, if care is taken to place all the fibres of the wood parallel to the greatest length of the instrument, vibrations, whose direction is at right angles to these fibres, will produce more decided flections than if it were in any other direction, for in this direction the elasticity of the wood is the smallest. It is necessary, therefore, that the fibres of the deal should be placed parallel to the length of the instrument. The post has other properties besides that we have just attributed to it. It is not placed inside the Violin to sustain the belly, since we can place it outside the instrument; besides, so slender a rod of dry wood would be of little use for strengthening purposes. It plays a very important part, which proves the necessity of giving to the bridge a certain definite form. It is always placed behind the right foot of the bridge, which has the effect of sustaining this foot in a state *of almost perfect rest*, in order that the left foot may, as in the marine-trumpet, communicate its movements to the bar of the instrument. In all Violins there is beneath the belly a bar intended to give the belly resistance, at the same time that it determines in the whole length of the instrument the movement communicated to it. This bar is to the left of the instrument,

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and ought to receive the shocks produced by the left foot of the bridge.

We proceed to cite experiments in support of what we advance. We take a Violin, and pierce the belly at the point directly over the extremity of the post, so that the right foot of the bridge rests on this extremity without touching the belly at all; the sound is a little dull, but the effect of the post is produced. In another Violin we isolate the left foot of the bridge, the bar being in the middle, the effect of the post is still manifested. To do this, we cut out a piece of the belly, and without allowing it to touch the belly of the instrument, maintain it in its place by a special contrivance; it supports the left foot of the bridge, which communicates in no manner with the belly. The effect of the bar is to produce throughout the Violin the movement communicated to it by the bridge. It vibrates as a whole: there is no division in its length, nor in that of the belly. Thus, to resume, we see that the post has three functions, first, It communicates the movement from table to table; second, It renders the vibrations of the tables normal; third, It renders the right foot of the bridge immovable. The post vibrates the belly as a whole, and whatever the original direction of the vibration is, it renders it normal in the two tables.

Let us examine now the part played by the body of the instrument, which is composed of the belly, the back, the sides, and the corner-blocks. The back is always composed of beech or maple, as well as the sides; the belly of deal. Maple is preferable to beech for the back.

We will now consider the body first in its simplest form. Let us suppose it to be rectangular, and we will then examine the role of each piece as we build them up. If we take a thin plate of wood by itself, it will render a certain sound—fa^3 for example; to its two extremities we now glue, at right angles, two small blocks. If we now cause the first plate to vibrate again, we shall find that the sound is lower than before for the same nodal division—say, si^4; next gluing another rod or plate to the blocks, of the same dimensions as the first, and parallel

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to it, we find the sound given by the system to be—say, *sol*^{4}; the nodal divisions presented by both plates being the same as when the first vibrated alone. We have chosen the two parallel plates so as to be perfectly in unison, that they may produce exactly the same mode of division, and being united, whichever one we excite, both will produce the same nodal figure. If now we diminish the thickness of one of the plates, the nodal lines will be displaced—they will no longer correspond upon the two plates; the nodes on the thinner one will approach nearer together, but nevertheless the sound of the two plates will still be the same, whichever one be excited. We can understand easily that, the thinner plate being compelled to vibrate in unison with the other, the nodes must be nearer together, since the ventral segments must be smaller to give the same number of vibrations. We perceive the same phenomenon in the body of a Violin. Separately, the back and belly will not give the same number of vibrations; *united, they render the same sound.* To prove this, let us operate with closed rectangular cases, pierced in the centre of their larger surfaces with a circular hole, to allow the passage of some rosined horse-hair, and also with apertures corresponding with the *f* holes of a Violin, to give the air contained in the case freedom to vibrate. If now we cause the case to vibrate, by means of the horse-hair, a nodal line will be produced round its edges, and the sound will be the same whichever surface of the case we vibrate.

If the two plates are of the same thickness, and identical in form, the nodal lines are the same in each, and this is a method of proving the quality of the two plates. If they are not of the same thickness, the sound of both will still agree, but the nodal division will no longer agree in each. In the thicker one, the nodal lines will retreat from one another, while in the thinner one they will approach more closely together.

It is evident from this that the back and belly of a Violin *vibrate always in unison.* Let us examine now the part played by the air contained in the case of the instrument. We take a case formed of two plates, rectangular in shape, of the same

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wood, the same thickness, and giving the same sound for the same mode of division. They are united by sides also rectangular, pierced with two holes, analogous to the *f* holes of stringed instruments. The tables are pierced with holes to allow the passage of a skein of horse-hair to put them in vibration. To make the column of air resound, we employ a slightly conical brass tube, flattened at the larger end, so as to present only a narrow rectangular orifice for the passage of the air.

This apparatus is very convenient for the purpose of vibrating any column of air. In the present case, we place the flat end upon one edge of one of the lateral openings, so as to blow upon the other edge, and, after a few trials, we shall soon obtain the required sound. Then we remark a very important fact, viz., that the sound of the contained air is exactly the same as that rendered by the instrument when we vibrate either *one, or the other* of the tables. If we reduce the thickness of one of the tables, the sound given by the air will be changed, as well as the sound rendered by the tables, but the two sounds will still be the same. The air and the two tables then form a vibrating system, and vibrate as a whole. This is true, however, within certain limits; for if we reduce the thickness of one of the tables, so as to make it render a sound an octave below the other, the two will no longer vibrate in unison, nor will the air any longer give the same sound as either of the tables. If we close one of the lateral openings, the sound of the air will be lowered at the same time, and the sounds will still be in unison. This reaction of the air upon the tables is a very curious and instructive phenomenon—a reaction which determines the number of vibrations in both. The two tables of a Violin give the same results, that is to say, the sound given by them is exactly that of the mass of air contained by the instrument, as one can prove by means of the brass tube described above. To prove this phenomenon, and vibrate the tables in a direct manner, we attach perpendicularly to the back and belly with a little sealing-wax, rods of glass, which we cause to vibrate longitudinally, the tables will enter into

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vibration, and will give the same sound as that produced by means of the tube applied to one of the *f* holes. Whatever be the size or form of the instrument, this result is always the same. We have tried with Violins with flat surfaces and of a rectangular shape, with excellent Stradivariuses and Guarneriuses, and resulting always in a confirmation of this principle; that the air and the tables always vibrate in unison, and as a system, of which all the parts react one upon another.

There is, as we have seen, a great differenec between a Violin which possesses a post and one without. In the first case the sound of the air is higher than in the second. It is the same with the sound of the tables. There is always a complete identity between the two sounds. Take a Violin and vibrate the air and the tables, you will have a certain sound; take away the post, and the sound will be lower both for the air and for the tables. One fact is to be noticed from this of moment—it is, that in the instruments of Stradivarius we have tried, the sound of the air is invariably the same. We will give the value of this fact presently.

The intensity of the sounds rendered by a Violin depends upon the mass of air which it encloses, and which ought always to be in a certain proportion with the other elements of the instrument. It is easy to determine it. To prove this relation, we have made a flat rectangular Violin, beneath which was fitted a rectangular case, furnished with a piston, which permitted the mass of air to be augmented or diminished at pleasure. If we cause the strings of this instrument to vibrate, while we adjust the mass of air by raising or depressing the piston, we find that in a certain position of this piston the sound has the greatest intensity and sweetness. If the volume is too great, the lower sounds are feeble and hollow, and the higher sounds bad and poor; if it is too small, the lower sounds are thin, and the higher sounds less pure.

If we determine the sound of the air, (by the means already described) when we find the sound of the strings to be at their best, we find that it rests within certain limits, which depend upon the form and other elements of the instrument. In

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experimenting thus with instruments of Stradivarius, we have found that the air always gave the *do natural* of natural philosophers, corresponding to 512 vibrations per second, that is 512 single vibrations, or 256 double vibrations—the French philosophers always count single vibrations; the English and Germans, double vibrations, or the *do flat* of the present scale. Now, it is to be noted that at the beginning of the eighteenth century, when Stradivarius constructed his instruments, the pitch was half a note lower than at present.

All the instruments, therefore, of this great master were in *do*. Several musicians have found that in tuning their instruments in *do flat*, the tone was better. In examining a great number of excellent Violins of Stradivarius, we have always found this condition to be fulfilled.

Here, then, is a fact acquired by industry and science; without this condition, a Violin leaves much to be desired. If the air gives the sound *do sharp*, the low sounds are bad; if it gives the *si* or *la* below, the high sounds lose their power, and are more difficult of emission, while the grave sounds resemble those of the Tenor. In many Stradivarius Violins the air gives exactly 512 vibrations per second. It is easy to assure one's self if this condition is fulfilled, without which a Violin has little value; it suffices to put the air in vibration by means of the conical tube described previously. Although one of the most important points in the construction of the Violin is that which we have just examined, there are others to which we must have regard, and which we shall proceed to point out, persuaded that, by operating according to the conditions indicated, we shall be sure of obtaining in all cases, and at once, good instruments.

What relation ought there to exist between the sounds of the two tables before being united? Ought they to give sounds in unison, or an octave apart, or what? We have constructed a Violin of which both plates were of deal, and perfectly in unison when made to vibrate separately. The sound of this instrument was feeble, and of very ordinary quality. A back of maple was substituted for the deal one, but still in unison

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with the belly; the instrument was bad and very feeble. Thus we see already that the two tables ought not to be in unison, and besides, if they were perfectly in unison at first, they would soon differ a little, and then we should have beats, and a very bad effect would be produced. It is necessary, therefore, to avoid the unison, and even to be a certain distance from it. so as to avoid the possibility of beats occurring.

To determine the exact distance between the sounds of back and belly there was only one means, and that was to have recourse to direct experiment. It was necessary to study the best Violins, to dissect them, and examine all their parts. We have dissected several Stradivarius and Guarnerius Violins of great value, and we have determined directly the sounds of the two tables. To obtain these sounds, we clamp the tables at a point where two nodal lines cross one another, the one transversal and the other longitudinal, so that the elasticity of the wood in both directions is called into play. The nodal system being the same on each plate, we find *a tone* difference; nearer to the unison we shall have beats, more than a tone difference, the difficulty the plates have in vibrating in unison increases.

Thus we must consider as positive that a good Violin must satisfy these two conditions, to have the tables such that they give sounds a tone apart, and a mass of air giving, by blowing in at one of the *f* holes the *do flat*, or the *do* of the fourth string, 512 vibrations per second, in round and exact numbers, *the other dimensions* being the same as those of Stradivarius. For the nodal division indicated, we find that in the good Violins the sound varied between *do sharp*^{3} and *re*^{3} for the belly, and for the back between *re*^{3} and *re sharp*^{3}, so that there is always a semi-tone, or a tone difference between the two.

Why is deal preferred for the construction of musical instruments to any other description of wood? The nature of deal, its feeble density, and, above all, its elasticity, causes it to be preferred to any other substance. Its resistance to flexion is greater than that of any other wood, and also than a great number of other substances, even metallic; it is equal to that of glass and steel. Thus, with a very feeble mass, we

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possess in deal, a substance having elasticity as great as that of glass or steel.

Sound is propagated in deal with the same velocity as in these substances. If we take three rods of glass, steel, and deal, cut in the direction of the fibres, all three having the same dimensions, and cause them to vibrate longitudinally or transversely, so as to produce the same nodal division in each, we shall see that the sounds given by the three sensibly approximate. Thus, the velocity of sound in deal is as great as in glass, or steel, or as great as in any solid substance. The deal then offers the incontestable advantage of presenting a large surface with little mass, and possesses a great elasticity. A Violin with tables of glass or steel, would be worth nothing, on account of its great mass, and the difficulty that would be experienced in causing it to vibrate. Violins have been constructed in glass, steel, brass, silver, etc. The sounds of such instruments were always found to be feeble and bad. In maple, the propagation of sound is much less rapid than in deal; it varies between 10 and 12 in the direction of the fibres, that in air being 1. Perpendicularly (to the fibres) it is between 4 and 5. In deal, the rapidity of propagation is 15 to 16½ times as great as in air, transversely it is much less, between 2 and 4, according as the fibres are wide or narrow; it never reaches 5. This difference of elasticity in two directions, at right angles, is again an advantage not found in homogeneous substances like glass and metals. This feeble power of propagation in a direction perpendicular to the fibres, determines greater contractions, dilations, and transversal deflections, which act upon the post with great energy, which would not be the case except for the fibrous nature of the substance.

The deal owes to its fibrous structure other advantages which it is important to note. We have stated previously that the tables of a Violin vibrated in the same manner as plates, and caused the formation of nodal lines exactly as surfaces put into vibration, so that the fibres appeared to play no particular part; nevertheless, it is not to be doubted that the fibres facilitate their being put into a state of vibration. We may

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conceive that, being disposed to vibrate in unison with the sounds produced, they enter immediately into vibration, and communicate the movement to the tables, just as the strings of a guitar, in unison with sounds produced in the same apartment, enter into vibration, and communicate their movement to the entire mass of the instrument. The fibrous nature of the deal appears then to play a very important part in the structure of the Violin, and becomes a powerful motive to prefer it to any other substance. One can find in these facts the explanation of several phenomena connected with the human ear.

The disposition of the drum, its fibrous nature, which has already given rise to several theories of audition, would play the same role in the ear as we have attributed to the fibres of the deal, to facilitate the vibration of several parts of this organ. Here is an experiment among several others which we could cite, to justify our assertion. We take several parallel rods of unequal length forming a surface upon which we glue some parchment. By producing sounds varying in pitch beneath this body, we shall see that the vibratory movement always commences in the rod nearest in unison with the sound produced, and then communicates itself to the whole system, causing the parchment to vibrate as a plate.

The Violin is, then, an instrument consisting of strings, plates, and a mass of air; all these elements vibrate in unison, and the mass of air ought to give the sound $ut = 512$ vibrations for the construction generally admitted. The position of the bridge, the place occupied by the post, and its pressure upon the tables of the instrument, have great influence upon the sound. The player ought to pay great attention to the relative position of the various parts of his instrument. The fundamental sound of the air can be influenced by a bad disposition of the post, and render more or less bad an instrument otherwise having all the qualities essential to a good instrument. The pressure of the post upon the tables can modify the sound of the air, and of the tables, by rendering them lower, or higher; if it is too short the sound will be too low, and the

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lower sounds of the Violin will be favoured; if it is too long the pressure upon the tables will be too great, and the acute sounds of the instrument, those of the E string, will gain in brilliancy, to the detriment of the low sounds of the fourth string. In a word, if the pressure is too feeble, it is equivalent to decreasing the thickness of the tables; if the post is too long, the same effect is produced as if the tables were increased in thickness. It is necessary, then, to calculate the dimensions of the post, the position of the bridge, and above all, to try at every change if the sound of the air contained in the case corresponds with the fundamental sound we have already indicated, supposing all the other conditions fulfilled in the instruments. As the makers of instruments must necessarily try their tables before glueing them, it will be useful to enter into some details as to the method of determining the sounds they give.

If we take a square plate of deal, having two of its sides parallel to the fibres, and if we make it vibrate normally so as to produce two nodal lines parallel to the direction of the fibres, we shall produce a certain sound; if we now turn it and cause it to vibrate so as to produce two parallel nodal lines at right angles to the fibres, the sound will be different, although the mode of division is the same. In one case the plate is deflected in the direction of the fibres, and in the other perpendicularly, or rather at right angles to this direction. The resistance to flexion being different in these two directions, the sound must change. But we can make the plate produce a nodal figure, consisting of two nodal lines at right angles to one another, and in this case the sound is always the same, as the elasticity in both directions is called into play simultaneously. To obtain this division it is necessary to clamp the plate where the lines cross one another. In the tables of a Violin we can obtain one longitudinal line in the direction of the fibres, and two at right angles to it. If we produce the longitudinal lines, or the transversal ones separately, we shall have different sounds, because the flexions of the tables will be either parallel or at right angles to the fibres. By clamping

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the table at a point where one of the transverse lines crosses the longitudinal one, we shall divide the belly or back into six vibrating segments, which will oscillate synchronously, and produce the sound it is necessary to determine. The maker who wishes to try his tables will take a wooden clamp, and between two corks, cone-shaped, or two wooden cones covered with leather, will clamp the table and make it vibrate by means of the bow, after having spread over its surface a little of the sand used in offices for drying ink. He will see the nodal lines form, and after a few trials will be able to press the table where two lines at right angles cross one another, and he will then have the required sound. It is necessary to use great care in choosing the wood. It should be dry, the fibres exactly parallel to the length of the instrument, and perfectly symmetrical in shape. He will be able to assure himself of the good construction of his tables by means of the nodal lines, which ought to be perfectly symmetrical, and divide the two halves of the tables in exactly the same manner. He will be sure of producing a good instrument by these means, and science, in conducing to this result, will have rendered an immense service to industry.

As all the different kinds of deal are not equally good, we must give a simple method of determining the sorts we should prefer, on account of their greater elasticity. We have said that deal and maple present great differences in the velocities with which sound is propagated in them longitudinally and transversely. To discover if two substances offer the same resistance to flexion, we cut rods of the same dimensions from each substance, and cause those rods to vibrate longitudinally. In the case of wood it is necessary to cut these rods parallel to the fibres or transversely, according to the direction in which we wish to test the velocity of propagation. Care must be taken to cause the rods to give the same nodal division. The velocity of the propagation will be in proportion to the acuteness of the sounds produced. The higher the sound produced by a rod, the greater the velocity of propagation in that rod. By these means we shall be enabled to keep rods

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serving as types, and test the quality of the woods we use, by comparing it with these rods.

THE BRIDGE.—The Bridge plays a far more important part than is generally attributed to it. Its incisions and form have a great influence upon the quality of the instrument. It merits, therefore, all our attention. If we take a piece of wood, cut like a bridge, and glue it upon a Violin, the instrument nearly loses its sound. It gets a little better if we form feet to the bridge; if we make lateral incisions in it, the sound improves, which improvement increases gradually until the bridge assumes the ordinary form. It is an astonishing thing that by trial we gradually arrive at the form of bridge usually adopted, and which appears to be better than any other. A multitude of trials have been made before this important piece arrived at perfection. Everything has led to this result, so that we cannot depart from the established form without detracting greatly from the quality of the instrument Bridges have been made of deal with their fibres perpendicular and parallel to the belly, but the sound was found to be altered. The size and shape of the openings have been altered, but the beauty of the instrument has always been impaired. Let us examine the movement of the molecules of the bridge. If we take a plain bridge with two feet and a single string, the movement is tangential, parallel to the face of the bridge. If we make two incisions in it, the nature of the movement changes, and the sand is seen to move in several directions at once, while the bridge itself experiences movements of oscillation, and its molecules appear to execute vibrations in a direction normal to the belly. The effect appears to be to confirm the normal movements of the tables. The bar to which these oscillations are imparted, produces in the belly a similar movement over its entire surface, and prevents it from dividing into ventral segments by transversal nodal lines. All the parts of the instrument enter at once into vibration. Let us see how we can modify the effects of the bridge, by interfering a little with its oscillations. By placing a mute on the bridge the sound is almost null, and the bridge seems no longer to vibrate. It even appears

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to arrest the vibrations of the other parts of the instrument. The mute arrests its oscillations, and no longer produces the vibration of the belly. If we clamp the right foot of the bridge, the sound is weakened, but not to so great an extent as with a mute. On the other hand, if we repeat the experiment with the left foot, which ought to communicate its movement to the *bar*, the sound is incomparably weaker. It is evident that the left foot of the bridge produces the shocks which occasion the movement of the bar and of the belly. The right foot, as we have seen, is rendered immovable by the post.

NECK.—The form of the neck and the nature of the wood employed have great influence upon the quality of a Violin. If the wood is too hard or too soft, the quality of the sounds is considerably changed. Perrot states in his treatise on singing, that if the strings of a lute are attached to a support, the sounds lose greatly in power. We must remark, however, that this would have less influence in the Violin, where the action of the bow is constant, and not instantaneous, as in lutes and guitars. Nevertheless, let us examine the species of modification that the sound of a Violin will undergo if the neck is detached, and rendered independent of the body of the instrument. A Violin is fixed in a vice, and the neck is separated from it, as well as the part to which the strings are attached; the bridge rests on the body of the instrument, but the points to which the strings are attached have no communication with it. The apparatus is now put into vibration, and the sound is still found to have considerable intensity; but if we put the neck again in communication with the case, the intensity will be greatly increased. It is easy, then, to see from the preceding, the part played by the neck in a stringed instrument played on by a bow. In fact, in exciting the strings with the bow, at a short distance from the bridge, we cause the strings to be deflected at the point where the bow is applied, and the curve thus produced is not symmetrical in the two halves of the length of the string, but the greatest deflection is at the point where the bow is applied, and this deflection is propagated as a wave along the string, and is reflected on arriving at the nut,

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returning to the bridge upon the opposite side of the axis of the string. These waves are continued without cessation at each oscillation of the string, and impinging upon the bridge cause therein a transversal movement. We can easily be assured of this fact, by using a long monochord, having a plate disposed as a bridge, upon which sand is strewed.

There are then three different sorts of movements in a Violin; one in the direction of the length of the strings, one normal to the belly, and the third tangential; these three movements force the instrument to execute the greatest possible amount of oscillation.

An experiment of M. Cagniard Latour confirms the explanation we have given of the movement propagated from end to end of the strings. We take a small rectangular piece of paper; by making two parallel cuts with a penknife in this paper, we can pass it along one of the strings. If we place this paper near the bridge it will follow the direction of the bow, but if we place it near the nut, its motion will be contrary to that of the bow. This phenomenon proves that the curve in the half of the string, nearest the nut, makes an angle in the opposite direction to that produced by the bow at the point of attack.

The weight necessary to stretch a Violin string is as nearly as possible twenty pounds. The first string often requires twenty-two pounds to bring it up to pitch; for the second twenty pounds are required, and a little less for the third and fourth. Let us take a first string, having exactly the length given to it on a Violin, and making it sound E, by stretching it by the appropriate weight. We will now see what part of the weight is supported by the belly when the whole tension of the four strings amounts to eighty pounds. To this E string, stretched horizontally, we will suspend a weight, at the exact point where the bridge would be, sufficient to cause the string to make at that point the same angle it makes when stretched over the bridge, which angle is about 155°; the string will then give the sound F. If we examine the weight we find it to be six pounds two ounces. Thus the table would support about

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twenty-four pounds for the four strings. After establishing the conditions in which the best Violins of Guarnerius and Stradivarius were constructed, and having proved that they contain a mass of air giving *dc*=512 vibrations, and having also stated that musicians should adopt this diapason in order to get the best possible tone from their instruments, we shall finish by saying, that we shall be able to construct excellent Violins on any other tone, by constructing them precisely similar to those of Stradivarius, and being careful to have all the parts in inverse proportion to those of Stradivarius, as the tone we take as the basis bears to *dc*=512 vibrations. Thus, if we construct a Violin in *do flat*, the dimensions must be to the dimensions of a Stradivarius, as 512 is to the number of vibrations given by the mass of air in the Violin.

After having studied the Violins of the best masters, and determined the role of each part, we have indicated the means of constructing excellent instruments, resembling in everything the most perfect ones of Stradivarius. The principles we have deduced from numerous experiments permit us to state the question in a general sense, and not as a particular case. The construction of Violins is a problem susceptible of several solutions. Several of these being unknown, they are so related the one to the other, that one being determined it is easy to determine the others. We can, for example, vary the form and dimensions of the tables, but we must at the same time vary their thicknesses and the height of the sides, so that the air shall still give the sound *do*=512 vibrations. The dimensions of the *f* holes have great influence upon the sound of the mass of air. We have already said, that if we cover one of these with paper the sound of the air is lowered. Consequently, if they are too large, the sound of the air is too high, and *vice versa*. This is the reason why we often find Violins of large pattern giving a higher sound than *dc*=512 vibrations, while from their size it should be lower. Such are the Violins of Maggini, at least those which we have examined, the sound of the air being *re* instead of *do*, on account of the *f* holes of these instruments being larger than those of Stradivarius.

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It is possible, then, to construct Violins of any form and thickness, provided we keep within the conditions indicated. The problem being indeterminate admits, as we have seen, of an infinity of solutions. It must be noted, however, that if we substitute flat tables for arched ones, or tables more or less arched, the *timbre* of the sound will be modified. We shall obtain greater purity as the tables approach being flat, but at the same time the sound will lose in brilliancy.

VIOLONCELLO.—What we have said with regard to the Violin leaves little to be added regarding this instrument. The Violoncellos now made are generally good, and we can always arrive at good results by following the same principles as those enumerated with regard to the Violin, and by taking the dimensions in proportion to the sound taken as a basis, with the exception that we must give the instrument greater proportional depth, otherwise they would be too long and very unwieldy. If exactly proportional to a Violin in all parts, the length of a Bass would be 35 in. by 20 in breadth, instead of which they are constructed of 26 to 27 in. in length, by 15 or 16 in breadth, but instead of being only 3 in. in depth they are made 4 in. The sounds of the Violoncello being an octave and a fifth below those of the Violin, the sound of the mass of air should be lower in the same proportion, that is to say, *fa*= 170·66 vibrations. This sound is arrived at by diminishing the surface of the tables, and increasing the depth of the instrument as stated above. To determine the sound of the air in the body of a Violoncello, it is only necessary to produce a succession of low notes near one of the *f* holes. Among these sounds one will be found to be reinforced to a greater extent than any of the others, and this will be the note required, or we may make use of the brass tube previously described in speaking of the Violin. We frequently observe that the *fa*, *fa sharp* or *fa flat* on the fourth string of a Violoncello has a hollow rumbling sound, and can scarcely be obtained with purity. This remarkable peculiarity has never been properly explained. It is evident from what we have just said, that the sound of the mass of air is in most cases somewhere in the

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neighbourhood of this *fa*, and this effect is produced from the mass of air not being exactly in unison with the *fa* of the fourth-string, and beats are the result; or if the *fa* itself is exactly in unison with the air, the neighbouring sounds *fa flat* or *fa sharp* will suffer instead.

THE TENOR.—The mass of air in a Tenor should render a sound a fifth below that of the Violin, and consequently an octave above that of the Violoncello, say *fa*=341·33. Instead, however, of producing this note, most of the Tenors made now, give the sound *do*=512 vibrations, like the Violins. The result of this is, that the low sounds are feeble, hollow, and difficult of production, and the instrument has not the quality it ought to have. Formerly Tenors were made of large pattern, and approached more nearly to the veritable conditions of the theory. It is much to be desired that the makers should give their attention to the matter, so as to place the construction of these instruments in harmony with the Violins and Basses.

CONTRE-BASS.—The foregoing observations will apply also to the Contre-Bass, the construction of which has hitherto been altogether arbitrary. The Contre-Bass gives sounds an octave below those of the Violoncello, and the mass of air should therefore be the *fa* below that of the 'Cello. But as the instrument carries only three strings, the lowest being *sol* instead of *do*, perhaps the sound of the air should not be so low. It is a point, however, to be settled only by experience.



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CHAPTER IV.

REMARKS UPON THE FOREGOING THEORIES OF SAVART RELATIVE TO THE VIOLIN.

THE READER having carefully perused the preceding pages, let us examine how much positive instruction is to be derived from them. We must carefully take into account, however, that the papers in "L'Institut" are merely reports of what Savart stated verbally in his lectures, and it must be understood that the matter would have been stated far more clearly had the papers received his revision, or proceeded from the pen of the philosopher himself. For my own part I cannot regard the universally-received idea, that the sound-post is intended as a means of communication between back and belly, otherwise than a popular error, and the more I think of it, the more it seems to me that the points of the back and belly touched by the sound-post, are the points of *least* vibration. Upon the philosophy of sound-boards, Professor Tyndall writes as follows:—"Take the Violin as an example. It is, or ought to be, formed of wood of the most perfect elasticity. Imperfectly elastic wood expends the motion imparted to it in the friction of its own molecules; the motion is converted into heat instead of sound. The strings from the tail-piece pass over the bridge, being thence carried to the pegs, the turning of which regulates the tension of the strings. The bow is drawn across at a point about one-tenth of the length of the string from the bridge. The two feet of the bridge rest upon the most yielding portions of the belly of the Violin—that is, the portion that lies between the two *f* shaped orifices. One foot is fixed over a short rod, the sound-post, which runs from belly to back through the interior of the

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Violin. The foot of the bridge is thereby rendered rigid, and it is mainly through the other foot, that is not supported, that the vibrations are conveyed to the foot of the instrument, and thence to the air within and without. The sonorous quality of the wood is mellowed by age. The very act of playing has also a beneficial influence, apparently constraining the molecules of the wood, which in the first instance might be refractory, to conform at last to the requirements of the vibrating strings."

In the rendering of the vibration of back and belly normal by the sound-post, we must clearly understand in what sense Savart uses the term *normal*. In his paper upon "The Vibrations of Solid Bodies considered in general," he defined the terms he should afterwards make use of in speaking of various modes of vibration. By normal he means vibrations executed perpendicularly to the surface of the vibrating body, or what in English acoustics is termed transverse vibrations; by tangential vibration he means movements parallel to the surface. From the series of interesting experiments upon the sound-post, he deduces the following results:

1st. That the deflections of the belly produce in the post a longitudinal movement, which, reacting upon the movements of the belly, determines therein a normal movement instead of an oblique one.

2nd. That the post holds the right foot of the bridge in a state of complete rigidity.

3rd. That the post communicates the vibration from belly to back.

Now, as regards the first of these deductions, it is true that the general law ruling the communication of vibrations is, that all the vibrations of a vibrating system are executed in the same direction as the exciting cause. For example, suppose *a b*, in the accompanying Fig., to be a rod of wood, and *c* another rod glued to it perpendicularly at *g*. Now, if *c* be made to vibrate transversely in the direction *e f*, *a b* will vibrate longitudinally, provided they are rigidly connected at *g*. But if this joint is imperfect, the same result will not follow. Again,

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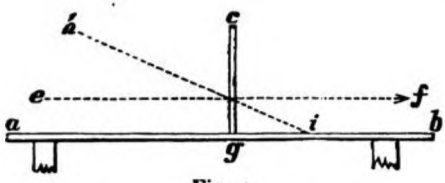


Fig. 2.

by exciting *c* at an angle of about 40° with the original direction, as *h i*, the second rod, *a b*, will vibrate transversely instead of longitudinally. It is obviously unnecessary, therefore, to make the case of the Violin-post an exception to this general law, since neither the post nor the bridge are rigidly connected with the belly. Again, in his "Memoire sur les Communications des Vibrations," Savart himself states the following case, among many others:—"If a rod falls perpendicularly upon another rod, at a point in this latter, held in a state of rest by a rigid obstacle, the first being caused to vibrate transversely, the second will also vibrate transversely," as in the following Fig.

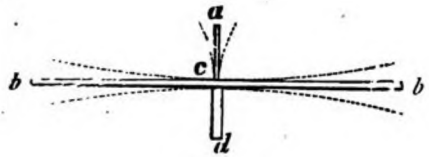


Fig. 3.

Let *a* be the first rod falling perpendicularly upon the second rod *b b*, at a point *c* in this latter, held immovable by the obstacle *d*. If *a* be made to vibrate transversely, *b* will also vibrate transversely, as indicated by the dotted lines. This appears to be the real state of the case in the Violin, where *a* would represent the right foot of the bridge vibrating under the influence of the strings from right to left, *b* the belly and *d* the sound-post.

Again, Savart in the same "Memoire" stated that it was found impossible to cause a rod to vibrate longitudinally when one of its ends was rigidly fixed. How, then, can the post be the

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seat of longitudinal vibrations, if one end of it is employed in maintaining the right foot of the bridge in a state of rest?

The second deduction of Savart's, then, seems to be the true one, and is in perfect accordance with the remarks I have made above. A noticeable fact, deduced from Savart's experiments on the sound-post which seems to confirm this, is, that the pressure of the post is only required to be exerted on the belly. The third deduction of Savart's seems to be of little importance, for, if the second be true, the communication between the tables must be principally effected by the sides. Savart then proceeds to examine the mutual reaction that the tables and the contained mass of air exert, the one upon the other. This section contains the cream of the matter, and the experiments cited are of the greatest interest. Let us briefly recapitulate what Savart puts forward in this section.

He proves by experiments that the tables and air, within certain limits, always vibrate synchronously, that the sounds of an instrument are at their best when the air contained by the case has a certain volume, which volume depends upon the other elements of the instrument, that the sound of this mass of air in the Violins of Stradivarius was always found to be the *do* of 512 vibrations, and that the sounds of the bellies and backs of the good Violins were found to give about the sounds *do sharp*$_3$* and *re sharp*$_3$ respectively, when caused to vibrate independently, and in such a manner as to form one nodal line in the direction of their length, cut by two other lines at right angles to the first. In other words, the sound of the belly vibrating under such conditions, gave a tone equal to the mass of air in the completed instrument, and the back a note higher.

But to these data he adds that the dimensions of the instrument should be the same as in Stradivarius instruments, and this is the weak point in the theory, for without knowing

* This small index number 3, printed over the notes in this and the preceding Chapter, is meant to indicate the position of the sound above the lowest, or "32 feet" C of the organist,—thus *do sharp*$_3$ represents 2 feet, or middle C.

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the exact dimensions in question, it is obvious that we could satisfy all the conditions of Savart, in a multitude of different ways, by varying these dimensions.

For instance, suppose we had an instrument satisfying all the conditions required by Savart—that is to say, the belly giving the sound *do*, the back *re* vibrating independently, and the mass of air in the complete instrument *do*=512 vibrations. Now, by increasing the area of the tables, and at the same time their thickness in proper proportions, it is very easy to see that we could preserve the same sounds while the dimensions would vary considerably. At the same time, we could preserve the sound of the mass of air constant, by decreasing the height of the sides, and the result would be a Violin of entirely different dimensions, and yet satisfying all the conditions Savart insists upon. Again, without varying the area of the tables, we could obtain the required tones for back and belly in a variety of ways by simply adjusting the thicknesses.

For instance, let the accompanying Fig., represent one of the tables, and let *a a*, *b b b b*, be the nodal lines obtained in testing the tone. Let it, in the first instance, be supposed to give the required tone and be of equal thickness throughout. Now, by increasing the thickness along the nodal lines, and also, gradually, and to a greater extent outwards towards the rim of the table, so that the rim or edge would become thicker than the centre, the same sound could be preserved, for we should be increasing the elasticity along the nodal lines, the effect of which would be to increase the number of vibrations; but this effect would be neutralised by the increased weight of the ventral segments *c c c c*. The same result would be produced by the reverse of this proceeding—that is, by diminishing the thickness along the nodal lines, and also to a greater extent that of the flanks, so that the greatest thickness would then be in the centre. Now, not only according to Lupot, but actual experience, all these three systems of thicknesses were applied to the bellies of the Cremona instruments



Fig. 4.

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of various makers, the first by Stradivarius; the second by Joseph Guarnerius; and the third by the Amatis; but all agreed in having the backs thickest in the centre, the respective qualities of the three classes of instruments being, power and mellowness, great power and brilliance with less mellowness, and sweetness but little power. Now, which is right? Tradition and prejudice is in favour of the last, the Amati style; but eventually will the student find his favorite method to be *equal thickness throughout the belly.*

Speaking of Stradivarius, Lupot says:—"Persuaded that the Violin is too noble for being pawned and used only as a vulgar instrument; too sublime for giving away to every one, he studied what ought to be its most perfect model, and his genius discovered this. Its profound proportions gradually and sensibly recurred to him in each of his *chefs-d-œuvre.* He examined the air-capacity, he enlarged his models without overdoing them; he studied the archings; calculated his thicknesses, in such a manner as to produce broad, equal, and harmonious sounds; he put everything in equilibrium; adjusted the whole and determined their concord. According as he deepened or flattened his archings he banished all excesses, and bent his sounds to all shades of variety. His thicknesses, mathematically reduced, are very strong in the centre of the back, and thinner towards the sides, *equal as a ribbon throughout all the belly* like the edges of the back."

Is it not remarkable that there should be so close a parallel between the respective qualities of the three classes of instruments and the three systems of thicknesses? The Joseph Guarnerius, on the one hand, with the greatest thickness round the edge, has the greatest power; while, on the other hand, the Amatis with the greatest thickness in the centre, have comparatively little power, but great sweetness. Against these two extremes we have the Stradivarius instruments, with equal thickness throughout, combining the good qualities of both. In the work of August Reichers, who has handled and repaired no less than 300 Violins made by Stradivarius, will be found the thicknesses of the backs and bellies of instruments of this

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celebrated maker. The back is always thicker than the belly about the position of the bridge and sound-post, varying from 5/32 to 7/32 of an inch in the thickest portion. One of the Violins of Stradivarius, made during his best period, gave the following measurements. The back at the position of the sound-post was 4 millimeters thick (a millimeter being ·03937 inch), and continued as far as 50 mm. towards the lower block, and 60 mm. towards the upper block. The cheeks measured from ½ mm., towards the middle sides the wood was 3 mm. thick; the belly measured exactly 2½ mm, and was of *equal thickness throughout.* It must also be particularly noted that, no matter how different the qualities of the pine and maple might be, Stradivarius never made any alteration in the thicknesses of the *bellies.*

In an article of Savart's, published in the "Annales de Chimie," entitled "Recherches sur les Vibrations de l'Air," he states certain facts which throw considerable light upon what ought to be the form of the mass of air contained in a Violin. If we take a long, narrow vibrating column of air, as an organ pipe, for instance, it will give a certain sound, which, with its harmonics, are the only sounds that can be derived from the pipe, and it will resound to no other vibrating body except such as may be in perfect unison with one of its sounds. Thus, if we have an organ pipe giving the sound C, and a tuning-fork exactly in unison with it, the pipe can be made to sound by simply holding the vibrating fork near its mouth, but no such effect is observed if the fork gives any other sound than that of the pipe itself. This phenomenon is called resonance. Now, Savart states in the article referred to above, that if the vibrating column of air is gradually reduced in length and increased in diameter, this power of resonance is no longer confined to sounds exactly in unison with the mass of air itself; but if the diameter be considerable in comparison with the length of the column, almost any sound within certain limits will be reinforced to a greater or lesser extent.

This power of reinforcing a number of sounds, increases as the diameter increases in proportion to the length, and the

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mass of air in a Violin may be regarded as such a column whose diameter greatly exceeds its length. There appears, therefore, to be good reason for obtaining the requisite mass of air in an instrument by lateral expansion, rather than by increasing the height of sides, or the arching of the back and belly, and a scientific explanation is at once given of the causes that led Stradivarius to extend his model, at the same time that he reduced the arching of his instruments. Savart's explanation why there should be a tone of difference between the two tables appears somewhat doubtful. He alleges that a nearer approach to unison would cause beats, but this accords very imperfectly with his previous statement: that within certain limits, whatever be the sound of the two tables when vibrating independently, they always vibrate synchronously when united. The limit is a very narrow one when anything more or less than a tone destroys their power of vibrating in unison. It appears certain that the sounds of a Violin proceed principally from the mass of air contained in the instrument, as no sounds of so great an intensity could be produced from vibrating plates equal in area to the tables of a Violin, while there are other musical instruments whose sounds we know are produced by aerial vibrations, which, although containing a mass of air much less than that of a Violin, produce sounds of equal intensity, such, for instance, as the Flute, Clarionet, or the reed pipe of an organ. The last is a very instructive example, and may tend to an explanation of the point in question. A reed pipe consists of a free or fixed reed in communication with a column of air above it. Now, it is not absolutely necessary that the reed should be perfectly in unison with the mass of air above, within certain limits they will accomodate themselves the one to the other; but one remarkable fact is to be noticed, viz., the stiffer the reed the greater the power it will have in forcing the air above to vibrate in unison with it. This appears to be the role of the tables of a Violin, that is to force the vibrations of the air to accomodate themselves to the vibrations of the tables, and the ratios given by Savart as existing between the back, belly, and contained

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mass of air in the good Violins he experimented upon, are no doubt such as to give the two tables sufficient stiffness to bring the mass of air into complete subjection. If this stiffness be decreased the air will have a tendency to vibrate after its own mode—that is, to sound its fundamental note or its harmonics; but, on the other hand, if the stiffness of the tables be too great, greater difficulty will be experienced in putting the instrument into vibration.

When we consider that the sound given by a vibrating solid is an exact index to its elasticity or stiffness, this explanation appears extremely probable. Savart's remarks upon the bridge and the neck seem perfectly just. Unfortunately he bestows but little attention to the bar, which is perhaps the least understood element of the instrument.

Upon the paragraphs relating to the other instruments of the class, Tenor, 'Cello, and Double-Bass, I make no remark, considering it sufficient for the present to confine my attention to the Violin, for let the true principle of the perfect construction of this instrument be once clearly laid down, the rest will become very easy.



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CHAPTER V.

THE CONSTRUCTION OF THE INSTRUMENT.

TO MANY, the above head-line, no doubt, will suggest such thoughts as those:—What utility can there possibly be in describing the construction of an instrument which one can purchase at the most trifling expense, an instrument which, with its appendage the bow, we can obtain for a few shillings—yea, a full-sized, veritable Violin, stained in scarlet hues, and anointed with turpentine varnish, mated with a coloured bow of beechwood, which only awaits an attack upon the strings of its feeble and deformed neighbour, to arouse "discordant sounds," which by no mellifluous charm favour the scions of Apollo?

The following must, however, forcibly strike the minds of such persons. Violins appear to possess the widest range of prices, perhaps over any other article of such original cost, as whilst we can obtain the one for two or three shillings, we find we cannot possess some of the finest of the Cremonese instruments for several hundreds of pounds; and when such is the case, curiosity must impress the most careless and superficial reader as to the cause of such apparently mad expenditure.

Fifteen hundred acres of Cincinnati land were at one time given for a Stainer Violin, and as the city of Pittsburg now stands upon that land, it may be safely stated that this is perhaps the heaviest price that was ever paid for a Violin. It is not the mere varnish, wood, and stain that we purchase in those fine old instruments, it is the intuitional inspiration of the artistic genius, the harmonic soul introduced into such apparent trifles, the maximum experience of multiform lives concentrated into a few wooden elements—a small, thin, wooden shell—

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which constitute almost a living thing of immortality. Time, although capable of tracing lines and spots upon its surface, has but little effect upon its anointed fabric, and, like the mysterious Alchemical Sages of romance, it only begins to grow old with ages of perpetual youth, and never loses its essential qualities of sweetness and resonance. It lives with a vigorous "forgotten-by-death" consciousness, singularly contrasting with the generations of humanity and familiar objects which disappear around it, and although its elements may have been for centuries widely diffused throughout the world, yet its "back," or "breast," which may be the only single original element of its composition, faithfully proclaims its individuality and life of metempsychosis. Thus *its* life is in a manner dual, human in its pathos and sympathy, but superhuman in its imperishable materiality, for it reigns truly the prince of all instruments, and sings over the grave of many generations, only awaiting the master-touches of a Paganini, or Joachim, to still remain the joy and wonder of a civilised world. The Joan Kerlino Viola is over three centuries old, the Violins of Stradivarius are over two centuries, several of which having survived a thousand calamities, still remain in their diaphanous varnish without a flaw or scratch.

Does a Pag. or Wilhelmj draw ravishing tones from its melodious recesses?—they work as all gifted artists must work, guided by the sensitiveness of the fine nerve-power of touch as an individual endowment, and strenuously endeavouring, by days and nights of restless devotion, to render palpable the thought that possesses them. Whether in the sacred Melodies of Mozart and Handel, or in the secular Strathspeys of Gow and Marshall, its capabilities of expression under the hands of a master proclaims its pre-eminence, and bravely has it maintained its royal supremacy, though surrounded by numerous other instruments of more complexity, of greater size, and of far greater volume of sound. But the "still small voice" that sings of purity and love belongs eminently to the Violin. As music is cultivated amongst the masses, and its refining influence improves their better nature, softens their passions and

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elevates their tastes, so will the Violin be correspondingly appreciated.

> "By the sweet muse of music I could vow
> I do believe it smiles upon me;
> See it full of unuttered music, like a bird,
> Rich in invisible treasures, like a bud
> Of unborn sweets and thick about the heart
> With ripe and rosy beauty—full of trembling:
> I love it like a sister. Talk to me,
> Lovely one! answer me, thou beauty."

In former times when Stradivarius, Amati, and Guarnerius flourished, along with many other celebrated makers, the making of such musical instruments was purely an art, for truly such makers were genuine artists; whilst at the present time Violin-makers, generally speaking, are only traders in it, and instruments, as a consequence, are now ostensibly made for the furtherance of this art, and are thus sent wholesale into the world, faulty and careless in construction; crude, immature, and harsh in quality. The Violin is a favorite, and ever will be, and in view of this alone we shall try to investigate, to the best of our frail ability, its mechanical structure, its workmanship, and its known acoustical principles.

The Violin is, as a general rule, composed of seventy different parts, but this is not essential, as we find many of the Cremona instruments had no such number, the back being often in one piece and technically termed a "whole" back, in contradistinction to that formed from two separate plates, or pieces, united. At other times we find the corner-blocks omitted, and the backs made from wood cut slabwise, as in the instruments of Andrew Amati, who never deviated from this method. The proper selection of wood of the finest acoustical qualities was a matter of the utmost importance with the ancient artists. In many of the old Cremona instruments the backs as well as breasts, have been formed, or "pieced," from quite a number of different parts, all united with the most skilful care and workmanship, and plainly demonstrating that sonority was the *sine qua non*, as in Italy there was little or no difficulty in obtaining wood in sufficient *quantity*, although not at all times of sufficient *quality*.

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Fetis gives us some curious information regarding the maple used by the Italian Violin-makers, that wood having been sent from Croatia, Turkey, and Dalmatia, to Venice. The following is a translation of what he says:—"They sent the wood to Venice, prepared as oars, which served in the galleys, and the Turks, it is said, who were constantly in rivalry and often at war with the Venetians, took care to choose the best figured or wavy wood, as it would break the more easily. It was from those portions of timber destined for the oarsmen that the Italian Violin-makers chose the wood which was the most suitable for the manufacture of Violins."

The following Table will show distinctly the different parts, along with those which are sometimes omitted :—

NAMES OF THE DIFFERENT PARTS.	PIECES USED.	
	Generally.	Sometimes.
Belly or Breast,	2	1
Back,	2	1
Sides,	6	4
Neck or Hand,	1	1
Pegs,	4	4
Finger-board,	1	1
Nut,	1	1
Bridge,	1	1
Tail-piece,	1	1
Button for do.,	1	1
String for do.,	1	1
Guard for Tail-piece String,	1	1
Side-linings,*	12	8
End-blocks,	2	2
Corner-do.,*	4	0
Sound-post,	1	1
Bass-bar,	1	1
Indenting or Purfling,*	24	12
Strings,	4	4
Total,	70	46

* Sometimes omitted.

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In addition to the above it will not be out of place here to add the properly constructed Chin-rest as a necessary appendage. Some instruments have a series of rectangular thin pieces of wood glued across the joints of the back and breast, inside the instrument, to keep the joint secure, as well as to give greater rigidity to the plates.

Violins are made of the following woods:—Breast, bass-bar, sound-post, and side-linings, of Swiss pine, lemon-tree, and ash; back, sides, and neck, of curled plane, or bird's-eye maple, blocks of sallow, or pine; finger-board and tail-piece of ebony. Those are the woods which have been usually employed by the best makers, but in the common Violin we find beech used for the back, neck, and sides; whilst in others we find the back made of pear, or cherry-tree, the side-linings of sallow, blocks of lime-tree, etc.; but, from the true construction of the instrument, it is evident maple and pine ought alone to be used for the formation of the back and breast. Stradivarius made several Violoncellos and Tenors with the backs formed of poplar and pear-tree, but his best instruments have always had backs made from maple. A species of wood—the Azarole—common in the Tyrol, is believed to have been used by some of the Cremonese makers in preference to the Swiss pine, the south side of the tree only being used.

Speaking of Azarole wood reminds me of an alleged "Extraordinary Discovery" of Herr Schradieck, Prof. of the Violin in the Cincinnati College of Music. About ten years ago he claimed to have re-discovered the lost art of the Cremona Violin-makers. Mr. Neiderheitmann, of Aix-la-Chapelle, who was an intimate friend of the Professor, took apart and destroyed a valuable Stradivarius Violin, and an analysis of its wood convinced Schradieck and Neiderheitmann that the secret lay in the wood itself, a balsam pine, which grew in Italy at the time when Stradivarius lived, but which has subsequently disappeared. It was, however, discovered that the tree which grows in our northern latitudes, called the *Pinus Balsamea*, or Balsam Pine, possessed the identical properties of the Italian tree. But a considerable period of

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suspense has elapsed since then, and we have yet to learn the practical results.

The wood of which the instrument is formed is a matter of pre-eminent importance, as it must be thoroughly seasoned, and possess good resonant properties. If the wood of the back and breast is perfectly baked by exposing it for a length of time near a fire, the instrument made from it acquires a certain crispness and intensity of tone. Many modern makers adopt this method, but along with intensity there is always a harshness in the sound of the instrument, as the form of the wood-cells is changed by the heat, and after a few months the tone of the instrument gradually deteriorates. The firmness and sonority of wood is somewhat improved by steam-drying, and we find many of the pieces for Violin backs and breasts sold by the musical-instrument dealers have gone through this process, whilst others again have undergone an acetous purification. The following method of wood-drying is adopted by several of the Continental firms who supply prepared wood for the fabrication of musical instruments. The wood is kept for some hours under boiling water, whereby all its soluble parts are withdrawn. It is next left to dry, and then boiled for some time in a solution of borax, which causes the albumen to become soluble, and to escape from the pores. After this proceeding, the wood is placed in stoves heated by steam, and in three days after the commencement of this series of operations, it has become quite dry, and to all appearance well seasoned.* About 1835, Mackintosh of Dublin, it is said,

* In a recent report by Monsieur Violette upon some experiments in which he has lately been engaged, he states that steam of a temperature of 480° Fahr. is capable of taking up a considerable quantity of water. In his experiments he exposed several kinds of wood for two hours to the action of a current of steam at 7½ lbs. pressure per square inch, and having a temperature of 482°. The wood having been weighed before and after exposure to the steam, it was found that oak and elm decreased in weight ½, walnut and ash 2-5, and pine ⅓, the wood having also become stronger, with an increased power of resisting fracture. The increase of strength in oak was 5-9, walnut ½, pine 3-5, and elm ⅓. By this process the fibres of the wood were drawn closer together, the colour became darker, and maple and pine treated by steam at a temperature of 487°, were rendered far more valuable for musical instruments than by any process heretofore known.

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discovered a process by which he cleansed the wood of its resinous particles, etc., without deteriorating the fibre, but his secret he never made known. There can be no doubt that a lengthened seasoning is the most efficient method for the present purpose, as it gives greater toughness, elasticity, and resonance to the wood than by any artificial means that can be adopted.

The celebrated Parisian maker, Vuillaume, even went personally through Italy and Switzerland in order to obtain his time-worn wood. In many cottages of the peasantry and others, the furniture and woodwork of the houses are composed of pine of a very fine quality, which has perhaps been standing there for hundreds of years, and which consequently possesses the necessary resonant properties. This valuable material was what Vuillaume purchased, and as a result, some of the instruments produced from it, by a few months' usage, approximate to the old Cremonas. Wood which grows in rocky and exposed situations possesses much sonority. No wood, under at least four or five years' seasoning, ought to be used for Violin-making, and not even then, unless it has been known that the tree was ripe when cut. In this semi-tropical country (Georgia), every lumber-merchant and woodsman knows that it takes about seven years for pine to thoroughly season; under that time it is certain to shrink.

The wood of the entire tree previous to maturity may be divided into two portions, the outer called sapwood, which is soft, weak, and less compact than the inner portion called heartwood, which is the most solid. It is through this outer portion, or sapwood, that the sap chiefly ascends, and from its thus abounding more in saccharine and other matter, it is more perishable and sooner decays. In trees which have arrived at maturity, there is no distinction between the sap and heartwood, the wood being of the same texture throughout and almost uniform. The proper time for cutting trees is when the sap ceases to flow, and experience has determined the month of December to be the best time for this purpose, as the wood which has been cut during this month, has been found to have

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always been of a superior quality to any cut during the other months of the year. Another very important matter is this; wood which has been cut down at an improper time always becomes "wormy," there are thousands of acres of pines in this country annually destroyed by "sawyers," as they are called, or worms. A few trees felled in August, for instance, will cause hundreds of healthy trees around them to die from being worm-eaten. The ages of trees are generally known from the number of their concentric rings, but this is not an infallible index in every case. Some pines are known to contain 1,200 of those circles, thus indicating an age of 1,200 years, but the mean age of the pine, when it has reached maturity, is about 80 years. In the best of the Violins of Stradivarius the pine is of very uniform quality, the straight lines marking the annual growth numbering from 12 to 20 to the inch. Maples are known which have reached the age of 600 years.

If the wood to be used is in the original state, as a log transversely cut from the tree, we have merely to cut the wood to the centre, from the outer or bark side, and the pieces when so cut must be at least a quarter of an inch thick at the centre of tree, and about an inch and a quarter at the bark or outside, when the grain of the wood will be found to run in the requisite direction. Again, if the wood is in plank, it must be so sawn as that the required plate will have the concentric circles of the fibre of the tree passing at right angles to its surface, but a few minutes' explanation from any intelligent cabinetmaker in his workshop upon this point, would make the matter clearer to the uninformed reader than the writing of a whole Chapter upon the subject. When such pieces have been obtained, and free from knots, warps, and fissures, they may be cut into the following dimensions :—Length, 16 inches, breadth, 6 inches, ¼ inch thick towards the heart of the tree, and 1⅛ inches towards the outside. The pieces of maple for the neck are to be cut into lengths of 12 inches, depth, 2¼ inches, with the grain running on this part, breadth, 1¾ inches, this surface being slabwise. They may now be stacked on each other in an

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airy and dry place, with openings between the layers to admit a free circulation of the air, whilst rain, as well as excessive sunshine, must be excluded. Wood seasoned in this manner will be less liable to twist, or warp, or contain fissures, and will gradually pass to a dry and solid state.

When the wood for the back and breast has been thus seasoned, the two thickest edges, being the bark side of the tree, are to be neatly and carefully joined in such a manner, that one side of the joined plate will run perfectly level, whilst the other side will be highest in the middle, slanting to the edges, as seen endwise in Fig. 5. For the operation of joining the two halves, the plane-iron must be very keenly sharpened, with the back-iron pretty close down, so that the thin shavings are perfectly cut and not torn. It must be observed that they are not twisted, by rubbing the two surfaces lengthwise, the one upon the other; if the joint is twisted, the one will jar or rock upon the other. It will thus be seen that the edges of this joined plate contain the interior or heartwood. The joint is thus made plain, but as fine and close as possible on both sides, that both pieces may thus act as one afterwards, and it must also be cut so as to have the fibres of the wood running as nearly parallel to it as possible. It is assumed that the resonant property of the wood has been tried and found satisfactory; also, that the maple is of full figure and finely marked, thus conducing to the beauty of the instrument, that the grain of both back and breast runs straight and nearly equi-distant. In the wood for the breast the grain ought to be pretty close, fine, and well marked, and perfectly straight from end to end.



Fig. 5.

Presuming a tolerably good joint has now been obtained, the next process is to glue it. Carpenter's common glue will not answer the purpose well, as it is by far too coarse. It tends also to leave an unseemly black line where the pieces are joined. Isinglass is often employed for uniting the parts of the Violin, but its proper manipulation is very difficult, as it sets so soon; and there are so many bad samples of it in the market, that there is much difficulty in obtaining it of excellent

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quality. A very pure and refined glue is to be had, which is almost transparent, and which possesses great tenacity. It is always in pieces about 9 in. long, 2 in. broad, and barely 1-16 in. thick, and is almost as transparent as glass. This glue is generally sold at one shilling per lb., and will be found of admirable quality for Violin-making, as well as for any other purpose where neatness combined with strength is required. For the Violin it is quite essential that the finest glue must be employed, as the instrument has to withstand so many vicissitudes of temperature, vibration, etc.; and it is certainly not very gratifying to have it constantly requiring repairs from the cause of bad glueing.

A small glue-pot of copper or cast-iron, with a tinned interior vessel, may be obtained for a trifling sum, and will be found quite suitable for the various operations of Violin-making. The glue is first broken into small pieces, and steeped for an hour or two in cold water, after which it will be found to dissolve more readily in the subsequent operation. Pour off the water, and place the now swelled glue into the interior vessel of the glue-pot, along with a small quantity of water; fill up the outer vessel with water, and insert the one containing the glue, allowing the superfluous water to escape, then place on the fire until the glue thoroughly dissolves, and gradually fill up with water until the liquid is about the consistency of olive-oil. A small brush and thin piece of pinewood are all that is required for spreading it upon the surfaces of the articles to be united. If this species of glue is used, care should be taken not to overheat it. A small quantity of spirits along with a few drops of creosote, may be advantageously added to the solution, as this tends to strengthen it; and by this method it will also keep from mould.

The two halves of the back being now properly jointed, place one in the bench-vice, joint-side upwards; hold the other half with jointed surface running along the former, and resting on it edgewise; cover both surfaces with hot glue of a somewhat thin consistency; place the now glued surface of the detached half upon the surface of the fixed one; slide the upper surface

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upon the under, longitudinally and evenly, forcing out the interposed glue, when, after a short time, the glue will set, as will be shown by the intense binding of the plates together. If the joint has been well made the glue will gradually set stiffer as the surfaces are rubbed, but if any part is "swimming" the halves must be separated and rejointed. When the glue sets, have them in proper positions, as ends and sides square; let them remain in the vice for a short time, until the joint firms somewhat, after which, carefully place them in some dry place until the glue dries, which, in the summer time, will be in from eight to ten hours, according to the quality of glue. The breast is glued in a precisely similar manner. Some makers cramp the two plates together; but by this method the joining is never so firm, neither does the joint remain so firm as it appears when newly taken from the cramp, but almost invariably slightly opens afterwards. If the weather is cold the two plates may be slightly warmed, previous to glueing; but the planed surfaces must be kept as clean as possible, and free from fingering, as the glue will not adhere properly if the joined surfaces have been greased by the warm hand or fingers. In warming the plates, the maple especially, avoid all excessive heating, or it will be found that what was originally an almost *invisible* joint, will be found, after glueing, to be but of a too visible nature, as the even surfaces have been injured from the contractions arising from overheating. When such is the case, there is no remedy but to take the back to pieces and joint it again.

When the back is thus glued and thoroughly dry, the level or under surfaces may now be dressed perfectly straight and level with a plane; for upon this surface is the outline of the instrument traced. The model of the intended instrument must now be decided upon, whether a copy of a Stradivarius, Guarnerius, or Amati, is contemplated, therefore if the amateur maker has a cherished instrument which he wishes to copy, he must model an outline from his favorite instrument. This is a simple matter if he has had the instrument to pieces, as he has only to trace the outline of the breast; but when the instrument

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is whole, the following method may be adopted. In a piece of thin hardwood of proper dimensions, cut out an elongated opening of a guitar shape, sufficiently large to allow the higher parts of the arching of the back of the Violin to pass through, and the edges to rest upon the surface; then trace the outline with a small drawpoint or tracer. Upon the dressed level surface of the back, place the model, and trace off the design carefully with the drawpoint. It will save trouble in re-measurements hereafter, if he keeps the joint running exactly through the centre of the back. After the design of the back is thus marked, the plate is to be fixed in the vice, and with a fret, or bow-saw, as shown in Fig. 6--which may be obtained for a few shillings--the design is to be cut out by sawing pretty close to the traced line. The saw should be kept as square as possible, by doing so it will save the trouble of after-paring, but the traced line should be left quite clear. When this is accomplished, any inequalities of the edges may be smoothened by paring with the gouge and chisel, and finally finished to the line with a file.



Fig. 6.

The models for the arching of the back may now be prepared, as in the early part of the subsequent operations they are required. Many makers use no models for this purpose, merely working by eyesight alone; but if the amateur has any regard for the internal volume of air to correspond harmoniously as a whole, he will find the benefit of making and working to models taken from an excellent instrument. Four of those models are required for the back, which may be made in the following manner. In a piece of mahogany about 15 inches long, 1½ in. broad, and 1-10 in. thick, cut an elongated curve, place this perpendicular and lengthwise upon the centre of the back of the Violin, then with a small scribing-tool trace off upon the surface of the mahogany the arching of the back. A shifting-legged compass will answer the purpose equally well, if the amateur does not choose to make a small scribing instrument.

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Place a pencil in the compass, and pass the point of the other leg into a small piece of cork, to prevent the compass from scratching the varnish, open the legs about ¼ or ⅜ of an inch, let the point with the cork rest close to the surface of the Violin and mahogany, keep the model perpendicular to back, and draw the compass along the arching from end to end, when the pencil will trace the line of arching upon the mahogany. Mark the model at the purfling of the back, cut one end square to purfling, and have a notch cut in the other, so as to fit the edge of the extremity, then with a knife cut out the underwood to the pencil line, and place the model upon the back, when, if any slight discrepancies occur, adjust with a file, until the model fits accurately upon the curvature of back from end to end. A representation of this model, along with the other three, are shown in Fig. 7. The three transverse models are

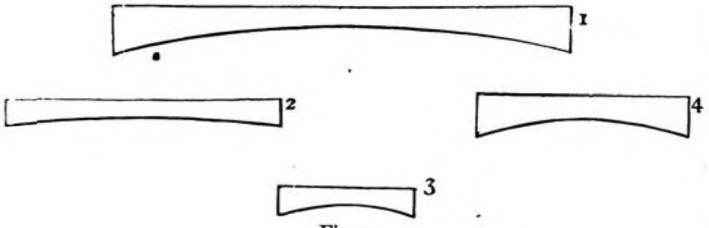


Fig. 7.

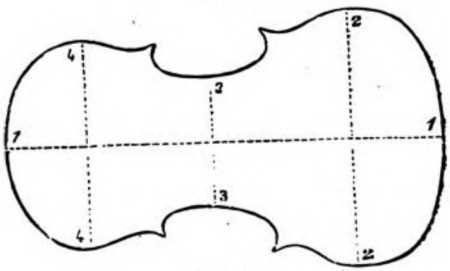


Fig. 8.

made in a similar manner, and are taken from the archings at the places on the Violin marked respectively 2, 3, and 4—Fig. 8.

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It will now be evident there are the same number of patterns required for the arching of the breast, and which are formed in the same manner as those already described for the back, in all eight, which models complete the outlines for the archings of the instrument. To return to the back, the outline of which has been now finished, the thickness of the edges must now be made equal. With a small gauge, set the tracer to mark a line 3-16 or ¼ in. thick, according to the copy of Violin to be made, as this first thickness must be somewhat fuller to allow for indenting, finishing, etc. When the gauge is thus set to the desired thickness, run a line round the edges from the under or flat surface, when the upper wood must be removed with the plane and paring-chisel, until the edges are all of an equal thickness. Some makers have a piece of deal about the same size as the back, upon which the flat surface of the back or breast is placed; an iron screw, with large threads, is screwed partly through the under surface of either, and passes through the deal, having a binding-nut at lower end of iron rod, by which the back or breast is firmly fixed to deal. Others again cramp the back or breast, flat side downwards, to the deal plate with small iron cramps--either of which methods retains the back or breast in position until the outer surface or arching of the instrument is completed; but the generality of makers merely hold the plate on the bench, or knees, until this portion of the work, as well as the succeeding, viz., the hollowing-out, are finished. I anticipate the amateur will choose no such appliances, but adopt the latter method of working. If such is the case, two thin rectangular pieces of pine may now be glued across the plain surface, one at each end, crossing the joint, which will prevent the joint from opening at the ends, as it sometimes does from the heat and perspiration of the hand.

The gauge is now set to a distance a little farther from the edge than where the indenting or purfling is to be placed, and a line traced round the edge on the upper surface, where the scooped-out part is formed with the gouge, leaving the surface between the line and edge flat, until the other part of the raised

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surface is completed. If the purfling or indenting tool used has a movable slide containing the cutter, this may be used instead of the gauge, to mark the line of edge slope, by taking out the cutter and substituting a small-pointed piece of steel as a tracer.

The upper or outside surface must now be gradually sloped with the gouge, plane, and paring-chisel, until it approaches in curvature to correspond with the different models, after which the wavings or tool-marks are obliterated with a file, and the surface finished with fine sand or glass-paper. If the curvatures have been carefully wrought, the models will now fit upon the respective surfaces equally, and the archings will bear no important dissimilarity from those of the model Violin chosen. In cutting off the superfluous wood, the tools must be kept very sharp, as there is difficulty in working cleanly some specimens of plane which are highly marked, unless the edge is keen, and the run of the wood must also be observed—in short, the tool must always cut, and never tear the woody fibres. The amateur will always find his safest method to be in cutting as much as possible *across* the grain of the wood.

This, as well as the other parts of Violin-making, will be found to take time, patience, and application, but when the work is accomplished in a creditable manner, there is the more pleasure attached to it afterwards, and whatever is worth doing, is worth doing well. When the arched surface of the back has been completed accurately according to models, and no prominent marks or irregularities left on the surface, as may be seen by holding it on a level with the eye to the light, but all beautifully even and symmetrical, the next proceeding will be that of hollowing it out and graduating it to the proper thickness. For this purpose a double callipers made of either iron or hard-wood, having the ends polished, is necessary, as also a gouge or two, and a small plane. Fig. 9 represents the callipers; Fig. 10, *a*, *b*, *c*, *d*, the shapes of the curves of edges of the gouges; and Fig. 11, the form of plane. A small knuckle-bent gouge, Fig. 12, will be found extremely useful in hollowing out the part of the exterior surface adjoining the indenting. In

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Fig. 13 is represented another form of callipers, which will be found very useful in taking the thicknesses of the breast of any whole Violin; two different sizes of this callipers will prove



Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.

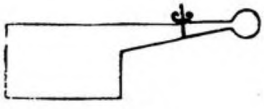


Fig. 13

serviceable, one leg is inserted through the *f* hole, as will be understood from the illustration.

No invariable standard thicknesses can, as a rule, be adopted in the construction of the various instruments, as this depends upon the quality of the wood and the model chosen, as Amati adopted one method, whilst Guarnerius and Stradivarius wrought each upon entirely different principles. The reader, by referring to Chapters II, III, and IV, will easily perceive this, as well as the various reasons for departure from a fixed rule. The following thicknesses, as a mean standard, may be successfully chosen for the back, whilst the other parts of the instrument must be built in a proportionately harmonious manner as regards volume, or capacity, and toning of breast.

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Dress three small pieces of hardwood about 1 in. long, and ⅜ in. broad, to the following thicknesses exactly:—No. 1, 1-5 of an inch; No. 2, 1⅗ lines; and No. 3, 1¼ lines. Those various sizes are the mean thicknesses for the back (the breast being always slightly thinner throughout), and are used by placing them between the points of one end of the callipers, whilst the other end gauges the thickness of the plate.

At the distance of 6¼ in. from the upper or wide end of the back, upon the centre-line, make a mark with tracer, and from this, as a starting-point, measure off 2¾ in. towards the upper end, and 2 in. towards the lower end upon the centre-line of the back; set a small compass to ¾ in., and set off this from the extreme, or end-marks on each side, thus forming a rectangular figure 4¾ in. long and 1½ in. wide. The thickness within this figure must be reduced until it is the same as No. 1, or 1-5 of an inch thick throughout, gradually but accurately decreasing in thickness outwards to 1⅗ lines, midways between this and the edges where the sides are placed, this part being 1¼ lines thick in the back. The back may be hollowed out with gouge, until the thickness is nearly arrived at, after which the small plane may be used until the precise thicknesses are obtained. A line should be run round the inside margin of the back with the gauge at the place whereon the side-linings will run, and the thickness truly reduced to the standard at this part.

The graduating of the thicknesses must be wrought very accurately, and the interior surface finished with the same care as the already finished outer arched surface—no ridges or irregularities being left, but all smooth and finished. The final finishing must be done with No. 0 sand or glass-paper. It must be observed that the outer surface of the edge of the back from the gauge-line must be left thicker for the present to allow of the indenting afterwards. The normal tone of the back may now be tested, which, if the wood has been of rich sonorous quality, will be found to answer very closely to that of the backs of Stradivarius if the same model has been adopted.

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For the belly or breast the same models are required, which may be made in the same manner as those already described for the back, and in addition to those, a model of one of the *f* holes must also be taken. This may be traced on paper, or parchment, and transferred to zinc or thin wood, after which the pattern may be cut out. The model of the *f* hole can easily be copied from that of any good instrument. Place a thin piece of paper over the *f* hole and rub it over with a piece of heel-ball. But there are some pretentious and high-class amateur Fiddle-makers and Authors, who, working with gloves on (?), rub a finger of the dirty glove over the paper, thus leaving an impression of the outline of the *f* hole. As the breast is made in a similar manner to the back, it would only entail unnecessary repetition to describe that part of it preceding the cutting of the *f* holes. The same starting-point is taken for the breast as that of the back, and the rectangular surface of equal thickness the same dimensions, but the thickness throughout the entire plate ought to be half a line less than that of the back. The former starting-point, viz., 6¼ inches from the upper or wide end, corresponds with the inner or bridge-notches of the *f* holes; a line passing through this point to the centre-line will pass through those notches. The sizes of *f* holes vary according to the model of the Violin, and are formed to correspond with the internal capacity; when large they make the tone more free and shrill, and when small they cause the tone to be more round and mellow.

The model of *f* hole being obtained, it is to be placed in the proper position upon the surface of the breast, and the shape traced upon the breast with a fine-pointed pencil. A thin, narrow, and pointed penknife may be used for cutting out the *f* holes, which must be cut by small portions, and the knife kept very sharp. When cut, the circular parts may be rounded with a fine rat-tail file, after which the *f* holes must be finished with fine glass-paper. The model is now reversed to the other side, and the other *f* hole cut in like manner to the preceding. The bass-bar may now be made and carefully fitted to the interior surface of the breast. For this no particular scale of

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dimensions can, as a rule, be adopted, as much depends upon the height of arching and quality of wood used in the construction of the breast, whether close or open in the grain, and the height of bridge to be chosen afterwards. For mean sizes the following may be advantageously chosen; length, 10 inches; depth at centre, ⅓ inch, gradually tapering to about 1-12 inch at the ends, and thickness about 1-6 of an inch. For forming the above, the piece of pine may be about 11 inches long, having a line crossing the centre dividing the length into two equal parts, whilst the depth or breadth may be about 1¼ inches; then, by placing the piece upon a line traced upon the proper part of the interior surface, where the bar is to be glued, a line may be scribed with a compass upon the bar, and the spare wood cut away with the knife, etc., until the bar accurately fits to the intended part of the surface.

A common but very erroneous idea prevails amongst many Violin-makers regarding what ought to be the proper depth of the bar at the centre. The method alluded to is this: a straight-edge is passed across the two inner edges of the breast, where the centre of the bass-bar ought to be, the depth is then measured from the bottom of the hollow or curve to the under surface of the straight-edge, which determines the required depth of the bar; in other words, the top surface of the centre of the bass-bar runs level with the two edges of the breast. It is necessary that the wood from which the bass-bar is formed possesses resonant qualities in an equal degree to that of the breast, and ought to be tested previous to commencing. The proper place for the bass-bar is about 1-16 inch inwards from the inner edge of the lower circle of the bass *f* hole. In the Guarnerius copies by Vuillaume, the length of the bass-bar is such as to extend to 1⅝ inches from either end of the breast, as measured on an imaginary line passing through the middle of the bar. When the bar has been accurately fitted, it may now be glued in its proper position upon the interior surface.

The next object claiming attention is the bending of the sides to the proper curvatures, and the insertion of the blocks and side-linings. Numerous methods are used for this purpose

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by the Violin-makers, some bending them over a hot iron, whilst others bend them by having previously soaked them in boiling water. The generality of makers use a mould for this purpose, whereby much trouble is saved, although a few adhere to the plan of bending to curvature on a hot iron, and glueing on to the Violin back separately, after which they fit in the blocks. There are various patterns of moulds used by the makers, some preferring a half-mould, whilst others adopt a whole one. A form of whole-mould is represented in Fig. 14. This mould may be formed from a piece of clean plane or beech, about 17 or 18 inches long, and 1½ inches thick. The

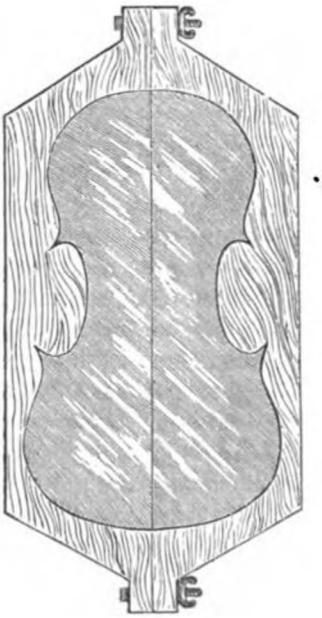


Fig. 14.



Fig. 15.

inner part is neatly cut out from pattern, whilst two iron screws pass through the extremities, one at each end, and bind the inner plates together. The sides or ribs, after being dipped in

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boiling water, and slightly bent to shape upon a hot iron, are placed in the mould, after which the two inner halves are inserted, and the whole clamped together by the two iron screws. The blocks are added after the sides are thoroughly dry and retain their permanent shape.

Fig. 15 represents another and better description of mould. This form of mould is made from one half of the model of the intended Violin, as will be observed in the illustration. About a quarter of an inch from the edge of the outline, are placed a few bent pieces of strong wire, by which the linings are kept in position upon the sides, whilst at the distance of about an inch from the edge are fixed several iron cramps, one end being turned, as in Fig. 16, which passes into a hole pierced in the mould, whilst the other has a screw attached, which cramps the corner-blocks and sides, by which a neat and close joint is obtained. This mould may be made from a piece of clean beech, about 16 inches long and 1½ inches thick. The outline of the Violin from a half model must be carefully drawn on beech, whilst a line must be traced neatly within the outline at the place where the outer surface of the sides would be, and the whole inner portion carefully sawn out to this inner line. The sides of the curved inner part must be cut truly perpendicular, and all the saw-marks removed with a file.



Fig. 16.

The sides are bent nearly to the shape upon a hot iron, after which they are placed into the mould and cramped into position by the iron screws and wires, until they fit closely to the mould, and are left to set for several hours, after which the corner-blocks and side-linings are fitted and glued in, and cramped as before. The thin veneers for the sides, as well as the small pieces for the indenting, can be obtained at the musical-instrument dealers' for a trifling sum. The sides must be carefully dressed with a small hand-plane. One end may be glued or tacked to a flat and level piece of board, whilst the other lies free, as from the thinness of the side it would warp and break if placed against a rest. If the amateur wishes to cut the sides from wood he may have, he can dress one side of his plank,

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and then saw out the veneer such a size as may enable him to have all his sides from the one piece; then, after dressing the other surface, he may cut them into pieces about 15 or 16 inches long, by 1½ broad. The grain of the wood must run parallel with the length, and the veneers may be cut out to sizes with a knife. It will be observed that the depth of the sides of the generality of good instruments varies, the narrowest part being at the neck or hand, gradually increasing towards the button of the tail-piece, where the depth is the widest. In the Violins of Nicolas Amati, the average depth of the sides at the neck will be found to be 1 3-20 inches, increased to 1¼ inches at the button-end.

The side-pieces being now properly dressed, are to be carefully bent to nearly the required shape upon a hot iron. Two iron or brass tubes of different sizes will be found advantageous for the variety of curvature of the sides, the smallest one answering to the acute curves of the corners. The tubes are to be heated either in a clear fire, or by the introduction of a heated iron rod, but the heat must not be so great as would char the wood. They are to be bent gradually, moistening the upper surface slightly with water, which will tend to prevent them from breaking. After they are bent to shape, introduce them into the mould, and cramp them in with the wire and screw-cramps, until they are close to the edges of the mould all round.

The next operation will be that of making the side-linings, which are formed of pieces of pine or sallow, about 3-16 of an inch broad and fully 1-16 of an inch thick at one edge, the other being only about 1-12 of an inch thick, one side being thus level, whilst the other, or outer side is sloped. They are glued to the inside of the upper and lower edges of the sides, and may be bent into shape upon the hot tubes, or by dipping them into boiling water.

The corner and end-blocks are also made of pine or sallow, and must be neatly fitted to their respective places. The corner-blocks are from ⅞ to 1 inch in length across the upper surface, the end-block at the button, about ¾ inch at the

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thickest part, and of a semi-elliptical outline, whilst the neck-block is made similar to the former, but of a somewhat larger size. All the above pieces require to be neatly fitted to the sides, being quite close all round, whilst the under and upper surfaces of the blocks must fit evenly against the back and breast. The side-linings and corner-blocks being prepared, they are glued to the sides and corners, and cramped all round into position, the former being placed with the level surface upon the sides, with the thick edge outermost, after which they are left in the mould for several hours to dry. If the whole model is adopted, the side-linings can be kept in position by the American clips, such as photographers use, and which are sold at 1s. per dozen; a representation of which is shown in Fig. 17.

The end-blocks are not attached until the other half of the sides, corner-blocks, and linings are finished, which is merely a repetition in manipulation of the preceding description. The blocks are made slightly deeper at first than required, that they may be truly fitted to the back and breast afterwards, and the length of that part of the sides and linings which would run upon the centre-line is kept full, that a neat joint may be obtained when the end-blocks are attached. The first half, being dry in the mould, may now be finished, by removing all traces of superfluous glue from the joinings, and cleaning the whole with fine glass-paper, but the glass-paper must be very fine, so as not to leave the slighest roughness of surface.


Fig. 17

The two end-blocks having been made, two lines may be traced down the outside centre of each, after which the blocks are to be fitted to their places upon the ends of the back, with the bisecting lines running exactly upon the centre-line of the back of the Violin. They are to be firmly glued on the end surfaces, and cramped down until the joints are thoroughly dry. The two halves of the instrument, comprising sides, corner-blocks, and linings, having been prepared as described, are to be accurately

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fitted upon the back. For this purpose one half may be adjusted first, and cramped down upon the back with the wooden cramps, as shewn in Fig. 18, the ends being cut the exact length, which will be square from the centre-line of the back, after which the whole may be glued, by unscrewing a few of the cramps, by which means the glue can be traced in the joint little by little, then rescrewing the cramps as before, until the whole of the joining of the sides, with the back, and half of the end-blocks is completed. When this portion is thoroughly set, and dry, the other half may be attached in a similar manner, but instead of glueing on the whole of the sides, a portion of each end may be left unglued for the present, and allowed to project over the two glued ends of the other half, as by this means the joinings can be easily and accurately fitted afterwards. When the whole is dry, the two ends of the sides may be cut to the proper length, and glued to the end-blocks and back. The side-linings should also fit closely to the surfaces of sides, blocks, and back, and no openings or crevices be found, as all should be neatly joined, that the whole may act as a single piece afterwards. The French method of uniting the sides, is by having blocks and corner-pieces attached round a mould, glueing on the back, and then cutting the blocks free from the mould.



Fig. 18.

The neck or hand of the instrument next claims attention. If the amateur wishes to form the hand and scroll from any favorite Violin, he must make himself a pattern from such. This he can readily accomplish by tracing such model upon a thin veneer of hardwood, or thin plate of sheet zinc, carefully observing the copying of the curves of the scroll, as well as the angle which the neck makes with the body of the Violin. Having selected a piece of maple with the fibres running properly, as mentioned in the early part of this Chapter, he must square it up, and upon the grained surface trace the design, leaving the wood longer than actually required here-

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after, in order to accomplish the joining of the extremity of the neck to the body of the instrument. He must carefully trace the scroll with draw-point and compass, having the centres exactly opposite. The peg-box must be neatly mortised out with a small chisel, the spirals of the scroll cut gradually into shape with small gouges, the marks obliterated with a round file, and the whole finished with glass-paper. The proper places for the peg-holes are to be marked out and pierced wih a bradawl, or small bit, then a tapered bit of the form of Fig. 19, may be used to cut them to the conical form.

The young amateur will no doubt find some difficulty in his first attempt at this operation—the making of the hand—but the manipulation will prove easier to him after a few trials. Finished hands are now sold by the musical-instrument dealers, at prices ranging from 6d. to 2s., according to quality and finish—thus, if the amateur gets baffled in his first attempt, his wants will be met at a small outlay. The neck must be adjusted very accurately to the body of the instrument, not only as regards angular position, but also that it may be in a line with the centre of the Violin. The proper angle for the neck is such, that the centre of the scroll lies in a line with the edge of the back of the instrument, as seen from the opposite extremity; but the young amateur must observe, in the adjustment of the neck, that the finger-board be afterwards at the proper height from the breast. The degree of elevation of the finger-board depends upon the model of the Violin chosen; but as a mean, the height from the extreme end of the finger-board to the surface of the breast in the centre, may be taken as 7-10 inch; but no definite elevation can, as a rule, be laid down. The amateur must decide upon this from the intended height of his bridge. The belly may be cramped down on the sides with a few of the wooden screw-cramps, and the hand lightly fixed to the instrument with a cramp, such as that shown in Fig. 16, but larger in size, when



Fig. 19.

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the following simple method will suffice for the adjustment of the neck. Take a piece of thin wood about 17 inches long and ¼ inch broad, having one edge perfectly straight, lightly tack this veneer to the upper surface of the neck, in such a manner as to have the straight edge running in a line exactly through the centre of its length, by this it will be readily perceived that the neck will be in its proper position, when the joint is such, that the edge of the veneer is exactly in a line with the centre-line of the belly, and its lower surface will coincide with that of the finger-board, from which the proper height may be easily arrived at.

The neck being properly adjusted, and a joint obtained to meet the required demands, it must be firmly glued into its proper position, and cramped for several hours, until the joining gets thoroughly dry. It is to be understood that the preceding description is applicable to a plain joint, where the neck is merely glued to the outside of the body of the Violin, but in numerous cases a part of the neck is let into the body, having a saw-kerf near to the extremity, through which part of the sides are inserted; but by the first method, if the joint is well fitted and glued, it will be found quite efficient to withstand all tension and pressure to which the instrument is necessarily subjected. If this plan is had recourse to, the joining will be much simplified by observing to place the end-block and sides quite square upon the back; then, when the proper angle for the fitting of the neck is once obtained, cut the model to the same angle, which will greatly facilitate the amateur in the joining of this part to the instrument in subsequent operations, if the same model is chosen.

The dovetailing the end of the neck into the Violin requires great care bestowed upon the fitting. In order to do so, draw a line across the place where the nut is supposed to be, and from this line, at a distance of 5⅛ inches, draw another line across the neck. Let this line be square with the centre-line which has been previously drawn up the middle of the neck. The neck must be made the same breadth as the finger-board, and bevelled off at both sides, until it is about ⅝ inch

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broad at the bottom part, where it is joined to the back. Now, from the two sides and the cross-line at 5⅛ inches from the nut, let there be lines drawn at an angle of 80½° with the upper surface, and at the same angle draw another line on each side about ⅜ inch nearer the end, then let the wood be pared off to those latter lines, when the dovetail will come back to the first drawn lines, and is precisely in the middle of the end. This dovetail will be about ⅜ inch thick at the top, tapering down to about ½ inch. Dovetail it also across the bottom. It will be found that the dovetail up the sides stops about ⅜ inch from the top surface, this allows for the thickness of the belly, and the proper clearance, and height of the finger-board. Let a corresponding dovetail be now cut in the end, or neck-block. Draw the exact size of it upon the sides, and the distance inwards upon the block. In cutting down the sides, leave ¼ inch at the bottom, bevel the dovetail downwards, until the bottom is through the block to the back. Let it be carefully observed, as formerly, that the neck is in proper line with the centre of the back. If the neck is awry, pare a little off the long side of the dovetail, until all is straight, and find if the set of the neck is at a proper angle. Place the finger-board and belly on, and let the distances from the top surfaces of each be rather over ¼ inch. In obtaining this height, you may require to re-set the neck, by paring off a small portion, if it is too high, in order to set it back a little. When the neck is properly fitted, heat it, and run the glue upon the dovetail in the block, as well as upon the neck, and cramp down.

After the hand has been properly attached, the belly may be glued upon the instrument. Previous to this, the edges of the sides and blocks, as well as the interior of the instrument, must be quite clean and finished, and every trace of superfluous glue removed. The belly may now be cramped down upon the sides, and care be taken that a uniform distance is maintained between the sides, and the outer edge, all around the instrument. If the sides have been attached to the back, slanting, or off the perpendicular, those unseemly faults will now appear very glaringly, as the distance between the edge of the belly

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and the sides, will vary with almost every curve. The belly being cramped down with a sufficient number of the wooden screws, one side may be loosened, and a covering of hot thin glue traced all round the inner surfaces to be attached; this is now to be firmly cramped, until every part of the joint is close; the screws from the other half are then to be removed, after which it is to be attached in a similar manner. The last work having well dried, the next step is the indenting, or purfling of the instrument--although some makers do this part of work immediately after they have formed the back and breast, but this is a matter of no great importance, unless bad work has been displayed in attaching the sides.

The edges are to be rounded and finished previous to running the indenting along the surfaces. For the purfling many forms of tools are used, but the one represented in Fig. 20, although *original*, will be found to answer the purpose thoroughly. By this instrument, it will be perceived we can vary the distances from the edges, to imitate any model chosen. The two cutters are thin pieces of steel, sharpened at an angle, with a shoulder left of the necessary thickness, so that the groove cut may fit the indenting strips. The cutters are kept in position by the screw *a*. Fig. 21; *a* represents one of the cutters, seen edgeways; Fig. 21, *b* shows the form of blade and point. Fig. 20, *b* is a small screw for adjusting the shoulder-piece to any required distance the purfling may be intended to be placed. This tool may be made from iron—with the exception of the cutters, of course--and fixed in an ordinary tool-handle.

Another purfling tool, but much simplified, is shown in Fig. 22. The body of this tool may be formed from a piece of beech, having two cutters the same as the preceding, fixed by a binding-screw. This simple tool answers admirably, and may be easily made by any amateur, or can be purchased for about 2s. 6d. The angular parts of the blades must be made thin, and the edges kept very keen. Either of those two tools is to be held quite steady, and a double cut of the proper depth run round the margin of the back and breast, the interior wood is

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afterwards to be cleanly cut out with a chisel-sharpened awl, as in Fig. 23. The indenting groove must be cut gradually and carefully, never allowing the tool to tear the wood, or slip from the proper place. At the parts of the back and breast opposite



Fig. 20.

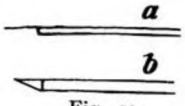


Fig. 21.


Fig. 23.


Fig. 24.


Fig. 22.

to the extremities of the neck, where the indenting tool does not reach, two pencil lines may be drawn through the spaces, and the groove cut to such lines with a thin pointed penknife, and the wood cut out as previously. The small strips of indenting are to be had at the shop of the musical-instrument dealer, and may be obtained at a trifling cost. They are to be fitted and glued into the grooves with thin glue, and, when dry, cut down to the surface of the Violin--the scooped out part is now finished, and the edges reduced to their proper thickness.

At this stage of the work the Violin is usually cleaned and varnished, but, for the present, we shall complete the mechanical part of the work, viz.. the finger-board, nut, etc. The finger-board is formed of ebony, and a model of such—as shown in Fig. 24--should be made from that of some well-

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made instrument. A piece of ebony being obtained of the proper dimensions, the outside parts are to be dressed with the plane, the hollow surfaces scooped out with gouges, and the whole finished with glass-paper, and glued upon the neck of the instrument. The following dimensions of the finger-board may serve as a mean:—Length, 10 inches; breadth at lower end, 17-20 inch; and at the upper end 1¼ inches. The nut, or small piece of ebony which projects at the end of the finger-board, is now to be formed and glued into its place, the whole is then finished with file, and cleaned with glass-paper. A small hole is then to be cut through the tail-block for the admission of the button-peg, upon which the tail-piece is fastened, whilst a small strip of ebony is glued into that part of the breast, over which the cords of the tail-piece pass. The tail-peg may be fitted in without glueing in the meantime, in order that the sound-post may be properly adjusted afterwards. The holes for the pegs are now to be formed of the proper size, with the bit shown in Fig. 19, and the pegs roughly fitted with file and glass-paper to their respective places. Mr. Needham of Crewe, (Eng.) has invented a beautiful little instrument, a "Stringed Instrument Peg Fitter," which will not only round the peg to the necessary size and taper, but bore the peg-hole and cut the peg end off, if necessary. The small holes for containing the ends of the strings may be pierced with a small drill.

When the foregoing operations have been finished, the surface of the whole instrument is to be thoroughly cleaned with glass-paper, and prepared to receive the varnish. A wetted sponge is now to be passed lightly over the whole surface, and, when dry, the roughness is to be cleaned off with glass-paper, and the preceding operations to be repeated until the surface is perfectly smooth and brilliant, when wet. The instrument being dry, is now ready for varnishing, details of which may be found in Chapter X. Many makers, previous to this operation, coat the surface with a wash of thin size, which, when dry, is rubbed off with glass-paper, and is then ready to receive a coating of varnish. When the varnishing is completed and the instrument dry, the peg-holes may be cleaned with a rat-tail file and glass-paper, and the pegs are afterwards accurately fitted

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to their proper places. The tail-piece may now be put on, along with the strings, and the bridge being cut to the proper size and form, must be fitted very truly to the surface of the belly of the instrument.

Many of the bridges, even inclusive of the Aubert, are too thick, and must be thinned to the proper size, which of course depends upon the character of the Violin. Glue a piece of No. 1 sand or glass-paper upon the surface of a piece of board, and rub the bridge down upon it to the necessary thickness. Now place it upon its proper position on the belly, the strings being removed out of the way, then scribe the feet with a pencil, after which cut away the wood to the scribe mark. Now take a piece of sand-paper and hold it firmly down on the belly between the *f* holes, hold the bridge in an upright position, in its proper place, now rub it about half an inch back and forth, and you will find you can make it fit exactly in a very short time, then round it on the top, and make the notches just deep enough only to keep the strings from slipping off under bowing. The arching of the bridge ought to correspond to that of the surface of the finger-board, if properly made. The sound-post is now made, and is formed from a piece of straight and well-grained pine, having the fibres running longitudinally.



Fig. 25.

It may be rounded with file and glass-paper, and must be neatly fitted at the extremities, so as to rest closely upon the inner surfaces of the two tables of the Violin. To place it in the instrument, a small draw-point may be used, or the sound-post-setter, which is a long metallic plate of a rather peculiar form, shown in Fig. 25.

The proper place for the sound-post varies according to the qualities of the instruments; but in good Violins it may be placed, as a mean, in such a position as to be about a quarter of an inch behind the right foot of the bridge, but when once the proper place is obtained--by repeated trials--it should be marked, so that, in cases of accidents, it may be replaced in its proper position; but the amateur will find the necessary information regarding this, as well as the bridge, in the other parts of this manual more directly appertaining to the subject.

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CHAPTER VI.

MATHEMATICAL METHOD OF MODELLING AND CONSTRUCTING THE VIOLIN.

BY DRAWING and constructing the instrument according to the following modified method of Bagatella, the Amateur will have but little difficulty in producing a Violin, but this Violin will prove to be of mediocre quality only. The "*Geometrical System of Antonius Bagatella*" was published in 1782, in Padua. At first it took with immense *furor*, many Violin-makers having discarded their former methods and taken to the new idea, but in a very short time they forsook it also, and returned to the established old plan; for Bagatella's theoretical calculations turned out completely illusory. That great virtuoso, Ole Bull, constructed a few Violins upon this plan, but all the technical attempts of the great Violin virtuoso failed, the so constructed Violins had neither the expected magnificent tone nor sound, but upon the contrary they proved inferior to some of the common Violins of Saxony. At a later period Ole Bull tried the system of Savart, but his results were alike unsatisfactory, although he actually opened and took to pieces his beautiful Guarnerius, in order to try to discover the secret of the old Italian instruments. Finally disgusted with his many costly attempts and waste of time, he consigned the whole lot to the flames, save one instrument which his wife preserved during her lifetime as a precious relic, but which was bought by an American Collector after her death.

In the following method *exact* work must be displayed in the divisions of the length, as well as in the graduation to scale

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subsequently set forth. Draw a perpendicular line 14 inches long, and divide this carefully into 72 equal parts, as in Fig. 26. Through the following numbers of the graduated perpendicular, draw 20 horizontal lines, as in illustration :

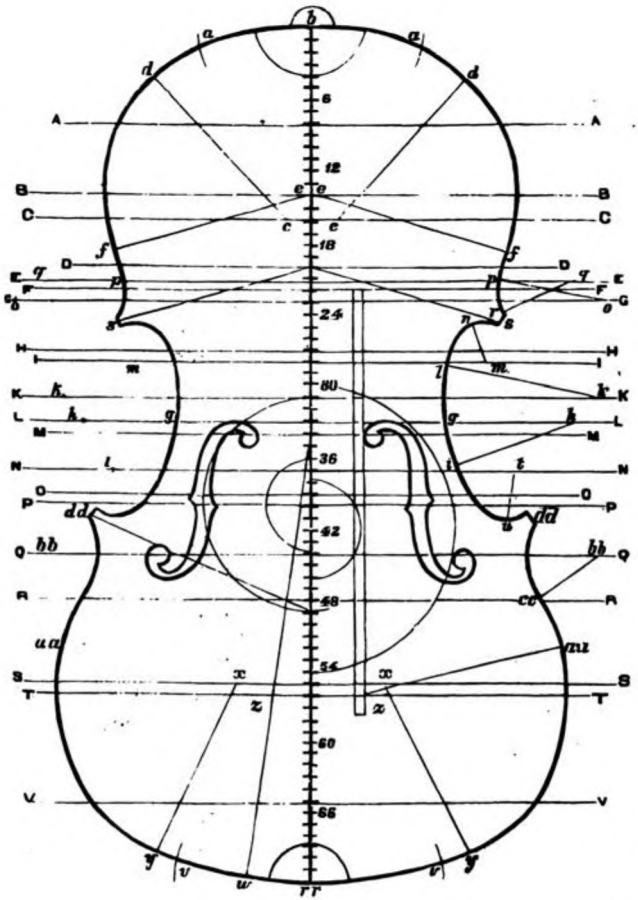


Fig. 26.

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1st	Line through the point	8,	and marked AA.
2nd	.....	14,	..... BB.
3rd	.....	16,	..... CC.
4th	.....	20,	..... DD.
5th	.....	21¼,	..... EE.
6th	.....	22,	..... FF.
7th	.....	23,	..... GG.
8th	.....	27,	..... HH.
9th	.....	28,	..... II.
10th	.....	31,	..... KK.
11th	.....	33,	..... LL.
12th	.....	34,	..... MM.
13th	.....	37,	..... NN.
14th	.....	39,	..... OO.
15th	.....	40,	..... PP.
16th	.....	44¼,	..... QQ.
17th	.....	48,	..... RR.
18th	.....	55,	..... SS.
19th	.....	56,	..... TT.
20th	.....	65,	..... VV.

Now open the compass to 9 parts, place one leg on *b*, and trace the two arcs *a a*, then open the compass to 24, and placing one leg on 24, from *b* draw the curve *a b a*, open the compass 2 parts, and set off this upon both sides of the perpendicular, upon the line C, as marked *c c*, and from those points as centres, with radii *c d*, describe the two arcs from *a* to the first parallel A. Now set off 1 part as formerly on the line B marked *e e*, and from those points as centres prolong the curves through *f* from the line A to D. Set off 11⅓ parts upon line L to *g*, and 11 from *g* to *h*, from *h* as a centre, draw the curve *i* from L to P. On K set off 23¾ parts *k*, from this point with a radius from the part of the curve crossing M, draw the curve *l* from M to H. Open the compass 11 parts and from *r r* as a centre trace the two arcs *v v*, and from 35 as a centre, with radius *r r*, trace the curve *v*, *w*, *r r*, *v*. Again, upon the line S mark off 6 parts *x x*, and from those as centres, with *v v* as radii, prolong the curves from *v* through *y* to the line V. On T mark off 4 parts *z z*, with those as centres, and radii to where the curves touch V, prolong the curves through *a a* from V to

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R. On G mark off 24½ parts on either side of the perpendicular *o o*, with those as centres, and radii to the parts of D where the curves *f* touch, prolong the curves *f* through *p* to F, and on I mark off 14⅔ parts as *m m*, with those as centres, extend the curves from *l* through *n*, from H to *s*. Set off 22 parts *g g* on E, and with those as centres, with radii to where the curve *p* touches E, trace the curve through *r r* to *s s*. Now place the compass upon 20, open it 16⅓ parts, and trace the corners *s s*. Again, upon Q mark off 24 parts *b b*, with those as centres, prolong the curves from R through *c c* to *d d*, and upon N mark off 16½ parts *t t*, with those as centres, and radii to the parts where P joins *i*, trace the curve *u* to *d d*. Finally open the compass 19¾ parts from the point 49, and trace the corners *d d*. The angles of the curves between L L and M M must be formed into a proper shape by a file.



Fig. 27.

THE PROPER ELEVATION FOR THE ARCHINGS OF BACK AND BELLY.--For the longitudinal model of the arching, dress a piece of wood to the following dimensions:—15 inches long, 2 inches broad, and about ⅛ inch thick; divide it in the middle as at Fig. 27. Open the compass to three times the length of the perpendicular *b*, *r r*, Fig. 26, or 216 parts, and with this as a radius. from a perpendicular drawn through *a*, trace the curve *b*, *a*, *c*, Fig. 27

THICKNESS OF THE BACK.--From 42 as a centre, set off 4⅓ parts as a radius, and trace a circle; all the wood within this circle must be reduced very carefully to one part in thickness; then from the same centre 42, trace another circle with a radius of 12 parts, the thickness of the wood from the inner circle to the edge of this second circle must diminish very gradually to two-thirds of a part, and from the latter circle to the parts whereon the sides are attached, the thickness must gradually decrease to one-half of a part.

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THICKNESS OF THE BELLY.—With 40 as a centre open the compass 4 parts, and trace a circle, within which the wood must be reduced to two-thirds of a part in thickness. Now open the compass 9 parts (8½ according to Wettengel), and from 40 trace another circle; the wood from the inner circle to the edge of this second circle is to be reduced to half of a part in thickness, and from this latter circle to the parts which meet the sides, the thickness must gradually diminish to one-third of a part. In Fig. 26, the two half circles on the right of the instrument are those of the back, the semi-circles on the left represent the graduations of the belly of the Violin.

THE SIDES.—The sides are to be 6¼ parts wide at the button, decreasing gradually to 6 parts at the neck.

SIDE-LININGS.—The side-linings must be 1½ parts broad, and half of a part thick.

END-BLOCKS.—The upper block should be 10 parts broad and 4 parts thick, the lower of the same thickness, but only 8 parts broad.

NECK.—The length of the neck from the sides to the nut should be 27 parts.

THE *f* HOLES.—The length of the *f* holes is 15 parts, extending from the point 32½ to 47½. The diameter of their upper circular holes should be 1⅓ parts, that of the under circles 1¾ parts. The distance between the edges of the upper holes should be 9 parts, that of the interior notches 15 parts, and the space between the edges of the lower circles 24 parts.

THE BASS-BAR.—The bass-bar is 36 parts long, 1 in breadth, and 2 parts thick in the centre, and this thickness must gradually diminish to two-thirds of a part at the ends. The bar should run parallel with the joint, having its centre opposite the point 40. Its proper place is exactly on the margin of the interior circle.

THE SOUND-POST.—The sound-post must be 1 part in diameter, its place should be two parts behind the right foot of the bridge.

THE BRIDGE.—The bridge should be 8 parts wide and 6½ parts in height. The present description answers equally to

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the Violoncello and Double-Bass, if we assume the sides of those to be 12 parts broad at the button, diminishing to 11¼ at the neck, and the bridge to be 12 parts in height.

As I have already intimated at the commencement of this Chapter, those mathematical instruments will, in ninety-nine times out of every hundred, prove totally worthless. Even as yet it must be admitted that we are very much in ignorance of the science of Acoustics. When the Opera of the Rue Lepelletier was burned, one of the greatest artists and architects of Paris was heard to say:—"Bravo! we will now have a Hall which will be constructed according to the strictest laws of Acoustics." It was Garnier who used every care in mathematical combinations, for the purpose of obtaining perfect resonance. The *result*, then, is Le Grand Opera, which is one of the most abominable Halls that any one could find for musical purposes! The Opera of La Rue Lepelletier, which was constructed without any regard to Acoustics, was simply marvellous, and some of our best Halls are exactly those ugly places which have been erected long ago, at a time when the modern science of Acoustics was unheard of. Ostend possesses a Khursaal which cost 3,000,000 dollars, nothing was neglected which could make it a mathematically and acoustically perfect Concert Hall, nevertheless the result is about the most miserable failure in existence. I have been informed by an excellent Violin-maker of Brussels, M. Mougenot, that neither Vuillaume, Gand, Lupot, nor Chanot *frere*, were ever successful according to this method, which, when published in the "*Encyclopedie Roret*," about sixty years ago, created such immense excitement. Mougenot is Luthier to the Conservatory of Brussels, as also to Vieuxtemps, Leonard, Ysaye, Servais, etc.



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CHAPTER VII.

DESCRIPTION OF SAVART'S BOX FIDDLE.

IN DESCRIBING this instrument, it may be as well to follow some of the illustrious Savart's experiments, by which he was led to adopt the following form and construction of the instrument:—It must not be supposed that M. Savart, subsequently to the formation of this style of instrument, considered it as of a superior quality from its form and change of construction to those of the old makers; on the contrary, a few years after this, the renowned skill and pre-eminent adjustments displayed in the instruments of Stradivarius, etc., by their harmonious relationship of parts, unfolded themselves gradually to his master mind, and thus unhesitatingly compelled him to acknowledge that their proportions, etc., were the true standard for a perfect instrument, as they will ever continue to be.

When fine dry sand is sprinkled upon a vibrating surface, it is thrown into various symmetrical forms, being collected always in the largest quantities upon the parts of the surface where there is the least vibration, and being thrown off those portions where the vibration is the strongest. Thus, if we sprinkle upon the surface of a Violin some fine dry sand, we will find that, by playing on the instrument, some of it will remain undisturbed, and this will always happen to be upon the places where there is little or no vibration, and consequently those are the parts least capable of producing sound. We may readily discover the vibrating and non-vibrating parts by the following simple method:—Place upon the surface of the Violin any small concave substance, a percussion-cap or button will be found to answer, sound one of the strings, when the cap

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or button will be seen to be violently agitated, and thrown up from the surface; and if, whilst making the experiment, we hold the instrument level with the face between us and the light, we can estimate the distance thrown, and thus we can vary the position on the surface, until the cap or button, being placed upon certain parts, will remain stationary, which of course are the portions of non-vibration.

Thus reason and experience would lead us to suppose that the curvature of the surface tends to be a detriment rather than an advantage, but we must not forget that the curved interior surface is very powerful in producing reflections of the sound. Savart, therefore, in the construction of his new Violin, used flat wooden plates instead of the common curved ones; and, in order to maintain an equal vibrating surface on either side of the strings, he formed each breast and back of two pieces cut parallel with the grain from the same board, their edges being united by glueing.

To withstand the increased pressure on the breast at the part where the bridge is placed, he strengthened this part by making it about 1-5 of an inch thick, whilst the thickness of the outer edges was only about 1-12 of an inch. The bridge was the next part of the instrument to which he directed his attention.

What purpose the bridge serves besides being a support for the strings, is shown by the following experiment:—Stretch a Violin string along a plank 2 or 3 inches thick, fasten the two extremities, and insert a bridge below the string as in the Violin. Get a circular disc or plate of lead, and place it between the bridge and the surface of the plank, and upon this leaden plate strew some fine dry sand, when, if a bow is applied to the string, we will find the sand has formed itself into a symmetrical figure upon the leaden plate.

We learn from this that the vibratory motion given to the string by the bow is communicated to the bridge, and from the bridge to the leaden plate on which it rests, and by analogy we now know that it is by means of the bridge that the body of the Violin is put into vibration when its strings are played upon, and are thus vibrating.

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Now we also know that the back or under surface of the Violin vibrates along with the breast, and that this vibration is communicated from the breast, by the sides, and partly by the sound-post. All Violinists are well aware that this small wooden peg or post, which is placed within the body of the Violin, and which partly helps to meet the increased pressure on the breast where the right side of the bridge rests, arising from the smaller strings, has a material influence on the tone of the instrument. If we take a rod of pinewood and place one end upon the lid of a vessel in which water is boiling, whilst we apply the other end closely to the ear, or insert it between the teeth, we hear the boiling with great distinctness, owing to the sound being conveyed more rapidly through the pine than the atmosphere, and it is precisely similar with the Violin, the sound-post, and, in a greater degree, the sides, conveying to the back with immense rapidity the vibrations which have been excited in the breast from the strings.

It is essential that we choose the best place for the sound-post, for we have seen that certain portions vibrate stronger than others, whilst others appear almost to remain stationary; thus we are led to suppose the proper place for the sound-post would be the former, viz., where the vibrations are the most intense, coming directly from the bridge, but another important use of the sound-post is in rendering the vibrations of the upper and under plates normal.

A Violin always yields some tones more brilliantly than others. Savart imagined that this might be owing to the curved form of the surface, some of it being non-vibrating, or that the sound-post happened to be placed at a nodal or quiescent point during some tones; but as the *f* holes in Savart's Violin, as we shall presently see, were cut straight and rendered easy of vibration, he placed the sound-post near to one of them, that it might thus be the means (as was supposed) of conveying powerful vibrations from the breast to the back of the instrument.

By pasting a slip of thin paper over one of the *f* holes, the sound is much enfeebled, we may therefore conclude that part

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of their purpose is to establish a communication between the external air, and the internal air vibrating in the body of the instrument. Savart, at the time of these experiments, saw no reason for the *f* holes being fantastically curved, as a greater number of fibres were cut than if the holes were straight, so he adopted this latter method in his Violin. Subsequently to this, however, he clearly perceived why the *f* holes were curved in the instruments of the old masters, for the more we may deviate from that form the worse the instrument becomes.

The bass-bar claimed his attention also, for by its being placed under the internal surface of one side of the breast, it thus apparently maintained an unequal elasticity on both sides, so, to equalise this, he placed his bar exactly in the centre, running down the thickest part of the breast.

He now directed his attention to the shape of the instrument, which, from being formed in a complicated manner, by having its sides curved into so many arcs, etc., and by having the two deep hollows cut, serving to let the bow pass freely upon the first and fourth strings of the instrument, appeared to him at this time as faults in its construction, as the wood, by being thus bent, acquired an unequal elasticity.

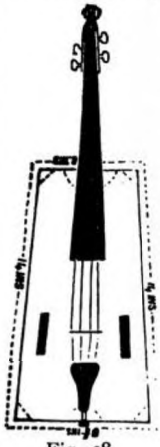


Fig. 28.

In his Violin he did away with this curvature, and made the sides, as well as the outline, straight, the length being about the same as that of the common Violin, and the width being narrowest at the neck, and broadest at the other end. In this form of instrument the bridge must be higher than in the common Violin, to enable the performer to play separately upon the first and fourth strings, as there are no side-hollows cut in this instrument. The sides were also made deeper than in common Violins, and by this means the mass of air was augmented, whilst a large vibrating surface was obtained, which would thus tend to produce an increase of sonority. The general appearance of the instrument is shown in Fig. 28.

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Savart having presented a memoir regarding his Violin to the Academy of Sciences, at Paris, they instituted a commission to examine and report upon it. This commission consisted of the four following famed men of science: Messrs. Biot, Prony, Hany, and Charles, along with the following four members of the Academy of the Fine Arts, Messrs. Cherubini, Catel, Berton, and Lesveur. The account was drawn up by M. Biot, and the following is a translation from his own words, as given in the "Annales de Chimie et de Physique."

"To assure themselves of this," states M. Biot, "the commission invited M. Lefebure, chief of the orchestra of the Theatre Feydeau, to make a trial of it before them. This able artist, whose performances on the Violin—full of grace and sensibility—have been long known and appreciated by the world, yielded to our desire with much courtesy; he was willing to compare the Violin of Savart with that of his own, and which is so full of expression in his hands. He played the one and the other in succession before us, and the new Violin was found to possess a greater purity of tone, and a more perfect equality in the different tones—the last of which qualities is known to be very rare. The new Violin, heard from a short distance, appeared to have somewhat less brilliancy than the other, but this brilliancy decreased at a greater distance. The better to assure ourselves of the comparison, we requested M. Lefebure to retire to an adjoining room, and play the same passages alternately on the two instruments, without telling us which he was about to play, when they were found so nearly equal that the most practiced persons confounded the one with the other, or, if there was any difference, it was that the new Violin had a little more sweetness of tone."

Thus eminently did Savart's instrument stand such a rigid test as has been related, and such a Violin can be made by anyone possessing the least mechanical turn of mind, although, perhaps, not so very fine in quality. To sum up, then, the particulars of construction in Savart's Violin are,—1st. Instead of the back and breast being curved, they are made of two flat plates, similar in size and direction of grain, 1-5 of an inch

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thick at one edge, and 1-12 of an inch at the other, and the thick edges united. 2nd. Instead of the sides being curved, they are perfectly straight. 3rd. The bridge is made higher than usual, to suit the shape of the instrument. 4th. The bass-bar is placed on the middle of the instrument, instead of being at one side. 5th. The holes in the breast are straight, instead of being curved. 6th. The sound-post is placed very near to one of these holes. 7th. The sides are deeper than in the ordinary Violin, thereby increasing the capacity, etc.

About the same time when Savart's Violin was thus submitted to the Academy of Sciences for trial, we find another somewhat similar instrument receiving high praise from that learned body. This instrument was constructed by M. Chanot, an officer of the navy, and also a musical amateur. The following are the peculiarities of this instrument,— 1st. The Violin is of the form of a guitar, with the sides bent in the same manner, and consequently has neither corners nor inner blocks. 2nd. The edges are finished off square with the sides, having an inlaying of hardwood all round. 3rd. The sound-holes are arc-shaped, parallel to the sides, and as near as possible to the bendings. 4th. The bass-bar is placed upon the joint of the breast, being exactly in the middle. 5th. A screw is placed in the end of the tail-piece, which, pressing on the breast, lifts the tail-piece, and lessens the pressure of the strings on the bridge and breast of the instrument. 6th. Passing through the back of the Violin, underneath the sound-post, is a screw by which the pressure of the sound-post against the breast can be regulated.

Such were the particulars of this instrument, which was subsequently modified by the following,--7th. There was no tail-piece or button, but the strings were fixed to the breast of the Violin, half-way between the edge and the bridge. The belly being veneered, inside and out, with a strip of hardwood, holes were cut in this, through which the strings were fixed, and passed over a little nut (made from the upper veneer) on to the bridge. 8th. The bass-bar was made in the shape of an arch, and was placed under the left foot of the bridge, near the fourth string, and approached the middle at the ends.

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9th. The sound-post was placed in front of the bridge.

The Box-Violin, made thus according to the method of Savart, will be found superior in quality and intensity of tone to many of the common cheap Violins. The chief disadvantages, however, in this style of instrument, are the difficulties presented in bowing it, from its great width at the sound-holes, and in holding it with the chin, as the sides are considerably deeper than in the ordinary Violin.

But we may safely rest assured that amongst the legion of those fantastic Fiddles, we generally gradually recede further and further from that fine perfection, combined with adaptability, which is to be found in the contour and construction of the beautiful instruments of the celebrated old Masters, and which are now so eagerly copied and imitated in almost every country, by our modern makers.

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CHAPTER VIII.

THE APPEARANCE, QUALITIES, ETC., OF THE VIOLINS OF THE MOST CELEBRATED MAKERS, INCLUDING AN EPITOME OF THE LIVES OF THOSE EMINENT ARTISTS.

THE PRESENT work being only designed as an elementary treatise, space cannot be devoted to a lengthened memoir of each of the famed old artists, but a short and rapid glance at the appearance and qualities of their instruments, etc., must for the present suffice. For the information as well as the gratification of numerous Violin-amateurs, in addition to a general description of the instruments of those old artists, I shall endeavour to pourtray the appearance of one or two choice specimens, merely premising that it is a very imperfect method, apart from seeing them, for as all language is unworthy when matched against thoughts which speech fails to interpret, so do I employ forms of expression so rude, that my utter powerlessness will be shewn in every line of delineation I write. This is, however, the only means in my power of conveying an impression—feeble though it may be—of the appearance which such instruments represent. I shall therefore commence with the instruments of that immortal artist,

ANTHONY STRADIVARIUS.

The Violins of Anthony Stradivarius are of the flat model, the elevation of curvature not being over five-eighths of an inch. It is now well known this model is the best adapted for the production of an intense, deep, and full tone--one reason being that instruments of this class have the wood essentially thicker,

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and from this, and the other proportions having been so harmoniously combined in the instruments of this maker, their unapproachable quality evidently was derived. In the flat model, the vibrations are always the most energetic and free; whilst in the highly elevated instrument the tone is feeble, and very often thin and piercing. The first productions of Stradivarius were high modelled—no doubt from his being still adherent to the form of his master, Nicolas Amati; and even those early instruments are known by the name of STRADIVARIUS-AMATIS.

His next instruments were of the flat and enlarged pattern, with the outlines masterpieces of design, the arching falling in gradual and beautiful curves, whilst the wood of which the instruments were formed was of the most choice figure, and of the finest sonorous qualities. The thicknesses have been reduced with mathematical accuracy, the back being very thick in the centre and diminishing gradually to the edges, whilst the tables or breasts are formed upon an entirely different principle from those of Amati or Guarnerius. The *f* holes are exquisitely cut, and lie at a medium distance from one another; the edges and corners are beautifully finished; the inlaying or indenting is neither so narrow nor so near to the edge as in some of the Amati instruments; whilst the varnish is generally of a cherry or blood-red colour, although a few are of an orange or yellow tint. The interior of the instrument possesses the same perfection of workmanship, along with accuracy of proportions, which could only have been obtained after a lifetime of study. From the present high pitch, etc., the tables of some of the instruments have sunk a little under the fourth string, which has necessitated the placing of a rather larger bass-bar in the instrument. The Violoncellos of this eminent maker possess the same admirable perfections of quality and finish as his Violins.

One strange peculiarity in his Violins is that he often placed one of the *f* holes lower down than the other, sometimes to the difference of an eighth of an inch. The lower is always on the left or bass side of the instrument. The drawings of Stradi-

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varius, now in the possession of the Marquis Della Valle, confirm this by means of a series of complicated concentric and other curves. This nobleman also possesses about a dozen Violin and Tenor moulds, as well as a large collection of Stradivarius's patterns and drawings, and many of the tools with which he worked, which plainly reveal the fact that his instruments were not made upon any hap-hazard plan, but upon strictly mathematical principles, and that every portion of the Violin was formed to accurately accord with exact paper patterns.

Fortunately a magnificent specimen of this artist has been kindly placed before me, a delineation of which I shall present as faithfully as possible. The label in the instrument bears the date of 1708, and upon measuring the Violin carefully it is found to be much larger than the medium Amati type, being fourteen inches and one eighth in length. The usual length of a "grand" Stradivarius is only fourteen inches, but in this fine instrument we have one of the artist's illustrious and rare gigantic forms, only a few of which exist. It is six inches and three quarters broad towards its upper extremity, four and a half across the centre, and eight and five-sixteenths at its lower or broad end, with sides, or rims, one and five-sixteenth inches in height or depth. The outline is stiffer than that of Amati, the shoulders as well as the C's are more square, and the broad end more flattened in the outline. The arching springs straight, or nearly so, from the edges; there is no dipping here as in the instruments of Amati; but the arch rises gracefully to the centre and bends off on the other side to a perfect curve, flattening towards both ends, but never losing its proportional line of beauty and perfect harmony. The edges are heavier outside the indenting than those of Amati, and the purfling or indenting is broader, both being quite in uniformity with their size, giving to the instrument an honest appearance of strength and solidity. The corners are neither too long nor too short; and the purfling, instead of running to the centre, bends off to their inner points in a fine graduated hair line. The *f* holes are equally as sharply cut, and quite as graceful, as those of

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Amati, although they are a little longer and more divergent as they descend, still they approach closer together at their roundings. The scroll is large and beautifully rounded, with the edges flattened; the box is wide and strong, allowing plenty of space for the strings to turn clear of each other on the pegs. The back is of one piece of richly-curled maple, the curls or wavings running straight across, and diverging towards the broad end. The rims or sides are wider in the curls or wavings than those of the back, and are placed in a sloping position, which conduces much to the handsome appearance of the instrument. The table or belly-wood is very fine in the grain, with a rich reed like silver-pine, which gradually widens as it approaches the edges. The varnish is of a blood-red tint, with a rich yellow substratum of a supple translucent appearance, which gives to the surface the resemblance of a fine old painting, bright as the diamond and mellow as a summer sunset. The tone at first seems muffled, but having a peculiar bite, which commences in soft and distant echoes, but by a few minutes playing becomes stronger, firmer, and more distinct, and reaches an indescribable richness and grandeur, ringing out with a bell-like sonority from the open G to E in alt. until it satiates the atmosphere with harmony, and becomes as it were a part of ourselves.

> "But, far from fading, it but grows
> Richer, diviner, as it flows;
> Till rapt it dwells on every string,
> Like echoes lost and languishing."

Hark to that sound, so near and yet so far, soft and sweet as the chime of Angelic bells echoing from some high tower in Heaven, as they ring clearly through every nook and corner of the vast Music Hall; listen to the penetrating silveriness of these weird notes, resembling the soft sighing whispers of the Angelic hosts in celestial bliss, such a purity of tone as utterly intoxicates the senses and keeps the mind spell-bound in its fascinating charms. Musical superfluity of Divine light, how glorious and how grand do the nightingale notes from the

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magic wand of the Violin Master—the Fiddle Adept—rush dropping through the air like pearl bubbles about to fade again, larks soaring into the morning air of spring, crystal showers and gleams of sparkling melody resonant with the ring and chorus of bird harmonies, diamond chords and matchless jewels of the purest sound. Music is distinctly the language of the emotions, but stoical, dead souls have no emotions.

Such oddities talk of the Violin as being an "expressionless" instrument, but their minds are too gross, too closely fettered to the bonds of matter, to listen to the *singing of thought* that the Master of the Bow can produce from his "clumsy box"! It must be a very apathetic, stolid, stoical person, who cannot appreciate and *realise* the brightness, the delicacy of the delicious, rippling tones of our finest old instruments, sounds, which by the hands of genius, seem to leap and flutter from the strings like starry coruscations of living fire, which float from the bow with all the beauty and elegance of rainbow bubbles blown forth throughout the atmosphere--brilliant runs and trills that glitter and bubble up and down like sparkling brooks and dashing fountains of harmony, gushing through beds of lovely blue-bells and azure violets, exquisite gushes of sound that sigh their weird tones between the varied harmonies, like the dreamy passion of ardent lovers who have never died, the one upon earth being but an abandoned part or half of the one in Heaven, ready to become inseparably united once again when the proper sign is made, and when the appropriate period arrives.

The Italians say:—"*La Musica e il lamento dell' amore o la preghiera a gli Dei*," in other words, Music is the lament of love, or a prayer to the Gods. Is not the Violin truly a miracle in itself? a simple wooden box having four strings ingeniously knotted across it, in which strange but scientifically contrived bit of handiwork is imprisoned the intangible but nevertheless living spirit of sound. Is it not altogether perfectly astonishing that out of such familiar, yea despicable materials, as a few pieces of old wood, four strings of twisted catgut, and a bunch of threads of horsehair, the Divinest music can be

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drawn forth by the hand of the Master who thoroughly knows how to handle those rough implements? Can we not learn a truly suggestive lesson from this? If man can through his very imperfect skill and limited intelligence thus invoke the soul of music, or spiritual melody out of such rude materials, then can God not contrive some remarkable harmony, some sweet and sacred tunefulness for Himself, even out of our poor, frail, sinful, and common earthly discordances? Truly to the virtuoso and happy possessor, a "Stradivarius" is "a thing of beauty, and joy for ever."

How vastly grand and great is the design which we discover then, in the magnificent instrumentation that coming along with such an oratorio of harmony that has been sounding now through centuries, the real causes of which baffle our clever artists to compute. There is in those classic masterpieces but little necessity for minutiæ of detail; all is colossal, distinct, magnificent, whilst every curve and arch is executed in a style of the most perfect workmanship in those stupendous monuments of harmony. It must be herein observed that those dumb structures are—to the unappreciative—little else than a nonentity, for

> "A Primrose by the river's brim
> A yellow primrose is to him,
> And nothing more;"

—yet nevertheless they are most eloquent, to the true artist—for

> "Nothing is lost on him who sees
> With an eye that feeling gave;
> For him there's a story in every breeze,
> And a picture in every wave"—

as they are full of the deepest revelations to the real connoisseur. More ethereal tones were never latently encompassed in wood; a purer harmonial sonority, waiting only to be brought forth from its unwilling captivity by the hand of a master, never existed than in some of the magnificent specimens of high art which Stradivarius fashioned during the medial

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period of his profession. Those instruments combine all the sottest notes of the human voice, they can sing of love and wail to you of disappointed love, till they fill you with a melancholy from which there is no escaping, from which you never wish to escape; they can produce a luxury of anguish, a fulness of satisfaction of imaginary woe, a realisation of the mysterious delights of romance, which no words can thoroughly supply. The notes sink and sink so low and low with their soft, sad wail of delicious woe, that the listener dreads that something will be lost in the very struggle of listening, and there seems to come some lethargy on his sense of hearing, which he fears will shut out from his brain the last, lowest, sweetest strain, the very pearl of the music, for which he has been watching with all the intensity of prolonged desire. Upon the other hand they can penetrate your soul with a weird joy and happiness, an ecstasy of mirth and fascination, from which there is no release, for they speak to you as no other instrument can speak, and reveal to you with wonderful eloquence the sadness or the mirth which may be alike produced from their melodious recesses.

This talented artist was supposed to have been born at Cremona* in 1644, and is said to have died in 1737. He appears to have commenced Violin-making at the early age of 23 years; his last instruments having been made when he was at the advanced age of 92. During his long and active lifetime he made a vast number of instruments, and his average

* Cremona, of such illustrious note, is a town situated in the province of the same name in Lombardy, in Austrian Italy, about 45 miles SE. from Milan, on the North bank of the river Po. The town contains many fine buildings, such as palaces and churches, and there are also many fine galleries of paintings. Silks, cottons, porcelain, and chemical products, are its chief manufactures. One of the principal objects which meets the traveller's gaze, approaching Cremona, is the famous Torazzo, or belfry tower, which is one of the loftiest in Italy, and is seen from a considerable distance. The poet Virgil is supposed to have been born in this town, and to have received his education at Andes, between Mantua and Cremona. Low marshy lands being contiguous, render the suburbs unhealthy. A canal passes through the town, and joins the Po, which is navigable from here to the sea.

In the *Via Stradivari*, west side of *Piazza Roma*, are situated close to

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charge for each seems to have been about £4. The Violins of this maker which are esteemed the most valuable, have been made from about 1700 to 1730, as after the latter period his instruments begin to deteriorate in quality. His finest instruments may be said to possess the following esteemed qualities: —delicacy, mellowness, free power, penetrating brilliancy, and roundness of tone. It is related by Foster that he sent a number of Violins to a merchant in London, Cervetto (who was a countryman of his own), to be disposed of at a sum equivalent to £4 each; but the latter having failed to realise such an amount, they were returned to the artist.

There is every probability of this being the case, as the Violins of Stradivarius were never used in his own days even by any of the numerous professional players of Europe. Corelli, his contemporary, used an old Cremona, made in 1578. In the next generation the fame of Cremona was eclipsed by that of Stainer; Tartini, Geminiani, etc., used Stainer Violins. In Hawkins' *History of Music* (1776) we find it stated that:— "The Violins of Cremona are only exceeded by those of Stainer, whose instruments are remarkable for a full piercing tone." The first great solo-player who used a Strad. was Pugnani, who was born ten years before Stradivarius died, but it is to Viotti that the full development of his fame is due.

Lupot, in his excellent work upon the Violin, says that:—

"The Violins and Violoncellos of Stradivarius had crossed the frontier since 1796, but we fully believe that had it not been for the arrival of Viotti at Paris, the name of the illustrious chief of the School of Cremona would have remained for a considerable time quite obscure. It was in reality owing to the celebrated Italian virtuoso that the contemporaries became possessed with the knowledge of the new master. Viotti possessed an

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one another the house of Stradivarius, which is No. 2, next to it No. 3, the house of Bergonzi, next but one, No. 5, the house of the Guarneri; continuing a few paces the *Via Guarneri* is reached, containing the shops of Ruggeri, Amati, and Storioni. All these great makers made the square of S. Domenico—now *Piazza Roma*, their centre, and lived but one or two minutes' walk from one another. The house of Stradivarius has been joined to another building, and about five years ago converted into a restaurant, with rooms to let, scarcely a trace of its original condition being left, whilst the other houses have been but little altered.

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admirable Stradivarius, the sonority of which was phenomenal. The prices of these instruments were at that time very modest, one could with three or four hundred francs in his pocket, bring from Italy either a Violoncello or Violin, nevertheless the price had considerably risen since the death of Stradivarius, who sold his instruments for four *louis d'or*.*

"Owing to the kindness of M. Poignie, a celebrated Violoncellist and a pupil of Duport, we are indebted for the following interesting details upon the vicissitudes which a Stradivarius Violoncello had to undergo, before becoming the property of M. Franchomme. This splendid and specially finished instrument had been ordered from Stradivarius by an old Physician of Lyons, upon his return from a voyage to Italy. Stradivarius demanded only his common price, but at the instance of the Doctor, who desired a very special instrument, he agreed to double the sum. The 'Cello was despatched to Lyons, where its proprietor enjoyed its possession for only a very brief period. At the death of the Doctor the 'Cello remained in possession of his heirs for several years, after which it was brought to Paris. The instrument was at different times put up for sale, but unsuccessfully, for the Fiddle-makers of Paris were not then aware of the pearl which was offered to them. Amidst various difficulties the instrument was at last taken to the Hotel Bouillon, the price wanted was no secret, at length the proprietor found Duport, who bought the instrument for 2,400 francs." (about £97.)

Vast and giddy indeed are the rapid changes which years imprint in their onward course, for "time but the impression deeper makes" even on Violin value, as where is the present-day amateur, or connoisseur, who would not gladly bestow a far higher sum upon an instrument by this renowned artist? The highest price which has ever been given in Britain for any Violin by this maker, is, so far as I am aware, 50,000 francs (£2,000) which Mr. Crawford, of Edinburgh, paid a few years ago to the heirs of Alard for the "Salabue" Strad., better known by the name of "*Le Messie.*" An uninjured Strad. will at present fetch in a public Auction-Room from £250 to £800, according to its quality and state of preservation, and in 1888, £1,000 was paid for such an instrument. In 1889 Prof. Waldemaier, of Berlin, purchased a Strad. of 1716 which was specially made for King George I of England, for £1,250. Reichers of Berlin, who had been the former owner, paid £1,000 for it. Ysaye, the Belgian Violinist, paid £1,250 for

* An old French coin equal to 19 shillings.

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his Joseph Guarnerius Violin. According to the *Daily News*, Signor Piatti's Ruggieri Violoncello is valued at no less a sum than £4,000 (?); Gerardy's Guarnerius is said to be worth £800; Ysaye's Guadagnini Violin is set down at £240, while Lady Halle's Stradivarius, once in the possession of Ernst, is valued at £2,000. Remenyi, the famous Violinist, is said to have a Collection of Violins valued at £18,000. He is owner of one of the finest Violas in existence. It is known as the "Cathedral," and was made by Paolo Maggini, in Brescia, in 1617. For sonority of tone it is acknowledged to be without a rival, and it is valued at £1,600. He is the happy possessor of no less than sixty-two Violins by the great masters of the art. The Violin of Henri Marteau—a Maggini—which originally belonged to Charles de Beriot, the famous Parisian Violinist. is estimated as being worth £1,400. Even in the days of Dragonetti, Mr. Salomon, the Jew, offered him *eight hundred guineas* for one of his Double-Basses by G. di Salo, but with refusal, as he would not part with it for a less sum than *one thousand.*

There are a number of instruments by this family scattered throughout Scotland, a few of which are here subjoined. In travelling several years ago through the North Western Highlands, I accidentally came upon a Violin made by Anthony about his best period, which for many years had been suspended like a criminal upon the bare, sooty, and smoky walls of a Highlander's hut amongst the mountains. It was in woful condition, having been literally plastered or bespattered with rosin or tar, to keep its back, breast, and sides from open rebellion, by separation. The old proprietor would not hear of parting with it, it having descended as an heir-loom amongst the family. Upon the continuation of my tour a short time subsequent to this, I met Mr. Carte from London, who had also seen the same shamefully-used instrument, but he, like myself, almost needless to relate, was unfortunately unable to release the tortured gem.

In addition to the beautiful "*Le Messie*" Strad. of Mr. Crawford, Edinburgh, Mr. W. Croall, of the same city, has a

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well-known and delicious instrument of this artist, dated 1716, which formerly belonged to the Count de Cessol, and is therefore known as the "Cessol" or "Artot" Strad. It is in perfect preservation, of superb tone, and covered with Strad.'s fine red varnish. This is one of the six instruments mentioned by Fetis as the finest known. This gentleman also possesses an equally perfect but earlier example of this maker, dated 1702, of beautiful wood, exquisite workmanship, and covered with rich brown amber varnish. Both these instruments were formerly in the possession of Mr. Laurie, Glasgow. Robert Butter Malcolm, Esq., Edinburgh, has a Violin by this maker, dated 1707. It is in excellent preservation, and formerly belonged to the Count Castelbarco, of Milan, and was esteemed in all respects the best Violin in his famous collection. It was also for some time the property of the late Nathaniel F. Vuillaume, of Brussels, and also of Mr. Laurie, of Glasgow.

Other excellent instruments of this maker are in the possession of the following gentlemen:— The Grand Court "Strad.," dated 1701, in the possession of John P. Waters, Esq., Brooklyn, U. S. A.; one dated 1716, owned by H. O. Havemeyer, Esq., New York; one belonging to J. J. Murray, Esq., Galashiels, dated 1688; two to William J. Laidlay, Esq., Seacliffe, North Berwick, one dated 1684, and the other 1712; one to James Cook, Esq., Glasgow, dated 1721; one to David Laurie, Esq., Glasgow, dated 1708; one to —Orchar, Esq., Dundee, 17—.

Mr. Muir, of Leith, possesses a Violin made by this illustrious artist, which was formerly the esteemed instrument of the celebrated Violinist Viotti; it contains the following inscription, "*Antonius Stradiuarius Cremonensis Faciebat*, 1704." A splendid instrument by this maker is also in the possession of Sir James Clarke, of Penicuik. Sir A. M. Mackenzie, of Delvine, Perthshire, possessed an excellent Stradivarius, which was purchased about twenty years ago in Paris for £300. Mr. Robertson, of Ladykirk, also possesses a Stradivarius of the long pattern, a well-known instrument. John Ure, Esq., Helensburgh, has a Violoncello by this artist, dated 1725. I

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have been informed that a very fine Violin by the same maker is in the possession of Mr. J. Robertson, of Glenisla; but having communicated with this gentleman in reference thereto, and receiving no reply, I am thus unable to furnish any definite particulars.

The Amati Family.

The oldest maker of this famed family was Andrew, who was born about the commencement of the sixteenth century, and is supposed to have acquired his knowledge of the art in the ancient workshop of Brescia. His instruments were well-finished, and chiefly modelled of a small pattern, the archings abrupt and elevated, with the backs cut slabwise, whilst their tone was sweet and mellow, with little brilliance or intensity, a distinguishing characteristic of quality in the majority of the Violins of the whole family. This maker wrought at Cremona until about 1580, during which year he probably died, and was succeeded by his sons Jerome and Anthony, who flourished at Cremona from 1550 to 1638, being partners for several years, and conjointly produced many Violins of much excellence. Whilst thus associated, they built upon two different models, a large and small, but those of the large pattern ranked the first in excellence. After working together for a number of years, they appear to have separated, from which arose a change of form and quality in their instruments. The Violins of Jerome were generally of large model, made of excellent wood, the arching sloping very gradually, having high elevation, the backs often in one piece, the varnish mahogany-coloured, and the finish usually admirable. Those of Anthony rivalled the preceding in finish and quality, although the wood is scarcely of such choice beauty.

Having thus glanced at the foregoing makers, and their instruments, we now arrive at the most renowned maker of the family—Nicholas,* the son of Jerome, and nephew of Anthony,

* There was another Nicholas, brother of Andrew, and consequently uncle of Anthony, of whom mention is made in Lupot's work on the Violin. Anthony is also supposed to have had a son named Nicholas—see Translator's note in Otto's work, p. 62.

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who was born September 3rd, 1596. His instruments are masterpieces of workmanship in every detail, possessing a tone of ethereal purity, a combination of brilliant power and sweetness. He adopted three sizes, a large or "*grand*," as this form is now familiarly known by, a medium, and a small pattern; but the Violins of the two former models are those which are held in the most estimation. His instruments are of deep elevation, with a peculiar form of arching, no doubt based upon, and perfected from, the principles of the curves of the vibrating string of the Violin, which bear a close analogy in several of their forms to the archings of our finest instruments. The back and breast of his Violins are thick in the central parts, diminishing gradually by exquisite workmanship to the sides, where they are very thin; the varnish, brilliant and elastic, is of the utmost purity, and tinted from a shade of amber-yellow to that of a cherry-red.

In giving a description of an individual instrument of this celebrated artist, I shall choose one of the finest specimens extant, known as the "Alard" Amati. Upon carefully examining it, I find it is a medium-sized instrument, measuring barely fourteen inches in length, by about six and three-eighths at the upper end, four and three-eighths across the centre, and fully eight inches at the lower or broad extremity. This outline is the most graceful of all the Violins, being exquisitely rounded, with long pointed corners, the edges slightly raised and admirably rounded outside the purfling. The purfling in not placed too near to the outer edge, but just at a sufficient distance to give an appearance of solidity with elegance. From the purfling the surface-wood falls in or undulates all around in a most graceful curve or sweep, not too abrupt, but gradually rising to the centre, which is finely rounded, and not by any means pointed, or too high. The *f* holes are exquisitely circled and cut, and so finely are they pierced through the table as to give them the appearance of having been cut by a sharp steel die. The distance between the nearest curves in the upper circles is one and five-sixteenth inches, and three and three-eighths at the narrowest part of the lower circles. The scroll is of a

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beautiful full size, perfect in proportion, and sharply cut, the edges being slightly flattened, but the back part of the scroll retains its sharpness, although the edges have also been flattened. The box is of medium width, with strong edges, and presents an appearance of much elegance, united to stability and strength. The back is formed of two pieces of medium curled maple, of a very rich quality, with the wavings almost straight across. The sides are one and three-sixteenths of an inch in height, with the curl of the wood rather wider than that of the back, and sloping all around as in the Stradivarius Violin previously alluded to. The table-pine is of medium width of reed, which increases towards the outer edges, and the lines run perfectly straight from one end to the other. Add to this a translucent coating of a most beautiful glistening reddish-brown, or maroon tint, which, to use a homely expression, entirely covers it like a vitrified mass of red-currant jelly, or liquified ruby, and the young amateur will have a faint idea of the representation of what a Nicholas Amati Violin is like, as it issued from the master's hands. This excellent gem has neither internal nor external crack or flaw, and the original hand lengthened from the block is still attached to it. No language of mine seems adequate in furnishing words to describe the beauty of its tone,

> "When every string's according glee,
> Is blended into harmony;"

for it contains all the requisites to be found in an excellent instrument, power and quality, richness and brilliancy, and a freshness of sound which its exceptional state of preservation alone can give. The date of this Violin is 1645.

This maker died a Cremona, 12th August, 1684, and was succeeded by his son Jerome, who was born in 1649. The instruments of Jerome, who was the last maker in the family, bear little or no comparison with those of his father; as the Violins of sterling worth by the Amati family may be said to virtually terminate with Nicholas. Many excellent Violins by

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this family are to be found throughout the country, a few of which are here mentioned.

The "Alard" Nicholas Amati, previously described, is the property of Mr. D. Laurie, Glasgow. The late Rev. Wm. Logie, Tynet (Banffshire), possessed a Violin by this artist, dated 1655; whilst two instruments of the same maker are in the possession of Messrs. Roberts, of Fyvie (Aberdeenshire), and Smith, of Glasgow. Amongst the numerous instruments belonging to Mr. Malcolm, of Edinburgh, there is a grand Nicholas Amati Violin, along with another instrument by the brothers, Anthony and Jerome. The late Mr. Gordon, Aberdeen Quill Company, had an instrument by those artists, and a Violin aud Violoncello, of well-known excellence, by the same makers, are in the valuable collection of Mr. Croall, of Edinburgh. The Violin bears the following inscription:—"*Antonius et Hieronymus Fr. Amati, Cremonen; Andrea Fil F. anno* 1627," and the Violoncello is labelled 1595, this latter instrument being formerly the property of M. Kreutzer, who brought it from Germany. Another excellent Violin is the property of the eminent connoisseur Mr. Wood, of Woodcot. Other specimens of those artists are in the possession of the following gentlemen:—Messrs. John Macnee and James Allen, Edinburgh, ——Buchanan, Glasgow, the late John Sellar, Hatton, Morayshire, and J. W. Reside, Dalton, Michigan (U. S. A). An Amati Violin of merit is also in the possession of Sir James Clarke, of Penicuik; another is the property of a lady residing in the neighbourhood of Fraserburgh, at one time considered a superior instrument. I have been informed that several Cremona Violins are in the possession of James Gentle, Esq., Edinburgh, one being a Nicholas Amati, which was purchased from Signior Emiliani, the eminent Violinist, and which was formerly in the possession of an English Clergyman; also, that the well-known "Maule" Amati is now the property of a gentleman in Perthshire. Several other excellent instruments by this illustrious family are to be found throughout the south of Scotland, a few of the proprietors of such absolutely refusing, and others failing to render any information relative thereto.

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The Guarnerius Family.

The first of this distinguished family was Andrew, a native of Cremona, who flourished from about 1630 to 1695. The instruments of this maker, although certainly good, claim but a secondary value in comparison with those of the most illustrious of the Cremona makers. His son and pupil, Joseph, who worked from 1680 to 1730, produced instruments of much greater merit, which are characterised from those of Andrew by their difference of model, as well as from possessing a tone more brilliant and penetrating. The next Violins of this family are those of Peter, brother of the preceding, who was a pupil of Jerome Amati, and worked at Cremona and Mantua from about 1690 to 1728. Peter Guarnerius, notwithstanding the faults of his workmanship, was nevertheless an excellent artist. The Violins of this maker were of a larger model, with deep archings, having the thicknesses graduated in a peculiar manner; the tone was sweet, but subdued. This maker must not be confounded with Peter, the son of Joseph, and *grandson* of Andrew, who wrought at Cremona from 1725 to 1740, and whose Violins display but little care and finish, although several of his Basses have been held in high esteem.

We now arrive at the most distinguished maker of the family, whose finest instruments are so widely known, and appreciated for their eminent excellence, as to require but little comment in the present short notice. This eminent artist, Joseph, was the son of John Baptiste Guarnerius, and was born at Cremona in 1687. He is said to have been a pupil of Stradivarius, but this seems to be erroneous, and his Violins are, generally speaking, finished in a manner inferior to those of his supposed master. Many of his Violins bear a cross upon the label, usually placed over the following letters, thus: IHS, from which quaint monogram he derived the name of Joseph *del Jesu*. His Violins may, like those of Stainer, be classified into three distinct epochs. During the first period, his early instruments are but of medium quality; a little later, however, true traces of the master appear. The model is of a small size, the wood of

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excellent quality, the varnish equals that of Stradivarius, both in quality and colour, but from a disproportion in the thicknesses, the sounds of his instruments, although sweet and mellow, possess but little penetration. The next period is particularly characterised by a change of model, as well as by an alteration in the mode of thicknesses, from which the instruments possess a superior excellence in every respect. At one period he makes the back and table of his Violins thicker than those of his supposed master, and at another the thicknesses of the centres are made equal to those of Stradivarius, but the graduation of such increases in quite a different ratio, to correspond with the flatness of the model adopted. His finest finished instruments may be included in his second epoch, and they rival in this respect those of Stradivarius. After this epoch, in several of his instruments, all traces of the finished artist disappear, nevertheless his most magnificent *chef d'œuvres* are mingled alongside of those "Prison Fiddles," as they have been termed. During this, his third period--from about 1738—although we have his coarsest finished instruments, we undoubtedly have also his finest productions. The "Paganini" Violin is dated 1743, the "King Joseph," 1740, and the "Alard" instrument, as well as many other Violins of recognised excellence, all belong to this epoch. These are all of splendid model, magnificent wood, large size, with cupped edges, characteristic *f* holes, and extraordinary power of tone, but are generally covered with inferior and heavy reddish-brown varnish. At this stage of the artist's existence, tradition reports that dissipation and debauchery claimed him as their victim, that he was for several years a prisoner, owing to the committal of some crime now unknown, and that whilst in the prison the daughter of the keeper supplied him with wood, tools, and varnish, and even disposed of his Violins, at almost nominal prices, in order to administer to his wants in his unfortunate and miserable abode. But all this is, we suspect, purely legendary, sheer gossip based upon no veritable foundation.

Lupot, in his admirable volume, states:—

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"Joseph Guarnerius, pupil of Anthony Stradivarius, and Peter Guarnerius, pupil of Jerome Amati, wished in their turn to be original like their masters, but they had not as yet perceived that the true principles had been determined upon, and that to attempt other paths for reaching glory was to sentence themselves beforehand to be left upon the road. * * * * The Joseph Guarnerius Violin, near to the colour and varnish which he borrowed from Stradivarius, was, like him, truly original, but he had neither the lightness of his hand, nor the fertility of his genius. At first he shortened his model, and, what appeared to be the more strange, was that he strengthened his thicknesses; he flattened his archings, a mode which at least was reasonable for increase of power. In other respects his proportions are quite exact, his archings artistically cut, the thicknesses of the two tables being perfectly equal in the centres to those of Stradivarius, gradually increasing as far as the extremities. This arrangement certainly conduces to power as well as brilliance, and this is the chief thing in the Violins of this maker. The first string is very brilliant; the second is similar in this respect; the third equally brilliant, with a certain amount of roundness; but the fourth is, generally speaking, hard and stiff throughout, uneasy at every tone, especially upon the A and C natural. It is completely sacrificed to the other three. It is well known that an excessive thickness means ruin to the fourth string."

As there are so many various models and sizes by this celebrated maker, and many of them so dissimilar to one another, it requires the accustomed and well-trained eye of an expert to distinguish the same handiwork running throughout each of them. It is also difficult to classify them, and to indicate which particular instrument was made either at the commencement or middle of the artist's professional lifetime, as it is only in the latter Violins that we find decisive traces of the period they belonged to, such as the particular elevation of the exterior edges, and the peculiar spot, or dot, which he gave to the finish of the indenting at the corners. Those instruments are generally of a larger size, such as those previously referred to, and the one which has been selected for description. Speaking in general terms, the Violins of this artist may be defined thus:—Flat construction, with very slight elevation, and gradual curvature of arching; varnish varied, but usually fine, elastic, and of various tints of colour, passing from a light yellow to a deep red. Another striking peculiarity is, that in many of them, the *f* hole on the bass side is longer, by about

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3-16ths of an inch, than that on the other side of the instrument.

In giving a description of an individual instrument by this maker, the author has chosen a magnificent specimen--one of the very finest known—in the possession of J. M. Kinghorn, Esq., of Helensburgh, Dumbartonshire. This is a large-sized "Joseph," being fully fourteen inches in length, six and five-eighths at the narrow, or upper end, four and five-eighths at the narrowest part across the centre, and eight and one-eighth inches at the lower, or broad extremity. The rims, or sides, are of extra height, being one inch and three-eighths in depth. The Violin is of round outline, more resembling that of the Nicholas Amati than the Strad. previously described, the only flat, or stiff part of the outline, being a portion of the edge about three inches in length, extending across the lower, or broad end. The C's are almost an exact counterpart of those of Nicholas Amati, being beautifully rounded, although not so deeply let into the instrument, which gives a greater width across the centre of the waist, and has the effect of shortening or contracting the corners. The *f* holes are more pointed, lying more upright, or straight, upon the table, than those of Stradivarius or Amati, and they are fully an eighth of an inch longer than those of the former, being over three inches and one-eighth in length, yet they appear in perfect symmetry on this model; whereas, were they placed upon a Strad., or Amati, an astute connoisseur would at once detect the disproportion, and remark that the *f* holes were too long. The head has not the delicacy of that of the former artist, but is exceedingly bold and large, with a noble rotundity and fulness in the incision, which gives to it truly a majestic and characteristic appearance. The back of the box is broad and flat, the carving slightly hollowed out, but curiously enough, the edges are not flattened like those of Stradivarius, but are merely left blunt, which gives additional beauty to the volute, or rotund appearance of the scroll, and leaves the ears, or centres, more relieved. The peg-box is wide and strong—a very different model from that of modern imitators. The arching of the back and table is a little

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flatter than that of Stradivarius, and the declivity being flattened towards the edges, gives to it an appearance of greater shallowness than it really possesses, but the undulating curve is carried fuller to both extremities than in the Violins of Stradivarius, consequently the centre does not appear so elevated, although in reality it is almost of the same elevation as the best models of his master. This similarity in elevation of the instrument alluded to, cannot by any means be laid down as an infallible index to go by, as there are some instruments by Stradivarius quite as flat, or low in elevation, as any Guarneriuses ever made, and *vice versa*. The wood of this "Joseph" is of very excellent quality, and the proportions are thick and heavy. The back is formed of one single piece, with a broad curl which descends from left to right; the rims, or sides are of the same curl, and the latter placed obliquely, as in the instruments formerly described. The table-wood is of wide grain, but each reed distinctly relieving itself, and altogether a different, or what inexperienced amateurs would designate as a coarser wood than that used by Stradivarius, or Amati, but every fibre stands eloquently mute, and proclaims a tone. The varnish with which it is almost entirely covered—the sole exception being, where from age and wear, it has been broken up in the centre of the back, and at the part whereupon the chin is placed—is of a dark red colour, with a brilliant substratum of limpid yellow, as shewn at the edges, where the exterior red varnish has been worn off. This red varnish of his late period is of inferior quality, and wants the brilliance and translucence of that which he used in his smaller and earlier instruments. The tone of this Violin is heavy and vigorous, of immense penetration, with a delicious and refined ethereal purity, which requires the touch of a powerful player to judiciously evoke. The purfling, which is very small and fine, is regularly and beautifully laid in, in striking contrast to several of his earlier Violins, and all the other parts of the instrument are as skilfully finished as in the Violins of Stradivarius, which plainly evinces that this maker possessed true artistic skill and genius, although at times he displayed carelessness and want of finish.

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The edges outside the purfling are angular—not round, or semicircular—with considerable elevation, which appears to have been a mode he only adopted during his last, and best period.

This Violin is dated 1739, and is in every respect an exact counterpart of the famed Violin of Paganini, which now remains as a seen but unused memento of the past, in one of the cabinets of the Museum of the Municipal Palace of Genoa, his native city, the only dissimilarity being that the back of the latter Violin is formed from two pieces, whereas, as already stated, that of the former instrument is composed of one plate.

In conclusion, this instrument looks almost as fresh as when it issued from the hands of its maker, and is apparently capable of enduring any amount of work for any period of time. Fortunately it is the property of an ardent amateur, under whose careful guardianship it will be handed down to a succeeding generation in the same fine preservation as that in which it now exists--having neither crack nor flaw—eloquently shewing to others what the artistic genius of Cremona could produce, and serving as a worthy model for future aspiring artists to imitate, but never to surpass.

This celebrated maker commenced Violin-making at Cremona about 1725, and is supposed to have died in 1745. Numerous other instruments of this family are to be found throughout Scotland, a few of which are here subjoined.

A well-known and highly-famed Violin by Joseph, nephew of Andrew, is in the possession of H. Gordon, Esq., of Avochie, near Edinburgh. This instrument is in excellent preservation, at least was several years ago, and was purchased at Paris about the end of last century by Mr. Thompson, of Banchory. From what I have learnt regarding it, Mr. Thompson's son sold it about 40 years ago to the late Mr. Hunter, of Tillery, Aberdeenshire, for £100. This latter gentleman possessed the finest collection of Cremona Violins in the County, and after his decease those cherished instruments were exposed in the market for private sale. This favorite Guarnerius was sent on

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to Edinburgh, where an eminent connoisseur offered £115 for it, but, as formerly stated, it became the property of Mr. Gordon, of Avochie, being sold at £125. Mr Muir, of Leith, also possesses a Violin by this maker. Another well-known Violin by this eminent maker is the property of the eminent Violinist, Mr. A. C. Mackenzie, of Edinburgh, and is remarkable for its fine quality and intensity of tone. About the year 1800 this Violin was, strange to say, also in the possession of an A. Mackenzie, from whom it went to Mr. F. Cramer, through Henry Murray, Esq., for the sum of £262. At the sale of the latter gentleman's effects, it was purchased by Mr. Alexander Crombie, Edinburgh, for £105, and in 1846 became the property of the late Mr. Alexander Mackenzie, the present proprietor's father. As remarks relative to such valuable instruments are always interesting to the young amateur, I subjoin the following verbatim copies ot letters relating to the above mentioned Violin. The first is a copy of a letter from Francois Cramer, to his son William, dated 1841, which was transmitted in the subsequent letter from Mr. S. W. Forster, to Henry Murray, Esq., Edinburgh, regarding the authenticity of the instrument:

LETTER FROM F. CRAMER, TO HIS SON WILLIAM.

MY DEAR WILLIAM,—As you wish to have the pedigree of the *Joseph Guarnerius Violin* I bought forty years ago of a Mr. Mackenzie, a distinguished *Amateur* in those days, with a warranty of its being a genuine instrument, and soon after sold it, the gentleman who bought it of me died, and his widow returned it to me for sale, as, of course, she had no use for it after his death. It has never been in any other hands, and I can warrant its being a genuine instrument,

Your Affectionate Father,

FRANCOIS CRAMER.

37 Upper Charlotte Street, Fitzroy Square,
June 10, 1841.

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LETTER FROM S. W. FORSTER TO H. MURRAY, ESQ., TRANSMITTING THE PRECEDING LETTER AND RECEIPTS.

I have much pleasure in transmitting the copies of the above, and hope they will give you additional pleasure when gazing on the instrument to which they refer. With best wishes for your health, and thanks for favor conferred,

I remain,

Yours respectfully,

S. W. FORSTER.

13 Macclesfield Street, Soho Square,
21st Ausust, 1841.

The following is a copy of the label on the instrument, *Joseph Guarnerius, fecit, Cremonæ, anno* 1741, IHS." Another Violin by this same maker, dated 1734, is in the possession of that eminent collector, W. Croall, Esq., of Edinburgh, and was formerly in the possession of the great solo-player, Wieniawski, for 15 years. This Violin was purchased for £200. Three other perfect instruments by this maker, dated respectively 1735, 1739, and 1744, are in the possession of Messrs. H. O. Havemeyer, New York; D. Laurie, Glasgow; and J. Kirkhope, Edinburgh. An instrument by Joseph *fil Andrea*, dated 1717, which thoroughly bears out the characteristics of this maker, is the property of T. M. Drysdale, Esq., of Milnathort, and a Violin by one of the Guarnerii family is in the possession of Sir R. Dalyell, of Rennis, Linlithgowshire. This instrument is dated 1732, and formerly belonged to the celebrated Violinist, Stabilini, whose seal in wax remains upon its scroll. It is of a small pattern, with golden-coloured varnish, and possesses a fine mellow tone. A Violin by Andrew Guarnerius, dated 1694, is in the possession of A. B. Wallace, Esq., of Edinburgh. This instrument is in good preservation, and was formerly bought from Mr. Chanot, by John Wood, Esq., Advocate, Edinburgh, who sold it to the present possessor.

The preceding observations, although somewhat concise, must for the present suffice; meanwhile an artist, whose instruments are second only to those of the Cremona makers, forms the next subject of our consideration.

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Jacob Stainer.

The date of Jacob Stainer's birth as well as that of his death appear to have been quite unknown, until the Exhibition held in Vienna, in 1892, decided the question, for amongst the many historical relics therein exhibited there was a slab of marble, nothing less than the tombstone of Jacobus Stainer, which had been sent to the Exhibition, from Absom. From the inscription thereon we learn that this founder of the Tyrolese School of Violin-makers was born in July 1621, at Absom, a village in the Tyrol, situated a few miles form Innsbruck, the capital; as also that he died in peace, before sunset, upon the evening of Friday after St. Giles, 1683. In 1641 he was living in his own parish occupied in Violin making, and a lovely Violin of this date was seen in Paris by Abele. In 1643 he went to Salzburg with a "*Viola Bastarta*," which he sold for about £3. In 1645 he married, and in 1648 the Archduke Ferdinand Charles invited him to his Castle at Innsbruck, when he was so well pleased with his work as well as his Violin playing, that he was made a "Prince's Servant," and was allowed to prefix "Honorable Gentleman" to his name. In 1666 he purchased from his brother-in-law, a little cottage with a garden attached surrounded by Linden trees; this house may still be seen. In 1669 the Emperor took him into his own household as his first Violin-Maker. Like many others, Stainer was after this suspected of that hydra-headed and unpardonable crime—"*Heresy*" (?), he also became indebted to a Jew in Salzburg, the Emperor refused to assist him in any way, and poor Stainer, deeply lamenting over his misfortunes, broke his heart and lost his reason, dying in his own little cottage in 1683, where visitors may still see the very bench and other inventions used to constrain him in his violent fits of frenzy.

There is a tradition prevalent in the Tyrol that Stainer wrought for several years in Venice, learning Violin making from an old Italian there, who is said to have been specially inspired in this art through superhuman vision; that he hated the Cremona makers and taught Stainer not to *imitate* but *excel*

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them. and that Stainer was never pleased with many of the Italian instruments. It is also said that he never had his label printed, but always written, and in many Violins no label at all. But be all this as it may, according to the common narrative, in his earlier years he became the pupil of Anthony, and afterwards of Nicholas Amati; but his Violins certainly bear much greater resemblance to those of the brothers Anthony and Jerome, than they do to those of Nicholas, although they have always that unmistakably German appearance in their details. The instruments of this maker have been classed into three distinct epochs, and there is every reason to believe that he also adopted three different sizes of build—a large, a medium, and a small. His first instruments were of small dimensions, with short and narrow *f* holes, having lofty archings, whilst the heads and scrolls were of diminished proportions, but of beautiful finish. Those early instruments are now of the utmost rarity, and bore labels inscribed in his own handwriting, and were dated from Cremona.

Opinions are very conflicting as to Stainer's life, for about the commencement of his second period, legend states that he married the daughter of Anthony Amati, this phase of life being marked by misfortune, genuine art having succumbed to carelessness, whilst poverty in all its icy coldness surrounded his home circle, compelling him to travel with his now crude and imperfect instruments, which he gladly, but with difficulty disposed of, for the diminutive sum of six florins. During this, his second epoch, he returned from Cremona to his native town Absom, where he hastily manufactured a vast number of instruments. Most of the Violins of this period were of very inferior quality, and bore little or no trace of the hand of genius. They contained printed labels, and were dated from 1650 to 1667. It is related that during part of this period his brother Mark, who was a monk, frequently chose to exchange the monotonous routine and retirement of the cloister for the practical operations of the workshop, and thus assiduously assisted him in his labours. Now again, however, the dying embers of genius are fortunately fanned into a flame, which

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bursts afresh with redoubled effulgence, and fame now victoriously crowns him with its never-dying laurels. His Violins are now made with extreme care, several having the scrolls beautifully ornamented with the heads of lions and other animals, whilst the varnish appears as a limpid coating of reddish-brown crystal. A few of those Violins may be included in the latter part of his second period, during which the instruments bore printed labels. His wife having now died, legend reports that he entered the gloomy solitudes of a Benedictine Convent, there not only to adhere to the scrupulously strict duties of an ascetic life, but also to distinguish himself by the completion of sixteen instruments which have been pronounced by all judges as masterpieces of genius. Through the kindness of the Superior, he was enabled to obtain wood of pre-eminent merits for the construction of those instruments, which have been known by the name of Elector-Stainers, from the fact of twelve of these Violins having been presented to the Twelve Electors of the Empire, whilst the remaining four were presented to the Emperor. Those instruments were all that could well be desired both in finish and quality, and bore labels inscribed in his own handwriting. Those superior Violins characterise his third period but only three of those instruments are known at the present time. But it is now supposed that this story of Convent life is purely imaginary.

The Violins of Stainer may be generally described thus:—The round outlines, as well as the scroll, C's, and *f* holes, are delicately harmonious, symmetrical, and pleasant in appearance, showing the artistic finish of a tasteful workman; but this excellence always retains a portion of his national characteristics, as the *f* holes and C's are shorter, and the exquisitely cut head is smaller, though more deeply carved out, than in the Italian instruments. The purfling is beautifully and finely laid in, and is of medium breadth. It lies near the outer edge, which is angular and very finely wrought, but gives to the Violin a rather light appearance. The arching is high, and springs rather more abruptly to the centre than that of Amati; they are scooped out all around the sides between the purfling and the

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spring of the arching. The woods employed are of excellent quality. The back is usually "slab," or "half-slab," and the curl gorgeously mixed, which lends a charm to their fine appearance; the rims, or sides, are of the same quality, the table-wood is usually of remarkably fine pine, very close in the reed or grain, and as the instruments of this maker were held in very high estimation towards the end of the last, and about the commencement of the present century, no doubt this quality of close-grained pine, adopted by Stainer, gave rise to the erroneous idea still prevalent amongst makers, and amateurs, in country districts—viz., that it is absolutely necessary to have a very fine-grained table for tone. The varnish is from a golden to a reddish-yellow, or brown tint, light and flexible, and in his best instruments is of an exquisite Italian quality, resembling the varnish of the Amatis. The tone of this maker's Violins is pure and liquid, but not powerful, which renders them particularly well adapted for use as chamber instruments. An immense number of instruments by other Tyrolese makers, who forged the name of Stainer, found their way into the market at an early period, and thus criminally obscured the well-merited reputation of this old master.

Amongst the numerous Violins in the collection of Mr. Lowe, of Edinburgh, is one by this maker. The late Mr. W. Ingram of Huntly (Aberdeenshire), had a Violin also by this maker, bearing the following inscription: "*Jacobus Stainer, Cremonen, in Absom, prope ænipontum Cremona*, 1647." Another was in the possession of the late Mr. Skene, of Tarland.

Probably of all the old instruments, the Violins of Jacob Stainer are the most difficult to unmistakably distinguish, knowing that about three-fourths of all the makers of the last century copied his instruments, with the greatest care and skill in every detail, with the sole exception of the varnish. It is therefore no little matter for surprise that such vast numbers of instruments. thus partially aided by age, have been sold as the veritable productions of this artist—the founder of the great Stainer school. The great stumbling-block of those imitators was the beautiful varnish, for no matter how their skill and

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efforts were employed, they all failed in this speciality, although it must be admitted that several copyists succeeded in coating their instruments with a clear and lustrous varnish, of beautiful deep yellow tints, but this varnish was chiefly of a hard unimpressible, or flinty quality. Another obstacle which presents itself in distinguishing the genuine Stainer, is this:—As many of the instruments have suffered from fractures and other similar accidents during the period of time since Stainer lived, they have in numerous instances been re-varnished. In some cases new varnish has been partially laid over the original, and in others the latter has been entirely re-covered by the former. Such original varnish has sometimes been removed by the levelling manipulation, this having been deemed the most convenient and easy mode for the careless and unskilful repairer, and numerous amateurs are but too little cognisant of the fact, that more of this class of workmen exist than is generally supposed, to whom unfortunately such gems are entrusted for restoration, to the utmost vexation of the owners. In concluding this chapter, I therefore deem it essential to add the following

Advice to Inexperienced Amateurs.

The preceding remarks relate, not only to the Violins of Stainer, but also to vast numbers of those of other makers of eminence. What is even more derogatory, is the abstraction of portions of the genuine old Violins by unscrupulous repairers. In old Violins it often happens that the belly, or table, from being very brittle in the wood, is much fractured, either by accident or from the strain and pressure being greater on this part, than on the back and ribs. The other parts of the instrument often remain comparatively little worse, even from their usage and age. In such a case the fraudulent repairer invariably recommends a new "lid," or table, to be put on, in order to have the original one for the purpose of building up an apparently *genuine* Cremona. At other times a new back, or neck, is added, when the original one may chance to be fractured, on the plea that such would be more

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suitable, so as to give strength and solidity to the instrument. Several thoughtless owners have had bitterly to regret their sanction to this base roguery, whilst in other cases no such sanction had ever been given, but merely a recommendation upon the part of the repairer. In the latter instance, after such an abstraction, the part is made up, and copied as closely as possible from the original; the instrument is returned, and eventually passes by the inexperienced for a genuine old Violin, the chief merits being largly dwelt upon, and this excellence often attributed to the very part so abstracted.

Again, I have sometimes observed what has been termed *two genuine old Cremonas* formed out of *one* by a rare process of fecundity—for example, the table and neck of one being placed upon matched ribs, duly darkened and chipped, then of course the old back and ribs are provided with a new *chosen* table, charred and imitated, with a head of less importance, to all appearance still worse from wear, by levelling off the edges, similar to the appearance which usage and friction produce. At other times old tables have been added to original old ribs, and back, when of a supposed matchable character, by altering certain parts, adding to, or curtailing the edges by running the purfling farther inside, if too large, by cleverly replacing such parts so as to agree with the ribs, which can be pressed in a little here and there, when the belly is afterwards glued on. After much careful dodging the deception becomes complete, and the adjusted table requires nothing else to look old, beyond a little alteration of the edges, and the form of the *f* holes.

A well-trained eye may often detect such by observing that the outline does not follow the ribs, that the ribs have been twisted off the square to match the altered table, that new pieces have been carefully inserted along the *f* holes, especially upon the outside, so as to alter their original character as nearly as possible to that which the cunning dealer wishes his feigned instrument to represent. Perhaps the most flagrant deception the author has ever witnessed was that of a dealer several years ago, who guaranteed as *genuine* such an altered

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instrument, giving a written warranty that it was a Maggini Viola. The back was the only original part of the instrument, the table, rims, and neck were comparatively new, and matched to the back. For this spurious instrument £30 was given by the purchaser.

A far better knowledge of the Violin ought to exist amongst amateurs, and even amongst intelligent professionals, than what is generally to be found, especially now that a taste for the Violin is now becoming more and more cultivated amongst the higher, as well as the lower classes. We have now numerous very talented lady-artists, so it may be safely said the instrument is now becoming fully appreciated by the fair sex, and very justly so, knowing how susceptible the Violin is, so fascinating, so tender, and yet so free, so marvellously varied and bewitching; its quality seems an everlasting study of boundless resources for the ingenious and patient possessor of polished musical abilities, so compact, so admirably adapted for the drawing-room, and a companion to the Pianoforte now everywhere in use, a voice unequalled, yet sustained, flexible, and so widely different to the quality of the Piano, that when combined with good execution, the harmony is complete.

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CHAPTER IX.

THE BOW, THE ROSIN, AND THE STRINGS.

THE BOW, that apparently simple and trifling rod, which many doubtless consider as unworthy of devoting time and space to, will be found, nevertheless, to possess certain claims upon the amateur's attention, which will be well worthy of his earnest notice. In a treatise in which the construction of the Violin is initially delineated, it would be considered quite unpardonable to omit all notice of its appendage—the Bow—that mysterious assistant, by the combined use of which the artist excites us at one time to bestir ourselves to the lively Strathspey or Reel, and at another to place us, as it were, in an ethereal and harmonious world of delights, forgetting our existence for a time upon this sublunary sphere, and fascinated by the swift chords of enchantingly sonorous pearls which melodiously emanate upon our ears with a sweetness indescribable. The earliest bows, as can well be imagined, were of the rudest and most primitive form, being, strictly speaking, veritable "*bows*," or arcs of bent cane, having a number of hairs attached to both ends, to keep them in the requisite position.

The first improvement which we find, representations of such being obtained from monumental drawings, is in the bow being formed or cut quite straight from the wood, having both projections on the ends an equal depth, with the hair fixed permanently therein, whilst a century or two afterwards the movable nut was formed, and at a still later period a loop was made on the nut, which fitted into a notched metallic plate, by which means the player was enabled to graduate the tension.

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At a period subsequent to this, those primitive methods gave place to other improvements, viz., the substitution of a screw for regulating the tension, whilst the outline approached more closely in form to our modern bow. In the eighteenth century the bow arrived at great perfection through the scrupulous care and attention of that celebrated French maker, Francois Tourte, who has left a lasting fame throughout Europe, and upon whom we consider it necessary to bestow a brief notice.

Francois Tourte's father was a Parisian clockmaker, his eldest son, or Tourte Senr., was a bow-maker to trade, having served his time as an apprentice to this profession, whilst his brother, Tourte Junr., had served his time as a clock-maker in the Palais Royal. During his leisure hours he made nuts, screws, and buttons for his brother's bows. He displayed much taste in this, having made some beautiful mountings in gold and tortoiseshell, so that the bows began to be eagerly looked after. At this time the wood which the Tourtes used was of a very peculiar quality, it was dark in colour, and age added very much to its beauty; no acid was used by the elder Tourte to darken it, as in some of the bows of our modern makers, which have a hard flinty look, the outside shell soon dropping off, having been charred by the acid, and the spring of the stick thus weakened. His early bows are a little short, however; after his death his younger brother Francois continued the business.

Although the elder brother was a skilful workman, yet he was in nowise to be compared with Francis, the greatest maker who ever lived. The wood is now changed, the grain is very wide and open, the colour a very light brown, almost white and grey, the latter being the best, as nearly all his most elaborate nuts, etc., will be found upon those. In fact this wood is more like mahogany than the close-grained, heavy, and stiff Brazil-wood at present used by our modern makers. The proportions are simply perfection, and there are a few points in connection with the head and mortices which specially belong to this maker, points which experts well know, but which need not be entered into here.

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The bows of this maker, from their excellent quality, were high in price even at the time when he wrought, gold mounted ones being about 11 guineas, silver 3 guineas, and plain bows about 30s., but now it is very difficult to obtain them, from their having been anxiously sought after by many of our finest professional Violinists and collectors of such worthy mementoes; but excellent bows are now to be had by several other distinguished makers, and, what is of the utmost importance, at a reasonable price. Amongst those esteemed makers may be mentioned the following:— Lupot, Tubbs, Voirin, Stentor, Panormo, Picatte, the Dodds, Vuillaume, and Enri (Henry). About the period when Tourte thus perfected the bow in France, we find the elder Dodd distinguishing himself at the same art, whilst a short time after this, the bows of his son, John, worthily merited a high degree of fame. They are light and firm, being made from well-finished, and fine wood, maintaining permanently their original curvature, and are shorter than those of Tourte, whilst they are moderate in price, being from half-a-guinea and upwards, according to quality and finish. To Violinists, a Dodd bow will prove much cheaper in the long-run, than the purchase of one of the so-called *cheap* ones, the latter being after a few months' usage utterly worthless, whilst the former very rarely gets out of shape. Again, in Paris, we have Vuillaume, whose bows also possess great excellence. From the bows of Tourte have been derived the standard measurements of the length, and proportions of the stick, the proper balance, the slide for fastening the hairs, etc. We may assume the standard length of the stick to be 29 inches, but the medium length is about 27½ inches, the height of the head and nut from the body of the stick being about ¾ inch. For about 4 5-16 inches from the end, where the nut is placed, the bow is of uniform thickness, being a fraction over 5-16 inch in diameter, and gradually but not uniformly, tapering to about 1-5 of an inch in diameter, where the head is formed.

The bows which have the most perfect balance for playing, have the hair 25½ inches long, and their centre of gravity is about 7½ inches from the nut, and in the bows of the Violon-

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cello the length of hair should be 23¼ inches, whilst they should balance at 6¼ inches from the nut, the stick being proportionally larger, having a length varying from 24 to 25 inches. In the Violin-bow, the finest white hair is employed, after being carefully assorted and cleansed. The best bows ought to have a uniform curvature, and this regulated in such a manner that the exact centre of the bow, between the head and nut, ought to be the portion of the bend which approaches nearest to the hair. The number of hairs contained in the Violin-bow varies according to their size, but the mean number is about 150.

The woods principally used in the manufacture of bows are Brazil or Pernambuco wood, snakewood, logwood, ironwood, horsewood, mahogany, beech, etc., whilst the nut is formed of ebony or ivory. Amongst the preceding woods none is found to give the required results equal to Brazilwood, from which all our finest bows are now formed. There are several varieties of this wood, named after the places of their growth, viz., Pernambuco, Sapan, Santa-Martha, Lamon, Japan, etc. By some it is affirmed that this wood gave the name to the country in which it principally grows—Brazil; and the Portuguese made it a source of vast and royal revenue, hence it was at one time termed Queenwood. It commonly grows in dry, barren, and rocky places, and the trunk of the tree is of large dimensions, crooked, knotty, and full of cracks. The flowers of this tree are of a beautiful red colour, and possess an agreeable aromatic smell, which stimulates the brain, and the branches are slender and full of many prickles. The bark is exceedingly thick, whilst none of this species of wood contains pith, except the Japan variety. The wood is hard, and, when newly cut, of a yellow colour, which becomes red on exposure to the air. It may be distinguished from logwood by its paler colour, and for surety the inexperienced amateur may apply the following test:—Boil a small quantity of the chips in water, filter, and when cold, add a few drops of a solution of acetate of lead, protochloride of tin, or lime-water, when if the precipitate is crimson, it is Brazilwood—and if violet, then it is logwood. Brazilwood is extensively used in dyeing, and is generally

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exported in bundles, from which the finest pieces are selected by the bow-maker, but those, like angels' visits, are "few and far between," as the wood naturally possessing so many blemishes and inequalities, few faultless pieces are to be found, hence this alone tends to augment the prices of such bows.

The finest bows have the curvatures finished by heat, every part of the bend being subjected to its action, as agreeably to this method, the inner as well as the outer side will always retain its proper curve; whereas, if only the inside of the stick has been heated, the inner woody fibres being in their normal condition, will always have an opposing resistance to the outside ones, and thus the bow will gradually be drawn from its finished curvature to its original form—a fact too well experienced in those bows which infest the shop windows of several of our *cheap* musical-instrument dealers. Several important improvements in the bow have been effected through the exertions of M. Vuillaume. One convenience is that the hair maintains always a flat surface, from having each extremity inserted into a sort of tubular pliers, one of which fits into a pierced cavity in the head of the stick, and the other into the interior nut, the mechanism being exceedingly simple. Another excellent improvement to meet the changes of position of the hand of the player caused by the variations in the length, consequent upon the changes of distance effected by the different tensions from the nut-screw, is obviated thus:—The nut is attached permanently to the stick, and is mortised out to receive an interior nut of brass, which advances and recedes within the permanent one by a screw—thus maintaining always a uniform distance between the head of the bow and the outside of the exterior nut. I must not omit herein to mention a simple and ingenious method of bow-hairing invented by Mr. Walker, late of Castle Newe, Aberdeenshire, now of Williamstown, U. S. A., a gentleman who possesses a large collection of Violins, and who is also author of a Collection of Strathspeys and Reels. In this invention, the extremities of the hair are inserted under two metallic hinges, one being fixed to the head, the other to the nut. The former is kept shut by

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a small piece of wire, which passes through the outside case of the shutting hinge, whilst the latter hinge is closed by a metallic slide, which retains the hair in position, as in the ordinary bow. By this method, one can re-hair the bow with the utmost facility, by merely taking out the pin, slipping off the slide, and inserting the new hank, cut to the proper length. Ironwood bows are generally too heavy, and lack the necessary elasticity. Steel is now used in the formation of bows, but wood will always have the preference over metals in the construction of such an article as a Violin-bow.

Space will not permit of herein including a practical description of bow-making, but the amateur will, at the present day, be enabled to readily purchase excellent bows at a medium price, as he cannot do better than supply himself with one made either by Vuillaume, or Dodd. The price of Vuillaume's bows, made either of wood or steel, with movable hair, and mounted in silver, is 30s. each; and without movable hair, plain wood, 10s. 6d. Dodd's bows are sold at prices varying from 12s. to 30s., according to quality and finish. Tourte's bows are now commanding fabulous prices, 15, 20, 25, 40, up to 76 guineas are occasionally given. The essential qualities found in a good bow, are, its perfect balance and levity, combined with strength and stability, yet possessing the necessary flexibility, and straight as an arrow from heel to point, or at least a very slight bend towards the left, as observed by looking along its outer side. A common plan of testing the strength of a bow is to screw it up, until the hair is straight and the stick has lost its bend, then look along the back and see if it is perfectly straight, but this is not exactly a proper method, for as already stated, very many of the finest sticks are given a very slight bend to the left, in order to resist the pressure to the right arising from proper bowing. When the hair of the bow gets dirty, it may be readily cleaned by washing it with soap and water, after which it should be sponged with cold water to remove all traces of soap, and then allowed to dry.

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In conclusion, let the young and inexperienced amateur beware of buying any of the detestable rubbish so often palmed upon the unwary by disreputable dealers, at a favorite price of 7s. 6d., when, for the difference of a few shillings, he would have been enabled to purchase one by an eminent maker, from a respectable house, and which would have proved serviceable to him, instead of the former foreign and worthless toy, which was made for the mere purpose of finding its way into the market, or mart of the cheat, there to be sold at a price exceeding six times its original cost. How often is it the case that the young Violinist rushes to some "cheap" Music-Store, makes a purchase, and brings home a shining specimen of wood and horse-hair, which, upon a few turns of the screw, sticks its back up like a wild-cat, as if you were about to use it in one of the old archery contests, instead of to play with it upon a Violin! Avoid such abominable trash dear at any price.

The Rosin.

Common Rosin, Colophony.—A short description of this substance may prove interesting, as, to the Violinist, this forms an article of indispensable necessity. Rosin is the residue left in the vessels after the distillation of turpentine, and is used by the druggist in the manufacture of some of his ointments, by the colourman in his varnishes, the shoemaker and saddler in their wax, in the yellow soaps of the soap-maker, and to a small extent by the perfume-maker; whilst it is extensively employed by the wholesale manufacturer, in extracting the various oily bodies which it produces by destructive distillation, and which are extensively used in the arts. Its specific gravity averages about 1·080, it softens at 160°, and enters into fusion at 275°. When the common rosin, which always contains water, is deprived of this by fusion, it is termed brown or black rosin, and whilst still fluid, if agitated with about one-eighth part of water, and dried, it forms the yellow rosin of the chemist. The bleaching of common rosin has been often attempted, but with unsuccesstul results, but latterly the

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patented process of Hunt & Pochin has enabled the soap and varnish-makers to obtain it of an almost transparent white.

The following is a short description of the process:—Ordinary rosin is placed in a suitable vessel, and then melted, and whilst fluid, steam, carbonic acid, or a mixture of carbonic acid and nitrogen, is passed through the mass, until nearly the whole has been distilled, when the rosin having been condensed in a receiver, surrounded by a constant current of cold water, is afterwards dried, and will then be found adapted for the purposes required. Violinists' rosin of very good quality may be made from Venice-turpentine. Otto's method is this:—Put a quantity of Venice-turpentine into a pipkin, add a little water to it, and boil for two or three hours over a slow fire. As it rises, pour in small quantities of cold water to keep it from overflowing, and allow a drop now and again to cool on a plate, when if it rubs clear between the fingers, without sticking, it is sufficiently boiled. When thus boiled, pour it into cold water, work it well with the hands, to press out the water, and break it into pieces when cold; expose to the sun and air until all the moisture is evaporated, and the rosin quite transparent. Many Violinists adopt a method of purifying, and rendering the rosin more transparent, by boiling it in vinegar, and whilst it is warm it is poured into paper moulds, after which it is exposed for some time to the sun and air. The purest and finest rosin for the Violin is that made from pure Venice-turpentine. The Violinists of Vienna and several of the other continental capitals sometimes use liquid colophony, instead of solid rosin. The mixture is applied with a camel's-hair brush, and is said neither to injure the bow nor the strings of the instrument, and to last one hundred hours playing. It is also stated that the strings give out a clearer tone than when solid rosin is used, but the latter will always have the preference.

The Strings.

Gut Strings.—It hath been said, perhaps, with more truth than poetry:—

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"The most uncertain of all human things,
Are women, riches, love, and Fiddle-Strings."

In the manufacture of Violin-strings there are various separate operations undergone ere the article in its finished form is arrived at. There are manufactories of musical strings in Italy, Germany, France, and England. Strings vary very much in quality, but certain it is that our English friends can in nowise worthily compete with the Italian, German, and French manufacturer in this well-known article. The Italian strings possess the greatest durability as well as the best quality of sound. Whether the muscular thalms of our mountain sheep are equal in quality to those of Italy, Germany, or France, is a question for others to investigate, but the fact is undeniable that the Italian, German, and French musical strings are vastly superior to those of English manufacture. Violin-strings are made from the smaller muscular intestines of the sheep. Catgut is an old and almost universal cognomen for the material forming the Violin string, and which undoubtedly has led many of the ignorant to fancifully imagine, that such strings are made from the muscular intestinal fibres of our whiskered fireside-favorite, the cat, but when or where this term first originated is a mystery.

Sheep of a small size, which have been fed upon dry, mountainous pasture, are those preferably selected by the string manufacturer. The finest Italian strings are made from the intestines of the lamb, or those sheep which have been killed during their first year's growth. In Italy the lambs are generally commenced to be slaughtered about Easter, at which period the string-makers begin to furnish themselves with the raw materials. Those intestines being premature, soft, and porous, are chiefly used for the manufacture of the larger strings. The finer class of first, or E strings, are manufactured throughout the months of June, July, August, and September, and subsequent to this latter month the manufacture ceases until the following summer. When the sheep have been slaughtered, and whilst still warm, the small intestines are carefully taken out by the workmen and cleaned. In this

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operation the intestines are steeped in cold soft water, for a period varying from 12 to 24 hours, during which time the water is several times changed, after which they are subjected for several hours to a current of hot water, which tends to separate the muscular membrane from its skinny and mucous coatings. Those coatings are afterwards roughly removed by the scraper, when the remaining muscular membranes are repeatedly cleaned and soaked in an alkaline solution, this latter operation occupying several days. The membranes now having been thoroughly cleaned, are arranged according to their size and quality. Those of the largest and most irregular dimensions are split and made uniform in diameter, after which the whole are carefully assorted into separate bundles, each lot corresponding with the No. of string it may be intended for in the subsequent process, viz., that of spinning. Manual labour is frequently employed in this, as well as in the subsequent operations, of finishing and wire-covering, but in the larger manufactories this is now supplanted by steam motive power. The spinning wheels are of simple construction, and the mechanism is such that a multiform movement is given to the wheel upon which the strings are attached. The strings, whilst moist, are subjected to a slight degree of twisting, after which they are exposed in bleaching chambers to the fumes of sulphur, for a period varying from 2 to 10 days. During this interval the torsion is several times gradually augmented by spinning, until they are of a firm consistence, when they pass through the process of finishing. In order to attain this latter and important object, the strings are subjected to a sustained friction, by being partly covered with a helix of horse-hair, or tube of haircloth, to which motion is imparted, by which they are rendered of a uniform diameter. They are now dried and polished, by being rubbed with a piece of cloth, upon which has been sprinkled a mixture of olive oil and ground pumice, after which they are moistened with olive or almond-oil, to which a small quantity of creosote, or oil of laurel is added, when they are afterwards sufficiently dried, and made into bundles of 15 or 30, each helix containing three or four lengths

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of string, as the case may be. The chief seats of the string manufacture are at Rome, Padua, Naples, Verona, Saxony, and Paris.

Silk Strings.

Silk Strings are now in common use by many Violinists, especially by the open-air musician, and the country ball player. They withstand the effects of perspiration better than gut, whilst they are not so liable to break from the variations of temperature and dryness, arising from a crowded atmosphere, but their sound is shrill, and in nowise to be compared with that of the finest Roman strings. They were first manufactured in China, although there are now several manufactories throughot Europe. Being subjected to a strong tension in their manufacture, they are difficult to adjust in tune, consequently they stretch but little. They are usually formed of 140 strands, the strand containing 12 threads of silk, from the worm, making a total of 1,680 threads in each string. They are manufactured by special spinning-mechanism, and when finished they are coated with gum-arabic, and polished with white wax.

Twisted silk first strings are generally rough, and contain a number of silk filaments which project from the surface of the string, causing often a harshness in the sounds emitted. This defect may be remedied thus:—Pour a small quantity of strong spirits into a shallow vessel, as a saucer, and light it, then draw the whole length of the string evenly and quickly over the flame of the spirits, which will consume all the outstanding filaments, after which, rub the string several times with a piece of gauze or taffeta. By this operation the string is rendered more elastic, and the tone is much improved.

Steel Strings.

Steel Strings are now employed for the Violin, and are quite common amongst the humbler class of players. Their tone is certainly "metallic," and their liability to rust has

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proved rather a disadvantage to their use. To meet this objection the strings have been coated with Nickel and Silver, but the string soon scales, rendering it little better than the plain steel strings. There is a Gold-plated first string, however, which can be used with advantage by those who are troubled with sweaty fingers, it possesses great durability, and remains always at pitch. No wire second or third strings ought ever to be used, as they utterly destroy the tone of a Violin, making it little better than a Banjo, and a good gut string is always much preferable to any one made of wire.

Covered Strings.

Covered Strings are formed from gut or silk, and have a covering of fine wire wound round their surface, which augments their mass. The wire is made of copper, silver, gold, gun-metal, or platina, as the case may be. Common Violin fourth strings are made of gut, upon which is twisted a covering of fine copper, or silvered copper wire, but for the execution of Violin solos upon the fourth string, silver wire is substituted, which is generally of remarkably fine quality, and wound so close and equal as to be scarcely perceptible. We have now fourth strings covered with a combination of metals, which tends to counteract the increase in pitch so prevalent in the old strings, arising from contraction and expansion.

In small manufactories the strings are covered by means of a small wheel, driven by hand, in the surface of which a small hook is inserted, for the purpose of holding one end of the string, whilst the other is fixed to a swivel. Another string is attached to this swivel, which passes over a pulley, and has a weight suspended, which keeps the string to be covered at a proper stretch; the wheel is turned, causing the string to revolve, upon which the thin wire is regularly and uniformly wound. In large establishments this ancient method is supplanted by intricate machinery, by which means enormous lengths of strings are covered in a few hours. An early patent for the manufacture of such strings, by a process somewhat

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similar to that already described, was obtained by William Lovelace, on January 31st, 1772, No. 1,001. The intestines, after having been scraped, soaked, and twisted, were bleached with sulphur and oiled, (the two latter processes being now discontinued in the manufacture of strings intended to be wire-covered,) after which they were covered in the following manner, as given by the patentee:—"Let two wheels, with grooves on their edges, be fixed on a frame close and similar to each other. Wind the string round the rim of one of these wheels, put the other end of the string through a hollow iron-turned stud, and fasten it to the rim of the other wheel, upon the other iron stud, whose bore must be in a line with the upper edges of these wheels or pulleys, so as not to draw the string from a right line. On the stud there must be a pulley, for the band of a large wheel, to move it round, and on the flat of this pulley must be a stud, with a bobbin filled with wire, to move round the stud with a proper degree of stiffness to bind the wire tight upon the string. When this pulley is set in motion, the end of the wire from the bobbin being fastened to the string, it will be wound round the string with very little strain upon the string, and as it winds round the string it will be conveyed from the wheel or pulley on which the string was first wound upon the other; by reason that the string but just fill the bore of the stud, weights or springs must be used to the two pulleys to give the string a proper tension." A patent for a method of making silk strings was obtained by Peter Nouaille, on January 22nd, 1774, No. 1,062. Raw silk of the finest and whitest quality is soaked in an animal or vegetable mucus, then spun into strings, after which they are varnished. A method of rendering gut, silk, or other strings waterproof, was patented by Isaac Hawkins, No. 2,446, November 13, 1800. A patent for an improvement in covering strings with gold or platina wire, was obtained by William Bundy, on April 24, 1811, No. 3,436; whilst in 1854, March 11, No. 589, John Maynard claims provisional protection for an improvement in covering strings, from wire made from a particular composition of metals.

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Characteristics of Good Strings.

A good Violin-string ought to be perfectly cylindrical from one extremity to the other, having a regular thickness throughout, and possess the necessary elasticity. A packet of strings upon being compressed, or bent together, ought not to change colour, or the united parts to break, but to quickly return to their original shape. They ought also to be transparent throughout their entire length, like a thread of glass, and possess no wavy or curled markings. The best second and third strings are of a transparent white; the firsts not being so white, but perfectly transparent. If the first strings are very white, we may safely assume that they have been made from the intestines of animals which have been prematurely used, or excessively bleached by the manufacturer. The strings should be now and again slightly oiled, preserved in oil-paper or bladder, and laid aside in covered tin boxes, in a dry place. For oiling the strings, a small piece of woollen or other cloth may be used, upon which a very few drops of olive or almond-oil are poured. If olive-oil is used, it should be purified by a mixture of lime and lead, until it is perfectly limpid. The first string should require a tension of 15 pounds to bring it to opera pitch; the second 17 pounds; the third and fourth about the same as the first.

We must carefully observe that the tone of any Violin is very perceptibly affected by the size of the strings, as if not in due proportion the one to the other, no uniformity of tone or power will be obtained. The peculiarities of the strings which prove individually suitable to the different classes of Violins must also be judiciously studied, as the instruments vary so much in this respect, that a string which is perfection to one is destruction to another, but generally speaking, all the ancient instruments require to be lightly strung, in order to effectively evoke their purity of tone, and freedom of vibration. If the strings are too thin or light, the tone of such will be weak and feeble, whilst on the contrary, if too thick or heavy, the sounds will be hard and coarse, and an unnecessary strain and pressure will be exerted on the bridge.

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Many of the common-class Violins require the strings to be *over*-tight ere they can be brought to pitch, causing endless ruptures, but a well-made Violin never requires this *over*-straining or tightening in order to bring it to pitch. The fingering also varies on some Violins, even although they may be of precisely similar lengths of finger-board.

From the preceding cursory remarks the reader will easily discern that the strings form an important item in the correct adjustment of the instrument.



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CHAPTER X.

VARNISHES, STAINS, ETC.

THE CREMONA Varnish! How many minds have been eagerly and enthusiastically bent upon the solution of the query as to the composition of this beautiful and diaphanous substance? Volumes have been written containing the authors' choicest receipts for this varnish, or rather its imitation, but with what result—despondency, for the common cry is, "The secret is lost, never to be regained." A few enthusiastic writers have even gone so far as to declare that the varnish made the Violin, or, in other words, that the superiority of our ancient instruments arose solely from the excellent qualities of their varnish—an idea so monstrous and opposed to reason, that they might, with equal probability, have concluded that a worthless Violin only required to be placed in the hands of an eminent player, in order to be transmuted into one of the finest and most bewitching-toned instruments which ever graced the orchestra.

That the varnish bears an important influence upon the quality of the instrument is not to be doubted, but this influence must be regarded in a modified degree. Would the so-called re-discovered Cremona varnish of Monsieur Grivel if applied to a faulty-constructed instrument, ever render it a good one? Never; for the fault, arising from malconstruction, would never be redeemed by the application of a coating of varnish. The Cremona varnish was considered by many makers to be composed principally of amber dissolved in some suitable fluid, which solvent had been unfortunately lost in oblivion, whilst others adopted a somewhat different theory by supposing the

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amber had been dissolved in oil, constituting the *old* "oil-varnish," of a somewhat similar nature to the common amber oil-varnish.

There is every probability for supposing that this ancient varnish was an oil one, or at least that the first coatings of varnish applied to the instrument were such, for Lupot, in his excellent work, confirms this, wherein he states that the substratum of the varnish should be "*bonne huile fine;*" and another fact of significant importance is, that in the letter of Stradivarius to a clergyman—a *fac-simile* of which is contained in the learned work of Fetis—he states, "*Compatira la tardanza del Violino, perche e stato la causa per la vernice per le gran crepate che il sole non le faccia aprire.*" "Pardon the delay of the Violin, occasioned from the varnishing of the large cracks, that the sun may not reopen them"—a delay which had been caused from the varnishing (drying). It is evident this had been an oil-varnish, as no apology would have been required if spirit-varnish had been used, on account of the shortness of time taken by it to dry. Monsieur Grivel—as well as August Reichers in his book, "*Die Geige und ihr Bau*"—states that alcohol removes the Cremona varnish—so it does, but this is no proof that the Cremona varnish was a spirit one. If we make a varnish composed of any resin which is soluble in oil or alcohol, such as common rosin, Venice-turpentine, Canada-balsam, etc., with a certain proportion of oil, and a solvent capable of dissolving both oil and resin, as spirits of turpentine, mineral naphtha, etc., we will find that this varnish, on drying, will leave a slight film of the gum or resin, which can easily be removed by alcohol.

As a proof of this, let the amateur try the following experiment:—Mix a small quantity of Venice-turpentine with drying-oil, and boil the mixture for a short time, then dissolve the product in mineral naphtha, when the result will be a beautiful golden-coloured varnish, that will give a good surface if applied sparingly, but will sink into the wood if used too thickly. This varnish, when dry, will be brought off immediately by pure alcohol. Mineral naphtha dissolves most of the resins, unites

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in all proportions with strong alcohol, ether, and the essential oils, and extracts the colour from numerous roots and woods used as stains in varnishes. The disagreeable odour of this solvent soon vanishes by evaporation; and from being a natural product in Italy, may it not, with every reason, be supposed that this formed one of the solvents in the oil-varnish of the old Cremona makers? From certain experiments made with a varnish composed of essential oils and gums, having naphtha as a partial solvent, I found the tone of a new Violin very perceptibly improved by the application of such varnish. I at first used one composed of gums dissolved in alcohol, by which the tone was rendered harsh and grating; whereas, upon the application of the former varnish, the volume of tone was not only increased in fulness, but a bland and sustained mellowness was combined therewith.

Several writers, including Prince Youssoupow, are of opinion that certain of the ethers were the chief solvents used in some of the amber varnishes of the seventeenth century. This may not be altogether erroneous, for although all the varnishes of the Cremonese artists were purely oil ones, or at least that their chief liquid basis was an essential oil, still in a minority of instances we find a spirit-varnish employed. Guarnerius sometimes used light spirituous varnish, but always to attain a harmonious result, and to be in keeping with the instrument. Stradivarius even made different varnishes, some much richer and prettier than others, but those varnishes all look as if made specially for the particular instrument they cover, for the simple reason that they are both in harmony. Peter Guarnerius had perhaps the richest, and the most beautiful varnish of all the ancient artists, but as his instruments are always highly built and heavily wooded, they are not nearly so effective as many of those of the other makers. There is no doubt that the ancient artists kept the secrecy of the varnishes amongst themselves, as Fetis observes that towards the latter end of the eighteenth century, one of the Amati family, who was employed in the workshop of Lupot, preferred to leave his master, rather than divulge his family secret—the method of varnish-making.

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There are however some of our modern varnishes which possess real excellence, as from specimens shewn me, there is every probability of genuine success in this formidable but important branch of the art, for they appear to embrace all the beauty, mellowness, and transparency of the varnishes of the ancient artists, although it will be for future amateurs to judge of their permanency.

The chief difficulty presented to the modern maker, is that fine translucency and transparency, as seen in the beautiful colours adopted by the Brescian and Cremonese artists. The chemistry of permanent colours—lost to us—was well-known to the ancient artists. Where amongst our painters are we to search for the artist who can decorate our walls with imperishable colours? Ages after our pigmy buildings will have crumbled into dust, and the cities enclosing them will themselves have become shapeless heaps of bricks and mortar, with forgotten names—long after that will the walls of Karnac and Luxor be still standing; and the gorgeous mural paintings of the latter will doubtless be as bright and vivid 4,000 years hence, as they were 4,000 years ago, and are to-day.

The Cremona makers had no doubt been led to adopt oil, as one of the chief constituents in their varnish, from the fact that such would tend to give the dissolved gums a certain amount of elasticity, which could never be obtained by the employment of alcohol *alone* as a solvent. The spirit-varnishes dry quickly, but unless mixed, their chief disadvantages are, their want of elasticity, and aptitude to crack and peel off, whereas in a mixed, or good oil-varnish, the former defect is greatly ameliorated, and the latter is almost entirely obviated. Oil-varnishes are also the most durable and lustrous, and yield better to the operation of polishing, than spirit-varnish. Whatever varnish is used upon a Violin, it ought never to be harder than the wood itself, when it is dry.

The following receipts for varnishes have been more or less used by Violin-makers. No. 1 was kindly given the Author by one of our most eminent Scottish makers, who obtained it from the well-known Hardies of Edinburgh many years ago. The

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following short description of the chief substances used in the composition of the varnishes may not be out of place here :—

AMBER is a fossilised vegetable gum or resin of the extinct coniferæ tribe, forests of which were abundant at an early epoch over Northern Europe. Anciently a fabulous origin was attributed to it, as from its having been found on the sea-shore after a tempest, it was believed to have been the solidified tears of the sea-nymphs, or of the sisters of Phaeton. It is generally found in irregular-shaped masses of no great size, the colour varying from a light yellow to a deep orange, having various degrees of transparency, some pieces being entirely opaque. The milky or cloudy-coloured pieces have the most value, as the clear semi-transparent pieces can be easily imitated by copal or other gums. To the varnish-maker the most transparent are equally valuable, as the milky-coloured pieces are used chiefly by the carver and turner.

By friction it becomes negatively electrical, indeed so much so, that the workmen in turning it are often affected by nervous twitchings, and are frequently obliged to change the pieces they are handling. Many animal and vegetable remains are to be often found embedded in some of the pieces, as insects, leaves, etc., specimens of which are to be found in our national museums. When heated it exhales a fragrant odour, hence its being a favorite with the meerschaum-pipe-maker; it burns with a yellowish flame, leaving a shiny bituminous deposit. Amber is found on the beach in Norfolk, Suffolk, Isle of Wight, and North of Scotland, as well as in parts of America and India, and in Prussia mines exist of this singular substance. It is also exported from Japan.

It is somewhat brittle, and breaks in conchoidal fragments. Absolute alcohol extracts about one-ninth of its weight of pulverised amber, and in pure chloroform it is dissolved with varying facility, whilst ether dissolves from ten to twelve per cent of it; it is also soluble in a mixture of alcohol and spirits of turpentine heated in a close vessel. Amber, after having been kept in a close vessel at a high temperature, becomes completely soluble in alcohol. There is no other substance

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used for varnish that can possibly equal that of amber, both in beauty, brilliance, and lustre, but being the hardest of gums, it requires to be specially treated in a particular apparatus for the purpose of melting it, a process which is not necessary for the other gums. This is a well-known fact, and we need only state that the Firm of Stantien & Becker, of Konigsberg, who virtually own the monopoly of amber on the coast of the Baltic, and have a large manufactory there for melting the amber, by extracting the acids, etc., will confirm every word I say upon this subject. The melted product is called *Amber Colophon*, it is made from pure fossil amber without the addition of any other substance, and may be obtained from the same Firm, viz., Stantien & Becker, 8 Falcon Avenue, London, E. C. It can be readily dissolved in hot oil.

No matter what the late Mr. Reade, or any of our pretentious and self-conceited Authors may say to the contrary, amber has for centuries upon centuries been known to be dissolvable; it is distilled every day and used in Medicine, Pipe-makers melt and mould pounds of it a time, along with other substances. In ancient times amber was simply fused over a fire of charcoal, being placed in deep glazed vessels, which were closely covered, and the contents inside moistened with rosemary, or other oil, or preparation, and when nearly melted, hot linseed or nut oil was poured upon it. Excellent utensils have now been invented, by which the amber is melted over an alloy of tin and lead, which fuses at the same degree of heat, viz., 550°. In the sixteenth century it was simply fused over a charcoal fire, as already stated.

At the present day amber or copal is steeped in chloroform, bisulphide of carbon, or petroleum, for 24 hours; it is then placed in a water-bath with a still, using iced water, and treated so as to evaporate the solvent; then by raising the still you make the solvent run back again to the amber or copal. After about an hour, allow it to cool, and add your turpentine or oil, raise the still higher than the retort and heat until all is dissolved. Lower the still and evaporate the chloroform and heat the turpentine until it boils. In about an hour the whole

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of the copal or amber will be dissolved. Before using the amber or copal, powder it, dry it for several hours at 120°, mix with equal weights of powdered glass and sand.* But there are now several really excellent Amber Varnishes in the market, one of which is *Whitelaw's Amber Varnish*, made by James Whitelaw, 496 St. George's Road, Glasgow.

BENZOIN, or BENJAMIN, is a somewhat costly gum-resin, and is but little used in varnishes. It is brittle, breaks with a conchoidal fracture and fuses at a gentle heat. It readily dissolves in alcohol, to which it imparts an agreeable odour. It is obtained from a tree which grows abundantly in the islands of Sumatra and Java, also in Cochin-China and on the coast of Malabar. The white tears, or those pieces possessing the least colour, should preferably be selected for varnish-making.

CANADA-BALSAM is obtained from a tree of the same name, which is very abundant throughout Canada. It is perfectly transparent, having an agreeable odour, and is wholly soluble in rectified oil of turpentine.

COPAL is a gum-resin which exudes naturally from a tree which grows in New Spain and the East Indies. In durability

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* It is rather amusing the way in which the late Mr. C. Reade, in a letter to the *Pall Mall Gazette*, of Aug. 31st, 1872, refers to my writings upon this subject. He says, " . . . Mr. Davidson, in a book of great general merit (?), is misled (!), so far as to put down powdered glass for an *ingredient* in Cremona Varnish. Mark the logic. Glass in a sheet is transparent; so if you reduce it to powder, it will add transparency to the varnish. Imposed on by this chimera, he actually puts powdered glass, an opaque and insoluble sediment, into four receipts for Cremona varnish."

In the above statements, Mr. Reade, had he known anything about Chemistry, as applied in the manufacture of Varnishes, would at once have seen that I was not "imposed on by this chimera" so far as he imagined, and he would also have understood that powdered glass is often used for aiding the solution of *the gums*, merely from its *mechanical properties*; it keeps the particles of the powdered gums separate in the solution, but no one would ever be so foolish as to imagine that the powdered glass is added under the impression of being *dissolved* by the alcohol, or other fluids, to give transparency to the solution. It is also often used in the filtration of acids. In the above quotation Mr. Reade is about as logical as he is in another of his conceited assertions, viz., that amber was not soluble for varnish-making!

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it ranks second to amber as a varnish, and when of excellent quality, is too hard to be scratched by the nail. It is only partially soluble in alcohol, but is freely so in ether. Fused copal is completely soluble in boiling alcohol, or spirits of turpentine. Copal is freely soluble in oil of rosemary, or spike-lavender, and the addition of any of those oils to alcohol promotes its solubility. It is also wholly dissolved in oil of turpentine, which has been ozonised or exposed for a length of time to the light. The clearest pieces are to be selected in the preparation of varnish.

ELEMI.—There are several varieties of this gum, but that which is imported from Ethiopia is the best and most valuable. Elemi is so liable to adulteration, that there is much difficulty in obtaining it pure. The common gum is of a yellow colour, but genuine Ethiopian elemi is of a greenish colour, mixed with reddish stripes, of a solid body, but softens by the heat of the hand, and emits a very agreeable odour, resembling fennel. It is wholly dissolved by alcohol, and is generally imported in pieces, which are surrounded by the leaves of the palm-tree or Indian cane. The addition of this gum to varnish promotes its toughness and durability.

LAC is a resinous gum which results from the puncture of a small winged ant, upon the twigs of various trees which grow is several parts of India. There are several varieties of this substance, distinguished thus: stick-lac, seed-lac, shell-lac, etc. Stick-lac is that which is allowed to remain upon the small branches; seed-lac, that which has been taken off such twigs, and this lac melted, and run into thin scales or plates, forms shell-lac. Seed-lac forms a strong and tough varnish, which is often applied to the Violin and Violoncello, but possesses little or no elasticity. Shell-lac is used in the common hard varnishes, and forms the chief ingredient in the various French-polishes. Lac is soluble in alcohol, in a solution of borax and hot water, ammonia, naphtha, etc. There is another species of lac, of a white colour, and opaque, which has undergone the operation of bleaching by chlorine. This variety is termed bleached-lac, and is now much used in the preparation of varnishes.

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MASTIC is a gum-resin, which exudes from the bark of a tree which grows abundantly in the Levant. It is generally sold in small round tears of a yellowish colour, which are transparent. It is freely soluble in alcohol, and oil of turpentine, and is employed chiefly to give toughness and hardness to varnish which is intended for polishing.

SANDARAC is obtained from a species of juniper which grows in Africa. It is usually in the form of elongated tears or drops, of a pale yellow colour, and is freely soluble in alcohol. If much of this substance enters into the composition of a varnish, it is rendered very brilliant, but soft, and is easily scratched by the least friction. It turns brown in oil and gives a warm glow to colours, it is melted in very hot oil.

TURPENTINE.—Of turpentine there are several varieties, as Chio, Strasburg, Bordeaux, Venice, Oil (spirit or essence) of, and the common turpentine. They are all obtained from species of pine or larch trees. The Chio turpentine is greatly esteemed, but is much adulterated. This species when pure has a warm and acrid taste, and possesses a strong balsamic odour. That of Strasburg is produced from a species of silver-fir of Bordeaux, of a somewhat similar nature. That of Venice is extracted from a species of larch, and is of the consistence of treacle or honey, whilst common turpentine is so well known as to require no description. The oil, spirit, or essence of turpentine is distilled from a mixture of the common or American turpentine and water, and is a clear, limpid, and colourless fluid, possessing an agreeable fragrance when newly prepared, or kept excluded from light, or the oxygen of the atmosphere. The foregoing include all the chief substances employed in the formation of the following varnishes:—

OIL-VARNISHES.

No. 1.

Amber, fused, ...	2 oz.
Oil of Turpentine, ...	5 "
Drying Linseed-oil, ...	5 "

Dissolve by heat.

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No. 2.

Amber, fused,	4 oz.
Lac,	1 "
Drying Linseed-oil,	4 "
Oil of Turpentine,	8 "

Dissolve the lac separately, then add the amber, and thoroughly dissolve by heat.

No. 3.

Clear and pale African copal,	1 lb.
Pale drying-oil,	1 quart.
Rectified oil of Turpentine,	3 pints.

Boil the copal and drying-oil till stringy, then thin with the turpentine, and strain immediately into the store jar. This varnish is hard and durable, and dries hard in from 12 to 24 hours.

No. 4.

Clear pale rosin,	3½ lbs.
Oil of Turpentine,	1 gallon.

Dissolve. This is the varnish generally used on the cheap Violins.

SPIRIT-VARNISHES.

No. 1.

Mastic,	1 dr.
Sandarac,	1 "
Lac,	6½ "
Alcohol,	5 fl. oz.

No. 2.

Gum Sandarac,	4 oz.
Seed-lac,	2 "
Mastic,	1 "
Benzoin, in tears,	1 "
Powdered glass,	4 "
Venice-turpentine,	2 "
Alcohol,	32 "

No. 3,

Seed-lac,	5 oz.
Sandarac,	2 "
Elemi,	1½ "
Venice-turpentine,	2 "
Powdered glass,	5 "
Alcohol,	24 "

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No. 4.

Mastic,	¼ lb.
Turpentine Varnish,	2½ fl. oz.
Alcohol,	1 pint.

This is the spirit-varnish so often seen upon the cheap German Violins.

The preceding varnishes may be coloured to any suitable shade by the use of the following substances:—For a yellow tinge, aloes, annotto, gamboge, turmeric, or saffron; any of the foregoing will give various shades of yellow. For red, use dragon's blood, or red saunderswood, and by a judicious mixture of the foregoing colours, almost any of the Violin tints may be obtained. The substances are to be allowed to soak in the alcohol until the desired amount of colour is produced, or a small quantity of alcohol may be used separately to extract the colouring matter, which may be made of a deep intensity. This can afterwards be mixed with the varnish until the proper colour is arrived at, observing that every coating of varnish adds a perceptible depth of colour to the preceding one. Madder and logwood are sometimes used for the various shades of brown. Some Violin-makers adopt quite a different method of colouring their instruments; thus, instead of colouring the varnish, they stain the Violin with the liquid stain or colour, and afterwards apply a light coloured varnish. The foregoing spirituous extracts would give such stains, or merely watery infusions, of several of the substances, laid on hot. Stephen's wood-stains have also been used for the same purpose, but the Violins finished by this method have always a painted appearance, and can be easily recognised from those which have been finished with the colour in the varnish, as by this latter means a certain transparency and harmony of colour is obtained, which can never be produced by the application of a wash of stain to the surface.

The amateur will require but few tools in the operation of varnishing, viz., a few brushes, tripoli-powder, or fine glass-paper, oil, etc. The brushes, if for spirit-varnishing, may be flat camel-hair ones. Those vary in size, being from a quarter-of-an-inch to five inches and upwards in breadth. A brush an

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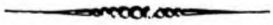
inch in diameter will be found large enough for general purposes, whilst a small camel or sable brush may be used for varnishing the scroll work of the hand, but the former brush, if carefully used, will answer for the whole manipulation. The brushes, after being used, may be dipped in methylated spirit, and afterwards pressed out between the thumb and finger, when they may be laid aside in a closely-fitting tin box. By this method they will be rendered clean, and adapted for instant use at any required time, as if this final washing is neglected, the brushes get quite hard, and the amateur will experience some difficulty in getting them properly cleaned, and even when they are so, the hairs have a tendency to get broken or loosened, and such loose hairs are certain to attach themselves to the first coatings of varnish. Care should be taken not to flood the brush with varnish, to spread the coating freely, lightly, and pretty quickly, as the varnish soon dries; to pass the brush over one part only once at a time, and never to return twice, or backwards over the same part, as if such has been the case, the part alluded to is sure to be rough and flaky when dry. The room, also, ought to be moderately warm, and free from floating dust or particles, or the varnish is almost certain to chill or bloom.

The first few coatings of spirit-varnish may be applied to the wood crosswise, although the final coatings must be laid on in the direction of the grain or woody fibres. When one coating is perfectly dry, another may be applied, always leaving a sufficient interval of time to allow the separate coatings to become thoroughly free from tackiness, when the rough surface left by the brush-marks has then to undergo the operation of polishing. This is the most tedious part of the work, and unless carefully conducted, is sure to be attended with anything but satisfactory results. When several coats of varnish have been applied and thoroughly dry, (no definite number can herein be specified, as much depends upon the quality and fluidity of the varnish, and the finish of the wood), the surface may be smoothed with glass-paper. A very small quantity of raw linseed-oil may be used with the glass-paper, which assists in hastening the smooth-

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ing of the inequalities, and tends to prevent heating by the friction. When the surface is thus rendered smooth, it may be wiped with an old silk handkerchief, to remove all traces of oiliness, after which several coats of varnish are to be applied, as already described. When dry, the polishing is again to be resumed as previously, then a coat or two of thinner varnish may be laid on, and afterwards polished with tripoli-powder and oil, until the surface is perfectly smooth and even, after which it may be rubbed with fine flour or starch, and finally polished with a piece of clean silk or flannel.

Several hours ought to elapse between the last smoothing and varnishing, as well as the final polishing, that the whole may have attained thorough hardness, otherwise an excellent lustre cannot be produced. The preceding remarks chiefly apply to spirit-varnish, the essential difference in oil-varnish being the length of time taken to dry, and the varnish being of a thicker consistence, necessitates fewer coats—one, in some instances being sufficient—but the amateur will readily understand this from the nature of the varnish he may be inclined to adopt.



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CHAPTER XI.

Miscellanea.—The Biter Bit.

A CURIOUS anecdote is related of a Violin-maker so skilful in his trade that he could imitate an old Violin to perfection. One day a Fiddler more eminent than honest, brought him a fine Cremona, and said, with a sly twinkle in his eye, "Mr. ——, I want you to make me an exact copy of this Amati." The maker, who knew to whom the Fiddle belonged, and guessed the object, promised to have it ready in two months. At the end of that time the player came, paid the money, and received the two Violins; but when he got home and examined them closely, he found they were *both* counterfeits, the clever imitator having kept the true Amati for himself.

Which is Which?

As a sequel to the foregoing anecdote M. Fetis relates to us a story of the marvellous capabilities and accuracy of Vuillaume, as an imitator of the old Cremonas. The story is based upon the authority of the great Violinist himself—Paganini—who appears in it. "On his return journey from a visit to England, Paganini, with dismay, observed the case containing his admirable Guarnerius fall from the roof of the diligence. The instrument had sustained manifest injury; but Vuillaume was in Paris; and Paganini, fixing all his hopes on him, entrusted his Violin to him, on descending from the vehicle. The repairs were made with all the care demanded by the beauty of the instrument, and the immense talent of the owner. Every minute trace of the accident was obliterated—

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and that which had been the confident of Paganini's inspirations was restored to its full charm and power. Whilst yet the depositary of so excellent an instrument, M. Vuillaume was tempted by opportunity to make a copy of it—such a copy as nobody might distinguish from the original. On the day appointed for putting the renowned performer in possesssion of his instrument, Vuillaume went to him, and, placing two Violins on the table, thus addressed him: 'I have so completely succeeded in obliterating every vestige of the accident sustained by your Fiddle, as to be quite unable to distinguish it from the other Guarnerius now beside it, which has been entrusted to me, and which bears a striking resemblance to it. You, who are well acquainted with your own instrument, will relieve me from this embarassment.' At these words, Paganini changed countenance—stood up in haste—seized a Fiddle in each hand—scrutinised and compared them both—and was struck dumb by their perfect resemblance. One hope remained; he snatched up his bow—sent it dancing alternately over the strings of the two instruments—drawing prodigies from each. Instead of dissipating his anxiety, this experiment only increased it. He strides about the room—his hands are clenched—his eyes are on fire! Vuillaume's triumph had reached its acme. 'Compose yourself,' said he,—'here is your Violin! and there—is the copy I have made of it. Keep them both as memorials of this adventure—and think, sometimes, on the restorer of your instrument!'"

The above tale is discredited by many, but I think without reason, for we know that King Albert of Saxony sent a Violin —which bore the date 1734, and had hitherto been looked upon as an undoubtedly genuine Stradivarius—to be repaired by Herr Paulus, of Markneukirchen; when, on a close inspecsion, it appears that the instrument is only a very excellent copy by Vuillaume, which has hitherto deceived all the experts who have seen it, even the late Apian Bennewitz having mentioned it in his book on the Violin, as a genuine Strad.

We must also bear in mind that the Violin sent by G. Gemunder, of Astoria, N. Y., to the Vienna Exhibition, the

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so-called "Emperor" Violin, was a puzzle to the Vienna Violin-makers and Violinists, who pronounced it a real J. Guarnerius, only freshened a little by Yankee tricks! I might also add that the celebrated Violinist, Sarasate, preferred a *copy* of an A. & H. Amati by August Gemunder, to the original one.

An Adroit Sell.

One day a gentleman called into the shop of Mr. Abraham Isaacs, with a Violin-case under his arm. He purchased a neck-tie, for which he paid three-and-sixpence, and then asked permission to leave his box while he did a few errands in the neighbourhood. Old Isaacs, a dealer in new and second-hand clothing, had no objection. "It is a Violin," said the gentleman, "which I prize very highly. It was given me by an old Italian who died at my father's house. I beg you will be careful of it, sir." Mr. Isaacs promised, and the owner of the precious Violin departed. Towards noon, while the old clothes dealer was very deeply engaged in the work of selling a suit of very old clothes for bran new broadcloth, a stranger entered the shop, a remarkably well dressed man, with a distinguished look. The Violin-case was in sight upon a shelf, and as no one was near to prevent him, the new comer slipped around, and opened the case, and took out the instrument, a very dark hued and ancient looking one. "Hallo," cried Isaacs, when he heard the sound of the Violin, "what for you touch dat, eh?" The stranger explained that he was a professor; that he was the leader of an orchestra; and that he could never see a Violin without trying it; and then he drew the bow across the strings, playing a few passages of a fine old German waltz. "My soul," he cried, after he had run his fingers over the instrument a while, "that is the best Violin I ever saw. There is not a better in England—a perfectly genuine old Cremona. I will give you twenty pounds for it." Isaacs said it was not his. "I'll give you fifty—a hundred." Mr. Isaacs was forced to explain how the Violin came to be left in his shop. The stranger had taken out his pocket-book and drawn forth a roll

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of bank-notes. He put them back, remarking:—"I must have that Violin if money will buy it. When the owner returns will you ask him to wait for me? If he cannot wait, ask him to meet me here at six o'clock. If he cannot do that, tell him to call at the office of the Treasurer of the Royal Academy of Music, and inquire for the director of the orchestra." Will you do it?" Isaacs said he would. "But," suggested the stranger, "you need not tell the man what I have said about his Violin, nor what I have offered, because he may have no idea of the treasure he possesses. You will be careful and circumspect." The stranger went away, and Abraham Isaacs reflected. In the course of an hour the owner of the Violin returned and asked for his box. But the "old clo'" man had been captivated by the golden bait. What would the gentleman sell his Violin for? At first the gentleman would not listen to the proposition, but after a deal of talk he confessed that he was not himself a professor, and could not well afford to keep such a valuable instrument. He would sell it for fifty pounds—not a penny less. Mr. Isaacs paid the money and became the legal possessor of the Violin, ready to take anything from two hundred to two hundred-and-fifty from the director of the orchestra, as he might be able. But the director did not come. At the end of a week Isaacs carried the Violin to a professional friend, and asked him what was its real value, before calling on the professor. "Five-and-twenty shillings, without the case!" Abraham Isaacs was strongly of opinion that the gentleman who left the Violin in his care was a swindler, that the director was a partner in the business, and that together they had made him their victim. That night old clothes went up ten per cent.

Fiddling.

Even Tom Hood is inexcusable for such a description of music as this:—"Heaven reward the man who first hit upon the very original notion of sawing the inside of a cat, with the tail of a horse." We never thought he could have been guilty of such *Violins* (violence).

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An Irishman's Description of the Fiddle.

"It was the shape of a turkey and the size of a goose, he turned it over on its back and rubbed its belly with a stick, and och, St. Patrick! how it did squale."

Sheer Strength.

Ole Bull was once seeing the sights at Donnybrook Fair, when he was attracted by the sound of a very loud Violin in a tent. He entered and said to the player, "My good friend, do you play by note?" "The divil a note, sir." "Do you play by ear, then?" "Never an ear, your honour." "How do you play then?" "By main strength, be jabers," rejoined Pat.

Sound-Posts.

Sound-posts made from glass tubes have been held in high estimation by several Violinists, and another ancient form of sound-post has been lately re-adopted and highly-extolled, as giving superior results to the one in common use, but this is very doubtful. The following is the method of making this latter form of sound-post. Drill a longitudinal hole through a square, clean piece of *cedarwood*, about ⅛ of an inch in diameter; now drill a number of holes crossways through two opposite sides, so as to have a space of about half-an-inch between each; then, in the other two sides of the square, drill a number of holes of the same size as the preceding, so as to pass through about the middle of the former spaces, in a direction thus crossways to the others; now reduce and cut the post to its proper dimensions, having the ends pierced, and fit to the Violin in the usual manner.

Bass-Bar.

A new and *original* form of bass-bar has been lately introduced by Mr. Walker (late of Donside). Upon its merits, the

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author hazards no definite opinion; but the following extract from one of Mr. Walker's letters, explanatory to the above, may prove acceptable to the reader:—"Instead of the bass-bar in common use, I have for some time past used another form of bar, which improves the instrument generally from twenty to thirty per cent. This bar consists of a piece of pine-wood cut on the slab—with the grain consequently running on the edge, of the following dimensions:—Length, 10 inches; breadth, ⅝ inch; and thickness, ⅛ inch. Bend the bar, and glue the flat surface to the inside of the Violin, in the usual place. I have always found this form of bar improve the instrument." No doubt this bar may cause mere *loudness* in tone; but as to *quality*—Query?

Marreppe's Automaton, or Self-Acting Violinist.

Several years ago there was exhibited before the Royal Conservatory of Paris a wonderful piece of mechanism by Monsieur Marreppe. M. Bruyere, who was an eye-witness, thus describes, in the pages of *Galignani's Messenger*, this unequalled Automaton:—Upon entering the saloon, I observed a neatly-dressed handsome figure of a man, to all appearance between forty and fifty years of age, standing with a Violin in his hand, as if contemplating a piece of music which lay upon a desk before him; and, if I had not gone to see an Automaton, I should have fancied the figure before me to have been possessed of life and intelligence, so perfectly natural and graceful were the attitudes and expression of countenance of the object. I had but short time for observation, before the orchestra was filled by musicians, and, on the conductor taking his seat, the figure instantly rose erect, bowed with much grace two or three times, and then, turning to the conductor, nodded, to signify he was ready, and placed his Violin to his shoulder. At a given signal he raised his bow, and, applying it to the instrument, produced, *a la Paganini*, one of the most touching and remarkable flourishes I ever heard, in which scarcely a semitone within the range of the instrument was omitted, and

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this, performed with a degree of rapidity and distinctness perfectly surprising. The orchestra then played a short symphony, in which the Automaton at times joined in a beautiful manner; he then played a most beautiful fantasia in E natural, with accompaniments, including a movement *Allegro molto* on the 4th string solo, which was perfectly indescribable. The tones produced were unlike the Violin, and beyond conception expressive. I felt as if lifted from my seat, and burst into tears, in which condition I observed most persons in the room. He abruptly struck into a *cadenza*, in which *the double* and *single harmonics*, *arpeggios*, on the four strings, and *saltos*, for which Paganini was so justly celebrated, were introduced with the very best effect; and, after a close shake extending *over eight bars*, commenced the *Coda*, a *prestissimo* movement, played throughout in three parts. This part of the performance was completely bewitching. I have heard the great Italian; I have heard the Norwegian; I have heard the finest of music, but I never heard such sounds as then greeted my ear. It commenced *p*, *f*, *p*, rising by a gradual *crescendo* to a pitch beyond belief, and then by a gradual *morendo* and *calando*, died away, leaving the spectators' completely spell-bound. Monsieur Marreppe, who is a player of no mean rank, now came forward amidst the most deafening applause, and stated that, emulated by the example of Vaucanson's flute-player, he had conceived the idea of constructing this figure, which had cost him many years of study and labour before he could bring it to completion. He then showed to the company the interior of the figure, which was completely filled with small cranks, by which the motions are given to the several parts of the Automaton, at the conductor's will, who has the machine so perfectly under management, that M. Marreppe proposes that the Automaton shall perform any piece of music which may be laid before him, within a fortnight. He also showed that to a certain degree the figure was self-acting, as, on winding up a string, several of the most beautiful airs were played, all with brilliant variations. But the *chef d' œuvre* is the manner in which the figure is made to obey the direction of the inventor, whereby it is endowed with a sort of semi-intelligence.

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The Lady Bass-Viol.

It was in the old days of stage-coaches, and one of those huge lumbering vehicles was plowing its way in a driving rain-storm, filled inside and outside with passengers. Among the number of the more fortunate insiders was a respected, bald-headed old gentleman, who seemed to be very solicitous about a lady riding on the roof. Every few minutes he popped out his head, regardless of the rain, and shouted to some one above, "Well, how is she now?" And the answer came, "All right." "Is she getting wet?" inquired the old man. "No; not much," was the reply. "Well, can't you put something round her. 'Twill never do to have her to get wet, you know." "We've got everything around her we can get." Have'nt you got an old coat, or a rug?" "No; not a rag more." A sympathetic young man, hearing all this, and feeling alarmed for the poor lady out in the storm, inquired of the old gentleman why they didn't let her ride inside, and not out on the roof. "Bless you, there ain't room!" exclaimed the old man. "Not room! Why, I'll give her my place. It's too bad." "Not at all, sir, not at all. We couldn't get her into the coach anyhow." Amazed at her prodigious dimensions, the kind young man said, "Well, sir, if my coat would be of any service, she may have it;" and suiting the action to the word, he took off that garment, and handed it to the old gentleman. "It's almost a pity, sir, to get your overcoat wet; but——" "Not at all, sir—by no means. Pass it up to her." The coat was accordingly passed up. "How'll that do for her?" asked the old gentleman. "Tip-top! Just the ticket! All right now." Thus relieved, no further anxiety was manifested about the outside passenger till the coach arrived at the inn, when what was the sympathetic and gallant young man's surprise and indignation to find that his nice coat had been wrapped around, not a fair lady of unusual proportions, but *a Double-Bass Viol.*

Cremona Fiddles.

Mr. Charles Reade, in an article in the *Pall Mall Gazette*, under the above head, writes as follows:—Nearly fifty years

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ago, a gaunt Italian, called Luigi Tarisio, arrived in Paris one day with a lot of instruments, by makers whose names were hardly known. The principal dealers, whose minds were narrowed, as is often the case, to three or four makers, would not deal with him. M. George Chanot, younger and more intelligent, purchased largely, and encouraged him to return. He came back next year with a better lot; and yearly increasing his funds, he flew at the highest game; and, in the course of thirty years, imported nearly all the finest specimens of Stradivarius and Guarnerius, France possesses. He was the greatest connoisseur that ever lived, or ever can live, because he had the true mind of a connoisseur and vast opportunities. He ransacked Italy before the tickets in the Violins of Franciscus Stradivarius, Alexander Gagliano, Lorenzo Guadagnini, Giofredus Cappa, Gobetti, Morglato Morella, Antonio Mariani, Santo Maggini and Matteo Bente, of Brescia; Michael Angelo Bergonzi, Montagnana, Thomas Balestrieri, Storioni, Vicenzo Rugger, the Testori, Petrus Guarnerius, of Venice; and fully fifty more, had been tampered with, that every brilliant masterpiece might be assigned to some popular name. To his immortal credit, he fought against this mania; and his motto was, "*A tout seigneur tout honneur.*" The man's whole soul was in Fiddles. He was a great dealer, but a great amateur. He had gems by him no money would buy from him. No. 91 was one of them. But for his death, you would never have cast eyes on it (in Kensington). He has often talked to me of it; but he would never let me see it, for fear I should tempt him.

Well, one day, George Chanot, Sen., who is, perhaps, the best judge of Violins left, now Tarisio is gone, made an excursion to Spain to see if he could find anything there. He found mighty little. But, coming to the shop of a Fiddle-maker, one Ortega, he saw the belly of an old Bass hung up with other things. Chanot rubbed his eyes, and asked himself was he dreaming. The belly of a Stradivarius Bass roasting in a shop-window! He went in, and very soon bought it for about forty francs. He then ascertained that the Bass belonged to a lady

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of rank. The belly was full of cracks; so, not to make two bites to a cherry, Ortega had made a nice new one. Chanot carried this precious fragment home, and hung it up in his shop, but not in the window; for he is too good a judge not to know the sun will take all the colour out of the maker's varnish. Tarisio came in from Italy, and his eye lighted instantly on the Stradivarius belly. He pestered Chanot till the latter sold it to him for 1,000 francs (£40), and told him where the rest was. Tarisio no sooner knew this than he flew to Madrid. He learned from Ortega where the lady lived, and called on her to see it. "Sir," says the lady, "it is at your disposition." That does not mean much in Spain. When he offered to buy it, she coquetted with him, said it had been long in her family; money could not replace a thing of that kind; and, in short, she put on the screw, as she thought, and sold it to him for about 4,000 francs (£160). What he did with the Ortega belly is not known—perhaps sold it to some person in the tooth-pick trade. He sailed exultantly for Paris with the Spanish Bass in a case. He never let it out of his sight. The pair were caught by a storm in the Bay of Biscay. The ship rolled; Tarisio clasped his Bass tightly, and trembled. It was a terrible gale, and for one whole day they were in real danger. Tarisio spoke of it to me with a shudder. I will give you his real words, for they struck me at the time, and I have often thought of them since. "*Ah! my poor Mr. Reade, the Bass of Spain was all but lost.*"

Was not this a true connoisseur? A genuine enthusiast? Observe, there was also an ephemeral insect called Luigi Tarisio, who would have gone down with the Bass, but that made no impression on his mind. *De minimis non curat Ludovicus.*

He got it safe to Paris. A certain high-priest in these mysteries, called Vuillaume, with the help of a sacred vessel called the glue-pot, soon rewedded the back and sides to the belly; and the Bass, being now just what it was when the ruffian Ortega put his finger in the pie, was sold for 20,000 francs (over £800).

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I saw the Spanish Bass in Paris twenty-two years ago, and you can see it any day this month you like; for it is the identical Violoncello now on show at Kensington, numbered 188. Who would divine its separate adventures, to see it all reposing so calm and uniform in that case?—*Post tot naufragia tutus.*

A Sleeping Musician.

The following instance of what our would-be *Savants* term "*double-consciousness*," "*unconscious cerebration*," "*latent thought*," "*ideo-motor principles*," "*cerebral exaltation*," and what not, is rather interesting, and is an abridged account from that of Dr. Abercrombie. A girl, seven years of age, employed in tending cattle, was accustomed to sleep in an apartment next to one which was frequently occupied by an itinerant Fiddler, who was a musician of considerable skill, and who often spent a part of the night in performing pieces of a refined description. These performances were noticed by the child as disagreeable noises. After residing in this house for six months she fell into bad health, and was removed by a benevolent lady to her own home, where, on her recovery, she was employed as a servant. Some years after she came to reside with this lady, the wonder of the family was strongly excited by hearing the most beautiful music during the night, especially as they spent many waking hours in vain endeavours to discover the invisible minstrel. At length the sound was traced to the sleeping-room of the girl, who was fast asleep, but uttering from her lips sounds exactly resembling those of a small Violin. On further observation, it was found that after being about two hours in bed she became restless, and began to mutter to herself; she then uttered tones precisely like the tuning of a Violin, and at length, after some prelude, dashed off into elaborate pieces of music, which she performed in a clear and accurate manner, and with a sound not to be distinguished from the most delicate modulations of that instrument. During the performance she sometimes stopped, imitated the re-tuning of her instrument, and then began exactly where she had stopped, in the most

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correct manner. These paroxysms occured at irregular intervals, varying from *one* to *fourteen*, or even to *twenty-one* nights, and they were generally followed by a degree of fever. After a year or two the music was not confined to the imitation of the Violin, but was often exchanged for that of a Piano, which she was accustomed to hear in the house in which she now lived; and she then also began to sing, imitating exactly the voices of several of the family. In another year from this time, she began to talk a deal in her sleep, in which she seemed to fancy herself instructing a young companion. She often descanted with the utmost fluency and correctness, upon a great variety of topics, both political and religious, the news of the day, the historical parts of Scripture, of public characters, of members of the family, and of their visitors. In these discussions she shewed the most wonderful discrimination, often continued with sarcasm, and astonishing powers of memory. The language throughout the whole was fluent and correct, and her illustrations often forcible, and even eloquent. She was by no means limited in her range, and Bonaparte, Blucher, Wellington, and other nobles of earth figured amongst the phantasmagoria of her brain. She was known to conjugate correctly Latin verbs, and spoke several sentences in French, knowing nothing of these languages in her normal state. When in her somnambulic state it was almost impossible to awake her, and when her eyelids were raised, and a candle brought near to her eye, the pupil was insensible to light as it almost invariably is in mesmeric, or somnambulic trance.

Of course such things would have been impossible to the girl in her natural or normal state. Such titles as "*cerebral exaltation*," etc., are ridiculous, for they convey no meaning whatever, they are in themselves physiological miracles and prodigies. Such scientists as give forth such absurdities must themselves be truly labouring under Hysteria. No man, no matter how gross and material he may live, can avoid leading a dual existence; one in this visible universe, the other in the invisible. The life-principle which animates his physical and mortal frame is chiefly in his *Astral body;* and whilst the

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merely animal portions of him rest, the more spiritual ones know neither bounds, limits, or obstacles. During the stillness of the silent night-hours, when our bodily senses are locked in sleep, our elementary body rests, but the Astral form, or Soul, becomes free. As Paracelsus observes:—"It oozes then out from its earthly prison and travels round the visible as well as the invisible." The more the body is exhausted, the more at liberty is the Astral form, and the more vivid the impressions of our soul's memory. In heavy sleep, dreamless and uninterrupted, upon awakening to outward consciousness, we sometimes remember nothing, but the impression of scenes and landscapes which our Astral body saw in its peregrinations are still there, though at the time lying latent under the pressure of our fleshly prison. They may at any moment be awakened, and during such flashes of our inner consciousness, or memory, between the cerebral ganglia of the brain and the photo-scenographic tablets of the Astral Light, a current is established. It is on the imperishable tablets of this Astral Light that is stamped the impress of every thought we think, and every act which we perform; and that future incidents—effects of long-forgotten causes—are already delineated as a vivid picture for the eye of the seer and the prophet to follow. *Memory*, which is the wonder of the materialist, the riddle of the psychologist, and the sphinx of science—is, to the true student of Nature, merely a term to express the power which man unconsciously exerts, and shares with many of the lower animals—to look with inner sight into the Astral Light, and there behold the scenes of past sensations and incidents.

The well-recognised fact, and one which is corroborated by three-fourths of the human race—that we often recollect as familiar to us, scenes and conversations, which we see or hear for the first time, and sometimes in countries never visited before, is a result of precisely the same causes. The deeper the trance, and the more lifeless the body appears, the clearer are the spiritual perceptions and the more powerful are the visions of the Soul. The organs of sight, smell, taste, touch, and hearing, are far more acute in a mesmerised subject deprived

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from exercising them bodily, than whilst he uses them in his natural state. The unbounded glorification of matter, the amorous diction about "wandering atoms," and "primordial forms," "interchange of protoplasms," "force correlations," etc., of our class-room lecturers will not do to solve subjects of this nature, for we must seek and study other works for corroboration than those of our present-day scholastic and sensational materialistic preachers.

We may herein also add that about two years ago, Mr. Harry Atkinson, the "Australian Orpheus," created no little amusement as well as astonishment, at the Oxford, London, by his clever imitation of the Violin, like the girl just mentioned, for the only instrument he uses is his mouth.

A Royal Pilgrimage.

It seems that the Duke of Edinburgh had to choose a rather novel mode of travelling, in order to be present as one of the First Violins in the "Dream of Jabal" performance at Plymouth, in 1892. The *Daily News* correspondent at that port says that the Duke was shooting at the Cornish seat of the Earl and Countess of St.Germans, and as he had to return to Plymouth in time for the Concert at that place, arrangements were made to apprise him in good time, when the train was signalled from the next station. The message was delivered at Port Elliot, but it failed to reach the Duke, who consequently missed the train. A special fish train was due almost immediately after. The Stationmaster at St. Germans stopped it, and the Duke travelled to Plymouth in the Guard's Van. His Royal Highness, who was much amused at the position in which he found himself, reached Plymouth in ample time for the Concert.

The Stradivarius Violin used by the Duke of Edinburgh at the Concert of the Plymouth Orchestral Society was recalled for the purpose from the Vienna Musical Exhibition. The instrument, which is extremely valuable, came to the Duke from the late Duke of Cambridge. The bow was received by

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His Royal Highness as a wedding-gift from the late Sir Thomas Gladstone, but had it been some poor man, Sir Thomas would have been the very last to have presented him with anything.

Great Violence!

"O' Rafferty," said Judge Duffy, of New York Police Court, "your wife swears you struck her with great violence." "Wid great Violins, how can that be, whin there is divil a Fiddle, big or little, on the praymeses? She exaggerates too much entoirely, yer Honour. It was wid me boot that I rebuked her, and not with any Violins."

Too Bad!

Enraged Musician (from the floor below), "Ach! Himmel! Tonner-und-blitzen! Leef off, assassin! Do yo not see dot Feetl is out of chune?" Top floor lodger (amazed), "Out of tune! What! Why, then, I've been swindled, that's all! I bought it new only six months ago!"

In Anxious Suspense.

A few years ago there was a Concert in the good old town of Dunfermline, and the audience comprised some amateurs from one of the neighbouring mines. In the course of the evening, the Paganini of the Orchestra stepped forward to play a Solo on the Violin. His ambitious selection was the famous "Carnival of Venice," through which he struggled, scraped, and sawed, with exemplary courage, and at the end he dropped his Bow and Fiddle by his side, right and left, and made obeisance, expecting a burst of applause, instead of which his ears were astonished by an exclamation from the back seats of:—"I say, Fiddler, are ye gaun to be a' the hale nicht tunin' that Fiddle o' yours? or are ye gaun to gie us a tune at a'!"

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In the Log or in the Plank.

A timber merchant was sitting in his office one day musing sadly over the terrible depression in trade, when a quiet-looking young man entered. "Do you sell beechwood?" asked the stranger. "Yes, sir," replied the timber merchant, rising with alacrity, and hoping devoutly to book a large order; "we can supply you with it either in the log or in the plank, for thousand feet lots we can make you a per centage." "Oh! I don't want so much as that," said the young fellow, shifting his feet uneasily; "I just want a little bit for a Fiddle-bridge!"

A Costly Stainer Violin.

A few years ago at a sale by auction at Dresden, one of the objects sold was the famous Violin which the Count Trautmansdorf, Grand Equerry to the Emperor Charles VI, bought from a celebrated maker, Stainer, on singular conditions. He paid in cash 66 golden caroluses, undertaking to supply him as long as he lived with a good dinner every day, 100 florins in specie every month, a new suit of clothes with gold frogs every year, as well as two casks of beer, lodging, firing, and lighting; and further, if he should marry, as many hares as he might want, with two baskets of fruit annually for himself, and as many more for his old nurse. As Stainer lived 16 years afterwards, the Violin must have cost the Count 20,000 florins in cash. The instrument, which was last in the hands of an Austrian nobleman, was sold to a Russian for 2,500 thalers (about £375).—*Daily Paper.*

The Amusement of Fiddle-Making.

The Rev. Wilse Brown, rector of Whitstone, Exeter, writes to the *Times*:—"Mr. Dunbar, a friend of my father, when on a visit here, told me that he found the fragments of a Violin in a private house, bought them for £20, glued them together,

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and found he had got a capital instrument. He was subsequently offered £150 for his own Fiddle, and £50 for the one he had glued, which he accepted. A gentleman named Jay, of good fortune, residing many years ago in Newcastle-on-Tyne, made several Violins for his own amusement. He was offered £600 for one of these, but not wanting money he refused to sell it, saying he might not make so good a one again. In Teesdale, the Durham and Yorkshire inhabitants for amusement make Violins. I lived there, holding the living of Egglestone for 22 years. My gardener's son made one, for which he was offered £3 by a gentleman from London. During repairs in my church some fine-grained old deal was taken down. The Fiddle-makers begged all of it from the churchwarden. The shoemakers there use a peculiar-shaped knife in forming the wooden soles of the shoes. The Fiddle-makers borrow these knives to shape the back of the Fiddle."

Satan as a Musician and Composer.

Amongst the many attainments attributed to that omnipresent, omniscient, and omnipotent allegorical myth, the Devil-deity, or god—for those words are substantially similar in etymological meaning—is that of Music. Our national poet has immortalised in verse the capabilities of the Gentleman-in-Black as an instrumental artist on Bagpipe and Fiddle, as he observes:—

> "A towsie tyke, black, grim, an' large,
> *To gie them music* was his charge;
> He screw'd *the pipes* an' gart them skirl,
> Till roof an' rafters a' did dirl,"

but his sympathies even appear aroused at the shadowy fair one—the ghostly semi-nude witch, Nannie, for the poet further states:—

> "Even Satan glowr'd an' fidg'd fu fain,
> An' hotch'd an' blew wi' micht an' main,"

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and in addition to the Bagpipes, the Violin claims his notice, for the same poet, in extempore verse, further states:—

> "The Deil cam' *fiddlin'* thro' the toon
> An' danc'd awa wi' the Exciseman,"

but leaving to the curious *the true* meaning of the Scottish term, "*fiddlin'*," herein alluded to, for the present we shall confine our attention to the Deil's supposed capabilities, not only as a Violinist, but as a musical composer, the story of which is told by Guiseppe Tartini, of Padua. It was this esteemed Violinist and Composer who *re*-discovered the phenomenon of *the third sound*—the sympathetic resonance of a third note, when the two upper notes of a chord are sounded. Tartini relates the following anecdote as the origin of his *chef-d'œuvre*, "La Sonata di Diavolo," or "The Devil's Sonata." "One night, it was in the year 1713, I dreamed that I had made over my soul to his Satanic Majesty. Everything was done to my wink; the faithful menial anticipated my fondest wishes. Among other freaks, it came into my head to put the Violin into his hands, for I was anxious to see whether he was capable of producing anything worth upon it. Conceive my astonishment at his playing a Sonato Solo, with such dexterity and grace, as to surpass whatever the imagination can conceive. I was so much delighted, enraptured, and entranced by his performance, that I was unable to fetch another breath, and in this state I awoke. I jumped up and seized upon my instrument, in the hope of reproducing a portion, at least, of the unearthly harmonies I had heard in my dream. But all in vain; the music which I composed under the inspiration, I must admit the best I have ever written, and of right I have called it the 'Devil's Sonata'; but the falling off between that piece and the Sonata which had laid such fast hold of my imagination is so immense, that I would rather have broken my Violin into a thousand fragments, and renounced music for good and all, than, had it been possible, have been robbed of the enjoyment which the remembrance afforded me."

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Ghostly Fiddling.

Meanwhile, that we are upon such weird music, it appears our friends—or rather the invisible musical performers upon the other side—cannot resist the impulse of reawaking themselves to a sense of earthly music, as the following report would appear to testify. It appeared in the columns of the "*Age of Progress*," October 29th, 1854, and is attested by five well-known, intelligent, and respectable witnesses, citizens of Cleveland, (Ohio):—

"Strange and interesting accounts having been given us of the spiritual manifestations occurring at the ghost, or spirit-room of Jonathan Koons, of Athens County, Ohio, the undersigned recently devoted a few days to visiting that place, and witnessing for themselves the wonderful phenomena there produced. From Cleveland, we went to Columbus by rail, and thence to Millfield, a distance of seventy miles, by private conveyance, over roads quite rough and hilly. Here we found two log-houses fitted up as spirit-rooms. These houses are about three miles apart, and each composed of a single room about twelve by fifteen feet in size. One house is on the farm of Mr. Jonathan Koons, the other on that of Mr. John Tippie, and both are used only for spiritual demonstrations, and were built under the direction of those ghostly beings. We stayed two nights at each place, and carefully examined each room and its contents to prevent any chance of our being deceived. ....On the table lies a Violin, Accordeon, Harmonicon, Tambourine, Guitar, Triangle, Dinner-bells, etc., and a tin trumpet about two feet long. In front of the long table stands a round one, about four feet in diameter.

"Circles are held in each of these rooms almost every evening, and occasionally in the day time. A full circle at Mr. Koons's consists of himself, wife, and eight children; at Mr. Tippie's, of himself, wife, and ten children. All are mediums in each family. They sit in a semi-circle around the tables, which are connected at the ends with the square table, or bench, which sustains the instruments. Behind them are

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benches, usually occupied by twenty or more strangers, who sit as spectators and auditors, and whose position enables them to command the whole scene. We attended four sittings in the evening, and a few in the day time. At these circles we were allowed to arrange the furniture, and to seat the persons present in such order as we pleased; and every facility was afforded us for carefully investigating all that transpired. During the circles, the following phenomena was produced: After the company was seated and the lights extinguished, the presence of the invisibles was manifested by several tremendous blows on the table, ceiling, and walls. The sounds were apparently made with the drum-sticks, but their force and frequency was almost deafening, and exceedingly startling. A *reveille* was beaten on the drums, which would do credit to experienced drummers. The Violin, an old one not worth fifty cents, was tuned, and in the process the pegs slipped, and the bridge fell upon the floor. These mishaps were immediately remedied by the spirits. One of the party found fault that the Violin was not tuned up to concert-pitch. Being requested by the spirit to give the true pitch, he did so, when the instrument was finely tuned again, and several airs played upon it, not with a bow, but *pizzicato*. All this time, the Violin was carried about to different parts of the room, and played sometimes, apparently quite up against the ceiling, and then resting against some one of the company. It was at one time placed *strings downward* on the knees of one of the party, and whilst his hands were groping in the dark all around it, so as to feel for the invisible performer, a tune was played upon it. The Accordeon, Harmonicon, Guitar, and other instruments, were also played in different parts of the room, or about our persons, as we wished. Sometimes all the instruments were played in full chorus admirably, and seemingly floating in the air. We also heard speaking, whistling, singing, and addresses through the horn. It would be impossible to convey any adequate idea of these musical performances; the time being strictly marked, now on the Tambourine, Triangle, Drum, Bells, etc., and the various instruments made to join in occasionally, playing solo and

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chorus alternately, produced a most pleasing effect. During the concert, words were frequently spoken through the horn, indicating that one of the invisibles presided over the performance. Also in this way, many amusing comments on the instruments and musicians were made, sometimes commending and sometimes severely criticising them..... At Tippie's room, however, the music is all produced by spirits, and is more varied and interesting than at Koons's. At the latter, Mr. Koons plays on the Violin at first, and the spirits accompany him; but at Tippie's the music is started, as well as continued, by the invisibles."

Then follow the signatures of the five witnesses, Crittenden, Richmond, Brown, Lewis, and Treat. Another account of "ghostly musicians" at Vermont, is given by Colonel Olcott in his work, "*People from the Other World.*"

We must be inclined to suppose, however, that in the above case, the spirits must have been "Darkies" of the Banjo-order, who perhaps descended from the upper spheres to remind Uncle Sam that the Harp was not their sole remaining joy in their new abode, as if the shades of Paganini or Neil Gow had been present, in all likelihood *the bow*, as well as the fingers, would have been applied to the strings with an intensity which would have failed not in claiming recognition and identity.

"THE LAND O' THE LEAL."

A short time before the death of James White (in 1888), who had been a porter for 40 years at Dunblane Railway Station, he sent for old John Rogers, a well-known Fiddler in the locality, who had for upwards of 30 years attended passenger trains with his Fiddle, between Stirling, Bridge-of-Allan, and Dunblane, and asked him to play at his dying bedside "*The Land o' the Leal,*" that pathetic song which fills with emotion the breast of every sensitive Scot:

> "I'm wearin' awa' Jean, like snaw on the thaw, Jean,
> I'm wearin' awa' to the land o' the leal,
> There's nae sorrow there, Jean, nae caul' nor nae care, Jean,
> The day is aye fair in the land o' the leal."

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This pathetic circumstance forms the subject of a small but excellent painting, by H. J. Dobson, a rising Scottish artist. The picture was exhibited in the Fine Arts Section of the Glasgow Exhibition, in 1888, where it attracted crowds of appreciative people.

A Desperate "Case."

A Scottish Fiddler, staggering home under the influence of the "Mountain Dew," which he had too freely imbibed at an evening party, where he had been employed, chanced to fall into a ditch by the roadside, and his Fiddle falling out of its case could nowhere be found. A Minister happening to pass by, and seeing the poor Fiddler floundering out of the ditch, shook his head in holy horror, and muttered:—"A desperate case, indeed, for broad, broad is the road that leadeth to destruction." "Hoots, man," says the Fiddler, looking up, "I wadna care a farthing for the *case*, if I could only lay hands on my Fiddle, and as to the *road*, I agree perfectly wi' you there, for it's nae the *length* but the *breadth* o't that has caused me a' this trouble an' doonfa'."

Donald's Description of a Fiddle.

During the last century a rustic Highlander, who claimed descent

> "From ta Hielan' hills,
> Ta lan' o' ta heather an' ta whisky gills,"

visited Glasgow, and for the first time in his life saw a street musician playing upon a Fiddle. The novelty of such a thing amused the Highlander greatly, so much so that when he returned to his mountain home, he never forgot to tell his neighbours some of the strange sights he had seen in Glasgow, the most notable one being, as he expressed it:—"A man playin' music on a muckle broon hen," confidently declaring to them that he "saw him put its heid under his chin, stretch oot its twa legs, and kittle its belly wi' a lang hairy stick. An' och! me," added Donald, "tat hen sang sae bonnie, bonnie!"

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Graphic Comparisons.

Over fifty years ago John Cameron was leader of a small but rather imperfect quadrille band in Edinburgh. Having been superseded by the services of other and better Fiddlers who had been engaged to play at a particular ball, the disappointed John passed the following severe and graphic remarks upon them:—"There's Geordie Menstrie, he plays rough, like a man sharpenin' knives wi' yellow sand; then there's Jamie Currie, his playin's like the chappin' o' mince collops—sic short bows he taks; and then there's Donald Munro, his Bass playin' is like the win' in the lum, or a toom cairt gaun doon Blackfriars Wynd."

A Mutilated "Strad."

In a letter from my late and talented friend, "The Harmonious Blacksmith," of *The English Mechanic*, he observes:—

"J. J. Hawkins patented an invention, in 1800, whereby he entirely removes the bottom or back coverings of the Pianoforte, and other analogous stringed instruments. Like most of us, when we discover a good principle, we at once proceed to carry it out to absurd lengths. So instead of making large sound-holes in the sides of his Fiddles, where they could do no harm, and were almost certain to do good (!!), he removed its dorsal region altogether, or, in other words, was cruel enough to cut its poor back all to pieces, just as if the 'Strad.' had been nothing more important than a common private soldier in the army of that very free people, the British, who used to make very free indeed with soldiers' backs—after which he inserted a stout wooden rib, or bracing-bar underneath the belly (substituting a spring for the sound-post), to resist the tension of the strings. I am bound to bear testimony that the tone did not seem much, if at all, diminished in mere loudness, although I cannot say much for its quality, but then of this my late friend's playing was hardly a fair test, for he did not quite rival Paganini or Mori, or my late friend, John Alvey

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Turner, whose tone surpassed that of either, for he could produce the fullest and most 'horny' tones I ever heard from a Violin or Tenor. So I being quite determined to ascertain if the bad quality of the tone the Fiddle without a back, commonly uttered, was due to its owner's and my bad bowing, I once took him with me to look at and try it, but the sight of the mutilated 'Strad.' so horrified my too impressionable friend—who had bought many a Fiddle for the same reason the Irishman (in the days of faction-fights) married his wife, viz., for the sake of her 'back,' which in the instance of Fiddles (if not of females) is generally understood by connoisseurs to be the region of beauty—that after looking over where its back ought to have been, he laid it down with extreme disgust. I think, poor fellow, he very nearly fainted away, nor could my utmost eloquence induce him to put horsehair across it. All the time we were riding home he descanted on the iniquity of so barbarously mutilating the work (worth, he said, at least a hundred guineas) of a man whom he venerated so highly that he named his eldest son, then a small boy, 'STRADIVARIUS' (a fact), so I returned no wiser than I went, but, alas, somewhat sobered by the consideration that I had a long ride on a very cold night, and was the cab-hire out of pocket for my pains."

THE MISSING STRING.

A Scottish Violinist, of well-known repute, used to tell the following anecdote. Having been called upon to play at a Royal residence upon one occasion, he betook himself to his private *Sanctum Sanctorum*, in order to supply himself with an extra Violin-string, in the event of breakages during the night's performance. He searched however, in vain, for a spare E string which he had left upon the table a few hours previously. His wife, it appears, had made a pudding, (Scotch dumpling) for their dinner, and not finding a piece of string wherewith to tie up the pudding-cloth, she had taken the Violin-string. She, however, informed her husband what she had done, observing that he would have the string after the dumpling was boiled,

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as it only required to be dried again to be as good as ever, but of this the husband was rather dubious. Judge of her surprise, then, when upon removing the cover from the pot, she found the dumpling floating loose through the water, and the string dissolved!

A Dinner from a Fiddle-String.

Another anecdote connected with Fiddle-strings and dietary purposes, is that of Dr. Arne. Upon one occasion the Doctor being in Edgeware, went into one of the Inns, when observing only a leg of mutton upon a spit, he ordered it for dinner, but the waiter informed him that unfortunately it was being cooked for a party in the house. In this dilemma, the ready-wit of the Doctor proved highly serviceable to him, so, taking a Fiddle-string, and cutting it into small lengths, he sprinkled it over the mutton, and walked into the Commercial Room. In a short time the mutton was served up to the party, but one of the gentlemen upon commencing to carve it, exclaimed to the waiter that it was full of maggots, and ordered him to take it away. This was what the Doctor really anticipated, so desiring the waiter to hand it to him, maggots and all, as Fiddlers had strong stomachs, he scraped off the pieces of string and enjoyed a hearty dinner.

A Painting for Fiddling.

In the life of Nollekens, Smith relates that he once found Colonel Hamilton playing so exquisitely on the Violin, to the great painter Gainsborough, that the latter exclaimed, "Go on, and I will give you the picture of the Boy at the Stile, which you have so often wished to purchase of me." This picture was a favorite work of the artist, and one which he prized so highly that he repeatedly refused to part with it. Gainsborough was also a famous player on the Violin and Violoncello.

"Coffins Stood Round like Open Presses."

Many years ago there existed a well-known character to the frequenters of the theatre—Hebden—who was an unrivalled

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performer upon the Bassoon and Bass-Viol, and who, for half a century, had stood like a statue in the corner of the Orchestra at the Old Drury. In his capacity as a teacher, he attended at the upholsterer's shop in King Street, to give young Tom Arne instructions. Calling one morning upon his pupil, he observed the shop closed, but upon a minute inspection he found the youth inside, occupied in playing the Violin, and having his music supported upon a Coffin. At such an inconsistent spectacle, Hebden was impressed with the most solemn feelings, but those were soon aroused to utter horror when he discovered that the Coffin actually contained a body within it. He fled with the most headlong precipitation, and never afterwards could he be induced to repeat his visits.

A Historical Violin.

The Violin used by Mr. Macquarrie at a Temperance Soiree at Tobermory, last year, has been in the family for 101 years, having been given to the late Colonel Macquarrie (father of Captain Macquarrie), by the great Fiddler, Neil Gow, in 1793, in exchange for a Cremona. It accompanied Colonel Macquarrie during the taking of the Balearic Isles; in Egypt in 1801; when engaged against the French at the siege and capture of Burgos; at the battles of Orthes, Toulouse, Salamanca, Vittoria; at the siege and capture of Badajos, where the Colonel was wounded; in the Peninsular War; at the retreat and battle of Corunna, when it was saved by being carried by the Colonel on his back under his military cloak, when an order had been given to the army by General Sir John Moore to throw away everything that might impede their flight. It has since then travelled with Captain Macquarrie, son of Colonel Macquarrie, in many parts of the world.

A Weird Concert on the Pyramid.

In the year 1876 the celebrated Norwegian Violinist—the late Ole Bull, who was born at Bergen on the 5th February, 1810—celebrated his birthday under rather peculiar circum-

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stances. Having had an interview with the King and Queen of Sweden, the latter spoke very favorably of one of Ole Bull's best compositions, "Saeterbesog," which was also her favorite as well. A rather strange idea occurred to the King, who immediately proposed to the Artist, that as his intended tour was likely to extend beyond Europe, he should play this very piece upon the top of the old Pyramid of Cheops! stating that such a thing had never before taken place. Ole Bull agreed to this proposal, and the 5th of February—the Artist's sixty-sixth birthday was decided upon as the day upon which this Pyramid Concert should take place.

Soon after this Ole Bull set out on his tour, he took ship at Brindisi for Egypt, in company with the Court Pianist, Bach of Berlin, and other Artists. They landed at Alexandria upon the 4th of February, and at once proceeded to Cairo. Early in the morning of the 5th, Ole Bull along with his friends and fellow-Artists drove to the Pyramid, where they arrived about 10 o'clock. The company now broke up into two different sections, those who were to ascend the Pyramid and those who preferred to remain below. The latter party was greatly in the minority, consisting only of a few ladies and elderly gentlemen. Ole Bull, although decidedly the oldest of the party, ascended with much agility, refused all assistance from the Bedouins, who are always ready to aid the traveller, but he accepted their help for carrying his Violin, by choosing two of the strongest of them to carry it to the top, placing them in front of him all the way. They reached the summit in a quarter-of-an-hour, and greeted the Norwegian flag, which the Consul had caused to be hoisted. The other members gradually reached the top, and the Bedouins climbed and clambered up upon all sides, for they had been informed that a European King in the far-away North had sent a "Playing Man," to play a "Fantasia" upon the top of old Cheops.

Taking the Violin from its case and playing a few chords, to assure himself that it was uninjured by its perilous journey, then rising to his full height, he looked out upon the world below him. When he commenced to play, it was as if he

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uttered a joyful outburst of gratitude to that kind Fate which had given him the delight of standing there and viewing this wonderful panorama — the ambition of so many—then he turned to the North—that mystic North—to the direction of his native land, and began playing his own composition. In the pure still air of this high altitude the tones sounded so transparent, so limpid and clear, and again so strong, mellow, and powerful, that one felt enchanted and carried away, as if by some weird Magic power. Now one listened as if to the clear delicate voices of young girls, now to a sighing as it were for his native mountains, and again to the triumphal song of a hero, proud of his country. The Bedouins, those hardy children of the desert, who, during his performance had remained motionless as statues, sprung up when he had finished, as if electrified, and gave vent to their admiration in repeated shouts of "Allah! Allah!"

Having thus fulfilled his promise, Ole Bull, immediately upon his return to Cairo, telegraphed to the King to this effect, and received a reply the next day. This Cheops Concert soon became known in Cairo, the Khedive himself gave an audience to the Artist, and complemented him on his courage and youthful vigour. A Concert was given in the Opera House, and Ole Bull earned rich laurels; flowers, garlands, and even poems being showered upon him. He was especially successful in his rendering of the "Carnival de Venice," which exemplified his almost incredible brilliancy of execution, but his "Norwegian Alphen Song" he never played again!

New "Old" Violins!

A "factory fashion" to readily deceive purchasers of Violins has made its appearance quite familiar nowadays, and the utmost care is recommended when purchasing so-called "old" Violins. A factory of musical instruments in Saxony labels its Violins, made "old" artificially, by pasting on the inside a seemingly old paper, printed with old type, bearing the words: "Antonius Stradiuarius Cremonensis—Faciebat Anno 1712." The 12 is written with pale ink. The paper also bears the

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mark of the celebrated Cremona Violin-maker—the A. S. with the cross. The factory sells those Violins at a price which answers the quality of the goods. By the adoption of this "factory fashion," the door is thrown wide open for fraud and deceit, when Violins marked as above are in the hands of unprincipled persons.

The above warning appeared in different German trade papers. But we have something additional to say to this. Just a few years after the first edition of my Violin book was published, being in the shop of the late Mr. Millar, Violin-maker, in St. Andrews, one day, I found him busy cleaning out the inside of several strange and uncouth looking Violins. Looking upon the inside of the backs of the Violins—the bellies having been removed—I found them ticketed with handwritten lables, written in ugly brown ink, denoting that the Violins had been made by J. Stainer, the Amatis, Bergonzi, etc., etc. Mr. Millar smiled upon seeing me looking at them, and said :—"Mr D. I am afraid your late book on the Violin is doing harm." "How is that?" said I. "Well," says he, "here's a half-a-dozen Violins I received the other day for cleaning, from a certain gentleman in the Braes of Cupar Angus, all having been recently labelled with exact copies, to the year even, of some of those you have given in your Violin Book. The fact is the party told me he had copied them out of your book." This was certainly wholesale cheating with a vengeance, but *Verbum sat sapienti.*

FIDDLE ENVY.

Busts, cameos, gems—such things as these
Which others often show for pride,
I value for their power to please,
And selfish churls deride;
One Stradivarius, I confess,
Two Meerschaums, I would fain possess.

O. W. HOLMES.

TROUBLES COME IN SHOWERS.

"A catastrophe that happened to a certain amateur Fiddler was so complete and extraordinary that it seems almost

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incredible. Nevertheless, its truth is vouched for. He is an enthusiast, and was in the habit of practising on his instrument in his bedroom, before breakfast. One dark morning he was so employed, with his Music placed in front of the looking-glass on the dressing-table, and a lighted candle on each side. On the floor immediately behind him was his sponge bath, filled with the water he had just been using. When in the middle of a difficult page, the Music sheet suddenly toppled over against one of the candles. Making a quick movement to prevent a conflagration, his Violin escaped from beneath his chin and slipped over his left shoulder, and in trying to save it from falling he caught his heels in the bath and sat down in the middle of the water, right on the top of the instrument. His bow was snapped in two, and, as the lace window-curtains had caught fire, it required all his energy and presence of mind to extinguish the flames and save the house.

"Now, all this combination of disasters took place in less than a quarter of a minute, and when the Violinist had succeeded in putting out the fire and was able to contemplate the damage, one would have almost forgiven him if he had used language that is not heard in the drawing-room; but he was a man of philosophical temperament, and possessed of a strong sense of humour. He therefore indulged in laughter so loud and boisterous, that a friend who went to his room to see what was the matter feared he was suffering from Hysteria, or had taken leave of his senses."—*Tit-Bits.*

Musicians' Epitaph.

Ah! what avails, when wrapped in shroud and pall,
Who piped, who fiddled, or who sang the best?
What are to me the Crotchets, Quavers, all,
When I have found my everlasting *Rest?*

Multum in Parvo.

"Jamie, man, ye widna believe it," said a parental Fiddler one day to his son, to whom he was imparting the mysteries of the scales and the difficulties attendant upon their performance, "ye widna believe it, hoo terrible it grunts if ye only pit ye'r finger half-an-inch ower laigh or ower heigh upon the string."

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Fiddling under Difficulties.

Amongst the many accomplishments of Blondin, the famed French acrobat, may be included that of instrumental music. Fancy a man with his feet on the ends of pitchfork handles, the prongs downwards, and then ascending a rope high in the air, as easy as a Peon, or a Guacho would mount a horse, only, instead of bestriding the rope with his legs, he bestrides it with the prongs of the pitchfork stilts; fancy him dancing, cutting capers, turning somersaults, and running up and down inclined ropes, at angles of thirty and forty degrees with his stilt prongs; fancy him playing the march from "Guillaume Tell" on the Fiddle, and playing it *a la Vieuxtemps*, dancing all the while to the tune on his rope, and turning the most complicated somersaults, without once stopping his performance—bow-arm, as well as left-hand fingers, going all the time with the steadiness of clockwork and the velocity of steam. In like manner with a drum which he plays with a vehemence and rapidity equal to half-a-dozen drummers, he never misses dancing to time, or stops for a single instant his deafening tattoo, whether turning backwards or forwards, or springing high into the air.

"Music hath Charms, etc."

An anecdote is related of an adept of the needle journeying home about "the wee short hour ayont the twal" from a ball-room party, where he had been using the *bow* instead of the *goose*. Upon passing through a field of cattle he was attacked by an infuriated bull. After several efforts to escape, he attempted to ascend a tree; not, however, succeeding in the attempt, a momentary impulse directed him to pull out his Fiddle, and, fortifying himself behind the tree as well as he could, began to play; upon which the enraged animal became totally disarmed of his ferocity, and seemed to listen with great attention. The affrighted tailor, finding his fierce and formidable enemy so much appeased, began to think of making his escape, left off playing, and was moving forward. This, however, the bull would not suffer; for no sooner had the tailor

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ceased his fascinating strain, than the bull's anger appeared to return with as much rage as before; he, therefore, was glad to have recourse a second time to his Fiddle, which instantly operated again as a magic charm upon the bull, who became as composed and attentive as before. He afterwards made several more attempts to escape, but all in vain; for no sooner did he stop his Fiddle, than the bull's anger returned, so that he was compelled to keep Fiddling away, till near six o'clock, when the family came to fetch home the cows, by which he was relieved and rescued from a tiresome labour and frightful situation.

A similar story is related of the celebrated Scottish Violinist, Neil Gow, whose accomplishments with the bow seemed, like Orpheus of old, to have charmed both man and beast. The only difference in this case was that Neil kept his face to the foe and backed towards the road, jumped the dyke and was out of danger, after which he coolly placed his Fiddle in its bag, at the same time saying to the bull:—"If it's Scottish Music ye want, Mr. Hornie, I can gie ye plenty o' that ony day ye like."

Cruelty to Animals.

A favorite cat belonging to Mr. B. M. Carrodus, son of the late well-known Violinist, has experienced the truth of an indisputable fact—that the tender mercies of burglars are utterly fiendish. Mr. and Mrs. Carrodus left their home in Camden Town to visit some friends. Somehow their absence became known to the local burglars, who promptly entered the premises by way of the coal-cellar. Once inside, they gathered together all the linen and silver they could lay their hands on, they then made themselves free with the larder, and, impressed by some hellish desire for cruelty, they finished up their proceedings by putting the cat in the oven, whilst it was still hot. But those infernal Neros of Camden Town will look rather stupid, when we tell them that in their haste to inflict such wanton cruelty upon a harmless favorite, they altogether over-

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looked a very valuable Stradivarius Violin, which was worth much more than all the booty they took away.

Talking of this cruelty to a cat reminds me to say that in contradistinction to the above, in 1891 Mrs. Ole Bull obtained 150 signatures at the Session of the National Council of Women, to a pledge not to wear the bodies or feathers of birds, because of the cruelties practiced by those who supply them.

Music or Gossip.

Mrs. Fashionable:—"I am going to give a very nice leetle reception next Thursday evening, and I would like some music, Violin Solos in particular. What are your terms?" Prof. Fiddle-de dee:—"Eef I go zere seemply as a musician, und blay my selections, and then leef, I gharge twenty-fife tollars; but eef I must go as a guest und spend ze whole evenings talking to one pack of ceevelised fools, then I gharge feefty tollars."

Scotia Awake.

At last we are glad to see that Old Scotia is beginning to wake up, after such a sound snooze of several hundred years. Nearly two years ago, upon a Sunday evening in a certain well-known Church in Dundee, might have been heard a Violin Solo—Beethoven's Romance in G—which was performed during the service, accompanied by the Organ. The Soloist also accompanied the Anthems and Hymns. The Violin used was a well-preserved *Gaspar di Salo*, the grand tones of which swelled out exquisitely above the Organ.

Violin or Fiddle.

Boy.—"Is this instrument called a Fiddle or a Violin?" Professor.—"Ven I blay it, its's a Violin; ven you blay it, it's a Feedle."

Second Fiddle at Home.

"Rosin is a remarkably fine Violinist." "He is indeed; but there is something strange about his Musical ability." "There

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is?" "Yes; he plays *first* Fiddle in the Orchestra, but plays *second* Fiddle at home, and his wife isn't much of a Musician either."

Music in Heaven.

Little girl (during a thunderstorm). "Mamma, can you tell me if they have any Music in Heaven?" "Yes, my dear." "Well, then, I guess Wagner must be leading the Orchestra there."

The Greenback Fiddle.

Any person almost knows that there is money in old Fiddles. Should you want to invest in an old Fiddle, come to Philadelphia, the quiet city of Quakers and Cobblestones. A Violin was recently bought there for 80 cents (about 3s. and 4d.), and fetched $1,780 (£356). No connoisseurs, experts, or Fiddle-Dealers, were needed to confirm the reality of its value, for the Fiddle was stuffed full of Greenbacks. The discovery of this treasure was as strange as its existence. The buyer of the 80 cent Fiddle attempted at different times to play upon it, it refused all his efforts, whereupon he smashed it to pieces with the Stove-lifter, when, lo! out fell the Greenbacks.

The Stradivarius Distemper.

"I understand," said Mrs. Connoisseur, as she swept into her box at the Chicago Auditorium, "that Max. Benedix is to play the Solo parts to-night." "Ain't that *so* nice?" responded Mrs. Parvenu; "he's a regular masterpiece on the Fiddle." "Ahem, yes, but did you hear that he has a Stradivarius?" "No! is it possible?" "I heard so." "Where did the poor unlucky fellow get it?" "They say that he got hold of it a year or two ago in Europe." "Well, that's just simply awful. Can't the Doctors do nothin' for him. I guess he'll go, just like Barrett. Seems as if the Cholera, Colonel Forbes (cholera-morbus), Eppy Lepsy (epilepsy), and all them dreadful diseases comes from Europe, and"—the rest was utterly drowned by the beating of the Kettledrum.

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One Scraper Enough.

Foote, being annoyed one day by the strains of an itinerant Fiddler, sent the man a shilling, and requested him to go away, saying that *one scraper at the door* was quite sufficient.

Proper Distinctions.

"I wish you would tell me the difference between a Fiddler, a Violinist, and a Virtuoso?" said Mrs. Duke to her husband. Mr. Duke replied:—"I will. A Fiddler plays for nothing, a Violinist gets five dollars for an evening's work, and a Virtuoso receives fifty dollars for one piece."

A Musical Diary.

Extract from the Diary of a Musical Artist. "After having slept *Dolce*, I rose from my couch *Allegro*, *Ma non troppo*, dressed *Poco*, and entered *Allegretto* the breakfast room, where I arrived *a Tempo*, to see my wife pour out the coffee *Andante grazioso*. I asked her *con Sentimento*, how she had rested; she answered *Molto vivo*, with her beautiful flageolet voice, and gazing at me the while *Expressivo*, with her bright blue eyes. Suddenly I heard at first *Pianissimo*, then *Piano*, at last *Crescendo* knocks at the house door. The house servant opened, and in entered *Maestoso*. a man who asked *con tutta forza* if he might speak to me. I rose *Ritardando*, opened *Adagio* the door, and beheld my Tailor. He requested at first *Rallentando*, then more *Stringendo*, the payment of his bill. This made me *Furioso*, and I declared *Resoluto* that I was low in cash, and threw him downstairs *con strepito*.

Dr. Johnson's Opinion on Music.

It is a well-known and well-authenticated fact that the famous Dr. Johnson had, to put it mildly, a very defective ear for music; in fact he positively hated it. Having once been induced to go to a Concert at which a very elaborate Violin Concerto was played, the Doctor asked his next neighbour (a lady) what it all meant. This was naturally rather a poser

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for the lady to answer off-hand, and she merely remarked that it was a very difficult work to play. "Difficult indeed," said the Doctor, "I wish with all my heart it had been impossible!" When a lady once asked Dr. Johnson if he liked music, immediately after she played a Violin Solo, he replied, "No, Madam, but of all *noises* Music is the least disagreeable!"

Slow Playing.

A Music Teacher who lives in a small town in Central Ohio tells a delicious story, which goes to shew what unappreciative ears classical Music sometimes falls on, when the owners of such ears think that nothing is good Music unless it is "fast and lively." The incident occurred during a Concert given by August Wilhelmj, the great German Violinist. Wilhelmj, as is known by Musicians, particularly excels in rendering *Andante* or *Adagio* movements, containing much pathos and deep feeling. The proprietor of the Town-Hall had heard of the great artist, and although he had no more idea of what the performance of a Solo Violinist of the first rank would be, than he had of the present system of political economy on the planet Mars, bethought it would be a paying speculation to engage the great Violinist for a Concert, and accordingly did so at a price which looked ruinous to his townsmen. The attendance on the night of the Concert proved, unfortunately, that the musical culture of the place was not sufficiently advanced to fill the house, for there was only a handful of people in the Hall at 8 o'clock, the time for commencing the Concert. The Music Teacher who tells the story arrived after the Concert had commenced. He found the manager taking tickets at the door. "Well, Jim," he asked, "how's it going?" The manager looked up with an air of deep dejection. He said nothing, but plucking his friend's sleeve, he led him silently to the door of the Hall, and opened it and looked in. Wilhelmj was playing a soulful Adagio. As he drew his bow slowly across the strings he drew forth tones which seemed almost like melodious sobs in their sweet pathos. His great lemon-coloured Stradivarius Violin seemed to sing almost like

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a thing of life. The few people who were there sat entranced and breathless, drinking in the matchless tones. "Well, you see for yourself, Profr.," said the manager to the Music Teacher, "I'm paying that chap $300 for this Concert, and lookee how slow he's a playin'."

THE OLD VIOLIN.

Tho' minus its bridge, and tho' broken its bow,
It tells me a tale of the dear long ago;
Like a shell from the sea or a stone from the rill,
Tho' battered and dusty, it sings to me still.
Its varnish is cracked, and no more thro' the days
That wearily pass for the public it plays,
But I easily hear, as the twilight steals in,
The long vanished tunes of the old Violin.

And out from the Past comes the tripping of feet
Where softly the shadows of eventide meet;
The curtains of Memory rise to disclose
Some faces that rest beneath lily and rose.
To me like a strain from a tropical clime
Some music floats back o'er the vistas of time,
And I know, as I wait for the dance to begin,
'Tis an echoing note from the old Violin.

The eyes that grew bright at the tunes that it play'd
Are peeping at me from life's sunshine and shade,
And out of the depths of the heart's "long ago"
Come the laugh of the belle and the kiss of the beau.
I turn with a smile at the music I hear,
For every note as an anthem is clear;
Can it be that I dream? Ah, that musical din
Most certainly comes from the old Violin!

No more will it play as it play'd in its time,
'Neath the hand of a master who died in his prime;
But ever to me of a youth-time it sings,
And fingers unseen often play with its strings.
I know that it carries the marks of the years;
I know that to many it worthless appears;
But I cherish it now above all earthly kin,
And love forms a crown for the old Violin.

T. C. HARBAUGH.

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A Country Fiddler.

A rustic Paganini was so fond of accompanying his performance on the Violin *con spirito*, that it frequently brought him into many *scrapes*, as well as distress. A gentleman, meeting him one day, looking very *doloroso*, said, "Why, Jack, what ails you? isn't your Fiddle in *tune?*" "No, sur," replied Jack, "it be in *pawn!*"

Cutting off the Fiddler's Head.

A very singular merriment in the Isle of Man is mentioned by Waldron, in his history of that place. He says that "during the whole twelve days of Christmas there is not a barn unoccupied, and that every parish hires Fiddlers at the public charge. On twelfth day the Fiddler lays his head in some one of the girl's laps and a third person asks who such and such a maid should marry, naming the girls then present one after another, to which the Fiddler answers according to his own whim, or agreeably to the intimacies he has taken notice of during this time of merriment. But whatever he says is as absolutely depended upon as an oracle; and if he happens to couple two people who have an aversion to each other, tears and vexation succeed the mirth. This they call 'Cutting off the Fiddler's Head;' for after this he is dead so to say for the whole year."

Edicts against Fiddling.

An idea may be formed of the strictness with which all popular amusements were prohibited, when the Puritans had the ascendancy, from the fact that in 1656-7, Oliver Cromwell prohibited all persons called Fiddlers or Minstrels from playing, fiddling, or making music in any Inn, Ale-House or Tavern, etc. If they proffered themselves, or offered to make music, they were adjudged to be rogues and vagabonds, and were to be proceeded against as such.

Dr. Johnson's Opinion on Fiddling.

"There is nothing, I think," says the unmusical Doctor, "in which the power of art is shown so much as in playing on the

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Fiddle. In all other things, we can do something at *first*. Any man will forge a bar of iron, if you give him a hammer; not so well as a smith, but tolerably. A man will saw a piece of wood, and make a box, though a clumsy one; but—*give him a Fiddle and a Fiddle-stick, and he can do nothing.*

A "STRAD" DEVOTEE.

About a year ago there died in San Francisco an aged Musician who, though his last years were passed in the direst poverty, possessed two treasures, the sale of which would have made his old age comfortable. These treasures were a Stradivarius and a Seraphino Violin. If a price could be placed upon them, the one might be estimated at £1,000, the other at £100. Yet, at 90 years old, Beaujardin preferred to eke out a bare existence for his aged wife and himself by giving music-lessons, rather than part with those two Violins. Wrapped in silken handkerchiefs to preserve them from being scratched, as well as from the damp air, placed in their respective cases, there they lay year in and year out, except upon very rare occasions when the Professor would touch their strings, or allow some favorite artist to test the tones of these old rarities. This Stradivarius Violin was dated 1717, he had been repeatedly offered $3,500 for it, but he would not part with it; the Seraphino had passed through many strange adventures before it fell into the hands of the old French music-teacher. Once it was shipwrecked, its owner was drowned, but the Seraphino was saved.

THE TRINITY IN UNITY.

Simpson, who was a Musician in the reign of Charles II, in his work "The Division of the Violin," presents us with the following curious statement. He says:—"When I further consider that three sounds placed by the interval of a third one above another, do constitute one entire harmony, which governs and comprises all the sounds that by art or imagination can at once be joined together in musical concordance, *that* I cannot but think a significant emblem of that Supreme and

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Incomprehensible Three-in-One, governing, comprising, and disposing the whole machine of the world, with all its included parts, in a most perfect and stupendous harmony."

Old Young and young Young.

From "*Purcell's Catches*" we quote the following lines on two persons named Young, father and son, who lived in St. Paul's Churchyard, the one being a good Violin-Maker, the other a notable Player on that instrument.

> You scrapers that want a good Fiddle, well strung,
> You must go to the man that is old, while he's Young,
> But if this same Fiddle you fain would play bold,
> You must go to his son, who'll be Young when he's old.
> There's old Young and young Young, both men of renown,
> Old sells, and Young plays, the best Fiddle in town;
> Young and old live together, and may they live long,
> Young to play an old Fiddle; old, sell a new song!

Early Gipsy Fiddling.

Amongst the Gipsies, the first Violin reigns supreme in their orchestration, for they have been notable musicians for centuries back. As early as the year 1550 they possessed a Violinist, Karmen, who was an excellent player and created an immense sensation. Another celebrated Gipsy Fiddler was Michael Barun, who lived in the 18th century, and came off victor at a competition between twelve Violin virtuosi. About 1772 there was a lady Violinist amongst them, named Chinka Panna, so that lady Violinists are not such a modern innovation as might be supposed, and amongst the recent Romany celebrities have been Paticarius, Keskemety, and Sankosy.

The Victor Fiddler.

Two rustics were long at variance as to their respective abilities on the Violin. They ultimately decided to have the matter tested by a Professor, staking a sum at the same time as to the result. After a patient, though no doubt painful hearing of the combatants, the Professor addressing one of them said:—"You are the worst player ever I heard in my

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life." "Then," cried the other, rapturously, "I am the victor." "No," said the Professor, "You can't play at all."

Fiddling in Mental Disorders.

From the remotest ages philosophers have maintained the singular power of Music over certain diseases, especially of the nervous class. Kircher recommended it, Asclepiades employed it, Democritus, Maxwell, and Mesmer all used it. When Iamblichus, Herodotus, Pliny, or some other ancient writer, tells us of Priests who caused asps to come forth from the altar of Isis to the sounds of Music, they are considered liars and ignorant imbeciles, and when modern travellers tell us of the same wonders performed in the East, they are set down as enthusiastic jabberers, or untrustworthy writers, for we moderns are so omniscient in this respect, that even Solomon was but an idiot compared with us.

In "Essays and Orations," by Sir Henry Halford, it is related of a gentleman who, on account of the sudden loss of his property, was first stupefied, and afterwards became insane. This gentleman could be hardly said to live; he merely vegetated, for he was motionless until pushed, and did not speak to, or notice anybody in the house for nearly four months. The first indication of the return of any sense appeared in his attention to Music in the street. This was observed, the second time he heard it, to have a more decided force in arousing him from his lethargy, and, induced by the good omen, the sagacious humanity of his superintendent offered him a Violin. He seized it eagerly, and amused himself with it constantly. After six weeks, hearing the rest of the patients of the house pass his door to the common room, he accosted them:—"Good morning to you all, gentlemen; I am quite well, and desire I may accompany you." In two more months he was dismissed, cured.

Aul' Recollections.

At the termination of the Indian Mutiny, after Lucknow had been relieved by Sir Colin Campbell and his Highlanders,

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those regiments which had done the hardest service by long marches and constant fighting, were dispersed throughout several cantonments to find recuperation and rest. Amongst them was a portion of a Highland regiment who was quartered in a fortified camp in Central India, and who had along with them a large contingent of invalids. Amongst them was a Bandsman, who somehow or other had managed to get hold of a Fiddle, the daily delight of his wounded and infirm comrades being in listening to him, as he played some of the pathetic melodies of that dear old land which, alas! many of the brave fellows were destined never to see again. An Officer who, acting as sentry, was going his round one afternoon, when he came upon a stalwart Corporal, who had bravely withstood all the fatigue and dangers of the campaign, leaning his head on his rifle and shedding tears. Upon perceiving this the Officer was not only affected but alarmed as well, thinking that one of his best men was breaking down, a bad omen for the little garrison. With that fine manly and soldierly feeling which characterised the relationship of Officers and men, under the long service system in most of the Scottish regiments, he spoke kindly to the Corporal, asking him if he felt ill, and promising if such was the case, to have him relieved at once. "No, no, thank God!" said the Corporal, bracing up, "I am a' richt, sir. It was just that aul' Scottish Fiddle, wi' its fine aul' fireside memories that recalled olden days to my remembrance, and made me forget mysel'." The Officer listened for a moment to the sounds coming from the open window in front of him, he cast military forms and regulations aside for the moment by giving place to the promptings of common humanity, as he wrung the Corporal's hand in the deepest emotion and passed on in the profoundest silence.

The Grocer and Professor.

Grocer.—"Well, how is my daughter gettin' on wi' her Fiddlin'?" Professor.—"Well, I am only teaching her the Scales and Shifts at present." "Teachin' her the *Scales*, I don't want her to learn about Scales; she's not going to serve

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in my shop, I mean her to be an accomplished lady. Teach her the Fiddle, and never mind about make-shifts or scales, or I shall take her away from you at once."

Scottish Music.

(We have received the following communication from a renowned and well-known Scottish Violinist, Composer, and lover of Scottish Music.)

"Dear Sir and old Friend.—When the Newspapers are now so busy discussing the Music of the *future*—Wagnerian music, Classical music, or what you like—I wish to pen you a few lines, a few homely remarks regarding the Music o' aul' Scotland—the inspiring Strathspey, which 'puts life and mettle in their heels,' and which has always been a characteristic of the true-born Scotchman. My old master used to say that he believed 'Music was given by our Heavenly Father in order to cheer our existence in this world, and to unite us in love and sympathy with one another.'

"But how different are such matters at the parties of the present time; let me give you an idea of the evening's agony, for in your American mountain home 'midst rattlesnakes, buzzards, and a burning-hot Sun—not the fine old cool luminary of our Scottish skies—you can scarcely imagine the changes occurring. The Pianist is seated and the utmost attention restored (save a few who are more intent upon fashion, rinking, and the like). We are now fascinated by the squealing, thumping, smashing strains from a confused mass of sheets, which appear to have but one attraction, viz., a pretty picture on the title-page, got up to sell, and turns out a 'sell.' This young damsel has risen from poor but humble parents, she has been sent abroad to *finish* her education. She is now asked by an old lady to favor the company with something Scottish. The answer is:—'Really, Mrs. Gray, I must decline, altho' I'm *so* sorry; you know Herr Taliforte wishes me to discontinue these barbarous tunes, as they are quite vulgar, perfectly unrefined, and, moreover, they tend so much to spoil one's style, and besides all this, you know, they are not suited to the present age!'

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"Ye Gods! what a marvellous change has taken place in this modern 'Goddard,' since aul' Farmer Macintosh, (her Daddy, or rather *Pa*, a Scotchman every inch) bocht a Pianner for hale five pound, sent it hame frae Aberdeen in the train, and bade his servant-man Jock gang tae the Station for't, which Jock duly did, returned, and on arriving at the front door, to their surprise, teemed her (the Pianner) oot, like a load o' neeps, and broke nae less than twa-three o' her teeth! A sair, sair beginning, but the auld 'Broadwood' was soon repaired, and with all its defects, Maggie delighted her aul' father on mony a winter nicht, after his hard day's toil. But noo things have changed—and instead of the 'Land o' the Leal,' 'Robin Adair,' the 'Flowers o' the Forest,' 'Auld Robin Gray,' 'Afton Water,' and 'O' a' the Airts,' etc., he is destined to sit in the auld ingle neuk, and smoke his pipe to the tune of 'Tommy, make room for your Uncle,' 'Grandfather's Clock,' 'Not for Joe,' with an occasional *discord* to relieve the monotony—the *music* of the future, be it remembered, having been thrown aside, without *affecting* any of the company.

"If Scotchmen were as jealous regarding Scottish Music as the late Professor Blackie was regarding the Gaelic, they would do something more for Scottish Music than has been done, whether in the 'Linkit sweetness lang drawn oot,' or in the characteristic 'Mak' us a' in glee unite' style, where the flat seventh comes in with such grand effect, as instance 'Reel o' Tulloch,' 'Tullochgorum,' etc. But alas! alas! our Schools are so loaded with foreign talent, 'Dull Italian Lays,' (which *fashionable* people admire), that there is no room for 'Auld Robin Gray!' Did you ever hear a foreigner who could play a Strathspey properly? Never; the right hand is the secret, and as the accentuation is difficult, it necessarily entails a considerable amount of practice, and far from spoiling a Violinist's style (as has been alleged), I believe it adds in no small measure to nicety of accent. Had we Schools for Scottish Music (supported by the public), we should soon have willing pupils, and expert and enthusiastic students. This is our only mode of escape from those who consider our Music,

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trash, and who would fain elbow it from society; may our music in future excite more attention, and our wish be, that we may yet hear the sprightly Strathspey wherever Scotchmen gather."—J. S. S.

Violins, like Fruit, Ripen by Age.

It is amusing to read what that old and quaint Author, Mace, 1676, says as to the value of age upon stringed instruments. "The Reason for which," he observes, "I can no further Dive into, than to say: I apprehend that by Extream age, the Wood, (and Those Other Adjuncts), Glew, Parchment, Paper, Lynings of Cloath, (as some use;) but above all, the Vernish; These are All so very much (by Time) Dried, Benefied, made Gentle, Rarified, or (to say Better, even) Ayrefied; so that that Stiffness, Stubbornness, or Clunginness, which is Natural to such Bodies, are so Debilitated, and made Plyable, that the Pores of the Wood, have a more, and free Liberty to Move, Stir, or Secretly Vibrate: by which means the Air (which is the Life of All Things) both Animate and Inanimate, has a more Free and Easie Recourse, to Pass, and Repass, etc. Whether I have hit upon the Right Cause, I Know not, but sure I am, that Age Adds Goodness to the Instruments."

American Criticism.

Whilst lately talking of Remenyi reminds me of the following choice criticism from one of our Southern papers. The Editor says:—"When it gets right down to a question of what's what, this man Remenyi can outfiddle any man in Adams County, barring no man, black or white. He was at the Opera House last night, and if he wasn't old Rosin-the-Bow for about an hour, old Rosin-the-Bow never lived. He fiddled up one side and down the other hippity-hop-skip and jump. You never heard such music in all your life."

Opinion of Dr. Joachim.

Few people know very much about Violins, the best judge living on this subject is, in my opinion, Signor Piatti. There

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is an ancient theory about *old* Violins; these, however, cannot always be depended upon. There are very bad old Violins, and very excellent new ones. I remember once going to an exhibition of Violins in Paris, a friend of mine having spent a small fortune in collecting these instruments; but on close inspection, most of them proved to be worthless and fictitious imitations of the real article. With respect to the celebrated Violin-makers of Cremona, I am of opinion that the palm should be given to Antonius Stradivari, in whose instruments are combined the tone-producing qualities, which the other great makers have only been able to bring forth individually. Maggini and likewise Amati were renowned for the delicacy and sweetness they imparted to their instruments, but the union of liquidity and power is more especially noticeable in the Violins manufactured by Guiseppe Guarneri, del Gesu, and Stradivari.—*The Woman at Home.*

The Tale of a Violin,

as told by itself.

As I lie here in my costly case in the shadiest corner of the sunlit verandah, and hear the low-crooning of the nurse, as she walks up and down the garden with my master's son and heir in her arms, I cannot but ponder over the many events in my strange career, from the earliest period of my recollection till the present moment in this South African home, with its garden of pomegranates, peaches and figs, and its many-hued flowers and luxuriant foliage.

We had quite a musical treat here last evening. A prima donna from Johannesberg—the "mushroom city"—a native of the "old country" and R. A. M., paid us a visit, and I had the honour of accompanying her exquisite rendering of "La Serenata." But I was thinking of my long life; let me tell you all I can remember. At first, about A. D. 1789, I belonged to a tailor, a strange looking little man, who lived in a very rural Scottish village. I was about a year old when he bought me, and I should think he must have been about thirty. But, really, when I think of the way he used to handle me in those

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days, my strings vibrate with a horror indescribable, however, that is all over now. He wasn't a bad sort of a creature after all, only rather odd and abrupt in his manner, and his dwelling was a two-roomed cottage—a "but" and a "ben." In the "but" he would sit cross-legged all day, and his patient little wife would serve up the meals, sew on the buttons, etc., but in the evening he would retire to the "ben," and his cronies would drop in one by one. Old dilapidated Music-Books would be carefully taken from a very ancient corner cupboard, and I would be gently taken from the bright green baize bag which hung by the fireplace, and slowly tuned up. Others who had brought their instruments would also tune up, which process I may define as heart-rending, and then the Concert began. Oh! how these worthies rejoiced over their chords and discords! how they stamped their feet and changed their physiognomy! I remember they would particularly revel in such old Tunes as "Tullochgorum," "Monymusk," "The Brig o' Perth," "The Marquis' Farewell," "The Deil amang the Tailors," "Lady Mary Ramsay," "Speed the Plough," etc. Occasionally I would figure at the village weddings; and it was really bewildering to note the amazing agility of the bonnie Scottish lads and lasses in the Reels, and to hear the wild "hoochs" of both old and young, as, waving their arms, or bonnets, they madly whirled round and round in the Highland Flings or other national dances; and, of course, I could not but feel a certain inherent pride in knowing that I contributed largely to the general amusement. Talk of love scenes! What sweet nothings I have heard whispered at these homely dances, especially when "Geordie Gray"—that was the tailor—would lay me down and retire to "wet his whistle," which I believe was the vulgar term they used for taking a little "mountain dew," or Scottish whisky, as refreshment. However, the tailor was getting old, and my stay with him was soon to be at an end; and I think it was about the year 1820 that he got an assistant, or rather apprentice, to help him.

This pale-faced youth, John Murray, I took a great fancy to from the very first; and as he lived at some distance from

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Geordie's, he used to occupy a kind of cupboard bed from Monday until Friday, and consequently was present at the musical evenings. I feel sure that he never cared very much about the tailoring, but looked eagerly forward to those evenings, for his eyes would weirdly glisten with excitement when I made my appearance out of that hideous green bag, and I was in nowise surprised when the following conversation took place some time later.

"John," said Geordie, "I dinna think ye'll ever mak' a tailor, and I hae but sma' hopes o' your ever flourishin' in my trade ava, but I've been thinkin' ye'd like to play a wheen o' tunes on the Fiddle, eh, laddie?" "Oh! maister, wad I no? that's a' that I care for," said John eagerly. "Gin ye'll teach me, I'll pay you for it." "Toots! laddie!" was the magnanimous answer. "Ne'er fash yer head ower the bawbees. Ye're richt welcome to a' I can tell ye, and when ye can play as weel as me, I'll sell ye the Fiddle for twa poun' ten (£2 10s)."

Of course though deeply shocked at the value set on me, I was not sorry to change owners, for poor old Geordie's playing was sadly degenerating; and just six months after, John might be seen proudly making his way to the "Aul' Brig Inn" of the neighbouring country town, the residence of his father. There was a rare old garden at the back of the Inn, and here John would sit for hours playing his favorite melodies, and when the stage-coach, which used to run to and from Edinburgh, stopped there, the visitors would occasionally saunter into the garden to listen. One day, however, I heard John making arrangements for a visit to Edinburgh; he had obtained an appointment in a draper's shop, so taking me with him, he bade farewell to the old folks and took his journey to the city.

Here he succeeded so well that from rather quiet lodgings we removed to a spacious house with every comfort—that was in '57, on the occasion of his marriage, and by that time he had an extensive business of his own. The lady of his choice, a Miss Katie Douglas, was tall and lovely, with a wealth of auburn curls and the sweetest voice imaginable. At the select parties held at the Murrays she would fairly melt the heart of

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her auditors, when she sang, "O' a' the Airts," "Afton Water," "The Braes o' Gleniffer," "Auld Robin Gray," "The Flowers o' the Forest," etc., and it was no uncommon thing to see them shed tears. But it would take too long to narrate the many changes in that happy home, how their children grew up, and how they gradually grew wealthier, till at last the failure of a confounded Glasgow Bank reduced them to comparative poverty. I think one of the most touching scenes of all was when Mr. Murray, then getting old and frail, bequeathed me, with tears in his eyes, to his eldest son James, and told him to take good care of me, seeing that I had been his comforter in many a sorrow, and his companion in many a joy. This was when my present owner was about to leave home about five years ago, and I have no reason to complain of the usage I have received since then.

The voyage out here, in the "Hawarden Castle," was delightful, and many happy evenings were spent on deck. The first night after leaving the "old country" was glorious moonlight, and Master James Murray took me out, and, surrounded by a group of young men, played "Then you'll remember me," "Sweet Spirit hear my prayer," "My Nannie O'," and other good old songs, in which the poor fellows joined with many a break in their voice, as they thought of the homes and the dear ones they had left behind them; whilst the moon cast its silvery light over the waters as the vessel steamed on, bearing us further away. At last, after stoppages at Cape Town and Port Elizabeth, which latter place he resided in for three years, he has settled down in this delightful retreat near Johannesberg. But I hear the clatter of horses, that means company from the city, and my reflections are rudely disturbed by a dusky native servant, who seizes my case and carries me into the drawing-room to my master. I am now taken from my varnished case, my master eagerly dusts me with his silk handkerchief, I am carefully tuned as I take my place alongside a lady who sits at the Piano, and I am fondly pressed to the breast of my master, who now draws from my soul a few pathetic airs prior to the lively dance music of the evening.—*Strings.*

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To my Amati.

And mine Amati—my beloved one—
The tender sprite who soothes, as best he may,
My fever'd pulse, and makes a roundelay
Of all my fears—e'en he, when all is done,
Will be thy friend, and yield his place to none
To wish thee well, and greet thee day by day.

For he is human, though, to look at him,
To see his shape, to hear,—as from the throat
Of some bright angel,—his ecstatic note,
A sinful soul might dream of cherubim.
Aye! and he watches when my senses swim,
And I can trace the thoughts that o'er him float.

* * * *

Oh! come to me, thou friend of my desire,
My lov'd Amati! At a word of thine
I can be brave, and dash away the brine
From off my cheek, and neutralise the fire
That makes me mad, and use thee as a lyre
To curb the anguish of this soul of mine.

Wood as thou art, my treasure, with the strings
Fair on thy form, as fits thy parentage,
I cannot deem that in a gilded cage
Thy spirit lives. The bird that in thee sings
Is not a mortal. No! Enthralment flings
Its charm about thee like a poet's rage.

Thou hast no sex; but, in an elfish way,
Thou dost entwine in one, as in a troth,
The gleesome thoughts of man and maiden both.
Thy voice is fullest at the flush of day,
But after midnight there is much to say
In weird remembrance of an April oath.

And when the moon is seated on the throne
Of some white cloud, with her attendants near—
The wondering stars that hold her name in fear—
Oh! then I know that mine Amati's tone
Is all for me, and that he stands alone,
First of his tribe, belov'd without a peer.

E. Mackay.

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Paganini's Shoe-Fiddle.

In the autum of 1832, Paganini was residing at a villa near Paris. He was an invalid, and took little notice of any of the other occupants of the villa. The only person for whom he sought to care much was Nicette, a young and pretty waitress, who was wont to attend upon him.

One morning Nicette, tray in hand, entered the apartment of the famous Maestro, who sat at a table carving a handle for a dagger out of a piete of ivory. Instead of her usual merry look, she was sad and dejected, and her blue eyes showed traces of recent weeping. Paganini, who had taken an honest liking for the poor girl, was not long in learning the cause of her grief. The conscription had just been drawn; a bad number had fallen to the lot of her lover; and, said she, "Poor Adolphe must go off for a soldier, and I shall never see him again."

"But why don't you find him a substitute?" inquired Paganini.

"Monsieur is joking," was the sobbing reply. "They say there is to be a war, and fifteen hundred francs is the lowest price for a substitute."

Fifteen hundred francs was really nothing to Paganini; but no man ever lived who loved money more than did the great Violinist, and to give away such a sum directly was an idea which never entered his mind. So he said nothing. but made this memorandum in his pocket-book; "See what I can do for poor Nicette."

A few weeks passed, and Christmas was at hand. In France it is the custom to place a wooden shoe on the hearth, just as we hang up a stocking. Late in the afternoon of the day before Christmas, Nicette entered the saloon, where the musician was seated in the centre of a large group. She said that a huge parcel had just arrived for the Signor Paganini. He declared that he could not imagine what it was, but ordered it to be brought up. Wrapper after wrapper was opened before the curious spectators, and finally there appeared a huge wooden shoe, almost large enough for an infant's cradle.

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The bystanders laughed. Some maliciously hinted that it was sent by some one who insinuated thereby, that the great Maestro was much more fond of receiving presents, than of bestowing them. Quite possibly this was the case, and more than probably there was those present who knew all about the sending of the odd gift. Paganini suspected as much, and a sudden idea seemed to strike him. "Well, well, my friends, we shall see if this shoe is not worth something to somebody." And he left the saloon, carrying the shoe with him.

For three days little was seen of Paganini; and it was reported that he was busy in his little workshop which he had fitted up for himself, and which no one was allowed to enter. Then it was announced that on New-Year's Eve the great Maestro would give a unique concert, in the course of which he would execute five pieces on the Violin and five on a wooden shoe. The price of admission was to be twenty francs, and only one hundred tickets would be sold. Of course the tickets were disposed of at once.

When the evening came, Paganini made his appearance in most unusual good spirits. The Violin pieces came first on the programme, and everybody declared that the great Master fairly exceeded even himself, and there was no end of bravos. He retired for a moment, and then reappeared with the veritable wooden shoe under his arm. But in the three days of his seclusion he had cut and carved and shaped it into a rude imitation of a Violin, to which he had deftly fitted three strings. Upon this curious instrument he began to improvise one of those strange fantasias, which many say were the highest inspirations of this wonderful genius. It needed no words to tell that the theme was the life of a conscript and soldier. There was the suspense of drawing lots for the conscription, the rejoicings of those whose friends had got clear, the wailings of those who were not so fortunate, the departure of the conscript, the noise and bustle of the camp, the roar and tumult of the battle, the shouts of victory, the return of the conscripts, now heroes, to their homes, all closing with the glad pealing of marriage-bells.

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Poor Nicette, whose lover was to be marched off in a few days, stood behind the scenes weeping. Scarcely had the tumultuous applause ceased when Paganini bade her approach.

"Here," said he, "are the two thousand francs which the old shoe has brought. That is five hundred more than you want to buy off Adolphe. Keep the rest to begin house-keeping with. And here's the old shoe; you shall have that too. Maybe somebody will give you a few francs for it."

There was great competition as to who should have the wonderful Shoe-Violin. It was put up at auction, and struck off at six thousand francs to a wealthy Englishman who had been present at the concert, and who wanted to preserve a souvenir of the great occasion. But it is not recorded that anybody except Paganini himself ever succeeded in extracting music from the instrument.

As a Supplement to the foregoing we shall now add another version of the "Shoe-Fiddle," which appeared in a French paper, in 1891—the Paris *Figaro*. It says:—"There has lately been sold one of the most curious Violins known to the music fanciers of the world. It formerly belonged to Paganini, the great Violinist, and at first sight merely presents the appearance of a mis-shapen wooden shoe. Its history is curious and well worthy of a place in this repository of the wonderful. During the winter of 1838 Paganini was living in a *maison de sante* called Les Neothermes, Rue de la Victoire, 48. One day a large box was brought here by the Normandy diligence, on opening which he found enclosed two inner boxes, and, carefully wrapped in several folds of tissue paper, a wooden shoe and a letter, stating that the writer, having heard much of the wonderful genius of the Violinist, begged as a proof of his devotion to music, that Paganini would play in public on the oddly constructed instrument enclosed. At first Paganini felt this to be an impertinent satire, and mentioned the fact, with some show of temper, to his friend, the Chevalier de Baride. The latter took the shoe to a Violin-maker, who converted it into a remarkably sweet toned instrument. Paganini was pressed to try the Shoe Violin in public. He not only did so, but per-

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formed upon it some of his most difficult fantasias, which facts, in the handwriting of the Violinist, are now inscribed on the Violin."

A FIDDLING MINISTER.

There is a well-known anecdote of the gardener of Inverkeithing and the Rev. Ralph Erskine, of Dunfermline. The gardener desired to have the ordinance of baptism administered to his child; but having differed with his parish minister, whom he accused of worldliness, he resolved to solicit the services of the pastor of an adjoining parish. Reaching that clergyman's manse, accompanied by his wife carrying the baby, he enquired whether the minister was at home. He was informed by the maid-servant that the minister was a-fishing, but that he would certainly return very soon. "He may come hame when he likes," said the gardener, "but nae fishin' minister shall bapteese my bairn."

The party proceeded to another manse, but the incumbent was, according to the story, "oot shootin'." "Nae shootin' minister" would suit the enraged gardener, who now proposed that his spouse should accompany him to "guid Maister Ralph Erskine at Dunfermline, wha," he added, "I'se warrant, will be better employed than fishin' or shootin'." As the wanderers approached Mr. Erskine's residence, they heard the notes of a Violin, and the distressed gardener at once concluded that the Rev. gentleman was from home. "The minister's nae at hame, I see," said he, addressing Mr. Erskine's servant. "The minister *is* at hame," said the girl, "an' dinna ye hear? He's takin' a tune to himsel' on the Fiddle; he tak's a tune ilka evenin'." The gardener was almost frantic with disappointment and vexation. "Could I hae believed it," exclaimed he, "that Maister Ralph Erskine wad play on the Fiddle!" He was somewhat relieved by learning that Mr. Erskine did not use the ordinary instrument, but the Violoncello—"the big gaucy Fiddle!" "But," he added, "I maun admit that oor ain minister, though wrang in some things, is better than the lave o' them; for he neither fishes, nor shoots, nor plays the Fiddle."

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WANTED? A FIDDLING MINISTER.

Several years ago there appeared in the London *Guardian* an Advertisement, stating that a Clergyman was wanted for Brokenhurst, Hamps, as also that "a real Musician would be preferred," that all applications be lodged with Mr. John Morant, Church Officer. A lady turned it into the following witty verse:—

Hey, diddle, diddle!
A priest who can fiddle
Is wanted for Brokenhurst, Hants;
You clerical fellows,
With good Violoncellos,
Apply, please, at Johnnie Morant's.

"JENNY DANG THE WEAVER!"

This popular tune owed its origin to an occurrence in which a minister's wife was the heroine. During the second year of the last Scottish Rebellion, the Rev. Mr. Gardner, of Birse, Aberdeenshire, reputed for his humour and musical talents, was one evening playing over on his Violin the notes of an air he had been composing, when a scene in the courtyard arrested his attention. His man "Jock," lately a *weaver* in a neighbouring village, having rudely declined to wipe the minister's shoes, as requested by Mrs. Gardner, she administered a hearty drubbing to his shoulders with a cooking utensil, and compelled him to execute her orders. Witnessing the proceedings from the window, Mr. Gardner was intensely amused, and gave the air he had just completed the name of "*Jenny Dang the Weaver.*"

A "HOLY FIDDLE."

A Scottish Divine, now deceased, and formerly pastor of a congregation not a hundred miles from Aberdeenshire, was not only eminently known for his virtues of benevolence and charity, but also for his accomplished performances on the Violin. This latter art, as practiced by their clergyman, found but little favour with the majority of the hearers, who held a noisy meeting for the purpose of deciding upon what steps

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should be taken to put an end to such impious howlings. At this "*Special Assembly*" it was arranged that several of the most pious, or "*unco guid*," should proceed to the manse, and hold a conference with the musical Divine, in order to sift the matter properly. The orthodox elders having fortunately found their pastor at home, began to pour out their dogmas upon the unholiness of "*Fiddling*," when their venerable pastor asked them if ever they had seen *his Fiddle*, or heard him play, to which they responded in the negative. Those righteous and long-faced worthies being now anxious to hear him play, he brings a Violoncello, and pathetically plays a psalm-tune, to which they willingly accompanied him by singing, after which they appeared perfectly satisfied, expressing their verdict of sanctity in the use of such by the following choice decision. "A muckle, fat, *releegious*-soonin' Fiddle like that, there was nae hairm in, na, na; *that* was nane o' yer scandalous penny-waddin' Fiddles that they had haurd tell o'."

The Minister-Painter and Fiddler.

The following extract, relative to the late "Minister-Painter," the Rev. Mr. Thomson of Duddingstone, may appositely follow the foregoing. "A solitary, sad-eyed, mediæval monk, illuminating missals in a cloistered silence, broken only by the tinkling of refectory or prayer-bells, is familiar enough to the imagination, but a modern presbyterian clergyman, painting pictures on week days, and preaching sermons on Sundays; writing papers on optics to the Edinburgh Review, and drawing tears in the evening by his *Violin performances*; throwing down his brushes of a forenoon, placing against the wall a picture of the Bass, with a thundercloud blackening over it; going out to see an ailing parishioner, and noting on his way how a sunbeam made gleam the ivies on Craigmillar, which a shower had just wet, and returning to receive to dinner Sir Walter Scott, fresh from the 'Bride of Lammermoor,' and Sir David Wilkie, fresh from Spain and the study of Velasquez; this complex activity, this variety of duty, this fulness of noble life, is something not very frequently met with."—*Argosy*.

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Metal Violins.

Among the numerous articles contributed by working men to the Westminster Industrial Exhibition, in 1879, was a Violin constructed of metal by an ingenious mechanic. This instrument attracted much attention on account of its fine workmanship, shape, and beautiful finish; and Lord Beaconsfield, when opening the Exhibition, alluded to it in complimentary terms. He, however, expressed his regret that so much valuable labour had been expended on an article which, simply because the wrong material had been used, was, as a musical instrument, a failure.

For many years there might have been seen a Silver Fiddle in the window of a Silversmith, near Leicester Square, London. It is now the property of Mr. Sala. In this gentleman's Hall there hangs the Silver Violin, which was made in Cawnpore, and was the property of some Indian Rajah. "I bought it in Leicester Square," said the owner; "and it was marked thirty-five pounds. I went inside the shop and offered a ten pound note for it." "Oh," exclaimed the proprietor, "you're Mr. Sailor, you are! Well look here, you can have it for thirteen pounds." "Right!" I said. "Going to pay now?" he asked. "Yes." "Then take it out of the shop, for it's been hanging here for twenty-five years!"

In connection herewith may be mentioned the following anecdote:—

A Tin Fiddle.

Several years ago in Newtonards, County Down, there lived quite a character, a tinsmith or tinker by profession, who played upon the Violin. He made one of Tin-plate, and having had a domestic brawl with his spouse, he left her and journeyed to Scotland, taking his Tin Fiddle along with him. At his departure he played upon it, what he supposed to be his final "Farewell" to his wife and neighbours, at the corner of South Street, Conway Square,

"Fare ye well Killarney,
For I will never see you more,"

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but as fate would have it, he did "see them more," for he returned to his home after several years, and lived in peace and quietness, with the exception of the noisy character of his occupation. The reminiscence of the Tin Fiddle, however, could never be obliterated from the memory of the inhabitants of Newtonards.

Aluminium Violins.

Aluminium is being used for everything nowadays, from stewpans to steamboats, but a scientist of this country, Prof. Alfred Springer is probably the first to have made Violins of it. He recently gave a lecture on Aluminium Violins, in Brooklyn, and musical illustrations were given on an instrument made from this novel material. The body of the Violin was made of Aluminium, but the neck and pegs were of wood. The instrument produced a great volume of tone, but there were quite a variety of opinions as to its quality. Some musicians declared that the quality was not nearly so good as a wooden one for solo work, but that it would prove good in the orchestra. Others took the opposite side of the question altogether, whilst a few predicted that in a few years Aluminium Violins would be substituted for the wooden instruments. Doctors differ!

The "Baist" Fiddle.

A Scottish farmer, who kept in vogue the good old custom of giving his harvesters a "Maiden" (Harvest-home) each year at the expiration of the reaping of his grain, possessed an old *base* Fiddle (Violoncello), an instrument as seldom in proper repair as it was in tune, though at the same time its condition in these respects may be said to have been equivalent to its owner's performances thereon, these achievements being gone through only on occasions such as formerly referred to. A little girl, who had been a guest at one of those merry-makings was, on the following day, subjected to an interrogatory ordeal concerning the "Maiden," by one of those inquisitive characters who are so often zealots in their ambition to obtain

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news of anything transpiring in the district. After his roll of queries was almost exhausted, as to "Wha were a' at the Maiden? What was sung, and what was said? Wha played the Flute, and wha the sma' Fiddle?" he half sarcastically put the question, "Was Buddy (the farmer) playin' on his *base* Fiddle, na?" "Od, shurely he wis," replied the girl with due simplicity, "for the thing he played on juist cried like a *baist*."

It may be said that in explanation of the above, the pronouncing of the word "base" by the questioner sounded to the girl's ears as "baist" (beast).

Lighting a Fire with a "Joseph del Jesu."

Some forty or fifty years ago, a friend of the writer, and a lover of Violins, was in the old shop in Coventry Street, London, until recently occupied by Withers, which place has been a "Fiddle-Shop" for upwards of a hundred years, and observed the proprietor placing a very handsome instrument in a case. In answer to his inquiries he was told it was a "Joseph *del Jesu*" of the finest quality, and had just been sold for £150—a large price at that time. He was astonished, and remarked that he knew of an exact *fac-simile*. "Where?" asked the shop-keeper, eagerly. "Oh, away in Germany; a long way from here," replied the visitor, adding that he could get the Fiddle for "a mere song." Two months afterwards, business calling him to the Continent, he went to his native place to look after the Violin, which belonged to two brothers, who had evidently no idea of the treasure they possessed. It had hung for years on a nail in the kitchen, and was never disturbed excepting when the narrator used to visit the place. He had always regarded it as an instrument of some value, but had never screwed up courage enough to make a bid for it. He had now, however, made up his mind to carry it off, and in due time, in the dusk of the evening, he reached the cottage of the two brothers, when after some general remarks, he began to look round the room, but could not see the old Fiddle anywhere. He felt very uneasy, but, endeavouring not to betray any particular interest in it, asked quietly,

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"Where was the old Fiddle?" "Well," said one of the brothers, "I think we lighted the fire with it last winter." "What!" said the visitor, aghast, "you idiot! do you know what you have done? Why that Fiddle was worth £100 if it was worth a penny." It was now the brothers' turn to be amazed, and as £100 would have been a little fortune to them, their mortification can easily be guessed. There was no help for it, however, as they remarked, "Nobody ever played on it," so the old Violin was broken up and used to light the fire. One of the brothers put his hand up to a high shelf, and reaching down something, said, "This is all that is left of it." This was the scroll and neck of the "*del Jesu*"—the neck-end being all charred, from its having been used as a poker for some time. This scroll was brought to London, and is no doubt now doing duty on some high-class instrument.

We have not hitherto been in possession of facts relating to any offspring of the great "*del Jesu*," but in the possession of a friend of the Author, in London, is what is termed a "Prison Joseph," which contains the following curious old label:—

"*Guiseppe Guarneri, mio padre,*
eba la disgrazia di non essere
amato di tutti, ma i figli suoi
non denono avere nemeci.

Carcere di Cremona, 1737."

G. C. N. S.

[*Gesu Cristo, nostro Signore—Jesus Christ, our Lord,*]

which, rendered into English, reads:—

"*Joseph Guarnerius, my father,*
had the misfortune not to be
beloved by all, but his sons should
not have enemies.

Prison of Cremona, 1737."

This instrument is very flat in model, in good preservation, and possesses fine tone. In one half of the table are numerous

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places in which the maker has plugged the worm-holes, as was his custom in order to economise his wood.

The Harp, the Bagpipes, and the Fiddle.

An excellent player upon the Harp, Bagpipes, and Fiddle—Grant of Sheuchly—who lived in the seventeenth century, thus gave expression to the respective merits of the above mentioned instruments. Speaking of the Harp, he says:—"The pleasure which thy tones afford are doubled whilst accompanying a sweet female voice; or, when round the festive board, inspired by love, or wine, I reach beyond my ordinary capabilities, and I feel the sweet pleasure of pleasing." Talking of the Bagpipes, he says:—"How it would delight me, on hearing the sound of war, to listen to their martial notes in striking up the 'Gathering Cry,' and to rally round the Chief on a frosty morning, while the hard earth reverberated all their stirring notes, so as to be heard by the most distant person interested." To his beloved Fiddle, which he christens by the name of the old Scottish Song, "Mary George's Daughter," he says:—"I love thee for thine own sake, and for the sake of those who do—the sprightly and bonnie Scottish lassies, all of whom declare that thou, with thy Bass attendant, can have no competitor, thy sweet music having the effect of charming and electrifying all who listen to it."

The Harp and the Fiddle.

The Harp and the Fiddle one day held dispute;
Madame Harp rather jealous of Fiddle's repute
Had become, for she fancied in loftier strain
He had talked ever since Herr Molique's campaign;
"And indeed, my good fellow," she said, half in spite,
"The airs you assume are ridiculous quite;
Your ambition would lead you to consort with me,
When, at best, you are only a Fiddle-D-D!"
Here the Fiddle waxed wroth, and exclaimed in his ire,
"On you I retort—for I say you're a *Lyre!*"

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Hints to Young Violinists.

To Clean The Violin.—In order to clean out the dust which accumulates in course of time, in the interior of the Violin, a handful of heated barley, oats, or rice should be put into the instrument at one of the *f* holes. The Violin should then be well shaken, and all the grains poured out. The sonority of the instrument will be found much improved, and internal moisture will be prevented. The exterior of the instrument ought also to be kept clean. When the rosin accumulates, let it be wiped off with a piece of flannel, wetted with olive-oil, to which a little paraffine-oil is added.

The "Dance" of David.

Having, in all probability, already taxed the patience of the reader with *Fiddles* and *Fiddling*, sacred and secular, let us now—previous to parting company—conclude with the *dance*. "An elder, who is also precentor in a Free Church not fifty miles from Inverness, lately attended the marriage of his eldest son, and in the evening, joined the young couple and others in a reel, by way of leading off the dance. This having come to the ears of the other elders of the church, they held a conclave, to which David was summoned. He made a full confession, and has been suspended from his office of precentor for three calendar months. David has been an elder and precentor for twenty years. So much the more reason, argued the kirk-session, why he ought to know better than to make merry at his son's marriage."—*Inverness Courier*, *April*, 1870.

Punch gives the following comment upon the foregoing:—

"Elder David, the precentor, his son's wedding dance attended,
Elder David, the precentor, from his office was suspended.
Though old David, the Psalmist, danced, we know, 'fore the ark,
Elder David, the precentor, must *not* dance for the lark.
Let the fate of elder David, the precentor, *in terrorem*,
Hang o'er the heads of elders when they list to '*Tullochgorum*;'
But one point in the punishment appropriate one feels,
That such elders, when suspended, be suspended by the heels!"

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ALPHABETICAL LIST OF VIOLIN-MAKERS.

ABBATI,——, 1780.

ABSAM, Thomas, Wakefield, 1830.

ACEVO, *Saluzzo*, Cremona, 1640. A pupil of Giofreda Cappa. The Violins of this maker are only of mediocre quality.

ADAMS, Cathune, Garmouth, 1800. Made Kits, Violins, and Violoncellos. He was chiefly famed for his Kits and Violoncellos. The fingerboards of some of his Violins were inlaid with ivory. The late Rev. W. Logie, Tynet, had a Violoncello by this maker, a good, round-toned instrument. A Violin by this maker is also in possession of Mr. Boyne, Achinhalrig, Banffshire.

ADDISON, William, London, 1672.

AIRETON, Edward, London, 1750-1807. A pupil of Peter Wamsley. Some of his instruments have a very fine and full tone.

ALBANESI, Sebastian, Cremona, 1740. A maker of fair merit.

ALBANI, Matthias. Born at Botzen, or Bolzano, in 1621, died 1673. A maker of medium quality. The archings of his instruments being too deep, they have a nasal tone. Label, "*Matthias Albani in Bulsani, Thiroli fecit. Anno 1653.*"

ALBANI, Matthias, Bolzano, 1670. Son of the above. A good maker.

ALBANI, Paolo, Palermo, 1660. A pupil of Nicolas Amati, and a superior maker.

ALBANI, Signor, Palermo, 1633. Label, "*Signor Albani, in Palermo, 1633.*"

ALBANUS, Josephus Math. 1721.

ALBERT, C. F., Philadelphia. Now living; has been awarded several medals for his Violins; he is also a good repairer.

ALDRED, ——, 1562. An early Viol maker.

ALDRIC, ——, Paris, 1832. Of no particular merit.

ALESANDRO, ——, 1665.

ALETZIE, Paolo, Monaco, 1730. Chiefly renowned for his Violoncellos.

ALTMANN, ——, Gotha, 1710.

ALVANI, ——, Cremona. Reputed a fair maker; he copied J. Guarnerius.

AMATUS, Franciscus, 1766.

AMATUS, Giroleanus, 1617.

AMATI, Andreas, Cremona, 1520-1580. Founder of the Cremona school of Artists.

AMATI, Nicolas, Cremona. Brother of Andrew.

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AMATI, Nicolas, Cremona. Nephew of the former.

AMATI, Antonius, Cremona, 1550-1633. Brother of the preceding.

AMATI, Hieronymus, Cremona, 1635. Brother of Anthony. The Violins of this and the preceding maker generally bear their united names, as, "*Antonius et Hieronymus Fr. Amati Cremonen Andrea fil F. 15—.*"

AMATI, Nicholas, Cremona, 1596-1684. Son of Jerome, and the most celebrated of the Amati family. Label, "*Nicolaus Amati Cremonæ, Hyeronimus Fil, ac Antonius Nepos fecit 1630.*"

AMATI, Hieronymus, Cremona, 1649-1673. Son and pupil of Nicholas. This artist was the last of the family.

AMBROGI, Peter, Rome, 1728. An imitator of Jacob Stainer.

ANCONITA, Antonio, Taleso, 1803.

ANSELMO, ——, Cremona, 1700.

ANSELMO, Peter, Cremona and Venice, 1720-1750. One of the best makers of the Florentine school; his instruments resemble those of F. Ruggieri, but his 'Cellos are held in the highest estimation.

ANSON, J. Several of his Violins possess fair quality of tone.

ANTON, Petrus, 1724. Testore school.

ANTONIA, Paolo Testore, 1745.

ARCANGIOLI, Lorenzo, 1837. Followed Guarnerius pattern.

ARIGO, Tubbia, 1646.

ARTMANN, ——, Gotha, 1730. An imitator of Amati.

ASKEY, Samuel, London, 1820.

ASSALONI, Gaspard, Roma, about 1725. Of no particular fame; his instruments are roughly made and covered with a thin transparent varnish.

AUDINOT, N., Paris. Successor to Vuillaume and a good maker.

AUGIERE, ——, Paris, 1833.

BACHMANN, Louis Charles, Berlin, 1736-1800. An excellent German maker. He was Chamber Musician to the King of Prussia as well as Court Musical-Instrument Maker. Label, "*Carl Ludwig Bachmann, Hofinstrumentenmacher, Berlin, 1766.*"

BACHMANN, Otto. Son of the former and an inferior workman to his father. He wrote a treatise on the art of Violin-making.

BAGATELLA, Antonio, Padua, 1780. Wrote a work on the Violin which obtained a prize offered by the Academy of Science, also a good maker.

BAGATELLA, Pietro, Padua, 1760.

BAILLY, Paul, Paris. A pupil of Vuillaume who has received many medals.

BAKER, ——. A pupil of Panormo.

BALDANTONI, Joseph, 1839.

BALDIN, Gio. B., 1684.

BALESTRIERI, Pietro, Cremona.

BALESTRIERI, Thomas, Cremona and Mantua, 1720-1750. An excellent maker, and a pupil of Stradivarius. His Violins are appreciated more

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in Italy than in England. Label, "*Thomas Balestrieri Cremonensis. Fecit Mantuæ, Anno 1740.*"

BALLANTINE, ——, Edinburgh and Glasgow, 1848.

BALZEREK, ——, Vienna, 1852.

BANKS, Benjamin, Salisbury, 1740-1795. An excellent English maker. He adopted the model of Nicolas Amati, his charming varnish was clear and transparent, of different colours, his scrolls weak and imperfect. His 'Cellos are considered superior to his Violins. He died on 18th Feby., 1795, and was buried in St. Thomas's Churchyard, Salisbury. Label. "*Benjamin Banks, Musical Instrument Maker. In Catherine Street, Salisbury, 17—.*"

BANKS, Benjamin, James, and Henry. Sons of the former, and good makers. One of Benjamin's Violins the Author has heard played upon which had a very fine tone. It was purchased for four guineas. Label for this family, "*James and Henry Banks, Musical Instrument Makers and Music Sellers, 18 Salisbury 00.*"

BARBAY, ——, Paris, 1746.

BARNES, Robert, London, 1780.

BARRAILES, Thomas, Rome, 1683. Brown varnish, strongly built; label, an engraved plate.

BARRETT, John, London, 1720. Another good English maker who adopted the Stainer pattern: his best instruments are purfled. Label, "*At ye Harp and Crown in Pickadilly, London.*"

BARTL, Andreas N., 1726.

BARTON, George, London, 1810.

BARZELLINI, Aegidius, 1710.

BAUSCHE, Ludwig, Leipsic. A workman of fair merit.

BECKMAN, Sweno, Stockholm, 1706. Wood and work inferior, dark varnish.

BELLOSIO, Anselmo. A Venetian maker of the 18th century, and an imitator of Seraphino.

BENEDETTI, Donato, Cremona, 1700.

BENEDICT, Matteo, Cadiz, 1808.

BENOIT, ——, Brussels, 18th century.

BENTE, Matteo, Brescia, 1580. A famed maker of the Brescian school. His Violins are much esteemed.

BERGONZI, Franciscus, Cremona, 1685.

BERGONZI, Carlo, Cremona, 1712-1755. An excellent maker, and a pupil of Stradivarius, whose instruments are now valuable, although the greater number of the Violins of this artist, which we have seen, bear a much greater resemblance to those of Joseph Guarnerius. There are certainly a few with a slight similarity to those of Stradivarius, and the outline approaches more to the Stradivarius than the Guarnerius pattern. The model is usually very flat; the *f* holes are

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stiff, diverging much as they descend, and are not by any means graceful; the C's. which are square and rather stiff, are very deeply cut into the body of the instrument; the purfling is broad, and not very neatly laid in; the corners are rather unfinished, and the prominently elevated but fairly made scroll is much detached from the box. The varnish is usually of a deep red or brown tint, but sometimes of a beautiful golden colour, such as that upon the instrument of the late Earl of Falmouth. The tone—which is, as the French term it, "not yet made"—is generally strong and powerful, but has neither the delicacy and charming quality of the Stradivarius, nor the grandeur and richness of the Guarnerius. still, in the absence of a Violin of those two great masters, they are desirable instruments, and will assuredly have a good future. He also made Violas and Violoncellos. Label, "*Anno 1723, Carlo Bergonzi, fece in Cremona.*" Mr. Johnstone, of Glasgow, has a fine and perfect specimen of this maker.

BERGONZI, Michael Angelo, Cremona, 1725-1760. Son of the above, and is stated to have been a pupil of Stradivarius. Label, "*Michel Angelo Bergonzi Figlio di Carlo fece in Cremona l' Anno 1755.*" There are very few of this maker's Violins in Britain.

BERGONZI, Nicholas, Cremona. Brother of the preceding, but inferior in merit.

BERGONZI, Petrus, "*Alumnus Stradivari;*" thick red varnish.

BERGONZI, Zosimo. Brother of Nicolas. his work of less merit than the preceding.

BERKEL, P. Von, Antwerp, 1763.

BERNADEL, ——, Paris, 1872. A good modern maker.

BERNARDO, Calcagnas, 1790.

BERROIT, ——, Brussels.

BERTRAM, Alexander, Eddleston, 1880.

BERTRAND, Nicolas. A French maker.

BETTS, John, London, 1755-1823. A pupil of Duke, and a good maker. Label, "*Jo. Betts, No. —, near Northgate, the Royal Exchange, London,* 1762." His Violins are often of the most choice wood and varnish.

BETTS, Edward, London. Nephew of the above, also a good maker.

BEVERIDGE, William, Craigh and Aberdeen, 1870. The Violins of this maker are of exquisite finish, with beautifully carved scrolls and tail-pieces; he is also the inventor of an improved tail-piece, which adds much to the neatness of the Violin. In this tail-piece the holes for the strings are pierced longitudinally, having a small cavity cut at the extreme ends of each for containing the knots, similar to that commonly used for containing the button-string. The strings are simply inserted through the longitudinal holes, and a knot formed, which is prevented from slipping by the holes being graduated to a size corresponding to the four strings. This artist was patronised by

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the late Prince Consort for his Violins, Bows, Snuff-boxes, etc., and Her Majesty has at various times commissioned him to supply her with many articles in wood-carving.

BIERLARIS, Joseph, 1690.

BIMBI, ——, Florence, 1768.

BINTERNAGLE, ——, Gotha, 18th century. A copyist of the Cremona patterns.

BLACK, ——, London.

BLAIR, William, Abergeldie. Born 1794, died 12th Nov. 1884. Violinist to H. M. Queen Victoria, and H. R. H. the Prince of Wales, also a maker; some of his Violins are pretty well finished, and have much power and brilliancy of tone, but want the bland and silvery sound of the old Italian instruments. The wood of all the best instruments of this maker has been baked by fire.

BOCQUAY, Jacques, Paris, 1710-1730. A native of Lyons, and a good French maker. A Violin by this maker is in the collection of Mr. Lowe, Edinburgh, which, from the extraordinary volume and intensity of its tone, is familiarly known as "The Emperor;" the model is large, the varnish of fine yellow tint. Label, "*Jacques Boquay, rue d' Argenteuil a Paris, 17—.*"

BODDIO, Gennaro, Venice, 1740.

BODIN, Johannes, 1773.

BOLLER, Michael, 1784.

BOLLES, ——. An early Lute and Viol maker.

BONO, Gaetano. Venice.

BOOTH, ——. Leeds.

BORELLI, Andreas, Parma, 1736.

BORLON, or PORLON, Peter, Antwerp, 1640. Label, "*Peeter Porlon tot Antwerpen, f. 1647.*"

BORVIN, Claude. A French maker.

BOUCHER, ——, London, 1760.

BOULLANGIER, C., London, 1879. A good modern maker, awarded silver medal at Inventions Exhibition, 1885.

BOUQUE, ——, Paris, 1826.

BOURDOT, Sebastian, Mirecourt.

BOUSSU, B. A., Etterbeeck, 1752. A good maker. Some of his Violins are sold for about five guineas.

BRECKENRIDGE, John, Parkhead, 1830.

BREMEISTER, Johann, Amsterdam, 18th century. A good and careful workman.

BRETONLE, Paris. Of inferior merit.

BROWN, James, London, 1760-1834.

BROWN, James, London, 1786-1860.

BRUNER, Martin, 1764.

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BUCHSTADTER, Ratisbon. Recommended by Spohr. Otto states that the instruments of this maker are not highly esteemed.
BUCKMAN, Geo. H., London and Dover, 1895.
BUDIANI, Javietta, Brescia, 1580. A good maker of the Brescian school.
BUENSI, Paolo, 1650.
BUSANO, Domenico, Venice, 1776.
BUSETTA, Giovanni Maria, Cremona, 1605. Finely finished instruments, but mediocre in quality.
BUTHOD, ——, Mirecourt, 1820. A good imitator of Stradivarius.

CABASSE, ——, Paris.
CAHUSAC, ——, London, 18th century.
CAJECTANUS, ——, 1806.
CALCANIUS, Bernardus, Genoa, 1753.
CALVAROLA, Bartholomew, 1750. Model and varnish similar to that of Andrew Guarnerius, wood very thick throughout, head large, and scroll wanting the last turn. Label, "*Calvarola Bartholomæus, fecit in Vico Turris Boldonæ prope Bergomum, Anno 1756.*"
CAMBINI, ——.
CAMILLIO, David, 1740.
CAMILLUS, Camille, Mantua, 1712-1739. Of no great merit. His Violins are well modelled, but he cannot be classed as a pupil of Stradivarius, as is frequently reported.
CAMMINADA, Frederick, Milan, 1655. Of the long Amati pattern, fair workmanship, delicate tone.
CAMPBELL & CO., Glasgow, 1895.
CAPPA, Giachimo, and Geofreda, Cremona and Saluzzio, 1590-1640. Pupils of the Amatis, and founded the Saluzzian school of makers. Label, "*Iofredus Cappa in Saluzzio, Fecit Anno 1640.*"
CAPUCINNUS, P. Vincentius.
CARCASSI, or CARRASSI, Giovanni, 1759.
CARCASSI, Lorenzo Tomasso, Florence, 1782.
CARCASSI, Vincenzo.
CARNEVOLI, Nicola, 1826.
CARTER, John, London, 1785. A good English maker.
CASSINO, Anthony, Modena.
CASTAGNERY, Andrew, Paris, 1740.
CASTAGNERY, Jean Paul, Paris, 1640. A good French maker.
CASTALIANI, ——, 1743.
CASTELLO, Paolo, Genoa, 1750.
CASTRO, ——, Venice, 1690. A maker of rather inferior quality.
CAVALERI, ——, 1748.
CAVALERI, Joseph Baptista, 1759.
CELIONATUS, John, Taurini, 1736.

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CERUTI, or CHERUTTI, J. Baptista, Cremona, 1868. A good modern maker.

CHALLONER, Thomas, London.

CHANOT, Georges, Paris, 1872. A good French maker.

CHANOT, George, London, 1875. Son of the above. At the Paris Exhibition in 1878, he carried off the only prize medal awarded to the English section; at the Inventions Exhibition in 1885, he gained the gold medal; and at the Liverpool Exhibition 1886, he gained another gold medal.

CHANOT, Joseph A., London, 1895. Successor to the above.

CHAPPUIS, Nicholas Augustine, Paris, 1760. Of large and flat model, and mediocre quality.

CHEVRIER, ——, Paris.

CHRISTA, Josephus Paulus, Munich, 18th century.

CHRISTOPHORI, Bartholomew, Florence, 18th century. Little seems to be known about his Violins, but he made a great many Violoncellos, Violas, and Double-Basses.

CIRCAPA, Thomas Naples, 18th century.

CLARK, ——, London.

CLAUDOT, Charles. A French makes of inferior quality.

CLAUDOT, Augustine, 1848.

COLE, James, Manchester, 1860. Of fair repute.

COLE, Thomas, London, 1690.

COLLIER, Thomas and Samuel, 18th century. Of fair merit.

COLLIN, Mezin, Paris. Now living; excellent work but inferior varnish; claims a speciality in bass-bars.

COLLINGWOOD, Joseph, London, 18th century.

COMINS, John, 1801. A pupil of Forster.

CONTRERAS, Joseph, Madrid, 1745. A good maker. I have seen a Violin by this maker, for which the possessor refused thirty guineas. It is made of excellent wood, of rich figure and possesses a fine round tone.

CONTURIEUX, ——, Paris, 1800.

CONWAY, William, 1748.

CORSBY, George, London, 1868.

COSTA, Della Pietro, Treviso, 1660-1680. Considered a good maker.

CRAMOND, Charles, Aberdeen, 1821-1833. Made some good instruments of which several are in the county; his usual charge for a Violin was about £5. About 1834 he went to Nova-Scotia.

CRASKE, George, London, Bath, Manchester, Birmingham, Stockport, 1830-1889. A good copyist of the Strad. and J. Guarnerius models and a very prolific maker. He died in 1889.

CRESPANO, de Pedrinelli.

CROSS, Nathaniel, London, 1720. In company with Barak Norman. A

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good maker. His Violins are well built, of a large and rather high model, greyish yellow varnish. The initials *N. C.*, are branded inside the back.

CROWTHER, John 18th century.

CUNI, ——, 18th century. A good French maker.

CUTHBERT, ——, London. An average maker in the 17th century.

DALLI, Aglio, Mantua, 1808. High model, coarse wood, dirty yellow varnish.

DANIELS, ——, 1877.

DARCHE, Aachen. A good imitator of old Italian Violins.

DARCHE, Leopold, Brussels, 1834. Good work.

DARDELLI, Pietro, Mantua, 1500. An early maker of Viols, Bass-Viols, and Rebecs. He was a monk of the Franciscan Order and was known under the title of "*Padre Dardelli.*"

DAVID, ——. A French maker about the 18th century.

DAVIDSON, Hay, Huntly, 1879. Violins of very inferior finish and quality.

DAVIS, Richard, London, 18th century.

DAVIS, William, London, 18th century.

DEARLOVE, Mark, Leeds, 1826. Of fair merit, has been successful at several Exhibitions with his models.

DEARY, C., Paris, 1732.

DECOMBRE, or DE COMBLE, Ambrose. Tournay, 1750-1760. A pupil of Stradivarius. His Basses are much esteemed. Label, "*Fait a Tournay, par Ambroise de Comble, 17—.*"

DECONET, Michele, 1769. Author of a small treatise on the "Instrument Makers of the Italian Schools," which was published at Hamburg in 1877.

DELANY, John, Dublin, 1800. Inferior work.

DENNIS, Jesse, London, 1802.

DEPINE, G., Modena, 1772.

DERAZEY, Henry, Paris. A good copyist.

DESPONT, Anthony, Paris, 18th century.

DEVONEY, Frank Blackpool, 1895. Considered a good maker.

DICKENSON, Edward, London, 1745. A fair maker. Label, "*Edward Dickenson, maker at the Harp and Crown in the Strand, near Exeter Change, London, 1745.*

DICKESON, John, London, and Cambridge, 1770. A good maker, but model rather flat and over-wooded.

DICKSON, John, Stirling.

DIEHL, Nicholas. Darmstadt, 1779. The best maker of this family.

DIEHL, Martin, Darmstadt.

DIEHL, Nicolas Louis, Darmstadt.

DISSMORE, Geo. A., Des Moines, Iowa, 1895. A good modern maker.

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DITTON, ——, London, 18th century.

DODD, Edward, Sheffield and London, 1705-1810. An improver of the bow.

DODD, Thomas. Son of the above. Not an artist himself, but excellent instruments still exist bearing his label, but those were made by Lott and Fendt, who wrought for him.

DODD, Thomas, London. Son of the above.

DODD, John. Son of Edward, the celebrated bow-maker.

DODDS, Edward, Edinburgh. This maker is considered the best of our modern artists in Edinburgh. His Violins are made of good wood, are carefully and accurately formed, and covered with a good lustrous oil-varnish. Within the past few years he has made several exact and fine copies of Mr. Croall's Strad. Violins. He is also an excellent repairer, his work being exceedingly neat.

DOLLINGER, Sebastian, Vienna, 1784.

DOMINICELLI, ——, Ferrara, 1695-1715. A pupil of the Amati school.

DOMINIQUE, A., Cremona.

DOPFER, Nicholas, Mayence, 1784. Of fair merit. Made several instruments when 84 years of age.

DORANT, William, London, 1810.

DUCHERON, Mathurin. A good French maker.

DUIFFOPRUGGAR, or TIEFFENBRUCKER, Gaspard, Bologna, Paris, and Lyons, 1510-1540. Now understood to be the first maker of the real Violin; he was born in the Italian Tyrol. Some of the scrolls have beautifully carved figures.

DUKE, Richard, London, 1765-1791. A well-known English maker, whose Violins now rank pretty high in value as works of English merit. Label, "*Richd. Duke, Londini, fecit 1765.*"

DUKE, Richard, London. Son of the above,

DULFENN, Alessandro, Livorne, 1700.

DUNCAN, ——, Aberdeen, 1762.

DUNCAN, George, Glasgow. Now living. A good maker who was awarded the gold medal of the London Exhibition of Inventions and Music, in 1885; as also the silver medal at the Edinburgh Exhibition, in 1887.

DURFFELL, or DOERFFEL, Johann Andreas Gottfried, Altenburg, 1750-1780. His Violins possess delicate tone, but little power, his Double-Basses are much esteemed. Label, "*Johann A. Gottfried Durffel, Violinmacher, Altenburg, 1776.*"

DURFFLER, or DOERFFLER, Christian F. 1796.

DURST, Mathaus, 1779.

DYER, George, Vienna, 1701. One of the good old copyists. The Author possesses an excellent specimen of this old maker.

EBERLE, Jean Ulric, Prague, 1749. An eminent German maker, recom-

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mended by Otto. Mr. M'Donald, Mossat (Aberdeenshire), has a Violin by this maker.

EBERTI, Thomas, 18th century. Model somewhat resembles Stainer, but breast-wood often coarse.

EDLINGER, Thomas, and Joseph Joachim, Prague, 1710-1748. A family who made several good instruments.

EGLINGTON, ——, London, 1802.

ELSLER, Joseph, Mayence, 1730.

ERNST, Frank Anthony, Bohemia and Gotha, 1750. A Mathematician who afterwards adopted the Musical profession and became Court Musician to the Duke of Coburg Gotha. He is said to have made many good instruments, the celebrated Spohr having performed a Concerto upon one of them.

ERTL, Johann, 1817.

EVANS, Richard, London, 1748. Label, "*Maid in the Paris of Lenirhengel, by Richard Evans, Instrument Maker, in the year 17—.*"

FABRIS, Luigi, Venice, 1867. Copied di Salo.

FALCO, ——, Cremona, 18th century. A good maker.

FALLAISE, ——, French. Copied Amati and Stradivarius, varnish thin and yellow.

FARINATO, Paolo, Venice, 1720.

FEBBRE, ——, Amsterdam, 18th century.

FEIER, Andreas, 1790.

FELDEN, ——, 17th century.

FENDT, or FINTH, ——, Paris, 1775. A native of Germany, and a good maker. His Violins are beautifully finished, and varnished in oil.

FENDT, Bernard, Innsbruck and London, 1756-1832. An excellent maker who wrought with Thomas Dodd and John Betts.

FENDT, Bernard Simon, London, 1800-1852. Son of the preceding, and a prolific maker of no great reputation.

FENDT, Martin, London, 1840. Brother of the former.

FENDT, Jacob, London, 1815-1849. An able copyist.

FENDT, Francis, London. Of the foregoing family.

FENDT, William, London, 1833-1852. A good maker.

FERDINAND, Andraias, 1734.

FERGUSON, Donald, Huntly (Aberdeenshire), 1870.

FERONI, Gio. Baptista, 1767.

FEURY, F., Paris.

FICHOLD, H., 17th century.

FICHTEL, Martinas Matthias, 1780. High model.

FICHTH, Johann, 1732.

FICHTL, Johann, 1758.

FICKER, or FIEKER, Johann Christian, Cremona, 1742. His instruments are not amongst the best, he used a peculiar monogram,

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stamped upon the wood, indicative of his being at the head of the family.

FICKER, Johann Gottlieb, Cremona, 1740.

FIESOLE, Angelico, 1667. Of Stainer model and splendid yellow varnish.

FINDLAY, James, Padanaram (Forfarshire), 1870.

FIORILLO, Giovanni, Ferrara, 1775.

FIORINO, ——. Well toned instruments.

FIRTH, ——, Leeds, 1834.

FISCHER, Zacharias, Wurtzburg, 1758.

FISCHTL, Hans Christian, 1745.

FISCHTL, L. C.

FLEURY, Benoist, Paris, 1715.

FLORENTUS, Florinus, Bologna, 1685-1715. One of the Amati school.

FONTANELLI, Giovanni, 1772.

FORD, Jacob, London, 1775. Of high model, handsome wood, and deep brown varnish.

FORREST, ——, Glasgow.

FORSTER, William, Brampton, 1713-1801. The earliest maker of this renowned family. Label, "*William Forster, Violin-Maker, in Brampton.*"

FORSTER, William, London. 1739-1808. Son of the former, and an excellent workman who copied chiefly Stainer and Amati, and made very fine Violoncellos. I have seen a Violoncello by the elder William, which was purchased for £10, a very fine-toned instrument; a Tenor and Violoncello of exquisite quality, by the same maker, are in the possession of that eminent Collector, Mr. Croall of Edinburgh. Label, "*William Forster, Violin Maker, in St. Martin's Lane, London, 1801.*"

FORSTER, William, London, 1764-1824. Also a good maker.

FORSTER, William, London, 1788-1824. Son of the preceding.

FORSTER, Simon Andrew, London, 1800-1868. Brother of the former.

FOURRIER, Nicholas, Paris and Mirecourt, 1810. An excellent maker.

FOW, Franziskus, 1820.

FRANKLAND, ——, London, 18th century.

FRASER, Alexander, Forres, 1879.

FREI, Hans, Nuremberg, 15th century. A celebrated maker of Lutes and Viols, and father-in-law to Albert Durer.

FRITZ, Bernardus.

FRITZ, Berthold, Leipsic, 18th century.

FRITZSCHE, Samuel, Leipsic, 1790. Made good instruments.

FUNGD, George, 1817. Generally of large model.

FURBER, London, 1700-1840. A family of good makers. Label, "*John Furber, Maker, 13 John's Row, top of Brick Lane, Old Street, Saint Luke, 1813.*"

GABBICELLIS, Giovanni di, Florence, 1720. A maker of beautiful

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instruments, tone and workmanship excellent, varnish brown and of good quality. He copied the models of Stradivarius and Joseph "*del Jesu.*"

GABRIELLI, Giovanni Baptista, Florence, 1747. Many instruments of this maker are of superior quality, but are rather elevated in appearance. His Violoncellos and Violas are preferable to his Violins. The varnish he used was generally yellow, he often branded his instruments with his initials, G. B. G. Label, "*Joannes Baptista de Gabrielli, Florentinus, Fecit 1747.*"

GABRIELLI, Antonio, Florence.

GABRIELLI, Bartolomeo, Florence.

GABRIELLI, Christophoro, Florence.

GABRIELLIS, Angelus di, 1705.

GAETANO, Pasta, Brescia, 1702. A good maker.

GAETANO, Antonio, Cremona, 1858. Of no particular merit.

GAGLIANO, or GALIANUS, 1695-1790. A family of Naples, celebrated makers who imitated the method of Stradivarius; one or two of the family have been considered the immediate pupils of Stradivarius.

GAGLIANO, Alexander, Naples, 1695-1730. Youssoupoff says of this maker:—"Alessandro Gagliano, son of a Marquis of the same name, was, at the commencement of the 18th century, compelled to flee from Naples in order to escape from the police, who were endeavouring to capture him on account of a murder which he had committed. He withdrew to a dense forest in the neighbourhood of Marighanetto Borgo, and while there, and to amuse himself, he carved Violin-shaped instruments on the trunks of the trees. As he discovered that his hand was not entirely unsuited to this kind of work, and after the police had tired of busying themselves with his tragedy, he returned to Naples, and there founded an instrument-maker's workshop." He made excellent instruments of a flat and large form, with yellow varnish. They contain wide and straight *f* holes, more so than those of Stradivarius; the wood is generally good, the scroll small. Label, "*Alexandri Gagliano, Alumnus Stradivarius, fecit Neapoli, anno 17—.*"

GAGLIANO, Nicolo, Naples, 1700-1740. Son of the former. His Violins and 'Cellos are remarkably well made, bearing a similarity to the earlier instruments of Stradivarius. The varnish is of a darker colour than that on the instruments of his father.

GAGLIANO. Ferdinand, Naples, 1700-1735. Brother of the former. Label, "*Ferdinandus Gagliani, me fecit Neapoli, anno 1730.*"

GAGLIANO, Januarius, Naples, 1740. Brother of the former and a good workman.

GAGLIANO, Ferdinand, Naples, 1780. Of the same family. Alexander Shields, Esq., Manufacturer, Perth, has a fine Violin by this maker. It was purchased from Dr. Spiteri—first Violin, in the Opera House at

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Malta—in 1870, and is dated 1789. Label, "*Ferdinandus Gagliano Filius, Nicolai fecit Neap. 17—.*"

GAGLIANO, Guiseppe, Naples, 1780. Son of Ferdinand.

GAGLIANO, Giovanni, Naples, 1850.

GAGLIANO, Antonio, Naples, 1868.

GAGLIANO, Raphael, Naples, 1868. This maker, as well as the former, produced good work.

GAISSENHOFF, ——, Vienna, 1803.

GALBUSERA, Christian A., 1830. Said to have been the inventor of a peculiar chemical preparation by which he extracted the resin from the wood. He made his Violins and Tenors without corners, being of a Guitar shape.

GALERZENA, ——, Piedmont, 18th century.

GAND, Charles Francis, Paris, 1802-1845. A pupil and successor of Lupot, and an excellent maker. He died at Paris, on 10th May, 1845.

GAND, Eugene, Paris. Son of the above.

GAND, Adolpe, Paris. Now a partner in the firm of "Gand et Bernadel."

GARANI, Michael Angelo, Bologna, 1700-1720. An excellent maker, being one of the Cremona school. He was an imitator of Stradivarius and was also a good maker of Violas.

GARANI, Nicolo, Naples, 1700. Also one of the Cremona school.

GASPAN, Domenico, 1757.

GATTANANI, ——, Piedmont, 1786.

GAVINIES, Francois, Paris, 1734-1780. A good French maker. Label, "*Gavinies, rue S. Thomas du Louvre, a Paris, 1735.*"

GEDLER, Johann Benedict, and Johann Anthony, Fissen, about 1720.

GEISENHOF, Franz, Vienna. An excellent workman who copied Stradivarius, his initials are sometimes branded on the bottom of his Violins.

GEISSERHOFFER, ——, Vienna.

GEMUNDER, George, Astoria, New York. Now living, a pupil of Vuillaume, he left Paris for America in 1847. A good modern maker.

GEMUNDER, August, New York, 1895. A maker of good repute.

GERLE, Jean, Nuremberg, 16th century. A Lute and Viol maker.

GESCHIEL, And. Johann, 1778.

GIACINTO, Ruger, 1650.

GIAMBERINI, ——, 1777.

GIBBS, James. A workman of Gilkes'.

GILKES, Samuel, London, 1800-1827. A good maker, being a pupil of Forster. Label, "*Gilkes from Forster's Violin and Violoncello Maker, 34 James Street, Buckingham Gate, Westminster.*"

GILKES, William, London, 1875. A son of the former.

GILLIOS, Antonius, 1610.

GIOFFREDA, B., Turin, 1860. A maker of medium quality.

GIOSDANE, Alberto, Cremona, 18th century. Little is known of this maker.

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GIRARD, Grand. Used amber varnish.

GLASS, Fried. Aug. A modern maker, swelled model.

GLENISTER, ——, London. A good modern maker.

GOBETTUS, or GOBETTI, Franciscus, Venice, 1690-1720. A pupil of Stradivarius. An excellent maker; his Violins are varnished of a reddish-yellow colour. Label, "*Franciscus Gobetti fecit Venetiis 17—.*"

GOETHEL, Christian Fred., Borstendorff, 1780. Of the Stainer school; dark red varnish, not purfled.

GOFRILLER, Matthew and Francis, about 1700. A family of Venice, who cannot be classed with the higher makers.

GOLLIVER, Francesco, Venice, 1729.

GOUGH, Joseph, London, 1816.

GOUVERNARI, Antonius, Cremona, 1640. Not of much repute. Label, "*Antonius Gouvernari, Cremonensis Faciebat, Anno 1640.*"

GRAGNANI, A., Liburni, 18th century. Fair merit. Label, "*Antonius Gragnani, fecit Liburnii Anno 17—.*"

GRANCINO, Paolo, Milan, 1665-1690. Produced excellent Violoncellos. Although born in Milan he was a pupil of Nicolas Amati. He modelled his Violins after those of his master. There are many of this maker's Violins bearing the labels of Nicolas Amati, but they can easily be distinguished by the scroll, which is shorter in the genuine Amati Violins.

GRANCINO, Giovanni, Milan, 1694-1721. Son of the preceding, and made good instruments. The tone, wood, and workmanship are excellent, the varnish generally yellow. Some connoisseurs give this maker the preference over the others belonging to the family. Label, "*Giovanni Grancino in Contrada Largha di Milano, al segno della Corona 1721.*"

GRANCINO, Giovanni Baptista, Milan, 1685. Brother of the former, and a good maker.

GRANCINO, Francisco, Milan, 1710-1762. Son of the former and the most inefficient workman in the family.

GRANDJON, J., Paris, 1867. A pupil of Gand and maker for the National Conservatory of Music. His instruments are brilliant, but have no great intensity.

GRAY, James, Fochabers (Morayshire), 1870. Has made some finely-finished instruments after the method of Bagatella. They possess good intensity of tone.

GREINOT, Josephus, 1771. Guarnerius type.

GRIMM, Carl, Berlin, 1865. One of the most celebrated of European makers, he gained the first prize at the Paris Exposition.

GRINDLEY, ——, Chester, 1830. Made narrow, guitar-shaped instruments with snuff-box heads, but of no merit.

GROBITZ, ——, Warsaw, 1752.

GROSSET, Paul. A good French maker, and a pupil of Pierray.

GUADAGNINI, Lorenzo, Cremona, 1690-1742. He was for 35 years the

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workman of Stradivarius, and wrought upon his own account about 5 years after the death of his master. A great many of his Violins are nowadays sold as Stradivarius instruments, from which it is very difficult to distinguish them, except those that are of small pattern. In reality his Violins are very rare, almost unknown. The tone is sweeter and softer than those of the latter, but less brilliant; but in reality the differences are by no means remarkable. He also used the celebrated red varnish, but this is inferior to that of Stradivarius. Those of his successors bearing the same name have made many really good instruments, but possessing nothing like the limpid and mellow quality of Lorenzo, the oldest of this family. Label, "*Lorenzo Guadagnini Cremonæ, Alumnus Stradivarius. Fecit Anno Domini 1734.*"

GUADAGNINI, Joannes Baptista, Placentia and Milan, 1710-1755. A good maker. Amongst the numerous instruments in the collection of Mr. Lowe, of Edinburgh, is one by this maker, made in 1750. Miss Hamilton, the eminent Violinist, has another excellent and perfect specimen of this maker, dated 1755. Label, "*Joannes Baptista Guadagnini, Placentinus fecit Mediolani 1755.*"

GUADAGNINI, L., Milan, 1740-1770. Son of Lorenzo, modelled his instruments after those of his father, but the Violins of this maker are not held in very high esteem.

GUADAGNINI, Giovanni Baptista, Piacenza, 1755-1785. Of the same school as the former, but his Violins approximate more closely to the model of Stradivarius, the shape being better than that of Lorenzo; the varnish of a rich dark red colour.

GUADAGNINI, Guiseppe, Parma, 1762-1798. Brother of the former.

GUADAGNINI, Guiseppe, Como, 1780. Son of Giovanni Baptista. A Viola by this maker, in the possession of a friend of the Author, bears the following inscription:—"*Guiseppe Guadagnino Figlio di Giovanni Battista Fece in Como nella Contrada di Porta Sala 1780.*" Inside the table is written, "*Dadona Pissa laga magna Adino io Sonno Guiseppe Guadegnino, 1780, Como Natius di Torino.*"

GUADAGNINI, A., Turin, 1868. The Violoncellos of this maker possess fine tone.

GUARNERIUS, Andreas, Cremona, 1630-1695. A pupil of Nicholas Amati. Label, "*Andreas Guarnerius fecit Cremonen sub titulo Sanctae Teresiæ 1670.*"

GUARNERIUS, Guiseppe, Cremona, 1680-1730. Son of the former. Label, "*Joseph Guarnerius filius Andreae fecit Cremonae sub titulo S. Teresiae* 1703."

GUARNERIUS, Pietro, Cremona and Mantua, 1690-1728. Another son of Andrew, and brother of the former. Label, "*Petrus Guarnerius Cremonensis fecit Mantuæ sub. tit. Sanctæ Teresiæ* 1705."

GUARNERIUS, Pietro, Cremona, 1725-1740. Son of Joseph and grandson of Andrew.

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GUARNERIUS, Joseph, Cremona, 1725-1745. Surnamed *del Jesu*. Many of his instruments bear the monogram I.H.S. The following is a copy of the label:—"*Joseph Guarnerius, fecit Cremone, anno* 17—I.H.S." This was the last maker of this illustrious family.

GUARNIERI, Johannes Ruggeri, 1750.

GUASANT, Francois, 1756.

GUERSAN, Ludovicus (Louis), Paris, 1730-1766. An excellent French maker. His Violins are of the small pattern, and finely finished, being covered with oil-varnish. A few of the Violins of this maker were covered with spirit-varnish, but those are supposed to have been made by his pupils, and are of inferior quality to the former. Label, *Ludovicus Guersan prope Comœdiam Gallicam Lutetiæ Anno* 1765."

GUGEMMOS, ——, Bavaria.

GUIDANTES, Florenus, 1717.

GUIDANTUS, Giovanni F., Bologna, 1740. His Violins are high in pattern, with long *f* holes, the varnish thick. In 1882 there was a Viol d' Amour of this maker exhibited at Milan, dated 1715, it was ornamented with a beautifully carved head of a Cupid.

GUIDOMINI, Lorenzo, Milan.

GUISEPPE, Marconsini, 1770.

GUSETTO, Nicholas, 1685.

HAAS, Leoboldt, 1786.

HAMBERGER, Joseph, Presburg, 1842.

HAMM, Johann Gottfried, Rome, 1765.

HANSEL, Johann. Of no particular merit.

HAOLICOCK, ——.

HARDIE, Matthew, Edinburgh, 1815. A well-known Scottish maker. His Violins are powerful in tone and of fair workmanship.

HARDIE, Thomas, Edinburgh, 1830-1856. A son of the former. Workmanship not very delicate, and scrolls by no means handsome.

HARDIE, James, Edinburgh, 1888.

HARE, Joseph, London, 1725. Made some good instruments.

HARE, John, London, 1726. His Violins are clumsy, yet of good wood and tone; outline is unshapely, and indifferently cut *f* holes; the backs and breasts commence their archings from the purfling, which is not sunk. He was no copyist of Stainer. Label, "*John Hare, at ye Viol and Flute, near the Royal Exchange in Cornhill, London*, 17—."

HARHAM, ——, London, 1772.

HARRIS, Charles, London, 1800. A Custom's Officer who made good instruments. The archings of the back of his Violins are formed in a peculiar manner, with a deep undulation or scoop all round the inner parts from the indenting; the bellies are generally made from wood of good quality. Some of the Violins have backs made from Rosewood,

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others of Walnut, etc. Dr. Murray, of Forres (Morayshire), has a Violin by this maker, which, although much shattered, possesses a delicacy and fulness of tone seldom or never obtained in the old instruments of common-place English makers. The Author also possesses a well-preserved Violin of this maker.

HART, John T., London, 1805-1874. An eminent judge of Violins.

HART, George, London. Son of the former, Author of a work on the Violin; also a celebrated judge, maker, and repairer of instruments. He died 1891.

HART, George, London, 1895. Son of the above.

HASSERT, ——, Rudolstadt. He imitated the model of Stainer, his instruments are shrill and hollow in tone.

HASSERT, ——, Eisenach, 1743. Brother of the above and a good imitator of the old Cremonas.

HEAPS, John K., Leeds, 1880. Has made several good Violins and Violoncellos within the past thirty years. His varnish is of good quality.

HEESOM, Edward, London, 1745.

HELMER, Charles, Prague, 1742. A careful maker, and a pupil of Eberle.

HENDERSON, D., Aberdeen, 1867.

HENOCQ, ——, Paris, 1764.

HENRICH, Th., Heberlein. An excellent modern copyist.

HENRY, J., Paris, 1869. The bows of this maker are excellent.

HENTSCHL, Johann, 1760.

HERRMANN, Felix, London, 1895.

HESKATH, Thos. E., Manchester, 1895.

HILDEBRANT, Michael Christopher, Hamburg, 18th century. Of fair merit.

HILL, William and Joseph, London, 1740-1770. Brothers, who made excellent Violoncellos. I have seen a fine-toned Tenor, which contained the following inscription:—"*Made by Joseph Hill and Sons, at the Harp and Flute, in the Haymarket, 17 London 65.*"

HILL, Joseph, London, 1837. A son of Joseph.

HILL, Lockey, London, 1842. A brother of the former.

HILL, William Ebsworth, London, 1840-1895. Son of the preceding, and a good repairer and judge.

HILL, Alfred, London, 1895.

HOFFMAN, Martin, Leipsic. Recommended as being a good maker, but his instruments have a rather inelegant outline.

HOLLOWAY, J., London, 1800.

HOPFF, ——. A trade manufacturer. Violins of rough finish and of little or no merit.

HORIL, Giacomo, 1720.

HORNSTAINER, Matthias, Mittenwald, 1802. A pupil of Klotz; his

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instruments are of medium model, powerful tone, and pale orange-brown varnish.

HORNSTAINER, Joseph, Mittenwald.

HOYER, ——.

HULLER, Augustine, Shoeneck, 18th century.

HUME, Richard, Edinburgh, 1536. A Lute maker.

HUNGER, Christopher F., Leipsic, 1787. Stated by Otto to have been a superior maker. A pupil of Jaug; he also made many good Violas, Violoncellos, and Double-Basses.

HYDE, Andrew, Northampton, Mass., 1895. Said to be a fairly good modern maker. Quoting trom his "Treatise on the Violin," he says that he makes copies of the "great G. P. Magganni (?)" whoever he may have chanced to be.

INDELAM, Matteo.

JACOBI, ——, Meissen. A Lute maker.

JACOBS, Henri, Cremona and Amsterdam, 1685-1735. A maker of rather mediocre merit, used whalebone purfling, and chiefly copied the pattern of Nicholas Amati. His wood was good, varnish red and of beautiful transparency. Many have supposed, quite erroneously however, that this was almost the only maker who used whalebone purfling. There are quite a number of Violins—by eminent makers even—purfled with whalebone, as for instance several of Andrew Guarnerius, Nicholas Amati, David Tecchler, Vincenzo Panormo, and many instruments of the good old German makers. Whalebone is very durable and elastic, and remains *in line* better than wood, although it is not so tenacious with glue.

JAUCH, ——, Dresden, 1770. Reputed as having been a good maker.

JAUG, Andreas, Dresden. Large, flat model.

JAY, Henry, London, 1658. A Viol maker.

JAY, Thomas, London.

JAY, Henry, Long Acre, London, 1753. Chiefly renowned for his Kits, but a good copyist of Stainer. He used excellent wood, and his Violins have often been labelled and sold as genuine Stainers.

JEAN, F. S., French.

JOHNSON, John, London, 18th century.

JOHNSTON, James, Pollokshiels.

JOY, E. F. Makes excellent Violins of very old wood.

JULIANO, Francisco, Rome, 1690-1710. Mr. G. Neil, of Wreaton, Aberdeenshire, possesses a Violin by this maker, a fine-toned instrument. It bears the following inscription:—"*Francisco Juliano in Roma, 1700.*"

KAMBL, Johann Andreas, 17th century.

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KEILLING, Julius, 1811.

KEMPSELL, Israel.

KENNEDY, Alexander, London, 1750. A Scottish maker of good repute. Label, "*Alexander Kennedy, Musical Instrument Maker, living in Market Street, in Oxford Road, London, 1780.*"

KENNEDY, John and Thomas, London, 1730-1869. Father and son, very prolific makers.

KERLINO, or KERLIN, Joan, Brescia, 1449. A native of Brittany, and one of the earliest makers of the Violin; he also made Viols, Rebecs, etc. La Borde, Author of "Essai sur la Musique," states that he saw a Violin by this maker, with four strings, and having, instead of the common tail-piece, a piece of ivory inlaid in the breast, and pierced with four holes. The breast of the instrument was higher than those of the common Violins, whilst the outline was unequally curved at the ends, and the sides badly formed. This Violin—if it may be called such—contained the following label:—"*Joan Kerlino ann. 1449.*" The tone was sweet but weak—similar to some of the instruments of Anthony Amati.

KERNBTER, ——, 1763.

KESSEL, Anton.

KIAPOSSE, Sawes, St. Petersburg, 1749.

KIRKOVICS, Francis, 1822.

KIRSCHSCHLAG, ——, A Tyrolese maker in the 18th century.

KLOTZ, Matthias, Tyrol, 1670-1696. One of Stainer's best pupils. His finest instruments are dated between 1670 and 1696. A Violin by this maker, dated 1679, is in the possession of Mr. William Clark, New Mill, Fife.

KLOTZ, George, Mittenwald, sur l' Iser, 1754. Son of the former. Label, "*Georg Klotz in Mittenwald an der Iser 17—.*"

KLOTZ, Egitia, Tyrol. Brother of the former, made good instruments.

KLOTZ, Sebastian. The best maker of the family. Large sums have been given for some of the Violins of this maker. Parke, in his "Musical Memoirs," tells us that Lord —, gave Mr. Hay, the Leader in the King's Orchestra, in London, £300 and an annuity of £100 for his specimen.

KLOTZ, Joseph, Tyrol. Used very fine wood in his instruments.

KLOTZ, Joan Carl.

KLOTZ, Michael, Mittenwald, 1769.

Although numerous Violins exist by all the Klotz family, yet a far greater number are scattered about, bearing fictitious labels, many of which are in a measure closely allied, arising from the many makers—imitators—who sprang up towards the close of the last century. In the Tyrol there existed a school of Violin-makers, who were close imitators of the original instruments, and whose Violins in fact may

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be ranked as equally meritorious with the inferior instruments of the Klotz family, hence the harm was less injurious in designating them as genuine, for with the exception of Sebastian Klotz, no extraordinary merit is apparent in their labours, and even his work and excellence is by no means uniform.

Infinitely worse is it to palm off those scandalous eye and ear-sores, termed Violins—now manufactured by thousands, and known as "*Mirecourt* (*Warehouse*) *Fiddles*," which are baked, blurred, darkened, and daubed by acids, and other fraudulent means, in order to imitate age and wear, and are sent out inscribed with all manner of labels, but generally with those of the second-class makers, including Bergonzi, Rogerius, Gagliano, etc. Those fictitious labels are often of wrong date, for fifty or sixty years antecedent, or subsequent to the real time of the artist's existence, appear to be of little moment, yet they often seriously mislead, and in more cases than one aid unscrupulous dealers in their impositions. Such a Violin the Author has observed several years ago endorsed at a price of £50,—a comparatively new instrument, and by no means worth 50s. Of all other methods such shameful frauds are the most to be despised, especially as the artificial seasoning of the belly, or table-wood, renders their tone worse by age.

It must, however, be herein remarked, that widely different indeed are those fine old "Stainer" copies, both English and German, which characteristically proclaim their identity, and seldom betray themselves to amateurs who may possess even but a moderate knowledge of Violin experience.

KNITL, Joseph, Mittenwald, 18th century.
KNITTING, Philip, Mittenwald, 17th century.
KOHL, Jean, Munich, 1575. A Lute maker.
KOLDITZ, Matthias Johann, Munich, 1719. Label, "*Matthias Joannes Koldits, Lauten u. Geigenmacher in Munchen, 1750.*"
KOLDITZ, Jacques, 1800. A Bohemian maker.
KOLIKER, ——, Paris, 18th century. A celebrated maker.
KOPFF, Peter.
KRAUB, Johann Adam.
KRAMPERA, Jacob.
KRASNA, Jacob, Vienna.
KRICHBAUM, ——, 1777.
KRINER, Joseph, Mittenwald, 1759.
KULHARVY, Antonius, Vienna, 1825.

LACASSO, Antonio, Milan, 1700.
LAFLEUR, ——, Paris.
LAGETTO, ——, Paris, 1672.
LAKE, Franz, 1772.

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LAMBERT, Nancy, about the commencement of the 18th century, surnamed "Charpentier de la Lutherie." None of the Violins of this maker are held in much esteem.

LONDOLPHI, or LANDOLFI, Carolus Ferdinandus, Milan, 1750-1760. He varnished in two different colours, the red being the finest, although very thick, it is still very transparent and beautiful in colour. A pupil of Guarnerius and a good maker. Label, "*Carolus Ferdinandus Landulphus fecit Mediolani in via S. Margaritæ, Anno 1755.*"

LANSA, Antonio Maria, Milan, 1673.

LAURIE, David, Glasgow. Now living. An excellent judge of Violins, and an extensive dealer in this class of instruments. Amongst the many instruments which he has imported into Britain, may be mentioned the "Alard" Stradivarius Violin, *ex* Alard, Paris; the "King Joseph" Guarnerius Violin, *ex* Vicomte de Janze, Paris; the "Sancy" Stradivarius Violin, *ex* the Baron de Sancy; the "Heller" Stradivarius Violoncello, *ex* de Heller, St. Petersburg; all in the possession of John Adam, Esq., Blackheath, London, when the last edition of the present work was published, and whose magnificent collection of Violins will be found detailed in the Appendix to this work; the "Artot," or "Cessol" Stradivarius Violin, *ex* Count Cessol de Nice, and a perfect and most beautiful Violin, both in the possession of W. Croall, Esq., Edinburgh; the "Cuisiniere" Stradivarius Tenor (the only one of four known), perfect, bought at the Hotel Drouet, Paris; the "Canon" Joseph Guarnerius Violin; a very large and handsome model Violin, with beautiful red varnish—said to have been the Violin Paganini lost at play; the "Passini" Joseph Guarnerius, and "Alard" Nicholas Amati; two perfect Stradivarius Violins from the Castelbarco Collection, Milan; the "Ernst" Stradivarius Violin, now the Solo Violin of Madame Norman Neruda (now Lady Halle), the renowned artiste, etc., etc.

In addition to the immense number of Italian Violins, first, second, and third class, which Mr. Laurie has imported, he from time to time brought over some of the finest copies of Paganini's "Joseph" Guarnerius, and the "Messie" Stradivarius Violins, made specially to his order by Mr. J. B. Vuillaume. The finest Violins by this maker, although condemned, so to say, by very faint praise, and dismissed with a very short paragraph in Mr. G. Hart's work on the Violin, are certainly perhaps the finest of modern made instruments, and for beauty of workmanship and finish, are almost equal to the finest Violins of Stradivarius, and certainly surpass in this respect the great majority of makers, ancient or modern, and the tones of the fine copies which he latterly made, leave nothing to be desired, both for power and quality; nevertheless there are numerous instruments of this maker which are truly inferior in quality.

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LAUTTEN, L. W., Tyrol. Of no particular merit.
LECLERC, ——, Paris.
LEIBMILLER, Martin.
LEIDOLFF, Joannes Christ., 1750.
LEITZMULLER, Martin, 1788.
LEMBOSK, G., Vienna. Maker to the Conservatory there.
LENTZ, John Nicholas, London, 1810. Made good instruments.
LEWIS, Edward, London, 1705. Also a good London maker.
L' HARMAND, ——, Paris.
LIDL, Anthony, 1762.
LIEB, Andreas Carolus, 1785.
LIEZPEM, Reinacus, Lownai, 1750. A German maker; instruments of a peculiar narrow build, good wood, well finished, and dark brown varnish.
LIHARZEK, Doctor, Vienna, 1865. Of modern Violin-makers—although his Violins are not in the market—this gentleman may well be mentioned. His theory of the instrument led him to a slight change in its construction, by which he produced a Violin, which, although new, was said to be equal in tone to the finest instruments of the old masters. Dr. L. was a practicing physician, his specialty being Diseases of Children. He was a profound Mathematician, and published a wonderful work: "The Square of Three in the Human Body," from which he could tell the height, weight, and proportions of a human body from any fragmentary portion of it.
LINAROLLI, Venturi, Venice, 1520. A maker of Viols, etc.
LOB, G., 1821.
LOCKE, Guiseppe, 1760.
LOLY, Jacovo, Naples, 1625. Of little merit.
LONGMAN, ——, London.
LORENZINI, Gaspar, Placentia, 1788.
LOTT, John Frederick, George Frederick, and John Frederick, London, 1775-1871. A family who made good instruments.
LOUIS, J., Geneva.
LOUVET, ——, A French maker.
LOWENDALL, ——, Dresden. The Violins of this maker are well known.
LUCIA, Luigi de.
LUPOT, Francis, Stutgard, 1725-1785. Made some excellent instruments. He was Court Instrument Maker to the Duke of Wurtemburg.
LUPOT, Nicholas. Son of the former; the finest of the French makers. His first instruments are dated from Orleans. He was born in Stutgard in 1758, in 1785 removed to Orleans, and about nine years afterwards he was appointed maker for the Chapel Royal in Paris, in which city he died on 13th August, 1824. He wrote a work on the

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Violin, which far surpasses any of our English works, an edition of which was printed for the "Academie des Bibliophiles" in 1869. He was one of the most conscientious and careful Violin-makers, and every portion of his work shews the extreme care and pains which he had taken with it. The Violins made during the last 20 years of his life may be valued at £45 and upwards. His Violins are much valued, and ranked next to the old Cremona instruments. Label, "*Nicolus Lupot, Luthier, rue Croix des petits-Champs, a Paris, l' An. 18—.*" Mr. Johnstone, Glasgow, has one of the finest instruments of this maker, for which he refused an offer of £100, made by Wilhelmj the eminent Violinist.

MACGEORGE, ——, Edinburgh, 1796.

MACINTOSH, ——, Dublin, 1837. Well modelled Violins, of flat pattern, rather narrow, yellow varnish, *f* holes small but well cut, and wide apart; branded his initials on the back near the neck junction, also near the tail-piece.

MACINTOSH, —— Blairgowrie.

MADYIER, Andrea A.

MAGGINI, Giovanni Paolo, Brescia, 1590-1640. A native of Brescia, pupil of Gaspard di Salo, and an esteemed maker. His Violins are of a large pattern, and are made similar to those of di Salo. Most of his instruments are covered with spirit-varnish of a deep golden colour, with the back and breast generally double purfled, and terminating at both ends in an ornament. In the collection of J. A. Wood, Esq., Edinburgh, is a Violin, by this maker, of great depth and purity of tone. Label, "*Paolo Maggini in Brescia.*"

MAGGINI, Pietro Santo, Brescia, 1635. Son of the former; renowned for his Double-Basses.

MAIER, or MAYER, Andrea Ferdinand, Salsburg, 18th century. Made some fine Violins, good varnish, scrolls often carved into Lion's heads. Label, "*Andreas Ferdinandus Mayr Hof Laut, und Geigenmacher in Saltsburg. Anno 17—.*"

MALDONNER, ——, Bavaria, 1760.

MALER, Lucas, Bologna. A celebrated Lute maker. Mace tells us that Maler's Lutes were sold for as much as £100 each, though often "pittiful, old, batter'd, crack'd things."

MAN, Hans, Naples. An imitator of Stradivarius and Guarnerius, but of little merit.

MANN, John A., Glasgow, 1870. A dealer, as also a maker and repairer of Violins and other musical instruments. He often went on business trips to Paris, where he enjoyed at J. B. Vuillaume's table the society of the most eminent of the Paris makers and players. When first shewn the "Messiah" Violin, he could have purchased it for £160.

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A year afterwards its price was fixed at £300; a little later it went to £600: then Delphin Alard purchased it for £1,400; finally Mr. Crawford, of Edinburgh, bought it for £2,000! This maker died in 1889.

MANSANI, Dominico, 1839.

MANSIELL, Leonard, Nuremberg, 1728. His instruments are recommended by Spohr.

MANSUY, a Paris. Flat model, good finish, but too lightly wooded.

MANTEGAZZA, ——, Milan.

MARATI, C. B., Verona, 1690. Mr. Malcolm, Edinburgh, has a Violin by this maker, dated 1690.

MARCHI, Joannes Antonius, 1783.

MARIANI, Antonio, Pesaro, 1570-1620. Fetis states that his instruments are not of much value.

MARLOT, Nicholas.

MARQUIS DE LAIR, French, 1800. Of inferior merit, flat model, with peculiar yellow varnish.

MARSHALL, John, London, 18th century.

MARTIN, ——, London, 1797.

MARTINELLI, Gio. Guiseppe, 1755.

MAST, J. L., Paris. Generally followed the Stradivarius model.

MATTHIEU, Nicolas.

MAUCOTEL, Charles, Mirecourt, Paris and London, 1807-1860. Made some beautiful instruments.

MAULE, Giovanni, Padova, 1826.

MAYRHOFF, Andrea Ferdinand, Salsburg, 18th century.

MAYSON, Walter H., Manchester. Now living; a careful maker.

MEDARD, Nicholas, Nancy, 17th century.

MEDARD, Henry, Paris and Nancy, 1680-1720. Supposed to have been a pupil of Stradivarius; he generally followed the model of Jerome Amati.

MEDARD, Franciscus, Paris, 1710. Label, "*Franciscus Medari fecit Parisiis 17—*."

MEDARD, Jean, Nancy 18th century.

MERLIN, Joseph, London, 1800.

MEUSIDLER, Jean, Nuremberg, 16th century. Lute and Viol maker.

MEZZABOTTE, ——, Brescia, 1720.

MEZZADIE, Alexander, Ferrara, 1690-1720. One of the Amati school.

MIER, ——, London, 18th century.

MILANI, Francisco. Considered to have been a good maker.

MILLAR, Alexander, St. Andrews, 1870. This maker chiefly followed the Guarnerius model. His instruments are well made and carefully finished.

MIRECOURT, C., Paris, 1868. The instruments of this maker are very brilliant in tone; the varnish is very fine.

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MIREMONT, C. A., Paris, 1868. A good French maker.
MODESSIER, ——, Paris, 1800. Instruments of fair repute.
MOFFAT, ——. Pupil of Kennedy.
MOHR, Philip, Hamburg, 1655. Lute maker.
MONK, I. K., London, 1895.
MONTADE, Gregory, Cremona, about 1730. A pupil of Stradivarius.
MONTAGNANA, Dominicus, Cremona and Venice, 1700-1740. A pupil of Stradivarius. This maker is principally known through his excellent Violoncellos, which possess much fulness and sonority of tone. The table-wood in his instruments is generally very wide in the reed, and the tables or bellies are a little short between the *f* holes and the end of the instrument. His excellent varnish, soft in quality and fiery in intensity, is all that can be desired. Mr. Edward Howell, of H. M. Theatre, London, possesses a magnificent specimen of this maker's instruments. Label, "*Dominicus Montagnana, Sub Signum Cremonæ Venetiis, 1747.*"
MONTECAZZA, or MANTEGAZZA, ——, Milan, 1790.
MONTEGRACIA, Petrus Johannes, Mediolani, 1775. A maker of average merit.
MORELLA, Morgatto, Mantua and Venice. 1550. Some instruments of this maker still exist. He is supposed to have been a pupil of Dardelli. Label, "*Morgatto Morella fece in Venezia, 1550.*"
MORIGI, Joannes, Ravenna, 1821.
MORISON, John, London, 1800.
MULLER, L., Venice. A Lute maker.
MURDOCH, Alexander, Aberdeen, 1870. His instruments are well-finished, and possess much intensity, but want mellowness of tone.

NAMY, ——, Paris, 18th century.
NAYLOR, Isaac, Leeds, 1786.
NEUNER, Matthias. Amati model.
NEWTON, Isaac, 18th century.
NICHOLAS, Didier, Geneva, 1800. A rather inferior maker. His initials D. N., are stamped inside on the backs of his instruments.
NIEGER, Anton, Mittenwald, 1780. Average merit, dark brown varnish.
NIGGEL, Sympertus, Paris, 1652.
NOEBE, Louis. A fairly good maker.
NORBORN, John, London, 18th century.
NORMAN, Barak, London, 1680-1740. A well-known English maker. He is supposed to have been the first English maker of Violoncellos; in 1715 he went into partnership with Cross. Label, "✠ *Barak Norman and Nathaniel Cross, at the Bass Viol in St. Paul's Churchyard, London, Fecit, 1725.*"
NORRIS, John, London, 1739-1818. In company with Barnes.

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NOVELLO, Peter, Venice, 1710.
NOVELLO, Mark Anthony, Venice, 1756.
NOVELLO, Valentine, Venice, 1760.

OBUE, Bartholomew, 17th century.
OCORVETTI, Rivisto.
ODOARDI, Guiseppe, 1703.
ODUQUESEDO,——, 1640.
OTT, Jean, Nuremberg, 1495. A Lute maker.
OTTO, Jacob Augustus, Gotha, 1765-1830. Author of a treatise on the Violin; he was Court Violin-Maker to the Duke of Saxe Weimar; a pupil of Ernst and an excellent imitator of Stradivarius.
OTTO, ——, Gotha, 1795. Son of the former.
OTTO, ——, Cologne, 18th century.
OUVRARD, Jean. A pupil of Pierray; considered a good maker.
OWEN, John William, Leeds, 1895.

PAGES, Juan, 1790.
PALMA, Paolo, Lucca.
PAMPHILON, Edward, London, 1685. Made several fine instruments, but his work varies much.
PANORMO, Vincenzio, Palermo, 1750; Paris, Ireland, and England, 1775. Died 1813; an excellent maker. Label, "*Vincent Panormo rue de l' arbre Sec. a Paris 1736.*"
PANORMO, George Lewis. Son of the above, the celebrated bow-maker.
PANORMO, Joseph, London. Brother of the former, and a good maker.
PANORMO, Louis, London.
PANORMO, Edward and George, London. Relatives of the former family.
PANSANI, Antonio, Rome, 1785.
PARKER, Daniel, London, 1720-1785. An excellent English maker. The eminent connoisseur, Mr. Lowe, of Edinburgh, possesses a fine specimen by this old artist.
PARTH, Andreas Nicholas, Vienna, 1782.
PARTL, Christian Franciscus, Vienna, 1789.
PASTA, Dominico, and Gaetano, Brescia. 1710. Good makers of the Amati school.
PAUL, Saint, 1672. Some of this maker's instruments are very good.
PAZZINI, Giovanni Gaettano, Firense, 1640-1650. One of the Brescian school and a pupil of Maggini; made good instruments. His Violins are high modelled, varnish brown, tone good. Label, "*Giovan. Gaettano Pazzini, allieno d' ell Maggini de Brixiæ, Fecit Firenze, anno 1640.*"
PEARCE, James, London, 1785.
PEILLING, Johann, Mittenwald, 1821.

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PEMBERTON, Edward, about 1650. The Violins of this maker are said to have been good.
PERE, Derazey.
PERNHARDUS, Seitz, 1773.
PETZ, Marianus.
PEZARD, ——, Brescia, 1562. One of the early makers, and a contemporary of Maggini.
PFENNER, Joan Georg., Tyrol, 1789.
PFRETZSCHNER, Johann Adam, 1712.
PFRETZSCHNER, Gottlieb, Cremona, 1752.
PFRETZSCHNER, Charles Frederick, Cremona.
PHILBROOK, Benjamin, 1800.
PIATTELLINI, Gaspero, 1784.
PICARD, Nicholas, Versailles, 1725.
PICHOL, ——, Paris.
PICINO, ——, Padua, 1710.
PIERRET, or PIERRAY, Claude, Paris, 1710-1730. Made excellent Violins after the model of Jerome Amati, but of no great finish. Label, "*Claude Pierray proche la Comedie a Paris 17—.*"
PIERROT, ——, Lyons.
PIETE, Noel, Paris, 18th century.
PILLEMENT, Lete., Turin, 1814.
PILLEMENTI, F., Paris.
PIOVESANA, ——.
PIQUE, F. L., Paris, 1790. A pupil of Saunier. His instruments are highly recommended, they are constantly increasing in value, and in all probability they will continue to do so. Label, "*Pique, rue de Grenelle S. Honore, au coin de celle a Ecus, a Paris, 17—.*"
PITET, ——. A French maker, about the 18th century.
PIZZURNUS, David, Genoa, 1759. A maker of fair quality; model rather narrow. His instruments are of sweet tone, but possess little power.
PLACK, F., Schoenback, 1740, Considered to have been a good maker.
PLANE, Watty, Glasgow.
PLANIS, Augustus de.
PLATNER, Michael, Rome, 1762.
POLLEN, Michael, 1797.
POLLUSCA, Antonio, 1754.
PONS, ——, Paris.
PONS, ——, Grenoble, 1788. Of no particular merit.
POSCH, Anthony, Vienna, 1739.
POSSEN, Lauxmin, Bavaria, 16th century. Lute and Viol maker.
POSTACHINI, ——, 1836.
POWELL, Thomas, London, 1790.

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PRAGA, E., Genoa. An excellent Italian maker; he took first prize in Genoa, in 1885.
PRESSENDA, Joannes Franciscus, 1835. A good maker.
PRESTON, John, York, 1790.
PRICE, A. H., London, 1895.
PUPUNAT, Fs., Lausanne, 1834.

RACCERIS, ——, Mantua.
RAEBURN, John, Largoward, Fife, 1879. An aspiring young artist, whose work is of excellent finish. He was awarded the Bronze Medal in the Artisan Section of the Edinburgh Exhibition of 1891.
RAFF, ——, Bavaria.
RAMBEAUX, Claude, Paris and Mirecourt, 1858. A good maker.
RAMBOUTS, Peter, Amsterdam.
RAPHAEL, Nella, Brescia, 1735. Beautifully finished instruments.
RAUCH, ——, Breslau and Wurtzburg, 1740. A family who are said to have produced some excellent instruments.
RAUCH, Jacques, Mannheim, 1722-1745.
RAUT, Jean, Rennes, 1780. A good French maker.
RAYMANN, Jacob, London, 1640. A Tyrolese who is regarded as the founder of Violin making in England; he is a fairly good maker.
REICHEL, Johann Gottfried, Absom, 1785. Of inferior merit.
REICHEL, Johann Conrad, Newkirch, 18th century.
REISS, Jos., 1822. Generally of large model.
REMMY, ——, London, 1838.
RENAULT, Nicholas and John. Good French makers.
RENISTA, ——, Cremona, 1740. Label, "*Renisto Cremonæ Alumnus Carlo Bergonzi, Fecit 17—.*"
RESPINI, Pietro, Brescia, 1826. Good wood and varnish, but ridiculously full and elevated model.
RESTIE, Anton., 1799.
RICOZALI, Ludovicus, Cremona, 1725.
RIEGER, Anthony.
RIEGER, Johann, 1755.
RIESS, ——, Bamberg, 1750. An excellent maker who imitated Stainer.
RIVET, ——.
RIVOLTA, Giacomo, Milan, 1816. Very shallow ribs, extremely high model, inferior red varnish.
ROCCO, Joseph Antonius, Turin, 1843.
ROCCUS, S., Paris 1700.
ROGGIERI, Domenico, Cremona, 1740.
ROOK, Joseph, London, 1807. A good maker.
ROSS, John, London, 1560. A Viol maker.
ROSSI, Florianus di, 1747

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ROTH, Christian, Augsburg, 1685.
ROVELLI, ——, 18th century.
ROZE, ——, 1788.
RUB, Aug. de, 1771.
RUDDIMAN, Thomas, Aberdeen, 1769. At that time ranked as amongst the best of our Northern makers.
RUDERFIELD, Jacob Ferdinand.
RUDGER, Giovanni, Cremona, 1670. This maker must not be confounded with the following family.
RUGGER, RUGGIERI, or ROGERIUS, Cremona and Mantua. A family who made excellent instruments. Carl D. Hamilton, Edinburgh, has a Violoncello by one of this family.
RUGGER, Francis, Cremona, 1668-1725. Surnamed "Il Per," a pupil of Amati, and a good artist. His Violins are generally large and made very thick, the varnish red or dark brown, *f* holes like those of Amati, the tone brilliant and good. A Violin by this maker is in the Collection of Mr. Malcolm, Edinburgh. Label, "*Francesco Ruggieri detto il per Cremona, 1671.*"
RUGGER, Guido, Cremona.
RUGGER, Vincent, Cremona, 1700-1730. Label, "*Vicenzo Rugger detto il Per in Cremona 1720.*"
RUGGER, John Baptista, Brescia, 1691-1725. A pupil of Nicolas Amati, and made excellent instruments. Label, "*Io: Bapt. Rogerius: Nicolai Amati de Cremona alumnus Brixiæ, fecit Anno Domini 1724.*"
RUGGER, Giacinto, Venice, 1654.
RUGGER, Peter James, Brescia, 1700-1720.
RUPPERT, Francis, Erfurt. A maker of mediocre merit.

SALETPIER, ——, 1735.
SALLE, ——, Paris, 1800. An excellent French maker, and follower of Guarnerius.
SALO, Gaspard di. Born in the town of Salo, upon Lake Garda, Brescia, 1550-1610. One of the celebrated old artists. His instruments possess great power and excellence of tone. He was chiefly celebrated for his Viols, Basses, and Double-Bass Viols. Amongst the numerous fine Violins in the possession of Mr. A. C. Mackenzie, of Edinburgh, is one by this maker, of a somewhat small pattern, tone very full and powerful, with excellent varnish, arching of breast very elevated, and workmanship very fine. Label, "*Gaspar da Salo. In Brescia.*" Mr. Wallace, Professional Double-Bass Player, Dundee, has a Double-Bass by this artist. It is an excellent instrument, was bought from Mr. Laurie, who brought it from Rome, and is, so far as I can learn, the only G. di Salo Double-Bass in Scotland. In none of the traditions which have reached us regarding this fine old maker, has there been

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any hint or suspicion that he had a brother working with him, but in a Violin of his make in the possession of W. Pickering, Esq., of London, the ticket runs thus:—"*Francesco e Gaspar di Salo in Brescia.*" This instrument is narrow, slightly under full size, and has the double row of purfling.

SALOMAN, ——, Paris, about 1740. Considered a good maker.

SALZAR, ——. Of no particular merit.

SANCTI, Giovanni, Naples, 1725. Of inferior merit.

SANONI, Giovanni Baptista, Verona. Of no particular fame.

SANTINO, Santis. Milanese school.

SANZA, C. C. de, Prestwich. A good modern maker.

SANZO, Santino, Milan, 18th century.

SAPINO, ——, Cremona, 1635. A pupil of Giofreda Cappa, imitated the Violins of Amati, and was formerly esteemed a good maker.

SAUNIER, ——, Lorraine, 1720. A pupil of Lambert, and surpassed his master in quality and finish.

SAXON, ——, Manchester and Stockport, 1800. Of inferior merit; hard and worthless orange varnish.

SCHANDL, George, 1790.

SCHAEDELICH, Christian Gottfried, 1782. Stiff, high model, with yellow varnish.

SCHEINLEAN, Matthew Frederick, Langenfield, 1720-1771.

SCHEINLEAN, Jean Michael, Langenfield, 1730-1771. Son of the preceding; a good maker, but his instruments are somewhat weak in the wood.

SCHLICK, ——, Leipsic. Said to have discovered a process for rendering the wood free of water, acid, and resin. He also made good instruments.

SCHMIDT, ——, Cassel, 1817. Recommended by Otto, but an inferior maker. He used spirit-varnish.

SCHONGER, G., Erfurt. Made some very fine instruments.

SCHONGER, Francis Erfurt, 1769.

SCHORN, Johann, Innspruck, 1690-1699. His Violins are of high model and good varnish.

SCHORN, Johann, Innspruck, 1690.

SCHORN, Jacob, Salsburg.

SCHOTT, Martin, Prague. An inferior maker.

SCHUND, Georg.

SCHUSTER, Joseph Anthony.

SCHWAICHTER, ——.

SEATON, Samuel, Heely, 1879. An experienced collector and connoisseur, who has a numerous collection of good old Violins. A great number of exquisite instruments have passed through his hands to most parts of the United Kingdom.

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SEITZ, Joseph Mittenwald, 1790.

SERAFINO, Santafece, Venice, 1756.

SERAPHINO, Sanctus, Venice, 1710-1745. One of the Amati school; a maker of excellent instruments. He is celebrated for the beautiful finish of his work. At one time he copied Stainer, at another Amati. His varnish is of an excellent brown colour. He used very fine wood, although his scrolls have not the perfection of the Italian makers. Label, "*Sanctus Seraphin Utinensis fecit Venetiis Anno 1730.*"

SHAW, ——, London, 17th century.

SHAW, ——, Nottingham, 1878. His Double-Basses are of fair merit.

SIANI, Valentino, Florence, 1650. His Violins are weak but sweet and sympathetic; varnish thick and of a brown colour.

SIMON, Franz, Salsburg, 1778.

SIMPSON, John, London, 1787. Label, "*John Simpson, Musical-Instrument Maker, at the Bass Viol and Flute in Sweeting's Alley, Opposite the East door of the Royal Exchange, London.*"

SMITH, Thomas, London, 1755. Chiefly noted for his Violoncellos. He was a pupil of Wamsley, and succeeded him at the Harp and Hautboy. Label, "*Made by Thomas Smith, at the Harp and Hautboy, in Pickadilly, London, 1756.*"

SMITH, William, London, Stockport, and Sheffield, 1780-1820. A few of this maker's Violins are of fair merit.

SOQUER, Louis, Paris, 1752. A good French maker.

SPEILER, ——, Tyrol, 1765.

SPIES, Carl.

STAINER, or STEINER, Jacob, Absom, Tyrol, 1650-1683. A well-known maker. Label, "*Jacobus Stainer in Absom, prope Oenipontum 1654.*"

STAINER, Marc, Kufstein, Tyrol, 1660. Brother of the above, who, it is said, for several years assisted him in his workshop. Supposed to have been a monk. He used good wood and yellow-brown varnish. Some of his labels were written and some printed. The following is a copy of one of his Labels:—"*Marcus Stainer, Burger, und Geigenmacher in Kuefstein, Anno 1659.*" Violins by this maker were at one time esteemed of the highest quality. Burney (Vol. III, p. 569) tells us that Veracini, a celebrated Florentine Violinist, lost two M. Stainer Violins by shipwreck, in his voyage from London to Leghorn, in 1746, which he had christened "St. Peter" and "St. Paul." Burney says:—"He lost his two famous Stainer Violins thought to have been the best in the world."

STAINER, Fred., 1729. Imitated the preceding makers.

STANGL, Aloysius, Mittenwald, 1799. Flat model, fair work, reddish varnish.

STANISLAUS, ——, Brescia, 1720.

STATELMANN, David, Vienna, 1735-1750. Of average repute.

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STATELMANN, Johann Joseph, Vienna, 1784. A well-known excellent maker.

STENTOR, ——.

STIRRAT, ——, Edinburgh, 1815. A pupil of Matthew Hardie, who only lived to work a few years on his own account. The Violins of this maker are considered to have been equal, if not superior, to those of Hardie. Mr. Lowe, Edinburgh possesses, a Violin by this maker, dated 1815; this ranks amongst the best instruments of this artist.

STOF, Hermann Joseph, 1739.

STOFF, Eustachius, 1799.

STOFZ, Ignaz., St. Polten, 1821.

STOHR, Jacob, 1817.

STORIONI, or STORIONUS, Laurentius (Laurence), Cremona, 1780—Trieste, 1801. A famed maker. Englishmen are beginning to recognise the value of the instruments of this excellect artist, who has long been a great favorite amongst Italian professional players. His workmanship has a rough appearance, but there is found upon closer acquaintance to be a considerable amount of character in it, and the vigour of his tone is undoubted. He seldom made two Violins alike, and appears to have been experimenting the whole of his lifetime. Some of his instruments are modelled after "*Joseph del Jesu*," with the long *f* holes, others are more of the "Strad." model, but none are *copies*. He had a style of his own throughout, and cannot well be mistaken for any other maker. In one instrument in the possession of a friend, of unusually careful workmanship, a ticket of "*Omobono and Francesco Stradivarius*" has been inserted. M. Vieuxtemps played for a time upon an instrument made by this maker, which possessed excellent sonority. His instruments are rising rapidly in value, and the day is probably not far distant when we shall see him, on account of his sterling merit, pass the Gagliani, the Grancini, and several other second-class makers, and take his place next after Carlo Bergonzi. He left Cremona in 1801, and removed to Trieste, where he made Violins. Label, "*Laurentius Storioni, fécit Cremonæ, 1783.*"

STRADIUARIUS, or STRADIVARIUS, Cremona. One of the illustrious families, well known for their excellent instruments.

STRADIVARIUS, Anthony, born 1644; died about 1737. The best maker. Label, "*Antonius Stradivarius Cremonensis Faciebat Anno 1725.*"

STRADIVARIUS, Homobono, or Omobono. Son of the former. Died about 1742. Label, "*Omobonus Stradivarius figly Antony Cremone fecit, Anno 1740* $\overset{\text{T}}{\text{a e s.}}$"

STRADIVARIUS, Francisco, 1720-1743. Brother of the former. Label, "*Franciscus Stradivarius Cremonensis Filius Antonii faciebat Anno 17—.*"

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STRAUBE, ——, Berlin. Made excellent instruments; was also a good repairer.

STRAUSS, Joseph, Neustadt, 1745. A Violin of good quality by this maker is in the possession of Messrs. Reid, Aberdeen.

STRAUSSERCH, ——, Cremona, 1785.

STROHL, Johannes, 1717.

STRUAD, Caspar, 1791. Guarnerius model.

SURSANO, Spiritus, Coni (Cuneo), 1714-1730. One of the Amati or Stradivarius school.

SYLVESTRE, H. C., Lyons, 1830. A superior French maker.

SYLVESTRE, Pierre.

TANEGIA, Carlo Antonio, Milan, 1731. Label, "*Carolus Antonius Tanegia, Fecit in Via Lata, Mediolane, Anno 17—.*"

TARR, William, Manchester, 1876. Now living; is known chiefly as a Double-Bass maker of fair repute. Upwards of eighty instruments are known to have been made by him.

TARR, Thomas, Sheffield, 1879. Son of the above; a good maker, and an excellent repairer of Violins and Double-Basses.

TAYLOR, ——, London, 1780-1820. A good maker.

TEBAL, Magus, 1681.

TECCHLER, David, Salsburg, Venice, and Rome, 1680-1742. Chiefly celebrated for his Basses, although many of his Violins possess great excellence. He followed the models of Amati, the *f* holes were copied from those of Stainer. He used excellent wood, varnish yellow; he also made excellent Violoncellos. The Right Hon. Lord Forbes, Castle Forbes, Aberdeenshire, possesses a Violin by this maker, bearing the following inscription:—"*David Tecchler, fecit Roma, 1742.*"

TEODITI, Hieronymus, 18th century.

TERENGHI, ——, Brescia, 1855.

TESTORE, Milan. A family of excellent makers, of the Amati and Stradivarius schools.

TESTORE, Carlo Guiseppe, 1690-1719. A good maker who followed the model of Guarnerius. Some of his instruments have been mistaken for the work of his master, Giovanni Grancino. The tone is good, and fairly powerful; the varnish a brownish yellow. A Violin, by this artist, is in the collection of Mr. Malcolm, Edinburgh. Label, "*Carlo Guiseppe Testore in Contrada Larga di Milano Segno de'll Aquila, 1700.*"

TESTORE, Carlo Antonio, Milan, 1700-1740. Son of the former. He adopted the N. Amati and Guarnerius models. His Violins are good, the wood as well as the tone excellent. Label, "*Carlo Antonio Testore figlio Maggiore del fu Carlo Guiseppe in Contrada Parga, al segno de'll Aquila 1735.*"

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TESTORE, Paolo Antonio, Milan, 1710-1745.
TESTORE, Leopold, Rome. A pupil of Nicolas Amati.
TESTORE, G. Giovanni, Milan. Imitated Guarnerius, yellow varnish.
TEUTZEL, Johann, 1776.
THIBOUT, Jacques Pierre, Paris, 1820. A noted French dealer.
THIER, Matthias, Vienna, 1804.
THIR, Joannes Georgius, Vienna, 1730-1772. Large and well-made instruments resembling those of Albani.
THIR, Antonius, Presburg, 1766—Vienna, 1797.
THOMPSON, Robert, London, 1746.
THOMSON, ——, Aberdeen, 1837. Made some fair instruments; also a good repairer.
THOMSON, James, Easter Balmoral, 1879, Ballater, 1895. An amateur who has made several fair instruments.
THOMSON, Charles and Samuel, London, 1720-1748. Several good instruments are known by these makers. Mr. John Munro, Aberarder, Aberdeenshire, has a Violin by this maker, having a good mellow tone; it contains the following inscription:—"*Charles and Samuel Thomson, in St. Paul's Churchyard, 1746.*"
THORLEY, Thos., Manchester.
THOROWGOOD, Henry, London, about 1770.
THUMHARD, Johann Georg., 1812.
TIEFFENBRUNER, Kobbinian.
TOBIN, Richard, London, 1810. A good maker.
TONONI, Giovanni, Venice, 1700. An excellent maker.
TONONI, Felice, Bologna, }
TONONI, Guido, Bologna, } 18th century.
TONONI, Carlo, Venice, }
TORTOBELLO, Francisco, Rome, 17th century. An imitator of Maggini.
TUNONUS, ——, 1695.
TURNER, William, 1549.
TYWERSUS, ——, 16th century. A French maker, adopted the model of Andrew Amati; was a pupil of Nicholas Renault.

UBELL, John Christian, Klugenthal, 1750. Instruments of good quality. Label, "*Johann Christian Ubell, Brolinmacher, in Klugenthal, Anno 1753.*"
URQUHART, Thomas ("London Bridge"), London, 1648. An early maker of worthy excellence. In the valuable collection of Violins belonging to Mr. Muir of Leith, are two very fine instruments by this eminent maker.
URSELLI, M.

VAILLANT, ——, Paris, 1738.

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VAILLOT, ——. A French maker.
VALENTINE, William, London, 1874.
VALLER, ——, Marseilles, 17th century.
VAROTTI, Joannes, 1790.
VERONA, Adrian, Paris, 1720. A good French maker who followed the model of Amati.
VETTRINI, Baptista, Brescia, 1630. Of fair merit, his Violins were of small model, varnish yellow, wood good.
VEULE, Franciscus, 1702.
VIBRECHT, Gysbert, Amsterdam, 1705.
VIMERCATI, Paolo, Venice, 1705.
VIORILLO, Giovanni, Ferrara, 1780. Imitated J. Stainer.
VIVORELLI, Rubini Hieronymus.
VOGEL, Wolfgang, Nuremberg.
VOGLER, Johann George, Winzburg, 18th century. Label, "*Johann Georg Vogler, Lauten und Geigenbauer in Wurzburg 1740.*"
VOIGT, George, Voigtland, 1750. Stainer model and of fair quality, with hard brown varnish.
VUILLAUME, Jean, Mirecourt, 1700-1740. Said to have been one of Stradivarius' pupils, and an eminent maker. Three excellent instruments, by this maker, are in the collections of Messrs. Lowe and Mackenzie, Edinburgh.
VUILLAUME, Jean Baptiste, Paris, 1799-1875. A well-known famed maker, and a pupil of Francois Gand. There are said to be nearly 3,000 of the Violins of this maker. His instruments are beautifully made and finished, his bows are also of excellent quality; he is also the inventor of a peculiar kind of mute, which acts upon the tail-piece of the Violin by the chin of the performer.
VUILLAUME, N. F., Brussels, 1867. Died 1876. Brother of the former, a good maker, his instruments possessing excellent tone.
WADE, J., Leeds, 1895.
WAFELLBERGER, Antoni, 1713.
WAGNER, Joseph, Constance, 1730.
WAGNER, Benedict, 1769.
WALKER, Alexander, Williamston, Mass. (formerly of Castle Newe, Aberdeenshire), 1879. Composer of a Volume of Scottish dance music, also a Repairer of Violins, etc.
WAMSLEY, Peter, London, 1720. An excellent English maker. Label, "*Made by Peter Wamsley, at ye Golden Harpe, in Piccadilly, London, 1728.*"
WAPL, Michael, 1723.
WEICKERT, ——, Halle, 1800. Otto states that he steeped the breasts of the old Violins in pine-oil, under the ridiculous impression that the instruments were too old.

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WEISS, Jacob, Salzburg, 1765. A fairly good maker. Label, "*Jacob Weiss Lauthen und Geigenmacher Saltsburg.*"
WELCHE, Peter, Jerrard Street, Soho, London, 17—.
WENGER, Gregory Ferdinand, Salzburg, 1727-1765.
WENTZEL, Johann Heinrich, Klingenthal, 1755.
WEYMANN, Cornelius, Amsterdam, 18th century.
WHITE, Ira J., 1843.
WILD, Franz Anton., 1784.
WILKINSON, S. B., Leeds, 1895.
WINTER & SON, Messrs. Hull, 1880. Careful workman.
WISE, Christopher, London, 17th century.
WITHALM, Leopold, Nuremberg, 1765-1788. Highly recommended by Otto. Modelled his instruments after the Stainer pattern. His initials are often branded in the inside of his Violins.
WITHERS, Edward, London, 1880.
WITHERS, Edward, London, 1895. Son of the above.
WITTING, Joseph, 1794.
WOCHERLEIN, Joseph, 1783.
WOLFF, Phillip Frederick, 1840.
WOLFRAM, Sebastian, 1776.
WORNLE, Franz, Mittenwald, 1790.
WREDE, H. Jun., London, 1820.
WURNE, Phillipus Jacobus, 1782.

YOUNG, John, London, 1726. Made some good instruments.
YOUNG, John, Aberdeen, 1860. Chiefly a repairer.

ZACH, Thomas, Vienna. One of the finest of the Austrian makers.
ZACHER, Giovanni, 1717.
ZANETTO, Peregrino, Brescia, 1540. Little is known of this maker.
ZANI, Franciscus, 1753.
ZANOLI, Joannes Baptista, 1718.
ZANTI, Alexander, Mantua, 1765. A good maker; one of the Amati or Stradivarius school.
ZWERGER, Anton., 1717.

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APPENDIX.

THE FINEST FIDDLE IN THE WORLD.

THIS remarkable Violin remained in the Collection of the wealthy amateur and well-known connoisseur. Count Alessandro Cozio di Salabue, at Milan, until after his decease. It was in 1775 that the Count purchased this famous Violin, "*Le Messie*"—the Messiah, along with nine other instruments, from Paolo Stradivari. It was then sold in 1827 to that strange nomadic collector, Luigi Tarisio, an humble carpenter in Piedmont. During his peregrinations in search of famous Fiddles, he used often to talk of a wonderful Violin by Stradivarius, which he had got from the Salabue Collection, but he never shewed it, but shrouded it in mystery, until the "Salabue" Violin, as they called it, became a byeword amongst the Parisian Fiddle-Dealers. Tarisio always declared to those French Dealers that many of their Violins were excellent, but that the one he had in reserve would very much surpass any one of them.

Tarisio was one day chatting to Vuillaume upon this favorite topic, when Alard, the eminent Violinist, overhearing the conservation, exclaimed:—"Ah ca, votre Violon est donc comme le Messie; on l' attend toujours. et il ne parait jamais," "Ah, just that, your Violin is like the Messiah, then; we are always expecting it, but it never appears!" hence it was called "Le Messie," the expected one. Tarisio lived in penury; in 1854 he was found dead in his garrett in Milan, surrounded by Fiddles, Tenors, 'Cellos, and Basses of all sorts. The old enthusiastic Collector had amassed a collection of some 250 instruments, the result of a 30 year's almost incessant hunt, and although a poor and penniless carpenter when he started life, yet he died worth £12,000. In 1855 Vuillaume became the purchaser of the Italian's Collection for the small sum of £3,166. For the next 20 years this celebrated Fiddle remained the precious property of Vuillaume, who kept it for inspection in a glass case, and never allowed it to be handled by anyone. The "Messiah" Violin gave him much anxiety during the Franco-Prussian War, for in September, 1870, he tells his daughter, who was married to Alard, that he had found a safe hiding-place for the "Messie," and her husband's Violins; that it was protected from fire—"plus a la grace de Dieu," for he buried underground in an air-tight box those precious treasures, and never disentombed them again, until the proclamation of peace. At the death of Vuillaume in 1875, this Violin became the property of his two daughters—the elder of whom was the wife of Alard,

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The Finest Fiddle in the World.



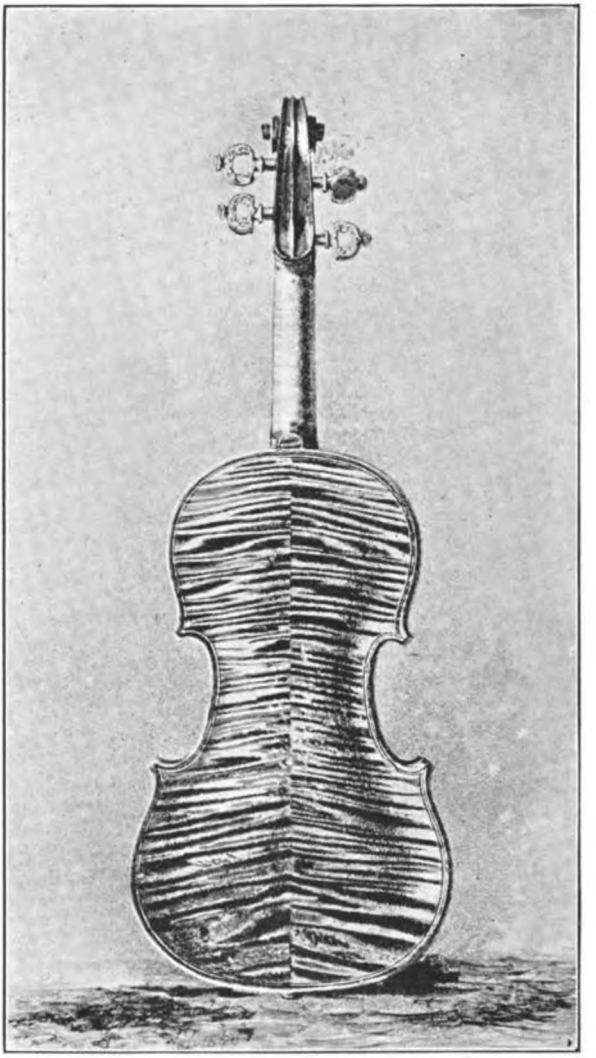
CHICAGO PHOTO. ENGRAVING CO.

FRONT.

THE "*MESSIAH*" STRAD. 1716, OWNED BY MR. ROBERT CRAWFORD, TRINITY, EDINBURGH.

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The Finest Fiddle in the World.



CHICAGO PHOTO. ENGRAVING CO.

BACK.

THE "*MESSIAH*" STRAD. 1716, OWNED BY MR. ROBERT CRAWFORD, TRINITY, EDINBURGH.

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the celebrated French Violinist. When Alard died in 1888, "Le Messíe" became the property of his widow and daughters, and on the death of the former, the two latter sold "Le Messie" in 1888, for £2,000—two-thousand Pounds! (the largest authenticated sum ever paid for a Violin) to Mr. R. Crawford, of Trinity, Edinburgh, in whose possession it now remains, and by whose kind permission we are enabled to reproduce the accompanying engravings of this unique instrument. It is

THE FINEST FIDDLE IN THE WORLD;

an absolutely matchless instrument in several respects, and which has, times without number, been pronounced by the most competent experts, makers, and connoisseurs as absolutely unique. It is *perfectly* AUTHENTIC in all its parts; it is the *best preserved* of all the old instruments; it is *the Fiddle of Europe* and it *challenges the world* to find its mate. How gratifying it is, then, that "Aul' Caledonia" possesses such a treasure, for there is only *one Messiah* Violin, and every true Scotsman ought to feel deeply grateful that Mr. Crawford, in displaying such enthusiastic energy and artistic taste, has become owner of such a truly famous possession; an owner of whom at least every Musical son and daughter of old Scotia ought to well feel proud.

VIOLIN COLLECTIONS, SALES, ETC.

THE MOST MAGNIFICENT COLLECTION OF VIOLINS IN THE WORLD.

ALTHOUGH the various notable old Violins I have alluded to throughout the pages of this volume are almost entirely confined to Scotland—many of the Violins of the English owners being mentioned in other works—yet to the Violin amateur, as well as to the general reader, a short detail of the instruments—many of which are unequalled—which, in 1879, were in the possession of J. Adam, Esq., London, will be of the utmost interest, especially as this magnificent collection has hitherto never been published.

It contains the largest and finest assemblage of instruments ever brought together at any time, or in any country, for the "Goding" and "Gillott" collections bore no comparison with this, yet although those contained a few eminent instruments, there were numerous trashy specimens, especially in the latter collection. Mr. Adam's capabilities as an astute and vigilant connoisseur are laudably established, when it is a well recognised fact that each and all of his Violins bear the indisputable impress of reality, as amongst this unequalled Fiddle family there is not a single instrument which supplies the faintest trace of its having a doubtful or suspicious identity, for every one represents a picture, clear, distinct, life-like, and highly characteristic of the individual presented, and thus proclaims in unmistakable language its true parentage.

This unrivalled collection embraces 16 Violins, 7 of which are by Stradivarius, 4 by Joseph Guarnerius *del Jesu*, 1 by Carlo Bergonzi, 1 by Morglatto Morella, 1 by Nicolas Amatí, 1 by Rogerius "il Per," and 1 by Stainer; 4 Violas, 1 by Stradivarius, 2 by Carlo Bergonzi, and 1 by the Brothers Amati; 3 Violoncellos, 1 by Stradivarius, and 2 by Carlo Bergonzi. I herewith subjoin a few details—

VIOLINS.

ANTONIUS STRADIVARIUS 1713. Known as the "*Sanzy*" instrument, whole back, red varnish and very handsome pattern.

" " " " 1714. Instrument as perfect as when finished,

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	whole slab-back, and very rich red varnish.
" " " "	1714. Known as the "*Dolphin*" Strad., one of the finest Strads known, very fine diaphanous varnish.
" " " "	1714. Termed a "*Brother*" to the preceding, being a *fac-simile* to it in every way.
" " " "	1715. Inlaid with Mother of Pearl between the double purfling. This instrument was for about 30 years in the possession of the Rev. W. Blow, of Colchester, and was formerly the property of Dr. Camidge, of York.
" " " "	1715. Recently owned by the famous D. Alard, of Paris, considered in London and elsewhere to be THE FINEST Strad. now in existence. It is in perfect preservation, being free from fractures and other like damages, and is covered with magnificent rich red varnish.
" " " "	1722. Fine powerful-toned instrument, with whole back, and light colour of varnish.
JOSEPH GUARNERIUS *del Jesu*,	1732. The best Violin in the "Gillott" Collection, and lately owned by Lord Dunmore. This instrument is also in excellent preservation.
" " " "	1738. A fine powerful-toned Violin of rich wood and varnish.
" " " "	1740. A very grand and *matchless* instrument with whole back and dark red varnish.
" " " "	1740. The celebrated "*King Joseph*" from the late Mr. Goding's Collection; sold by Christie in 1857, and for 20 years in the possession of Vicomte de Janze, of Paris. This Joseph is *quite unequalled*, and is covered with magnificent varnish.
CARLO BERGONZI, ...	A very good specimen of this artist.
MORGLATTO MORELLA, ..	1571. Carved head.
NICHOLAS AMATI, ...	16—. From the "Thornley" Collection, *very fine* and *grand pattern* instrument.
ROGERIUS, "IL PER," ...	—— —— —— —— —— —— ——
STAINER, ...	A very perfect specimen.

VIOLAS.

ANTONIUS STRADIVARIUS,	1696. Double purfling, light colour of varnish, and very handsome.
CARLO BERGONZI, ...	17—. Fine red varnish.
" " " "	1727. Fine red varnish of light red tint.
A. AND H. AMATI, ...	1620. Formerly in the possession of W. L. Adye, and Blagrove, bears a painting on the back. This instrument was exhibited at South Kensington in 1872.

VIOLONCELLOS.

ANTONIUS STRADIVARIUS,	1713. Of magnificent tone, very handsome, and quite perfect.
CARLO BERGONZI, ...	1722. A fine instrument, with beautiful red varnish.

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" " " " 1730. Reduced in size, red varnish. A fine large instrument of delicious tone.

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THE GODING COLLECTION.

A List of the most remarkable Violins in the possession of the late James Goding, Esq., of Belgrave Square, London, and the prices which they realised at the auction in 1857.

VIOLINS.

		£		
ANTONIUS STRADIVARIUS,	1710,	70	0	
" " " "	1722,	200	0	
" " " "	1700,	125	0	
JOSEPH GUARNERIUS. . . .	formerly the property of Ole Bull,	105	0	
" " " "	formerly the property of Rode,	86	0	
" " " "	- - - - - - - - - -	260	0	
" " " "	formerly the property of Lafont,	135	0	
" " " "	formerly the property of Lafont,	101	0	
NICHOLAS AMATI, ...	formerly the property of the Marchese della Rosa,	40	0	

TENORS.

NICHOLAS AMATI, ...	lately the property of Mr. Joseph Calkin, and formerly Bartolozzis',	47	5	
ANTONIUS STRADIVARIUS,	in case, with bow. Formerly the property of the late Lord M'Donald,	212	0	
" " " "	with case,	64	0	

VIOLONCELLOS.

ANTONIUS STRADIVARIUS,	in case. Known as the "General Kidd," and lately the property of Sir Wm. Curtis,	130	0	
" " " "	(*doubtful*),	41	0	
SANCTUS SERAPHINO, ...		56	14	

—§—

THE GILLOTT COLLECTION.

A List of the more important Violins, Tenors, and Violoncellos, in the Collection of the late Mr. Joseph Gillott, and the prices realised at the auction in King Street, St. James's, London, on 29th April, 1872.

	£		
A Violoncello, by Guiseppe Cappa, Saluzzio, with filled-in case,	31	0	
A Tenor, by J. B. Guadagnini, 1733, and a small Violin, with case,	40	0	
A Violin, by Joseph Guarnerius, Filius Andreæ, and another. by the same, both in good condition,	67	0	
A Violin, by Gaspard di Salo, Brescia, and one by Ferdinand Landolphus. with case,	40	0	
A Violin, by Carlo Testore, Milan, and a Violin by J. Baptista Rogerius, with case,	54	17	
A large-sized Tenor, by Gaspard di Salo, and a Violin by Testore, Milan,	32	10	

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A Violin, by Antonius Stradivarius, Cremona, 1737,	£160 0
A Violoncello, by Forster; another by Forster, sen., with case fitted to instrument, and a Violoncello by William Forster, 1811,	65 0
A Violin, by J. B. Guadagnini, and another by Carlo Bergonzi, 1731, in double Violin case,	70 0
A Violin, by Nicholas Amati, Cremona, 1654, and a Violoncello, by the same, with case,	93 0
A Violin, by Antonius Stradivarius, Cremona,	110 0
A Tenor, by J. B. Guadagnini, with case; and a Double-Bass by Gaspard di Salo, formerly Signor Dragonetti's, with case,	56 15
A Violin, by Joseph Guarnerius, 1731, and an old Italian Violin,	50 10
A Violin, by Guarnerius,	105 0
A Violin, by Paul Maggini, Brescia, and a very handsome one by Antonius and Hieronymus Amati, Cremona, 1650, with double French case,	71 0
A Violin, by Gaspard di Salo, Brescia, and another by Dominico Montagnana, large pattern,	63 11
A Violin, by Antonius and Hieronymus Amati; a Violin, by Nicholas Lupot; and one by Hieronymus Amati,	86 0
A Violin, by Andrea Guarnerius, in double case; a Violin, by Carlo Landolphi, Florence; and an old Italian Violin,	57 0
A Violoncello, by Guarnerius, with case,	121 0
An old Italian Violin; a Violoncello, by Gaspard di Salo, with case; and a Violin, by Nicholas Amati,	67 10
A Violin, by Guarnerius, in double case; and another by Hieronymus Amati, 1656,	79 8
A Violin, by Antonius Stradivarius, Cremona, 1717,	194 15
A Violin, by Storioni, with case; and a Violin, by Sanctus Seraphin, Venice,	52 0
A Violin, by Joseph Guarnerius, Cremona, 1732,	275 0
A Violin, by Antonius Stradivarius, Cremona, and an old Italian Violin,	96 0
A Violin, by Vincenzo Panormo, and an old Italian Violin,	84 0
A Tenor, by Joseph Guarnerius, Cremona,	56 0
A Violin, by Antonius Stradivarius, Cremona, 1699,	76 0
A Violin, by Antonius Stradivarius, Cremona, 1686,	165 0
A Violin, by Nicholas Amati, grand pattern; another by Gaspard di Salo, and another, Guarnerius model,	62 10

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A Violin, by Antonius and Hieronymus Amati, 1651, and a large Tenor, by Andrew Amati, -	£ 71 0
A Violin, by Joseph Guarnerius, Cremona, 1741,	156 0
A Violin, by Carlo Landolphi, in maplewood case, and a Tenor, by Antonius Stradivarius, 1672, - - - - - - - - -	88 0
An Italian Tenor and case, and a Violoncello, by Nicholas Amati, Cremona, 1672, - -	92 0
A Violoncello, by J. B. Guadagnini, with case, and a Violoncello by Guadagnini, - -	76 0
A Tenor, by Andrew Guarnerius, 1694, in double mahogany case, - - - - -	60 0
A Violin, by Antonius Stradivarius, Cremona, 1715, - - - - - - - - - -	290 0
A Tenor, by Gaspard di Salo, Brescia; a Tenor, by Grancino, and a Violoncello, by Guarnerius, with case fitted to instrument, -	56 0
A large Tenor, by Antonius and Hieronymus Amati, Cremona, with inscription, 1652, and case, - - - - - - - - - -	61 0
A Tenor, by Carlo Bergonzi, Cremona; and an old Italian Tenor, - - - - -	78 0
A Violoncello, by Andrew Guarnerius, with case; and an old Italian Violoncello, - -	73 0

The whole realised £4,195.

THE CORSBY COLLECTION.

A List of Violins in the Collection of the late Mr. George Corsby, of Princes Street, Leicester Square, London, and the prices they realised at the auction on 22nd January. 1874.

VIOLINS.

	GUINEAS.
NICHOLAS AMATI, ... 1653. Formerly the property of Lord Falmouth.	95
" " " " 1689. Formerly the property of Lord Falmouth.	37
JOSEPH GUARNERIUS, son of Andrew. 1684.	21
JOSEPH GUARNERIUS. I.H.S. 1724.	45
" " " " 1727.	74
" " " " 1726.	45
" " " " 1719.	45
" " " " 1730.	unsold.
ANTHONY STRADIVARIUS, 1700. Formerly the property of General Prim of the United States, and later of Sir James Hope. . .	50
" " " " 1720.	unsold.
CARLO BERGONZI, ... 1730.	80
JOHN BAPTISTE GUADAGNINI, 1730.	16
VINCENZO PANORMO, . . ——.	8

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TENORS.

		GUINEAS.
JOSEPH GUARNERIUS, I.H.S.	1723.	43
PETER GUARNERIUS, . . .	1712.	33
" " " "	1736.	41
ANTHONY STRADIVARIUS,	1700. Formerly the property of Col. M'Lewth.	35
JOANNES GAGLIANO, . .	1785.	19
JACOB STAINER, ...	1674. Formerly the property of Lord Falmouth.	30
NICHOLAS AMATI, ...	1640 (copy).	5
DAVID TECCHLER, ...	1719.	6½

VIOLONCELLOS.

JOSEPH GUARNERIUS. . .	1740. Formerly the property of George IV, and the late Duke of Cambridge.	£140
" " " "	1714. Formerly the property of Lindley, the eminent Violoncellist.	130
ANTHONY STRADIVARIUS,	1700.	135
PETER GUARNERIUS, . . .	1739.	30
JOSEPH GUARNERIUS, I.H.S.	1730.	20
" " " "	1664.	31
" " " "	1674.	30
MATTHIAS ALBANI, . . .	1682.	20
NICHOLAS AMATI, ...	1689.	22
" " " "	1689.	37
FRANCISCUS ROGERIUS, .	1680.	27
" " " "	1676.	26
JANUARIUS GAGLIANO, .	1741.	25
" " " "	1740.	22
JACOB STAINER, ...	1640.	21
FORSTER, Senior, ...	——.	7

		GUINEAS.
VINCENZO PANORMO, . .	——.	7½
DODD, Senior, ...	——.	10½
FENDT, Senior, ...	——.	6½
B. BANKS, ...	——.	6

DOUBLE-BASSES.

		GUINEAS.
ALEXANDER GAGLIANO, .	——.	18
G. CORSBY, ...	——.	7
" " " "	——.	7

——§——

THE THORNLEY COLLECTION.

A List of Violins in the Collection of the late Mr. John Thornley, of Bank Parade, Preston, Lancashire, and the prices which they realised at the auction on 3rd February, 1876.

		GUINEAS.
ANDREW AMATI, . . .	1546.	21
JEROME AMATI, . . .	16—.	20

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		GUINEAS.
JEROME AMATI, ...	1666. - - - - - - - -	38
" " " "	1687. - - - - - - - -	66
NICHOLAS AMATI, ...	1680. Bought by the owner from a gentleman near Sheffield for £20.	51
" " " "	1691. Formerly the property of the late Count Gonzales, Milan, cost the owner £40. - - - - - -	110
" " " "	16—. Purchased in 1875 for £60. -	115
" " " "	1648. - - - - - - - -	46
" " " "	16—. - - - - - - - -	41
ANTHONY STRADIVARIUS,	1712. Formerly the property of Count Giovanni Bembo, S. M. Formosa, Italy; cost the owner £106. - - - - - - -	40
" " " "	1694. Formerly the property of Count Giustiniani Recanati, of Venice. - - - - - - -	112
ANDREW GUARNERIUS, .	169—. Cost the owner £55. - -	30
PETER GUARNERIUS, . .	1728. Cost the owner £18. - -	35
JOSEPH GUARNERIUS, I.H.S.	1735. - - - - - - -	57
" " " "	1742. (*A Carlo Landolphi*). - -	42
" " " "	17—. - - - - - - -	72
JACOB STAINER, ...	1667. - - - - - - -	11½
" " " "	——. (This was a Klotz, and cost the owner £73 in 1873). - - -	11½
CARLO BERGONZI, ...	1717. Cost the owner £70 in 1874, formerly the property of General Scott. - - - - - -	31
MICHAEL A. BERGONZI, .	1756. - - - - - - -	20
FRANCISCUS ROGERIUS, .	1679. - - - - - - -	61
JOHN BAPTISTE ROGERIUS,	1678. - - - - - - -	20
THOS. BALESTRIERI, . . .	1795. - - - - - - -	15
JOSEPH GUADAGNINI, . .	1802. - - - - - - -	13
An unlabelled Violin. -	- - - - - - - - -	30
A Tenor by ANTHONY and JEROME AMATI, formerly the property of Count Recanati.	1620. - - - - - - -	20
A Silver-mounted Tourte Bow. -	- - - - - - - -	4½
Two other Bows. -	- - - - - - - - -	3

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THE PARERA COLLECTION.

A List of the more important Violins, Tenors, and Violoncellos, forming the Collection of P. R. Parera, Esq., of Manchester, and the prices which they realised at the auction on 29th May, 1877.

VIOLINS.

		£		
NICHOLAS AMATI, ...	1665.	£	41	0
JOSEPH GUARNERIUS, . .	1690.		40	0
PETER GUARNERIUS, . .	1677.		60	0
JACOB STAINER, ...	1679.		10	0

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ANTHONY STRADIVARIUS,	1722.	£280 0
" " " "	1710.	170 0
" " " "	1679.	70 0
WALTER H. MAYSON, . .	1876.	3 3
" " " "	1876.	3 0

VIOLAS.

JOSEPH GUADAGNINI, . .	1755.	22 0
GASPAR LORENZINI, . . .	1788.	4 15
JOHN BAPTISTE ROGERIUS,	1696.	35 0
ANTHONY STRADIVARIUS,	1672.	200 0

VIOLONCELLOS.

WM. FORSTER, ...	——.	15 0
ROGERIUS, (?)	——.	6 10
JACOB STAINER, ...	1689.	19 0
ANTHONY STRADIVARIUS,	1713. Formerly in the possession of King George IV, thence to the Duke of Cambridge, thence to Mr. Corsby, by whom it was sold to K. Shuttleworth, Esq., of Preston, from whom it was purchased by the present owner. (This instrument was the cause of a legal action, in consequence of it having turned out to be a fine *F. Rogerius*, instead of a *Strad.*)	370 0
THOS. THORLEY, ...	1870.	3 10
NICHOLAS AMATI, ...	1672. Put up at £100, and no offer.	0 0

——§——

THE AMES AND BENNETT COLLECTION.

A List of the more important Violins in the Collection of Messrs. Ames and Bennett, and their prices at the auction on 19th April, 1893.

A Violin, by A. Stradivarius, Cremona, 1734, in excellent condition. (This Violin has changed hands three times within the last 20 years, having been first bought for £400, then for £600, and now for £860.)	£860 0
A Violin, by Peter Guarnerius, Cremona and Mantua, 1701, ...	125 0
A Violin, by Giovanni Paolo Maggini, of Brescia, ...	92 0
A Violin, by Joseph Sasam, a pupil of A. Stradivarius, ...	111 0
A Violin, by Jacobus Stainer, 1699, given by George III to his Chapel-Master, Charles Salaman, ...	50 0
A Violin, by J. B. Guadagnini, ...	80 0
A Violin, by Camillus Camille, Mantua, a very fine example, ...	65 0

There were about sixty Lots in the Sale, and the total sum amounted to £2,500.

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THE MAXWELL AND WILLIAM COLLECTIONS.

A List of the finest of the Violins and 'Cellos in the Collection of the late Sir P. B. Maxwell, and Mr. J. William, of Walsall, and the prices realised at the auction in July 1893.

A Violin, by Stradivarius,	£500 0
A Violin, by Bergonzi.	350 0
A Violin, by J. B. Vuillaume,	34 0
A Violin, by Gragnani,	24 0
A Violin, by N. Lupot,	87 0
A Violin, by Tononi,	28 0
A Violoncello, by Testore,	50 0

The Sale realised £2,400 in all.

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THE BARRE AND BAYLY COLLECTIONS.

A List of the more important Violins, etc., in the Collections of Messrs. Barre and Bayly, and the prices which they realised at an auction sale at Exeter, in April 1894.

A Violin, by Pressanda,	£ 86 0
A Violin, by N. Lupot,	115 0
A Violin, by Carlo Bergonzi,	260 0
A Violin, by Sanctus Seraphino,	280 0
A Violoncello, by Gagliano,	38 0

Bows by Tourte and Dodd realised from £17 to £2.

—§—

THE WOOLHOUSE AND CUSINS COLLECTIONS.

A List of the more important Violins, Violoncellos, Bows, etc., in the Collection of the late Mr. W. S. B. Woolhouse, F.R.A.S., and the late Sir W. G. Cusins, and the prices realised at their auction by Messrs. Puttick and Simpson, in Leicester Square, upon 6th December 1894.

A Violin, by Stradivarius, described as having been "made in Cremona,"	£620 0
A Violin, by Amati, dated 1676,	170 0
A Violin, by Joseph Guarnerius, *del Jesu*, 1742,	270 0
A Violin, by Girolamo Amati, son of Nicholas. A good deal of interest was manifested about this Violin, it being quite a rarity. It had remained in possession of "another property" for upwards of 200 years; therefore its history was authentic,	130 0
A Violin, by Stradivarius,	200 0
A Violoncello, by Wm. Forster,	61 0
A Violoncello, by Tecchler,	91 0
A Violoncello, by Giovanni Grancino, Milan, 1703, with Club-head case and silver ornamented Bow,	65 0

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THE ROWE COLLECTION, AND OTHERS.

A List of the principal Violins, Violoncellos, etc., the properties of Major Rowe and others, and the prices realised at their auction by Messrs. Puttick and Simpson, June 19th, 1895.

A Violin, by Antonius Stradivarius, 1728, .	£300 0
A Violin, the back and sides by A. Stradivarius,	105 0
A Violin, by A. & H. Amati, 1628, Hill's guarantee, ...	75 0
A Violin, by Francesco Ruggeri, 1698, . .	69 0
A Violin, by Guadagnini, 1743, Hill's guarantee,	60 0
A Violin, by T. Eberle, 1755, ...	44 0
A Violin, by Pique, ...	43 0
A Violin, by Gagliano, ...	40 0
A Violin, by Pressenda, Hill's guarantee, .	36 0
A Viola, by G. di Salo, ...	110 0
A Violoncello, by J. B. Vuillaume, Strad. copy,	34 0
A Violoncello, by Pierre Silvestre, . . .	25 0
A Violoncello, by Landulphus, . . .	25 0

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GENERAL INDEX.

Illustrations are marked thus *.

A costly Stainer Violin, 201.
A country Fiddler, 223.
A desperate Case! 207.
A Fiddle-string, dinner from, 210.
A Fiddling Minister, 239.
A historical Violin, 211.
A Holy Fiddle, 240.
A Musical diary, 220.
A mutilated "Strad.," 208.
A Painting for Fiddling, 210.
A Royal Pilgrimage, 199.
A sleeping Musician, 196.
A "Strad." devotee, 224.
A Tin Fiddle, 242.
A weird Concert on the Pyramid, 211.
Acoustics, general ignorance regarding, 120.
Acoustically-built Concert-Halls, worthless, 120.
Advice to inexperienced amateurs, 155.
Air-mass, characteristics of, 49.
Air-mass, experiments upon, 52.
Air-mass, proper relations of, 52.
Aluminium Violins, 243.
Amati, Andrew, 139.
Amati, Jerome, and Anthony, 139.
Amati, Nicholas, son of Jerome, 139.
Amati, Nicholas, brother of Andrew, 139.
Amati, Nicholas, choice Violin of, described, 140.
Amati Violins, possessors of, 142.
Amber Colophon, 178.
Amber, description of, 177.
Amber, dissolvable, 178.
Amber, how to dissolve, 178.
Amber, manufactory for, 178.
American clips,* 106.
American criticism, 230.
Amusement of Fiddle-making, 201.
An adroit sell, 188.
Analogy and sympathy of Sounds and Colours, 16.
Ancient conceptions of the seven rays, 16.
Angle of position of neck, 108.
Arching models described,* 96.
Artists must work freely, 48.
Astral or Soul world of causes, 47.
Astral body, or soul of man, 197.
Astral light, 197.
Aul' recollections, 226.
Awl for indenting,* 112.
Azarol, probably used in Violin-making, 88.

Back, formation of arching of, 98.
Back, how to graduate, 100.
Back, mathematical proportions of,* 118.
Back varies from *re*3 to *re sharp*3, 64.
Back and breast, different sounds of, 45.
Backs and breasts pieced, 86.
Backs, method of holding, 97.
Backs, thickest in centre, 80.
Bagatella's system of Violin-making, 115.
Baked wood, characteristics of, 89.
Balsam Pine for Violin breasts, 88.
Bass-bar, erroneous opinion regarding, 102.
Bass-bar, formation of described, 102.
Bass-bar in Savart's Fiddle, 124.
Bass-Bar in Vuillaume's copies, 102.
Bass-bar, mathematical proportions of, 119.
Bass-bar, mean sizes of, 102.
Bass-bar, new form of, 190.
Bass-bar, proper position of, 102.
Belly, method of glueing on, 110.
Belly varies from *do sharp*3 to *re*3, 64.
Belly, weight supported by, 71.
Benzoin or Benjamin, description of, 179.
Bow, the, 158.
Bow, early forms of the, 158.
Bow, plan of testing, 163.
Bows, prices of, 163.
Bows, sizes of, 160.
Bows, Vuillaume's improvements in, 162.
Bows, Walker's improvements in, 162.

Digitized by Google

Bows, woods used in formation of, 161.
Bow-saw,* 95.
Box-Fiddle of Savart,* 124.
Box-Fiddle of Savart, chief features of, 125.
Box-Fiddle of Savart, not superior from *form*, 121.
Brazil-wood, 161.
Breast, graduation of, 101.
Breast, mathematical proportions of, 119.
Breast, thickness of in Savart's Fiddle, 69, 70.
Bridge, experiments upon, 122.
Bridge, how to fit, 114.
Bridge, mathematical proportions of, 119.

Callipers, forms of,* 99.
Canada-balsam, description of, 179.
Catgut, erroneous idea regarding, 166.
Central Sun, seven radiations of, 16.
Chanot's Violin, particulars of, 126.
Chelys, ancient Egyptian, 10.
Chemistry of permanent colours, lost, 176.
Chief seats of string manufacture, 168.
Chin-rest, 88.
"Coffins stood round like open presses," 210.
Colour and sound, mysterious alliance between, 16.
Complex music, derivation of, 17.
Contre-bass, observations upon, 74.
Copal, description of, 179.
Copying Violins, inutility of, 48.
Corner-blocks, sizes of, 105.
"Corsby" Violin collection, 296.
Covered-strings, details of, 169.
Covering strings, patents for, 170.
Cramps for uniting neck, 108.
Cremona Fiddles, 193.
Cremona, the old Violin-maker's houses in, 134.
Cremona, situation of, 134.
Cremona varnish, an oil one, 174.
Cremona varnish considered, 173.
Cremona Violins in Edinburgh in 1708, 29.
Cremona Violins in 1752 for sale, 29.
Cruelty to animals, 217.
Cruisigh, music, 4.
Cruit, a harper, 4.
Cruitcog, a female harper, 4.
Cruitire, a harper, fiddler, 4.
Cutting off the Fiddler's head, 223.
Crwth, or Crowd, British, dimensions of, 5.
Crwth, earliest mention of, 4.
Crwth, methods of tuning, 6.
Curves of gouges, forms of,* 99.

Deal, fibrous nature, advantages of, 65.
Deal, why employed for breast, 64.
Della Valle, Marquis of, owner of Strad's models, etc., 130.
Details of mathematical modelling, 117.
Different parts in Violin, 87.
Difficulties in the varnish, 176.
Dimensions, Savart's, various modes of obtaining,* 57.
"Divine Inward Breath," the, 46.
Dodd family, bows of the, 160.
Dodd, the elder, 160.
Donald's description of a Fiddle, 207.
Dr. Johnson's opinion of Music, 221.
Dr. Johnson's opinion of Fiddling, 223.
Duiffopruggar, originator of the Violin, 11, 12, 13, 14.

Early bow instruments, 1.
Early Fiddlers, 23, 24.
Early Fiddlers in Court of Charles II, 27.
Early Gipsy Fiddling, 225.
Edges of back, thickness of, 100.
Edicts against Fiddling, 223.
Egyptian obelisk, representation of Violin upon, 3.
Elector-Stainer Violins, 153.
Elemi, description of, 180,
End-blocks, making of, 106.
End-blocks, mathematical proportions of, 119.
Ether, a supposed solvent in Cremona varnish, 195.
Excellence not limited to mere imitation, 42.
Experiments on tables, 79.
Experiments on a Stradivarius Violin, by Hawkins, 30.

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Fictitious Cremonas, 156.
Fiddle envy, 214.
Fiddle, Donald's description of, 207.
Fiddle, Irishman's description of, 190.
Fiddlers, early records of, 23.
Fiddlers in 1545, 23.
Fiddlers, spoken of, in 1641, 28.
Fiddling, 189.
Fiddling in mental disorders, 226.
Fiddling under difficulties, 216.
Fidla, Icelandic, 3.
Final finishing of Violin, 114.
Finest Collection of Violins in the world, 285.
Finest Violin in the world,* 284.
Finest Violins, what they tell us, 42.
Fingerboard, elevation of, 108.
Fingerboard, model of,* 112.
Fingerboard, to make, 113.
Flutes from Vulcanite and Gutta-percha, 44.
Forces, semi-intelligent of Nature, 47.
Formation of Violins, slabwise, 49.

Gamut, invented in India, 10.
Ghostly Fiddling, 204.
"Gillott" Violin collection, 294.
Glue, different qualities of, 93.
Glue, how to make, 93.
Glue-pot described, 93.
"Goding" Violin collection, 293.
Good strings, characteristics of, 171.
Goudok, description of, 2.
Gourd Fiddle, 39.
Graphic comparisons, 208.
Great Violence! 200.
Grivel's test for Cremona varnish, 173.
Guarnerius, Andrew, 143.
Guarnerius, Joseph and Peter, 143.
Guarnerius, Joseph *del Jesu*, 143.
Guarnerius, Joseph *del Jesu*, choice Violin of, described, 146.
Guarnerius, Joseph, at times displayed carelessness, 147.
Guarnerius, Peter, grandson of Andrew, 145.
Guarnerius, Peter, had perhaps the richest varnish, 175.
Guarnerius family, possessors of Violins of, 148.
Guarnerius family, Violins of, described, 143, 144.
Gue of Shetlander, 3.
Guhue of Africa, 3.
Gut strings, manufacture of, 18.

Half-moulds, form of,* 103.
Hand, method of fixing, 109.
Hand, various modes of attaching, 109.
Heptaktis, malevolently represented, 16.
Heptaktis, symbolical meaning of, 16.
High priced Violins, 137.
Hindu scale, 10.
Hints to young Violinists, 247.
How fictitious Fiddles are made, 156.
Hydrostatics, early knowledge of, in India, 9.

In anxious suspense, 200.
In the log or in the plank, 201.
Indenting, or purfling, described, 111.
Indenting pieces, 112.
Indenting tools,* 112.
India, birth-place of the arts and sciences, 9.

"Jenny dang the Weaver," 240.

Kemangeh-a-Gous, Arabian, 3.
Koba of Tartary, 3.
Kytts (or Kits), early use of, 24.

Labels of Amati, A. and J., 142.
Labels of Guarnerius, J., 150.
Labels of Stainer, J., 154.
Labels of Stradivarius, A., 138.
Lac, various species of, 180.
Langspel described, 3.
Laws of vibration, 47.
Lemon-tree used in Violin-making, 88.
Lengthened wood-seasoning, most efficient, 90.
Letters relating to a Guarnerius Violin, 149.
Light, velocity of, early known in India, 9.
Lighting a fire with a *del Jesu*, 244.
List of the "Ames & Bennett" Violin Collection, 292.
List of the "Barre & Bayly" Violin Collection, 293.
List of the "Corsby" Violin Collection, 289.
List of the "Gillott" Violin Collection, 287.

Digitized by Google

List of the "Goding" Violin Collection, 287.
List of the "Maxwell & William" Violin Collection, 293.
List of the "Parera" Violin Collection, 291.
List of the "Rowe" Violin Collection, 294.
List of the "Thornley" Violin Collection, 290.
List of the "Woolhouse & Cusins" Violin Collection, 293.
Lupot, bows of, 160.
Lute maker, oldest, 12.
Lyke-wakes, Violins used at, 29.
Lyre, had been a bow instrument, 10.

Man's dual existence, 197.
Marreppe's Automaton Violinist, 191.
Mass of air in case, experiments upon, 43.
Mass of air in Tenor, 74.
Mass of air in Violin, 62.
Mass of air in Violoncello, 73.
Mastic, description of, 181.
Mathematical plan of model,* 116.
Mean thickness for back, 99.
Melrose Abbey, bas-relief on, 22.
Memory, what it is, 198.
Metal Violins, 242.
Method of glueing on sides, 101.
Minister Painter and Fiddler, 241.
Mode of arching by mathematical model,* 118.
Model of *f* holes, how to copy, 101.
Model of Violin, how to obtain, 95.
Models for back arching described, 95.
Modern philosophy, derived from Indian sources, 9.
Monk's triple bass-bar, 35.
Monochord, Egyptian, 3.
Multum in parvo, 215.
Music, capabilities of, 40.
"Music hath charms," etc., 216.
Music in Heaven, 219.
Music of the spheres, 16.
Music or Gossip, 218.
Musical instruments came westward from India, 10.
Musical notes, relations of, 17.
Musicians epitaph, 215.

Nature demands inquiry, 42.
Neck, an important matter, 54.
Neck, dove-tailing of described, 109.
Neck, experiments relating to, 70.
Neck, mathematical proportions of, 119.
Neck, method of making, 107.
Neck, modelling of, 107.
Neck, necessary quality of wood for, 70.
Necks, or hands, prices of, 108.
Nerve-power of touch, 85.
New old Violins, 213.

Old Young and young Young, 225.
Ole Bull, a Fiddle-maker, 115.
Ole Bull breathed into Violin, 53.
Ole Bull on Pyramid, 211.
Omerti, description of, 2.
One scraper enough, 220.
Opinion of Dr. Joachim, 230.
Organ pipes, experiments regarding, 81.
Otto's method of making rosin, 165.
Owners of Amati Violins, 142.
Owners of Guarnerius Violins, 148.
Owners of Stainer Violins, 154.
Owners of Stradivarius Violins, 137, 138.

Paganini's Shoe-Fiddle, 236.
Paganini Violin in Genoa Museum, 148.
Panormo, bows of, 160.
"Parera" Violin Collection, 291.
Parts, vibrating and non-vibrating, 121.
Patents relating to Violins, 30-39.
Pear-tree, used in Violin-making, 88.
Peg Fitter, patent, 113.
Pegs, fitting of, 113.
Peg-holes, how to cut, 108.
Picatte, bows of, 160.
Pictures, derivation of, 17.
Pierce tone-ageing Co., 35.
Pine, takes seven years to season, 90.
Pinus Balsamus for breasts, 88.
Plane for hollowing,* 99.
Plates, to determine sounds of, 67.
Poplar-tree, used in Violin-making, 88.
Prices of Bows, 163.
Prices of Stradivarius for his Violins, 136.

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Prof. Tyndall on sound-boards, 75.
Proper distinctions, 220.
Purfling tools,* 112.
Purifying rosin, 164.

Ravanastron, how constructed, 1.
Rebab, description of, 2.
Report upon Savart's Fiddle, 125.
Resonators of Helmholtz, 51.
Rods of pine and maple, experiments upon, 45.
Rods, metallic and wooden, experiments upon, 65.
Rosicrucians, ideas of, on music, 40.
Rosicrucians, ideas of, on music *may* be true, 41.
Rosicrucian theory of the Universe, 16.
Rosin or Colophony, 164.
Rosin, Hunt and Pochin's patent for, 165.
Rosin liquid used, 165.
Rosin, Violinist's to make, 165.
Rosin, yellow, of the chemist, 164.
Rota, the instrument of the French Trouveres, 5.
Rouana, construction of, 7.

Sandarac, description of, 181.
Sanscrit, marvellous language, 10.
Sapwood and heartwood, 90.
Satan as a musician and composer, 202.
Schradieck's, Prof., discovery, 88.
Scotia, awake, 218.
Scottish Music, 228.
Screw-cramp, for linings,* 104.
Screw-cramp, wooden,* 107.
Second Fiddle at home, 218.
Semi-luna, description of, 30.
Seven-rayed rainbow of Noah, 18.
Seventh prismatic ray, peculiarities of, 17.
Sheer strength, 190.
Shift-playing, by whom introduced, 29.
Side-linings, mathematical proportions of, 119.
Side-linings, sizes of, 105.
Sides, bending of, 105.
Sides, depths of, in N. Amati's Violins, 105.
Sides, depths of, varies, 105.
Sides, mathematical proportions of, 119.
Sides, method of bending, 104.
Sides, method of making, 104.
Silk strings, advantages of, 168.
Silk strings, how to improve, 168.
Sinclair's Violins, 34.
Sizing, used by some, 113.
Slow playing, 221.
Smooth surfaces influence tone, 45.
Song of Nibelungen, 23.
Soorunga, description of, 2.
Sound, causes of, 49.
Sound, doctrines of, abstruse, 41.
Sound, mysteries of, 47.
Sound, propagation of, in maple and deal, 65.
Sounds and Colours, comparisons of, 17.
Sounds and Colours, similarities of, 17.
Sounds and Colours, spiritual numerals, 16.
Sound-holes, experiments upon, 72.
Sound-holes, how to model, 101.
Sound-holes, how to make, 101.
Sound-holes, in Savart's Fiddle, 124.
Sound-post, mathematical ratios of, 119.
Sound-post, Prof. Tyndall's ideas on, 75.
Sound-post, pressure of, required on belly, 78.
Sound-post setter,* 114.
Sound-post, slight medium of vibrations, 76.
Sound-post, to make, 114.
Sound-post, to place in Violin, 114.
Sound-post, vibrations of, considered, 76.
Sound-posts, glass and cedar, 190.
Spirit-varnish, used by Guarnerius, 175.
Stainer, Jacob, biographical notice of, 151.
Stainer, Mark, 152.
Stainer varnish, a stumbling-block to imitators, 154.
Stainer Violin, 1,500 acres given for, 84.
Stainer, J., Violins of, described, 153.
Stainer Violins, early value of, 135.
Staining Violins, 153.
Steam-drying of wood, 89.
Steam, early knowledge of in India, 10.

Digitized by Google

Steel strings, 168.
Stentor, bows of, 160.
Stiffness of tables, deductions regarding, 83.
St. Jerome's Bible, Violin illustration upon, 21.
Stradivarius, Anthony, Violins of, 138.
Stradivarius, Anthony, Lupot upon, 80.
Stradivarius, a choice Violin of, described, 130.
Stradivarius Violins, made on no chance plan, 130.
Stradivarius Violins, possessors of, 136-138.
Stradivarius Violins, sums given for, 137.
Stradivarius Violins, thicknesses of, 80.
String-making, operations of, 167.
Strings, breaking tension of, 171.
Strings, how to keep, 171.
Strings, must be proportionate, 171.
Strings, patents regarding, 170.
Sumphion, description of, 3.
Systems of thicknesses considered, 79.

Tables and air-mass, identity of sound between, 62.
Tables, a tone or semi-tone different, 64.
Tables, glueing of, 93.
Tables in unison, result of, 63.
Tables, method of uniting, 92.
Tables of deal, experiments on, 63.
Tables, ratios of, causes of, 82.
Tables, relations of sounds of, 63.
Tail-peg, how attached, 113.
Tale of a Violin, 231.
Tapered bit,* 108.
Tarau, or Thro, described, 3.
Tavern sign-boards, Violin pictured on, 29.
Taverns, Violins used in, in 1600, 29.
Tenor, particulars regarding, 74.
Testing resonance of air, 50.
The "Baist" Fiddle, 243.
The Biter Bit, 186.
The Dance of David, 247.
The Greenback Fiddle, 219.
The Grocer and Professor, 227.
The Harp and the Fiddle, 246.
The Harp, Bagpipes, and Fiddle, 246.
The Lady Bass-viol, 193.
The Land o' the Leal, 206.
The missing string, 209.
The musical sand of California, 19.
The musical sand of the Sinai desert, 19.
The old Violin, 222.
The Stradivarius distemper, 219.
The Trinity in Unity, 224.
The Universe, a musical instrument, 16.
The Victor Fiddler, 225.
Thicknesses depend upon wood, etc., 99.
"Thornley" Violin Collection, 290.
Three systems of thicknesses, 80.
To my Amati, 235.
Too bad! 200.
Tools used in hollowing out,* 99.
Tourte, Francois, bows of, 160.
Toy-Fiddles in early fairs, 27.
Trees, ages of, how known, 91.
Trees, proper period for cutting, 90.
Troubles come in showers, 214.
Tubbs, bows of, 160.
Tuning-forks, experiments with, 50.
Turpentine, varieties of, 181.
Twenty-four Violinists in early Court, 26.

Urh-heen, or Chinese Fiddle, 2.

Varnish, experiments with, 174.
Varnish-making, a trade's secret, 175.
Varnish-oil, 181.
Varnish, to polish, 184.
Varnishes, oil and spirit, characteristics of, 176.
Varnishes, several modern, good, 176.
Varnishes, substances used in, 177.
Varnishes, to colour, 183.
Varnishes, various ideas regarding, 174.
Varnishing, details of, 183.
Varnishing, tools requisite for, 183.
Vegetation affected by musical tones, 18.
Vibrating surfaces, experiments upon, 121.
Vibrations of strings, experiments upon, 122.
Vidulators, Violers, etc., terms used in 1306, 23.

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Viol family, distinctions of, 7.
Viol of 15th century,* 7.
Viol, origin of, 6.
Viol, the Hebrew, 16.
Viol d'Amour, description of, 8.
Viol d'Amour, still used, 9.
Violers in the Royal household, 8.
Viols, chest of, 6.
Violet, or purple ray, peculiarities of, 17.
Violin, a favorite with ladies, 157.
Violin, not a military musical instrument, 27.
Violin, back and belly, vibrate in unison, 60.
Violin, body of, experiments relative to, 59.
Violin-breast, experiments upon, 53.
Violin, broken and mended, errors regarding, 55.
Violin, derived from Monochord, 3.
Violin, double, 34.
Violin, early representation of, 21.
Violin, increased capability of expression of, 85.
Violin, known to Druids, 10.
Violin, likened to the Alchemists, 85.
Violin, made of glue, 43.
Violin-making, a pure art in early times, 86.
Violin-making, requisites of, 38.
Violin or Fiddle, 218.
Violin, originated in Atlantis and India, 9.
Violin primitive, amongst Buddhist priests, 11.
Violin, result of changed sizes of, 35.
Violin, the "Alard" Amati, 140.
Violin, the "Cessol" or "Artot," 138.
Violin, the "Messiah," 136.
Violin, theory of, discussed, 48.
Violin, used at country wakes in 1600, 29.
Violin, used in Edinburgh at Queen Mary's arrival, 24.
Violin, used in Shetland in 1600, 25.
Violin, used to accompany Morris-dances, 25.
Violin, Queen Elizabeth's, 24.
Violina, where first mentioned, 15.
Violins, finest Collection of in the world, 185.
Violins, flat modelled, give depth of tone, 128.
Violins, made from glass, steel, etc., 65.
Violins, like fruit, ripen by age, 230.
Violins of Stainer, 154.
Violins of Stradivarius, A., strange peculiarity of, 129.
Violins of the Amati family, 142.
Violins of the Guarnerius family, 148.
Violins of the Stradivarius family, 138.
Violoncello, particulars regarding, 73.
Vuillaume, bows of, 160.
Vuillaume, using old wood, 90.

Wanted? a Fiddling Minister, 240.
Wave-lengths of Sound and Colour compared, 17.
Which is which? 186.
Whitelaw's Amber oil-varnish, 179.
Whole mould described,* 103.
Why Stradivarius increased sizes of Violin, 82.
Wollenhaupt's Violin,* 36, 37.
Wood, a matter of great importance, 86.
Wood-drying, method of, by continental firms, 89.
Wood-drying, M. Violette's experiments upon, 89.
Wood for oars, used for backs, 87.
Wood, from rocky places, favours sonority, 90.
Wood, grain of, easier to cut across, 98.
Wood, method of cutting for tables, 91.
Wooden plate, modes of testing, 45.
Woods employed in Violin-making, 88.
Woods of high tone preferable, 45.
Woods, velocities of sounds through, 48.
Wormy wood, the causes of, 91.

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