

A. LABY, LITHO.

STANNARD & SON, IMP.

Tuning a Harpsichord,
FROM A PICTURE IN THE POSSESSION OF
JOHN BROADWOOD & SONS.

LONDON, ROBERT COCKS & CO. NEW BURLINGTON ST. REGENT ST. W.

PIANOFORTE MANUFACTURERS AND MUSIC PUBLISHERS, BY SPECIAL WARRANT TO

HER MOST GRACIOUS MAJESTY QUEEN VICTORIA,

H.R.H. THE PRINCE OF WALES, & TO HIS MAJESTY THE LATE EMPEROR NAPOLEON III.

THE PIANOFORTE,
ITS ORIGIN, PROGRESS, AND CONSTRUCTION;

WITH SOME ACCOUNT OF INSTRUMENTS OF THE SAME CLASS WHICH PRECEDED IT; VIZ.

**THE CLAVICHORD, THE VIRGINAL, THE SPINET,
THE HARPSICHORD, ETC.**

TO WHICH IS ADDED A SELECTION OF INTERESTING

SPECIMENS OF MUSIC

COMPOSED FOR KEYED-STRINGED INSTRUMENTS,

BY BLITHEMAN, BYRD, BULL, FRESCOBALDI, DUMONT, CHAMBONNIÈRES, LULLY, PURCELL, MUFFAT,
COUPERIN, KUHNAU, SCARLATTI, SEB. BACH, MATTHESON, HANDEL, C. P. EMANUEL BACH, ETC.

BY

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MEMBER OF THE ROYAL ACADEMY OF MUSIC IN STOCKHOLM, ETC. ETC.

LONDON:

ROBERT COCKS AND CO. NEW BURLINGTON STREET, REGENT STREET, W.

MUSIC PUBLISHERS TO HER MOST GRACIOUS MAJESTY QUEEN VICTORIA,
AND HIS IMPERIAL MAJESTY NAPOLEON III.

1860.

TO

HENRY E. DIBDIN, ESQ.

(OF FLODDEN LODGE, MORNINGSYDE, EDINBURGH)

I DEDICATE THIS VOLUME,

NOT ONLY BECAUSE I ESTEEM HIM AS

A VALUED FRIEND,

BUT BECAUSE

TO HIS GRANDFATHER IS DUE THE MERIT

OF HAVING

FIRST INTRODUCED THE PIANOFORTE TO PUBLIC NOTICE

IN ENGLAND.

PREFACE.

AMONGST the entire range of musical instruments, there is not one, in our day, that possesses so many claims to notice as the Pianoforte—the “household orchestra” of the people. Although it was the birth only of the last century, there have existed, for hundreds of years, instruments which, under different appellations, resembled the Pianoforte in the more important features of construction. Those instruments are but little known to the artist; scarcely, if at all, to the public. But the spirit of enquiry which marks the present age demands some explanation of those musical fabrics upon which so many of our eminent musicians exercised their mechanical skill, and for which they composed strains which are listened to with pleasure, even in these days of improvement.

The history of the Pianoforte has never been attempted on any scale at all commensurate with its interest or importance. Brief, unsatisfactory, and incorrect notices are indeed to be found; but these have only served to lead the enquirer into a net of inaccurate data, or a maze of wild conjecture.

Nevertheless, some articles are to be found which must, to a certain extent, be exempt from the general stigma; and amongst them the following, all of which have been used in the course of the following pages.

M. Fétis's *Sketch of the History of the Pianoforte and of Pianists*, originally printed in the *Révue Musicale*, and afterwards partly translated (the translation was left unfinished) in *The Harmonicon* for 1830-1, a valuable periodical, edited by the late Mr. W. Ayrton.

The late Professor Fischhof's *Versuch einer Geschichte des Clavierbaues*. Vienna. 8vo. 1853.

Thalberg's Remarks on Pianofortes, printed in the *Jury Report* of the Great Exhibition of 1851.

Mr. W. Pole's *Musical Instruments in the Great Industrial Exhibition of 1851*. Printed for private circulation.

I may also enumerate the valuable *Tours* in France, Italy, Germany, &c. by Dr. Burney; together with his articles in Rees's *Cyclopaedia*. I have derived much curious and minute information from these sources, which cannot be too highly commended for their intelligence, learning, and accuracy. I accord this praise to Burney, because it is the fashion of the present age to speak slightly of his labours.*

The task of writing the history of the Pianoforte was one of no small difficulty; the materials being widely scattered, and, in some cases, almost inaccessible. The amount of miscellaneous reading, too, required was almost enough to deter the most ardent explorer after hidden treasure from pursuing his labour; and when I present the following pages to the public, it is not without some misgiving that the result will be found to be far, very far short of what might have been expected. But, perhaps, if my work cannot be received as a complete history of the subject of which it treats, it may be regarded as a diligent collection of facts and opinions, illustrating the origin, progress, and construction of that delightful instrument the Pianoforte.

The materials are divided into three parts; viz.

- I. The History of the Pianoforte.
- II. The Construction of the Pianoforte.
- III. The early Composers for Instruments of the Pianoforte Class.

* My friend Mr. Charles Salaman's Lectures on the Pianoforte are deserving of especial notice, for the care with which they have been prepared. The information they contain has been gleaned from authentic sources, and reflects much credit on the industry and talent of their compiler.

In the first part of the work, I have given an account of the early keyed-stringed instruments which preceded the invention of the Pianoforte ; i. e. the clavicitherium, the clavichord, the clarichord, the virginal, the spinet, and the harpsichord ; tracing, as far as possible, their origin and progress.

And here I may remark, that a much greater antiquity is assigned to instruments of this class than has hitherto been ceded to them ; although I do not go the length of the learned Abbate Pietro Gianelli, who, in the article *Cembalo*, in his *Dizionario della Musica*, says, “ that King David knew something of this instrument is apparent from the 130th Psalm, where occurs the expression, ‘ *Laudate eum in cymbalis jubilationis* ’ ;” which is, of course, to suppose that King David wrote and spoke the Latin language ; for *cymbalum* is but the vulgate translation of a Hebrew term !

I have also treated of various instruments in use by the Hebrews, the ancient Egyptians, the Greeks, &c. Perhaps some of my readers may deem this portion of my volume irrelevant to the purpose ; but it seems to me absolutely necessary to trace briefly, as I have done, the progress of the lyre, the harp, the psaltery, the dulcimer, and many other of those instruments which preceded the invention of the key-board. Besides, it must be remembered that the noble works of Sir J. Gardner Wilkinson, Dr. Layard, Rosellini, &c. throw new lights on the manners and customs of those ancient nations which I have named, clearing up many doubts and difficulties which puzzled our older musical historians.

The origin of the Pianoforte is now, it is hoped, satisfactorily cleared up, by the republication of Scipione Maffei’s interesting account of Bartolomeo Cristofali and his discoveries. The claims which have been set up for various ingenious men—Schröter, Marius, Silbermann, &c. now fall to the ground ; and it is a source of no small gratification to me to be enabled to present a literal translation of this highly valuable document, setting forth as it does so minutely the claims of an ingenious artisan to the honor of the invention of the Pianoforte.

The list of patents appertaining to the Pianoforte, copied from the books of the Great Seal Patent Office, must be welcomed as a valuable and faithful record of the progress of the instrument. All doubts as to the various claimants for the honor of *discoveries* may be solved by referring to this list. It would doubtless have been desirable to have examined the specifications themselves, and to have recorded more minutely the particulars of each invention; but this could hardly have been done in the present instance; not solely on account of the additional labour, but because the volume already extends considerably beyond the limits proposed.

The second part of the work treats *generally* of the construction of the Pianoforte, without descending too minutely into the technicalities of the manufactory.

It is arranged under three heads: i. e.—1. The Framing. 2. The Stringing. 3. The Keys, and Machinery attached for striking the Strings, technically called the “Action.” Under these divisions, all that relates to the manufacture of the Pianoforte, of whatever shape, “grand,” “square,” or “upright,” has been carefully considered, and the various improvements and inventions duly chronicled.

And here I must express my obligations to Mr. Pole’s valuable labours, as set forth in his volume already mentioned. The author is not only a *musician* in the proper sense of the word, but a gentleman of highly scientific attainments. His observations are of the utmost possible value; and whatever merit may be due to this portion of my work, it must be shared with Mr. Pole.

My notices of the improvements in the mechanical details of the Pianoforte close with the year 1851—the year of the Great Industrial Exhibition. Had they been carried down to the present time, several manufacturers would have received attention whose names do not occur in the index. Amongst them I may mention the spirited publishers of the present volume, in whose establishment an excellent class of instruments is produced, well deserving the notice of the public.

This division of the volume also contains a chapter on the “Various Mechanical Contrivances applied to keyed-stringed instruments in order to obtain sustained Sounds”—a subject which has occupied the attention of the philosophic mind for a period of nearly three centuries.

The “melographic,” “mechanical,” and “transposing” Pianos have also received due attention ; so also have the “Statistics of Pianofortes and Pianoforte Manufacturing as an Article of Trade ;” the “Materials used in the Construction of Pianofortes,” &c.

The third portion of the work consists of an interesting collection of specimens of ancient music for keyed-stringed instruments, ranging over a period of two centuries. They have been taken from rare books and manuscripts in the possession of the author, and have been selected from a large mass of material, chiefly with a view to show the gradual progress of what may be termed the art of Pianoforte-writing.

Many old-fashioned *stereotyped* notions will be disturbed by a careful perusal of these specimens. Frescobaldi, the famed Italian organist, will be pronounced vastly inferior to our John Bull ; whilst Henry Purcell, the great English musician, falls far short of his German and French cotemporaries in the art of *harpsichord*-writing. Couperin, the renowned *clavecin* writer, sinks into insignificance when compared with his predecessor in the French Court, Jean Baptiste Lully, whose harpsichord works betray a genius for which he has not hitherto received credit.

The sonatas of Handel and Scarlatti, printed for the first time in the following pages, shine forth with redoubled lustre when compared with the duller satellites by which they are surrounded.

Some of the more technical portions of my material have been thrown together in an Appendix, where, under the heads of “Hints to those who have the Care of Pianofortes,” “The Mode of Tuning,” and “How to regulate Defects in the Mechanism of the Pianoforte,” a variety of information may be gleaned by all who need it.

I have also added to the Appendix “ A Glossary of the principal Terms used in the Manufacture of the Pianoforte,” which might have been indefinitely extended, had the prescribed limits (already much exceeded) of the work allowed.

Before concluding these prefatory remarks, I have one duty left, which affords me much pleasure—the offer of my sincere thanks to those gentlemen who have so kindly assisted me in carrying out my enquiries during the progress of the following pages.

And first, to my friend W. Chappell, Esq. F.S.A. who kindly translated, at my request, Scipione Maffei’s Italian description of Cristofali’s Pianoforte. To Thomas Jones, Esq. B.A. the learned librarian of the Chetham Library, Manchester, for the transcripts of two important documents preserved in that repository. To Mr. Murray, the eminent publisher, for permission to copy several wood-cuts from Sir J. Gardner Wilkinson’s *Manners and Customs of the Ancient Egyptians*. To Robert Hendrie, Esq. for calling my attention to the monk Theophilus’s curious notice, *De Mensura Cymbalorum*, and for permission to use his translation of the same. To Count Pepoli, for his kind letter (printed in the *Additional Notes and Illustrations*) respecting Marco Jadra, the early virginal-maker. To F. W. Fairholt, Esq. F.S.A. for pointing out several early representations of musical instruments. To H. E. Dibdin, Esq. for many valuable hints, and for extracts and drawings from Prætorius’s *Syntagma Musicum*, in the University Library, Edinburgh. To the Messrs. Broadwood, for permission to copy the portrait of Tschudi, the founder of their firm, engraved as the frontispiece to the book. To Mr. Thomas Eastman (a gentleman on the Publishers’ Staff), who kindly read over the proof sheets during the progress of the work through the press, and favoured me with his valuable observations; and also for the note on the meaning of several Hebrew terms used in the Psalms, inserted on pages 12, 13.

To Professor Fischhof, of Vienna (now, alas! no more), I acknowledge myself indebted for many valuable communications; as also to my late

lamented friend, Mr. J. P. Barratt, for most valuable assistance in many technical portions of the work, especially in that portion devoted to a consideration of the causes of defects in Pianofortes, and the method of remedying them. Mr. Barratt's extensive knowledge of everything relative to the Pianoforte, and his readiness in communicating that knowledge, are well known to all who enjoyed his friendship. This acknowledgment is due from me to the memory of a truly deserving artist and a good man.

EDWARD F. RIMBAULT.

*29, St. Mark's Crescent, Gloucester Road,
Regent's Park,
February 10, 1860.*

ERRATA.

- PAGE 13, line 8, read עשור, ע, *Ain*, not צ *Tsaddi* (with *Kamets*).
- 13, foot-note, 2nd column, line 5, for “or,” read “on.”
 - 19, last line but one in the text, for “Musicá,” read “Musica.”
 - 19, foot-note, 2nd column, line 8, for “præseus,” read “præsens.”
 - 33, foot-note, 2nd column, line 10, for “sub-silentia,” read “sub-silentia.”
 - 47, foot-note, for “Fishof’s,” read “Fischhof’s.”
 - 64, foot-note, for “Arlington House,” read “the Mulberry Garden.”
 - 74, line 8, for “Rucker,” read “Ruckers”; the same in the foot-note.
 - 77, line 18, for “Podini,” read “Todini.”
 - 91, line 20, for “son,” read “nephew.”
 - 129, foot-note, 1st column, for “Fischoff,” read “Fischhof.”
 - 155, line 33, for “James,” read “John.”
 - 156, paragraph 13th, read “SAMUEL THOMAS CROMWELL.”
 - 190, line 1, for “George,” read “James.”
 - 208, foot-note, for “partée,” read “portée de tout le monde.”
 - 217, No. 28, for “Peachy,” read “Peachey.”
 - 218, In the italics at the head of the columns; for “*Cutalogue*,” read “*Catalogue*”; for “*Grund*,” read “*Grand*.”
 - 218, in the division at foot of page (Belgium), for “Entwerp,” read “Antwerp.”
 - 220, for “*Ne. iv.*,” read “*No. in.*”
 - 224, line 10, insert “from” before “the court or palace.”
 - 229, line 17, for “1591,” read “1587.”
 - 233, line 29, for “born about 1591; died in 1640” read “born in 1587; died about 1654.”

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PART I.
THE HISTORY OF THE PIANOFORTE.

CHAPTER I.
SOME OF THE STRINGED INSTRUMENTS OF THE ANCIENTS.

INTRODUCTION.

MUSICAL Instruments with stretched strings—the first principle of the piano-forte—existed in the remotest ages of antiquity ; but it is almost lost time to seek for their origin. “ Shadows, clouds, and darkness” rest upon their first beginnings ; and the names of their inventors, with their personal histories, are obscured by fables and traditions.

We can well imagine, that when the father of these instruments—

————— “ struck the chorded shell,
His listening brethren closed around,
And, wond’ring, on their faces fell,
To worship the celestial sound :
Less than a God they thought there scarce could dwell
Within the hollow of that shell,
That spoke so sweetly and so well.”

The Egyptians are generally looked upon as the fountain from whence the arts and sciences were diffused over the greater part of Europe ; and, from the wondrous records that have been handed down to us, this seems more than probable.

The ancient history of this extraordinary people is so entangled with tradition that it is impossible to unravel it. That there were extant at one period records extending up to its earliest existence is highly probable : but these were destroyed by Cambyses;

who, about 525 B. C. subdued Egypt, overthrowing the temples in which the records were deposited, and slaying the priests. In the absence of written authorities, all tradition points to Ham, or one of his sons, as the first who led a colony into Egypt; and some writers suppose that Noah reigned there, identifying that patriarch with Osiris, to whose secretary, Hermes Trismegistus, is ascribed the invention of music.

THE LYRE.

Apollodorus* gives the following account of the circumstance which led to the discovery of this enchanting art; and, although the art itself certainly did not owe its origin to the encounter of Hermes with the shell of the tortoise, it is not improbable that the invention of the lyre may be attributed to some such adventitious cause: "The Nile," says the writer, "having overflowed its banks at the periodical season for the rise of that wonderful river, on its subsidence to its usual level, several dead animals were left on the shores, and amongst the rest, a tortoise, the flesh of which being dried and wasted in the sun, nothing remained within the shell but nerves and cartilages, which, being tightened and contracted by the heat, became sonorous. Mercury (Hermes), walking along the banks of the river, happened to strike his foot against the shell, and was so pleased with the sound produced, that the idea of the lyre suggested itself to his imagination. The first instrument he constructed was in the form of a tortoise, and was strung with the sinews of dried animals†." Assigning the discovery to some human being, this story has so much probability as can be

* *Bibliotheca*, lib. ii.

† The lyre was called, by the Greeks, *chelys* (χέλυς); and by the Romans, *testudo*; that is, *tortoise*. It seems that in these the *magas* or concavity formed towards the base of the instrument, to augment the sound, was really formed of the shell of the tortoise; for Pausanias speaks of a breed of tortoises on Mount Parthenius, excellently suited to furnish bellies for lyres. *Paus. Græc.* lib. ii, lib. viii. *Arcad.* The variations in the forms of lyres, as exhibited in ancient sculptures and paintings, are so numerous as to defy any attempt at classification. The

earliest found were without the *magas*, or any contrivance to assist the sound. It is also remarkable, that, although the tradition assigns the invention of the lyre to Egypt, none of the instruments which their paintings exhibit are of the tortoise kind. The Egyptian lyre was generally held horizontally by the players, not perpendicularly, as by the Greeks and Romans. Sir J. G. Wilkinson says, they were *always* held horizontally. But this statement is contradicted by drawings in his own work.

afforded by the fact that many figures of ancient Greek lyres do actually bear the figure of a tortoise.

The lyre, in its various modifications of form, seems to have been the most common stringed instrument of all ancient nations. It possessed various forms, and various names—*lyra*, *chelys*, *testudo*, *cithara*, *barbitos*, &c., by which its principal varieties were distinguished. It seems certain, also, that the Hebrew כנור *Kinnór*, was a form of lyre, a representation of which is here copied from the curious tomb at Beni Hassan. The entire painting is supposed to represent the arrival of Jacob's family in Egypt, and is cotemporary with that event. Sir J. G. Wilkinson, from whose valuable work on the *Manners and Customs of the Ancient Egyptians* (vol. ii, p. 296) our figure is taken, says, "The lyre is rude, and differs a little in form from those generally used in Egypt; but its presence here, and in others of the oldest sculptures, amply testifies its great antiquity, and claims for it a rank among the earliest stringed instruments."



The question as to the number of strings in the original lyre of Hermes, has been a subject of much discussion; some writers assuming that it had only three, corresponding to the seasons of the year which the Egyptians recognized; *i. e.* winter, spring, and summer*. These three strings produced an acute, a mean, and a grave sound—the grave answering to winter, the mean to spring, and the acute to summer. Others contend that the lyre had four strings; the interval between the first and fourth being an octave; the second, a fourth from the first; the fourth, the same distance from the third; and that from the second to the third was a tone. Others again contend that the Hermean lyre had seven strings; but this discrepancy is very likely to have arisen from confounding the lyres of the Egyptian and Grecian Hermes, or from adverting to the state of the instrument at different periods.

* Not only the Egyptians, but the ancient Greeks, divided their year into three seasons, which were called *hours*. Thus Hesiod:

"The *hours* to Jove did lovely Themis bear,
Eunomia, Dice, and Irene fair:
O'er human labours they the pow'r possess,
With *Seasons* kind the fruits of earth to bless."
Theogony.

Many of the Egyptian lyres were of considerable power, having five, seven, ten, and even eighteen strings. They were usually supported between the elbow and the side, and the mode of playing them was generally with the hand, and not, as in Greece and Rome, with a *plectrum**. This custom, however, observes Sir J. G. Wilkinson, was also adopted by the Egyptians; and as it occurs in sculptures of the earliest periods, it is evident they did not borrow it from Greece; nor was it unusual for the Greeks to play the lyre with the hand without a plectrum; and many instances of both methods occur in the paintings of Herculaneum.

There is as little agreement amongst ancient writers with regard to the form of the lyre, as there is respecting the number of its strings. There are drawings of it, and remains of sculpture, in which its figure exists in various shapes; some resembling the front part of the head and horns of a bull, others the shell of the tortoise. Some were ornamented with the head of a favourite animal, carved in wood; as the horse, ibex, or gazelle; and others were of a more simple shape. The strings were fastened at the upper end to a cross bar connecting the two sides, and at the lower end they were attached to a raised ledge, or hollow sounding-board, about the centre of the body, which was of wood, like the rest of the instrument. The Berlin and Leyden Museums possess lyres of this kind, which, with the exception of the strings, are perfectly preserved. That in the former collection is ornamented with horses' heads; and, in form, principle, and the alternating length of its strings, resembles one painted on the walls of a Theban tomb; though the

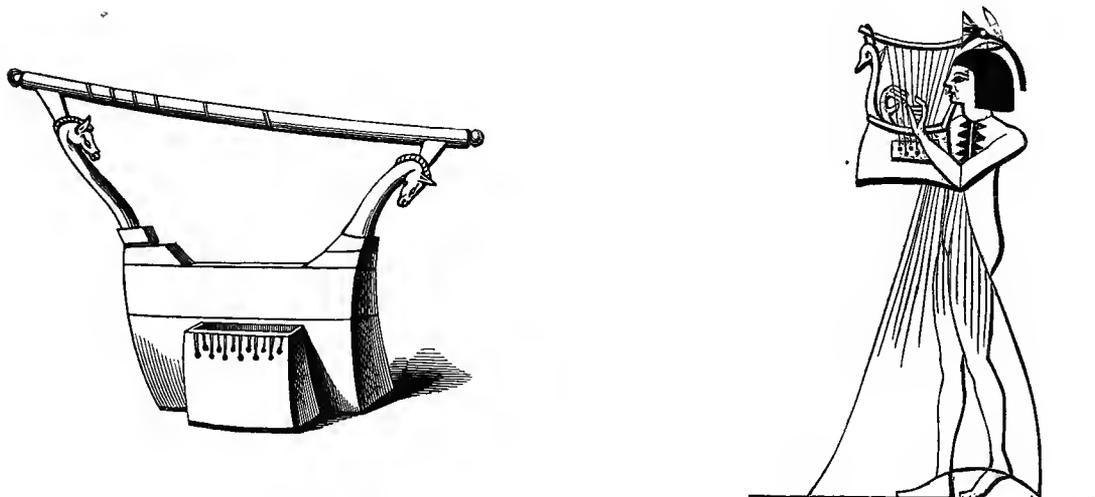
* "This implement seems to have been generally a piece of ivory, polished wood, or metal, in the form of a quill. Other forms are preserved, some of which seem to have been too clumsy to extract from the lyre tones of much sweetness or delicacy. Hawkins says that the lower joint of a goat's foot was sometimes employed. It appears that the plectrum was only used with the larger species of the lyre. When employed, it was held in the right-hand; and while the player struck the chords with it, the *fingers* of the left-hand also touched the strings. When the fingers only were used, those of both hands were generally employed: but some ancient lyrists were celebrated for their performances with one hand, and that too sometimes the

left-hand. Josephus says that the *Kinnorim* of the Temple were played with the plectrum: and this may have been, although it appears from Scripture that the common lyres were played with the hand."—*Pictorial Bible*, ii, 574. The quill plectrum was used in the earliest keyed-stringed instruments.

It may be remarked, in passing, that, in the classical writings, a distinction is observed between the *Pecten*, with which the strings were fretted as with the ends of the fingers, and the *Plectrum* (from *πλήττω*, to strike) with which they were struck—the latter term including, as is assumed, all instruments of the bow kind.

board to which the strings are fastened is nearer the bottom of the instrument, and the number of strings is thirteen instead of ten.

We have here an engraving of both, thus affording an opportunity of comparing a real Egyptian lyre, with the representation of one drawn by a Theban artist more than three thousand years ago.



The body of the Berlin lyre is about ten inches high, and fourteen and a half broad, and the total height of the instrument is two feet. It is entirely of wood, and one of the sides, as of many represented in the sculptures, was longer than the opposite one; so that the instrument was tuned by sliding the strings upwards along the bar.

The Greek lyres were similar to those of Egypt, sometimes imitating the shape of the head and portion of the horns of a gazelle, and other elegant forms: the strings too were as varied in number as those of the Egyptians. In Greece, the instrument had at first only four strings, till an additional three were introduced by Amphion*; who, as Pausanias seems to hint, borrowed his knowledge of music from Lydia, and was reputed to have been taught the use of the lyre by Mercury.

Seven continued to be the number of its strings, until the time of Terpander, a poet and musician of Antissa, near Lesbos (670 B. C.), who added several other strings; but many instruments were still made with a more limited number; and although

* Pausanias, lib. ix. The scattered notices of music preserved by this writer are very valuable.

lyres of great power had long been known, and were constantly used, many Greeks and Romans contented themselves with, and perhaps preferred, those of a smaller compass. The lyres in the paintings of Herculaneum vary in the number of their strings, as much as those in the Egyptian frescos; and we there find them with three, four, five, six, seven, eight, nine, ten, and eleven strings.

We give representations of two ancient lyres, drawn from the vases found at Herculaneum. The female figure seems to be in the act of tuning the instrument. The male, who is about to perform on a square-shaped lyre, has in his right-hand the plectrum.



There is every reason to believe that the musical instruments used by the Greeks and Romans came from the East, and were originally the same as those used by the Egyptians, Chaldeans, Phoenicians, and Syrians. The learned editor of the *Pictorial Bible* (the late Dr. Kitto) remarks: "It is, therefore, not impossible to recover, through the representations left by the Greeks and Romans, forms of lyres and other instruments nearly approximating to, if not identical with, those used by the Jews and other Orientals. The Greeks, always vain, and always jealous of their own glory, asserted that most of the musical instruments used by them were the invention of their gods or ancient poets. So they said of most inventions in science and art. But in the present instance, the Scripture alone suffices to overthrow such pretensions, since it mentions some of the instruments thus claimed as existing in times long anterior to even the ages of Greek fable. The Romans derived many

of their instruments, and the traditions connected with them, from the Greeks ; but their writers intimate that additions were made to them from Syria : their musical instruments came from the East. Thus Juvenal* sneers at the influx of Syrian customs and musical instruments ; and Livy† mentions the great number of instrumental performers which came to Rome from Syria, after the wars between the Romans and Antiochus the Great.

“ But even the Greeks are not consistent in their tales, being sometimes obliged to recur to the true source of most of their musical instruments : and this is always in the East ; in some instances, Phrygia or Lydia ; in others, Egypt, Syria, or Persia. As for the Hebrews, we need not suppose that they were themselves the inventors of the instruments they employed. They do not appear to have been ever remarkable for invention ; and the instruments of neighbouring nations are in general so similar, that it is not necessary to seek anything peculiar in them. They were probably supplied from the same sources which supplied Greece and Rome : the Chaldeans, from among whom their fathers came ; the Egyptians, among whom they so long lived ; the Arabians, Syrians, and Phœnicians, by whom they were surrounded ; probably furnished them with the models of most of the instruments they possessed.”

THE HARP.

One account of the origin of the lyre, and consequently of all stringed instruments, attributes it to an observation made by Apollo upon the twanging of a bow-string. It might, therefore, be inferred that the earliest instruments founded on this idea would bear the form of a bow. Yet this does not appear (as far as it has been observed) from any Greek or Roman monuments ; whilst *all* the harps of Egypt are more or less of the bow shape, so that the idea of such an origin would be suggested even were there no tradition to support it. The engravings, which we have selected from the perusal of a large number of Egyptian frescos, will trace the progress of the idea from the simplest modification of the bow-form to the large and magnificent bowed harp.

* Sat. iii.

† Lib. xxxix.

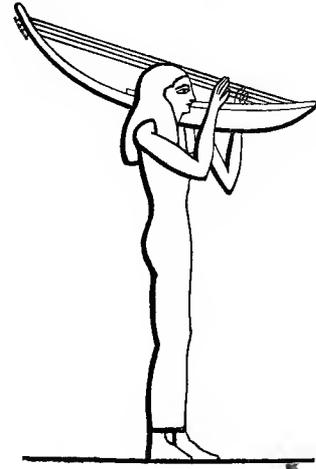
The most simple application of the bow formed into a harp appears to be that afforded by the instrument represented in our first engraving: it is given by Rosellini, as copied from a real instrument preserved in the Museum at Florence.

From the number of the pegs, the strings seem to have been four in number; and which appear to have been conducted through a box or belly, framed at one extremity of the arc, in order to strengthen the sound.

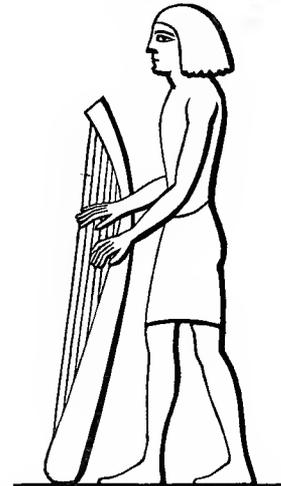


The second engraving exhibits another instrument of the same kind, with the four strings stretched over a box.

This figure is further interesting, as showing the manner in which the instrument was played, by carrying it upon the shoulder.



The next is another and rather larger instrument of the same description. It is not portable while played, but rests rather awkwardly upon the ground, without any base for its support.



The fourth figure shows a larger instrument of the class, and which has the same number of strings that Josephus gives to the Hebrew *nebel*.

All the Egyptian harps, according to Sir J. G. Wilkinson, have a peculiarity for which it is not easy to account; the absence of a pole, and, consequently, of a support to the bar, or upper limb, in which the pegs were fixed; and it is difficult to conceive how, without it, the strings could have been properly tightened, or the bar sufficiently strong to resist the effect of their tension, particularly in those of a triangular form.

The strings of the Egyptian harp were of catgut; and some of those on the harp discovered by Sir J. G. Wilkinson at Thebes, in 1823, were so well preserved, that they emitted a sound upon being touched, although they had been buried in the tomb probably three thousand years. This length of time would appear incredible, if we had not repeated instances of the perfect preservation of numerous perishable objects, even of an older date, in the sepulchres of Egypt.

The oldest harps found in the sculptures, are in a tomb, near the pyramids, of Geezeh, between three and four thousand years old; but perhaps the most interesting are those described by Bruce, in one of the tombs called Bibàn el Moloók (where the Kings of Egypt were interred), of the time of Rameses iii, B. C. 1235.

Bruce was the first to describe these representations, in a letter to Dr. Burney, which the latter printed in his *History of Music*. He also gave a drawing, engraved in that work, which was intended to represent one of the harps painted in these tombs. It is, however, so different in form and principle, as to leave no doubt that it was drawn from recollection*. Denon afterwards gave, in a rude sketch, a more correct representation, preserving the arc form which Bruce had destroyed. Then came the great French work on Egypt†, which gave a more finished and correct drawing; as also of one of the other harps, which appears to be larger, and more wonderful than that attempted by Bruce. Some serious errors have been committed in the descriptions of both these harps. According to Rosellini, the second harp contains *thirteen* strings, not *eighteen*, as stated by Bruce, nor *twenty-one*, as in the French work. But Sir J. G. Wilkinson, whose authority cannot be questioned, shows

* This distinguished traveller committed many mistakes, through his zeal and enterprise. But the mature investigations of the present quarter of a century have amply vindicated his character.

† *Description de l'Égypte, ou Recueil des Observations, &c.* published at Paris by order of Napoleon. See the second tome, pl. xci.

that it had only *twelve* strings. The accompanying engraving of both these harps is copied from the latter gentleman's *Manners and Customs of the Ancient Egyptians*, &c., and may be depended on for general accuracy and minuteness of detail.



Bruce, as we have said, made a fundamental error in the *form* of the first harp, and in the number of its strings. He also made another error, which has never yet been pointed out. After describing the player, he says, "To guess by the detail of the figure, the painter should have had about the same degree of merit with a good sign-painter in Europe; yet he has represented the action of the musician in a manner never to be mistaken. His left [right] hand seems employed in the upper part of the instrument among the notes in *alto*, as if in an *arpeggio*; while, stooping forwards, he seems with his right [left] hand to be beginning with the lowest string, and promising to ascend with the most rapid execution; this action, so obviously rendered by an indifferent artist, shows that it was a common one in his time; or, in other words, that great hands [*sic*] were then frequent, and consequently that music was well understood and diligently followed. If we allow the performer's stature to be about five-feet ten-inches, then we may compute the harp, in its extreme length, to be somewhat less than six feet and a half. It seems to support itself in equilibrio on its

foot, or base, and needs only the player's guidance to keep it steady. It has thirteen [ten] strings, and the length of these, with the ease and liberty with which they are treated, show that they are made in a very different manner from those of the lyre."

This description of the manner in which the performer's hands are placed upon the instrument, is calculated to give us too exalted an idea of the state of music in Egypt more than three thousand years ago. The Greeks, and other ancient nations, certainly knew nothing of the *accordance* of sounds, which we call harmony; and it is not more likely that the Egyptians were acquainted with an art, the discovery of which belongs to the medieval period*. The performers on "Bruce's harps" are simply playing *single notes in octaves*: the "arpeggios," and "rapid execution," are purely the invention of our imaginative traveller.

Bruce further adds, "Besides that, the whole principles upon which the harp is constructed are rational and ingenious; the ornamental parts are likewise executed in the very best manner: the bottom and sides of the frame seem to be veneered, or inlaid, probably with ivory, tortoiseshell, and mother-o'-pearl; the ordinary produce of the neighbouring seas and deserts. It would be even now impossible to finish an instrument with more taste and elegance." Dr. Burney himself has some interesting remarks on the same subject†, liable however to the correction necessary, from his having been in some respects misled by Bruce's drawing.

When, a few years after his letter to Dr. Burney, Bruce published his own work, he gave a representation of the second harp, which he had overlooked on the previous occasion; and which, although considerably modernized and *improved*, is far more faithfully copied than the other. With reference to both, he says, "These harps, in my opinion, overturn all the accounts hitherto given of the earliest state of music and musical instruments in the East; and are altogether, in their form, ornaments, and

* Whether the ancients had any knowledge of music in parts or counterpoint, is a subject that has given birth to a variety of disquisitions and disputes. The authorities in favour of the hypothesis, are Gaffurio, Zarlino, G. B. Doni, Isaac Vossius, Z. Tevo, the Abbé Fraguier, &c. Those who deny the ancients this knowledge, are Glareanus, Salinas, Bottrigani, Artusi, Cerone, Kepler, Mersennus, Kircher, Claude Perrault, Dr. Wallis, Bontempi, Burette,

Bougeant, Padre Martini, Marpurg, Rousseau, &c. The prevailing opinion among scientific men is, that the ancients were totally unacquainted with harmony in our acceptance of the term; but those who feel disposed to learn more upon the point, are referred to Dr. Burney's *History of Music*, vol. i, p. 112, where they will find the matter very ably discussed.

† Vol. i, p. 213, *et seq.*

compass, an incontestable proof, stronger than a thousand Greek quotations, that geometry, drawing, mechanics, and music, were at the greatest perfection when this instrument was made; and that the period from which we date the invention of these arts, was only the beginning of the æra of their restoration. This was the sentiment of Solomon, a writer who lived about the time when these harps were painted: ‘Is there,’ says Solomon, ‘any thing whereof it may be said, See, this is new! It hath been already of old time which was before us.’ ”

STRINGED INSTRUMENTS, THE PARTICULAR NAMES OF WHICH ARE UNKNOWN.

Much light might be thrown on the names of the various harps, lyres, and other musical instruments of Egypt, if those mentioned in the Bible were more accurately defined. But, as Calmet truly observes, “There is no subject in Scripture which has been so little understood as the nature of the Hebrew musical instruments*. The various translators of the Bible all differ as to the meaning of the terms applied to these instruments in the sacred volume; and the rabbins themselves know no more of the matter than those least acquainted with Jewish affairs. They enumerate no less than thirty-four different instruments, as used by the ancient Hebrews; supposing that the titles of several psalms, viz. *Michtam*, *Sigaion*, *Sheminith*, &c. indicate the names of particular instruments to be used in performing them. But of this there is scarcely any authority, excepting for the latter†.

* Those who are desirous to obtain knowledge on this subject, may read with advantage the curious investigations of Padre Martini, in the first volume of his *History of Music*: those of the Abbe Mattei in various dissertations with which he has illustrated his elegant translation of the Psalms in Italian verse; P. Philip Bonanni's *Gabinetto Armonico*, 1722; and the Latin dissertation of Francisco Blanchini, *De tribus generibus instrumentorum Musicæ Veterum Organicæ*, 1742.

The Padre Martini's *History of Music*, unfortunately, was never completed. The learned father began his work on so large a scale, that, though the chief part of his life

seems to have been devoted to it, only three volumes were published before his decease in 1783. The first volume, which is wholly confined to Hebrew Music, appeared in 1757. The second and third volumes, which treat of the music of the ancient Greeks, appeared in 1770 and in 1781.

† According to the Rev. J. Jebb, *Michtam* signifies “A Psalm composed or written by David;” *Sigaion* (or *Shiggaion*), “A wandering Song;” and *Sheminith*, “a Harp of eight strings.”—*A Literal Translation of the Book of Psalms*, ii, 140, 148, 157.

Mich-tam מִיְחָתָם—according to the Targum, “Sculp-

Mersennus, and, after him, Kircher*, have indeed undertaken to describe these instruments; the latter professing to have derived his information chiefly from the rabbinical writers and commentators on the Talmud. These are bad authorities; and it would only perplex the question still more to wade through their elaborate details. It is to the wonderful discoveries in Egypt that we must chiefly look for information upon this subject, and there our enquiries are more profitably rewarded.

Much confusion exists between the *cithara* or *kitarus*, the *ashûr* ('*asôr*, according to the Masoretic pointing, אֲשׁוּר), the *sambuc*, the *nabl* (*nebel*), and the *kinour* (*kinnôr*): nor can the various kinds of drums, cymbals, or wind instruments of the Jews be more satisfactorily ascertained. "The difficulty of identifying them is not surprising," says Sir J. G. Wilkinson, "when we observe how many names the Greeks had for their stringed instruments, and how the harps and lyres represented in the Egyptian sculptures approach each other in principle and

tura recta Davidis;" according to the Septuagint, "Tituli Inscriptio (σηλογραφία) ipsi David" — which seems to signify "a memorial of honour to David."

Shigga-jôn אֲשֶׁר לַדָּוִד "Ode erratica Davidis; i. e. varia." — *Bythner's Lyra Prophetica*. It is otherwise explained, "Occupatio aut Studium;" again, "Delectatio, lætitia, jucunditas."

Hash-sheminith—אֲשֶׁר לַדָּוִד—The Sheminith "Instrumentum octo chordarum," from the numeral אֲשֶׁר octo.

* As these two writers will frequently be mentioned in the course of the following pages, we shall here briefly notice their biography. MARIN MERSENNUS was born at Oyse, in the province of Maine, in 1588. He was educated in the College of Sorbonne, and afterwards received the habit of the Minims. He was a great Hebrew scholar, and possessed of deep learning and research. He had also a correct and judicious ear, and was a passionate admirer of music. These gave direction to his pursuits, and were productive of numerous experiments and calculations, tending to demonstrate the principles of harmony, and to prove that they had their foundation in nature, and in the original constitution of the universe. His principal work is entitled, *Harmonicorum Libri XII in quibus agitur de*

Sonorum Natura, Causis et Effectibus, Generibus, Modis, Cantibus, Compositione, Orbisque totius harmonicis Instrumentis; folio, Paris, 1636. The most material contents are dissertations on the nature and properties of sound; on strings; on consonances and dissonances; or ratios, proportion, and the division of consonances; on the modes and genera of the ancients; on singing and the human voice; on composition; and on musical instruments. This great scholar died in 1648.

ATHANASIUS KIRCHER, a jesuit of Fulda, was an able mathematician and a profound scholar. He was a professor at Wurtzburgh, in Franconia, from whence, on the entrance of the Swedes into Germany, he retired into France. He afterwards went into Italy, where he died in 1680, aged 79. He was the author of many learned works, and, among others, of the *Musurgia Universalis*, in two volumes, folio, 1650. He has been severely censured, by Meibomius and others, for his barbarous Latin, and unclassical ideas of ancient music, as well as for his credulity and want of taste in selecting his facts and materials. His *Musurgia*, however, contains much curious and useful information, for such as know how to sift truth from error, and usefulness from futility.

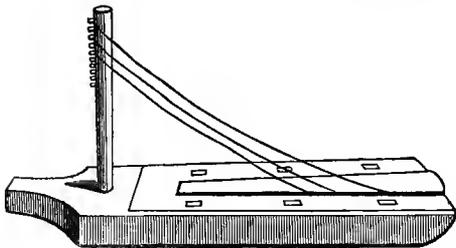
form; and we sometimes hesitate whether to ascribe to them a place among the former or the latter." It is among the instruments of this class, the genus of which is undecided, that we must seek for an explanation of many of those mentioned in the Scriptures.

Perhaps, among the most singular of these instruments, are those of a triangular form, two of which are here copied, as given by Rosellini, from tombs at Thebes and Dakkeh.



The first instrument has nine oblique strings, and is probably supported by a belt from the shoulders of the performer. The second instrument is a larger one of the same kind with perpendicular strings. It is held by pressing it between the side and elbow, and is played on with both hands, by one of those monsters which the Egyptian mind was so prolific in producing. From their peculiar character and form, no instruments of the kind claim a more attentive consideration.

To the same class essentially belongs another Egyptian instrument, of a very simple construction, and which is given by Rosellini, not from a painting, but from a real instrument found in Egypt, now deposited in the Museum at Florence.



In this, the strings (originally ten in number, as appears from the pegs) form a triangle, by their extension from the upper end of a piece inserted at right angles into a large harmonical body of wood, with which the strings are at the other extremity connected; as shown in

our engraving. Portions of the strings still remain, and appear to have been formed from the intestines of animals. Remembering that Solomon obtained wood for his *psalteries* by distant commerce, it is remarkable that the wood of this instrument is what Rosellini calls "a mahogany (*swietana*) from the East Indies;" and which the Egyptians must have obtained through commercial channels. Comparing the delta form, which the old authorities assign to the nabl or psaltery, with the number of the strings, Rosellini himself suggests that the present instrument has probably some resemblance to the עשור נבל, "the ten-stringed nabl" of the Hebrews*.

The instruments above represented are very similar in principle, however different their tones and powers may have been; but still they must be considered distinct from the harp, lyre, and guitar: and they may, perhaps, bear some analogy to the nabl, the sambuc, and the ten-stringed *ashur* of the Jews.

RECENT DISCOVERIES AT NINEVEH.

The sculptures discovered by the enterprising Dr. Layard, in the ruins of Nineveh, contain representations of a musical instrument very similar to the triangular one above described. It occurs in three different places in the series of slabs now deposited in the *Nimrud* room at the British Museum. Two of these represent processions, in which the king, returning from hunting, is met by five figures, the two last being musicians, standing side by side, and playing upon the instruments referred to. In the third slab, representing the Assyrian camp, a group of warriors, carrying the heads of the slain, are rejoicing, in company with two musicians, also with triangular instruments in their hands. Dr. Layard says, "It is possible that the Assyrians, like the Egyptians, had various musical instruments; only two kinds,

* "Owing to the obscurity which envelopes the instrumental music of the Hebrews, we cannot trust to Jewish tradition for any accurate definition of their various species. Even Josephus is not altogether accurate; since he speaks of the *nabal* or psaltery as an instrument of twelve strings

(*Antiq.* vii, 13, 3); whereas, we know, from the second verse of the 33rd Psalm, that it had but ten."—The Rev. John Jebb's *Literal Translation of the Book of Psalms*, ii, 146.

however, are represented in the sculptures—a drum, and a sort of triangular harp or lyre, which is held between the left arm and the side, and apparently suspended from the neck. The strings of this harp, nine or ten in number, are stretched between a flat board and an upright bar, through which they pass. Tassels are appended to the ends of the strings, and the bar itself is generally surmounted by a small hand, probably of metal or ivory. The instrument was struck with a plectrum held in the right hand: the left appears to have been used either to pull the strings, or to produce notes by pressure. Like the Egyptian harp, it had no cross piece between the upright bar and the flat-board or base; it is difficult, therefore, to understand how the strings could have been sufficiently tightened to produce notes*.”

* *Nineveh and its Remains*, 8vo. 1849; vol. ii, p. 412.
In a note, the author adds, “There is a representation of this musical instrument in the bas-relief of the king stand-

ing over the crouching lion, now in the British Museum.
See also Layard's *Monuments of Nineveh*, plate 12.

CHAPTER II.

THE MEDIEVAL INSTRUMENTS THAT PRECEDED THE INVENTION OF THE KEY-BOARD.

IN reference to the stringed instruments of antiquity, but little can be said; unless we were to enumerate the various opinions at different times expressed by learned authors—a task by no means calculated to give the reader satisfaction. We are at a loss to conceive what the differences could have been between the numerous instruments of the same class to which we have referred. Montfaucon, indeed, says that he examined the representations of six hundred lyres and citharas in ancient sculpture, without coming to any conclusion*. Burney, in his “Reflections on the Construction of Ancient Musical Instruments,”† however, quotes a passage from Quintilian, which throws a gleam of light upon the subject. “Among the stringed instruments,” says this authority, “you will find the lyre of a character analogous to masculine, from the great depth or gravity and roughness of its tones; the sambuca of a feminine character, weak and delicate; and, from its great acuteness and the smallness of its strings, tending to dissolve and enervate. Of the intermediate instruments, the polyphongum partakes most of the feminine; but the cithara differs not much from the masculine character of the lyre.”

From this description we learn that the Greeks had two classes, as they imagined, of stringed instruments; one producing tones called masculine, the other those which were considered of a feminine character. “The Greeks, says a recent

* This learned antiquary says, in all the representations which he had seen, he did not find one musical instrument with a finger-board; but all had open strings, such as the harp and lyre are provided with. More recent

research, however, has shown us that the ancient Egyptians were perfectly well acquainted with this important discovery.

† *History of Music*, vol. i, Appendix.

writer, “ were especially distinguished by a regard to nature in all their works. To them we are indebted for the noblest specimens of architectural taste ; and, if we may believe their disciples and annotators, they established the three orders from a consideration of the human figure. The Doric represents masculine strength ; the Corinthian, virginal elegance and grace ; the Ionic, matronal simplicity, and an avoidance of redundant ornament. So it appears, from the passage just quoted, they were accustomed to classify their instruments. There are two characters mentioned—the lyre, distinguished for its masculine tones, and the polyphongum, an instrument spoken of by Homer, for its feminine character. Between these two extremes, there were, in all probability, many varieties ; the cithara, resembling the lyre ; and the sambuca, having a similarity to the polyphongum.”*

We do not intend to carry out our inquiries into the stringed musical instruments of the Greeks and Romans, as it would not lead to any satisfactory result. The arts and sciences of all ancient nations were in a rude and imperfect state. The perfection of the arts depends on scientific knowledge ; and when we consider the uncertain state of the practical sciences at this early period, we can readily account for the imperfection of all ancient musical instruments. We shall therefore proceed to notice some of those instruments of the medieval period that more immediately suggested those of the class to which the present work is especially devoted.

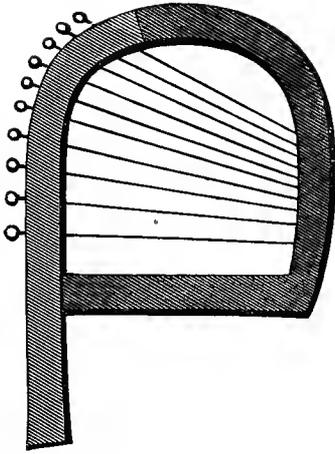
THE PSALTERY OR PSALTERIUM

Enjoyed great celebrity in the middle ages. It was a stringed instrument, played with the fingers or the plectrum†, and differed from the cithara, chiefly in having its sonorous body placed at the top, instead of its being below‡.

* Higgins on Sound, p. 102.

† Kircher cites Suidas, to prove that the word *Psalterium* is derived from *Psallo*, to strike the strings with the ends of the fingers. *Musurgia*.

‡ “ Sciendum quod Psalterio musico instrumento cithara est contriaria, quæ concavitatem quam Psalterium habet superius, inferius habet.” *Bede Op.* tom. viii, p. 311.



The cithara is thus commonly depicted in ancient manuscripts.

There were two forms of the early Christian psaltery—the square psalterium, and the triangular psalterium. The former had ten vertical strings. The sonorous body, which was placed at the top, according to Saints Augustine and Isidore of Seville, was of wood; or, according to St. Basil and Eusebius, of brass. Drawings of various forms of this instrument occur in a MS. of the ninth century, in the library of Boulogne-sur-Mer, and in a MS. of the eleventh century, in the Imperial Library at Paris (No. 1118)*

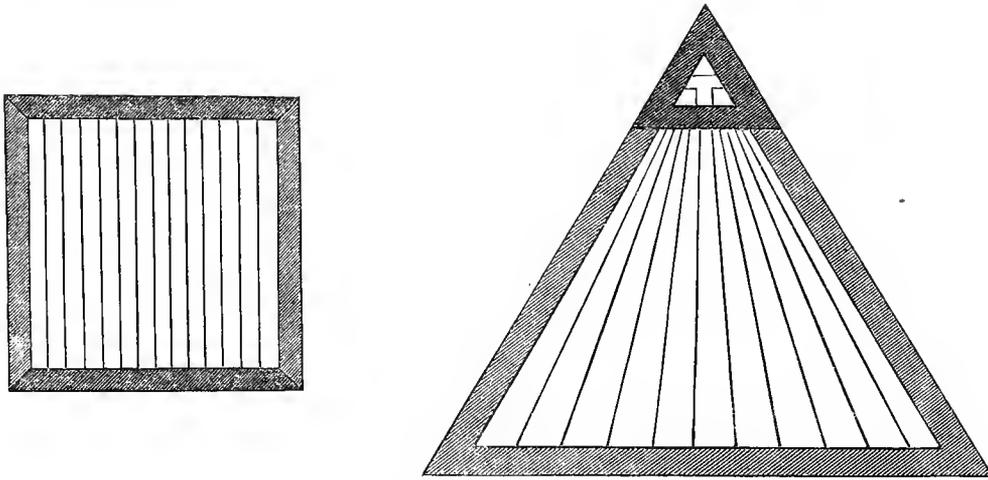
It is a curious circumstance, that, in manuscripts dating from the ninth to the eleventh centuries, David is always figured playing on the square psalterium, while subsequently to the twelfth century he is always depicted with the harp. This seems to show that the psalterium was, at the earlier period, considered as the nobler instrument, and more fitted to sound the praise of the Creator.

The triangular psalterium in form of a Greek Δ , resembled the cithara of the barbarians. According to Isidore of Seville, it was called *Canticum*. The Abbé Gerbert†, in his *De Cantu et Musicâ Sacrá*, plate xxiv, has left us figures of both the square and triangular psalterium, copies of which are here given.

* See the *Annales Archéologiques* of M. Didron, where both are engraved. Other representations are preserved in Cotton MS., Tiberius, c. v. fol. 16, 17., Strutt's *Horða Angel-cynnan*, Carter's *Specimens of Ancient Architecture*, &c.

† The labours of this learned man are of such importance to the history of the art, that he is entitled to a passing notice. Martin Gerbert, Prince-Abbot of the convent of Benedictines, and of the congregation of St. Blaise, in the Black Forest, was born in 1720, at a small town in Austria. From his position and authority in the church, he was enabled to discover the most secret treasures of musical literature, by obtaining admittance into the libraries of convents and monasteries, closed to the ordinary

enquirer. In 1762, he announced his intention of writing a history of church music, by the publication of a printed prospectus, preserved in the Critical Letters of Marburg. He finished his noble work in six years, though, in the interval, the abbey and valuable library of St. Blaise were burnt to the ground. The full title of the work, which is in two quarto volumes, with many plates, is *De Cantu et Musicâ Sacrá, a primâ ecclesiæ ætate usque ad præseus tempus. Auctore Martino Gerberto, Monasterii et Congregationis St. Blasii de Silvâ Nigrâ Abbate, Sacrique Romani Imperii Principe, Typis San-Blasianis, 1774.* The author divided his history of church music into three parts: the first finishes at the pontificate of St. Gregory: the second carries it on to the fifteenth century; and



The resemblance between this instrument and the harp was probably the reason it went finally out of use. The name of psalterium or psaltery, however, was preserved, and given at a somewhat later period to a stringed instrument having some analogy to it, but more resembling the first instrument of the pianoforte class with a key-board.

Trevisa, in his translation of *Bartholomæus de Proprietatibus Rerum*, printed by Wynkyn de Worde*, gives us the following description of the latter instrument.

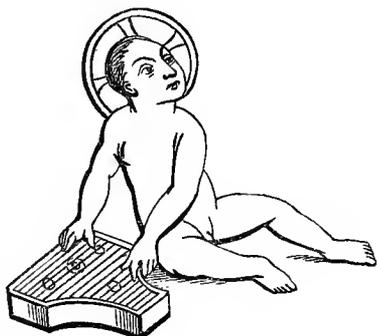
“ DE PSALTERIO.

“ The Sawtry highte *Psalterium*, and hath that name of *Psallendo, syngyngge*; for the consonant answeryth to the note thereof in syngyngge. The harpe is lyke to the sawtry in sowne. But this is the dyversytee and discorde bytwene the harpe and the sawtry: in the sawtry is an holowe tree, and of that same tree the sowne comyth upwarde, and the strynges ben smytte downwarde, and sownyth upwarde; and in the harpe the holownesse of the tre is byneth. The *Hebrewes* callyth the sawtry *Decacordes*, an instrument having ten stringes, by numbre of the ten hestes or commandementes. Stringes for the sawtry ben beste made of laton, or elles those ben goode that ben made of sylver.”

the third to his own time. But the work which has given Gerbert the greatest distinction, is his *Scriptores Ecclesiastici de Musicâ Sacrà potissimum. Ex variis Italiæ, Galliæ et Germaniæ codicibus Manuscriptis collecti et nunc primum publicâ luce donati, &c. Typis San-Blasianis*, 1783. This is a collection, in three volumes, of all the ancient authors who have written on music since the third century to the invention of printing, and whose works had remained in manuscript. Dr. Forkel has given an extensive analysis of it in his *Histoire de la Musique*.

* Bartholomew's singular work was written about the year 1366, and is certainly one of the most entertaining and valuable remains of antiquity. The contents are of a miscellaneous nature, and display the author's extensive knowledge of the several subjects of divinity, ethics, natural history, medicine, astronomy, geography, and various branches of the mathematics. After discussing these several topics, with great learning and ingenuity, he concludes with a very interesting dissertation on the music and musical instruments of his time.

To use more intelligible language, the instrument now called the psaltery or *nabulum*, was a stringed instrument, composed of a triangular sonorous box, one of the angles of which was often slightly flattened or rounded. The strings were placed on the upper face, sometimes perpendicular to the side opposite the flattened angle, sometimes parallel to the face opposite this flattened angle*. We have copied two interesting illustrations. The first from a MS. of the fourteenth century, in the Imperial Library at Paris; the second from a grotesque alphabet, by "the Master of 1466." †



In Wace's description of the Coronation feast of King Arthur (*Brut d'Angleterre*), written in the twelfth century, he enumerates the various instruments used on that occasion, amongst which we have "psalterys and monochords." The psaltery was a favourite instrument of the minstrels of the middle ages, as may be gleaned from its mention in the following extracts.

* Grassineau, in his *Musical Dictionary*, in v. *Psalterion*, says, "It is strung with thirteen wire chords (*i. e.* strings), set to unison and octave, and mounted on two bridges, on the two sides; it is struck with a plectrum or little iron rod, or sometimes with a crooked stick (the writer here confounds the psaltery with the dulcimer,

which latter was struck with a crooked stick), whence it is usually ranked among the instruments of percussion. Its chest or body resembles that of a spinet. It has its name à *Psallendo*; some also now call it *Nablum* or *Nablium*."

† This is the instrument frequently mentioned as the *Sautry*, by Chaucer and his contemporaries.

In the *Squire of Lowe Degre*, a romance of the fifteenth century, we are told

“ There was myrth and melody,
 With harpe, getron and *sautry*,
 With rote, ribible and clokarde,
 With pypes, organs and bumbarde,
 With other mynstrelles them amonge,
 With sytolphe and with *sautry* songe,
 With fydlie, recorde, and dowcemere,
 With trompette, and with claryon clere,
 With dulcet pipes of many cordes,
 In chambre revelyng all the lordes.”*

Gawain Douglas, in his allegorical poem, *The Palace of Honour*, describing his visit to the Court of the Muses, says

“ In modulation hard I play and sing,
 Faburdoun, pricksang, discant, countering,
 Cant organe, figuratioun, and gemmell;
 On croude, lute, harpe, with monie gudlie spring;
 Schalmes, clariounis, portativis, hard I ring,
 Monycord, organe, tympane and cymbell;
 Sythall, *psalterie*, and voices sweet as bell,
 Soft releschingis in dulce delivering,
 Fractionis divide, at rest, or clois, compell.”†

And Holland, the author of a poem called *The Houlate*, written in 1543, enumerates the following musical instruments.

“ The *psaltry*, the citholis, the soft atharift,
 The croude, and the monycordis, the gythornis gay;
 The rote, and the recourder, the ribus, the rift,
 The trump, and the taburn, the tympane but tray;
 The lilt-pype, and the lute, the cythill and fift,
 The dulsate, and the dulsacordis, the schalm of assay;
 The amyable organis usit full oft;

* Ritson's *Metrical Romances*, 1802, vol. iii, p. 189.

† Sibbald's *Chronicle of Scottish Poetry*, 1802, vol. i, p. 386.

Clarions loud knellis,
 Portatibis, and bellis,
 Cymbaellonis in the cellis,
 That soundis so soft." *

THE DULCIMER.

The psaltery or sautry gave rise to two instruments of a similar kind—the dulcimer (mentioned in some of the previous quotations), and the citole†.

The dulcimer, from *dulce melos*, sweet melody, was an instrument of a triangular form, strung with about fifty wire strings, resting on a bridge at each end, the shortest wire being about eighteen inches in length, and the longest about thirty-six. The instrument is laid out flat before the performer, and he plays on it by striking the strings with two small rods, sticks, or hammers, one held in each hand, the force of the stroke being varied according as the tones are required to be *piano* or *forte*. The psaltery appears to have been of a smaller size, and to have been provided with much fewer strings than the dulcimer. Ottomarus Luscinius, in his valuable work, *Musurgia seu Praxis Musicae*, Strasburg, 1536‡, gives an engraving

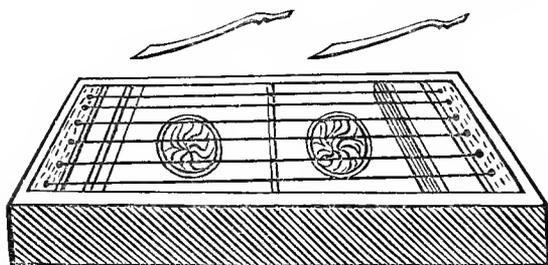
* Pinkerton's *Scottish Poems*, reprinted from scarce editions, 1792, vol. iii, p. 179.

† Baretus, Minsheu, Cotgrave, Phillips, and others, speak of the dulcimer as the same with the *sambuca*: but, according to Bartholomæus, the *sambuca* was an instrument with hollow pipes made from the boughs of the elder tree. Leyden says, "the recorder was sometimes made of the elder bough, and denominated *sambuca*." (*Complaint of Scotland*, p. 150). Tyrwhitt (*Glossary to Chaucer*) makes the dulcimer the same with the *rote*; but he is clearly in error, as the latter was certainly an instrument of the bagpipe kind. The dulcimer was most probably the same with the "dulsacordis," of which we read in the earlier romances. The lexicographers have confounded the dulcimer with the *dulzain* or *dulcino*, a wind instrument resembling the tenor hautboy.

‡ This interesting and important work, which we shall have frequent occasion to quote in the course of the following pages, is in the form of a dialogue, in which the interlo-

cutors are, Andreas Silvanus, Sebastianus, Virdung, sive malis, to use his own expression, Bartholomeus Stoflerus, and Ottomarus Luscinius. They meet by accident, and enter into conversation on music, in which Stoflerus, acknowledging the great skill of his friend in the science, desires to be instructed in its precepts, which the other readily consents to. The dialogue is somewhat awkwardly conducted; for though Stoflerus is supposed to be just arrived from a foreign country, and the meeting to be accidental, Luscinius is prepared to receive him with a great basket of musical instruments; which his friend seeing, desires to be made acquainted with its contents. The instruments are severally produced by Luscinius, and he complies with the request of his friend by a discourse, which is no other than a lecture on them. The merit of this book is greatly enhanced by the forms of the several instruments described in it, which are very accurately delineated. It is a small book, of an oblong quarto size, containing about a hundred pages.

of the dulcimer, which is here copied. It shows the instrument in its earliest stage, before it had attained its full complement of strings.



Luscinus calls it the "Hackbret," *i. e.* the Hackboard, or chopping-board, used by cooks, which it exactly resembles in shape.

"Short instruments, called dulcimers," are mentioned in the Inventory of Henry the Eighth's musical instruments, remaining in his various palaces at the time of his decease*.

Nicomachus, the Arabian, who flourished in the middle of the first century after Christ, mentions, in his curious tract on music, the trigon or *triangular dulcimer*; but we much question whether it resembled the instrument just described.

A kind of dulcimer forms a favourite instrument in Egypt at the present day. It is of a four-sided figure, with three rectangular and one sloping side. A specimen of this instrument, which Mr. Lane examined, and which is called a *ckánóon*, was about forty inches long, sixteen inches wide, and two inches deep. The face and back were made of fine deal, and the sides of beech. The sloping side of the instrument, which is made of beech, is provided with seventy-two pegs, round which are wound the ends of the same number of strings, the other ends of the strings being fastened to the opposite end of the instrument. The strings pass over a bridge; and, in order to aid the resonance, the face of the instrument is pierced in two places. The strings are made of lamb's gut, and are arranged in triplets, each note having three strings tuned in unison. The fore-finger of each hand is armed with a plectrum, made of a thin piece of buffalo's horn, kept close to the finger by a sort of thimble or sheath; and with these plectra the strings are touched. The player sits down, in the attitude customary among oriental nations, and places the instrument on his knees.

* Harleian MS. 1419, A. fol. 200.

THE CITOLE.

The word citole is derived from the Latin *cistella*, a little chest; and, in truth, the instrument was no other than a little chest or box upon which was stretched a series of strings. It differed from the psaltery and dulcimer in being played with the fingers, instead of plectra or small hammers. It was known in the early part of the thirteenth century, when the author of the half-historical, half-legendary history of *Fulke Fitz-Warine* mentions an outlaw "who knew enough of tabour, harp, viol, *sitole*, and jonglerie*." A drawing of the instrument is preserved in the British Museum (Bib. Reg. 20 A. 16), which is here copied.



Amongst the ancient authors who allude to the citole (besides those already quoted), are the following.

In the *Roman de la Rose*, commenced by Guillaume de Lorris early in the thirteenth century, and finished by Jean de Meun towards the end of the same, we have the following enumeration of musical instruments.

“ Puis met in cymbales sa cure,
 Puis prent freteaulx, et si fretele,
 Et chalemaulx, et chalemelle,
 Et puis taboure, et flute et tymbre,
 Et *citole*, et trompe, et cheurie,
 Et si psalterionne et viele ;
 Puis prent sa muse et se travaille
 Aux instrumens de Cornovaille,
 Et espringue et sautele et bale.”

Adam Davie, in his metrical *Life of Alexander*, written in the fourteenth century, describing an entertainment before the king, adds—

“ At the feste was trumpyng,
 Piping and eke taboryng,
Sytolyng and eke harpyng†.”

* Wright's *Essays on the Literature and Superstitions of England in the Middle Ages*, vol. ii, p. 53.

The romance has since been printed by the Warton Club.
 † MS. in the Bodleian Library.

The next quotations are from the *Confessio Amantis* of the "Moral Gower."

"But thee I might knowe,
For olde men which sowned lowe,
With harpe and lute and the *citole*,
The houe dance and the carole."

* * *

"He taught her till she was certaine
Of harp, *citole*, and of riote,
With many a tune, and many a note." *

Chaucer, in his *Knight's Tale*, describing the statue of Venus, says—

"A *citole* in hire right hand hadde she,
And on hir heed, ful semely on to see,
A rose garland full swete, and wel smellyng,
And aboven hire heed dowves fleyng." †

In the description of King Arthur's feast, in the Romance of *Launfal*, we are told

"They hadde menstrales of moch honours,
Fydellers, *sytolyrs*, and trompours,
And elles hyt were unryght;
Ther they playde, for sothe to say,
After mete the somerys day,
All what hyt was neygh nyght." †

But perhaps the most curious enumeration of musical instruments of the fifteenth century is contained in Lydgate's poem entitled *Reson and Sensualité*, written about the year 1430.

"For they ronde the practyke
Of al maner of Mynstralcye,
That any mane kane specifye;
For ther wer rotys of Almayne,
And eke of Arragone and Spayne:
Songes, stampes, and eke daunces,
Dyvers plente of plesaunces,

* Printed by Caxton, in 1493.

† Ritson's *Metrical Romances*, vol. i, p. 198.

† *Canterbury Tales*, edited by T. Wright, for the Percy Society, vol. i, p. 79.

And many unkouth notys newe
Of swiche folkys as lovde trewe ;
And instrumentys that dyde excelle,
Many moo than I kane telle.
Harpys, fythels, and eke roytys,
Wel accordyng with her notys,
Lutys, rubibis, and geterns,
More for estatys than taverns :
Orgyns, *cytolys*, monacordys ;
And ther wer founde noo discordys
Nor variaunce in ther souns,
Nor lak of noo proporsiouns."*

“Citlers” are mentioned among the musicians in the establishment of King Edward the Third. See also, besides the above passages, Du Cange, in v. CITOLA ; and M. de la Ravalere, *Poesies du Roy de Navarre*, tom. i, p. 248.

* MS. Fairfax, No. 16, Bodleian Library.

CHAPTER III.

THE FIRST INSTRUMENTS OF THE PIANOFORTE CLASS.

It is generally asserted, by those who have treated of the origin of stringed instruments with key-boards, that no traces of their existence are to be found anterior to the sixteenth century. M. Fétis, indeed, goes farther back, adding, "From all that we can learn by tradition, it seems probable that the clavichord was invented by the Italians about the year 1300, and that it was afterwards imitated by the Belgians and Germans*."

But a much greater antiquity may be ascribed to instruments of this class, and the period of their invention may probably be fixed about the beginning of the twelfth century. The *clavier* or key-board was invented at the close of the eleventh century, when it was applied to the organ†; and we cannot suppose that much time would be lost in adapting this important improvement to stringed instruments.

THE CLAVICYTHERIUM.

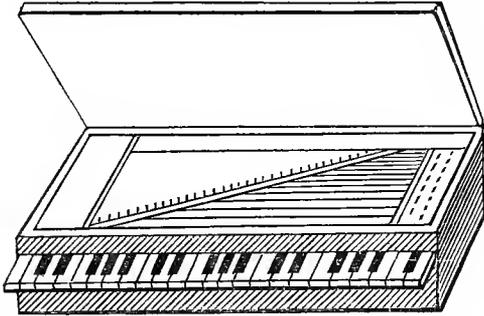
The first stringed instrument to which the key-board was applied, was probably the clavicytherium, or *keyed-cithara*. In its early stage, it was a small oblong box, with the strings arranged in the form of a half-triangle. The strings, which were of catgut, were sounded by means of quill-plectra, attached in a rude way to the ends of the keys. Luscinius and Mersennus have each treated of this primitive instrument, but in such a vague manner, that it is impossible to form any correct notion of its mechanism.

* *A Sketch of the History of the Pianoforte and of Pianists*, translated from the *Révue Musicale*, and printed in the *Harmonicon* for 1830 and 1831. We shall have frequent occasion to notice this article in the course of these pages. It is lamentably deficient in antiquarian research,

but seems to be the only work (brief as it is) claiming to be a *history* of the instrument of which it treats.

† See *The Organ; its History and Construction*; by Dr. Rimbault and E. J. Hopkins. Recently published by Messrs. Robert Cocks and Co. *Historical Section*, p. 31.

The idea of the Clavicytherium was of course suggested from the lyres, citharas*, and other instruments, the strings of which were snapped with a quill or with a piece of tortoiseshell. The thought of employing mechanical contrivances had the advantage of offering means of combining a greater extent of sounds than could



be done on any of the numerous varieties of the harp kind. The clavicytherium assumed different shapes; but the earliest delineation of its form handed down to us, is the wood-cut we have copied from Luscinius's *Musurgia, seu praxis Musicae*, Strasburg, 1536.

THE CLAVICHORD.

The next instrument on record, to which the key-board was attached, was the monochord, clavichord, or clarichord; for it was called by all three appellations. As the

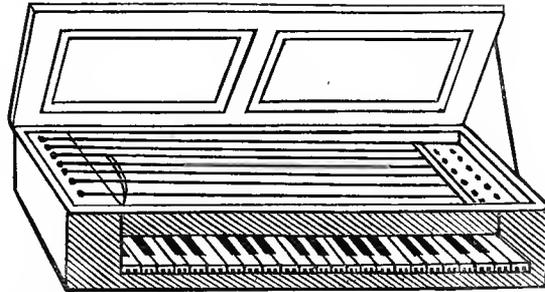
* The cithara was a particular species of harp or lyre; but its precise structure does not appear to be distinctly known. We have given one form of it, on p. 19; but it varied at different periods. The ancients describe it as triangular, in the form of a Greek delta; and the poets ascribe its invention to Apollo. Bartholomew, in his *De Proprietatibus Rerum*, has the following curious passage on the subject.

De Cithara.

“The harpe hyghte cithara, and was fyrst founde of Appollin, as the Grekes wene; and the harpe is like to a manny's breste, for lyke wyse as the voyce comyth of the breste, soo the notes cometh of the harpe, and hath therefore that name Cithara, for the breste is callyd *Thorica Thicariuz*. And afterwarde some and some, came forth many manere instrumentes thereof, and hadde that name cithara, as the harpe, and sawtry, and other such. And

some ben foure cornerde, and some thre cornerde; the strynges ben many, and specyall manere thereof is diverse. Men in olde tyme callyd the harpe Fidicula, and also Fidicen, for the strynges thereof accordyth as well as some men accordyth in Fey. And the harpe had seven stringes, and so Virgil sayth, libro septimo. Of sowne ben seven discrimina of voys, and ben as the next strynges therto. And strynges ben seven, for the fulleth all the note. Other for heaven sownyth in seven menyngs. A strynges hyghte corda, and hathe the same name of corde, the herte; for as the puls of the herte is in the breste, soo the puls of the strynges is in the harpe. Mercurius founde up fyrste suche strynges, for he strenyd fyrste strynges, and made them to sowne, as Ysyder sayth. The more drye the strynges ben streyned the more they sowne. And the wreste hyghte plectrum.”

clavichord (for that is the name by which it was most commonly known) was destined to play an important part in the history of music for nearly six centuries, it is entitled to something more than a casual notice. Luscinius depicts it in this form.



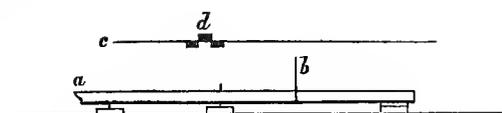
Drawings or sculptures of early keyed-stringed instruments are very rare. Douce (as quoted by Sir Harris Nicolas, in the *Privy Purse Expenses of Elizabeth of York*) says, "The clavichord is frequently represented in ancient bas-reliefs, in churches, both in France and in England, which differs materially from the dulcimer." Douce must have been mistaken, as *no* such representations are to be found at the present day, nor do they exist in the numerous archeological works of France and England which we have consulted. Luscinius's engraving of the clavichord is the earliest with which we are acquainted.

It will be seen that the instrument was made something in the shape of a small square pianoforte, and was without frame or legs. Indeed, the idea of the square pianoforte was taken from the clavichord; but it retains only its shape and the disposition of the strings; their actions have no similarity. The strings of the clavichord were of brass*, and its action was simply a piece of brass pin wire, which was placed vertically at a point where it could be struck or pressed against its proper string; this pin could be held against the string as long as required by the firm pressure of the finger. It thus necessarily formed the wrest-pin for the string, which vibrated only whilst the key was held down, a close damper being fixed behind, always acting upon the string when quitted by the pin†; the string was of course, hooked upon a hitch-pin at the back, but it was tuned only after having been struck, and whilst pressed by the striking pin at the end of the key, which, in fact, formed one of the two bridges between which the string vibrated.

* The pandoron, a musical instrument of the lute kind, said to have been the invention of the Assyrians, had *brass* strings. Prætorius says it gave the idea of furnishing the clavichord with the same.—*Syntagma Musicum*.

† "As the clavichord was still what the Germans call '*gebunden*,' so that several keys struck a single string, it could not be perfectly tuned; people played therefore only in those modes which could be tuned with the most purity." —Forkel's *Life of Bach*, p. 24.

Some idea of the mechanism of the clavichord may be formed from the annexed diagram.



a, key; *b*, brass pin; *c*, string;
d, cloth woven between the strings as a damper.

It is obvious that an instrument upon this construction could not have possessed much power; yet the tones are said to have been soft and melancholy, and better suited to the student, the composer, or the solitary, than for any purposes of social amusement.

Old Bach delighted in the clavichord; he considered it "the best instrument for study, and, in general, for private musical entertainment. He found it the most convenient for the expression of his most refined thoughts, and did not believe it possible to produce from any harpsichord, or pianoforte, such a variety in the gradations of tone as on this instrument, which is indeed poor in tone, but, on a small scale, extremely flexible*."

Bach's preference for the clavichord was not singular. This instrument, it will be remembered, formed part of the baggage of Mozart when he travelled; and Dr. Burney, in recording his visit to C. P. E. Bach, at Hamburg, in 1772, says, "M. Bach was so obliging as to sit down to his *Silverman clavichord* and favourite instrument, on which he played three or four of his choicest and most difficult compositions, with the delicacy, precision, and spirit, for which he is so justly celebrated among his countrymen. In the pathetic and slow movements, whenever he had a long note to express, he absolutely contrived to produce from his instrument a cry of sorrow and complaint, such as can only be effected on the clavichord, and perhaps by himself†."

Concerning the origin of the name clavichord, and the various other appellations given to this instrument, our etymologists are not very clear. To quote a few of the most erudite:

"CLAVICORDES, an instrument having many strings of one sound, saving that with small pieces of clothe, the sound is distinct. *Monochordium, dii neut. ge. Monochordia, orum Monochordion.*"

J. Baret's *Alvearie, or Triple Dictionarie*, 1573.

"MONOCÓRDO, an instrument with many strings of one sound, which with little pieces of cloth make distinct sounds."

Queen Anne's New World of Words, by John Florio, 1611.

* Forkel's *Life of Bach*, p. 28.

† Burney's *Present State of Music in Germany*, &c. second edition, 1775, vol. i, p. 269.

“CLERICORDES, claricords or clavicórdes. *Spanish*, clavicórdias; *Latin*, clavecymbalum; *French*, clavessins, manicordion; *Italian*, clavicordio, clavicémbalo; *German*, clavicord quia eius chordæ extenduntur et circumvoluntur clavibus (because the strings thereof are wrested up, with a wrest of iron, like a key, called, in *Latin*, clavis), vocatur etiam; *Latin*, Monochordum. It is an instrument having many strings of one sound, saving that with small pieces of cloth the sound is distinct.”

John Minshew's *Ductor in Linguas: the Guide into Tongues*, 1617.

“CLARICORDS. Instruments so called.”

“CLARICYMBAL. See *Clavecymbal*.”

“CLAVECYMBAL (*Clavecymbalum*). A pair of virginals, or claricords, so called, because the strings are wrested up with *clavis*, a key.”

Blount's *Glossographia*, 1656.

“CLARICORD, or *Clericord*, a kind of musical instrument, somewhat like a cymbal.”

“CLAVECYMBAL, or *Claricymbal*, a kind of instrument with wire strings; by some taken for a harpsical or virginal.”

The New World of Words: by E. Phillips, 1678.

“CLARICORD. A musical instrument in the form of a spinet, containing from thirty-five to seventy strings. Florio calls it *clarigols*, and makes it synonymous with the harpsichord. He also spells it *claricoes*. See his *New World of Words*, ed. 1611, pp. 39, 173, 219; Harrison's *Description of England*, p. 238. ‘Claricymballes, *cimballes*,’ Palsgrave. Sir W. Leighton has *claricoales*, in his *Teares or Lamentations of a Sorrowfull Soule*. 4to. Lond. 1613.”

Halliwell's *Archaic Dictionary*.

It will be observed, in the first place, that our lexicographers make no distinction between the terms clavichord and clarichord; but the one can hardly be a corruption of the other. The words suggest a totally different etymology, upon which we shall venture an hypothesis.

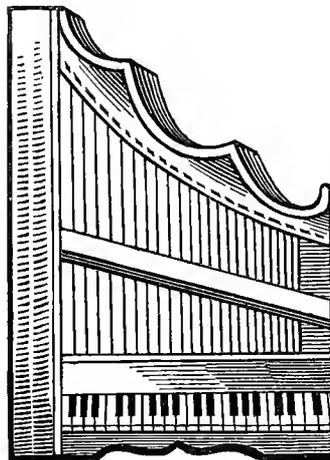
The word clavichord is certainly from *clavis*, a key, and *chorda*, a string; an instrument compounded of keys and strings. It seems far more likely that the *clavier* or key-board originated the name, than the key by which the instrument was tuned. Besides, the *tuning* key was not peculiar to the clavichord; it must have been used centuries before, in connection with the harp, and other similar instruments.

We learn that the strings of the clavichord were softened or deadened by slips of cloth. Now it seems probable that the clarichord was without this addition; and that the name was derived from the French *clair*, denoting a clear transparent tone, in contradistinction to the softened or muffled tone of the monochord, or clavichord. Or it may be from clarion; in low Latin, *clario*; an instrument which received its name

from its shrill sounds*. We merely throw out this hint, as a likely distinction between the two instruments; in other particulars they were probably identical.

The clavicymbal differed materially from the clavichord and clarichord. It appears to have been the origin of the harpsichord, the strings being disposed "after the fashion of the harp." It was sometimes made in an upright form; sometimes in an horizontal one; its strings were of steel wire, and sounded, like the clavictherium, by quill plectra.

The earliest drawing of this instrument exhibits it in an upright form. It is here copied from Luscinius's valuable work before mentioned†.



Julius Cæsar Scaliger, speaking of a newly-invented stringed instrument, in the first book of his *Poetics* (cap. 48)‡, has the following passage: "That new invention or contrivance was Simio's, which, from him, was called the *simicum*; it consisted of thirty-five strings, from which is the origin of the instrument the vulgar now call monochords; in which, when in order, plectra hopping (or leaping) up, give the sounds. Moreover the points of crow-quills are added to the plectra, which elicit a more lively harmony from the brass strings. When I was a boy, it was called the clavicymbal and harpsichord; but now, from those points, the spinet §."

* Menage derives the word Clarion from the Italian *Clarino*, or the Latin *Clarus*; because of the clearness of its sound. Nicod says that the clarion, as used among the Moors and Portuguese, served anciently as a treble to several trumpets which sounded tenor and bass.

† Hawkins remarks upon Luscinius's representation of the instrument: "The clavicimbalum is no other than the harpsichord, *clavicimbalum* being the common Latin name for that instrument; the strings are here represented in a perpendicular situation; and there is good reason to suppose that the harpsichord was originally so constructed, notwithstanding that the upright harpsichord has of late been obtruded upon the world as a modern invention. There is a very accurate representation of an upright harp-

sichord in the *Harmonia* of Mersennus; viz. in the tract entitled *De Instrumentis Harmonicis*, lib. 1, prop. xlii, and also in Kircher."

‡ Scaliger was born in 1484, and died in 1558. His *Poetics, Libri VIII*, was first printed in 1617.

§ The passage in the original is as follows:—"Fuit et Simi commentum illud, quod ab eo *simicum* appellatum, quinque et triginta constabat chordis, à quibus eorum origo, quos nunc monochordos vulgus vocat. In quibus, ordine digesta, plectra sub-silentia reddunt sonos. Additæ dein plectris corvinarum pennarum cuspides ex æreis filis expressiorem eliciunt harmoniam, me puero, clavicymbalum et harpichordium, nunc ab illis mucronibus, spinetam nominante."

The same words, or nearly so, are given by Prætorius, in his *Syntagma Musicum**, who adds, in a bracket, after the word monichords, *clavichordia*—the former name, as Scaliger says, “being that by which the vulgar called the instrument.”

The statements of these two old writers are exceedingly valuable, as pointing out the connection between the monochord, clavichord, clavicymbal, harpsichord, and spinet.

There are no fewer than three instruments to which the name of monochord has been applied; the first and oldest is the harmonic canon of Pythagoras. It consisted of a single string; and the instrument or frame to which it was attached was marked off by sections and subdivisions corresponding with the intervals of the scale. There were three bridges, two stationary, one of which stood at each end; the other, which was placed between the two, was moveable, and, by being applied to the different divisions of the scale, showed the relation which the sounds bore to the length of the string, and in this way was useful in determining the series of intervals which it embraced. This instrument was, of course, not employed in the performance of music; but there was a stringed instrument, called a *monochord* or *unichord*, used for that purpose, not by the ancients, but by the moderns of the sixteenth and seventeenth centuries. It was sometimes called the Trumpet Marine (for what reason is not distinctly known), and was about five feet long, of a pyramidal shape, fitted up with a finger-board and bridge, and played upon like a double-bass, with a bow†.

The monochord used by our ancestors in the twelfth and following centuries was certainly not an instrument of a single string. The word is frequently spelt *monochordis*,

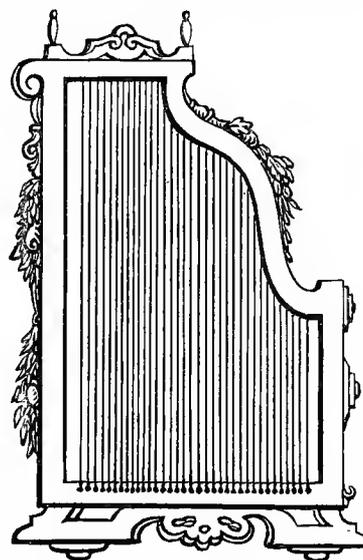
* The full title of this rare and curious book, a copy of which is preserved in the University Library, Edinburgh, is as follows:—*Syntagma musicum ex veterum et recentiorum ecclesiasticorum auctorum lectione, Polyhistorum consignatione, variarum linguarum notatione, hodierni seculi usurpatione, ipsiusque Musicæ artis observatione: in Cantorum, Organistarum, Organopæiorum, cæterorumque musicam scientiam amantium et tractantium gratiam collectum, in quatuor Tomos distributum.* Wolfenbüttel e Wittenberga, 1614, 1618.

† Representations of this instrument may be seen in the *Harmonicorum* of Mersennus, and in Bonanni's *Gabinetto Armonico*. We lately saw one of the real instruments, in excellent preservation, in the possession of Mr. Walesby, of Waterloo Place. Grassineau says, “It is the trembling of the bridge when struck, that makes it imitate the sound of the trumpet, which it does to that perfection, that it is scarce possible to distinguish one from the other, and this is what has given it the denomination of *Trumpet Marine*, tho' in propriety it be a kind of monochord.”

a mode of orthography suggesting different ideas from the one-stringed instrument—in fact, a *polychord*, or instrument of many strings*.

It may perhaps be doubted whether the instrument called the monochord, the study of which was recommended by Guido in the eleventh century as the best method of teaching beginners their musical intervals, was the Pythagorean monochord above described. Guido is said to have invented the *clavier*, or key-board, and it is not at all improbable that he was the first to apply it to the medieval instrument of many strings; at any rate, the monochord seems to have been the same with the clavichord, and, as such, was the progenitor of the harpsichord, the spinet, the virginals, and the pianoforte of modern times.

With regard to the instrument called the *simicum*, Vincenzo Galilei, the father of the celebrated astronomer, in his *Dialogo della Musica Antica e Moderna*, Fiorenza, 1582, has ventured to give us a representation of it, although it may be doubted whether he had any authority from antiquity for so doing. The form which he has assigned it resembles nearly that of an upright harpsichord, without the key-board, which seems to indicate that, when played on, it was held between the legs of the performer, different perhaps from the harp, with the bass strings near, and the acute ones remote from him.



Athenæus (lib. iv) mentions the *simicum*, and the *epigonium* invented by Epigonius. “The former,” he says, “had thirty-five strings; the latter, forty: the first was played with the plectrum; the latter, without it.”

* “The term *monochord* has occasioned much perplexity to musical writers and readers by its equivocal meanings in some passages of modern authors. Sometimes it seems to signify a *one-stringed* instrument, and sometimes an instrument having several strings. In Domenico Scorpione’s *Riflessione Armoniche*, published at Naples in 1701, we find, page 17, the following passage:—‘Fù anco chiamato Monocordo quell’ instromento che ha i tasti, come quelli del cembalo, del quale ne furono inventori gli Arabi, fù così

chiamato, perchè, senza quei pannucci che s’intessono fra le corde, acciò s’oda distinto il suono di ciascuna di esse farrebbe un sol sentire, e molto confuso, e nojoso.’ From this passage it appears very clearly that, in the sixteenth and seventeenth centuries, instruments having finger-keys and many strings or wires were known under the name of *Monochords*.”—G. F. Graham’s *Essay on the Theory and Practice of Musical Composition*; Appendix, p. 78.

These instruments, in common with many of those we have described in the previous chapter, can only be regarded as furnishing the first idea of those of the piano-forte class. The instrument to which the clavichord was much more nearly allied, was the medieval psaltery; the box of small depth, over which was stretched a set of strings.

Presuming that the monochord and the clavichord were the same instrument (which we can hardly doubt), we have evidence that it was known as early as the twelfth century, the proofs of which we shall now bring forward.

In Master Wace's *Brut d' Angleterre*, before quoted, the author mentions "psalterys" and "*monochords*;" and Ritson expressly says, in the Introduction to his *Metrical Romances*, that the musical instruments of the French minstrels at this period were "the viole, the *clavicorde*, the rote, the tabour, and others."

A very curious and important notice of this instrument occurs in the *Conseils au Jongler*, written by Giraud de Calanson, in the year 1210. Speaking of the accomplishments of the Jongleur, it is said, "he must play on the citole and the mandore, and handle the *clarichord* and the guitar*."

Of the state of music during the first half of the fourteenth century, much may be collected from the *Decameron* of Boccaccio, which was published in 1352, or 1353†. It is, as everybody knows, a collection of one hundred novels or tales; the author has ingeniously united them, under the supposition of a party formed during the dreadful pestilence which desolated Florence in 1348, composed of a number of cavaliers, and young, intelligent, and accomplished women, retired to a delightful part of the country, to escape the contagion. It was there agreed that each person, during the space of ten days, should narrate daily a fresh story. The company consisted of ten persons, and thus the number of stories amounted to one hundred. Each day's amusement is finished by dancing and singing; at the end of the fifth day, after a dance, the queen orders Dion, one of the gayest and most facetious of the company,

* See Sismondi's *Historical View of the Literature of the South of Europe*, vol. i, p. 128, Bohn's edition.

† Upon the first discovery of printing, the *Decameron* was freely circulated in Italy, until the Council of Trent proscribed it, in the middle of the sixteenth century. At

the solicitation of the Grand Duke of Tuscany, and after two remarkable negotiations between this Prince and Pius V and Sixtus V, the *Decameron* was again published in 1573 and 1582, "purified" and corrected.

to sing, who proposes several, at that time, well-known songs, to which the ladies offer some objection, on account of the licentiousness of the words. He tells them he would sing others, which he names, if he had a *cembalo*; "by which," says Burney, "some have imagined is meant a *harpsichord*, that instrument being now called *cembalo*, in Italian. However," continues the writer, "the harpsichord is certainly of later invention than the time of Boccaccio, who, in the passage where the word *cembalo* or *ciembalo* is used, probably meant only a kind of *tambour de basque*, or drum in the shape of a sieve, with small bells and bits of tin jingling at the sides of it; a tinkling *cymbal*, but not the modern harpsichord, nor the cymbalum of the ancients, which consisted of two parts resembling basons, which, being forcibly clashed together, marked the steps in Bacchanalian processions and the measure in singing the orgies, and which at present is in general use as a military instrument*."

M. Fétis, writing on the same subject, says, "some persons have expressed a doubt as to this *cembalo* being the harpsichord afterwards known under that name in Italy, and have imagined that an instrument of the same species as the cymbalum of the ancients was intended; that is to say, an instrument of percussion. This is not likely; for the use of small portable organs, and stringed instruments, had been so widely spread during the thirteenth century, as is seen in illuminated MSS., and music had made such progress in Italy in the time of Boccaccio, that it is not probable they would, under the circumstances related in the romance, have accompanied the voice with an instrument of percussion."—"If," continues the same writer, "it were permitted me to venture a conjecture in this regard, I should rather think that the instrument spoken of by Boccaccio was the *tympanum* (the *timpano* of the Italians), which is still to be occasionally seen in the hands of itinerant musicians, and which consists of a rectangular chest, in which is a sounding-board, surmounted by a bridge mounted with wire or catgut strings. The player strikes these strings with two small sticks hooked at the end, forming a harmony of two parts, and, if skilful, even executing passages of some difficulty. To the various mechanical means afterwards devised in order to

* *Hist. of Music*, vol. ii, p. 344.

obtain substitutes for these sticks, we are doubtless indebted for the origin of stringed instruments with a key-board.*”

The instrument here described by the learned Frenchman is evidently the *dulcimer*. But we cannot help thinking that had Boccaccio intended the *timpano*, he would have spoken of it under that name. Undoubtedly the *cembalo* was a small portable clavichord or clarichord, and not the tambour de basque or the dulcimer. Both writers, however, were unacquainted with the curious passages we have adduced of its use so long before Boccaccio's period, or their ingenious conjectures would probably have been spared.

Concerning the term *cembalo*, it will be necessary to say a few words. The instrument called by the Italians *cembalo*, or *clave-cymbalo*, by the French *clavecin*, and in Latin *clave-cymbalum*, is always understood to be the harpsichord, or at any rate an instrument of that class, furnished with plectra, strings, and a key-board. The word *cembalo* is of ancient origin, being the *cymbalon* or *cymbalum* of the Greeks and Latins. St. Isidore derives it from *cum*, and *ballematica*, an immodest dance, usually accompanying this instrument; but it is more likely to be from *cymbos*, cavity.

The ancient cymbals were of brass or other metal, and very much smaller than those which we now call by the same name†. Cassiodorus and Isidore call the cymbal

**Sketch of the History of the Pianoforte, in the Revue Musicale.* Although differing, as we do, from many of the opinions of M. Fétis, and lamenting his want of research upon the present subject, we cannot but feel a degree of respect for his various labours in the art.

An interesting ceremony has just taken place at Brussels, in which this distinguished artist was the most prominent person. After a musical career that embraces nearly the whole of this century, the fiftieth anniversary of his marriage has been celebrated by the artists, the pupils of the Musical Conservatory, and several of the principal State functionaries of Belgium. On the day appointed, a mass was sung in the Church of the Sablon, the music of which, by the delicate attention of the ecclesiastical authorities, was of M. Fétis' own composition. After which the inauguration of his bust took place in the court of the Conservatory, in presence of a large concourse of artists and functionaries. It is a bronze cast, after Geefs, and has the inscription, "To Francis Joseph Fétis, from the Professors

and Pupils of the Conservatory of Brussels." One of the expressions of the answer of M. Fétis to the address, is characteristic of the man and his career:—"In choosing for this solemnity the fiftieth anniversary of the beginning of my domestic happiness, you become the instruments of Providence, which recompenses in a single day a life of devotion to the beautiful; for, whatever opinion posterity may form of the value of my labours, I can conscientiously say that, as artist, theorist, historian, and critic, I have struggled at first with the ardour of youth, and have been subsequently taught by the lessons of experience, to realise the triumph of the beautiful and the preservation of the soundest traditions of musical science."

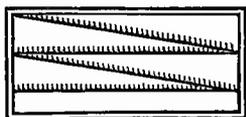
† "The Cymbals (Cymbala)," says Bede, are "*small vessels composed of mixed metal, which, when stricken together on the concave side, in skilful time, produce by their delightful collision a very sharp note.*"—*Opera*, tom. viii, p. 900.

Acetabulum, the name of a cup or cavity of a bone in which another bone is articulated ; and Xenophon compares it to a horse's hoof. It must, therefore, undoubtedly have been hollow. It is also certain that a handle was fastened to the exterior cavity ; from which circumstance, Pliny likens it to the upper part of the thigh, and Rabanus to a phial*.

The invention of the cymbal was attributed to Cybele ; on which account it was used at feasts and sacrifices. Frederic Adolph Lampe, who has written a learned work on the subject, *De Cymbalis Veterum*, 1703, gives the invention to the Curetes, or inhabitants of Mount Ida in Crete, who, as well as the people of Rhodes and Samothracia, were reputed to excel in the use of the cymbal. The Jews had their cymbal, or an instrument which translators render by that name. David, it will be remembered, in the CL Psalm, speaks of the "loud cymbals," and the "high sounding-cymbals ;" and those instruments of joy and worship were early introduced into the ceremonies of the Byzantine church, where it formed a conspicuous part.

The nature of the cymbal has never been properly understood. It is generally considered as simply rhythmic, producing sounds unappreciable by the ear ; but this was not the case with those of the middle ages. As we have said, the ancient cymbal was much smaller than that of the present day ; and from the valuable treatise of the monk Theophilus we now learn *that they were capable of being tuned to the various sounds of the scale.* Theophilus, who flourished at the latter end of the eleventh century, has

* Grassineau, in his interesting *Musical Dictionary*, after noticing the ordinary cymbal, adds, "There is a kind of instrument which we likewise call a *cymbal*, which differs greatly from that above described. It consists of a frame, about four feet long and two and a half wide, along which there is a bar of wood laid straight, and a second athwart from one corner to the straight one, in this manner :  and a third straight, which has one like the other that meets it at one end within a little distance ; so that all the bars lye thus in the frame ; on each of these bars is fixed an equal number of pins, about twenty-eight upon the two first, and near twelve or thirteen on those behind ; which pins are not sharp, but their points are rounded ; each of these supports a bar or wedge of a particular kind



of metal, but chiefly a compound of bell-metal and silver, at each end, the longest whereof is about ten inches, about one and a quarter wide, and about half an inch thick, or not quite so much ; these bars have a round hole about half through, to fit the pins ; the sound of the longest is C, the others are diminished (in length only) according to the proportion of the intervals in music, and those of the second row answer to the flats and sharps of the spinet. There is near forty in all, so that this instrument has something more than three octaves in compass, and may be reckoned an instrument of percussion, by reason 'tis played by striking it with knobs of wood at the end of sticks. The sound it yields is very agreeable, being something exceeding soft, the low notes resembling the flute (*i. e.* the old *English* flute), but the high ones have not so much duration as these, yet their sound may be compared to that of a small flagelet."

left us a most valuable chapter on the subject of "cymbal-making for the use of the church," which we transcribe entire*.

"DE MENSURA CYMBALORUM.

"Quicumque vult facere cymbala ad cantandum rectè sonantia, ad unumquodque debet ceram dividere cum pondere, et a superioribus incipiat ut descendendo possit pervenire ad graviora. Unumquodque autem notet cum propria littera ut illud in divisione cognoscat. Imprimis faciat duas partes ceræ æquales cum libra, unam ad *a* litteram alteram ad *G*. Ceram *a* litteræ dividat in octo æquales partes, et tantum ad ceram *G* litteræ quantum est in octava parte ceræ *a*. Similiter dividat ceram *G* per octo et tantum det *F* litteræ quantum est in summa ejus, et insuper octavam ejus partem, et habebit duos tonos continuos. In illo loco semitonium † debet esse, et hoc ita inveniat. Summam ceræ *a* litteræ dividat in tres partes, ipsamque summam det *E* litteræ, et insuper ejus terciam partem. Deinde det tantum ceræ *D* litteræ, quantum est in summa *a* et octavam ejus partem. Item tantum ceræ det litteræ *C* quantum habet *G*, et mediam ejus partem, itaque haberet duos tonos post semitonium. Deinde tantum ceræ tribuat *B* litteræ quantum est in tota summa *F* litteræ et insuper terciam ejus partem, et habebit iterum semitonium; atque septem symphonias ab *a* littera usque ad *B* inveniat. Dyapason vero necdum haberet sine octavo cymbalo. Duplicet igitur totam ceram *a* litteræ et sic eam tribuat *A* litteræ, et nichil deerit. Dyatessonon, Dyapason, atque Dyapente Synememon autem inveniat ita, tollat summam ceræ litteræ et tantum det *F* litteræ, et insuper medietatem ejus, ac constituat illam inter *A* et *B*. Omnino autem caveat qui cymbala formare aut fundere debet, ut de supradicta cera quæ tam cautè ponderata et divisa est, nichil mittat ad juga et spiramina, sed de altera cera faciat illa omnia. In magna providentia habeat ut, prinsquam aliquod cymbalum fundatur, stagnum cum cupro misceatur, ut rectum sonum habeat. Quòd si aliter fecerit non veniunt ad tonos.

"OF THE MEASURE OF CYMBALS.

"Whoever wishes to make cymbals of proper sound for singing, should divide the wax for each one with a weight, and should begin from the highest, that by descending he may be able to arrive at the graver (cymbals). He can likewise note each one with its own letter, that he may know it in the partition. In the first place, let him make two portions of wax equal with the balance, one for letter *a*, the other for *G*. Let him divide the wax of letter *a* into eight equal parts, and (give) so much to the wax of letter *G* as is in the eighth part of wax *a*: let him similarly divide wax *G* by eight, and give so much to letter *F* as is in its total, and an eighth of its part beyond, and he will have two consecutive notes. In that place the semitone should be, and let him thus find it. Let him divide the whole of the wax of letter *a* into three parts, and give this total to letter *E* and beyond, the third part of it. Then let him give so much wax to letter *D* as is in the total *a*, and the eighth part of it. Likewise let him give as much wax to letter *C* as *G* possesses and half a part of it, and he will thus have two notes after the semitone. Then let him afford to letter *B* so much wax as is in the whole amount of letter *F* and beyond, the third part of it, and he will have the semitone again; and let him find the seven concords from letter *a* to *B*. The octave he cannot yet have without the eighth cymbal. Let him therefore double all the wax of letter *a*, and so give it to letter *A*, and nothing will be wanting: the fourth, eighth, and fifth chord let him find thus, let him take the amount of the wax of the letter and give so much to letter *F* and the half of it beyond, and let him establish it between *A* and *B*. He who should fashion or found the cymbals should above all take care that he puts none of the above-mentioned wax, which is so cautiously weighed and divided, to the necks and air-holes, but let him make all these from other wax. Let him have the great foresight that, before any cymbal be cast, the tin be mixed with the copper, that it may have the right sound. Because, should he have done otherwise, they are not brought to their tones. A fifth or sixth part

* *Theophili, qui et Rugerus, Presbyteri et Monachi, Libri III, de Diversis Artibus: Opera et Studio Roberti Hendrie.* Londini: Johannes Murray, MDCCLVII. 8vo.

Mr. Hendrie has kindly allowed us to use his translation.

† "Semitonus," *imò*.

Quinta aut sexta pars debet esse stagnum, utrumque bene purificatum priusquam permisceatur ut clarè sonent. Si autem fusa cymbala minus rectè sonuerint hoc emendetur limâ vel lapide."

"DE CYMBALIS MUSICIS.

Facturus cymbala, primum acquire tibi lectionem et secundum quod docuerit formam facito, atque ceram diligenter pondera. Quas * cum fuderis, sicut supra dictum est, si quid per negligentiam vel incuriam de equitate tonorum defuerit, corriges. Si volueris cymbalum altiùs habere, in ora inferius limabis, si vero humiliùs, circa oram in circuitu."

should be tin, and be both well purified before they are mixed together, that they may sound clearly. Should, however, the cast cymbals sound imperfectly, this can be rectified with the file, or stone."

OF MUSICAL CYMBALS.

"Being about to make cymbals, first procure your directions, and, according to what they may have taught, make the mould, and carefully weigh the wax. When you have founded these, as mentioned above, should anything be wanting in justness of tone, through negligence or carelessness, you will correct it. Should you wish the cymbal to be higher, you will file about the mouth underneath (of the mould); but if flatter, round the rim in circumference."

The use of the cymbal in churches was discontinued upon the improvements in the construction of the organ, which instrument, however, still possesses traces of its ancient accompaniment in two of its stops, the *cymbal octave*, and the *cymbal regal*.

With the explanation we have thus been enabled to give, the ancient name of cembalo or cymbal, for a keyed-stringed instrument, does not seem so far-fetched as it has hitherto been supposed †.

To carry on our enquiries into the history of the clavichord.—There existed at Rome, about a century ago, a clavichord furnished with twenty-five keys, without any difference of form for the sharps or flats, and which had the appearance of being one of the first essays made in the fabrication of keyed-stringed instruments. It was then affirmed that it had been brought from Greece to Rome in the time of Julius Cæsar: such an opinion has no need of refutation. The author of the article *Clavecin*, in the *Encyclopédie Méthodique* ‡, also speaks of another clavichord which existed in the same city; the body, table, and bridges of which were of white marble. This instrument had doubtless formed part of some monument. The date of 650 assigned it was altogether ridiculous. Zarlino speaks of a "cembalo," the relics of which existed in his time (1555), and which appeared to have been made about one hundred and fifty years previous. "The testimony of so learned a musician," remarks M. Fétis, "is undeni-

* Quæ?

† In the MS. romance of *Clariodus and Meliades*, we read of "The clear *cymball* with the merrie cord," which certainly must mean the *cembalo* or *clavicymbal*, thus bearing out our argument.

‡ M. Nicholas Joseph Hullmandel, an eminent pianist. He quitted France on the breaking out of the French Revolution, and settled in London, where he died in 1823.

able, and is, moreover, in accordance with what is known relative to certain celebrated artists of the fourteenth century, such as Francesco degli Organi, Nicolo del Proposto, Jacopo di Bologna, and some others, who were not only skilful organists, but also distinguished themselves on keyed instruments, as is seen in the pages of the Italian writers of the fifteenth century. Again, nothing more clearly proves the existence of the harpsichord or spinet of the fourteenth century, or, at latest, at the beginning of the fifteenth, than the manner in which they are spoken of by those who give descriptions of these instruments in the early part of the sixteenth century. They do not speak of them as new inventions; and the varieties which they mention demonstrate, in the clearest manner, that they could be the result only of multiplied essays, dating from times already long gone by. The least attention to the slow manner in which discoveries and improvements were made, in so backward a state of civilization as that of these first periods of the birth of the arts, will convince us that instruments of so complicated a kind could not start forth at once from the brain of such inventors as those described by the writers of the sixteenth century."

The popularity of the clavichord and clarichord in the fifteenth and sixteenth centuries may be illustrated by the following extracts. Caxton, in his celebrated translation of *The Knyght of the Toure*, printed in 1484, gives us the following passage, confirming what Ritson advances relative to the common use of the clavichord by the early French minstrels. The extract occurs on sign C. 115.

"A yonge man cam to a feste, where were many lordes, ladyes, and damoysels, and arrayed as they wold have sette them to dinner, and had on hem a coote hardye, after the maner of Almayne. He cam and salewed the lordes and ladyes, and when he had done to them reverence, syre Geoffrey called hym before hym, and demanded hym where his vyell or *clavycordes* were, and that he should make his craft: and the yonge man ansuerd, Syre, I can not medle therewith. Haa, sayd the knyght, I can not beleve it; for ye be contrefaytted and clothed lyke a mynstrell."

In the accounts of the Lord High Treasurer of Scotland*, we find the instrument spoken of under the "vulgar appellation:"

"1497. Apr. 10. Item, to John Hert, for bering a pare † of monicordis of the kingis fra Abirdene to Strivelin, ix s."

"1504. Oct. 15. To the cheild [that] playit on the monocordis, be the kingis command. xvij s."

* Preserved in the General Register House at Edinburgh, and quoted in the Appendix to Dauney's *Ancient Scottish Melodies*. 4to. 1838.

† An ancient form of expression, meaning an instrument with more strings than one. See the term fully explained in the *Hist. of the Organ*, p. 40.

Also, in the testament of Edward Henrysoun, "Maister of the Sang Scole of Edinburgh, and Prebendare of St. Gelis Queir, quha deceist, 15 Aug. 1579."*

"Item, I leif to my sone, James Henrysoun, my gown, my coitt, my bumbasie doublet, and the bodie of poldavie, my kist, my bybill, *ane pair of monycordis*, my hat, thre of the best sarkis, ane pair of round scheittis, foure serviottis, &c."

From these extracts we might have imagined that the term monochord was used in Scotland instead of the more general name of the instrument; but this was not the case. At the marriage of James the Fourth of Scotland with the Princess Margaret, in 1503, we read that "the kyng began before hyr (*i. e.* the Princess) to play of the *clarychordes*, and after of the lute. And upon the said *clarychorde* Sir Edward Stanley played a ballade, and sang therewith." Again, the king and queen being together, "she played upon the *clarychorde* and after of the lute, he being upon his knee allwaies bare-headed."†

At the pageantry exhibited at Westminster Hall in 1502, on the occasion of an entertainment given to Catherine of Spain, we read that "twelve ladies had claricordis, claricymballs, and such other;"‡ and in the *Privy Purse Expenses of Henry the Seventh* § at the same period, we have the following entries:

"1502. (Jan.) To one that sett the Kinge's *Clevechords*.....xiiij s. iv. d."

"1504. (March.) For a pair of *Clavycords*.....xx s."

Among the *Privy Purse Expenses of Elizabeth of York* ||, Henry the Seventh's queen, we have the following:

"1502. (August.) Item, the same day to Hugh Denys, for money by him delivered to a straungier that gave the Queene a payre of *Clavycordes*, in crownes for his rewarde.....iiij li."

This entry affords a singular instance of the queen's liberality. The "foreigner" is rewarded with *four* times the value of his gift!

Stephen Hawes, groom of the Privy Chamber to Henry the Seventh, was author of a poem called *The Pastime of Pleasure*, finished at the beginning of the year 1506. In Chapter XVI, he has the following stanza:

* Daune's *Ancient Scottish Melodies*, p. 99.

† Leland's *Collectanea*. Append. iii, p. 284. edit. 1770.

‡ *Antiquarian Repertory*, vol. ii, p. 310.

§ Addit. MSS, Brit. Mus. No. 7099.

|| Edited by Sir. N. H. Nicolas, 1830.

“ There sat dame Musyke, with all her mynstralsy
 As tabours, trumpettes, with pipes melodious,
 Sakbuttes, organs, and the recorder swetely,
 Harpes, lutes, and crouddes ryght delycyous ;
 Cymphans, doussemers, wyth *claricimbales* glorious.
 Rebecks, *clarycordes*, eche in theyr degre,
 Dyd sytte aboute theyr ladyes mageste.”

Among the “proverbis” that were written about the time of Henry the Seventh, on the walls of the Manor House at Leckingfield, near Beverley, Yorkshire, anciently belonging to the Percys, Earls of Northumberland, but now destroyed, were many relating to music and musical instruments. The fact of inscribing these curious rhymes on the walls, is a proof of the estimation in which the art was held at the period. Those relating to our purpose are as follows :

“ He that fingerithe, well the keys of the *Claricordis* maketh a goode songe,
 For in the meane is the melodye withe a rest longe ;
 If the tewnys be not pleasant to him that hath no skylle,
 Yet no lac to the *claricorde* for he doith his goode will.
 He that covytithe in *clarisymbalis* to make goode concordance,
 Ought to fynger the keyes with discrete temperaunce ;
 Too myche wyndinge of the pipis is not the best,
 Which may cause them to sypher wher armoneye shoulde rest.”*

Skelton, the facetious poet laureate, in one of his doggrel poems, *A comely Cays-trowne*, printed by Pynson early in the sixteenth century, says of one of his characters :

“ Comely he clappyth a *payre of clavycordys* ;
 He whystleth so swetely, he makyth me to swete ;
 His descant is dashed full of dyscordes.” †

The writer of an old poem on Music‡, in the reign of Henry the Seventh, gives the following advice :

* A MS. copy of these proverbs is preserved among the King's MSS. in the British Museum, Bit. Reg. 18. D. 11.

† *The Poetical Works of Skelton*, edited by the Rev. Alexander Dyce, vol. i, p. 16.

‡ “In the Fleete made by me WILLIAM CORNISHE, otherwise called Nyshewete, Chapelman with the most famous and noble King Henry the VII, his reyne the

XIX yere the month of July. A Treatise between Truth and Informacion.” This curious poem, in black-letter, was printed by Wynkin de Worde. It contains a parable abounding with allusions to music and musical instruments ; and seems to be a complaint of Cornishe himself, under the denomination of Musicke, against one whom, under that of Informacion, he charges with having falsely accused him.

Who pleythe on a harp he should pley trew ;
 Who syngeth a song, let his voyce be tunable ;
 Who *wrestythe the Clavycorde*, mystuning eschew ;
 Who bloweth a trumpet, let his wynd be mesurabye ;
 For instruments in themselves be firm and stable,
 And of trowthe (would trouthe to every man's songe) :
 Tune them then trewly, for in them is no wronge."

Again he says :

"The *clavicorde* hath a tunely kynde ;
 As the wyre is wrested hye and lowe,
 So it tuneyth to the players mynde :
 For as it is wrested so must it nedes showe,
 As by this reson ye may well know,
 Any instrument mystunyd shall hurt a trew song,
 Yet blame not the *clavycorde*, the wrester doth wrong."

King Henry the Eighth, whose knowledge and love of music were very great, was a performer on the clavichord, as well as on other musical instruments. Richard Pace, in a letter to Cardinal Wolsey, preserved in the State Paper Office, says :

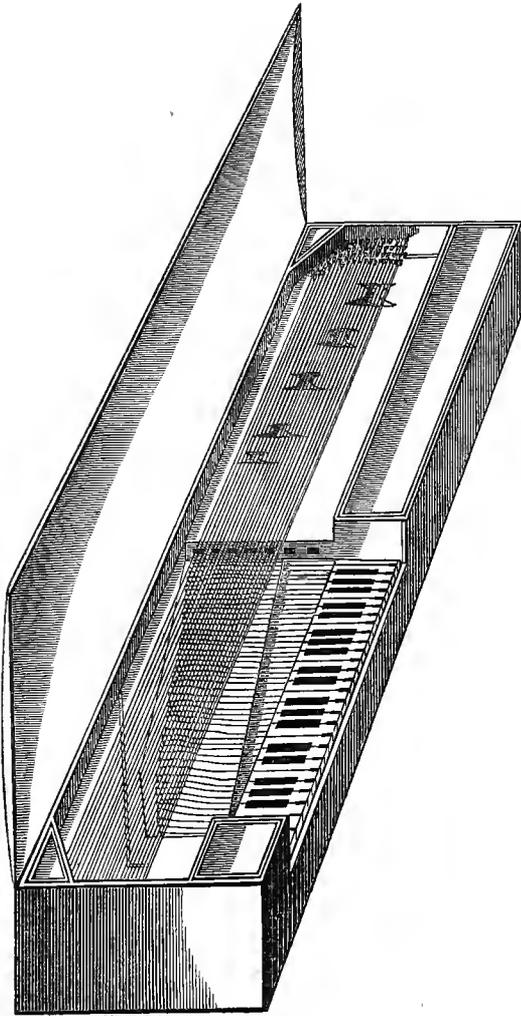
"The Kynge haith nowe goode passe tyme bi the newe player upon the *Clavicordes* that M. Rochpotte haith broght wyth hym (whoo playith excellently) and like wyse bi the gentilman off Almayne whoo was wyth hys grace at Wudstoke, and hath nowe brought hyde a newe goodde and goodly instrument, and playeth ryght wele upon the same. *Finem faciam in instrumentis Musicis, quia aliud nihil scribendum in presentia habeo.*"*

In the list of Henry the Eighth's musical instruments "remaining at Westminster in the charge of Philipp van Wilder," immediately after the king's decease, we find mention of "two payer of clavicordes."†

About the middle of the sixteenth century, an instrument called the Manichord first appeared. The writer of the article "Manicorde," in the *Encyclopédie Méthodique*, says, "it was more ancient than the harpsichord or spinet," and he presumes it to have been invented by the Germans ; but it more probably first took its rise in

* Wolsey Correspondence, IX, art. 60. See also Sir H. Ellis's *Original Letters illustrative of English History*, Third Series, vol. i, p. 200.

† Harleian MS. No. 1419, fol. 200.



Italy. Florio has it in his *Dictionarie of the Italian and English*, 1611, and describes it as "a rigoll or claricorde." Mersennus gives us a representation of the instrument, which is here copied.

From this drawing, and the description handed down to us, the Manichord appears to have been a large and superior clavichord. It was provided with forty-nine or fifty keys and seventy strings, which rested on, or passed over, five bridges; some of the strings being in unison*. It was furnished with a kind of hammer of brass, which struck the string, and a cloth damper to stop the vibration after the note had been struck. The hammer is thus shown by the author to whom we have just referred. Mersennus also says, "It's strings, like those of the clavichord, are covered with little pieces of cloth, to deaden the sound as well as soften it; whence it is called the dumb spinet (*épinette*



sourde), and is much used in nunneries, by reason the nuns who learn may play without disturbing the silence of their gloomy cells."

This instrument exactly resembled in form the first square pianoforte. It

* Sir John Graham Dalzell, in his *Memoirs of the Musical Instruments of Scotland*, says, "some musicians assure me that they have seen the clavichord with more than a single string to each note. Others have described a part of the action as much resembling that of a pianoforte:

that, instead of the *jack* and *quill* of the older instrument, a *stump* at the inner end of the lever struck inwards against the wires on depressing the key." This was undoubtedly the manichord.

was long and narrow; the sounding board took up half the length of the instrument, and the lid was frequently painted or inlaid with coloured woods; sometimes it was domed like the top of a hair trunk.

The clavichord, however, in almost its original form, still continued the popular instrument of Germany, and was much encouraged by the great masters of harmony. Roland von Lasz, Chapel Master to the Duke Albert of Bavaria, who died in 1594, is said to have been the first to use it in concert with other instruments.

The seventeenth century does not record any improvements in this primitive instrument; and we are told that Daniel Faber, Organist at Craylsheim in Anspach, about 1725, was the first clavichord maker who used a string for each sound!

Carl Lemme, an organist and instrument maker at Brunswick, at a somewhat later date, is said to have made "oval round clavichords with *double* sounding-boards." The clavichords of Wilhelm, of Cassel, were remarkable for their fine tone; as also were those of Vensky, Horn, and Mack, eminent makers, of Dresden.*

The last maker of the clavichord in Germany, of any note, was Krämer of Göttingen, some of whose instruments may still occasionally be met with in the old baronial residences with which that romantic country abounds.

* See Professor Joseph Fischof's *Versuch einer Geschichte des Clavierbanes*. Wien. 8vo. 1853.

CHAPTER IV.

THE VIRGINAL.

M. FÉTIS, in his *Sketch of the History of the Pianoforte*, before alluded to, has the following remarks upon the origin of this instrument :

“ When the defects inherent in the construction of the clavichord were discovered, a plan was devised of striking the strings with small pieces of quill affixed to minute springs, adjusted in the upper part of small flat pieces of wood termed *jacks*. These jacks were directed perpendicularly upon the key, and when the jack had made its escape, after the string had been struck, the jack fell in such a manner as to be able to reproduce anew the sound at will. A slip of cloth applied to each side of the jack had the effect of a damper in stopping the vibration. This new invention was applied to two instruments, which differed only in form : the one was the *virginal*, the chest of which was rectangular, like that of small pianofortes ; the other was the *spinnet*, which had the form of a harp laid in a horizontal position. These instruments were much in vogue towards the close of the sixteenth century, but were soon surpassed, both in respect to volume of sound and variety of effects, by the *harpsichord*.”

The invention of the jack and quill had formerly been applied, although perhaps in a ruder way, to the clavicytherium. The virginal was an improvement upon that instrument, and its strings of various lengths, one to each note, were of steel and iron, instead of catgut. Sometimes latten was used ; and, occasionally, for the treble notes, gold, silver, and even silk strings ; but these were often affected by the weather, and less harmonious in tone.

The virginal, however, did not supersede the clavichord, which instrument, as we shall afterwards see, only fell into disuse upon the rise of the pianoforte.

The earliest mention we have found of the virginal occurs in one of the "proverbis," as they are termed (before referred to), inscribed on the walls of the Manor House at Leckingfield, Yorkshire, in the time of Henry the Seventh*. It runs thus :

" A slac stryng in a *Virgynall* soundithe not aright,
It doth abyde no wrestinge it is so loose and light :
The sound-borde crasede, forsith the instrumente,
Throw mysgovernance, to make notes whiche was not his intente."

The virginal was also known early in the sixteenth century on the continent. Martin Agricola, in his *Musica Instrumentalis*, Wittenberg, 1529, mentions it, in company with the other keyed-stringed instruments of his time ; i. e. the clavicordium, the clavicymbalum, and the clavictherium†.

The general form of the instrument is shown by the following engraving, copied from an ancient piece of stained glass of the Elizabethan period.

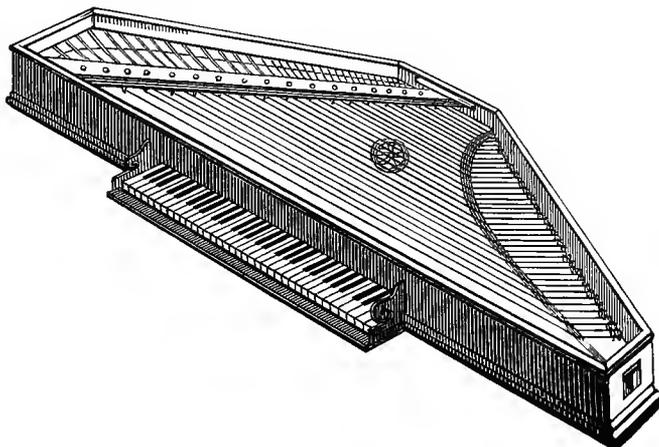


* Bib. Reg. 18, D. 11. Brit. Mus. See Ante, p. 44.

† Among the import duties relating to music in *The Rates of the Custome House, both inwarde and outwarde, very necessarye for all Merchants to knowe, Imprinted at London, by Rycharde Kele, &c. 1545*, will be found—

" Clarycordes, the payre, 2s. ; Harp Strynges, the boxe 10s. ; Lute Strynges, called Mynikins, the groce, 22d. ; Orgons, the payre, *ut sint in valore* ; wyer for Clarycordes, the pound, 4d. ; VIRGINALES, the payer, 3s. 4d. &c.

On the continent, the virginal was often made in a *triangular* shape. Prætorius thus depicts it, in his *Syntagma Musicum*.



An interesting engraving of a lady playing upon the virginal is given in the series of cards so beautifully engraved by Jost Ammin, and copied in Singer's *History of Playing Cards*. Other representations of ladies performing upon this instrument occur on the title pages to the two editions of *Parthenia, or the Maydenhead of the first musicke that ever was printed for the virginnalls*, 1611 and 1650*. The former is a well-executed engraving by William Hole.

Some authors have supposed that the name of this instrument was intended to convey a compliment to Queen Elizabeth—the “*Virgin Queen* ;” but what we have just stated shows that the virginal was known anterior to the date of her birth. Dr. Johnson suggests that the instrument was so called “because played upon chiefly by young ladies ;” and a modern writer, with better judgment, ascribes its title to its uses ; and reminds us how, in the pleasant twilight of convents and old halls, it served to lead sweet voices singing hymns to the *Virgin*.

The following is what a few of our etymologists and glossarists say upon the subject :—

* Both editions of this rare volume are in the author's library. See a fac-simile of Hole's title-page, in the edition printed, under the author's superintendence, by the Musical Antiquarian Society.

“VIRGINALLS. Instrumentum Musicum propriè Virginum, unde ei nomen inditum esse videtur, so called, because Virgins and Maidens play on them. *Latin*, Clavicymbalum, Cymbaleum Virginæum, fuit enim Cymbalum apud veteres Instrumentum Musicum, quod in sacris metris deorum cum Sympanis habebatur.”

John Minshen's *Ductor in Linguas, The Guide into Tongues*, 1617.

“VIRGINAL (*Virginalis*), Maidenly, Virgin like; hence the name of that Musical Instrument called *Virginals* because Maids and *Virgins* do most commonly play on them.”

Blount's *Glossographia*, 1656.

“VIRGINALS (*Lat. Clavicymbalum*), a common, but noble sort of Musical Instrument, toucht in like manner as the Organ or Harpsichord, and probably so call'd, as having been thought a proper Instrument for Virgins to play on.”

The New World of Words, by E. Philips, 1678.

“VIRGINAL. An instrument of the spinnet kind, but made quite rectangular, like a small piano-forte. I remember two in use, belonging to the master of the King's Choristers. Their name was probably derived from being used by young girls. They had, like spinnets, only one wire to each note. Sir John Hawkins speaks of them as being in fact spinnets, though under a different name; yet his own figures of them demonstrate a material difference in the construction. The spinnet, as many persons remember, was nearly of a triangular shape, and had the wires carried over a bent bridge, which modified their sounds; those of the *virginal* went direct from their points of support to the screw-pegs, regularly decreasing in length from the deepest bass note to the highest treble.”

Archdeacon Nares's *Glossary*, in v.

The virginal, as we have seen, was known in this country in the early part of the sixteenth century, if not earlier; and one of the first patrons of the instrument was King Henry the Eighth. Hollinshed, in speaking of the removal of the court from London to Windsor, when the king was beginning one of his progresses, tells us that he “exercised himselfe dailie in shooting, singing, dansing, wressing, casting of the barre, plaieing at the recorders, flute, *virginals*, in setting of songs*, and making of ballades.”

All accounts agree in describing Henry, in early life, as an amiable and accomplished prince; and the character given of him to the Doge of Venice, by his three ambassadors at the English court, could scarcely be expressed in more favorable

* Some of the king's own compositions are still extant. In a collection of anthems, motets, and other church offices, in the hand-writing of John Baldwin, of Windsor (the transcriber of that beautiful MS. Lady Neville's Virginal Book, in 1591), is a composition for three voices, “*Quam pulchra es, et quam decora.*” It bears the name *Henricus Octavus* at the beginning, and “*quod Henricus Octavus*” at the end of the cantus part. The anthem, “O Lord, the maker

of all things,” which is attributed to him in Boyce's *Cathedral Music*, is the composition of William Mundy; the words only are taken from *Henry the Eighth's Primer*. The music of a masque, preserved in the Arundel Collection in the British Museum, is also ascribed to Henry VIII, but without sufficient authority. See Stafford Smith's *Musica Antiqua*, vol. i.

terms*. In their joint despatch of May 3rd, 1515, they say : “ He is so gifted, and adorned with mental accomplishments of every sort, that we believe him to have few equals in the world. He speaks English, French, and Latin ; understands Italian well ; plays almost on every instrument, and composes fairly (*delegnamente*) ; is prudent and sage, and free from every vice.”

In the letter of Sagudino (Secretary to the embassy), written to Alvise Foscari, at this same date, he says : “ He (King Henry) is courageous, an excellent musician, plays the virginals well, is learned for his age and station, and has many other endowments and good parts.” On the 1st of May, 1515, after the celebration of May Day at Greenwich, the ambassadors dined at the Palace, and, after dinner, were taken into certain chambers containing a number of organs, virginals, flutes, and other instruments ; and, after having heard from the ambassadors that Sagudino was a proficient on some of them, he was asked by the nobles to play, which he did for a long while, both on the virginals and organ, and says that he bore himself bravely, and was listened to with great attention. The prelates told him that the king would certainly wish to hear him, for he practised on these instruments day and night.

Pasqualigo, the ambassador-extraordinary, gives a similar account at the same time. Of Henry, he says : “ He speaks French, English, and Latin, and a little Italian, plays well on the lute and virginals, sings from book at sight, draws the bow with greater strength than any man in England, and jousts marvellously. Believe me he is in every respect a most accomplished prince ; and I, who have now seen all the sovereigns in Christendom, and last of all these two of France and England, might well rest content,” &c.

Upon these despatches the editor justly remarks : “ As Pasqualigo had been ambassador at the courts of Spain, Portugal, Hungary, France, and of the Emperor, he was enabled to form comparisons between the state of the science in those kingdoms and our own ; and, indeed, it is the universal experience of the Venetian Ambassadors, and their peculiar freedom from prejudice or partiality (no jealousy or

* See *Four Years at the Court of Henry VIII. Selection of Despatches addressed to the Signory of Venice*, from January, 1515, to July 26, 1519. Translated by Rawdon Brown, 8vo. 1854, 2 vols.

rivalry existing between them and England), that makes their comments on our country so valuable."

As far as our purpose is concerned, the way in which these Venetians speak of the virginal is of considerable value, as showing that the instrument was well known to them. This is obvious, also, from the fact of Sagudino, the Secretary, being able to "bear himself bravely," in his performance upon it before the courtiers.

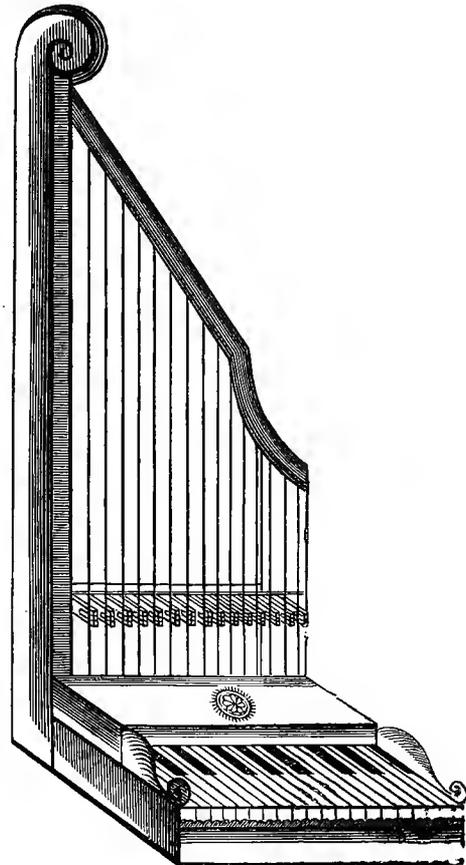
In the *Privy Purse Expenses of King Henry the Eighth*, published by the late Sir N. Harris Nicolas, in 1827, we meet with the following entries :

"1530 (April). Item the vj daye paied to William Lewes for ii payer of virginalls in one coffer with iiii stoppes brought to Grenewiche iii li. And for ii payer of virginalls in one coffer brought to the More other iii li. And for a little payer of virginalls brought to the More. xxs.....vii li."

"1531 (February). Item the xiii daye paied to Phillip of the Chambre, for William Lewes, for v payer of Virginalls.....viii li. vi s. viii. d.

And in the inventory of King Henry the Eighth's musical instruments, taken after his death (before alluded to), we find mention of numerous pairs of virginals, both single and double. Amongst them were "Two fair pair of new long Virginalls made harp-fashion, of Cipres, with keys of ivory, having the king's arms crowned and supported by his Graces beastes within a garter gilt, standing over the keys."

The "virginalls made harp fashion" was probably an upright instrument. We give a curious drawing of an upright virginal, taken from a collection of pen-and-ink drawings of ancient musical instruments, executed about the end of the sixteenth century. It seems to have been the original from which Mersennus gave many of his engravings. It resembles the *simicum* (see p. 35), with the addition of a key-board and striking action.



Henry the Eighth was very solicitous that his daughters should excel in musical accomplishments, and their talents appear to have been of no mean order. Sir Frederick Madden, in his introduction to the *Privy Purse Expenses of the Princess Mary**, says, "In regard to the lighter accomplishments of music and dancing, Mary equalled, if not excelled, Elizabeth. Of the first, indeed, she appears to have been passionately fond, as intimated in the letter addressed to her from Queen Catherine Parr †. She played on three instruments, the virginals, regals, and lute, and, according to Michele ‡, excelled on the latter to a surprising degree. So early as 1525, we find particular directions given to her Governess, in regard of the Princess's occasional practice in both the above accomplishments; and in the letter of maternal advice sent by her mother after their separation, she is desired sometimes to use her virginals or lute, 'if she had any.' § From the Expenses contained in the present volume, we learn that this monition was not disregarded; and after Mary's restoration to favour, she seems to have sedulously applied to the cultivation of music. Mr. Paston || is named as her teacher on the virginals, and Philip Van Wilder ¶, of the Privy Chamber, as instructor on the lute. She was accustomed, it seems, to take these instruments with her wherever she removed, and items often occur of payments to a person coming from London to tune them."

These items are so interesting that we give them in *extenso*.

* 8vo. 1831.

† "Artem illam Musicæ, qua te simul mecum oppido delectari, non ignoro." Strype, *Eccl. Mem.* ii. 2. 330. The annual expense of Mary's musical and dramatic establishment, in the first year of her reign, amounts to the large sum of 2233l. 17s. 6d. *Collier's Annals of the Stage*, i. 165.

‡ "Intendentissima, oltre gli essercitij di donna di lavor d'ago in ogni sorte di ricamo, anco della musica, specialmente del sonar di manicordo et di leuto. In tanta eccellenza, che quando v'attendeva, la fatto maravigliare i buoni sonatorij, et per la velocità della mano et per la maniera del sonare." MS. Lansd. 840, A. f. 156.

§ Burnet, ii 2, 336.

|| Nothing is known of this musician. He seems to have been a favorite with the Princess, who frequently made him presents. See *Household Book*.

¶ This person is often mentioned in the *Expenses of King Henry the Eighth*. In 1550, a commission was given to him by Edward the Sixth "to take to the king's use such and so many singing children and choristers as he and his deputy thought good," within any churches or chapels in England. We suspect he was the same with Phillipe de Vuildre, a motet of whose composition was printed at Antwerp in *Libro quarto Ecclesiasticarum Cantionum*, 1554. From his being selected as preceptor on the lute to the Princess, and the favour we know he enjoyed at Court, his talents appear to have been of a high order. The author is in possession of an original set of part books that belonged to the Chapel Royal in the reign of Edward the Sixth, amongst which are some interesting anthems by Philip van Wilder.

- " 1537 (Jan.) Item geven to one coming from London for mending of my ladys grace Virgynalls.....v s."
- " 1537 (March). Item geven to one Cowts for mending my ladys grace Virgynalls.....v s."
- " 1537 (March). Item for iii y'ds of Satten geven to Mr. Paston techyng my lady of the Vyrghynalles...xxii s. vi d."
- " 1537 (April). Item geven to Cowts comyng from London and mending my ladys grace Virgynalls...iiii s. iii d."
- " 1537 (April). Item geven to Mr. Paston on Saynt Marke daye techyng her on the Vyrghynalles.....vij s. vj d."
- " 1537 (May). Item paid to the man that sett the Virgynalls.....vs."
- " 1537 (Sept.) Item geven to one Cowts of London for mending my ladys grace Virgynalls.....vij s. vj d."
- " 1537 (Nov.) Item geven to one Cowts of London for mending of my ladys grace Virgynalls at soundry tymes.....vij s. vi d."
- " 1538 (May). Item geven to one Cowts mending my ladys grace Virgynalls.....v s."

Edward the Sixth appointed three virginal players to the court, with yearly salaries. The same musicians were retained by Mary when she ascended the throne. Their names are thus set down in a MS. in the Library of the Society of Antiquaries.

		£.	s.	d.
Players on the Virgynalles,	{ John Heywoode*, fee	-	-	50 0 0
	{ Anthony Chounter, fee	-	-	30 0 0
	{ Robert Bowman, fee	-	-	12 3 4

Princess Elizabeth's love of music is well known, and has frequently been dis-canted on. Camden†, in giving an account of her studies, says, that "she understood well the Latin, French, and Italian tongues, and (was) indifferently well seen in the Greek. Neither did she neglect Musicke, so far forthe as might become a Princess, being able to sing, and play on the lute prettily and sweetly."

There is every reason to believe that she devoted much time and attention to the study of music long after she became Queen of England. Sir James Melvil‡ gives

* John Heywood was the only virginal player in the household of Henry VIII. His fee was £6 : 13 : 4 quarterly, but probably this was independent of board and clothing. Elizabeth and James retained three virginal players in their courts.

Heywood's ready wit and skill in vocal and instrumental music rendered him a great favourite with Henry the Eighth, and Sir Thomas More; and by the latter he was introduced to the notice of the Princess Mary, by whom he was especially patronized, rather, says Puttenham, "for the mirth and quickness of conceit than good learning that was

in him." A full length wood-cut of him is prefixed to his curious work, *The Parable of the Spider and the Fly*, which has been copied by Richardson. On the accession of Elizabeth, Heywood left England and retired to Mechlin in Brabant, where he is supposed to have died in 1565.

Chounter and Bowman are unknown as musicians; they were probably merely performers.

† *Annales, or the History of Elizabeth, late Queen of England*. 3rd edit. 1635, p. 6.

‡ *Memoirs, now published from the original MS.* 1683, p. 50.

an account of a curious conversation which he had with this Princess, to whom he was sent on an embassy by Mary Queen of Scots*, in 1564. After her Majesty had asked him how his Queen dressed? What was the colour of her hair? Whether that or her's was best? Which of them two was fairest? And which of them was highest in stature? "Then she asked what kind of exercise she used?" I answered, says Melvil, "that when I received my dispatch, the Queen was lately come from the Highland hunting: that when her more serious affairs permitted, she was taken up with reading of histories: that sometimes she recreated herself in playing upon the lute and virginals. She asked if she played well? I said reasonably for a Queen."

"The same day, after dinner, my Lord of Hunsden drew me up to a quiet gallery, that I might hear some Musick, (but he said that he durst not avow it), where I might hear the Queen play upon the virginals. After I had hearkened a while, I took by the tapestry that hung before the door of the chamber, and seeing her back was toward the door, I entered within the chamber, and stood a pretty space hearing her play excellently well. But she left off immediately, so soon as she turned about and saw me. She appeared to be surprised to see me, and came forward, seeming to strike me with her hand; alledging, she used not to play before men, but when she was solitary, to shun melancholy. She asked how I came there? I answered, as I was walking with my Lord Hunsden, as we passed by the chamber door, I heard such a melody as ravished me, whereby I was drawn in ere I knew how; excusing my fault of homeliness, as being brought up at the Court of France where such freedom was allowed; declaring myself willing to endure what kind of punishment her Majesty should be pleased to inflict upon me for so great offence. Then she sate down low upon a cushion, and I upon my knees by her; but with her own hand she gave me a cushion, to lay under my knee; which at first I refused, but she compelled me to take it. She enquired whether my Queen or she played best. In that I found myself obliged to give her the praise."

In the dedication to Vander-noodt's *Theatre for Voluptuous Worldlings*, imprinted by Bynneman, in 1569, the author pays her Majesty the following compliment:—

* This unfortunate Princess, besides her personal charms, captivating powers of conversation, and knowledge of languages, had considerable taste in music.

“Your grace is expert in song and in the arte of Musicke; skilful in all kindes of musical instruments, and, according to the exact proportions of geometrie, exquisite in the measures of the dance.”

Richard Mulcaster, the famous Master of Merchant Taylors' School, in some Latin verses prefixed to Tallis and Byrd's *Cantiones Sacræ*, 1575, eulogises the Queen's musical abilities in lines which are thus translated:

“Our gracious Queen, bright glory of our age,
The pow'r of notes harmonious can engage;
Much joy she thence receives, but more conveys,
While both her *voice* and *hand* the concert raise.”

In a MS. note by Isaac Reed, written in a volume of old plays, we meet with the following anecdote: “When Queen Elizabeth was playing on the virginals, Lord Oxford, remarking the motion of the keys, said, in covert allusion to Raleigh's favour at court, and the execution of the Earl of Essex, ‘When *jacks* start up, heads go down.’”

The jacks, as before explained, were slender pieces of wood, armed at the upper ends with quills. They were fixed on the further end of the finger-keys, and acted as plectra by impinging or twitching the strings. By the stroke of the finger, the quill was forced past the string, its own elasticity giving way, and remained above the string so long as the finger was pressed on the key, giving the string liberty to sound. When the finger was removed, the quill returned to its place, and a little bit of cloth, fixed on the top of the jack, rested on the string, and stopped its vibration, or, in other words, acted as a *damper*.

The action of these *jacks* was the constant subject of simile and pun; for instance, in Middleton's *Father Hubbard's Tales*, describing Charity as frozen, he says, “Her teeth chattered in her head, and leaped up and down like virginal jacks;” and in Dekker's *Satiro-Mastix, or the Untrussing of the Humorous Poet*, 1602,—one of the lady characters exclaims: “Lord ha' mercy on us! we women fall, and fall still; and when we have husbands, we play upon them like virginal jacks, they must rise and fall to our humours, or else they'll never get any good strains of musick out of us.”



a, Jack.
b, Tongue.
c, Quill.
d, Bristle spring.
e, Cloth damper.

John Strangways, in some verses prefixed to Tom Coriat's *Crudities*, 1611, has the following lines :

“ *Kemp* yet doth live, and only lives for this
 Much famous, that he did dance the Morris
 From *London* unto *Norwich*. But thou much more
 Doest merit praise. For though his feet were sore,
 Whilst sweaty he with antick skips did hop it,
 His treadings were but friscals of a poppet;
 Or that at once I may express it all
 Like to the *jacks* of jumbled *virginall*.”

Passing from these humourous notices, we must take a glance at the Queen's virginals. Several “pairs,” once belonging to Queen Elizabeth, are yet extant in different parts of England. There is one, a very interesting specimen, at Helmingham Hall, in Suffolk, the ancient seat of the Tollemache family; Sir E. Bulwer Lytton is the possessor of another; the Rev. Mr. Sperling, of Kensington, is the fortunate owner of a most splendidly decorated instrument; and a fourth, certainly the most remarkable of all, is preserved at the residence of a Worcestershire esquire. It was purchased at Lord Spencer Chichester's sale, in 1805, and is of incalculable value. In the *Gentleman's Magazine* for that year, we read that “The case is of cedar, covered with crimson Genoa velvet, upon which are three gilt locks, finely engraved; the inside of the case is lined with strong yellow tabby silk; the front is covered entirely with gold, having a border round the inside two inches and a half broad. It is five feet long, sixteen inches wide, and seven inches deep, and is so lightly and delicately formed, that the weight does not exceed twenty-four pounds. There are fifty keys, thirty of ebony tipped with gold, and the remaining twenty (i. e. the semitones) are inlaid with silver, ivory, and different kinds of rare woods, each key consisting of about two hundred and fifty pieces. On one end are the royal arms, richly emblazoned; and at the other end is a symbolic and highly finished painting of a crowned dove, with a sceptre in its claw—the painting done upon a gold ground, with carmine, lake, and ultramarine.

In the Fitzwilliam Museum, at Cambridge, is preserved a small-sized folio MS. volume, in red morocco binding, elaborately tooled, and ornamented with fleur-de-lis, &c., and gilt edges, traditionally said to have been *Queen Elizabeth's Virginal Book*.

The MS. is written upon six lines, on 418 pages, throughout in the same hand. At the end of each piece of music, the arrangers' names are generally given. Among them we find, Dr. John Bull, Ferdinand Richardson, William Byrd, Thomas Morley, John Munday, Giles Farnaby, William Blitheman, Peter Phillips, Nicholas Strogers, Martin Peerson, Thomas Warrock, Thomas Tomkins, Robert Johnson, Richard Farnaby, Marchant, W. Tisdall, Hooper, Edward Johnson, William Inglott, Orlando Gibbons, Thomas Oldfield, Giovanni Pietri, Johan Pieterse Swellinck, Thomas Tallis, &c.

Dr. Burney says, "If her Majesty was ever able to execute any of the pieces that are preserved in a MS. which goes under the name of *Queen Elizabeth's Virginal Book*, she must have been a very great player; as some of these pieces, which were composed by Tallis, Bird, Giles, Farnaby, Dr. Bull, and others, are so difficult, that it would be hardly possible to find a master in Europe who would undertake to play one of them at the end of a month's practice." *

The late M. Choron expresses a similar opinion: "In every thing relating to the execution of instrumental music," says this distinguished critic, "it is of the utmost importance to dispel a very common error; which consists in believing that music was formerly very simple, and easily performed. This error arises from the circumstance of the old writers having used notes of very great value; and from its not being remembered that these notes were executed with very great rapidity, so that they had, in fact, no greater value than those in use with us at the present time. Besides, if we cast our eyes upon the collections of pieces remaining to us from former ages—upon the *Virginal Book* of Queen Elizabeth, for instance,—difficulties will be found which would puzzle the most able of our modern performers." †

A recent writer in *Chambers's Journal* ‡ is still "stronger" upon this point. After remarking upon the "insupportable and overwhelming difficulty" of the volume, he goes on to say, "a dozen of its pages would serve not only to crush the pretensions of any ordinary professor, but even to appal the bravest and most skilful among

* *History of Music*, vol. iii, p. 15.

† *Summary of the History of Music*, translated and

prefixed to the first volume of the *Dictionary of Musicians*, 1827, second edit.

‡ October 27, 1855.

those spasmodic pianists who delight the concert-going public of this concert-giving age."

Opinions, such as these, regarding the extreme difficulty of the music in the Virginal Book, have become so prevalent, that it seems almost heresy to contradict them. Nevertheless, it is time the illusion should be dispelled. Of the writers above quoted, the first (Dr. Burney) is the only one worthy of notice; for he alone *saw* and *examined* the volume, and doubtless, in his time, the music possessed some claim to be considered difficult. At the present day it has no such claims. An ordinary pianist could with ease execute any of the pieces in the volume after an hour's practice.

At the end of the sixteenth century, the virginal was the popular keyed-stringed instrument in England, and was found in the house of every person of education.

In an inventory of the furniture in Kenilworth Castle, in the days of the magnificent Earl of Leicester (A. D. 1584)*, we find: "Item, an instrument of organs, regalls, and virginalls, covered with crimson velvet and garnished with goulde lace;" also, "A faire paire of double virginalls." And in the inventory of the goods and chattels belonging to Sir Thomas Kytson of Hengrave Hall, Suffolk, 1603, we have "Item, one payer of little virginalls; ditto, one wind instrument like a virginall; ditto, one great payer of double virginalls."†

In Nicholas Breton's poem entitled *A Flourish upon Fancie*, 1582, the virginal is mentioned along with other musical instruments as forming part of the ordinary stock of a gallant of those days:

" Upon an olde crackt forme,
By his bed side, there lies
Ould instruments of musick's sound
All broke in wondrous wise;
A lute, with half the strings
And all the pinnes neere out,
The belly crackt, the back quite burst,
And riven round about.
His *virginalls* with never a jack,
And scantily halfe the keyes;

* MS. in the possession of the writer.

† Gage's *Antiquities of Hengrave Hall*, 4to. 1822, p. 24.

His organes with the bellows burst,
 And battred many waies.
 His fife, three holes in one ;
 His harpe with neere a string.
 Great pittie, trust me, for to see
 So broken every thing."

Burel, describing the pomp and pageantry with which Queen Anne (wife of James VI) was received at her public entry into Edinburgh, May 19, 1590, mentions the virginal amongst the instruments used on that occasion :

"Organs and regals thair did carpe,
 With their gay goldin glitt'ring strings ;
 Thair was the hautbois and the harpe,
 Playing most sweet and pleasant springs ;
 And sum on lutas did play and sing,
 Of instrument the onely king.
 "Viols and *virginalls* were their,
 With githorns maist jucundious ;
 Trumpets and timbrels made greit beir,
 With instruments melodious.
 The seistar and the sumphion
 With clarche-pipe and clarion." *

Spenser has mentioned the virginal in an English *trimeter-iambic* ; one of those fantastic attempts to introduce the uncongenialities of Latin versification, which the taste of the great poet soon led him to abandon. The line, however, in which the virginal is mentioned, presents a picture not unworthy of him :

"Unhappie Verse! the witsse of my unhappie state,
 Make thyself flutt'ring wings of thy fast flying
 Thought, and fly forth unto my Love wheresoever she be ;
 Whether lying restless in heavy bedde, or else
 Sitting so cheerless at the cheerful boarde, or else
Playing alone careless on her heaventie virginals."

* Watson's *Collection of Scottish Poems*, vol. ii, p. 6.

The musical instrument mentioned in one of Shakespeare's sonnets is of the same keyed family.

“How oft when thou, my music, music play'st
 Upon that blessed wood, whose motion sounds
 With thy sweet fingers, when thou gently sway'st
 The wiry concord that mine ear confounds,
 Do I envy those jacks, that nimble leap
 To kiss the tender inward of thy hand,
 Whilst my poor lips, that should that harvest reap,
 At the wood's boldness by thee blushing stand.
 To be so tickled, they would change their state
 And situation with those dancing chips
O'er whom thy fingers walk with gentle gait,
 Making dead wood more bless'd than living lips.
 Since saucy jacks so happy are in this,
 Give them thy fingers, me thy lips to kiss.”

Thus we have two of our great poets, Spenser and Shakespeare, showing us the delight they took in the same species of instrument which we have now, and so bringing themselves near to our pianofortes.

The first book printed in this country for a keyed-stringed instrument, appeared in the year 1611, with the following singular title :

PARTHENIA,
 OR
 THE MAYDENHEAD
 OF THE FIRST MUSICKE THAT EVER WAS PRINTED FOR THE VIRGINALLS,

COMPOSED

By three famous Masters, William Byrde, Dr. John Bull, and Orlando Gibbons,
 Gentilmen of his Majesties most Illustrious Chappell.

Ingraven

By WILLIAM HOLE;

Lond : print : for M. Dor. Evans, Cum privilegio, and are to be sould by G. Lowe, printer in Loathberry.

This work, entirely engraved upon copper plates, was again printed (from the same plates) in 1613, 1635, 1650, 1656, and 1659, and, according to Anthony a Wood, was “the prime book used by Masters in Musick for nearly half a century.”

This publication was speedily followed by another of a similar kind, without date, with the following title :

PARTHENIA IN-VIOLATA,
OR
Mayden Musicke for the Virginalls and Bass Viol,

Selected out of the Compositions of the most famous in that arte,

By ROBERT HOLE,

And consecrated to all true Lovers and Practisers thereof.

All you professors of this arte divine,
So strive your earthly accents to refine
To Angell's ayres, and Saynts most holy skill,
As all your musique sound your Maker's will.

Then is there true composure of the parts,
When there's an equal harmony of hearts :
And that the sacred concords be so even
As here on Earth you strike the same wth Heaven.

Printed at London for John Pyper, and are to be sould at his Shopp at Pauls' gate, next unto Cheapside at the Crosse Keies. Cum privilegio.

Shortly after the restoration, John Playford, the ingenious publisher, put forth, without date, his work entitled

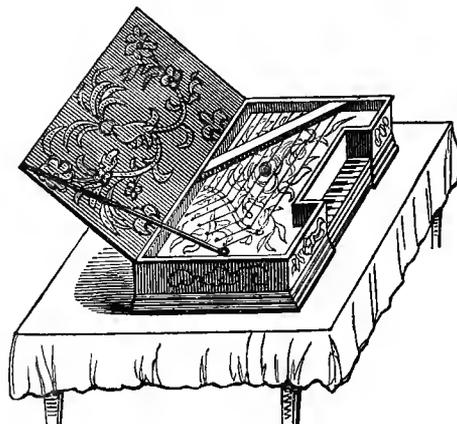
MUSICKS HAND-MAID,
New Lessons and Instructions
FOR THE
VIRGINALS OR HARPSYCHORD.

In his introduction, the author says, "The Virginals, according to the ancient standard, were made to contain 29 keys (with the half-notes 48 keys), but of later times they add to that number both above and below."

The two famous English virginal-makers of the latter half of the seventeenth century, were John Loosemore and Stephen Keen. Playford, at the end of his *Introduction to the Skill of Musick*, edit. 1672, advertises, "Mr. Stephen Keen,

Maker of Harpsycons and Virginals, dwelleth now in Threadneedle Street, at the sign of the Virginal, who maketh them exactly good, both for sound and substance."

A small virginal of this period is copied in the following wood-cut* :



Self-acting virginals were known as early as the seventeenth century. On the 27th of August 1623, a license was granted to Bartholomew Cloys, with three assistants, to make show of a Musical Organ, with divers motions in it; to make show of an Italian Motion; to show a Looking-glass; the Philosopher's Stone; and a Virginal with machinery."† And at a later period, on the occasion of the *Fireworks to be presented in Lincoln's Inn Fields on the 5th of November 1647*, we hear of self-acting virginals, or, as the writer expresses it, "musically playing of themselves."‡

The virginal became so common in England in the seventeenth century, that old Pepys, that entertaining gossip, describing the flight of the inhabitants by water at the time of the great fire, says, "I observed that hardly one lighter or boat in three that had the goods of a house in, but there was a paire of virginals in it."§

* Thomas Mackinlay, Esq. F.S.A. of Soho Square, possesses two interesting virginals of the latter part of the seventeenth century. One, made by John Loosemore, bears the date 1655. The other, made shortly after the restoration of Charles, has a curious painting on the inside of the lid, showing the Mall in St. James's Park, with a distant view of Arlington House.

† The Office-Book of Sir Henry Herbert, Master of the Revels to James the First.

‡ A rare broadside in the British Museum. See also Brayley's *Londiniana*, vol. iv, p. 56.

§ *Diary* (Sept. 2, 1666), edit. 1848, vol. iii, p. 271.

This instrument continued in general use until the beginning of the eighteenth century. One of the latest notices of it occurs in the *London Post* of July 20, 1701 : "This week a most curious pair of virginals, reckoned the finest in England, were shipped off for the Grand Seigneur's Seraglio."

In addition to the specimens of this instrument still remaining, and which we have noticed in the course of the preceding pages, we may add that many others may be found in the nooks and corners of old houses, in various stages of dilapidation. Sometimes, indeed, these old "crackt" instruments are still made to "play their part;" and we cannot conclude this chapter with a more characteristic anecdote than the following from *The Professional Life of Mr. Dibdin*. Speaking of his engagement as composer of the music to David Garrick's theatre, he says, "I was summoned to Hampton to take instructions for the *Christmas Tale*; many of the songs had been previously written, by fits and starts, and I had set some of them two or three times over; but now we were to go to work in earnest; and as he could not be easy without me, for his muse was very often in want of obstetrick assistance as to songs and choruses, however easily he might bring forth prologues and epilogues, so was I either obliged to sit up after the family, or get up before them, to lend musical aid to bits and scraps of which nobody could guess either the drift or meaning; and all this music was to be extracted from an old *virginal*, with half the strings broke, a prodigious fine antique, which graced Mr. Garrick's beautiful drawing-room, with much about the elegance and embellishment as a spot of rust upon a polished register-stove. I used to tell him, I hoped he would bequeath it to the Antiquarian Society."

CHAPTER V.

THE SPINET.

THE spinet (*spinetto*, Ital. *épinette*, Fr.) is so called from *spina*, a thorn or quill* ; the tone of the instrument being produced by a crow's quill inserted in the tongue of the little machine (before explained) called a jack.

The spinet, we are told, consisted of "a chest or belly, made of the most porous and resinous wood to be found, and a table of fir fastened on rods, called the sound-board, which bears on the sides : on the table were raised two little prominences or bridges, in which are fixed as many pins as there were strings to the instrument."

Mersennus† compares the structure of the spinet to that of the human body ; he says that "the sounding-boards are the muscles ; the cross bars the bones ; and the strings the organs of speech." But what is more valuable, he adds ; "the spinet had ordinarily, forty-nine strings, of which the lower thirty were made of latten, because that was strongest and deepest, and the higher ones, nineteen in number, were of steel and iron * * *. There were but six or seven sizes of strings ; but if the spinet were made in real perfection, there would be strings of different sizes, suited purposely to every note. Even in the length of string the makers are careless, and everything depends upon the tension."

The difference between the virginal and spinet is said to have been this : "the spinet was always of a triangular shape, and had the wires carried over a bent bridge, which modified their sounds ; those of the virginal, went direct from their points of support

* Florio, in his *Queen Anna's New World of Words*, 1611, p. 524, has the following :

"SPINETTA, a kind of little *Spina* * * also a paire of Virginalles.

SPINETTEGGIARE, to play upon Virginalles.

SPINETTO, a thicket of brambles or briars."

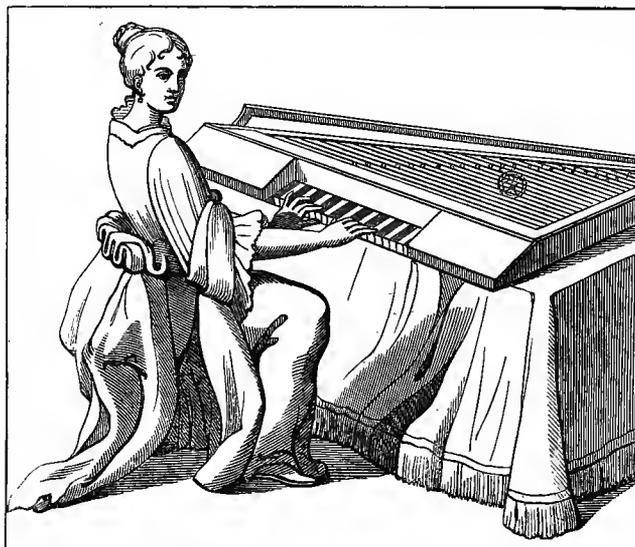
† *Harmonicorum*, Paris, 1636 ; frequently quoted in our earlier pages.

to the screw-pegs, regularly decreasing in length from the deepest bass note to the highest treble." We have not been able to make out this distinction ; in all the virginals and spinets which we have examined, their internal construction was the same.

The date of the invention of the spinet is not ascertained. According to Clement Marot, it was in common use among the French ladies in the reign of Francis the First (A. D. 1515, 1546).^{*} In the dedication of his version of the Psalms to his fair country-women, he tells them, that he hopes, divine hymns will supersede love-songs, and fill their apartments with the praises of Jehovah, in accompanying them on the spinet.

" Et vos doigts sur les Espinettes,
Pour dire Saintes chansonnettes,"^{*}

We have copied an interesting representation of the spinet from Father Bonanni's *Gabinetto Armonico*, 4to, Rome, 1722.



According to Artusi's *Imperfettioni della moderna Musica*, printed at Venice in 1600, the spinet was known in Italy early in the sixteenth century : and Pietro della Valle, in his *Discourse on the Music of his own time*, 1640†, tells us, the first opera

^{*} *Œuvres de Clement Marot*, à Lyon, 1551. 12mo. p. 192.

† Printed in the works of Battista Doni, at Florence, 1763, tom. ii.

or musical drama performed at Rome, took place in a cart, on which occasion, "Il Cavalier Leuto played wonderfully on the spinet."

Zarlino, the celebrated theorist, had a spinet, with quarter tones, made at Venice†. Burney saw it, in the course of his travels, at Florence, and says it was afterwards sent to England; but we have been unable to trace it.

The family of the Ruckers, of Antwerp (of whom we shall have occasion to speak presently), were famous makers of spinets in the seventeenth century, as also were their successors, Couchet and Jean Dennis: the latter was a Frenchman, and resided for many years in Paris.

The Hitchcocks and Haywards, fathers and sons, were the great makers of spinets in London, in the first three quarters of the seventeenth century. John Hitchcock made these little instruments of a compass of five octaves. Several specimens still exist bearing dates between 1620 and 1640. The keys are of ebony, having ivory fronts; the flats and sharps inlaid with narrow slips of ivory. Charles Haward, or Hayward, is mentioned as a celebrated maker, in Salmon's *Vindication of an Essay, &c.* 1672, p. 68.

Queen Anne had, among her musical instruments, a spinet by Hayward, the loudest and perhaps the finest that was ever heard; and which she highly valued. Her Majesty, just before the period of her decease, gave especial direction that this instrument should go to the master of the children of the Chapel Royal for the time being, and that it should regularly descend to his official successors. Accordingly it passed first into the possession of Dr. Croft, and afterwards into the hands of Dr. Nares, from whom it descended to Bernard Gates, and the late Dr. Ayrton. Mr. Hawes was the next master, and when the writer last heard of Queen Anne's spinet, it was consigned to the cock-loft of that gentleman's house in the Adelphi Terrace, where, in all probability, it still remains.

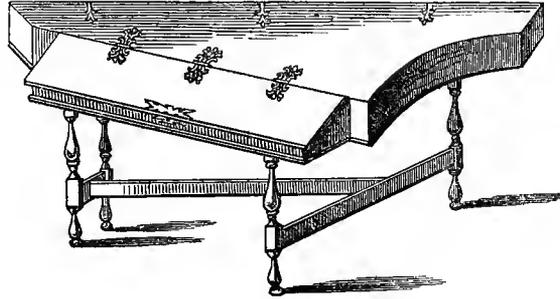
† In a letter to Mason the poet, dated Florence, Sept. 1770, Burney says, "This instrument was invented by Zarlino, in order to give the temperament and modulation of the three *genera*, the diatonic, chromatic, and enharmonic. It was made under Zarlino's direction in the year

1548, by Dominico Pesarese: it is now in the possession of Signora Moncini, widow of the late composer, Piscetti." In a subsequent letter, he says, "Zarlino's spinet or small *harpsichord* is now in London."

The later makers of spinets, of eminence, were Keen, Slade, Player*, Fenton, Baudin, &c. A fine specimen of the latter maker is in the possession of the writer. It has this inscription in front :

“JOSEPHUS BAUDIN, LONDINI, FECIT. 1723 ;”

and its general appearance may be imagined from the following engraving.



Burney, writing at the beginning of the present century,† says, “As the spinet rivalled the virginal, the small piano-forte has supplanted the spinet in public favour ; and we believe that very few have been made since the middle of the last century.”

* This maker is mentioned in Ambrose Warren's *Tonometer*, 1725, p. 7, as having made spinets with quarter tones.

† Rees's *Cyclopaedia*, in v. Spinet.

CHAPTER VI.

THE HARPSICHORD.

THE form of the harpsichord is precisely the same as that of the grand horizontal pianoforte. Its origin was evidently suggested by the harp, from which instrument it received its name.

Papius, and after him Du Cange, derive the name of harp from the *Arpi*, a people in Italy, who they say, erroneously, were its first inventors. Menage derives the word from the Latin, *harpa*, and that from the German, *herp* or *herpff*; others bring it from the Latin *carpo*, because it was touched or thrummed with the fingers. Dr. Hickes derives it from *harpa* or *hearpa*, which signifies the same thing; the first in the language of the Cymbri, the second in that of the Anglo-Saxons.*

Galilei† in his *Dialogo della Musica Antica e Moderna*, Firenze, 1581, has a very interesting passage respecting the harp, which we shall translate literally:

“Among the stringed instruments now used in Italy, we have, in the first place, the harp; which is in fact nothing but the ancient *cithara*, with a great number of strings, differing somewhat in form, but that chiefly owing to the taste of the artists of those times, the number of strings and their degree of tension; the extreme highest and lowest

* “From the Teutonic derivation of the harp, it is easy to account for its becoming the national instrument of the English. The Anglo-Saxons were of German race, and introduced the harp into Britain. Inflamed with a thirst of conquest, and eager to possess alone that fertile Isle, they almost exterminated the natives, and totally erased every vestige of Roman and British civility. The gentler modulations and softer harmony of the crwth were equally despised with its performers and admirers: this instrument was banished to Wales, Cornwall, and Armorica; in the last country, Venantius found it in the 6th century.

“The Roman Missioners kept alive and augmented the enmity between the Britons and Anglo-Saxons: the former would not adopt Popery or its superstitions, to which the latter were devoted: every temporal and spiritual motive which theological malignity could invent, was conjured up to make the resentment of both people implacable and perpetual, and with too good success. Hence the triumph of the harp over the crwth, and its general use among all ranks of people until the Norman invasion.” Walker’s *Historical Memoirs of the Irish Bards*, Appendix, p. 7.

† A Florentine nobleman, and father of the great astronomer, Galileo Galilei.

comprising upwards of three octaves. This very ancient instrument was brought to us from Ireland (as Dante has recorded) where they are excellently made, and in great number; and the inhabitants of which island have practised on it for many and many centuries; its being also the particular badge of the kingdom, and, as such, frequently painted and sculptured on their public edifices and coins, the people alleging, as the cause of it, that they are descended from the Royal prophet David. The harps used by them are much larger than ours, and they are usually mounted with strings of brass and some of steel, in the acute part, of the same kind as the clavichord. The performers upon them are wont to let the nails of both their hands grow to a considerable length, trimming them with great care in the manner we see the quills on the jacks of the spinnets. The number of strings are 54, 56, and as far as 60; whereas we read, that among the Jews, the *cithara*, or *psalterion* of the Prophet, had only 10 strings. The distribution of the strings of one of these harps (which I obtained a few months ago, by means of a very obliging gentleman of Ireland), I found, on careful examination, to be the same as that of *the harp with a double row of strings*, which was a few years ago introduced into Italy; although some (without a shadow of reason) assert that they have lately invented it, endeavouring to persuade the vulgar that none but themselves can play upon it, or understand its temperament, which they hold in such great estimation, that they have ungratefully denied it to many; in spite of whom, however, I will here describe it for the sake of those who may desire it. The 38 strings, which are mounted on the harp, contain four octaves and one tone; not major or minor, as some have imagined, but of the measure which I have above said to be contained in a key'd instrument. The lowest string, therefore, as well for a sharp as for a flat, is double C; and the highest string is D in alt: when they are to be tuned for B flat, the 16 lower strings on the left side are to be distributed according to the nature of the common diatonic, and the 14 that are in the opposite row to these, that is, on the right side (leaving apart the unison of D and A), must give, as we may say, the chromatic kind, agreeable in its nature to the said diatonics. The 15 that follow next, ascending the scale, are to be tempered diatonically, according to the mode of the 16 lower ones on the left side. The 13 that follow next above the first 16, are now to do the office of the lower ones on the right, as may be seen in the example.* If then you want to play in B natural, let the flats of each diatonic be altered, and tuned in one or the other of the chromatic, instead of the B flat; and let these be arranged in the place of those in the diatonic, both on the right, and the left. This mode of proceeding was so ordered by its author for the convenience and facility of the fingers of both hands, particularly in making diminutions, and lengthening sounds. We find thus among the said strings; five times C, five D, four E, four F, four G, four A, four B flat, and four B natural. Four unisons of D, four unisons of A. Four sharps of *c*, four sharps of *f*, four sharps of *g*, and the four flats of *e*; which in all make the number of 58 strings. But there are wanting, for the perfection of the diversity of harmony, the four sharps of *d*, and the four flats of *a*; for which, in those modes, or melodies, where these strings occur, their unisons which are among the chromatic strings, are accommodated to them; which unisons produce a great facility in the diminutions, as appears manifestly in practice; which facility is the cause that they are generally distributed in the manner I have mentioned.

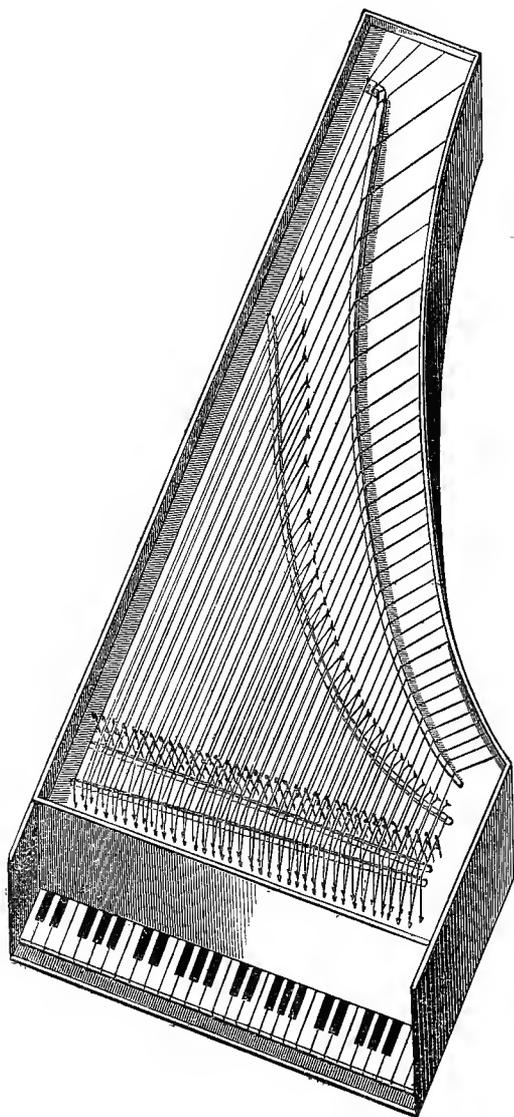
“The harp is so similar to the *epigonium* and the *simicum*, that it may with reason be said to be one of them;

* In the plate, a scale of the strings of the harp, referred to by Galilei, it has twenty-nine strings in each of the two rows; that is, D at top, and DD at bottom, in the right-hand row; and C at top, and CC at bottom, in the

left-hand row. It seems they were tuned in different keys, as occasion required them; and part of one row, and part of the other, served for the accidental flats and sharps; the remainder were unisons in both the rows.

nor do I think he would be much mistaken, who should maintain, that the strings were tuned in the same manner and proportion in the one as in the other instrument, seeing that these instruments were not introduced till after they began to play in consonant parts; and what distribution is best adapted to this, has been fully explained.

“Returning now to the invention and origin of modern instruments, I say, that (on account of the agreement of the name, of the form, and of the number, disposition and matter of the strings, although its professors in Italy say, that they have invented it;) from the harp, most probably, *the harpsichord had its origin*; which instrument is nothing but a horizontal harp: and from it, may be derived the key'd instruments of touch.”



The harpsichord was, in fact, only a large-sized spinet. In the spinet and virginal, however, there was but one string for each tone; another was added to the harpsichord, the form of which, as we have said, was precisely the same as that of our grand horizontal pianofortes. In Germany this instrument was called *Flügel*, from its resemblance to the shape of a *wing*.

We give an engraving of the harpsichord from the valuable work of Father Mersennus, so often quoted in our pages.

The mechanism of the jack remained the same in this instrument as in the older virginals and spinets*. Hans Ruckers of Antwerp was the first maker who effected an important reform in the construction of the harpsichord. He was originally a joiner; but, quitting that business, devoted himself entirely to the manufacture of keyed-stringed musical instruments, and gained a reputation which was surpassed by no other. He gave his harpsichords a more powerful and con-

* “The action of the harpsichord was simply a key and what was called a jack, which was a piece of pear-tree with a small moveable tongue of holly, through which a

cutting of crow-quill was passed to touch the string when the jack was in action.” Burney, in Rees’s *Cyclopaedia*.

nected tone, by joining to the two strings in unison a third range of shorter and finer strings, tuned to the upper octave of the others, and which could be entoned at pleasure, either together with them, or separately. He mounted his harpsichords partly with catgut strings, and partly with steel wire. In imitation of the organ, he added a second key-board to his instruments, the object of which was to allow three strings to be heard at once, or only a single one at pleasure. In fine, he extended the compass of his harpsichord to four complete octaves (from C to C), by adding four grave sounds to the forty-five which existed before.

It was towards the close of the sixteenth century, about 1590, that Hans Ruckers first began to manufacture his harpsichords. This artist and his two sons, Jean and Andreas, who rivalled their father in ability, sent a prodigious quantity of their instruments into France and Germany.

Burney, in his entertaining sketches of *The Present State of Music in Germany, the Netherlands, &c.**, has left us an account of these artists and their successors, which it is worth while to extract. Speaking of the city of Antwerp, the Doctor says—"The famous harpsichord-makers, of the name of Ruckers, whose instruments have been so much and so long admired all over Europe, lived in this city: there were three, the first, and the father of the other two, was *John Ruckers*, who flourished at the beginning of the last century. His instruments were the most esteemed, and are remarkable for the sweetness and fulness of their tone. On the left hand of the sound-hole in the bellies of these instruments may be seen a large H, the initial of Hans, which, in the Flemish Language, means John. *André*, the eldest of John's sons, distinguished his work by an A in the sound-hole. His large harpsichords are less esteemed than those made by any one of that name; but his small instruments, such as spinets and virginals, are excellent. *Jean*, the youngest son's harpsichords, though not so good as those of the father, are very much esteemed for the delicacy of their tone; his instruments may be known by the letter I in the sound-hole. The harpsichord-maker of the greatest eminence, after them, was J. Dan. Dulcken; he was a Hessian. At present there is a good workman at Antwerp, of the name of

* 2nd edit. vol. i, p. 47.

Bull, who was Dulcken's apprentice, and who sells his double harpsichords* for a hundred ducats each, with only plain painted cases, and without swell or pedals ; the work too of Vanden Elsche, a Flamand, has a considerable share of merit ; but, in general, the present harpsichords made here after the Rucker model are thin, feeble in tone, and much inferior to those of our best makers in England."†

Handel possessed a fine Rucker harpsichord, which he left by will to his friend and amanuensis, Smith. Coxe, in his *Anecdotes of Handel and Smith*, speaking of Handel's original MSS., which Smith presented to King George III, adds, "The harpsichord so remarkable for the ivory being indented by Handel's continued exertions, and on which, as has been already related, the far greater part of his music had been composed, and the bust, by Roubilliac, he sent afterwards to Windsor Castle."‡

The Messrs. Broadwood possess an instrument by Ruckers, which they conceive to have been Handel's, but its geneology will not bear examination. It is, however, a very interesting instrument, and merits a brief description. It is inscribed, "Ruckers, Antwerpia, 1651." The case and lid are painted black, with ornaments in gold and colour, a sort of lacquer-work. The sound-board is ornamented also, to the great risk of its sonority. Upon a ground of pale green are arabesques, among which sit half a dozen monkeys executing a concert. The lid is inscribed upon the under surface, in letters of gold, *Sic transit gloria mundi*, a legend which is often to be met with upon spinets and harpsichords, and which doubtless signifies that the glory of the world vanishes as sound and space. On that part of the lid which turns back when the harpsichord is opened, is *Musica donum Dei* (Music is the gift of God), also written in gold letters, upon a black ground §.

* A *single* harpsichord of two unisons and one set of keys was, in effect, a double spinet or virginal. A *double* harpsichord had two sets of keys and three strings, two unisons and an octave, to each note.

† Rucker harpsichords, about 1760, were in such high estimation that they frequently sold for more than a *hundred* pounds each ; but before the beginning of the present century, pianofortes became so prevalent throughout Europe, that the finest Rucker harpsichord would not produce more than ten pounds.

Many instruments by these eminent makers are still occasionally met with in out-of-the-way corners of our old mansions. Mr. Twining, of the eminent firm of that name in the Strand, possesses a fine *single* harpsichord by Andreas Rucker, 1640.

‡ Roubilliac's bust of Handel is still preserved at Windsor Castle ; but the harpsichord cannot be found.

§ For this description we are indebted to M. Victor Schœlcher's elaborate *Life of Handel*, lately published.

It was anciently the fashion to ornament the cases of old virginals, harpsichords, and spinets with inscriptions and paintings, many specimens of which have come down to our time. An ancient sounding-board, formerly belonging to a small virginal, now in the writer's possession, has the following curious inscription upon its upper surface :

"I once was livinge in the woods,
 But now I am cut downe
 By stroke of cruell axe, indeed,
 But yet to my renowne :
 For while I liv'd, I spake nought else
 But what the boistrous winde
 Compel'd my murmuringe straines unto ;
 But beinge dead I please y^e minde
 And eares of such as heare me singe,
 So pleasant is my musickes ringe."

Among the most interesting painted instruments, we may point out the virginal of Mary Queen of Scots, still preserved in the north of England. It is made of oak, inlaid with cedar, and richly ornamented with gold. The cover and sides are beautifully painted with figures of birds, flowers, and leaves, the colours of which are still fresh and undecayed. On one part of the lid is a grand procession of warriors, whom a bevy of fair dames are propitiating by presents or offerings of wine and fruits.

The old painters were proverbially fond of adorning their harpsichords. An exquisite little painting, by Annibal Caracci, of Silenus, teaching Apollo to play the pan-pipe (mentioned as being in the British Gallery), is said to have formed one of the compartments of an instrument belonging to that great painter. The story too of Salvator Rosa and his harpsichord ought not to be omitted. Happening one day to be found by a friend in Florence in the act of modulating on a very indifferent old harpsichord, he was asked how he could keep such an instrument in his house! "Why," said his friend, "it is not worth a scudo." "I will lay you what you please," said Salvator, "that it shall be worth a thousand before you see it again." A bet was made, and Rosa immediately painted a landscape with figures on the lid, which not only was sold for a thousand scudi, but was esteemed a "*capo d'opera*." On one end

of the harpsichord he also painted a skull and music books.* Both these pictures were exhibited at the British Institution in the year 1823.

Burney, in his amusing *Tour in France*, after describing his visit to the church of St. Rocque "to hear the celebrated M. Balbastre, organist of that church, as well as of Notre Dame and the Concert Spirituel," adds, "After church, M. Balbastre invited me to his house, to see a fine Rucker harpsichord which he has had painted inside and out with as much delicacy as the finest coach or even snuff-box I ever saw at Paris. On the outside is the birth of Venus; and on the inside of the cover the story of Rameau's most famous opera, *Castor and Pollux*; earth, hell, and elysium are there represented: in elysium, sitting on a bank, with a lyre in his hand, is that celebrated composer himself; the portrait is very like, for I saw Rameau in 1764. The tone of this instrument is more delicate than powerful; one of the unisons is of buff, but very sweet and agreeable; the touch very light, owing to the quilling, which in France is always weak."†

The harpsichord had arrived at considerable excellence in Italy very early in the sixteenth century. In the account of a banquet given by the magnificent Cardinal, Andrea Cornaro, to the Venetian ambassadors in 1522, we read, that after dinner "There was music of every sort that could be found in Rome. Excellent fifiers played continually; *harpsichords* also were there, with most wonderful sounds in them; lutes with four strings; harps and songs outside the room and inside; one music after another."‡

The author of a rare volume published at Bologna in 1590, under the title of *Il*

* Lady Morgan's *Life of Salvator Rosa*.

† This instrument was afterwards brought to London, when it became the property of the late James Goding, Esq. That gentleman had so little veneration for the work of Rucker, that he caused the "inside" of the harpsichord to be taken out, and a modern pianoforte substituted in its room! At the sale of Mr. Goding's musical instruments, by Christie and Manson, February 20, 1857, the instrument was thus described: "A MAGNIFICENT GRAND PIANOFORTE CASE: the top and sides beautifully painted with classical subjects, by Boucher: the inside, with a

large subject of the performance of a masque by the Royal Family, exquisitely painted by Le Prince, on a superbly carved and gilt stand. The instrument, 6½ octaves, by Zeitter." It sold for seventy guineas. When Zeitter took out the old sounding-board, he caused it to be made into a handsome music box, preserving the inscription, "Johannes Ruckers me fecit Antwerpæ," at the back. This box is now in the writer's possession.

‡ *The Girlhood of Catherine de Medicis*, by J. A. Trollope, 8vo. 1856, p. 50. The author does not enable us to give the passage in the original language.

Desiderio, mentioning some curious instruments in the Palace of the Duke of Ferrari, says, "there was a harpsichord, invented by Don Nicola Vincentino, surnamed *Archimusico*, in the year 1555. It had *six* rows of keys, comprehending in their division the three harmonic genera." He adds that the multitude of strings in this astonishing instrument rendered it very difficult to tune, and more so to play; and that, for this latter reason, the most skilful performers would seldom use it: nevertheless, he continues, "Luzzasco, the chief organist of his highness, who it is supposed must have understood and been familiar with the instrument, was able to play on it with wonderful skill." He says that this instrument, by way of pre-eminence, was called the *Archicembalo*; and that after the model of it, two organs were built; the one at Rome, by order of the Cardinal of Ferrari; and the other at Milan, under the direction of the inventor.

Father Bonnani, in his singular collection of engravings of musical instruments, entitled *Gabinetto Armonico*, 4to, Rome, 1722, gives a representation of an organ, harpsichord, two spinets, and a virginal, so contrived that they may be used separately, or *together*. This "prodigious artifice," as the monk calls it, was contrived by Michele Todino, of Savoy, for Signor Verospi, of Rome. Dr. Burney in his *Tour in France and Italy*, says, "I went this morning to visit the famous Podini gallery, in the Verospi palace. All the accounts of Rome are full of the praises of this music gallery; or, as it is called, gallery of instruments; but nothing shows the necessity of seeing for one's self, more than these accounts. The instruments in question cannot have been fit for use these many years; but, when a thing has once got into a book as curious, it is copied into others without examination, and without end. There is a very fine harpsichord, to look at, but not a key that will speak; it formerly had a communication with an organ in the same room, and with two spinets and a virginal; under the frame is a violin, tenor, and base, which, by a movement of the foot, used to be played upon by the harpsichord keys. The organ appears in the front of the room, but not on the side, where there seems to be pipes and machines enclosed; but there was no one to explain it, the old *Cicerone* being just dead."

Giovanni Maria Artusi, in his interesting work, *Delle Imperfettioni della Moderna Musica*, Venice, fol. 1600, gives a curious account of the state of instrumental music

in his time, and in describing a grand concert that was made by the nuns of a convent at Ferrara, in 1598, on occasion of a double wedding between Philip the Third, King of Spain, with Margaret, Queen of Austria, and the Archduke Albert with the Infanta Isabella, the king's sister, he enumerates the several instruments that were employed, and points out their excellencies and defects. Among these the harpsichord is honoured with particular attention both as to its construction and use.

Ottavio Rinuccini's drama of *Eurydice* was set to music by Jacopo Peri, and performed at Florence in 1600, on occasion of the marriage of Mary of Medicis to Henry the Fourth of France. In Peri's preface to the printed copy of the music, he tells us that "behind the scenes, Signor Jacopo Corsi played the *harpsichord*; Don Garzia Montalvo the chitarone or large guitar; Messrs. Giovanni Battista dal Violino the *lira grande*; and Messer Giovanni Lapi, a large lute."

In the Oratorio entitled *Dell' Anima e del Corpo*, performed in the oratory of the church of Santa Maria della Vallicella at Rome, in 1600, the *clavicembalo* or harpsichord formed one of the instruments of the orchestra; and in Monteverde's opera of *Orfeo*, performed at the Court of Mantua in 1607, amongst the instruments used we read of "Duoi Gravicembani."*

The "orchestra" of this period is well exhibited in the following wood-cut, copied from a scarce work entitled, *Festa, fatta in Roma, Alli 25 di Febraio 1634, e data in luce da Vitale Mascardi*. Rome, 4to, 1634. The entire engraving represents one of those magnificent entertainments in which the cardinals and other dignitaries were so often wont to display the enormous riches of the church. The group of musicians appears at one corner. The "maestro" is seated at the harpsichord, by the side of which is the vocal choir. He is assisted by two instrumentalists; one of whom is playing upon the viol da gamba, the other upon a large lute, or perhaps the "*lira grande*."

* Hogarth, in his *Memoirs of the Musical Drama*, vol. i, p. 17, edit. 1838, says, speaking of this opera, "The Genius of Music, who speaks the prologue, is accompanied

by two *gravicembani*, probably misprinted for *clavicembali*, or harpsichords."



For a long period, according to M. Fétis, the Italians did not avail themselves of the improvements made in the harpsichord, and continued to construct these instruments with two strings only to each note, and with a single key-board. The best manufacturers, at the beginning of the seventeenth century, were a Venetian priest named Zanetti, Crotone, and Farini. The latter conceived the idea of mounting his harpsichords entirely with catgut strings instead of wire, which gave them a more mellow and soft quality. To this kind of instrument he gave the name of *Clavichtherium*—the name of an older instrument, then out of date. Farini's example was followed shortly after by several German makers.

About the year 1620, Rigoli, of Florence, invented the vertical harpsichord, taking the idea from the earlier clavicymbal, which has since been imitated in a variety of the pianoforte. Near the same period, Richard, a French artist, acquired great and merited reputation for the excellence of his harpsichords. He was the first who conceived the idea of substituting small slips of cloth in the place of the quill, for producing the sound; by this means he succeeded in obtaining tones more agreeable, and yet without any diminution of power. Richard formed several distinguished artists, who necessarily perfected different details in the manufacture of the instrument.

The need of improvement in the quality of the tone of the harpsichord, which had always been harsh and disagreeable to delicate ears, led artists to attempt to disguise at least a defect like this by artificial means. Instruments were accordingly constructed with more than twenty different modifications, to imitate the tones of the harp, the lute, the mandolin, the bassoon, the flageolet, oboe, violin, and other instruments. The sounds discovered in the course of these experiments, and in which no analogy could be discovered to those of any other known instrument, were honoured with new and fantastic names, such as *jeu céleste*, *angélique*, &c.

A good illustration of this point is afforded by the following hand-bill, copied from the original, which appeared about the middle of the eighteenth century :

“HARPSICHORD IMITATING FOURTEEN WIND AND CHORDED INSTRUMENTS.

“THE SIEUR VIRBES, Professor of Music, and Teacher of the Harpsichord, from Paris, most respectfully acquaints the Nobility, Gentry, and Public, in general, that he is lately arrived in this Capital, with a most extraordinary Harpsichord, of a mechanism sufficiently simple, but so curious withal, as to deserve the attention of all connoisseurs, on account of the effects it produces, and its additional improvements. The very flattering reception he met with, on his first voyage here, from the Royal Society, and the most eminent artists, has encouraged him to give a new degree of perfection to that instrument, and offer it as a tribute of gratitude to this nation, whose suffrages he will be ever proud to deserve. He may be heard every day in the week, Sundays excepted, from twelve until three o'clock. To begin on this day, the 20th instant, No. 40, Suffolk street, Charing-cross.

“Admittance, a crown each person.

“He is in possession of the certificate from the Royal Academy in Paris, which testifies, that his new-invented Harpsichord imitates in nature the fourteen following instruments:—The Lute, Harp, Harmonica, German Guitar, Italian Mandoline, Hautboy, Tabor and Pipe, Tabor and Galoubet of Provence, Sistrum, Bassoon, Clarinets, Martial Kettle Drums, and celestial Harmony. The latter produces the most pleasing sensation, and cannot be compared in its grateful sound to any instrument hitherto known.

“The certificate may be seen, and an English translation of the same to be had of the inventor, as above.”

In order to produce these different effects, new rows of jacks were added, which were furnished with materials of the softest kind, and most conducive to expression. The performer could produce these different effects either together or separately, by means of springs acted upon by the knees, or by pedals: sometimes, in order to facilitate these combinations, a third key-board was added to the two former. And yet, with all this complication, the grand secret, the real shading of the *piano* and *forte*, was wanting still; nothing better was devised for augmenting or diminishing

the sound, than to put in motion different rows of jacks, so as to withdraw them from, or approximate them to, the strings at pleasure.

The result of these various experiments led to the invention of the *stops*, as they were termed, of which there were three kinds: the *forte* stop, which raised the dampers; the *soft* stop, which partly stopped the vibration of the strings; and the *buff* stop, which interposed a layer of cloth or soft buff leather between the jacks and the strings.

These stops seem to have been the origin of the pedals. They were used in the "middle age" of pianoforte-making as well as in the earlier harpsichords.

About the middle of the eighteenth century, Godfrey Silbermann, of Freyberg, and Blanchet, of Paris*, made several very important improvements in the details of the harpsichord, and particularly in the key-board, to which they gave a lightness unknown in former instruments. These makers added new key-boards, and extended the compass, of a large number of instruments made by the Ruckers.

Paschal Tasquin, "keeper of the musical instruments to the King of France," the celebrated pupil and successor of Blanchet, first used buff leather as a substitute for quill, in the year 1768. He also invented several ingenious pieces of mechanism in connection with the harpsichord, a detailed account of which may be seen in the *Encyclopédie Méthodique (Arts et Métiers Mécaniques, tom. iv, pt. 1.)*†

Schobert, an ingenious mechanic and an elegant composer of music, was the inventor of a harpsichord with a double bottom, in which was placed, above the first sounding-board, a range of strings of two octaves, of considerable size and length, to strengthen the bass. These strings were sounded by a piece of mechanism brought into action by a range of pedals. Harpsichords of this description were constructed by Silbermann of Strasburg, and by Perronard of Paris.

* The family of the Blanchets are well remembered in France as celebrated *clavier* makers. François Etienne Blanchet flourished in 1750. His grandson Armand (born 1763) succeeded to his business, and died in 1818. The firm of Blanchet and Roller still occupy a prominent position among the pianoforte makers of Paris.

† M. Trouflant, canon and organist of the cathedral at Nevers, addressed a letter to the *Journal de Musique*, 1773, on the inventions of M. Paschal Tasquin. See also the report of Baron de Dietrick to the Académie des Sciences, cited in the *Encyclopédie Méthodique*, 1791, art. Clavecin.

Wiegleb, "an organ and musical instrument maker" of Berlin, made harpsichords and spinets in 1724, in which the strings were sounded by brass or metal tongues, instead of the bristles or crow-quills commonly used.* This idea was revived some few years later, in 1788, by a maker named Hopkinson (an Englishman), resident at Paris. Godfrey Silbermann, of Freyberg, invented a piece of mechanism similar to that of the clavichord, which struck the string at its half length, by which the harmonic sounds were heard at the same time that the whole string was sounded; the strings of this harpsichord were much longer than those in common use. This instrument was called the *Clavecin d'Amour*. There was also a double harpsichord, named by its inventor, Johann Stein of Augsburg, the *Vis-à-vis* harpsichord, because each of its extremities was furnished with a key-board, by which means two persons could play at the same time.

But, perhaps, the most extraordinary invention of the time was that of Louis Bertrand Castel, a Jesuit of Montpellier. This worthy monk whose *Physical System* ranks among the best philosophical works of the early part of the last century, and whose *Optics of Colours* is still esteemed, studied vision and the nature of colours, as blended or contrasted with each other, till, his imagination getting the better of his understanding, he confounded the eye with the ear, and associated the harmony of tints with that of sounds. Infatuated with this idea, he invented what he called an *Ocular Harpsichord*, which was strung with coloured tapes instead of wires, and being placed in a dark room, when the keys were touched, the transparent tapes, which respectively corresponded with them, became visible; and the various successions and combinations of colours, consequent to this operation, produced effects on the sight which his fancy assimilated to the impression made on the ear by melody and harmony †.

* "Besides arming the tongues of the jacks with crow and raven quills, several other means were tried by which to produce a softer tone, and to be more durable. As the quilling a harpsichord with three stops was nearly a day's work, leather, ivory, and other elastic substances were tried; but what they gained in sweetness, was lost in spirit."—Burney, in *Rees' Cyclopædia*.

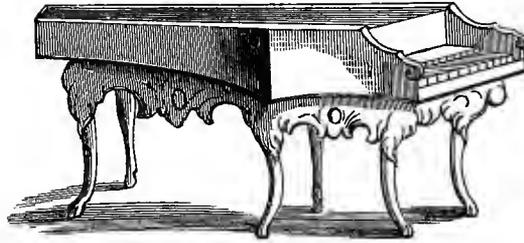
† This instrument was publicly exhibited in London in 1757, as appears by a rare tract in the possession of the writer, entitled *Explanation of the Ocular Harpsichord, upon shew to the Public*. Invento exoritur docto geminata Voluptas, affinisque Sono nascitur, ecce color. Am.

London: Printed for S. Hooper and A. Morley at Gay's Head, near Beaufort Buildings, in the Strand, MDCCLVII (pp. 22).

Varieties of the harpsichord were multiplied as fancy suggested, but the result of the greater part of these experiments was similar to many that have since been made on the pianoforte ; they amused for awhile, but were never generally adopted.

The Spanish harpsichords of the eighteenth century acquired considerable reputation, and were much sought after by judges. Burney, recording his visit to Farinelli at Bologna, adds his testimony to their excellence in the following words : “ Signor Farinelli has long left off singing, but amuses himself still on the harpsichord and viol d’amour ; he has a great number of harpsichords made in different countries, which he has named according to the place they hold in his favour, after the greatest of the Italian painters. His first favourite is a *piano-forte*, made at Florence in the year 1730, on which was written in gold letters, *Rafael d’ Urbino*, then Correggio, Titian, Guido, &c. He played a considerable time upon his Raphael with great judgment and delicacy, and has composed several elegant pieces for that instrument. The next in favour is a harpsichord given him by the late Queen of Spain, who was Scarlatti’s scholar, both in Portugal and Spain ; it was for this princess that Scarlatti made his two first books of lessons, and to her the first edition, printed at Venice, was dedicated, when she was princess of Asturias ; this harpsichord, which was made in Spain, has more tone than any of the others. His third favourite is one made likewise in Spain, under his own direction ; it has moveable keys, by which, like that of Count Taxis at Venice, the player can transpose a composition either higher or lower. Of these Spanish harpsichords the natural keys are black, and the flats and sharps are covered with mother-of-pearl ; they are of the Italian model, all the wood is cedar, except the bellies, and they are put into a second case.”

We are fortunately able to give an engraving of a Spanish harpsichord (probably the very one mentioned as having been made for the Queen of Spain), from the title page to a very rare work, entitled *Essercizi per Gravicembalo di Don Domenico Scarlatti, Cavaliero di S. Giacomo e Maestro de Serenissimi Prencipe e Prencipessa delle Asturie*, &c. folio oblong, no date or imprint. The shape of the frame-work and legs upon which the instrument stands is exceedingly graceful, far superior to the English and German harpsichords of the same date.



We see, from the foregoing extract, that transposing instruments are no new invention, although recently imposed upon the public as such. The keyed instrument in the possession of Count Torre Taxis, of Venice, was made under the direction of the King of Prussia in 1760. "It is in shape," says Burney, "like a large clavi-chord, has several changes of stops, and is occasionally a harp, a harpsichord, a lute, or piano-forte; but the most curious property of this instrument is that by drawing out the keys the hammers are transferred to different strings, by which means a composition may be transposed half a note, a whole note, or a flat third lower at pleasure, without the embarrassment of different notes or clefs, real or imaginary."

The harpsichord does not appear to have been commonly used in England before the latter half of the seventeenth century; it was then called the *harpsicon*, and the *harpsical*. John Playford, in the second book of his *Select Ayres and Dialogues*, folio, 1669, advertises, "If any person desire to be furnished with good new virginals and *Harpsicons*, if they send to Mr. Playford's shop, they may be furnished at reasonable rates to their content."

In the Harleian Collection, No. 5936, is preserved a curious hand-bill of the worthy Thomas Mace, "one of the clerks of Trinity College, Cambridge." In describing his "musical furniture" which he wishes to dispose of, he adds: "There is a *Pedal Harpsicon* (the absolute best sort of *consort harpsicon* that has been invented); there being in it more than 20 varieties, most of them to come in with the foot of the player, without the least hindrance of play (exceedingly pleasant): and also a *single harpsicon*."

In his *Musick's Monument*, published in 1676, Master Mace is very particular in his description of this instrument. The passage is so curious, that we extract it:

To the Harpsicon, yet more properly, and much better, to the Pedal, an instrument of a late invention, contriv'd as I have been inform'd, by one Mr. John Hayward of London, a most excellent kind of instrument for a consort, and

far beyond all harpsichords or organs that I yet ever heard of (I mean either for consort or single use); but the organ is far beyond it for those other performances before-mentioned.

“Concerning this instrument (call’d the Pedal because it is contrived to give varieties with the foot), I shall bestow a few lines in making mention of it, in regard it is not very commonly used or known, because few make them well, and fewer will go to the price of them, twenty pounds being the ordinary price of one; but the great patron of musick in his time, Sir Robert Bolles (whom, in the University, I had the happiness to initiate in this high art) had two of them, the one I remember at 30*l.* and the other at 50*l.* very admirable instruments.

“This instrument is in shape and bulk just like a harpsichord, only it differs in the order of it, thus, viz. There is made right underneath the keys near the ground, a kind of cubbord, a box, which opens with a little pair of doors, in which box the performer sets both his feet, resting them upon his heels (his toes a little turning up) touching nothing, till such time as he has a pleasure to employ them; which is after this manner, viz. there being right underneath his toes four little pummels of wood, under each foot two, any one of these four he may tread upon at his pleasure; which by the weight of his foot drives a spring, and so causeth the whole instrument to sound, either soft or loud, according as he shall choose to tread any of them down: for without the foot so used nothing speaks.

“The outside of the right foot drives one, and the inside of the same foot drives another; so that by treading his foot a little awry, either outward or inward, he causeth a various stop to be heard, at his pleasure; and if he clap down his foot flat, then he takes them both, at the same time (which is a third variety and louder).

“Then he has ready, under his left foot, two other various stops, and by the like order and motion of the foot, he can immediately give you three other varieties, either *softer* or *louder*, as with the right foot, before-mentioned, he did.

“So that thus you may perceive he has several various stops at pleasure, and all quick and nimble, by the ready turn of the foot.

“And by this pritty device, is this instrument made wonderfully rare and excellent; so that doubtless it excels all harpsichords or organs in the world, for admirable sweetness and humour, either for a private, or a consort use.”

The harpsichord was used in our public theatres in the latter half of the seventeenth century. When Shakespeare’s *Tempest*, as altered by Dryden and Davenant, was played at the Duke’s Theatre, in Lincoln’s Inn Fields, in 1667, it seems probable that the band was for the first time placed between the audience and the stage. The following is part of the introductory description: “The front of the stage is opened, and the band of twenty-four violins with the *harpsichords* and theorbos, which accompany the voice, are placed between the pit and the stage.”

The chief harpsichord-makers in England at this time were Charles and John Hayward, and John Hitchcock, some of whose instruments are still occasionally to be met with in our old country mansions.

These artists were succeeded by Keen, Slade, Player, Fenton, Baudin and John Harris; the last-named was the son of the celebrated organ-builder, Renatus Harris;

and he claims the distinction of having taken out the first patent in this country for an "improvement" in the construction of the harpsichord. This patent bears date Oct. 22, 1730, and is clearly described in the following advertisement, preserved in the curious collection of proclamations, broadsides, &c. presented to the Chetham Library, Manchester, by James O. Halliwell, Esq. F.R.S. (No. 830.)

"TO THE NOBILITY, GENTRY, AND OTHERS, THAT ARE LOVERS AND JUDGES OF MUSICK.

"Tho' many of the Quality and Gentry, &c. read the News Papers, 'tis believed there are but Few that regard the Advertisements; so that tho' the Advertiser is at considerable Expence to have his Affair made known to them, 'tis of little Service to him: I therefore beg leave to use this Method, and hope those Honourable Persons to whose Hands these Papers are humbly presented, will be pleased to read them, their Benefit being designed by

Their most obedient humble Servant,

JOHN HARRIS.

"His Majesty has been graciously pleas'd to grant to John Harris, his Letters Patent, for the making of an Harpsichord with two Sets of Strings, on which may be performed, either One Unison, or Two; or Two Unisons and an Octave together; and the Forte's or Piano's, or Loud, or Soft, or the contrary, may be executed as quick as Thought: And double Basses may be also expressed by touching single keys; so that here, Divisions may be played well, without the Thumb and little Finger together, which could not be well done otherwise; and Shakes may be here performed, which cannot be done by the Thumb and little Finger together.

"All Persons that shall make any of these Instruments, or in any respect imitate them in their extraordinary Performances, shall be prosecuted according to Law, and whoever will discover any one that (without my License) shall do so, shall, upon Conviction, be well rewarded by John Harris.

"N.B. These instruments are now made in Perfection; and Mr. Harris will (at a very reasonable Expence) make double basses, to either single, or double key'd Harpsichords, which are already made by other Persons, which will give a Fulness and Nobleness to the Instrument, that the best of other Harpsichords have not; and is very useful in playing a Thorough Bass, or other Musick, for the Parts are expressed in a double Manner, when you please. This Performance will not in the least injure the Tone or Sound of any instrument; nor make it go sooner out of Tune, than it would do without it, and the Touch will be very good when the double Basses are used, and also when they are not.

"Mr. Harris (Organ, Harpsichord, and Spinnet Maker) lives within three Doors of Bedford Court, in Red Lyon Street, Holborn, London."

In 1730, one William Barton, of whom nothing is known, took out a patent for his "new invention of pins of silver, brass, steel, and all other sorts of metals, to improve the use of harpsichords and spinnets, which will improve the tone of the said

instruments, and last many years without amendment; crow and raven's quills, of which they are now made, requiring frequent change and trouble in repairing."

In 1741, Rutgerus Plenius, an ingenious harpsichord-maker, issued the following curious broadside, which is transcribed from a copy of the original in the Chetham Library (Halliwell's Coll. No. 772).

“ ACTA VIRUM PROBANT.

“ HARPSICHOORDS, With a Stop that imitates y^e Welch Harp Having Quills that (tho' daily used) will last many years without breaking, they being chemically prepar'd, and all cut of equal Length to a Hair's Breadth, in an Engine invented for that Purpose which with Six other visible improvements are made by Virtue of His Majesty's Royal Letters Patent By the Inventor only, RUTGERUS PLENIUS; Who begs leave to acquaint all Gentlemen and Ladies, Lovers of Harmony, and Encouragers of industrious Artists, that He, after Ten years indefatigable Researches to bring this noble Instrument to y^e highest Degree of Perfection, has made more than Twenty essential Improvements in the Said Instrument, tho' many of them can't immediately fall under the Cognizance of every Spectator, yet y^e hand in playing will virtually feel their good Effect. And He humbly presumes that y^e Boldness of y^e Instrument united to the Delicacy of it's sound, as well as distinct Expression of every Single Tone, free from y^e Confus'd jumble of Sounds often heard in many Harpsichords, will most agreeably touch y^e Ear of every Auditor, it having already met with universal Applause, particularly from y^e most eminent Masters of Musick in England: The Truth of these Assertions, with a further Detail of the whole, He is ready, at all Hours, to make appear to y^e Curious, who shall honour him with their Presence.

“ BY HIS MAJESTY'S ROYAL LETTERS PATENT, GRANTED TO RUTGERUS PLENIUS, HARPSICHOORD MAKER; For the sole Making, Use & Benefit of a New invented musical Instrument, called a Lyrichord. Which imitates a Violin, Violoncello, & Double Bass; but when play'd Full, it resembles a perfect Organ of a most delightful Tone, altho' by Catgut Strings only, without Pipes. It admits of playing Forte & Piano; as also of swelling any Single Note (or many Notes ad libitum) on y^e same Key, by y^e simple Pressure of y^e Fingers: But what is most surprising, & indeed incredible if not seen (yet plainly demonstrable to every one) its strings never go out of Tune, as long as y^e constituent Materials of y^e Instrument remain entire; a Thing which has been so long wisht for & desir'd, & in all Ages, 'till now, by every one, deem'd impossible to find out. This therefore is to inform y^e Nobility, Gentry, & others, That y^e aforesaid Rutgerus Plenius has now, (after Ten years painful study & Labour, accompany'd with no small Expence) brought y^e above mention'd Instrument to Perfection. And he humbly presumes, that all Gentlemen & Ladies, who will do themselves y^e pleasure & him y^e Honour of seeing & hearing it, will be fully convinced of y^e Truth of y^e foregoing Assertions; & at y^e same Time be agreeably diverted by y^e Harmony of y^e Instrument; it being esteem'd & approv'd by all that have yet seen it; particularly by y^e most eminent Masters of Musick in England, who allow it to be y^e most curious Piece of Workmanship & most wonderful Instrument they have ever seen or heard of. The Price of seeing & hearing it perform'd on, at any Time between y^e Hours of Twelve & Four o'Clock, is Half a Crown each Person, at y^e Inventor's House (y^e King's Arms being oyer y^e Door) in south Audley Street, Grosvenor Square; where a good Hand is provided for y^e Entertainment of y^e Audience.

“N.B. The above described Lyrichord is not (as many erroneously thought) the same which appear'd in the World Two years ago, But a Complete intirely New Piece and (in the opinion of every one who has seen them both) excels That by at least a hundred Degrees.”

A few years afterwards, Plenius's Lyrichord was thus advertised in the public papers :

“TO BE SEEN AND HEARD 'TILL SOLD,

very day from eleven in the morning, 'till two in the afternoon, Sundays excepted, at the Golden-Ball, opposite the Little South door of St. Paul's, in Paul's Church-Yard, for half a crown each person.

“THE LYRYCHORD, the most curious musical instrument ever invented; which at a very great expence of money and ime, is now brought to a great degree of perfection. It imitates the Violin, Bass-Violin, and Double-Bass, and tho' it has no pipes, yet, when played full, it resembles a perfect Organ, and is touch'd by keys, like a Harpsichord. It admits of playing loud and soft, and the close-shake, as also of swelling any single note, or many notes together, by the simple pressure of the fingers: But what is most surprising, and indeed incredible if not seen (yet plainly demonstrable to every one) it's strings never go out of tune, as long as the constituent materials of the instrument remain entire: a thing hitherto deem'd impossible to find out.

“Note. A good performer is provided to entertain the audience, during the aforesaid hours.”—*The Public Advertiser*, June 12, 1755.

The last notice we have of Plenius's invention, occurs on February 11th, 1772, in the following manner :

“TO BE SOLD BY AUCTION,

BY MR. CHRISTIE,

At his Great Room, late the Royal Academy, in Pall Mall,

To-morrow and Thursday;

Fifteen fine toned Harpsichords, with double and single keys, several of which with double and single bass pedals, &c. being the stock in trade of Frederick Naubauer, Harpsichord-maker, together with a *Lyrichord*, a capital melodious instrument made by the famous Rutgerus Plenius. To be viewed this day. Catalogues may be had as above.”

One of the most important harpsichord-makers of the eighteenth century was a foreigner, resident in England, named Tabel. Nothing seems to be known of his history; but in his factory two men were employed that afterwards rose to considerable eminence as makers of musical instruments—Burckhardt or Burkat Tschudi, and Jacob Kirkmann.

Tschudi was a Swiss, who came to this country about the year 1732. The authors of *The Universal Helvetian Swiss Lexicon* tell us that “he was a poor journey-

man joiner who went to England and made himself known at the Court of London as an eminent clavier-maker. Besides many other famous things, he made, in 1765, an ingenious harpsichord with two manuals for the King of Prussia. He was married in London, where he died in 1775, leaving great wealth to his family." Tschudi was "harpsichord-maker to the Royal Family;" and in 1769 took out a patent for an "improvement" in the harpsichord. Burney says, "His work was extremely neat, and his tone and touch refined and delicate, while his instruments were new; but neither so full nor durable as those of Kirkman. Snetzler, who added horizontal organs to many of his harpsichords, used to account for his instruments soon losing their perfection, by his working in a very hot room, and keeping them there, in order to give to the tone the brilliancy of old instruments; but as soon as they were removed to a cold or damp room, the wood swelled so much, as to warp, crack the bellies, and disorder all the movements; accidents which we never remember to have happened to the excellent instruments of his worthy son-in-law and successor, Broadwood."

The same author, in his *Present State of Music in Germany*, speaking of the musical instruments in the Palace at Potsdam, thus alludes to the "ingenious harpsichord" above mentioned: "In another apartment there is a most magnificent harpsichord, made by Shudi in England; the hinges, pedals, and frame are of silver, the case is inlaid, and the front is of tortoiseshell; this instrument, which cost 200 guineas, was sent to Hamburg by sea, and from thence to Potsdam, up the Elb and the Havel, which, I was told, had injured it so much, that it has been useless ever since; however, it is natural to suppose that some jealousy may have been excited by it, and that it has not had quite fair play from those employed to repair it; for I never heard of any one of the great number of harpsichords which are annually sent from England to the East and West Indies by sea, receiving so much damage as this is said to have done in a much shorter passage. And now I am upon the subject of musical instruments, I must observe that the Germans work much better out of their own country than they do in it, if we may judge by the *harpsichords* of Kirkman and Shudi; the *piano-fortes* of Backers; and the organs of Snetzler; which far surpass in goodness all the keyed instruments that I met with in my tour through Germany."

To this notice of Tschudi, we may add, that the Messrs. Broadwood possess an interesting portrait of the Founder of their firm in the act of tuning the King of Prussia's harpsichord.

Kirkman, whose sign of the king's arms in Broad Street, Golden Square, we are told, was as well known to the nobility and gentry as the equestrian statue of Charles at Charing Cross, was esteemed perhaps the most eminent harpsichord-maker of his day. Burney, whose valuable articles in *Rees's Cyclopædia* have been of great use in these pages, has left us the following characteristic memoir of him.

“Jacob Kirkman, an excellent harpsichord-maker from Germany, who came to England about the year 1740, and worked with the celebrated Tabel, as his foreman and finisher, till the time of his death. Soon after which, by a curious kind of courtship, Kirkman married his master's widow, by which prudent measure he became possessed of all Tabel's seasoned wood, tools, and stock in trade. Kirkman himself used to relate the singular manner in which he gained the widow, which was not by a regular siege, but by storm. He told her, one fine morning, at breakfast, that he was determined to be married that day before twelve o'clock. Mrs. Tabel, in great surprise, asked him to whom he was going to be married, and why so soon? The finisher told her that he had not yet determined whom he should marry, and that, if she would have him, he would give her the preference. The lady wondered at his precipitancy, hesitated full half an hour; but, he continuing to swear that the business must be done before twelve o'clock that day, at length she surrendered; and as this abridged courtship preceded the marriage act, and the nuptials could be performed at the Fleet or May Fair, 'without loss of time, or hindrance of business,' the canonical hour was saved, and two fond hearts were in one united, in the most summary way possible. just one month after the decease of Tabel. Kirkman lived long enough to stock the whole kingdom with his instruments, and to amass great wealth. He had no children, but as many nephews hovering over him as a Roman pontiff.

“Theodorus, the father of Isocrates, was a flute-maker, who acquired wealth sufficient, by his employment, not only to educate his children in a liberal manner, but also to bear one of the heaviest public burdens to which an Athenian citizen was liable; that of furnishing a choir or chorus for his tribe, or ward, at festivals and

religious ceremonies. Each tribe furnished their distinct chorus, which consisted of a band of vocal and instrumental performers and dancers, who were to be hired, maintained, and dressed, during the whole time of the festival: an expense considerable in itself, but much increased by emulation among the richer citizens, and the disgrace consequent to an inferior exhibition. The fluctuations of trade and public favour have rendered the business of boring flutes far less profitable at present, than it was in the time of Theodorus. But our harpsichord-maker, Kirkman, who was known to be worth 90,000*l.* twenty years before he died, doubled the profits of his instruments by becoming a pawnbroker and a usurer; obliging young heirs with money as kindly and with as much liberality as a Hebrew.

“At a time when ruin stared harpsichord-makers in the face, by the rage with which musical ladies were seized for the guitar, in preference to all other instruments, Kirkman hit upon an ingenious expedient, which saved himself from bankruptcy, and restored the harpsichord to all its former favour.* He did not live to see his excellent double harpsichords of sixty or seventy guineas price sold at auctions for twelve or fourteen pounds, and the original purchasers turn them out of their houses as useless lumber. But such are the vicissitudes of this world, that our descendants will, perhaps, know as little about the pianoforte, as we do now of the lute or lyre. Kirkman is supposed to have died, in 1778, worth near 200,000*l.*”

Jacob Kirkman was succeeded in his business by his son Abraham, who ably kept up the family name by the manufacture of his instruments. He was in his turn succeeded by his son Joseph, who continued to make the best English harpsichords up to the commencement of the present century.

The harpsichord was greatly improved by that great mechanical genius, John

* This expedient is related by the same writer in another part of his work. (See article, GUITAR, *Rees's Cyclopædia*, vol. xvii.) “The common guitar used in England has frequently had fits of favour in this country. About fifty years ago its vogue was so great among all ranks of people as nearly to break all the harpsichord and spinet makers, and indeed the harpsichord masters themselves. All the ladies disposed of their harpsichords at auctions for one third of their price, or exchanged them for guitars;

till old Kirkman, the harpsichord maker, after almost ruining himself with buying in his instruments for better times, purchased likewise some cheap guitars, and made a present of several to girls in milliners' shops, and to ballad singers in the streets, whom he had taught to accompany themselves with a few chords and triplets, which soon made the ladies ashamed of their frivolous and vulgar taste, and return to the harpsichord.

Joseph Merlin. This extraordinary artist was born at St. Peter's, in the city of Huys, between Namur and Liège, September 17, 1735. After residing six years in Paris, he came to England, on the recommendation of the Royal Academy of Sciences, in the suite of the Spanish Ambassador, Count de Firentes. He arrived here, May 24, 1760, and resided for some time with the Count, in Soho Square. In 1768, he exhibited many curious inventions at Cox's Museum, in Spring Gardens, of which place he seems to have been the director for several years. In 1774, we find him residing in the parish of Marylebone, when a patent was granted him for "his new-invented kind of compound harpsichord, in which, besides the jacks with quills, a set of hammers of the nature of those used in the kind of harpsichords called *pianoforte*, are introduced in such manner that either may be played separately or both together, at the pleasure of the performer; and for adding the aforesaid hammers to an harpsichord of the common kind already made, so as to render it such compound harpsichord."

The common harpsichords of large size had two rows of keys, and three strings to each note. Of these three, two were tuned in unison, and the third sounded an octave higher. The latter was abolished by Merlin in 1775, and replaced by another unison which left the tone equally full, and rendered the instrument less susceptible to atmospheric influences. After constructing a great variety of musical instruments, and extraordinary pieces of mechanism*, this artist died, May 1804, leaving only a small fortune, but a name unrivalled for mechanical ingenuity.

From an advertisement now before us, it appears that Merlin's musical instruments in his possession at the time of his decease were not disposed of for more than thirty years afterwards. They are described as

* "During the latter part of the eighteenth century, this ingenious mechanic and musical instrument maker gratified the curious and tasteful by the public exhibition of his organ, pianoforte, and other inventions, at his Museum in Princes Street, Hanover Square. Merlin's mind was adequate to the embracing the whole compass of mechanical science and execution; at least, in the articles connected with elegant and domestic amusement. One of his ingenious novelties was a pair of skaites, contrived to run

on wheels. Supplied with a pair of these and a violin, he mixed in the motley group of one of the celebrated Mrs. Cornelly's masquerades at Carlisle House, Soho Square; when, not having provided the means of retarding his velocity, or commanding its direction, he impelled himself against a mirror, of more than five hundred pounds value, dashed it to atoms, broke his instrument to pieces, and wounded himself most severely." *Busby's Concert Room Anecdotes*, vol. ii, p. 137.

"CELEBRATED MUSICAL INSTRUMENTS

INVENTED AND MANUFACTURED BY THE LATE

MR. JOHN JOSEPH MERLIN.

To be sold by Auction by Mr. MILLS,

Friday, 21 July, 1837."

"Amongst them will be found The Celestial Harp, and full Band of Keyed Instruments. This surprizing and powerful Keyed Instrument is capable of producing all the effects of a full Orchestra, equal in power to four or six Violins, the same number of Tenors and Violoncellos, and other powerful accompaniments may be added. By means of a catgut worked by brass circles, the whole is made to sound. The performer is also enabled by one of the pedals acting as a mute to give the instrument all the effects of the Welsh Harp. As a source of profit for an Exhibition, this instrument might prove a fortune in the hands of a spirited speculator. "Also, Merlin's Original Private Harpsichord. Little remains beyond the case and a part of the action; yet enough remains to remind one of the great and talented individual."

The English harpsichords of the eighteenth century were infinitely superior to those constructed on the continent. Burney has left us an opinion upon this point, in his *Tour in France*, which is worth extracting. He says :

"To persons accustomed to English harpsichords, all the keyed instruments on the continent appear to great advantage. Throughout Italy they have generally little octave spinets to accompany singing in private houses, sometimes in a triangular form, but more frequently in the shape of our old virginals; of which the keys are so noisy, and the tone so feeble, that more wood is heard than wire. The best Italian harpsichord I met with for touch was that of Signor Grimani at Venice; and for tone, that of Monsignor Reggio at Rome; but I found three English harpsichords in the three principal cities of Italy, which are regarded by the Italians as so many phenomena. One was made by Shudi, and is in the possession of the Hon. Mrs. Hamilton, at Naples. The other two, which are of Kirkman's make, belong to Mrs. Richie, at Venice, and to the Hon. Mrs. Earl, who resided at Rome when I was there."

It is needless to follow up all the contrivances of the harpsichord-makers of this period to obtain sonority of tone, and to do away with the jarring noise produced by the action of the quill against the string; suffice it that the grand desideratum was attained, and the *hammer harpsichord* was soon to appear before the world in the shape of that charming and expressive instrument known to us all under the familiar appellation of the *pianoforte*.

CHAPTER VII.

THE CLAIMANTS TO THE INVENTION OF THE PIANOFORTE.

It was within a few years of each other, that, by a remarkable coincidence, three makers, in three different parts of the world, conceived the idea of the pianoforte. The one was an Italian, the other a Frenchman, and the third a native of Germany. Marius, the French manufacturer, and Schröter, the German organist, have hitherto had the advantage of priority of date conceded to them, whilst the claims of Bartolommeo Cristofali, of Padua, have been almost entirely overlooked.

Cristofali has an able advocate in the Count G. R. Carli, an elegant writer of the last century, who relates that he (Cristofali) invented the improvement during his stay at Florence, in the year 1718. The essay on music, which is to be found in the Milanese edition of Carli's works, published in eighteen volumes, 1784-7, contains the following spirited passage :—“ From the organ we pass readily to the clavicembalo—an instrument always progressing towards perfection, and much improved by Bartolommeo Cristofori (*i. e.* Cristofali), a Paduan, who added hammers to the mechanism ; of which *great invention* we are so forgetful that we have even believed it a new thing, bringing it here from Germany and England, and receiving it as an unique production of those fortunate regions which are destined to illuminate us with our own Italian lights. Thus it is that we have never known how to preserve any single thing for our own honour.”

The Count's error, as to the exact date, has caused much confusion, and has led to Cristofali's claims for *priority* of invention being ignored. The discovery which the Count places in the year 1718, had been made known to the public in 1711.

Bartolommeo Cristofali was born at Padua, in 1683, and settled at Florence in

1710, as “ harpsichord-maker to the Grand Duke of Tuscany.” Nothing seems to be known of his career, and but for the curious account of his invention of the pianoforte in the *Giornale de’ Litterati d’Italia*, Venice, 1711 (tom. v, p. 144), his name would hardly have been remembered.* The article in question was written by the celebrated Scipione Maffei,† and we feel proud in being able to present it to the reader *entire*, in the original language, and with an English translation. It is certainly a great curiosity, and will, no doubt, be read with interest.

“NUOVA INVENZIONE D’UN GRAVECEMBALO COL PIANO E FORTE; AGGIUNTE ALCUNE CONSIDERAZIONI SOPRA GLI STRUMENTI MUSICALI.

“Se il pregio delle invenzioni dee misurarsi dalla novità, e dalla difficoltà, quella, di cui siamo al presente per dar ragguaglio, non è certamente inferiore a qualunque altra da gran tempo in quà si sia veduta. Egli è noto a chiunque gode della musica, che uno de’ principali fonti, da’ quali traggano i periti di quest’arte il segreto di singolarmente dilettar chi ascolta, è il piano, e’l fortezzo, sia nelle proposte e risposte, o sia quando con artificiosa degradazione lasciandosi a poco a poco mancar la voce, si ripiglia poi ad un tratto strepitosamente: il quale artificio

“NEW INVENTION OF A HARPSICHORD, WITH THE *PIANO* AND THE *FORTE*; ALSO SOME REMARKS UPON MUSICAL INSTRUMENTS.

“If the value of inventions is to be measured by the novelty and difficulty, that of which we are now to give an account is certainly not inferior to any that has been discovered for a long time. It is known to every one who delights in music, that one of the principal means by which the skilful in that art derive the secret of especially delighting those who listen, is the piano and forte in the theme and its response, or in the gradual diminution of tone, little by little, and then returning suddenly to the full power of the instrument; which artifice is frequently used

* Fétis, in his *Biographie Universelle des Musiciens*, has a very meagre notice of Cristofali, whose name, he thinks, is more properly Cristofori. He also devotes an unprofitable article to this subject in the *Revue Musicale de Paris*, 1834. Fétis had evidently never seen the *Giornale de’ Litterati d’Italia*. In his work called *La Musique mise à la Portée de tout le Monde*, Brussels, second edition, 1839, he says:—“As early as 1716, a manufacturer at Paris, by the name of Marius, had presented to the Academy of Sciences, for their examination, two harpsichords, in which he had substituted little hammers for the strips of wood used to strike the strings. *Two years afterwards* (?), Cristoforo, a Florentine, improved upon this invention, and made the first piano which has served as a model for those which have since been made.” Although Cristofali’s claim to the invention has lately been disputed, it was acknowledged by Dr. Burney, in *Rees’s Cyclopædia* in v. PIANOFORTE. He says:—“There is a minute account of the invention and a description of the *pianoforte*,

in the *Giornale d’Italia* (tom. v. p. 144), printed at Venice, 1711. This instrument was invented at Florence, by Bartolommeo Cristofali, harpsichord-maker, a native of Padua, in the service of the Grand Duke of Tuscany.” In this statement he is followed by the *Oxford Encyclopædia*, *Wilkes’ Cyclopædia*, the fourth edition of the *Encyclopædia Britannica*, &c. &c.; yet, with the *fact* in print, in our Encyclopedias, we find Mr. George Hogarth (*Musical World*, July 15, 1836) giving a sketch of the “History of the Pianoforte,” and totally omitting the name of its inventor!

† It is referred to correctly in Forkel’s *Allgemeine Litteratur der Musik*, Leipzig, 1792, p. 262; Lichtenthal’s *Dizionarioe Bibliografia*, Milan, 1826, v. iv, p. 67; Walther’s *Musicalisches Lexicon*, 1732, p. 192, &c. The article is also said to have been translated into German, by Kœnig, and inserted in Mattheson’s *Critica Musica*, tom. ii, p. 335.

è usato frequentemente, ed a maraviglia ne' gran concerti di Roma con diletto incredibile di chi gusta la perfezione dell'arte. Ora di questa diversità ed alterazione di voce, nella quale eccellenti sono, fra gli altri, gli strumenti da arco, affatto privo è il gravecembalo; e sarebbe, da chi che sia, stata riputata una vanissima immaginazione il proporre di fabbricarlo in modo, che avesse questa dote. Con tutto ciò, una sì ardua invenzione è stata non meno felicemente pensata, che eseguita in Firenze dal Sig. BARTOLOMMEO CRISTOFALI, Padovano, Cembalista stipendiato dal Serenissimo Principe di Toscana. Egli ne ha finora fatti tre della grandezza ordinaria degli altri gravecembali, e son tutti riusciti perfettamente. Il cavare da questi maggiore o minore suono dipende dalla diversa forza, con cui dal sonatore vengono premuti i tasti, regolando la quale, si viene a sentire non soli il piano, e il forte, ma la degradazione, e diversità della voce, qual sarebbe in un violoncello. Alcuni professori non hanno fatto a quest'invenzione tutto l'applauso ch'ella merita; prima, perchè non hanno inteso, quanto ingegno si richiedesse a superarne la difficoltà, e qual maravigliosa delicatezza di mano per compirne con tanta aggiustatezza il lavoro: in secondo luogo, perchè è paruto loro, che la voce di tale strumento, come differente dall'ordinaria, sia troppo molle, e ottusa; ma questo è un sentimento, che si produce nel primo porvi su le mani, per l'assuefazione che abbiamo all'argentino degli altri gravecembali; per altro in breve tempo vi si adatta l'orecchio, e vi si affeziona talmente che non sa stancarsene, e non gratifica più i gravecembali comuni; e bisogna avvertire, che riesce ancor più soave l'udirlo in qualche distanza. E' stata altresì opposta eccezione di non avere questo strumento gran voce, e di non avere tutto il forte degli altri gravecembali. Al che si risponde prima, che ha però assai più voce ch'essi non credono, quando altri voglia, e sappia cavarla, premendo il tasto con impeto; e secondariamente, che bisogna saper prendere le cose per lo suo verso, e non considerare, in riguardo ad un fine, ciò ch'è fatto per un altro. Questo è propriamente strumento da camera, e non è però adattabile a una musica di chiesa, o ad una grand' orchestra. Quanti strumenti vi sono, che si usano in tali occasioni, e che non pertanto si stimano de' più dilettevoli? Egli è certo, che per accompagnare un cantante, e per secondare uno strumento, ed anche per un moderato concerto, riesce perfettamente; benchè non sia però questa l'intenzion sua principale, ma

and with marvellous effect, in the great concerts of Rome, to the incredible delight of such as enjoy the perfection of art. Now, of this diversity and alteration of tone, in which instruments played by the bow especially excel, the harpsichord is entirely deprived, and it would have been thought a vain endeavour to propose to make it so that it should participate in this power. Nevertheless, so bold an invention has been no less happily conceived than executed in Florence, by Signor Bartolommeo Cristofali, of Padua, harpsichord-player, in the service of the most serene Prince of Tuscany. He has already made three, of the usual size of other harpsichords, and they have all succeeded to perfection. The production of greater or less sound depends on the degree of power with which the player presses on the keys, by regulating which, not only the piano and forte are heard, but also the gradations and diversity of power, as in a violoncello. Some professors have not given to this invention all the praise it deserves; because, in the first place, they did not see how much ingenuity was required to overcome the difficulty, and what marvellous delicacy of hand was required to adjust it with so much nicety; and, secondly, because it appeared to them that the tone of such an instrument was more soft and less distinct than the ordinary ones; but this is a feeling produced by first impressions of the clearer sound we have on other harpichords; but in a short time the ear so adapts itself, and becomes so charmed with it, that it never tires, and the common harpsichord no longer pleases; and we must add that it sounds yet more sweet at some distance. It has further been objected to this instrument, that it has not a powerful tone, and not quite so loud as other harpichords. To this may be answered, first, that it has more power than they imagine, if any one, who wishes and knows how to use it will strike the keys briskly; and, secondly, he should consider the object, the attainment of which has been so greatly desired, and not in a point of view for which it was not intended.

“This is properly a chamber instrument, and it is not intended for church music, nor for a great orchestra. How many instruments there are, used on such occasions, which are not esteemed among the most agreeable? It is certain that, to accompany a singer, and to play with one other instrument, or even for a moderate concert, it succeeds perfectly; although this is not its principal intention, but

si quella d'esser sonato a solo, come il liuto, l'arpa, le viole di sei corde, ed altri strumenti de' più soavi. Ma veramente la maggior opposizione, che abbia patito questo nuovo strumento, si è il non sapersi universalmente a primo incontro sonare, perchè non basta il sonar perfettamente gli ordinari strumenti da tasto, ma essendo strumento nuovo, ricerca persona, che intendene la forza vi abbia fatto sopra alquanto di studio particolare, così per regolare la misura del diverso impulso, che dee darsi a' tasti, e la graziosa degredazione, e tempo e luogo, come per iscegliere cose a proposito, e delicate, e massimamente spezzando, e facendo camminar le parti, e sentire i soggetti in più luoghi.

“Ma venendo alla struttura particolare di questo strumento, se l'artefice, che l'ha inventato, avesse così saputo descriverlo, come ha saputo perfettamente fabbricarlo, non sarebbe malagevole il farne comprendere a' lettori l'artificio: ma poichè egli non è in ciò riuscito, anzi ho giudicato impossibile il rappresentarlo in modo, che se ne possa concepire l'idea, e forza, ch' altri si ponga all' impresa, benchè senza aver più lo strumento davanti agli occhi, e solamente sopra alcune memorie fattesi già nell' esaminarlo, e sopra un disegno rozzamente da prima disteso.

“Diremo adunque primieramente, che in luogo degli usati salterelli, che suonano con la penna, si pone qui un registro di martelletti, che vanno a percuotere la corda per di sotto, avendo la cima, con cui percuotono, coperta di dante. Ogni martello dipende nel suo principio da una rotella, che lo rende mobile, e le rotelle stanno nascoste in un pettine, nel quale sono infilate. Vicino alla rotella, e sotto il principio dell' asta del martello vi è un sostegno, o prominenza, che ricevendo colpo per di sotto, alza il martello, e lo spinge a percuoter la corda con quella misura d'impulsione, e con quel grado di forza, che vien dato dalla mano; e quindi viene il maggiore o minor suono a piacere del sonatore; essendo agevole anche il farlo percuotere con molta violenza, a cagione che il martello riceve l'urto vicino alla sua impertiatura, che vuol dire, vicino al centro del giro, ch' egli descrive; nel qual caso ogni mediocre impulso fa salire con impeto un raggio di ruota. Ciò che dà il colpo al martello sotto l'estremità della prominenza suddetta, è una linguetta di legno, posta sopra una leva, che viene all' incontro del tasto, e ch' è alzata da esso, quando vien premuto dal sonatore. Questa linguetta non posa però sopra

rather to be played alone, like the lute, the harp, viols of six strings, and other most sweet intruments. But, really, the great cause of the opposition which this new instrument has encountered, is the general want of knowledge of how, at first, to play it; because it is not sufficient to know how to play perfectly upon instruments with the ordinary finger-board, but, being a new instrument, it requires a person who, understanding its capabilities, shall have made a particular study of its effects, so as to regulate the measure of force required on the keys and the effects of decreasing it, also to choose pieces suited to it for delicacy, and especially for the movement of the parts, that the subject may be heard distinctly in each.

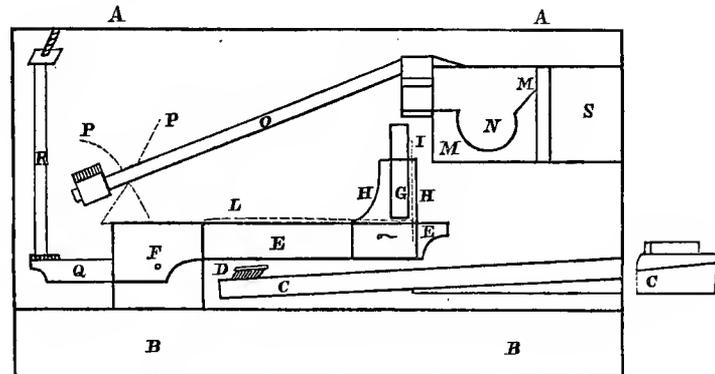
“But now, as to the particular construction of this instrument. If the inventor had known as well how to describe as he has to manufacture it, it would not be difficult to explain it to the reader; but as he has not succeeded in that, so I judge it impossible for me to represent it so that a due idea may be formed of the skill of the invention, especially as I have no longer the instrument before my eyes, but only some memoranda made while examining it, and a rough model laid before me.

“I will say, then, in the first place, that instead of the usual *jacks* that produce sound by quills, there is a row of little hammers that strike the string from below, the tops of which are covered with leather. Every hammer has the end inserted into a circular but, that renders it moveable, but these buts are partially imbedded, and strung together, in a receiver. Near the but, and under the stem of the hammer, there is a support or projecting part, that, receiving a blow from below, raises the hammer, and causes it to strike the string, with whatever measure of impulse, and whatever degree of force is given by the hand of the performer; and hence the sound is greater or less at the pleasure of the player. Also, it can be made to strike with much force, because the hammer receives the blow near its axis, and therefore even a slight touch will affect it readily. That which gives the blow to the hammer under the extremity of the forenamed projection is a little tongue of wood, placed upon a lever that meets the key, and that is raised by it when pressed by the player. This little tongue, however, does not rest upon the lever, but is slightly raised and strung on two jawbone-shaped pieces that are placed

la leva, ma n'è alquanto sollevata, e si sta infilzata in due ganasce sottili, che le son poste a questo effetto una per parte. Ma perchè bisognava, che il martello percossa la corda subito la lasciasse, staccandosene, benchè non ancora abbandonato il tasto dal sonatore; ed era però necessario, che il detto martello restasse subito in libertà di ricadere al suo luogo; perciò la linguetta, che gli dà il colpo, è mobile, ed è in tal maniera congegnata, che va in su, e percute ferma, ma dato il colpo subito scatta, cio passa; e quando lasciato il tutto, ella torna giù, cede, e rientra, riponendosi ancora sotto il martello. Questo effetto ha conseguito l'artefice con una molla di filo d'ottone, che ha fermata nella leva, e che, distendendosi, viene a battere con la punta sotto la linguetta, e facendo alquanto di forza, la spinge, e la tiene appoggiata a un altro filo d'ottone, che ritto, e fermo le sta dal lato opposto. Per questo appoggio stabile, che ha la linguetta, e per la molla, che ha sotto, e per l'imperniatura, che ha dalle parti, ella si rende ora ferma, ed ora pieghevole, secondo il bisogno. Perchè i martelli ricadendo dopo la percossa non rifavellissero, e ribattessero nella corda, si fanno cadere, e posare sopra una incrocatura di cordoncini di seta, che quietamente li raccoglie. Ma perchè in questa sorte di strumenti è necessario spegnere, cioè fermare il suono, che, continuando, confonderebbe le note che seguono, al qual effetto hanno le spinette il panno nelle cime de' salterelli; essendo anche necessario in questo nuovo strumento l'ammorzarlo affatto, e subito; perciò ciascheduna delle nominate leve ha una codetta, e sopra queste codette è posto un filare, o sia un registro di salterelli, che dal loro ufizio potrebbero dirsi spegnitoj. Quando la tastura è in quiete, toccano questi la corda con panno, che han su la cima, ed impediscono il tremolare, ch'essa farebbe al vibrarsi dell'altre sonando; ma compreso il tasto, ed alzata da esso la punta della leva, viene per conseguenza ad abbassarsi la coda, ed insieme lo spegnitojo, con lasciar libera la corda al suono, che poi s'ammorza lasciato il tasto, rialzandosi lo spegnitojo stesso a toccar la corda. Ma per conoscere più chiaramente ogni movimento di questa macchina, e l'interno suo artificio, si prenda per mano il disegno, e si osservi a parte a parte la denominazione di esso.

for this purpose one on each side. But as it was necessary that the hammer, having struck the string, should instantly quit it, although the key was still under the finger of the player, and the hammer should be in readiness to return to its place; therefore the little tongue that gives the blow is made moveable, and so connected that it moves up and strikes firmly; but, having struck the blow, it suddenly becomes loose—that is, it moves on; and, when entirely free, it returns to its place under the hammer.

The inventor has obtained this effect by a spring of brass wire that he has fastened in the lever, and which, distending itself, strikes with the point under the tongue, and, with some force, pushes it and holds it pressed against another brass wire, which stands erect and firm on the opposite side. By this firm support to the tongue, and by the wire which is under it, also by the balance of the whole, it becomes at one time firm, and at another pliable, just as may be required. In order that the hammers, in falling back after the blow, should not strike the string a second time, and so repeat the sound, they are made to fall and rest upon little strings of silk crossed, which receive them without noise. But because, in instruments of this description, it is necessary to stop the sound of the strings, which, by continuing to vibrate, would confuse the notes that follow, for which purpose spinets have cloth at the ends of the jacks; and it being also necessary in this new instrument to check it entirely and suddenly; therefore, each of the aforesaid levers has a little tail-piece, and on these tail-pieces a register of jacks is placed, which, from its use, might be called the damper. When the keys are at rest, these touch the string with cloth, which is on the top of them, and they prevent the vibration which would be caused by the striking of other strings; but when the key is pressed, and the point of the lever is raised, the tail-piece is consequently lowered, and with it the damper, so as to leave the string free to vibrate; but this ceases so soon as the key is quitted, and the damper again rises so as to touch the string. However, in order to understand more clearly every movement of this mechanism, and its internal contrivance, let the reader examine the diagram, and observe the accompanying description.



SPIEGAZIONE DEL DISEGNO.

- A. Corda.
- B. Telaio, o sia pianta della tastatura.
- C. Tasto ordinario, o sia prima leva, che col zocchetto alza la seconda.
- D. Zocchetto del tasto.
- E. Seconda leva, alla quale sono attaccate, una per parte, le ganasce, che tengono la linguetta.
- F. Perno della seconda leva.
- G. Linguetta mobile, che alzandosi la seconda leva, urta e spinge in su il martello.
- H. Ganasce sottili, nelle quali è impernata la linguetta.
- I. Filo fermo d'ottone schiacciato in cima, che tien ferma la linguetta.
- L. Molla di fil d'ottone, che va sotto la linguetta, e la tiene spinta verso il filo fermo, che ha dietro.
- M. Pettine, nel quale sono sequitamente infilati tutti i martelletti.
- N. Rotella del martello, che sta nascosta dentro al pettine.
- O. Martello, che spinto per di sotto dalla linguetta va a percuoter la corda col dante, che ha su la cima.
- P. Incrocatura di cordoncini di seta, fra' quali posano l'aste de martelli.
- Q. Coda della seconda leva, che si abbassi nell'alzarsi la punta.
- R. Registro di salterelli, o spegnitoi, che, premuto il tasto, si abbassano, e lasciano libera la corda, tornando subito a suo luogo per fermare il suono.
- S. Regolo pieno per forza del pettine.

EXPLANATION OF THE DIAGRAM.

- A. String.
- B. Frame of the key-board.
- C. The key or first lever, which at its extremity raises the second lever.
- D. The block on the first lever by which it acts.
- E. The second lever, on each side of which is a jawbone-shaped piece to support the little tongue or hopper.
- F. The pivot of the second lever.
- G. The moveable tongue (hopper), which, being raised by the second lever (E), forces the hammer upwards.
- H. The jawbone-shaped pieces between which the hopper is pivoted.
- I. The strong brass wire pressed together at the top, which keeps the hopper in its place.
- L. The spring of brass wire that goes under the hopper and holds it pressed firmly against the wire which is behind it.
- M. The receiver, in which all the butts of the hammers rest.
- N. The circular part of the hammers, which rests in the receiver.
- O. The hammer, which, when pressed upwards by the hopper, strikes the string with the leather on its top.
- P. The strings of silk, crossed, on which the stems, or shanks, of the hammers rest.
- Q. The end of the second lever (E), which becomes lowered by the act of striking the key.
- R. The dampers, which are lowered when the key is touched, leaving the string free to vibrate, and then returning to their places, stop the sound.
- S. Part of the frame to strengthen the receiver.

Dopo di tutto questo è da avvertire, che il páncone, dove si piantano i bischeri, o pirdi di ferro, che tengono le corde, dove negli altri graveceembali è sotto le corde stesse, qui è sopra, e i bischeri passano, e le corde vi si attaccano per di sotto, essendovi bisogno di più sito nel basso, affinché v'entri tutta la macchina della tastatura. Le corde sono più grosse delle ordinarie, e perchè il peso non nocesse al fondo, non sono raccomandate ad esso, ma alquanto più alto. In tutti i contatti, che vale a dire in tutti i luoghi, dove si potrebbe generar rumore, è impedito con cuojo, o con panno; specialmente ne' fori, dove passano perni, è posto ha per tutto con *singolar maestri del dante*, e il perno passa per esso. Quest' invenzione è stata dall' artefice ridotta ad effetto anche in altra forma, avendo fatto un altro graveceembali più col piano e forte, con differente, e alquanto più facile struttura, ma nondimeno è stata più applaudita la prima.

Essendo questo ingegnoso uomo eccellente anche nel lavorare graveceembali ordinari, merita di notarsi, com' egli non sente coi moderni artefici, chi per lo più gli fabbricano non solo senza rosa, ma ancora senza sfogo alcuno in tutto il casso. Non già ch' egli creda necessario un sì gran foro, come erano le rose fattevi dagli antichi, nè che stimi opportuno il forargli in quel sito, ch' è sì esposto a ricever la polvere, ma suol' egli farvi due piccoli buchi nella fronte, o sia nel chiudimento davanti, che restano occulti, e difesi; ed afferma esser necessario in alcuna parte dello strumento un tale sfogatojo, perchè nel sonare il fondo deve muoversi, e cedere; e chi il faccia, si conosce dal tremare che farà ciò che vi porrai sopra, quando altri suona; ma se il corpo non avrà foro alcuno, non potendo l'aria ch' è dentro cedere e uscire, ma standosi dura e forte, il fondo non si muove, e quindi il suono ne viene alquanto ottuso, e breve, e non risonante. Là dove fattovi un buco, vedrai tosto dar più il fondo, e restar la corda più alta, e sentirai maggior voce, e accostando le dita al predetto foro, quando altri suona, sentirai far vento, e uscirne l'aria. A questo proposito non vogliamo lasciar di dire, che ricavandosi, come è noto, bellissimi lumi per la Filosofia naturale dall' indagare le affezioni, e gli effetti dell' aria, e del moto; un fonte grandissimo, benchè finora affatto sconosciuto, di scoprimenti, e di cognizioni intorno a ciò esser potrebbe l'osservar sottilmente le diverse, e mirabili operazioni dell' aria impulsa negli strumenti musicali; esaminando la fab-

After this, it is to be observed that the plank in which the iron pins are fixed that hold the strings, and which, in harpsichords, is under the strings, is above in this, and the pins come through it, and the strings are attached to them below, there being more need of space in the bass to admit the whole of the mechanism of the key action. The strings are thicker than usual, and, in order that their tension may not injure the bottom, they are not trusted to this, but fixed somewhat higher. In all points of contact, or wherever any rattle might occur, it is prevented by leather and by cloth, especially in the holes through which the centres pass, there is placed everywhere [con *singolar maestri del dante*?], and the centre passes through it. This invention has also been effected in another form, the inventor having made another harpsichord, with the piano and forte, in a different and somewhat more simple shape; but, nevertheless, the first has been more approved.

This ingenious man, being also excellent in the manufacture of ordinary harpsichords, deserves notice, because he does not agree with the modern makers, who, for the most part, manufacture them not only without a *rose* in the centre, but even without any other escape for the sound throughout the case. Not that he thinks it necessary to make the hole so large as the roses of ancient manufacturers, nor does he think it desirable to make the opening in that part of the instrument, because it is exposed to dust; but he makes two small apertures in the front, so that when the instrument is closed, they are concealed and protected from it. He asserts that such apertures are necessary in some part of the instrument, because, when played on, the sounding-board ought to vibrate; and that it does so, is known by the trembling of anything you may place upon it when any one plays: but, if there were no opening, the air, not having an escape, could not yield, but would remain fixed; and hence the sound would be somewhat obtuse and short, instead of resonant. When, however, a hole is made, you will soon see the sounding-board give more, and the string remain higher, and you will hear a stronger (fuller) tone; and by placing the finger close to the aforesaid opening, you may feel the vibration and the exit of the air. I may here remark that, profiting by the investigations of natural philosophy into the inclinations and effects of air and motion, a great

brica loro, e riflettendo da che nasca in essi la perfezione, o 'l difetto, e da che se ne alteri la costituzione; come, a cagion d'esempio, la variazion del suono, che succede negli strumenti, che hanno l'anima, quai son quelli da arco, se questa un pocolino si muove di sito; divenendone tosto l'una corda più sonora, al'altra più ottusa; l'alterazione, e la diversità delle armonie, che ricevono gli strumenti dalle diverse misure, e singolarmente i graveceembali dall' essere il loro fondo alquanto più grosso, e alquanto più sottile, e così di mill' altre considerazioni. Non è anche da tralasciare, che tenendosi universalmente, che siano sempre imperfetti i graveceembali nuovi, e che acquistino perfezione solamente col lungo tempo; pretende questo artefice, che si possa lavorargli in modo, che rendano subito sonora voce non meno degli strumenti vecchi. Afferma egli, che il non risonar bene de' nuovi nasca principalmente dalla virtù elastica, che per qualche tempo conservano la sponda incurvata, ed il ponte; perchè, finchè questi fanno forza sul fondo per restituirsi, la voce non vien perfetta: che però se questa virtù elastica sarà loro tolta interamente prima di porgli in opera, verrà subito a levarsi questo difetto, com' egli in pratica esperimenta. Contribuirà ancorà la buona qualità del legno; onde il Pesaro si cominciò a servirsì de' cassoni vecchi, che trovavo sopra i granai di Venezia, e di Padova, e ch' erano per lo più di cipresso di Candia, o di Cipro.

Non sarà qui discaro agli amatori della musica, che alcuna cosa si dica anche d'un altro raro graveceembali, che si trovò pure in Firenze in mano del Sig. Casini, Maestro lodatissimo di Cappella. Ha questo cinque tastami, cioè cinque interi ordini di tasti, l'uno sopra l'altro gradatamente; e si può però dire strumento perfetto, essendovi divisa ogni voce ne' suoi cinque quinti; onde, che si può in esso far la circolazione, e scorrere per tutti i tuoni senza urtare in dissonanza alcuna, e trovando sempre tutti gli accompagnamenti perfetti, come fa sentire il suo possessore, che lo ricerca eccellentemente. Gli ordinari graveceembali, come tutti gli strumenti, che hanno tasti, sono molto imperfetti, a cagione, che non essendo le voci divise nelle sue parti, molte corde vi sono, che non hanno quinta giusta, e bisogna serversi degli stessi tasti per diesis, e per b molli; per ischivare in parte il quale errore alcune vecchie spinette si vedono, massimamente dell' Undeo, con alcuni de' neri tagliati, e divisi in due, del che non comprendono

amount of knowledge might be gained by closely observing the various and wonderful effects on air set in motion by musical instruments; by examining the form of its vibrations, and reflecting whence arises the perfection or imperfection of their sounds, and how to alter them; as, for instance, the variations of sound in instruments capable of expression, such as those played with a bow, which, if the position be slightly changed, becomes in one place sonorous, and in another obtuse; also, the alteration and diversity of sound in different measurements, and especially in harpsichords, from the bottom of the case being thicker or thinner, and from many other considerations. It must not be forgotten that, the universal opinion being that new harpsichords are always imperfect, and that they acquire perfection only by age, this manufacturer pretends that he can make them in such a manner as to be immediately as sonorous as old instruments. He asserts that the want of vibration in new instruments arises principally from the elasticity of the wood, that for some time keeps the sides and the bridge uninfluenced by pressure, and that, until they press upon the frame, the sound remains imperfect; that if this elasticity be entirely taken from them before employing them in the manufacture, this defect will immediately be removed, as he finds by experience. The good quality of the wood will also contribute; wherefore Pesaro made use of old chests that he found in the granaries of Venice and Padua, which were for the most part of cypress wood from Candia and Cyprus.

It will not be here disagreeable to lovers of music to hear something of another rare harpsichord, which is in Florence, in the hands of Signor Casini, a most esteemed Maestro di Cappella. This has five key-boards—that is, five entire sets of keys, one above the other, and which may be called a perfect instrument, the five fifths in every octave being tuned perfect (instead of only one, as then the custom), so that you may modulate and run through all the keys without any dissonance, and always finding the accompaniment perfect, as may be experienced by hearing the possessor play upon it, who displays it to perfection. Ordinary harpsichords, like all instruments with fingerboards, are very imperfect; because, the tuning not being equal in all keys, there are many keys that have not a perfectly tuned fifth, and we are obliged to employ the same key for a sharp and for a flat; to avoid which defect, there

la cagione molti professori; ed è veramente, perchè dovend per modo d' esempio dal diesis di Ge sol-re-ut, al b molle A la-mi-rè corrervi almeno un quinto di voce di differenza, v' è necessità di due corde. Ma nasce dall' imperfezione accennata, che un gravecembalo, o tiorba non si può interamente accordare con un violino, benchè sonando in concerto l' orecchio non se n' avvegga; e ne nasce parimente, che ne i più de' neri non si compone, e solo vi si va con riserva, e da alcuni Maestri, solamente quando alla parola ben conviene il falso, e 'l disgustoso della voce. Questa imperfezione degli strumenti, che hanno tasti cagiona altresì, che nell' udir sonare s' accorgeremo molte volte, quando il componimento è spostato, come parla il dialetto Fiorentino, o come dice la lingua comune, trasportato; perchè venendo a cadere in quelle corde, che non hanno quinta, la falsità del suono offende l' orecchio. Non così avverrà nel violino, che non avendo tasti, può trovar tutto a suo luogo, e in qual si sia tuono far sentir le voci perfette. Il gravecembalo adunque, di qui parliamo, oltre al diletto del perfetto suono, può esser utile a molte speculazioni su la teorica della musica; nè si credesse che troppo difficile fosse la sua accordatura, mentre anzi è più facile, attesochè procede sempre per quinte perfette; là dove ne gli strumenti ordinari, bisogna aver attenzione di far che cali la quinta, che crescano la quarta, e la terza maggiore, con più altre avvertenze.

are some old spinets, chiefly those of Undeo, with some of the black keys divided down the middle, the reason for which many professors do not understand; and it is truly because there being the fifth of a note difference between G sharp and A flat, there is a necessity for two strings.

However, owing to the before-named imperfection, a harpsichord or a theorbo lute cannot be tuned perfectly like a violin; although, when used in concert, the ear does not detect the imperfection; and hence it arises that there are no compositions in keys that require a great number of sharps or flats, that they are used sparingly, and, by some masters, only when an imperfect sound suits the expression of the words, or harshness is to be expressed by the voice. This imperfection in instruments that have finger-boards is also often perceptible, when the accompaniment is transposed; because, by changing into keys that have ill-tuned fifths, the imperfections of sound offend the ear. It will not so happen with the violin; because, not having a finger-board, the notes may be sounded in the right position, and the sound be perfect in any key. The above-named harpsichord, therefore, besides possessing the charm of perfect intonation, may be useful in many experiments on the theory of music; nor should it be supposed that its tuning is too difficult, for it is really more easy, in consequence of the fifths being tuned perfect; whilst, in the ordinary instruments, it is necessary to pay attention to the flattening of the fifths and the sharpening of the fourths and major thirds, as well as to other things.

Marius,* the French manufacturer, the next competitor for the invention of the pianoforte, submitted his instruments for examination to the Académie des Sciences in the month of February, 1716. In the *Recueil des Instruments et Machines approuvées par l'Académie Royale des Sciences*, published by this learned Society, under the year 1716, we find, in Nos. 172, 173, and 174, engraved plans of Marius's four *clavecins à maillets*, with a description of the instruments. This artist had already been known to the public, in 1700, by his harpsichords in three pieces, so constructed as to be able to shut into each other for convenience in travelling.

* Fétis has, singularly enough, omitted the name of this maker in his *Biographie Universelle des Musiciens*, although he refers to it under the article CRISTOFORI. The last edition of the *Encyclopædia Britannica*, in a most

wretched article upon the pianoforte, speaks of Cristofali and Schröter, but makes no mention of Marius. It is much to be lamented that greater care is not bestowed upon works intended for reference.

The *clavecins à maillets* evinced considerable invention and ability. They consisted of four instruments, one in the form of the common harpsichord; another with a mechanical contrivance above the strings; the third, vertical; and the fourth, in which both jacks and hammers were used. The first differed from the clavichord only in this, that each tone of the instrument was furnished with three strings, and that the hammers, the weight of which restored the key to its position after the string had been struck, were faced with leather for the purpose of softening the tone. As for the rest, the hammer, which stood perpendicularly upon the key, was carried directly to the string by the key itself, without any intermediary aid, and without an escape-movement. In the second instrument, he approached still nearer to the desired result, by arranging the hammers in such a manner that they swung in a kind of stirrup. By this means they were independent of the keys, which, meeting them in their course, impelled them against the string; and the hammer fell after striking the string, even though the performer kept his finger upon the key. By different combinations, Marius had rendered his mechanism fit to be placed either above or below the strings. His third *clavecin à maillets* was a vertical one, in which the key impelled a rod, furnished with the hammer, directly upon the string. His last invention, as we have stated, united the two principals of the jack and the hammer.

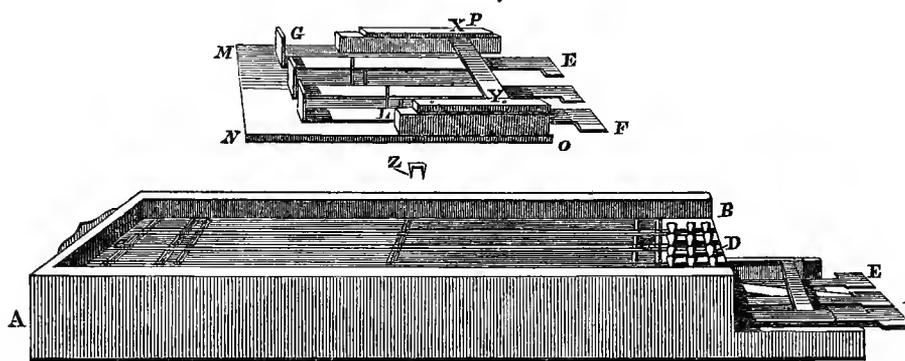
The following are Marius's own descriptions and drawings from the *Machines et Inventions approuvées par l'Académie Royale des Sciences, depuis son établissement jusqu'à present; avec leur Description.* Tome Troisième, à Paris, 1735, 4to.

CLAVECIN À MAILLETS.

INVENTÉ PAR M. MARIUS.

HARPSICHORD WITH HAMMERS.

INVENTED BY M. MARIUS.



CETTE methode de tirer le son du clavecin, consiste à substituer des maillets à la place des sautereaux. Le corps du clavecin est ici representé par la caisse A B ; cette caisse porte un fonds à la moitié de sa hauteur : c'est sur ce fonds que sont tendues des cordes fixées par des pointes à l'extrémité c, and bandés par des vis à l'extremité d. Là les côtés de la caisse sont coupés pour recevoir dans le fond une petite boîte M N O P, qui contient le clavier ; I O, L P, sont des bords à coulisse dans lesquels on fait entrer une barre x y, sous laquelle se trouve le centre de mouvement des touches E F ; ces touches prolongées en dedans de la caisse, portent à l'endroit G des maillets qui répondent aux rangées de cordes posées sur la caisse. L'on voit à l'inspection de cette figure que les maillets peuvent être de différente épaisseur et doivent toujours être posés perpendiculairement aux extrémités des touches qui doivent les élever. A l'endroit I L est une rangée des chevilles fixées à chaque côté des touches, et qui servent à les tenir toujours dans leur direction verticale ; c'est autour d'un étrier tel que z que chaque touche peut s'élever et s'abaisser. On observera de tenir le maillet plus pesant que le reste de la touche, afin qu'il puisse descendre plus promptement après le choc. L'on voit le chemin et le mouvement que chaque maillet fait par la troisième touche du clavier de la première figure en allant de F vers E ; le maillet de cette touche est représenté frappant les cordes qui lui répondent.

THIS method of producing the sound from the harpsichord consists in substituting hammers for jacks. The body of the harpsichord is here represented by the case A B ; this case has a sounding-board in its centre ; it is on this sounding-board that the strings are stretched, fixed by points to the extremity c, and by screws to the extremity d. The sides of the case are cut to receive in the bottom a small box M N O P, which contains the key-board ; I O L P are the edges with grooves, in which is placed a bar, x y, under which is placed the centre movement of the keys, E F ; these keys are prolonged beyond the case, having at the spot G hammers corresponding with the rows of strings placed in the case. On inspecting the diagram, we observe that the hammers are of different thicknesses, placed perpendicularly to the ends of the keys which lift them up. At the spot I L, is a row of pegs fixed to each side of the keys, and which serve to hold them in their vertical direction ; it is around a stirrup such as z that each key should rise and fall. Care must be taken that the hammer is heavier than the rest of the key, in order that it may descend more promptly after having struck the string. The direction and movement each hammer makes, is seen by the third key of the key-board (going from F towards E) in the above diagram : the hammer of this key is represented striking the string to which it belongs.

L'on croit que par des clavecins de cette construction, l'on pourra tirer des sons plus ou moins aigus en employant des forces connues sur les touches suivant les différens tons et les différentes mesures indiquées par les pièces que l'on voudra exécuter.

Voici sur cette théorie différentes manières d'employer les maillets et de leur donner toutes les positions possibles.

It is thought that on harpsichords of this construction sounds more or less sharp (or acute) can be produced, even by employing the usual power on the finger-board according to the different keys and the different marks of time indicated on the pieces we wish to perform.

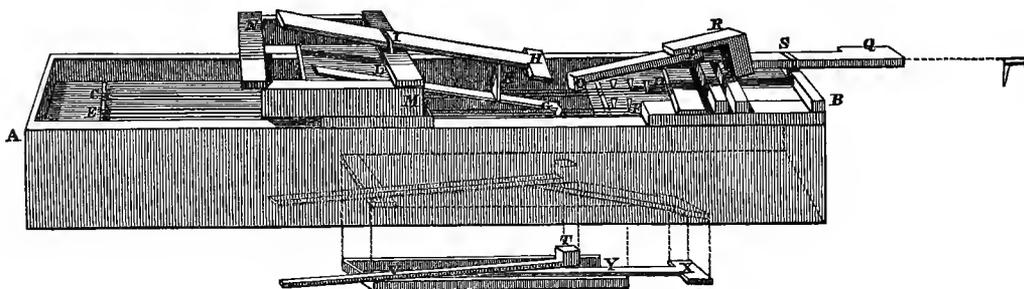
According to this theory, there are different modes of employing the hammers, and of giving them all possible positions.

AUTRE CLAVECIN À MAILLETS.

INVENTÉ PAR M. MARIUS.

ANOTHER HARPSICHOED WITH HAMMERS.

INVENTED BY M. MARIUS.



A B est une caisse qui représente le clavecin ; sur cette caisse sont deux rangs de cordes c d, e f. Les maillets sont ici représentés dans différentes positions, c'est-à-dire, placés pour tirer le son en dessus, et une en-dessous ; deux manières de le tirer en-dessus, et une en-dessous. Par exemple, le maillet g est en-dessus, et frappe sur la corde au moyen de la touche h mobile au point i ; le petit montant k est attaché à la touche h, et sert à faire frapper le marteau g, ce marteau étant attaché à l'endroit l par un petit étrier de fer, autour duquel il se meut librement. L'on peut faire regner le long du clavecin un semblable clavier, posé au-delà de ses bords sur une caisse transversale telle que m n, sur le devant de laquelle seront posés tous les maillets et toutes les touches.

Le maillet o frappe sur le rang de cordes d c ; ce maillet est aussi attaché en p par un étrier w semblable aux autres, autour duquel il se peut mouvoir, de même que la touche q mobile au point s. Lorsque l'on pèse sur la touche q, l'extrémité r du maillet se lève, le maillet o frappe sur les cordes et en tire le son. Il faudra observer

A B is the case which represents the harpsichord ; on this case are two rows of strings c d, e f. The hammers are here shown in different positions—that is to say, some to strike down and one to strike up. For example, the hammer g is above and strikes on the string by means of the key h, which is moveable at the point i ; the small upright k is attached to the key h, and causes the hammer g to strike ; the hammer being attached to the spot l by a small band of iron, around which it moves freely. All the keys of the harpsichord may be similarly arranged on a key-board, such as m n, on the front of which the hammers and all the keys can be placed.

The hammer o strikes on the row of strings d c ; this hammer is also attached at p by a band, w, similar to the others, around which it can move, the same as the key q is moveable at the point s. When we strike the key q, the extremity of the hammer r rises ; the hammer o strikes the strings, and produces the sound. It must be ob-

dans la construction d'un semblable instrument, que toutes les queues des maillets soient plus pesantes que les têtes, afin que le maillet après avoir frappé, se relève de lui-même et ne laisse point de tons faux.

La deuxième figure est pour faire voir comment on peut établir un clavier, à maillets pour tirer le son en-dessous. Le maillet *r* est mobile au point *v*, et la touche *x* mobile en *r* : en ce cas il faut que la tête *r* du maillet soit plus pesante que la queue.

served, in the construction of such an instrument, that all the butts of the hammers are heavier than the heads, in order that the hammer, after having struck the string, may rise of itself, and leave no false tones.

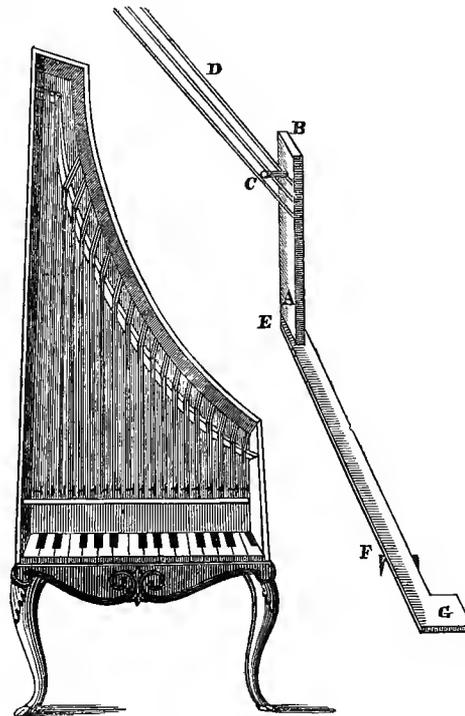
The second diagram is to show how a key-board can be made with hammers to produce the sound from below. The hammer *r* is moveable at the point *v*, and the key *x* is moveable at *r* : in this case it is necessary that the head of the hammer *r* should be heavier than the butt.

TROISIÈME CLAVECIN À MAILLETS.

INVENTÉ PAR M. MARIUS.

THIRD HARPSICHOED WITH HAMMERS.

INVENTED BY M. MARIUS.



Ce qu'il y a de particulier dans ce clavecin est, que le sautereau comme *A B* porte une cheville *c* qui frappe les cordes en-dessous, de même que les maillets que l'on a décrits précédemment. A quelque endroit autour de la cheville est un morceau d'étoffe pour étouffer le son, comme on le pratique aux autres clavecins.

L'extrémité *A* du sautereau est posée sur le bout de la touche *E F G*, dont le centre de mouvement est en *F*. Il

THIS harpsichord differs from the others, inasmuch that the jack *A B* has a peg, *c*, which strikes the strings underneath, in the same manner as the hammers which we have described in the preceding inventions. At a particular spot round the peg, is a piece of stuff to stop the sound, as in other harpsichords.

The extremity *A* of the jack is placed on the end of the key *E F G*, of which the centre of movement is at *F*.

est nécessaire que ce centre soit le plus près qu'il sera possible de l'extrémité *c*, afin que le sautereau retombe avec plus de promptitude après avoir frappé les cordes ; par ce moyen on aura un son plus net. L'on voit par entre eux ces sortes de sautereaux.

L'avantage d'un clavecin construit de sautereaux semblables est, que la sujétion de les remplumer, se trouve supprimée.

It is necessary that the centre should be as near as possible to the extremity *c*, in order that the jack should fall with promptitude after having struck the strings : by this means a clearer tone will be produced. The jacks may be observed in the interior of the instrument.

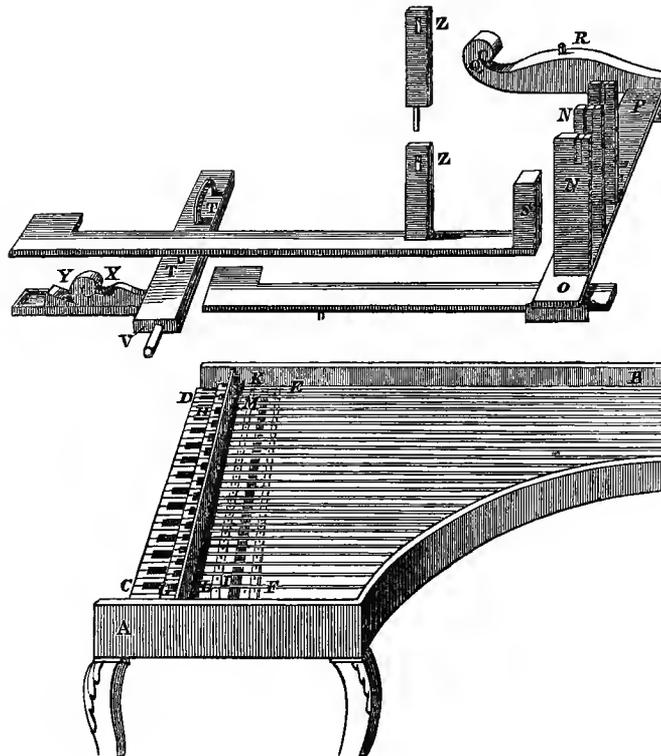
The advantage of a harpsichord constructed upon this principle is that the jacks will not require *re-quilling*.

QUATRIÈME CLAVECIN À MAILLETS
ET A SAUTEREAUX.

INVENTÉ PAR M. MARIUS.

FOURTH HARPSICHOED WITH HAMMERS
AND JACKS.

INVENTED BY M. MARIUS.



Après que M. Marius eut trouvé les maillets, il les substitua à la place des sautereaux en donnant à ces maillets différentes positions, comme il vient d'être dit sur les planches précédentes : il trouva aussi le moyen de placer deux jeux dans un seul clavecin, en y employant les maillets et les sautereaux, et faisant néanmoins ces deux

AFTER M. Marius had discovered the hammers, he substituted them in the place of the jacks, by giving to these hammers different positions, as shown in the preceding plate. He discovered also the means of placing two actions in a single harpsichord, by employing both hammers and jacks, and making, nevertheless, these two

jeux tout-à-fait indépendans l'un de l'autre ; c'est-à-dire, que les maillets peuvent servir seuls, de même que les sautereaux, et tous les deux à la fois quand on le veut ; ce qui s'exécute en cette sorte.

A B est un corps de clavecin ordinaire ; le clavier inférieur C D à rapport a la rangée de sautereaux E F, et le clavier supérieur G H fait joüer la rangée de maillets J K ; la troisième rangée, L M, contient des espèces de sautereaux fixés sur les touches des mêmes maillets, et garnis de drap, afin d'étouffer le son après que le maillet a frappé. Les sautereaux N N passent au travers d'une planche O P posée sur des tasseaux à coulisses, dans lesquelles cette planche peut se mouvoir horizontalement suivant la largeur du clavecin, au moyen de la pièce P Q mobile au point R, de manière qu'en poussant cette pièce par son extrémité Q, l'on fait avancer les sautereaux, qui pour lors répondent au-dessous des cordes, et sont en état d'en tirer le son ; et au contraire lorsque l'on ne voudra plus des sautereaux, on tirera à soi la pièce, les touches sur lesquelles elles posent sont assez larges pour leur permettre ce mouvement. Voici quel est le mouvement des maillets, pour s'en servir, et pour les supprimer.

Le maillet S est fixé sur la touche qui fait la bascule sur un étrier T fixé sur une traverse W, aux extrémités de laquelle sont des tourillons qui lui permettent de tourner ; à cette traverse l'on fixe une pièce X qui s'étend à chaque côté du clavier, et sous laquelle on fait couler un coin Y pour élever ou abaisser tous les maillets ensemble ; c'est-à-dire, que si on laisse la traverse dans son état naturel, les maillets toucheront les cordes, et lorsque l'on voudra les supprimer, on poussera le coin Y sous la pièce X, et pour lors les maillets braisseront et ne toucheront plus aux cordes. Le sautereau Z est posé sur la touche à quelque distance du maillet ; ce sautereau doit être construit, et placé de manière qu' à l'instant du coup, il soit prêt à étouffer le son.

actions independent of each other ; that is to say, the hammers could be used alone, or the jacks alone, or both together, at pleasure, which is done in this way.

A B is the body of the ordinary harpsichord ; the lower key-board, C D, belongs to the row of jacks E F, and the one above, G H, moves the row of hammers J K ; the third row, L M, contains a kind of jack fixed on the keys of the same hammers, and covered with cloth in order to check the sound after the hammers have struck the strings. The jacks N N pass across a plank, O P, placed on brackets with grooves, in which this plank can move horizontally (according to the size of the harpsichord), by means of the piece P Q moveable at the point R, in such a manner that, in moving this piece by its extremity, Q, the jacks are made to advance, and are thereby prepared underneath the strings, and in a state to produce the sound. When you do not require to use the jacks, draw towards you the *piece* ; the keys on which they rest are large enough to allow this movement. Hence the movement of the hammers, and the mode of suppressing them.

The hammer S is fixed on the key which see-saws on a stirrup, T, fixed on a cross piece, W, at the extremities of which are pivots which allow it to turn ; to this cross piece is fixed a piece, X, which reaches to each side of the key-board, and under which runs a wedge, Y, to raise or lower all the hammers together ; that is to say, if the cross-piece is left in its natural state, the hammers will touch the strings, and when you wish not to use them, you push the wedge Y under the piece X, and by that means the hammers will be lowered so as not to touch the strings. The jack Z is placed on the key at some distance from the hammer ; this jack should be constructed and fixed in such a manner that, the instant the blow is struck, it should be ready to damp the sound.

The remaining claimant to the invention of the pianoforte is Christopher Gottlieb Schröter. This eminent artist was born August 10, 1699, at Hohenstein, on the frontiers of Bohemia. His father, an organist and professor of music, taught him the rudiments of the science, in which he progressed so rapidly, that at the age of seven

he was admitted into the Chapel Royal of Dresden. Under the able tuition of Schmidt the Chapel Master, and Behnisch the theorist, he completed his musical education. According to the wish of his mother, young Schröter next studied theology at Leipzig; but this not suiting the bent of his inclination, he took advantage of her death and returned to the study of music. Once more visiting Dresden, he became acquainted with the celebrated composer, Antonio Lotti, in whose service he accepted the post of secretary. In transcribing and studying the works of the most celebrated Italian composers, Schröter greatly improved his style and knowledge of music. Lotti returned to Italy in 1719, when the subject of our notice received the offer to accompany a German nobleman to England; this opened new fields of observation to our young aspirant, and he accordingly accepted it, returning to Dresden in 1724. He now determined to continue his researches into the science of music, which he had commenced under the able direction of Schmidt and Behnisch; and accordingly entered the University of Jena, where he completed his first work on the theory of music, which was well received by his professional brethren. After remaining about two years in that city, he obtained, without solicitation, the post of organist to the principal church at Minden; which appointment he resigned, in 1732, for that of "chief organist" at Nordhausen in Saxony. He died in the latter city, November, 1782, at the age of eighty-three.

Whilst a pupil of the School at the Holy Cross at Dresden, in 1717, Schröter is said to have constructed a model of a pianoforte, which was afterwards exhibited to the Court at Dresden. Although the Elector of Saxony then testified his approbation of the invention, Schröter received neither honour nor reward, and the new instrument remained in abeyance. Many years afterwards, in a letter, dated "Nordhausen, 22 September, 1738," printed in Lorenzo Mizler's *Musikalische Bibliothek*, vol. iii, p. 464, Leipzig, 1752, writing upon the mathematics of music, and laying down "rules on temperament for the use of organ builders and instrument makers who are ignorant of mathematics," he thus alludes to his invention: "Indeed some of these artists, who for several years have understood *one of my inventions*, have given it out as their own. In 1717, I constructed, at Dresden, after much consideration, the

model of a new clavier with *hammers*, partly with, partly without springs, upon which one at pleasure might play *loudly* or *softly*.”*

According to the late Professor Fischhoff, the mechanism of Schröter's invention was simple. The hammer consisted of a lever of about three inches and a half in length, moving on a pivot with a leather head; the lever rested near the pivot on a pin with a leather head, screwed into the further end of the finger key; and the pin was of such a length that, when the key was slowly pressed down, the face of the hammer came within about a quarter of an inch of the string; but, when the key was smartly struck, the hammer, by the rapid motion communicated, was thrown up to give the string a blow, and, instantly recoiling, fell on the leather head of the pin and left the string free to vibrate.

In another plan of Schröter's—for it seems he constructed two models—the hammers were placed *over* the strings; but the inventor himself considered this device impracticable, “because the metal springs which should bring back the hammer after striking, did not promise to be durable.”

It is singular that these three ingenious men, Cristofali, Marius, and Schröter, should have conceived the same idea, within a few years of each other, and without any apparent communication or collision. But the priority of invention is certainly due to the Italian maker, whose claims are now fully established.

The object of centuries was at length accomplished. The quill, pig's bristle, thorn, ivory tongue, leathern tongue, &c. were soon to be banished. A small hammer

* H. C. Koch, in his *Musikalisches Lexikon*, says, “the pianoforte was invented by J. C. Schröder, of Dresden, in Saxony, in the year 1717. He had a model made of this invention, and presented it to the Court of Dresden for inspection. The hammers recoiled, and were covered with leather. Some time after, Mr. G. Silbermann, a musical instrument maker, began to manufacture pianos, and succeeded in bringing them to a tolerable degree of perfection. It has been questioned, however, whether Schröder, or B. Cristofali, an instrument maker of Florence,

had the first idea of it; but the most authentic accounts establish indisputably the claim of Schröder to this ingenious invention.” Why did not this learned writer ascertain the *true* date of the *Giornale de' Litterati d' Italia*?

In Thalberg's “Remarks upon the Pianofortes,” in the Great Industrial Exhibition of 1851, printed in the *Reports of the Juries*, p. 326, the name of Schröter is altogether omitted in the great pianoforte-player's brief historical sketch.

was made to strike the string, and evoke a clear, precise, and delicate tone, unheard before. The “scratch with a sound at the end of it” was doomed to a lingering fate. The harpsichord had been changed into an instrument of *percussion*, and it only remained for later manufacturers to perfect, extend, and popularize the now “world-wide” pianoforte.

CHAPTER VIII.

THE PROGRESS OF THE PIANOFORTE ON THE CONTINENT.

THE pianoforte, upon its first introduction, was not successful. Nor can we wonder at this; the public is always slow at receiving innovations; "besides," as M. Fétis remarks, "the resources of the new instrument were not understood, and the keys required a greater delicacy of treatment than those of the harpsichord; in a word, it became necessary for musicians and amateurs to change their style of playing, a circumstance, of itself, sufficient to retard the success of the pianoforte."

Of Cristofali and Marius we hear nothing; their inventions seem to have been treated with neglect or indifference. Schröter was better appreciated by his fellow countrymen. Silbermann of Strasburg, Späett of Dresden, and Stein of Augsburg, followed up his discoveries; and it is to these makers that Schröter alludes, in the passage we have quoted from Mizler's *Musikalische Bibliothek*.

Godfrey Silbermann was born at Frauenstein, in Saxony, in 1684. He is sometimes called Silbermann of Freyberg, sometimes Silbermann of Strasburg; the first, from his having built the organ of Freyberg Cathedral; the second, from his having learnt his profession, and chiefly lived, in the city of Strasburg. Whether this ingenious artist had any knowledge of the inventions of Cristofali, Marius, or Schröter, we have not the means of ascertaining; certain it is that he was one of the *earliest* makers of pianos, and the *invention* is generally attributed to him throughout Germany.

Silbermann constructed two pianofortes, and submitted them for approval to the great Sebastian Bach, who is recorded to have highly praised them as ingenious pieces of mechanism, but complained of their feebleness of tone, especially in the upper

octaves. Struck with the justness of this remark, Silbermann withdrew his instruments until he had found the means of remedying this serious defect. After repeated essays, and considerable expense, he was enabled to present a new instrument to Bach, who declared that *it was without fault*. * From this moment the fame of Silbermann extended throughout Germany, and the first step in the *progress* of the pianoforte was accomplished.*

We must relate Forkel's account of Bach's visit to Frederick the Great, about this period, as an important event in connection with the history of the pianoforte :

"The reputation of the all-surpassing skill of John Sebastian Bach was at this time so extended, that the King often heard it mentioned and praised. This made him curious to hear so great an artist. At first he distantly hinted to his son (Charles Philip Emanuel, at that time in the service of Frederick) his wish that his father would one day come to Potsdam. But, by degrees, he began to ask him directly why his father did not come? The son could not avoid acquainting his father with these expressions of the King's; at first, however, he could not pay any attention to them, because he was generally too much overwhelmed with business. But the King's expressions being repeated in several of his son's letters, he at length, in 1747, prepared to take this journey, in company with his eldest son, William Friedemann. At this time the King had every evening a private concert, in which he himself generally performed some concertos on the flute. One evening, just as he was getting his flute ready, and his musicians were assembled, an officer brought him the list of the strangers who had arrived. With his flute in his hand he ran over the list, but immediately turned to the assembled musicians, and said, with a kind of agitation,

* "The pianoforte was scarcely known in the time of Bach; and from the style of his compositions, it is evident that they were the product of the harpsichord, an instrument of very limited powers; the boldest effects of which were produced by sprinkling the chords in *arpeggio*, which occasioned a disagreeable jingling. The early sonatas of Haydn also bear marks of the influence of this instrument, and possess nothing of the expression of his later works. The invention of the pianoforte has formed an era in the

art. It has been the means of developing the sublimest ideas of the composer, and the delicacy of its touch has enabled him to give the lightest shades, as well as the boldest strokes of musical expression. It is the only instrument that will represent the effects of a full orchestra; and since its mechanism has been improved, Beethoven has displayed its powers in a way not contemplated even by Haydn himself." *Lives of Haydn and Mozart*, 8vo. 1817, Note, p. 106.

‘Gentlemen, old Bach is come.’ The flute was now laid aside; and old Bach, who had alighted at his son’s lodgings, was immediately summoned to the palace. William Friedemann, who accompanied his father, told me this story, and I must say that I still think with pleasure on the manner in which he related it. At that time it was the fashion to make rather prolix compliments. The first appearance of J. S. Bach before so great a king, who did not even give him time to change his travelling dress for a black chanter’s gown, must necessarily be attended with many apologies. I will not here dwell on those apologies, but merely observe, that in William Friedemann’s mouth they made a formal dialogue between the King and the apologist. But what is more important than this, is that the King gave up his concert for this evening, and invited Bach, then already called old Bach, to try his *fortepianos made by Silbermann*, which stood in several rooms of the palace. The musicians went with him from room to room, and Bach was invited every where to try and to play unpremeditated compositions. After he had gone on for some time, he asked the King to give him a subject for a fugue, in order to execute it immediately without any preparation. The King admired the learned manner in which his subject was thus executed extempore; and probably to see how far such art could be carried, expressed a wish to hear a fugue with six obligato parts. But as it is not every subject that is fit for such full harmony, Bach chose one himself, and immediately executed it to the astonishment of all present, in the same magnificent and learned manner as he had done that of the King. His majesty desired also to hear his performance on the organ. The next day, therefore, Bach was taken to all the organs in Potsdam, as he had before been to Silbermann’s *fortepianos*. After his return to Leipzig, he composed the subject which he had received from the King, in three and six parts, added several artificial passages in strict canon to it, and had it engraved, under the title of *Musikalisches Opfer* (Musical Offering), and dedicated it to the inventor.”

In the same interesting *Life of J. S. Bach*, is another passage of importance to our subject. After informing us that Bach used “two *clavichords* and the pedal, or a *harpsichord* with two sets of keys, provided with a pedal,” the writer adds: “He liked best to play upon the clavichord; the harpsichord, though certainly susceptible of a very great variety of expression, had not soul enough for him; and the *piano*

was in his life-time too much in its infancy, and still much too coarse to satisfy him. He therefore considered the *clavichord* as the best instrument for study, and, in general, for private musical entertainment. He found it the most convenient for the expression of his most refined thoughts, and did not believe it possible to produce from any harpsichord, or *pianoforte*, such a variety in the gradations of tone as on this instrument, which is, indeed, poor in tone, but on a small scale extremely flexible. Nobody could adjust the quill-plectrums of his harpsichord to his satisfaction; he always did it himself. He also tuned both his harpsichord and *clavichord* himself, and was so practised in the operation, that it never cost him above a quarter of an hour. But then, when he played from his fancy, all the twenty-four modes were in his power; he did with them what he pleased. He combined the most remote as easily and as naturally together as the nearest; the hearer believed he had only modulated within the compass of a single mode. He knew nothing of harshness in modulation; his transitions in the chromatic scale were as soft and flowing as if he had wholly confined himself to the diatonic scale. His *Chromatic Fantasia*, which is now published, may prove what I here state."

John Andrew Stein, of Augsburg, by the silvery and brilliant tone which he gave his pianos, tended greatly to increase the popularity of the new instrument. He was born at Heidelstein in 1728, and was a pupil of Silbermann's. In 1758, he visited Paris, where he worked for many years, and brought his abilities as a maker of pianos to perfection.* We have already spoken of him as a celebrated maker of harpsichords (see p. 82, *ante*). He died at his native city, Augsburg, February 22, 1792. In the latter years of his life, his factory was directed by his son Andrew, and his daughter Nanette, afterwards married to Streicher of Vienna.

Mozart frequently alludes to Stein, in his very graphic and interesting letters. In one, dated "Augsburgh, October 14th, 1777," he says, "I had the honor of performing for three quarters of an hour on a good piano by Stein. I played several fantasias; and, in fine, whatever music happened to be there, *at sight*; among others, several

* Stein invented the keyed-instrument called the Poly-Toni-Clavichordium, an account of which may be seen in the *Augsburgischen Intelligenzblatt*, October 5th, 1769.

For a list of this ingenious artist's various publications, see C. F. Becker's *Systematisch-Chronologische Darstellung der Musikalischen Literatur*, 4to. Leipzig, 1836.

pretty pieces by one Edelmann. I spoke of going to pass the afternoon with Stein, whereupon the young man immediately proposed accompanying me. I thanked him for his attention, and promised to return in two hours. I accordingly did so, and then set out, accompanied by the son-in-law, whom one would take for a student. Though I had particularly requested that my name might not be mentioned, Mr. Langenmantel had the imprudence to say to Mr. Stein, 'I have the honour of presenting to you a virtuoso on the piano.' I instantly disclaimed this quality, and stated myself to be an unworthy pupil of Mr. Sigl, of Munich. Stein made a negative movement with his head, and said, 'May I have the honour of receiving Mr. Mozart?' 'Oh no,' replied I, 'My name is Trazom, and here is a letter which I have to deliver to you.' He was about to open it immediately, but I would not give him time. 'Why will you read the letter now,' I asked; 'let us go to your music-room, I am impatient to try your pianos.' 'As you please,' was his reply, 'but I think I am not deceived.' He opened the door; I immediately ran to one of the three pianos which were in the room, and commenced playing. He could no longer resist his impatience; he opened the letter, looked at the signature, and with an exclamation, came to clasp me in his arms."

In a letter, a few days later, "Augsburgh, October 17th, 1777," he has some very interesting particulars connected with Stein's mode of manufacturing pianos. "I begin," says the great musician, "with Stein's pianos. Before meeting with them, I thought those of Spaett the best; now I give the preference to the first mentioned, for the key-board is better and more commodious than that in the pianos of the Ratisbon manufacturer. In passages that require vigorous play, I can lift the finger or leave it on the note, for the sound is not prolonged beyond the instant in which it is heard. I strike the chords as I please, and the tone is always the same: it is neither stronger nor weaker; it never shivers, and never fails to sound, as happens sometimes with other pianos. It is true that Stein never lets a piano go under three hundred florins, but one cannot sufficiently repay the trouble and zeal which he employs. His instruments have one quality found in them alone: they have all the escape-movement; it is almost impossible that a piano, without this, should render a well articulated sound. The hammers fall again as soon as they have touched the string, whether

the finger be left on the key or not. When Stein has finished a piano, he plays on it passages of all sorts, and never quits it till it is capable of anything, for he labours not for his pecuniary interest, but for that of the art. He frequently says: 'If I were not myself a passionate amateur in music, my patience would long ago have failed me; but I like an instrument which assists the musician, and serves for a long time. His pianos are, in fact, very lasting. He warrants the solidity of the sounding-board. When he has completed one, he exposes it to the air, rain, sun, snow, in a word to every variety of atmosphere, that it may split: then by means of slips firmly glued in, he closes the crevices. When a sounding-board has been thus prepared, it may be regarded as safe against all accidents. He has now three pianos finished, on one of which I have been playing to day. The pedals, which are pressed by the knees, are also better in Stein's pianos than in any other. I scarcely touch it, yet the effect is palpable, and as soon as I discontinue this pressure the sound resumes its natural quality.'*

* Mozart played upon the *new instrument* when he was a mere child. The writer of his biography says, "When Mozart, at the age of six years (*i. e.* in 1762), sat down to play in presence of the Emperor Francis, he addressed himself to his majesty, and asked, 'Is not Mr. Wagenseil here? We must send for him, he understands the thing.' The Emperor sent for Wagenseil, and gave up his place to him, by the side of the *piano*. 'Sir,' said Mozart to the composer, 'I am going to play one of your concertos, you must turn over the leaves for me.' Hitherto, Wolfgang had only played on the harpsichord, and the extraordinary skill which he displayed on that instrument seemed to exclude even the wish that he should apply to any other. But the genius which animated him far surpassed any hopes that his friends could have dared to entertain; he had not even occasion for lessons." *Lives of Haydn and Mozart*, 8vo. 1817, p. 342.

A correspondence has lately taken place in the *Neue Berliner Musik-Zeitung* respecting Mozart's piano. The result has been the publication of the following letter in its pages, which we think will be perused with interest:

"SIR,

In consequence of the question asked by some one in Vienna, and which appeared in No. 35 of the *Berliner Musik-Zeitung* for this year: "Who now possesses Mozart's piano, which the minister, Count von Rantzau, is said to have purchased in the year 1806, from Mozart's widow?" I wrote Count Kuno von Rantzau, of Rohlsdorff, with whom I have the honour of being acquainted, and begged for information respecting the valuable relic. I have received a very comprehensive answer, the most interesting portion of which I do myself the honour of communicating to you."

"How much I am delighted" (so runs the answer), "in answer to your communication of the 25th of last month, to be able to give the information you require concerning the piano of the Great Mozart, which is in our possession at our ancestral mansion. The instrument was certainly purchased by my uncle, and in 1806 conveyed to Breitenburg, after the death of his respected friend, from the latter's widow, who lived to the end of her life on a footing of friendship with my family.

The mechanism of the key was not, in the first instance, more perfect than the construction of the sounding-board ; for it consisted merely of a *pilote* attached vertically to the key, which impelled against the string a short and light hammer, suspended by a leather hinge, and guided by a thin shank which passed through its centre. Stein discovered a better process, when he devised the simple escapement, which still retains its name of *German mechanism*, and is still employed in the greater part of the pianofortes fabricated at Vienna. In this piece of mechanism, which has the two-fold advantage of great lightness and little expense, the hammer falls the moment the *pilote* of the key has described its elliptical curve, and allows the strings to vibrate at liberty, though the finger still remains on the key. Considering the fineness of the strings used in the first pianofortes, this piece of mechanism was not only sufficient, but the very best that could be devised.

At this period, the best instruments had a compass of only five octaves, were mounted only with double strings, and, instead of pedals, were furnished with two iron springs, ornamented with copper knobs, in that part of the chest nearest to the bass,

“The possessor of our family estates, Count Conrad of Rantzau, died in 1845, and was succeeded by my father. In order to regulate the inheritance and family property, a sale was ordered to take place, by the superior court, of the various art-treasures, etc. collected by Count Conrad, and catalogues were printed and sent out at the time, and advertisements inserted in all the principal German, French, and English papers, from which the notice in the *Berliner Zeitung*, of the 27th August, would seem to have been taken.

“I myself, during the above and following years, managed these family estates until the decease of my dear father, and the auction could not take place until 1849, at Breitenburg, in my presence.

“For works of art by Thorwaldsen, for paintings, and, also, for all kinds of fashionable rubbish, enormous prices were realised—for Mozart’s piano there was not a single bid higher than the wretched price of an old mahogany box. Truly indignant at this, I at least saved from the common broker’s shop this interesting relic of our greatest German

musician, on which his incomparable *Requiem* was certainly composed, and from which his fingers drew forth, for the last time, those immortal tones that still re-echo on the soul of every German possessed of feeling—by order of my dear father, who retained his deep love of the sacred art of music to his 83rd year, I purchased Mozart’s instrument for the castle. *It is now, since my father’s death, together with the lordship of Breitenburg, in the possession of my brother, Friedrich August zu Entin, Hofchef of the Grand Duke of Oldenburg. The piano, however, stands, at present, as it has since 1806, in its place of honour in Breitenburg, which unfortunately has not been inhabited for years.*”

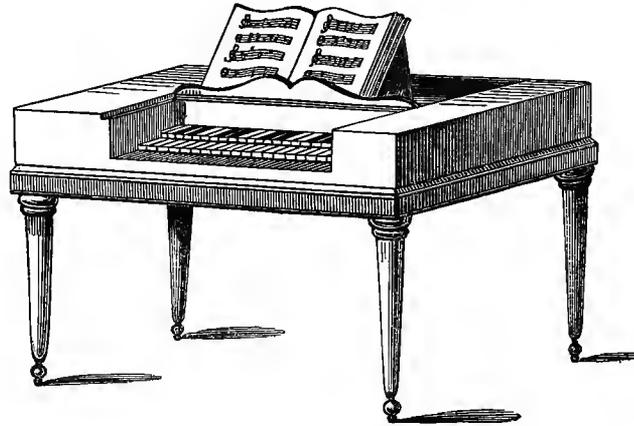
“I hasten, honoured sir, to place this interesting account at your disposal, in order that you may use it, if you please, in your paper, and remain, with the greatest consideration,

“BEHREND, M.D.”

“*Grevermühle in the Grand Duchy of Mecklenberg-Schwerin, October, 1856.*”

to raise the dampers. In order to move these springs, it was necessary that the player should use his left hand, and consequently he was obliged, for a moment, to quit the key-board. Stein improved these springs by making them to act by means of knobs placed against the knees.

A rough idea of the appearance of a pianoforte of this period, may be formed from the following wood-cut, copied from a picture in the palace at Potsdam.



The chief cotemporaries and successors of Stein may be thus enumerated.

John Adam Späett, or Spaeth (mentioned in Mozart's letter), was a celebrated maker of organs and keyed-stringed instruments in the latter half of the eighteenth century. He was born at Ratisbon, in which city he built the Cathedral organ. His pianofortes obtained almost an equal reputation with those of Stein. He died, at a very advanced age, in 1816.

Christian Ernest Frederici, the favourite pupil of Silbermann, was born at Merona in Saxony, in 1712. He is said to have made the first *square* pianoforte. He spent the greater part of his life in improving keyed-stringed instruments, and was an organ-builder of no mean repute. He died in 1779. An account of some of his inventions may be seen in the *Leipzig Magazin des Buch-und-Kunsthandels*, 1781.

John Godfrey Hildebrand, the son of Zacaria Hildebrand, the eminent organ-builder, and himself a distinguished builder, settled at Berlin, about 1758, as a maker of keyed-stringed instruments. In 1782 he constructed a square pianoforte, in which

the sounding-board occupied the entire length of the instrument, the hammers being placed *above* the strings. Marius and Schröter had proposed this plan as early as 1716 and 1717, but both abandoned it as impracticable. Hildebrand was not more successful. It was left for Streicher of Vienna, and Petzold of Paris, to show the *practicability* of this arrangement; and, finally, for M. Pape to bring it to perfection.

Christopher Michael Lenkler of Rudolstadt was one of the most ingenious mechanists of his time. His instruments ranked very high, and were as much sought after as those of Godfrey Silbermann. He flourished about 1760, and died before 1790.

Francis Ignace Seuffert, born at Wurzburg in 1731, was an organ-builder and pianoforte-maker of considerable eminence in his time. He was living at Wurzburg in 1807, well advanced in years. His two sons, John Philip, and Francis Martin, were also eminent manufacturers of pianos at Vienna.

John Andrew Streicher, born at Stuttgardt in 1761, was an excellent practical musician. In his visits to Augsburg, he became acquainted with Stein, and married his daughter. After his marriage, he took up his residence at Vienna, where he commenced an extensive manufactory for the making of pianos. He made many improvements in their mechanism, and improved the principle of placing the hammers *above* the strings. He died May 25th, 1833.

Dr. Burney, in his entertaining *Tour in Germany*, gives a number of interesting notices of the pianoforte, which show its gradual progress in public favour.

At Potsdam, he says, "after dinner I went to see the King's new palace (*das neue Schloss*), built since the last war. * * * * The apartments are fitted up with the utmost magnificence and taste; there is a *suite* of rooms appropriated to almost every branch of the royal family. Those of the King, of his sister Princess Amelia, and of the Prince of Prussia, are the most splendid. In each of these apartments there is a room dedicated to music, furnished with books, desks, a harpsichord, and other instruments. His majesty's concert room is ornamented with glasses of an immense size, and with sculpture, partly gilt, and partly of the most beautiful green varnish, by Martin of Paris; the whole furniture and ornaments of this room are in the most refined and exquisite taste. There is a *piano-forte*, made by Silbermann of Neuberg, beautifully

varnished and embellished ; and a tortoise-shell desk for his majesty's use, most richly and elegantly inlaid with silver ; on the table lay a catalogue of concertos for the *New Palace*, and a book of manuscript solfeggi, as his Majesty calls them, or preludes, composed of difficult divisions and passages for the exercise of the hand, as the vocal *solfeggi* are for the throat. His Majesty has books of this kind, for the use of his flute, in the music room of every one of his palaces."

At Vienna, after recording his visit to Hasse, the Doctor says : " From hence I went to M. L'Angier's concert, which was begun by the child of eight or nine years old, whom he had mentioned to me before, and who played two difficult lessons of Scarlatti, with three or four by M. Becke, upon a small and not good *pianoforte*. The neatness of this child's execution did not so much surprise me, though uncommon, as her expression. All the *pianos* and *fortes* were so judiciously attended to ; and there was such shading of some passages, and force given to others, as nothing but the best teaching, or greatest natural feeling and sensibility could produce. I enquired of Signor Giorgio, an Italian, who attended her, ' upon what instrument she usually practised at home,' and was answered, ' on the clavichord.' This accounts for her expression, and convinces me that children should learn upon that, or a *pianoforte*, very early, and be obliged to give an expression to Lady Coventry's Minuet, or whatever is their first tune ; otherwise, after long practice on a monotonous harpsichord, however useful for strengthening the hand, the case is hopeless."

Speaking of the celebrated John Philip Kirnberger*, whom he visited at Berlin, in the same tour, he says : " He played, at my request, upon a clavichord some of his *fugues* and church music, which are very learned and curious ; he likewise presented me with a copy of his *musical institutes*, and a short dissertation upon *tempera-*

* " Court musician to the Princess Amelia of Prussia, in Berlin. He was one of the most remarkable of Bach's scholars, full of the most useful zeal and general enthusiastic feeling for the art ; beside the development of Bach's mode of teaching compositions, the musical world is indebted to him for the first and only tenable system of harmony, which he has abstracted from his master's practical works.

He has done the first in his Art of Pure Composition (*Kunst des reinen Satzes*) ; and the second, in The True Principles for the use of Harmony (*Grundsätze zum Gebrauch der Harmonie*). He has, besides, been of service to the art, by other writings and compositions, as well as by teaching." Forkel's *Life of J. S. Bach*.

ment, which he has lately published, as well as of several manuscript compositions. After this he had the complaisance to go with me to the house of Hildebrand, the best maker of harpsichords and *pianofortes* in Berlin; here M. Kirnberger played again, and discovered great strength of hand, as well as knowledge in harmony and modulation."

We have now to consider the progress of the pianoforte in France. It does not appear that Marius's invention was ever adopted, or that he made any disciples by his discovery of the hammers. Fétis, indeed, says, "Marius' discovery met with *no* success in France, where custom is often seen opposed to the success of what is new." Blanchet, however, made instruments with hammers; and Paschal Tasquin, whom we have before mentioned as an eminent harpsichord maker (p. 81 *ante*), manufactured, in 1776, small square pianos in "imitation of the English;" but they were not well received. In fact, down to the year 1779, France had remained dependent on Germany and England for its instruments of this kind; nearly all those found at Paris, at this epoch, came from the manufactories of Augsburg, Ratisbon, and London. The brothers Erard were the first to free their country from this state of dependence, and manufactured small pianofortes of five octaves with two pedals, the silvery tone and perfect mechanism of which were truly remarkable for that period.

The great mechanical genius, Sebastian Erard, was born at Strasburg, April 5, 1752, and was the eldest of the four children of an upholsterer. At the age of eight years, he commenced the study of architecture, perspective, linear design, and practical geometry, in the schools of his native city; and his mind, fertile in invention, was continually suggesting to him new problems, and devising its own means of resolving them. Erard, himself, confessed that it was to his early acquaintance with drawing and the principles of mechanics that he owed his success. His father, having married very late in life, was surprised by death before his children reached an age at which they could be useful to their mother, or support themselves. Sebastian Erard became the head of a family at the age of sixteen. As his native town did not afford him the scope of which he felt the need, he set off courageously for Paris. He arrived there in 1768, and obtained employment with a harpsichord maker, whose chief workman he soon became, and whose jealousy he as quickly aroused by the superi-

ority of his workmanship. His master, wearied by Erard's constant inquiries respecting the principles upon which instruments were constructed, and, in fact, unable to furnish the information sought for, first reproached him with wanting to know everything, and concluded by dismissing him from his service. Another celebrated manufacturer of harpsichords being called upon to make an instrument which demanded something beyond his mere every-day routine, and finding himself not a little puzzled how to answer the unusual demand, sought out young Erard, whose reputation was already budding, and proposed to him to undertake the construction of the instrument for a certain sum of money, allowing the person of whom it had been originally bespoke to affix his name to it. Erard consented, and the instrument was completed; but, when it was delivered, the purchaser, who probably had no very great confidence in the ability of the manufacturer he had employed, demanded some explanation of the mechanism; the nominal maker was forced to refer to his assistant.

This anecdote soon circulated among the musical circles of Paris, and drew attention towards the rising artist, who shortly after made himself still further known by his mechanical harpsichord, a master-piece of invention and workmanship, which produced a most lively sensation among the professors and amateurs. This remarkable piece of mechanism was constructed for the cabinet of curiosities of M. de Blancherie. The Abbè Roussier inserted a detailed description of it in the *Journal de Paris*, which was afterwards reprinted in the Musical Almanack of Luneau-de-Bois Germain, in 1776.

Sebastian Erard was hardly twenty-five years old, when his reputation was so fully established, that whoever wished to have any new ideas carried into execution applied to no one but him. He was sought out by the most distinguished men, and introduced to the Duchess of Villeroy, a lover of the arts, a protectress of artists, and, above all, passionately fond of, and having a highly cultivated taste for, music. The Duchess wished Erard to remain in her employ, and offered him an advantageous engagement; but, preferring independence, and having besides already conceived the idea of a visit to England, he declined the offer, consenting, however, to stay with the Duchess till he had executed some plans of her invention; occupying, during that time, an apartment in the Hotel Villeroy, but with perfect liberty and command of

his own movements. In his old age he still delighted to recall to mind the goodness of Madame Villeroi, and express the gratitude with which she had inspired him.

It was in the Hotel Villeroi that Erard made his first piano. This instrument had been known for many years in England and Germany, but was still little used in France; and the few instruments that were to be found in Paris were imported from Augsburg, Ratisbon, or London. It was the fashion in some great houses to have these foreign instruments. Madame Villeroi asked Erard whether he could construct a piano? He had already conceived the idea of making one, and his answer was prompt and decided in the affirmative; he set immediately to work, and his first, like everything else he made, showed that it came from the hands of a man of taste and invention. It was heard in the saloon of Madame Villeroi by all the distinguished artists and amateurs of Paris. Numerous applications were made to him by the nobility for similar instruments; but finding it impossible to execute their orders, he sent for his brother, Jean Baptiste, to come to Paris and help him. Quitting the Hôtel de Villeroi, he founded his house in the Rue de Bourbon, in the Faubourg St. Germain; an establishment which the efforts of the two brothers eventually rendered one of the finest in Europe.

The *Luthiers*, or makers of musical instruments, of Paris, who carried on the trade of importing foreign pianos, found the new factory injurious to their commerce; they made a seizure in it, under the pretext that the brothers Erard were not members of the Corporation of Fanmakers, to which the Luthiers belonged. Sebastian Erard had powerful friends, however, and he obtained a brevet from Louis the Sixteenth which delivered him completely from the prosecuting corporation. This document is so highly interesting that we transfer it to our pages:

“ This day, the fifth of February, one thousand seven hundred and eighty-five, the King being at Versailles informed that Mr. Sebastien Erard has succeeded by a new method of his invention to improve the instrument called a forté-piano; that he has even obtained the preference over those made in England, of which he makes a commerce in the city of Paris, and his majesty wishing to fix the talents of Mr. Erard in the said city, and to give him testi-

monies of the protection with which he honours those who, like him, have by assiduous labour contributed to the useful and agreeable arts, has permitted him to make, to cause to be made, and to sell in the city and faubourgs of Paris, and wherever it may seem to him good, forté-pianos; and to employ there, whether by himself or by his workmen, the wood, the iron, and all the other materials necessary to the perfection or the ornament of the said instrument with-

out his being liable on this account to be troubled or disturbed by the guards, syndics, and adjutants of the corporations and committees of arts and trades for any cause or under any pretext whatever; under the conditions, nevertheless, by the said Mr. Erard of conforming himself to the regulations and ordinances concerning the discipline of journeymen and workmen, and of not admitting into his workshops any but those who shall have satisfied the

aforesaid regulations. And for assurance of his will, his majesty has commanded me to expedite to the aforesaid Mr. Erard the present brevet, which he has chosen to sign with his own hand, and to be countersigned by me, Secretary of State, and of his commands and Finances.

(Signed) LOUIS.

LE BARON DE BRETEUIL."

Incessantly occupied with new inventions and improvements, the genius of Sebastian Erard embraced a vast variety of subjects; he invented the organized pianoforte with two key-boards, one for the piano and the other for the organ. The success of this instrument was considerable. The Queen commanded one to be made for her own use, and in the construction of it Erard introduced several novel contrivances, which, at that time, awakened much interest. The Queen's voice was of limited compass, and almost every piece was too high for her. Erard rendered the key-board of his new instrument moveable, so that by changing its position with relation to the strings, a composition might be played a semitone, whole tone, or even a minor third, lower or higher, without tasking the player's ability to transpose: for instance, according to the position of the key-board, the key D would strike any string between B natural below and F natural above its proper string. It was in the organ part of this instrument that he also made the first attempt to produce a crescendo and diminuendo by the mere pressure of the finger on the key; and this he afterwards carried into effect, on a large scale, in an organ built for the King's chapel. Gretry, in his *Essais sur la Musique*, particularly pointed out this invention to the notice of professors and to the attention of government.

The revolution now broke out in France, and Sebastian Erard determined on removing to England; not with any intention of finally abandoning his native country, to which, on the contrary, he always meant to return, but with a view of opening new channels for the sale of his instruments. In London, as in Paris, Erard filled his manufactory with instruments of his own invention. In 1794, he took out his first patent for improvements in harps and pianofortes, and his instruments soon became fashionable. In 1796, he availed himself of the altered state of affairs in France to return to Paris, and, at this period, made his first horizontal grand pianos in the shape

of harpsichords after the English fashion. These instruments were the first of the kind, with escapements, that had been seen in Paris; they had the defect which formerly accompanied all similar instruments—a slowness of action in the levers and hammers. The Parisian pianoforte-players, accustomed to the easy touch of the small pianos without escapements, disliked the new invention; and it was for this reason, that, after much study and many experiments, Erard brought out, in 1808, another new species of piano, of reduced dimensions, and so more suited to the general size of Parisian rooms, and the mechanism of which acted with greater freedom and ease. Dussek played on one of these pianos with the greatest eclat at the concerts given in the Odéon by Rode, Baillot, and Lamarre, on their return from Russia. Amateurs and professors were alike satisfied; but Erard was not: he knew that there still remained some defects; the touch, indeed, was easy, but the hammers did not act with precision. On his return from London, at a later period, we shall find him exhibiting the model of a grand piano, uniting every excellence in its mechanism of which the instrument is susceptible.

About 1808, Erard returned to London, and there crowned his reputation as a manufacturer of musical instruments, and still more as professed master of mechanics, by his invention of the double-movement harp. The success of this new harp was immense; which induced Erard to neglect the manufacture of pianos in London, and confine himself to that of harps only. Nevertheless, in all the patents he took out in England, improvements on the piano, which he meant to carry into effect in France, are mixed with those of the harp. At every exhibition his works received the prize; thrice he obtained the gold medal; and for one of his last exhibitions, the cross of the Legion of Honour was decreed him; in short, he received every honorary reward that could be bestowed on the talents of a first-rate manufacturer.

The model of his grand pianoforte with double escapement was exhibited in 1823; the mechanism was most ingenious. The point to be achieved was to unite in the same instrument all the nice shades of touch which can be produced by the simple mechanism without escapement, and at the same time all the precision in the stroke of the hammer which is the effect of the escapement.

Erard's constitution, robust as it originally was, could hardly endure his continued

exertions. For many years he suffered by disease ; and at length breathed his last at his country house *La Muette* near Passey, on the 5th of August, 1831. His funeral was attended by some of the most distinguished artists in Paris.

The founder of another important pianoforte manufactory in France, was the celebrated Ignace Pleyel. This artist was born in 1757, at Rupperstahl, a small village within a few leagues of Vienna. He was the twenty-fourth child of Martin Pleyel, a schoolmaster of that place, and of a lady of noble family, disinherited by her parents on account of what they deemed so imprudent a marriage : she died in giving Ignace birth. The widower again entered into the wedded state, had fourteen children by his second wife, and expired in the ninety-ninth year of his age.

The young Ignace learned, according to the German custom, his own tongue, the elements of the Latin language, and music, all at the same time. His natural disposition for the latter induced his father to give him Vanhall as a master ; and at the age of fifteen he was placed under the instruction of Haydn, with whom he lived five years, at the expense of 100 louis per annum, a large sum at that period, which was defrayed by the Count Erdoedy, a wealthy Hungarian nobleman, who, struck by the talents and manners of the youth, took him under his protection. In 1777, his patron allowed him to visit Italy ; and at Naples his genius for instrumental music was evinced in a set of quartets, in which were first displayed that originality of melody which is the characteristic of all his works, and a manner entirely his own.

In Italy, Pleyel made the acquaintance of the great masters then flourishing in what was at that time the "land of song," of Cimarosa, Guglielmi, and Paisiello ; and his taste was much improved by hearing the most celebrated singers. Nardini, the violinist, was still living, and Pugnani, the master of Viotti, was in all his vigour. With such advantages, his improvement was rapid, and he gained much that he had failed to learn under Haydn, who, though the greatest composer of his age, was by no means a good master : indeed, it may be laid down as a general rule, says the French critic from whom we translate, that genius of a high order and the power of teaching, are rarely, if ever, united in the same person. At Naples, Pleyel was introduced to the King, who received him with much kindness, and desired him to compose an

opera. His *Ifigenia in Aulide* was in consequence produced, which proved successful; but it was the first and last work of the kind from the same pen.

In 1793, Pleyel was appointed chapel master of the Cathedral of Strasburg, and composed several masses and motets, all of which, unfortunately, were destroyed in a great fire a few days after they were written. From the above period to the year 1793, he produced nearly all those works which wafted his fame into every city in Europe; scarcely any instrumental music was willingly listened to, but that which he had created. In 1791, Saloman having engaged Haydn to compose symphonies for his concerts, the managers of a rival institution, named the Professional Concert, sent for Pleyel to supply works of a similar kind. He accordingly visited London, and produced a symphony of no ordinary merit, as well as a charming concertante; but, in the contest with the father of this high class of composition, he had no chance. The concert, which was under the direction of feeble-minded persons, failed, and Pleyel did not add to his reputation by the part he had taken in it; though he was a pecuniary gainer to the amount of £1200, with which sum he purchased an estate near Strasburg.

Suspected of aristocratic opinions, Pleyel was, in 1793, denounced no less than seven times to the republican authorities at Strasburg, and at length fled, but was pursued and taken. He was severely interrogated, and protested his *civism*, though required, as a proof of his sincerity, to set the music to a kind of drama for the anniversary of the 10th of August; he of course consented, and was allowed to return home to compose the work, but under the guard of two gendarmes, and almost with the axe suspended over him. After an uninterrupted labour of seven days, the music was finished, then performed under the author's direction, and afforded so much satisfaction to the Strasburgers that the author never after was suspected of encouraging politics at all adverse to the government. Little satisfied, however, with an occurrence which had put on so threatening an aspect, Pleyel sold his estate in 1795, went to Paris with all his family, and entered into a commercial speculation, becoming publisher of music and manufacturer of pianofortes. The enterprise proved successful, and the business was afterwards carried on by his son, Camille, in conjunction with Kalkbrenner.

Although both these gentlemen were skilful musicians, they devoted themselves to trade, as a more profitable and satisfactory pursuit.*

After a laborious career, Pleyel retired to enjoy an estate, not far distant from Paris, purchased by the fruits of his talents and industry, and indulged his taste for agriculture. His happiness seemed complete, when the revolution of July alarmed a mind somewhat enfeebled by time; his fears for the security of his property agitated a frame not very strong; he became ill, his anxieties increased, and, after three months of suffering, he died on the fourteenth of November, 1831.†

Concerning the progress of the pianoforte in Italy, the country which gave it birth, we have no authentic information, although we feel assured that it was not neglected. Geronimo of Florence, and Gherardi of Parma, are said to have carried out Cristofali's discoveries; but the particulars of their labours are not recorded. Farinelli's *favorite* instrument, the "Rafael d'Urbino," it will be remembered, was a pianoforte made at Florence in 1730‡—a fact in itself alone sufficient to prove the high excellence attained by the Italians at an early period in the history of its construction.

* According to Professor Fischhoff, Ignace Pleyel commenced musicseller at Paris in 1796; and pianofortemaker, in 1805. In 1824, Camille (his son) and Kalkbrenner joined the firm. In 1834, they employed two hundred and fifty workmen, and made 1000 pianofortes in the course of the year. The firm is now Pleyel, Wolff, and Co.

† These particulars, concerning Pleyel, are chiefly derived from a notice which appeared in 1832 in the *Revue Musicale*.

‡ Described in Burney's *Tour in Italy* (see ante, p. 83).

CHAPTER IX.

THE INTRODUCTION AND PROGRESS OF THE PIANOFORTE IN ENGLAND.

THE first pianoforte seen in this country, according to all accounts, was made by one Father Wood, an English monk at Rome, and by him sold to Samuel Crisp, Esq. a gentleman of considerable taste and learning, who sold it again to Fulke Greville, Esq. at the price of one hundred guineas.* For a long time this instrument was

*The two gentlemen, whose names are thus mixed up with the introduction of the pianoforte in England, are deserving of a passing notice.

SAMUEL CRISP was the intimate friend of Dr. Burney, the musical historian, and of his amiable family. In mind, manner, and habits, he was one of the most refined characters of the latter half of the last century. Madame d'Arblay says he was "a scholar of the highest order; a critic of the clearest acumen; possessing, with equal delicacy of discrimination, a taste for literature and for the arts; and personally excelling as a *dilettante* both in music and painting." He was the author of a tragedy called *Virginia*, and several poetical effusions in the magazines of the day. He visited Italy and other parts of the continent in 1757; and, upon his return to England, two or three years after, took up his residence at Hampton; where he fitted up a small house with paintings, prints, sculpture, and musical instruments, arranged with the most classical elegance. He died, April twenty-fourth, 1783, aged seventy-six, deeply regretted by all who had known him during life. His epitaph in Chesington Church, Surrey, was written by Dr. Burney.

FULKE GREVILLE, a descendant of the friend of Sir Philip Sydney, and known as the author of *Characters, Maxims, and Reflections*, was, at the middle of the last century, generally looked upon as the finest gentleman about town. "He excelled," says Madame D'Arblay, in all the fashionable exercises, riding, fencing, hunting, shooting at a mark, dancing, tennis, &c. and worked every day at every one of them with a fury for pre-eminence not equalled, perhaps, in ardour for superiority in personal accomplishments since the days of the chivalrous Lord Herbert of Cherbury." He travelled in a style that was even princely; not only from his equipages, out-riders, horses, and liveries, but from constantly having two of his attendants skilled in playing the French horn; and these were always stationed to recreate him with marches and warlike movements on the outside of the windows, when he took any repast.

This eccentric gentleman was the friend and patron of Dr. Burney; and a most interesting account of their first interview, at the ware-rooms of old Kirkman, the harpsichord-maker, may be found in Madame d'Arblay's *Memoirs of Dr. Burney*, vol. i, p. 26, *et seq.*

without a rival, and the wonder and delight of all who heard it; no virginal, spinet, or harpsichord, had yet been made capable of any modification of tone. The hammer harpsichord (for it was nothing more) obeyed the soul of the player, and, according to the pressure of the finger upon the key, passed through every gradation of *piano* and *forte*. This instrument became celebrated, and was known to all the dilettanti of London as "Mr. Greville's pianoforte." Plenius, the ingenious harpsichord-maker and inventor of the lyrichord (whom we have before mentioned), obtained permission of the proprietor to make a copy of it; but his efforts do not appear to have been attended with any great success.

At length, about the year 1760, many ingenious German mechanics left their country and came to England in search of employment as pianoforte-makers; this gave the instrument its first impetus. A party of twelve travelled hither in one company, and obtained, from this circumstance, the appellation of the "twelve apostles."

A German, named Viator, resident in London, had made several important improvements in the pianoforte. He was followed by Americus Backers, also a German *, who had been in the employ of Silbermann of Neuberg; but it does not appear that the instruments of these makers found much favour with the public.

An event happened about this time which gave a new impetus to the instrument, and awoke the ingenuity, as well as the ambition, of the chief performers and manufacturers in England. John Christian Bach, organist, pianist, and composer, arrived in this country, and established that series of concerts which first made familiar amongst us the grand classical music of the German schools †.

* "The name-board of a grand pianoforte is still in existence bearing the inscription

"AMERICUS BACKERS, FACTOR ET INVENTOR,
Jermyn Street, London, 1776."

(Pole's *Musical Instruments in the great Industrial Exhibition of 1851*).

† "Mr. J. C. Bach, having very early in life been deprived of the instructions of his father, the great Sebastian

Bach, was for some time a scholar of his eldest brother, the celebrated Charles Phil. Emanuel Bach, under whom he became a fine performer on keyed-instruments; but on quitting him and going to Italy, where his chief study was the composition of vocal music, he assured me that during many years he made little use of a harpsichord or pianoforte but to compose for or accompany a voice. When he arrived in England, his style of playing was so much admired that he recovered many of the losses his hand had

The harpsichord-makers now all lent their efforts to improve and popularize the new instrument. The most successful amongst them was a German, named John Zumpé (who had been in the employ of Tschudi), who succeeded in the construction of some small pianofortes (similar in shape and size to their progenitors, the clavichord and virginal), whereof the tone was peculiarly sweet, the touch good, and the price sufficiently moderate to place them within the reach of all those who had hitherto been purchasers of the harpsichord and spinet. "These instruments suddenly rose into such favour," says a contemporary, "that there was scarcely a house in the kingdom, where a stringed instrument had admission, but was supplied with one of *Zumpé's pianofortes*, for which there was nearly as great a demand in France as in England; in short, he could not make them fast enough to gratify the public fondness for them.*" Zumpé entered into partnership with Meyer, and afterwards with Buntebart; † and after realising an ample fortune, retired to his native country. A

sustained by disuse, and by being constantly cramped and crippled with a pen; but he was never able to reinstate it with force and readiness sufficient for great difficulties; and, in general, his compositions for the pianoforte are such as ladies can execute with little trouble, and the allegros rather resemble bravura songs than instrumental pieces for the display of great execution. On which account, they lose much of their effect when played without the accompaniments, which are admirable, and so masterly and interesting to an audience, that want of hand, or complication on the harpsichord part, is never discovered." Burney, *Hist. of Music*, iv, 482. Bach arrived in England in 1763, and established his concerts, conjointly with Abel, in the year following. These concerts subsisted for full twenty years,

* Capel Loft, in the *Monthly Magazine* for 1809, p. 23, says, "I wish to ascertain the exact period, if possible, of the introduction of the *pianoforte* into England. That its origin is German seems agreed; but neither the era of its invention there, nor of its being introduced either in France, Italy, or here, seems to be ascertained. I have

seen, and often had the pleasure of hearing, a good *pianoforte*, dated 1775; but I am not sure that this date might not belong to it in a harpsichord state, and the pianoforte improvement be made afterwards. I have seen another which, in its whole structure and appearance, indicates that when first made it had its present construction. This is at Bury, at Mr. Ramsay's. The superscription in front is:

'JOANNES ZUMPE, fecit, 1766,
'Princes Street, Hanover Square.'

In a subsequent page of the same volume, a correspondent informs Capel Loft that he has a square pianoforte made by Zumpé in 1768; he adds, "it is upon the common construction with two wires to each note, with the mark XVIII upon it, which appears to have been the number he had then made."

† He was in partnership with Meyer in 1778, and in 1784 with Buntebart. My friend, Mr. Charles Salaman, has a charming little instrument made by John Zumpé et Meyer, 1778. Sir George Smart has one of Zumpé's pianofortes with *quarter* tones.

recent writer says, "the place of his retirement we well remember, and have heard good report of his cheerful glass and well-filled pipe, without which, in those days, a German did not acknowledge that he lived."

Contemporary with Zumpé was John Pohlman, who, although his pianofortes were of inferior tone, made a fortune by supplying those who could not obtain the instruments of his more skilful countryman*.

The pianoforte as yet was considered as merely a "household" instrument; its limits being confined to private circles. In the year 1767, it was introduced on the stage of Covent Garden Theatre, as *a new instrument*. We have much pleasure in giving the following copy of an old play-bill, now in the possession of Messrs. Broadwoods, which records its first *public* announcement:

"By particular desire—For the Benefit of Miss Brickler.

"THEATRE ROYAL IN COVENT GARDEN.

"On Saturday next, being the 16th of May, 1767, THE BEGGAR'S OPERA. *Captain Macheath*, by Mr. Beard; *Peacham*, by Mr. Shuter; *Lockit*, by Mr. Dunstall; *Filch*, by Mr. Holtom; *Player*, by Mr. Gardner; *Beggar*, by Mr. Bennet; *Mat o' the Mint*, by Mr. Baker; *Mrs. Peacham*, by Mrs. Stephens; *Diana Trapes*, by Mrs. Copin; *Mrs. Stammekin*, by Mrs. Green; *Polly*, by Miss Brickler; with a Hornpipe by Miss D. Twist; and a Country Dance by the Characters in the Opera.

"End of Act 1, Miss Brickler will sing a favourite Song from Judith, accompanied by Mr. Dibdin, ON A NEW INSTRUMENT CALLED PIANO-FORTE.

"To which will be added a FARCE called the UPHOLSTERER. *The Barber*, by Mrs. Woodward; *Feeble*, by Mr. Murden; *Bellmour*, by Mr. Perry; *Rovewell*, by Mr. Davis; *Watchman*, by Mr. Weller; *Quidnunc*, by Mr. Dunstall; *Pamphlet*, by Mr. Shuter; *Harriet*, by Miss Vincent; *Maid*, by Miss Cokayne; *Termagant*, by Mrs. Green.

"Tickets to be had of Mr. Sarjant, at the Stage-door, where places for the Boxes may be taken."

Charles Dibdin, who has the merit of being the first person to perform *publicly* on the pianoforte in this country, was born near Southampton in 1745. His mother

* A pianoforte made by Pohlman in 1772, for the great composer Gluck, is thus described by Thalberg: "It was four feet and a half in length, and two feet in width, with a small square sounding-board at the end.

The wires were little more than threads, and the hammers consisted of a few piles of leather over the head of a horizontal jack working on a hinge."—*Report of the Juries*, &c.

had attained her fiftieth year at his birth, and he was her eighteenth child. He was educated at Winchester for the clerical profession, but his love of music predominated, and he received his first instructions from Mr. Fussel, organist of Winchester Cathedral. At the age of fifteen, he went to London, and, at sixteen, produced an operetta in two acts, at Covent Garden Theatre, under the title of *The Shepherd's Artifice*. As an actor he first appeared as *Dametas*, in *Midas*, and was the original *Mungo* in *The Padlock*, as well as *Ralph* in the *Maid of the Mill*. In 1778, he became composer to Covent Garden Theatre, at a salary of ten pounds a week. About 1782, he built the Circus (now the Surrey) Theatre, which he managed four years. In 1788, he produced at Hutchin's Auction Rooms, in King Street, Covent Garden, the first of those entertainments which originated with him, under the title of *The Whim of the Moment*. In this was the ballad 'Poor Jack,' of which seventeen thousand copies were finally sold.

Dibdin, encouraged by his success, in 1791 fitted up a room in the Strand, opposite Beaufort Buildings, which he called *Sans Souci*, and opened it with an entertainment entitled *Private Theatricals*. In 1793, he built himself a small theatre in Leicester Place, under the same name. Park, in his *Musical Memoirs* (i, 175), says: "As a proof of the versatility of Dibdin's genius, it need only be stated that this pretty little theatre was planned, painted, and decorated by himself; and that he wrote the recitation and songs, composed the music to them, and sang, and accompanied them on an *organised pianoforte of his own invention*." Here he continued his own unaided exertions, with varied success, till he retired in 1805, when he disposed of his stock, copyright, &c. to Messrs. Bland and Weller, for the sum of £1,800.

This great genius died in 1814, and his remains were deposited in St. Martin's Burying-ground, Camden Town.

The English pianoforte is said to have received considerable improvements from the poet Mason. By some, indeed, he is considered its inventor. Before, however, noticing his particular claims, we shall give a slight sketch of his biography.

William Mason was born in the year 1725; his father, a clergyman of great respectability, held the vicarage of the Holy Trinity, in Kingston upon Hull, Yorkshire. Of the early part of his education little is known. Having been admitted of St. John's

College, Cambridge, he took his first degree in 1745; from thence he removed to Pembroke Hall, of which Society he was elected a Fellow in 1747. The degree of Master of Arts was conferred upon him two years afterwards, when he first distinguished himself as a poet, by an Ode on the Installation of the Duke of Newcastle as Chancellor of the University of Cambridge. One of his next poetical productions was *Isis*, an elegy, which occasioned an answer from Thomas Warton, in his noble poem entitled *The Triumph of Isis*, in which that celebrated writer endeavoured to rescue his favorite place of residence from the imputations cast upon it by his formidable rival. Mason's fame was, however, speedily secured by the publication of his drama of *Elfrida*, in the year 1752; this was followed, after a short interval, by *Caractacus*, which performance contains some of his finest writing, particularly the odes. In the year 1754, he took holy orders, and was fortunate enough to obtain the patronage of the Earl of Holderness, who procured for him the appointment of Chaplain to his Majesty, and presented him with the valuable rectory of Aston, in Yorkshire. Previous to his leaving college, Mason had attracted the attention of the poet Gray by his imitations of *L'Allegro* and *Il Pensieroso*; and from the congeniality of their pursuits and dispositions, a friendship was speedily contracted, which terminated only on the decease of the latter in 1771. This circumstance exhibits, in an eminent degree, that warmth and fervour of affection which characterized Mason through life; he regarded the genius of Gray with an enthusiasm "bordering upon idolatry." And upon the melancholy event of his decease, he took upon himself the office of his biographer, and the editor of such part of his works as were in a state fit for publication.*

Besides the church preferments which we have mentioned Mason to have attained in the early part of his life, he was appointed Canon Residentiary and Precentor of the Cathedral of York. For the latter office, which he discharged with unwearied attention and ability, he was peculiarly qualified, from his knowledge of the science of music, and the warm affection he felt towards it, of which he evinced a very sufficient proof in his interesting *Essays, Historical and Critical, on English Church Music*,

* Gray bequeathed to him the whole of his library and MSS.

printed at York, 12mo. 1795. Of the sister art of painting he was a professed admirer, which no doubt actuated him towards the translation of Fresnoy's exquisite latin poem ; a work in which purity, elegance of style, and beauty of versification, are eminently conspicuous.

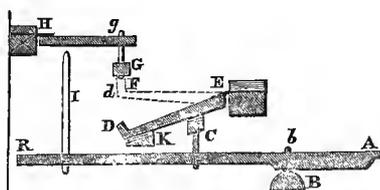
Mason married a most amiable woman, the daughter of William Sherman, Esq. of Kingston upon Hull, with whom he enjoyed the most perfect human happiness. She died at the early age of twenty-eight. The poet survived her near thirty years ; his own death was occasioned by a hurt received in stepping from a carriage, which produced a mortification. He died in the month of April 1797, in the seventy-second year of his age, bequeathing a name to posterity not more distinguished for exemplary worth and philanthropy, than for brilliancy of genius and talents, correctness of taste, and the most consummate skill and excellence as a writer. A monument was, in the early part of the present century, erected to his memory in the Poet's Corner of Westminster Abbey, adjoining to that of Gray. The design is well executed by Bacon, and represents a figure of Poetry holding a medallion of the deceased, whose loss she is deploring. The inscription commemorates little more than his name and the day of his death.

Mason's love of music prompted him to turn his attention to the defects of the pianoforte ; but the precise date at which he devoted his talent to the subject is not known. It was probably shortly after his German tour in 1755. Under the date of June 27, he thus writes to his friend from Hanover. " Oh, Mr. Gray! I bought at Hamburgh such a *pianoforte*, and so cheap! It is a harpsichord too of two unisons, and the jacks serve as mutes when the pianoforte stop is played, by the cleverest mechanism imaginable,—won't you buy my Kirkman?"*

The writer of the article Pianoforte, in the fourth edition of the *Encyclopædia Britannica*, 1810, vol. xvi, says: " The piano has been called a national instrument, because it is said to be an English contrivance, the invention of the celebrated poet, Mason. Mr. Mason had seen some attempts that were made by the Germans to make keyed dulcimers, which were in some measure susceptible of the *forte* and *piano* ;

* *The Correspondence of Thomas Gray and William Mason, edited by the Rev. J. Mitford, 8vo. 1853, p. 29.*

but as they were all constructed on one principle, and required a particular touch of the finger, which was of difficult acquisition, and which spoiled it for harpsichord practice; as they were also deficient in delicacy and justness; and as the performer was by no means certain of producing the very strength of sound intended, Mr. Mason removed all those imperfections, by detaching the mallet entirely from the key, and giving them only a momentary connection. It is by this improvement that the English pianoforte is distinguished from all others. Mr. Mason's general principle may be fully understood by the following description."



"The parts are represented in their state of inaction. The key A B K turns, as usual, on the round edge of the bar B; and a pin *b*, driven into the bar, keeps it in its place. The dot F represents a section of the spring. E D is the mallet, having a hinge of vellum,* by which it is attached to the upper surface of the bar E. At the other end is the head D, of wood, covered with some folds of prepared leather. The mallet lies in the position represented in the figure, its lower end resting on a cushion-bar K, which lies horizontally under the whole row of mallets. The key A R has a pin C, tipped with a bit of the softest cork or buckskin. This reaches to within one-twentieth of an inch of the shank of the mallet, but must not touch it. The distance E *e* is about one-third or one-fourth of the length of the shank. When the end A of the key is pressed down on the stuffing (two or three thicknesses of the most elastic woollen list), it raises the mallet, by means of the pin C, to the horizontal position E *d*, within one-eighth or one-tenth of an inch of the wire F; but it cannot be so much pressed down as to make the mallet touch the wire. At the same time that the key raises the mallet by means of the pin C, it also lifts off the damper G (a bit of sponge) from the wire. This damper is fixed on the end of a little wooden pin G *g* connected with the lever *g* H, which has a vellum hinge at H. This motion of the damper is caused by the pin I, which is fixed into the key near to R. These pieces are so adjusted that the first touch of the key lifts the damper, and, immediately after, the pin C acts on the shank of the mallet. As it acts so near to its centre of motion, it causes the head D to move briskly through a considerable arch D *d*. Being made extremely moveable and very light, it is thus *tossed* beyond the horizontal position E *d*, and it strikes the wire F, which is now at liberty to vibrate up and down, by the previous removal of the damper G. Having made its stroke, the mallet falls down again, and rubs on the soft substance on the pin C. It is of essential importance, that this mallet be extremely light. Were it heavy, it would have so much force, after rebounding from the wire, that it would rebound from the pin C, and again strike the wire. For it will be recollected that the key is, at this time, down, and the pin C raised as high as possible, so that there is very little room for this rebound. Lessening the momentum of the mallet, by making it very light,

making the cushion on the top of the pin C very soft, and great precision in the shape and figure of all the parts, are the only securities against the disagreeable rattling which these rebounds would occasion. In respect to the solidity and precision of workmanship, the British instruments are unrivalled, and vast numbers of them have been sent to all parts of the Continent.

“As the blow of so light a mallet cannot bring much sound from a wire, it has always been found necessary to have two strings for each note. Another circumstance contributes to enfeeble the sound. The mechanism necessary for producing it makes it almost impossible to give any considerable extent to the belly or sound board of the instrument. There is seldom any more of it than what occupies the space between the turning pins and the bridge. This is the more to be regretted, because the basses are commonly covered strings, that they may be of moderate length. The bass notes are also of brass, which has a considerable lower tone than a steel wire of the same diameter and tension. Yet even this substitution for steel in the bass strings is not enough. The highest of them are much too slack, and the lowest ones must be loaded, to compensate for want of length. This greatly diminishes the fullness, and still more the mellowness and distinctness of the tone, and frequently makes the very lowest notes hardly appreciable. This inequality of tone about the middle of the instrument is somewhat diminished by constructing the instrument with two bridges; one for the steel, and the other for the brass wires. But still the bass notes are very much inferior to the treble.”

The mechanism of the grand pianoforte received considerable improvement from the talents of Joseph Merlin, of whom we have given a particular account when speaking of the harpsichord (see *ante*, p. 92). Many stories of his ingenuity are still handed down in the traditions of the pianoforte manufactory. In the well-known portrait of Fischer, the oboe player, by Gainsborough, now in Hampton Court Palace, that celebrated performer is depicted leaning upon a grand pianoforte, upon the name board of which is inscribed “Josephus Merlin Fecit.”

The progress of the pianoforte in this country is characteristically exhibited in the following extracts from the reminiscences of two well-known veterans in the art :

William Gardiner, of Leicester, who was born in 1743, speaking of his youthful days, in his pleasant book of gossip, entitled *Music and Friends*, says (vol. i, p. 12) : “My mother bought me a *pianoforte* of German make, not much bigger than two writing desks put together. Upon this I began with the lessons of Caspar Heck, and the thorough-bass of Pasquali.” Again (p. 33) he says: “About the year 1782, young Crotch was brought to Leicester, as a musical prodigy, being then not more than five years old. He was brought first to our house, and played upon the *pianoforte* as he sat upon his mother’s knee. At that time there were not more than two or three pianofortes in the town or neighbourhood; mine was esteemed a good one, made by

John Pohlman, I suppose in Germany, and before any were made in England.* Upon this instrument Crotch first exhibited his extraordinary talent in Leicester."

Michael Kelly, in his *Reminiscences* (vol. i, p. 21), speaking of the preparations for his continental journey, in 1779, says: "As good *pianofortes* were in these times scarce everywhere—in Italy particularly, my father bought a grand one made by one of the first London makers." This instrument formed part of Kelly's baggage during his travels; and he remarks: "It turned out in every respect excellent."

The same author (vol. ii, p. 161), describing Sheridan dining with him, shortly before the production of *Pizarro* (to which Kelly wrote the music), adds: "I had pen, ink, music-paper, and a small *pianoforte*, which the Duke of Queensbery had given me, and which he had been accustomed to take with him in his carriage when he travelled."

The pianoforte was common in the orchestras of our theatres during the last twenty years of the eighteenth century. In 1770, Mr. Burney, the nephew of Dr. Burney, was appointed *pianist* to Drury Lane Theatre; and a few years afterwards, Mr. Griffith Jones was nominated to the same office at the rival house of Covent Garden. Kelly, describing the performance of *Lionel and Clarissa*, at Dublin, in 1779, says: "Michael Arne presided at the *pianoforte* in the orchestra." .

We have now arrived at the period of the foundation of the two large firms whose names are "household words" at the present day—Messrs. Broadwood and Stodart.

John Broadwood (the founder of the firm of Broadwood and Sons) was born in Scotland, in the year 1731; and, when about twenty years of age, travelled up from that country in search of employment in London. He was a carpenter or joiner by trade, and entered the firm of Tschudi, the eminent harpsichord maker, of whom we have before given some account (see p. 88 *ante*). Here he ingratiated himself so completely with his master that he became his son-in-law, partner, and successor. The earliest notice of a pianoforte of the *square* form in Messrs. Broadwood's books is

* The writer is here mistaken; John Pohlman was a German maker, resident in this country. (See p. 133 *ante*.)

dated 1771; the earliest of the *grand* form, in 1781.* In 1783, the books of the Great Seal Patent Office contain an entry of a grant (July 18th) "To John Broadwood, of Great Pulteney Street, Golden Square, '*pianoforte maker*,' for his new constructed pianoforte, which is far superior to any instrument of the kind hitherto made." This ingenious artist and worthy man died in 1812, at the advanced age of eighty-one, being succeeded by his son James Shudi Broadwood. There is an excellent folio mezzotint engraving of him by Messrs. Harrison and Say.

Robert Stodart, the fellow workman of John Broadwood, succeeded Americus Backers, before mentioned, and founded the firm so well known as John, William, and Matthew Stodart. The Patent Office Books, under the date Nov. 21, 1777, contain the entry of a grant to "Robert Stodart, of Wardour Street, Soho, musical instrument maker, for his new invented sort of instrument, or of *grand forte piano*, with an octave swell, and to produce various fine tones, together or separate, at the option of the performer." This seems to be a combination of the harpsichord and grand pianoforte, similar to that of Merlin's, before mentioned. It is stated that the grand pianoforte action, known as "the old English direct or *common* action," was the joint contrivance of John Broadwood, Robert Stodart, and Becker, a German mechanic, in the employ of Tschudi. James Broadwood, in a letter in the *Gentleman's Magazine*, 1812, attributed the invention to H. Baccers, a Dutchman, in 1772. We suspect that Americus Backers, Becker, and H. Baccers, were one and the same person.

Jacob Kirkman, the founder of the eminent firm of Joseph Kirkman and Son, was succeeded by his nephew Abraham, who was among the early improvers of the pianoforte. Harpsichords, nevertheless, were made by this house as late as 1800.

In 1786, John Gieb, an ingenious mechanic, effected a great improvement in the pianoforte, by the invention of what is called the *grasshopper action*. It consisted in the placing of an additional lever under that of the hopper hammer, the object of which was to apply the moving power as near as possible to the pivot of the hammer, which, it is evident, increased the rapidity of the blow. The end of the under lever

* It should be noticed that the first account book of 1851, this eminent establishment made no fewer than the firm is, unfortunately, lost. Between 1771 and 1851, 103,750 pianos!

rested on a little piece of mechanism, fixed in the finger key, and called a *grasshopper*, not unlike, in its object and contrivance, to that of the jack of the harpsichord. When the key was struck, the upper end of the grasshopper, which was about the eighth of an inch in thickness only, was carried past the end of the under lever, which rested on it, but communicated its impulse in passing, and received the end of the lever on a little block of wood glued on about a quarter of an inch below. In returning, the grasshopper, which was kept in its upright position by a slight spring of brass wire, yielded and passed the end of the lever again to its original position. Improvements in this action were patented, in 1794 and 1798, by William Southwell.

“The merit of the pianoforte,” says the writer of an excellent article in Brewster’s *Cyclopædiæ*, vol. xvi, p. ii, p. 601, “was not immediately acknowledged in any of the three countries, Italy, France, or Germany; nor was it in its own country that it came first into vogue. In England it was little better. The elder Broadwood, by executing the mechanism in a superior style, first put the superiority of the instrument over the harpsichord beyond question; and, although some maintained the orthodoxy of the latter, the innovation gradually forced its way; and it had, in a great measure, taken possession of the public taste here, while the musicians of the Continent still clung to the harpsichord.

“Ever since the pianoforte came into general use, the ingenuity of rival makers has been exerted to improve the instrument in power and quality of tone, and in the delicacy and effectiveness of the touch. These improvements have been effected chiefly by enlarging the instrument in general, by extending the scale and increasing the weight of the strings, by correspondently strengthening the frame-work, and by improving the mechanism of the action.

“The original scale of the pianoforte was from FF (octave below that immediately under the bass staff) up to f in alt, comprising five octaves; and this has been gradually extended. The first addition was of half an octave upwards to C in altissimo. Then the scale was carried down to CCC; that is, half an octave lower than FF.”

Francis Panormo, who was born in 1764, and died at the age of eighty, December 29, 1844, was the person who first suggested the *additional* keys to the pianoforte; viz. those from f to C; and found great difficulty in persuading the makers to listen to

the proposition. The first pianoforte with these *additional* keys, made by Messrs. Broadwood, was used at the Rotunda, Dublin, in a concert given by Ferdinand Panormo, who was considered a fine performer in his time.

We have already shown that the pianoforte was first used on the public stage in 1767, and it is not a little singular that the same year was also productive of another event equally important in the history of its progress—viz. the arrival of J. S. Schroeter in England.* Dr. Burney (Rees' *Cyclopaedia*, in v. Schroeter) says: "The pianoforte was a new instrument in this country: when he (Schroeter) first arrived, the hammer instruments of a large size were bad, and harpsichord players produced no great effects upon them; but Schroeter may be said to have been the first who brought into England the true art of treating that instrument. We were unwilling to give up the harpsichord, and thought the tone of the pianoforte spiritless and insipid, till expression and better instruments vanished our prejudices; and the expression and the *chiar' oscuro*, in performing music expressly composed for that instrument, made us amend for the want of brilliancy in the tone so much that we soon found the scratching of the quill in the harpsichord intolerable, compared with the tone produced by the hammer."

The compositions and public performances of Clementi tended fully to establish the new instrument in the confidence of the musical world. He is called, by Dr. Crotch, and justly, "the father of pianoforte music." He occupies a very distinguished position in the annals of music, whether we regard him as composer, performer, inventor, or as an improver of the mechanism of the pianoforte.

* The *Belle Assemblée* for August, 1807, having named C. G. Schroter, organist of Nordhausen, Germany, as the inventor of the pianoforte, produced the following reply, in the *Gentleman's Magazine* of 1812, from James Broadwood: "If by the celebrated Schroter mentioned in the *Belle Assemblée* as having invented the pianoforte in 1717, the late composer for the pianoforte and first elegant performer on that instrument is meant, the article must be incorrect, as he only died about twenty years ago, aged about 58. The first maker of the grand pianoforte was H. Baccers, a Dutchman, who, in 1772, invented nearly the mechanism by which it is distinguished from the

instrument with that name made in Germany. From the improvement by the English makers, particularly by my father, John Broadwood, who was the first *native of this Island* that attempted the business (before exclusively carried on by Germans and Flemings), it may be claimed as a British instrument, from its capacity of tone, extent of compass, superior in effect to every instrument of the same kind made on the continent." It is hardly necessary to say, that the writer of the above letter confounded the two Schroeters. We have quoted it for the information which it contains.

Muzio Clementi was born in the year 1752, at Rome, where his father followed the occupation of a chaser and embosser of silver vases and figures for the church service. He was related also to Buroni, afterwards principal composer at St. Peter's, from whom he received his earliest lessons in music. At six years of age, he commenced sol-fa-ing; at seven, he was placed under an organist of the name of Cordicelli, for instruction in harmony, and proceeded with such rapidity, that, at nine years old, he passed his examination and was admitted to an organist's place in his native city. His next masters were Santarelli, who is considered by the Italians the last great master of the vocal school, and Carpini, the deepest contrapuntist of his age in Rome. While studying under the latter, and as yet little more than twelve years old, young Clementi wrote, without the knowledge of his master, a mass for four voices, which was so much admired by his friends that at length Carpini desired to hear it; although not much addicted to bestowing praise, even Carpini could not refuse his tribute of applause, adding, however, what was probably very true, that if the youthful composer had consulted his master, "it might have been much better."

About this time, young Clementi's proficiency on the harpsichord, which, notwithstanding his other studies, he had assiduously practised, attracted the notice of the celebrated Peter Beckford, then on his travels in Italy. Mr. Beckford prevailed on the parents to consign their son's future education to his care, and brought him to England, to his seat in Dorsetshire, where the society and conversation of a family distinguished by literary habits and taste, as much as by wealth and rank, must have contributed in no small degree to inspire that relish for the whole circle of the belles lettres which led Clementi, independent of the study of his own art, to acquire an uncommon proficiency in both the living and dead languages, and an extensive acquaintance with literature and science in general. The works of Corelli, Alessandro Scarlatti, Paradies, and Handel, were the sources from which he derived musical instruction, and the examples on which he formed his taste; while at the same time he was indefatigable in the practice of the instrument to which he had devoted himself. His success was equal to his zeal and assiduity. At eighteen, he not only surpassed all his contemporaries in execution, taste, and expression, but had already composed (though it was not published till three years after) his celebrated Opera 2, a

work which, by the common consent of all musicians, is entitled to the credit of being the basis on which the whole fabric of modern pianoforte sonatas has been founded, and which—though it is now, from the immense progress which manual dexterity has made in the last eighty years, within the powers of even fourth-rate performers—was, at the period of its production, the despair of such pianists as J. C. Bach and Schroeter, who were content to admire it, but declined the attempt to play what the latter professor declared could only be executed by its own composer, or by that great performer of all wonders and conqueror of all difficulties, the Devil.

While thus assiduous in the prosecution of his studies, Clementi was not, as many men of studious habits are, inattentive to his personal health. Aware of the injurious effects of constant sedentary application, he used every means that abstemiousness in diet and a regular and judicious plan of exercise afforded to counteract them ; and, by this plan, he found his spirits unfailingly elastic, and his powers of application to study seldom wearied.

The time arranged by his father for his study with Mr. Beckford was no sooner completed, than his love of independence determined Clementi immediately to quit that gentleman's house and commence his career in the arena of the metropolis, where he was speedily engaged to preside at the harpsichord in the orchestra of the King's Theatre ; and his reputation increased so rapidly, that he soon received as high remuneration for his lessons or performances as Bach or any of his most celebrated contemporaries. In 1780, at the suggestion of Pacchierotti, he determined to make a tour on the Continent, whither his compositions and the fame of his executive talent had long preceded him. In Paris, which was the first capital he visited, he remained till the summer of 1781 ; when he proceeded, by the way of Strasbourg and Munich, to Vienna, enjoying everywhere the patronage of sovereigns, the esteem and admiration of his brother musicians, and the enthusiastic applauses of the public. Accustomed to the measured and somewhat cold plaudits of an English audience, the first burst of Parisian enthusiasm so astonished him, that he frequently afterwards jocosely remarked, he could hardly believe himself the same Clementi in Paris as in London. In Vienna, he became acquainted with Haydn, Mozart, Saliéri, and many other celebrated musicians then resident in that city ; and played alternately with Mozart before the

Emperor Joseph II, and the Grand Duke Paul (afterwards Emperor) of Russia, and his Consort. On one occasion, when the Imperial trio alone were present, Clementi and Mozart were desired to play. Some question of etiquette, as to which should begin, arising, the Emperor decided it by calling on Clementi, who, after preluding for some time, performed a sonata; and was followed by Mozart, who, without any other exordium than striking the chord of the key, also played a sonata. The Grand Duchess then said that one of her masters had written some pieces for her which were beyond her powers, but that she should much like to hear their effect; and producing two, Clementi played one, and Mozart the other, at first sight. She next proposed a theme, on which, at her request, the two great masters extemporized, alternately, to the astonishment and delight of their Imperial audience. The plan was evidently premeditated, and hardly fair towards the eminent professors who were thus surprised into immediate competition. The result, however, was equally honorable to both, between whom existed no unworthy feeling of jealousy, and creditable to them as artistes, on whose talents the demand, however unexpected or unusual, could not be too great.

In the course of his tour on the Continent, Clementi had written, in Paris, his operas 5 and 6; and in Vienna, his operas 7, 8, 9, and 10. On his return to England, he published his operas 11 and 12. In the Autumn of 1783, he performed publicly on the *pianoforte* at a series of concerts given at the Pantheon in Oxford Street. In the same year, J. B. Cramer, then about fourteen or fifteen years old, and who had previously received some lessons from Schroeter, and was studying counterpoint under Abel, became his pupil, and attended him almost daily, until Clementi went again for a short time to Paris, whence, however, he returned the following year; and from 1784 to 1802, continued in London, pursuing his professional career with increasing reputation as an instructor, composer, and performer.

About the year 1798, upon the failure of the house of Longman and Broderip, by which Clementi lost considerably, he was induced, by the representations of some eminent mercantile men, to engage in the music publishing and pianoforte manufacturing business. A new firm was quickly formed, at the head of which was Clementi's name; and from that period he declined taking pupils, but dedicated

the time which was not demanded by his professional studies or mercantile engagements to improving the mechanism and construction of the instrument of which he may be said to have first established the popularity. He was associated in the manufacture of pianofortes with Mr. Frederick W. Collard. Thus arose the great firm of Collard and Collard.

In 1802, Clementi visited the Continent for the third time, remaining abroad about eight years. While in Berlin, he married his first wife; but he had soon to regret her loss. The widower, having recourse to travel to dissipate his grief, set out for St. Petersburg; but very speedily left Russia and proceeded to Vienna, whence he was soon called by the death of his brother, which rendered his presence in Rome necessary. In 1810, he returned to England, and, in the year succeeding, entered again into the matrimonial state. He now published other works, and among them his *Practical Harmony*, in four volumes, and his *Gradus ad Parnassum*, in three.

Clementi was one of the founders and directors of the Philharmonic Society, to which he presented two symphonies, and every season conducted one of the concerts of that Institution. In 1827, the musical profession, as a testimony of affection and respect, invited him to a dinner at the Albion Tavern; and during the evening he was prevailed on to sit down to the pianoforte, when, choosing a subject from Handel's First Organ Concerto, he extemporized on it in a manner that proved how little his powers of imagination were affected by time, and excited the wonder of a very numerous company of judges assembled on the memorable occasion.

Clementi died on the 10th of March, 1832, after an illness of short duration, though his mind had for some time previous been gradually yielding to the attacks of age. His remains were deposited in the cloisters of Westminster Abbey, the three choirs of London and a great number of his brother-professors attending to pay the last tribute of respect to so valuable a man, and so eminent a composer.

The pianoforte was now firmly established in the public favour, and the date of Clementi's commencing manufacturer, i. e. 1800, gave the death blow to the old harpsichord. "Clementi's successors," says a recent writer, "worthily followed in his steps; finding new wants arise, from time to time, they demanded new improvements to satisfy them; and thus the player and manufacturer vied with each other in the general advance."

Before closing this chapter, it will be interesting here to chronicle a list of harpsichord and pianoforte makers resident in London at the end of the eighteenth century, which we are enabled to do from a rare and perhaps unique *Musical Directory for the Year 1794*. *

- “ BECK, Pia Forte Maker, 10, Broad St. Carnaby Market.
- “ BUNTLEBART and SIEVERS, Instrument Makers, 7, Princes St. Hanover Square.
- “ CORRIE, Pia Forte Maker, 41, Broad St. Carnaby Market.
- “ DONE (Joshua), Pia Forte Maker, 30, Chancery Lane.
- “ ELWICK, Harpsichord Maker, Long Acre.
- “ GANER, Pia Maker, 48, Broad St. Carnaby Market.
- “ HANCOCK, Organized Pia Maker, Parliament St. Westminster.
- “ HOUSTON and Co. Pia Makers, 54, Great Marlborough St.
- “ KIRKMAN and SON, Harpsichord Makers, 19, Broad St. Carnaby Market.
- “ LONGMAN and BRODERIP, Pia Makers, 26, Cheapside; 13, Haymarket; and Tottenham Court Road.
- “ PETHER (George), Instrument Maker, Oxford St.
- “ SHUDI and BROADWOOD, Instrument Makers, Great Pulteney St. Golden Square.
- “ STODDART, Pia Forte Maker, Wardour St.”

* This volume consists of 84 pages, besides 6 of introductory matter. It was compiled, according to the signature at the end of the preface, by J. Doane. The copy to which we refer is in the valuable library of the Sacred Harmonic Society.

CHAPTER X.

THE PROGRESS OF THE PIANOFORTE IN THE NINETEENTH CENTURY.

At the beginning of the nineteenth century, pianoforte making rapidly increased in every part of Europe, especially in Germany, France, and England; showing, as M. Thalberg expresses it, "how broad spread became the estimation of the instrument." From the year 1800 to the present time, scarce a year has passed without the appearance in England alone of patents for real or imaginary improvements, "countless experiments being made, most of them totally empirical and unimportant, but some, especially in the last thirty years, truly scientific, resulting in the enlargement and improvement which we now find."

It is not possible to enter into minute details respecting all the various experiments that have gradually brought the pianoforte to its present state of perfection, nor to do full justice to those scientific men who have directed their talents and energies to the subject; but we have thought that a list of patents, chronologically arranged, from the year 1694 to the year 1851, and carefully extracted from the valuable Indices prepared by Mr. Woodcroft, would be an acceptable record to those interested in the subject of the present work. We have the more pleasure in presenting this list to our readers, because it corrects many errors prevalent in the "trade" respecting the precise period that gave birth to certain important improvements now in daily use.*

* The Indices prepared by Mr. Woodcroft out of the materials accumulated during two centuries in the Great Seal Patent Office are valuable memorials of patient industry and extensive practical knowledge. They are four in number. The first gives at length the titles of the patents with a progressive number prefixed. From this

1694. GEORGE JOYCE and PETER EAST—"a speciall lycence for the sole use and exercise of their new invention
(Oct. 20.) of an instrument, which being applyd to organs, clockys, or any other key instrument, as harpsicord, virginalls, or the like, will cause the same too chyme or playe any mannere of tune, air, or notes plain, or perform a consort, and alterable to any tune or air in halfe an hour by any person, tho' noe master of musick, without changing the instrument."
1730. JOHN HARRIS, "harpsichord and spinnett maker"—a patent for his "new invention of an harpsichord,
(Oct. 22.) on which (having only two sets of strings) may be performed either one or two unisons, or two unisons and one octave, either in the *forts* or *pianos*, or loud or soft, and the contrary, may be executed as quick as thought, and also double basses, by touching only single keys, whereby hard divisions to the basse part may be well played in a double manner without the thumb and finger together."
1730. WILLIAM BARTON, for his "new invencion of pens of silver, brass, steel, and all other sorts of metals, to
(Dec. 17.) improve the use of harpsichords and spinnets, which will improve the tone of the said instruments, and last many years without amendment; crow and raven's quills, of which they are now made, requiring frequent change and trouble in repairing."
1741. ROGER PLENIUS, of the parish of St. George, Hanover Square, harpsichord maker, for "his new invencion
(Dec. 30.) of meliorating the musical instruments called harpsichords, lyrichords (which are harpsichords strung with cat gut), and spinnets."
1745. ROGER PLENIUS, of St. George, Hanover Square, harpsichord maker, for the "sole use and exercise of
(July 10.) his new invencion for the great improvement of musical instruments called harpsicords and spinnets."
1769. BURKAT SHUDI, harpsichord maker, for "his invention of a piece of mechanism or machinery by which
(Dec. 18.) the harpsichord is very much improved."
1770. THOMAS HAXBY, of York, musical instrument maker, for "his new invented single harpsichord, to answer
(Dec. 28.) all the purposes of a double one, and sell for the common price of a single one."
1772. ADAM WALKER, of Manchester, "teacher of natural philosophy," for "his new invented method of producing
(July 29.) continued tones from the wire strings of an harpsichord, and thereby remedying the acknowledged defect of these kinds of instruments, giving them all the powers of musical expression which the organ, violin, lyrichord, or harmonica, are capable of; and that he can adapt this improvement, which he calls a *caelestina*, to any harpsichord without altering either the form of the instrument or any of its stops, by adding a new piece of mechanism to it, of which he hath been the sole inventor."

catalogue is formed: 1st, an index of subjects, classified and alphabetically arranged; and 2nd, an alphabetical index of names, &c. The series is rendered complete by a "Reference Index," giving under each progressive number the title and vol. of every work in which any notice or description of the invention represented by that number has appeared. Not, at first, being aware of this valuable record, we took the trouble to compile a similar list of

"Inventions and Improvements in the Pianoforte" from such works as were accessible: i. e. *The Repertory of Arts and Manufactures*; *Newton's London Journal of Arts*; the *Official Catalogues* and *Jury Reports* of the Exhibition of 1851, &c. It is hardly necessary to say that the present list is much more extensive, and to be relied on for its accuracy. We have added a few remarks between brackets: those in italics are Mr. Woodcroft's.

1774. JOSEPH MERLIN, of Little Queen Ann Street, Mary-le-Bone, mathematical instrument maker, for "his new invented kind of compound harpsichord, in which, besides the jacks with quills, a set of hammers, of the nature of those used in the kind of harpsichords called *piano forte*, are introduced in such manner that either may be played separately or both together, at the pleasure of the performer; and for adding the aforesaid hammers to an harpsichord of the common kind already made, so as to render it such compound harpsichord."
- (Sept. 12.)
1774. SAMUEL GILLESPIE, of Brownlow Street, St. Giles-in-the-Fields, harpsichord maker, for "his new constructed principle of putting on the quills to strike the strings of a harpsichord with a peddle and swell, which raises the top, brings on the tone, and swells a new celestial stop, at the same time preserving the instrument compleat."
- (Dec. 28.)
1777. ROBERT STODART, of Wardour Street, Soho, musical instrument maker, for "his new invented sort of instrument, or of *grand forte piano* with an octave swell, and to produce various fine tones, together or separate, at the option of the performer." (A combination of the harpsichord and grand pianoforte.)
- (Nov. 21.)
1783. JOHN BROADWOOD, of Great Pulteney Street, Golden Square, *piano forte maker*, for "his new constructed piano forte which is far superior to any instrument of the kind heretofore made."
- (July 18.)
1786. JOHN GIEB, of the Old Baily, musical instrument maker, for "his new improvement upon the musical instruments called the *piano forte* and harpsichord, by which the same will become perfect and compleat instruments of their kind, which hath never before been discovered, and by which the same can be more easily tuned and played upon; and that such improvement extends to each of such instruments equally alike." (The grasshopper action, which is still in use for square instruments, is included in this patent.)
- (Nov. 9.)
1787. JOHN LANDRETH, of Tabernacle Walk, near Old Street, musical instrument maker, for "his new improvement upon the several musical instruments called *piano forte*, harpsichord, organ and guitar, and upon various other musical instruments, by which the same can be more easily kept in order and played upon, and by which the same will become perfect and compleat instruments of their kind, which hath never before been discovered."
- (March 31.)
1787. HUMPHREY WALTON, of the parish of St. Pancras, musical instrument maker, for "his new improvements on the musical instrument called the *piano forte*, and other instruments, which he believes will render them more compleat and perfect than any now in use."
- (May 25.)
1790. JOHN CRANG HANCOCK, of Wych Street, St. Clement Danes, organ builder, for "his new invented *grand pianoforte* with a spring key touch, German flute, and harp, which is preferable to any hitherto discovered."
- (April 13.)
1792. GEORGE GARCKA, of Wardour Street, Soho, musical instrument maker, for his "new improvements on the *piano forte*, which will render that instrument more perfect than any now in use."
- (Feb. 4.)
1792. JAMES DAVIS, of Tottenham Court Road, organ builder, for "his new invented improvements upon the several musical instruments called *piano fortes* and harpsichords."
- (June 6.)
1790. JAMES BALL, of Duke Street, Grosvenor Square, piano forte maker, for "his new invented improvements upon the *square* and other piano fortes, which will render these instruments more perfect than any hitherto made."
- (Nov. 16.)

1792. GEORGE BUTTERY, of the parish of St. Martin-in-the-Fields, musical instrument maker, for "his new improvement in the construction of *piano fortes* and all other musical instruments in which hammers are or can be made use of." (Jan. 26.)
1794. SEBASTIAN ERARD, of Great Marlborough Street, musical instrument maker, for "his new invented improvements in the construction of harps and *pianofortes*, both large and small, and which improvements may also be applied to all kinds of instruments where keys are used." (Oct. 17.)
1794. WILLIAM SOUTHWELL, late of Dublin, but now of Lad Lane, London, musical instrument maker, for "his new invented improvements in the construction of the musical instrument called a *piano forte*, by which improvements the tones of such instruments are rendered more distinct and perfect, and the players playing on such instruments have a power to produce the gradations of tones from piano to forte with greater effect than they are able at present to produce the same; and an additional number of keys may be put to such instruments in a new manner, upon a better construction than such keys can be put to piano fortes at present." (Improvements in the dampers form the basis of this patent.) (Oct. 18.)
1795. WILLIAM STODART, of Golden Square, piano forte maker, for "his new invented *upright grand piano forte*, of the form of a book case, the mechanism of which is upon an entire new construction." (Jan. 12.)
1797. WILLIAM ROLFE and SAMUEL DAVIS, of Cheapside, musical instrument maker, for "new invented improvements upon the musical instruments called the harpsichord, *grand piano forte*, and *square piano forte*. (See *The Repertory of Arts and Manufactures*, vol. vii, p. 431.) (Jan. 31.)
1798. WILLIAM SOUTHWELL, of Broad Court, St. Martin-in-the-Fields, musical instrument maker, for "his new invented improvements on the *action* and construction of *piano fortes* and other musical instruments." (Further improvements in the dampers.) (Nov. 8.)
1799. JOSEPH SMITH, of the parish of St. Martin-in-the-Fields, gentleman, for "his new invented improvements in the internal bracings of *piano fortes*, so as to admit the introduction into the internal part of the instrument of a drum, tabour, or tambourine, with sticks or beaters thereunto belonging, together with other improvements thereon." (See *The Repertory of Arts and Manufactures*, vol. x, 215; xii, 71; xv, 215.) (Oct. 3.)
1801. SEBASTIAN ERARD, for "his new invented improvements in the construction of harps and *piano fortes*." (May 16.)
1801. JOHN CONRAD BECKER, of Princes Street, Soho, musical instrument maker, for "his new invented improvements in musical instruments, chiefly applicable to harps and *piano fortes*." (See *The Repertory of Arts and Manufactures*, vol. xvi, p. 146.) (Nov. 7.)
1801. ANTONIUS BEMETZRIEDER, of Chelsea, master of arts, and ROBERT SCOTT, JOHN SCOTT, and ALEXANDER SCOTT, of Margaret Street, Cavendish Square, musical instrument makers, for "their new invented method of making piano fortes, entirely new, both in principle, construction, and shape." (See *The Repertory of Arts and Manufactures*, vol. xvi, p. 143.) (Nov. 10.)
1801. EDWARD RYLEY, of Kingston-upon-Hull, organ builder, and piano forte maker, for "his new invented moveable keys for pianofortes, organs, and other instruments." (See *The Repertory of Arts and Manufactures*, vol. xvi, p. 144.) (Nov. 28.)

1802. THOMAS LOUD, of Hoxton, musical instrument maker, for "his new invented improvements in the action and construction of upright piano fortes."
- (Mar. 9.)
1803. GEORGE WOONS, of Barbican, gentleman, for "his new invented method of constructing harps, harpsichords, piano fortes, violins, guitars, and other stringed musical instruments."
- (June 28.)
1807. WILLIAM SOUTHWELL, of the city of Dublin, musical instrument maker, for "his invented certain improvements upon a piano forte, which is so constructed as to prevent the possibility of its being so frequently out of tune as piano fortes now generally are, which he denominates '*a cabinet piano forte*.'"
- (April 8.)
1808. SEBASTIAN ERARD, of Great Marlborough Street, for "his invented certain improvements upon piano fortes large and small, and upon harps, for which he has already obtained a patent." (The *up*-bearing is included in this patent. By this the stroke of the hammer forced the string against the nut, instead of away from it, which was the case with the *down*-bearing. A firmer and increased tone is the result.)
- (Sept. 24.)
1809. DAVID LOESCHMAN, of Newman Street, piano forte maker, for "his invented certain improvements in the musical scale of keyed instruments with fixed tones, such as pianos, organs, &c." (The *Enharmonic* piano, an account of which may be seen in the *Monthly Magazine*, 1812, pp. 9, 213, 409.)
- (July 26.)
1810. SEBASTIAN ERARD, of Great Marlborough Street, for "his invented certain improvements on piano fortes and harps."
- (May 2.)
1811. WILLIAM SOUTHWELL, of Gresse Street, Rathbone Place, piano forte maker, for "his invented certain improvements in the construction of a pianoforte."
- (March 4.)
1811. ROBERT WORNUM, the younger, of Princes Street, Hanover Square, piano forte maker, for "his invented improved upright piano forte."
- (March 26.)
1811. WILLIAM FREDERICK COLLARD, of Tottenham Court Road, musical instrument maker, for "his invented certain improvements upon an upright piano forte."
- (Sept. 9.)
1816. WILLIAM SIMMONS, of Wigan, Lancashire, writing master and teacher of accounts, for "his invented certain improvements applicable to keyed instruments, as the organ, piano forte, harpsichord, or to any instrument or set of instruments to which keys are, or may, or can be affixed."
- (May 14.)
1816. JOSEPH KIRKMAN, of Broad Street, St. James's, piano forte maker, for "his invented improved method of applying an octave stop to piano fortes."
- (Oct. 14.)
1816. JOHN DAY, of Brompton, lieutenant on half-pay, of our 11th regiment of foot, for "his invented 'certain improvements and additions in the construction of piano fortes and other keyed musical instruments.'"
- (Nov. 14.)
1817. ISAAC HENRY ROBERT MOTT, of Brighton, composer and teacher of music, for "his invented 'Method of producing from vibrating substances a tone or musical sound, the peculiar powers in the management whereof are entirely new, and which musical instrument he denominates the *sostinente* piano forte.'"
- (Feb. 1.)
1820. JAMES THOM, of Wells Street, Mary-le-bone, piano forte maker, and WILLIAM ALLEN, of Castle Street, ditto, piano forte maker, "for their invented or found out 'a certain improvement in piano fortes.'"
- (Jan. 15.)
- (This patent was brought out by Stodart; it was for the metal tube bracing. Before this, however, Hawkins and Braithwaite had both made use of metal bars for upright instruments. This bracing was also *compensating*, as the metallic tubes possessing the same properties as the strings, extended or relaxed simultaneously with them.)

1820. ROBERT WORNUM, of Wigmore Street, Cavendish Square, piano forte maker, for "his invented improvement on piano fortes and certain other stringed instruments." (Equal tension stringing: this plan has not been generally adopted.)
(May 13.)
1821. WILLIAM FREDERICK COLLARD, of No. 195, Tottenham Court Road, &c. for "his invented certain improvements on musical instruments called piano fortes" (*an additional bridge and a moveable damper*).
(March 8.)
1821. WILLIAM SOUTHWELL, of Gresse Street, Rathbone Place, piano forte manufacturer, for "certain improvements on cabinet pianofortes" (*the action parts*).
(April 5.)
1821. PIERRE ERARD, of Great Marlborough Street, musical instrument maker, "in consequence of communications made to him by a certain foreigner residing abroad, he is in possession of 'an invention of certain improvements on piano fortes and other keyed instruments.'" (The repetition action This is a beautiful piece of mechanism, which, while it gives a blow of great force, can also be modified to the most delicate touch, the action being always under the hand ready for the repetition of the stroke.)
(Dec. 22.)
1823. FRANCIS DEAKIN, of Birmingham, sword maker, for "his improvements to piano fortes and other stringed instruments."
(Feb. 18.)
1823. HENRY SMART, of Berners Street, piano manufacturer, for "certain improvements in the construction of pianofortes."
(July 24.)
1823. THOMAS TODD, of Swansea, South Wales, organ builder, for his "improvement in producing tone upon musical instruments of various descriptions" (*obtaining violin notes from pianofortes*).
(Dec. 4.)
1824. WILLIAM WHEATSTONE, of No. 118, Jernyn Street, St. James's, music seller, for "a new method of improving and augmenting the tones of piano fortes, organs, and euphonions" (*by introducing drums*).
(July 29.)
1825. PIERRE ERARD, &c. "in consequence of communications made to him by a certain foreigner residing abroad, of 'certain improvements on pianofortes.'" (The system of fixed metal-bracing, which is now generally adopted.)
(Jan. 5.)
1825. FRANCIS MELVILLE, of Argyll Street, in the city of Glasgow, piano forte maker, for an "improved method of securing that description of small piano fortes commonly called square piano fortes from the injuries to which they are liable from the tension of the strings."
(Jan. 18.)
1825. GEORGE AUGUSTUS KOLLMAN, of the Friary, St. James's Palace, professor of music, for "certain improvements in the mechanism and general construction of piano fortes."
(Feb. 26.)
1825. JAMES SHUDI BROADWOOD, of Great Pulteney Street, Golden Square, for "certain improvements in small, or what are commonly called square pianofortes" (*preventing the recoil of the hammer*).
(Oct. 6.)
1826. (July 4.) ROBERT WORNUM, &c. for "certain improvements on piano fortes (*the action part*)."
1827. PIERRE ERARD, &c. "in consequence of communications made to him by a certain foreigner residing abroad," of "certain improvements in the construction of piano fortes."
(Feb. 20.)
1827. JAMES STEWART, of Store Street, Bedford Square, piano forte maker, for his "certain improvements in piano fortes, and in the mode of stringing the same." (A new damper arrangement forms part of this patent, in which the vertical wire was made to rise at some distance behind the strings actually struck, the head being elongated this distance forwards. In the old system, the damper wire, rising close by the side of the

vibrating strings, was apt to jar against them—an evil which this improvement removed. This patent was brought forward by Messrs. Collard.)

1827. JAMES SHUDI BROADWOOD, &c. for "certain improvements in the grand piano fortes."
(April 9.)
1827. EDWARD DODD, of 62, Berwick Street, Oxford Street, instrument maker, for "certain improvements on piano fortes."
(July 25.)
1827. WILLIAM DETTMAR, of Upper Mary-le-bone, piano forte maker, for "certain improvements on piano fortes" (*altering the pitch*).
(Aug. 30.)
1828. JOHN HENRY ANTHONY GUNTER, of Camden Town, piano forte manufacturer, for "certain improvements on piano fortes" (*an additional sounding board*).
(July 10.)
1828. ROBERT WORNUM, &c. for "certain improvements on upright piano fortes." (The *piccolo* action, which has been extensively followed by the foreign makers.)
(July 24.)
1829. FRANCIS DAY, of the Poultry, optician, and AUGUST MÜNCK, mechanic, of the same place, "in consequence of a communication made to them by a certain foreigner residing abroad, and inventions by themselves," for "certain improvements on musical instruments" (*adapting sonorous metallic springs to a piano forte*).
(June 19.)
1829. THOMAS HALL ROLFE, of Cheapside, musical instrument maker, for "an improvement or improvements upon the self-acting piano forte."
(Aug. 11.)
1829. JAMES STEWART, of George Street, Euston Square, piano forte maker, for "certain improvements on piano fortes." (A check to the under hammer, to prevent the rebound of the hammer against the string. This patent was brought out by Messrs. Collard.)
(Nov. 2.)
1830. SIMON THOMPSON, of Great Yarmouth, mariner's compass maker, for "certain improvements in piano fortes" (*keys and action part*).
Feb. 27.)
1831. JOHN CHARLES SCHWIESO, of Regent Street, musical instrument maker, for "certain improvements on piano fortes and other stringed instruments."
(Feb. 2.)
1831. WILLIAM ALLEN, of Catherine Street, Strand, piano forte maker, for "certain improvements upon piano fortes."
(July 20.)
1832. PIERRE FREDERIC FISCHER, of Chester Place, Regent's Park, gentleman, for an invention communicated to him by a certain foreigner residing abroad, of "certain improvements in piano fortes."
(Sept. 8.)
1833. JACOB FREDERICK ZEITZER, of New Cavendish Street, Portland Street, piano forte maker, for his invention of "certain improvements on piano-fortes and other stringed musical instruments."
(Nov. 1.)
1835. JAMES STEWART, of George Street, Euston Square, piano forte maker, for his invention of "improvements in the mechanism of horizontal grand and square piano fortes." (A new construction of the action, the escapement being placed upon the key, and, coming into contact with a lever or crank, thus regulating the rise and fall of the hammer.)
(Jan. 15.)
1835. FREDERICK LUDWIG HAHN DANHELL, of Great Marlborough Street, musical instrument maker, for "certain improvements in piano fortes; being a communication partly from his partner, FREDERICK GEORGE GREINER, a foreigner residing abroad."
(March 2.)

1835. ROBERT WOLF, of Cornhill, musical instrument maker, for "an improvement in pianofortes, consisting in the new construction, on the principle of acoustics, of a sounding body applicable to every description of piano fortes." (March 2.)
1835. PIERRE FREDERICK FISCHER, of Great Marlborough Street, merchant, for "certain improvements in piano fortes." (May 13.)
1835. PIERRE ERARD, of Great Marlborough Street, musical instrument maker, for "certain improvements in piano fortes," being an extension of former Letters Patent granted by His late Majesty George IV. (Dec. 31.)
1836. JOSEPH LIDEL, of Arundel Street, Panton Square, professor of music, for "certain improvements in piano fortes, being a communication from a foreigner residing abroad." (Feb. 17.)
1836. JOHN GODWIN, of Cumberland Street, Hackney Road, piano forte maker, for "an improvement in the making or construction of piano fortes." (March 8.)
1836. CHARLES GUYNEMER, of Manchester Street, Manchester Square, professor of singing, for "certain improvements in piano fortes, being a communication from a foreigner residing abroad." (March 8.)
1836. WHEATLEY KIRK, of Commercial Street, Leeds, musicseller, and manufacturer of piano fortes, for "certain improvements in piano fortes." (May 14.)
1837. WILLIAM SOUTHWELL, of No. 5, Winchester Row, New Road, piano forte maker, for "a certain improvement in piano fortes." (Aug. 24.)
1839. JOHANN ANDREAS STUMPF, of Great Portland Street, musical instrument maker, for "improvements in grand and other piano fortes." (Feb. 21.)
1839. GEORGE AUGUSTUS KOLLMAN, of the Friary, St. James's Palace, professor of music—an extension of former Letters Patent for "certain improvements in the mechanism and general construction of piano fortes." (Feb. 23.)
1840. JOSEPH CLARK, of Boston, in the county of Lincoln, printer, for his invention of "improvements in piano fortes." (Feb. 14.)
1840. JOHN HAWLEY, of Frith Street, Soho, watch maker, for "improvements in pianos and harps." (June 1.)
1840. PIERRE ERARD, for his invention of improvements in piano fortes." (An action for the oblique pianoforte.) (Sept. 24.)
1840. EDWARD DODD, of Kentish Town, musical instrument maker, for his invention of "improvements in piano fortes." (Nov. 7.)
1840. JOHN STEWARD, of Wolverhampton, in the county of Stafford, esquire, for his invention of "an improvement in the construction of pianofortes, harpsichords, and other similar stringed musical instruments." (Dec. 16.)
1841. JOHN GODWIN, of Cumberland Street, Hackney Road, pianoforte maker, for his invention of "an improved construction of pianofortes of certain descriptions." (June 23.)
1841. JAMES STEWARD, of Wolverhampton, in the county of Stafford, esquire, for his invention of "certain improvements in the construction of pianofortes. (The Euphonicon; an upright pianoforte, the framework entirely of iron, with the bass strings exposed in the form of a harp. It had three sound-boards.) (July 7.)
1841. JAMES STEWART, of 21, Osnaburgh Street, pianoforte maker, for "certain improvements in the action of horizontal pianofortes." (The introduction of the traversing escapement fixed upon the hammer-rail, (Nov. 11.)

- thereby admitting of a firmer blow, and greater resistance; as also a new repetition movement.
1842. THOMAS LAMBERT, of Regent's Park, musical instrument maker, for "improvements in the action of cabinet pianofortes."
(Jan. 15.)
1842. HENRY FOWLER BROADWOOD, of 33, Great Pulteney Street, Golden Square, for "an improvement in that part of a pianoforte or harpsichord, or other like instrument, commonly called the name board."
(Feb. 8.)
1842. ROBERT WORNUM, of Store Street, Bedford Square, for "improvements in the action of pianofortes."
(Feb. 15.)
1843. JOSEPH KIRKMAN, jun. of Soho Square, pianoforte manufacturer, for "improvements in the action of pianofortes."
(Jan. 19.)
1843. HENRY DU BOCHET, of 46, South Mall, in the city of Cork, Ireland, pianoforte tuner, for "a new method of making pianofortes."
(Feb. 11.)
1843. JAMES STEWART, of No. 3, Gloucester Crescent, Regent's Park, pianoforte maker, and THOMAS LAMBERT, of 91, Albany Street, pianoforte maker, for "improvements in the action of pianofortes."
(April 29.)
1844. CHARLES MAURICE ELIZÉE SAUTTER, of Austin Friars, gentleman, for "improvements in pianofortes."
(July 3.)
1844. OBED MITCHELL COLEMAN, of Fitzroy Square, gentleman, for "improvements in pianofortes."
(Oct. 10.)
1844. SEBASTIEN MERCIER, of Paris, manufacturer of pianofortes, for "improvements in pianofortes."
(Dec. 12.)
1845. WILLIAM HATTERSLEY, of Regent Street, Westminster, pianoforte maker, for "certain improvements in the construction of pianofortes."
(April 7.)
1845. EDWARD LESLEY WALKER, of Foley Place, professor of music, for "improvements in pianofortes."
(Oct. 10.)
1845. BENJAMIN NICKELS, of York Street, Lambeth, machinist, for "improvements in pianofortes."
(Oct. 27.)
1845. SAMUEL THOMAS CROMWELL, of Romsey, Hants, teacher of music, for "improvements in apparatus to be applied to pianofortes."
(Nov. 11.)
1846. ISAAC HENRY ROBERT MOTT, of No. 76, Strand, pianoforte maker, for "certain improvements in musical instruments, whereby they are rendered much more durable, much more capable of resisting the injurious and destructive effects of the atmosphere (especially of extreme climates), and whereby the quality of their tone is greatly improved and remains good for a much longer period."
(April 28.)
1846. FREDERIC HANDELL BURKINYOUNG, of Baker Street, gentleman, for "improvements in pianofortes."
(June 16.)
1846. THOMAS WOOLLEY, of Nottingham, pianoforte manufacturer, for "improvements in pianofortes."
(July 8.)
1846. THEOPHILE AUGUSTE DRESCHKE, of Rue Thérèse, Paris, late an officer of artillery in the service of Prussia, and late professor of sacred music at the University of Berlin, for "improvements in the keys of pianofortes and other keyed musical instruments."
(July 31.)

1846. ALEXANDRE DEBAIN, manufacturer, of Paris, for "certain improvements applicable to keyed musical instruments." (Aug. 29.)
1847. JOHN SPEAR, of Gloucester Road, Hyde Park Gardens, gentleman, for "improvements in pianofortes and in the musical scale of notes in use for such instruments; and also in apparatus to facilitate the action of the fingers on the keys of pianofortes." (April 29.)
1848. JAMES MONTGOMERY, of Salisbury Street, engineer, for "certain improvements in pianofortes and other similar finger keyed instruments." (Jan. 11.)
1849. WILLIAM PHILLIP PARKER, of Lime Street, City, gentleman, for "improvements in the construction of pianofortes." (May 15.)
1850. PIERRE ERARD, of Paris, for "improvements in the construction of pianofortes." (The addition of pedal keys. The patent also includes the metal wrest-plank.) (Sept. 12.)
1851. JOHN HOPKINSON, of Oxford Street, pianoforte manufacturer, for "improvements in pianofortes." (The repetition and tremolo action.) (June 3.)

To take a retrospective glance at the interesting information furnished by this list,—

We find, as early as 1774, mention of the "pianoforte" in the patent granted to Joseph Merlin. This is followed up, in 1777, by Robert Stodart's "newly invented grand pianoforte." Then, in 1783, we have "John Broadwood, of Great Pulteney Street, Golden Square" (the locale of the firm at the present day), "pianoforte maker." In succeeding years, we find Gieb, Landreth, Walton, Hancock, Garcka, Davis, Bull, and Buttery—all unknown men to the present generation—each contributing his quota towards the perfection of the pianoforte.

In 1794, we first notice the great name of Sebastian Erard; followed, in the same year, by William Southwell, an artist of considerable skill, and to whom the instrument is indebted for many of its greatest improvements. Then comes Stodart, with his invention of the "upright grand" pianoforte; and William Rolfe, the founder of a most respectable house, in being at the present day. The century is well closed by Southwell's perfection of his damper action.

The nineteenth century is commenced by the name of Erard; and followed, shortly afterwards (in 1807), by Southwell's invention of the "cabinet" pianoforte. In 1811, the name of Robert Wornum first appears, as an improver of the "upright" pianoforte—an instrument which he afterwards, in the name of the "Cottage" and the "Piccolo," made his own. Wornum was an artist of extensive practical knowledge,

and profound mechanical skill. Many of his inventions are now spread over the Continent as well as England.

The well-known name of Collard makes its first appearance in the Patent books of 1811; but the factory, as we have shown, under the names of Longman and Broderip, and afterwards under that of Clementi, was established in the previous century. Joseph Kirkman follows, in 1816, with the curious invention (derived from the harpsichord) of an "octave stop" to the pianoforte. This is the first appearance of another great name in the books of the Patent Office. The year 1817 introduces us to Isaac Mott's "Sostinente pianoforte," an improvement of the "celestina," as patented by the philosopher, Adam Walker, in 1772.

The year 1820 exhibits a new era in the construction of pianofortes—the invention of "metallic tubes" by Messrs. Thom and Allen. This paved the way for various patents introduced by the great makers at different periods: i. e. for the introduction of steel tension bars, metal bracings of various kinds, and steel string plates; all having for their object the strengthening of the instrument, so as to enable it to resist the enormous strain from the increased and increasing weight or tension of the strings.

A more perfect mechanism of touch was the next great desideratum; and in the next year (1821), Erard took out the patent for his beautiful piece of mechanism known as the "repetition action." The touch has been brought to still greater perfection by the ingenious Mr. John Hopkinson, whose first patent for his "repetition and tremolo action," taken out in 1851, closes our list.

It would have been desirable to have recorded a similar list of patents taken out in foreign countries; but the task was impossible, from the imperfect manner in which such records are kept in most continental cities. It would have been impossible on another account, which will be readily understood when we inform our readers that one maker—the ingenious M. Pape, of Paris—enumerates no fewer than 120 patents (more than all the English patents put together, from 1694 to 1851) taken out by himself alone! "Trifles light as air." All the really important inventions of recent date, relative to the pianoforte, are due to the talents of the English, who, in this particular at least, far excell all other countries.

A number of ingenious inventions may be claimed for the natives of Germany, France, Belgium, Austria, the United States, &c. some of the most important of which will receive attention in the Second Part of our work.

We may here remark that the "Vienna action" is more simple and less expensive than our own; and its results are totally different, both in touch and tone; the former being extremely light, the latter very thin. It was formerly in use throughout Germany; but, of late years, the English mechanism, "*die englische Mechanik*," has been more generally adopted in Germany and elsewhere; and hence the remarkable improvement of pianofortes on the Continent.

In pointing out a few of the most eminent Continental pianoforte makers of the nineteenth century, we may instance Bessalié, of Breslau; Dörner, of Stuttgart; Heitemeyer, of Münster; Rühms, of Altona; and Hoxa and Seuffert, of Vienna. In France, we have Pfeiffer, Petzold, Herz, Pape, Pleyel, &c. Russia has an excellent artist in Lichtenthal; and Denmark, in Hornung. Both these latter makers use the English action.

In the United States, we have Messrs. Nunns and Clark, Driggs, and Pirsson, of New York; and in Boston, the eminent firm of the Chickering's. The latter may truly be termed the Broadwoods of America.

"The manufacture of the piano as a branch of trade," says M. Thalberg, in his excellent remarks drawn up for the Jury of the Exhibition of 1851, "is of very great importance, from the superior character of the principal workmen, and the vast numbers employed, directly and indirectly, in connection with it. In all the cities of the civilized world, there are numerous makers of this instrument, with immense numbers of workmen; and in most secondary towns throughout Europe, there are small makers; while the increase of the number of pianos, compared with the population, is every year more rapid—a circumstance which is not observed in regard to other musical instruments. This is corroborated by the fact, that, some years ago, pianoforte-music constituted only a very modest portion of a music-seller's stock; whereas now it fills more than three-quarters of his shelves, and makes his chief business. The number of teachers is something wonderful. Many are reduced ladies, who find in this exercise of their acquirements the most available means of support.

Every professional pianist has often had occasion to exercise his kindly and generous feelings in recommending and assisting accomplished women, whose helpless families would otherwise have been utterly destitute.

“ The social importance of the piano is, beyond all question, far greater than that of any other instrument of music. One of the most marked changes in the habits of society, as civilization advances, is with respect to the character of its amusements. Formerly, nearly all such amusements were away from home, and in public; now, with the more educated portion of society, the greatest part is at home, and within the family circle—music on the piano contributing the greatest portion of it. In the more fashionable circles of cities, private concerts increase year by year, and in them the piano is the principal feature. Many a man, engaged in commercial and other active pursuits, finds the chief charm of his drawing-room in the intellectual enjoyment afforded by the piano.

“ In many parts of Europe, this instrument is the greatest solace of the studious and the solitary. Even steam and sailing vessels for passengers on long voyages are now obliged, by the fixed habits of society, to be furnished with pianofortes; thus transferring to the ocean itself something of the character of home enjoyments.

“ By the use of the piano, many who never visit the opera or the concerts become thoroughly acquainted with the choicest dramatic and orchestral compositions. This influence of the piano is not confined to them, but extends to all classes; and while considerable towns have often no orchestra, families possess the best possible substitute, making them familiar with the finest compositions. The study of such compositions, and the application necessary for their proper execution, may be, and ought to be, made the means of greatly improving the general education, habits, and tastes of piano students; and thus exerting an elevating influence, in addition to that refined and elegant pleasure which it directly dispenses.”

Heartily do we concur in the opinions expressed by the great artist. The pianoforte cannot become too general—“ transposing pianos—repetition pianos—patented pianos with hard names of unknown derivation—pianos of seven octaves in compass—pianos adorned in richest carvings, built of costliest woods, and illustrative of all the wealth, ingenuity, and tastefulness of the age—better still, little Quaker-like pianos

of white wood, fine tone, and most moderate price, built by a maker who stands at the head and front of his trade, and by him offered to the public of small means—the needy clerk, the poor teacher, the upper-class mechanic. This last,” says the eloquent writer in *Chambers's Journal*, from whom we have quoted, “is the very test and triumph of the pianoforte—as glorious a transition in its degree, from the time of the rare and royal virginals, as is the daily press and cheap literature of the nineteenth century from the darkness of that time when a scholar transcribed the classics with his own hand, and the parish Bible was chained to the reading desk in the middle of the church.”

The pianoforte monopoly is now at an end. The “high-priced” makers have had their day; “small makers” are now rapidly advancing in public favour, and good and cheap instruments, of all classes, are now things of every-day occurrence. Men of intellect are beginning to turn their attention to “cheap” pianos; new and more simple actions are being invented; and the dawn of that day is visible when the “box of stretched strings,” giving forth sweet sounds, shall be in every man’s house, his comfort, his solace, his companion—aye, his *friend!* Let us then look forward to that day. Shall we not be a happier, if not a better people?