

with some of the oil and lay it over the fish, which must first be seasoned with cayenne pepper and a few drops of essence of anchovies or shrimps. Cook in a good oven until hot, then remove the paper, sprinkle the fish with raspings, and in five minutes it will be hot enough to serve. Pour round it a little sauce, with chopped pickles added, or a border of pickles made hot in a spoonful of sauce.

Flaked haddock (dried) is a nice change from the usual ways of serving this popular fish. Choose a fleshy one, and pour boiling water over it, in which it should soak for ten minutes, covered to keep in the steam, then take out the bone, and flake the fish, free from skin. Put a pound, or thereabouts, in a saucepan with half a pint of milk and a seasoning of cayenne, bring it to the boiling point slowly, and let it simmer for ten minutes, then thicken with a little flour and butter, again boil up, and serve on a flat dish: hard-boiled eggs make a suitable garnish. The remains of

any kind of previously cooked fish may be served in the same way, but will require the addition of salt, and any sauce may take the place of part of the milk.

Eggs lend themselves very readily to great variety of treatment, so does cheese, and both are of great value for hasty dishes. The under-mentioned dish of the two combined will be new to most people, and well deserves a trial:—Slice thinly six ounces of rich cheese, Cheshire or Derbyshire, into a saucepan, add a little salt, pepper, and mustard, and a quarter-pint each of milk and cream; stir until the cheese is melted, and the whole looks rich and custard-like, then pour on to a hot flat dish, and cover with poached eggs, five or six, and sprinkle them with grated Parmesan cheese and bread-crumbs; transfer them to the oven until the surface is hot, then serve without delay. Cheese dishes of all kinds, to be worth eating, *must* be hot.

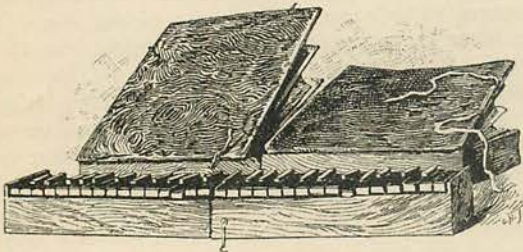
ANCIENT MUSICAL INSTRUMENTS.*

BY WILLIAM HUGGINS, D.C.L., LL.D., F.R.S.



THOUGH the last thirty years may be regarded as pre-eminently the Age of Science, scarcely less widespread and deep has been the increasing attention given during this time to music and to art. It is not surprising, therefore, that a subject like that of the present paper, which appeals almost equally to the students of music and of art, should be a very popular one. The crowds which gathered round the precious cases at the Music Loan Collection of 1885 witnessed to

the widespread interest in the forerunners of our present musical instruments, alike from the side of historical development and from that of decorative art.



BIBLE REGAL.

The period during which the chief transformations in the direction of progress in musical instruments took place was one in which the workman, whether in wood or in metal, was also an artist. It was the period during which the masterpieces of painting which adorn our galleries were produced. In most cases these mediæval transitional forms of our modern instruments were also, in a very true sense, works of art. It so happens that these early instruments, from the very circumstance of their imperfections as musical instruments, lent themselves more readily to the moulding of the artist's hand, and to a rich and highly-coloured decoration. For example, the early ancestors of the pianoforte, in consequence of their very limited keyboard, and the small stress of their thin and short strings, were objects so graceful and pleasing to the eye, that the contemporary painter loved to introduce them as accessories into his pictures. An example even more marked is furnished by the small mediæval organs which, from the St. Cecilia panel of Van Eyck's "Adoration of the Lamb," painted in 1426, down to a well-known picture by Rossetti, have added much to the charm of many paintings. The higher musical perfection of the present organ, and of the grand pianoforte, has almost removed these instruments from the domain of the artist to that of the engineer. The unwieldy form of the "concert grand," from its great width of keyboard and its iron carcass—

"Prone on the floor, extended long and large,
And stretching many a rood,"

* "Musical Instruments: Historic, Rare, and Unique," by A. J. Hipkins. Illustrated by Fifty Plates in Colours, drawn by William Gibb. (A. and C. Black.) "The History of Music," by Emil Naumann, edited by Sir F. A. Gore Ouseley, Bart., Mus.D. (Cassell and Co.)

cannot by any skill of the designer be moulded into the graceful form of an early spinet or harpsichord. All that is possible to the artist is to endeavour to soften its outlines by skilful decoration.

There is one exception, namely, the "king of instruments," the violin, in which the highest form of artistic expression was coincident with—or rather, it should be said, culminated at the hands of Stradivari, in the most perfect musical instrument. For the exquisite curves which can flow only from the hand of a true artist are precisely those which contribute greatly to the highest excellence of tone. The gem-like beauty

wide and accurate knowledge of early musical instruments, especially of the pianoforte class, is so well known.

"The History of Music," by Emil Naumann, translated by F. Praeger, and edited by Sir Frederick Gore Ouseley (Cassell), gives a philosophical account of the evolution of music from the earliest times up to the most recent developments of modern music. The work is greatly enriched by several chapters, of almost unique value, from the pen of the editor on the history and present condition of English music. In this book the history of musical instruments has received much



DOUBLE SPINET—BY HANS RUCKERS.

of the old varnish is the outcome of qualities which, in the highest degree, bring about and preserve the elasticity and sonorous condition of the wood. There is no "modern" violin, for, in the work of Stradivari, music and art were mated in a perfect union, and no man has dared to put them asunder. Before his time, the early members of the violin family were indeed picturesque, and pleasing in their quaintness of form, but they were not a high expression of art.

The treasures from many lands which filled the cases at the Albert Hall in 1885 were scattered the same year, and no official catalogue *raisonné* remains of these instruments, many of them of very great, and some even of unique interest. The splendid work on "Musical Instruments: Historic, Rare, and Unique," issued by Messrs. A. and C. Black, contains a record, in its fifty plates in colours, of over a hundred of the more interesting of the instruments of the Loan Collection. They have been drawn with extreme accuracy and very great sympathetic artistic feeling by Mr. Gibb. The text is from the pen of Mr. A. J. Hipkins, whose

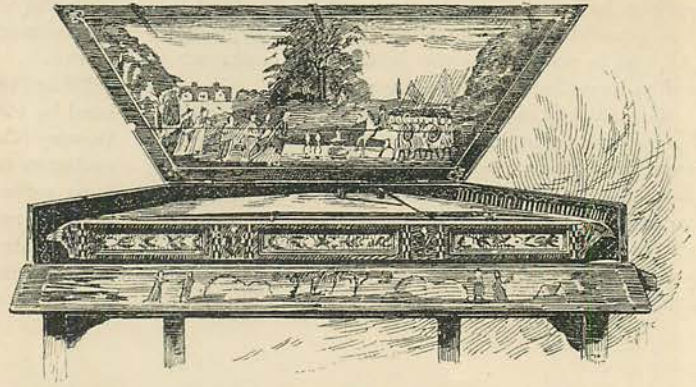
attention, and is well illustrated by a large number of woodcuts of early instruments, and of pictures in which they were represented.

Let us glance first, aided by these two works, at the ancestry of the pianoforte. It need hardly be said that all musical sounds are produced by periodic waves of air striking our ears, and, consequently, all musical instruments are machines for setting the air into periodic motion. In the pianoforte this is done by strings, which are made to vibrate at will by striking the keys. The earliest musical sounds from strings were doubtless produced by the prehistoric savage twanging the stretched sinew of his bow. Passing at once from the Stone-man to about 1,000 of our era, we find Guido of Arezzo, who named the spaces on his monochord (which was essentially a bowstring stretched over a resonance-box) corresponding to his different syllables, ut, re, mi, fa, sol, la—claves or keys. Soon after came a four-stringed "monochord," and then the epoch-making step was taken of using a simple mechanism whereby the strings

could be divided at the right point, and at the same time set into vibration. This arrangement consisted of levers, each having at one end a small, upstanding brass wedge, called a "tangent;" when the finger pressed down the other end of the lever, the "tangent" rose under the string, pushing it up slightly, and forming a temporary bridge, which, by its position on the string, determined the note, the blow at the same time setting the string into vibration; the part of the string not in use being damped by strips of cloth. The levers received the name that Guido had previously given to the spaces on his monochord, viz., *claves* or *keys*. In the earlier instruments two or more notes were produced on the same string by as many levers with their "tangents" striking the string at the places corresponding to the notes required. This was the earliest ancestor of the pianoforte, and was called the *clavichord*. Its date cannot be earlier than the middle of the fourteenth century, but it was already a popular instrument at the beginning of the sixteenth century.

In "Musical Instruments" the clavichord is represented by a late form of this instrument belonging to the early part of the last century. The compass is five octaves and a semitone, from the third E below to the third F above middle C. Chinese decoration was then in fashion, but the two music parties shown on the lid are playing on conventional representations of European fiddles and guitars.

There was also another line of descent of the piano-

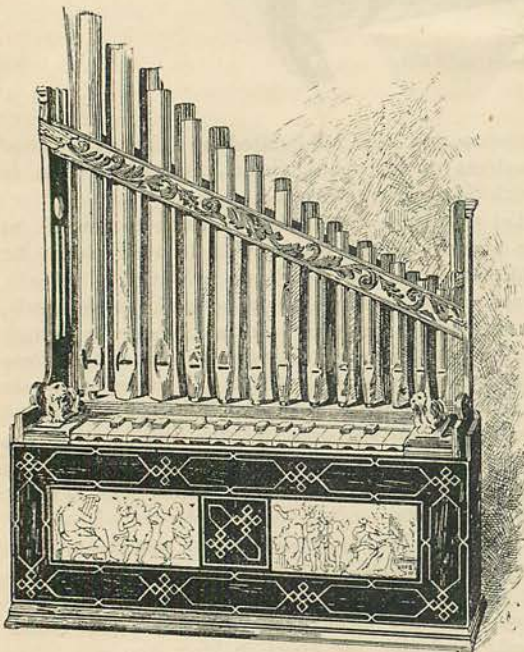


DULCIMER.

forte—a "maternal" ancestry—if the expression may be permitted. Through the earliest historic ages we find the development of instruments of the lyre class, in which the strings were plucked by the naked fingers, or by a quill or other elastic substance held in the hand, called a *plectrum*. These stringed instruments culminated in one direction in the mediæval *psaltery*, an instrument consisting of a resonance-box, over which were stretched a number of strings, which were played with a *plectrum*. Orcagna represents a *psaltery* in his "Trionfo della Morte," at Pisa (A.D. 1348). The strings are in groups, each group, as in a grand piano, tuned in unison to make one note. A representation by Orcagna of a similar *psaltery*, strung in threes, exists in our National Gallery. Such a "gay sautrie" was usually plucked with a *plectrum*, but sometimes by the naked finger, producing a different quality of sound. It can be shown from the theory of strings that a sharp point gives rise to a shriller tone, with a greater number of high tinkling upper partials, than the finger, but whichever way a string is plucked the intensity of the prime tone exceeds that of any upper partial. The simple but momentous invention of a method (probably suggested by the levers of the then existing clavichord) by which the plucking could be done mechanically turned the *psaltery* at once into a *spinet*. History is silent as to the name of the man who made this change, probably about the beginning of the fifteenth century. The early name of this instrument was the *clavicytherium*, or *clavicembalo*.

One of the oldest known *spinets*, belonging to the first years of the sixteenth century, which was exhibited at the Albert Hall, has been faithfully drawn by Mr. Gibb. Mr. Hipkins remarks that this is probably the oldest *spinet* or keyboard stringed instrument existing. It is a *spinet* set upright. It has a narrow compass—three octaves and a minor third—from the second E below to the second G above middle C. In this instrument the strings are plucked with little tongues of wire, and not quills or leather, as in the later *spinets*. It is in a painted pine case; the stand and the paintings are of later date.

These two classes of instruments, both rightly re-



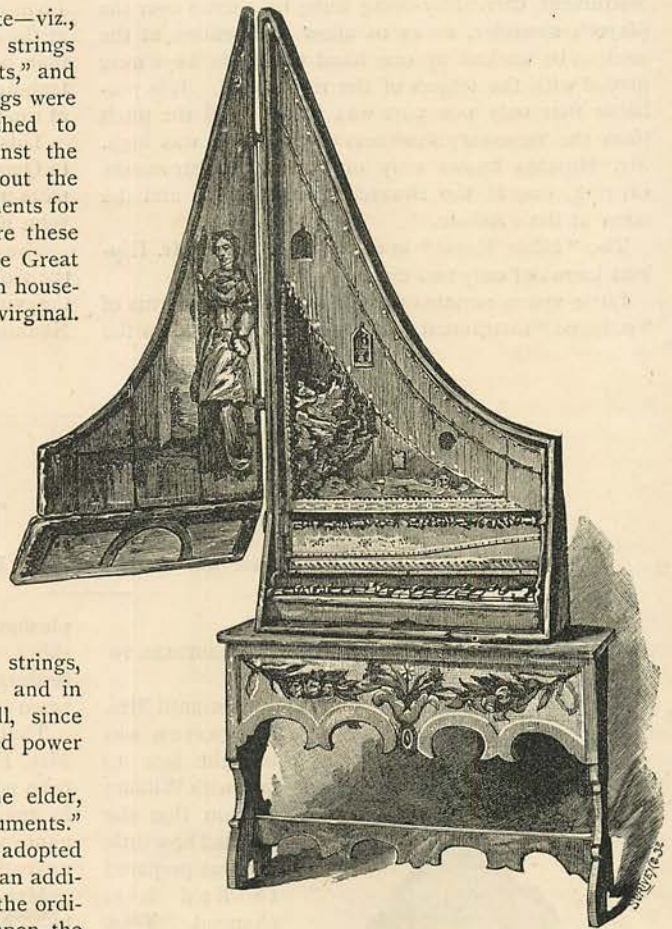
PORTABLE ORGAN.

garded as common ancestors of the pianoforte—viz., the clavichord and its congeners, in which the strings were struck and divided by the brass “tangents,” and the “*instrumenti da penna*,” in which the strings were plucked by wires, quills, or leather, attached to “jacks,” pushed by pressing the keys, against the sides of the strings—became fashionable about the same time, and continued the popular instruments for about three hundred years. So popular were these instruments in London, that at the time of the Great Fire scarcely a boat put off on the Thames with household furniture in which was not a spinet or a virginal. The two classes of instruments had their peculiar beauties and defects. The instruments of the clavichord order gave a small, colourless tone, which was independent of the force with which the keys were struck, so that these were not “*piano e forte*” instruments. Dr. Burney aptly describes the tone as “a scratch with a sound at the end of it.” In the later virginals and harpsichords these defects were to some degree remedied by the use of metal strings, and by the addition of a second keyboard connected with different sets of strings, which could be brought into use at pleasure; and in 1769 by the addition of the Venetian swell, since transferred to the organ, which gave a limited power of expression.

A spinet by the famous Hans Ruckers, the elder, of Antwerp, is represented in “*Musical Instruments*.” This instrument shows one of the expedients adopted to gain a more brilliant effect by means of an additional row of octave strings placed beneath the ordinary unison strings. The instrument rests upon the original arcaded stand.

The passage was not difficult from Pan’s pipes, in which the shepherds delighted from the very earliest historic records, to the insertion of the different reeds into a common air-box. At first the air was supplied by two men blowing and taking breath alternately, and the rude device was adopted of silencing the pipes not required by placing the hand over them. Then the mechanical plan of a perforated slide and a couple of bags, or bellows, to supply the air was adopted, and the organ may be said to have been invented. Even in classic times the equality of pressure of the air was maintained by water-pressure. From our present point of view we have to speak only of the small, highly decorated organs of mediæval times. It may be said in passing that the earliest record of the decoration of larger organs gives the honour to England, for, according to Aldhelm, who died A.D. 709, the Anglo-Saxons ornamented the front pipes of their organs with gilding, and in the tenth century St. Dunstan is said to have made an organ with brass pipes.

The small mediæval organs, which were well represented in the Loan Collection, were of four kinds: the Positive, or stationary organ; the Portable organ, carried in processions; the Regal, which had beating-reed pipes; and the Bible Regal, in which the pipes were cut down so as only just to cover the reeds, and



CLAVICYTHERIUM.

the keyboard was hinged, so that the whole instrument could be folded up into the form of a book. All these small instruments, with narrow keys, may be regarded as representing, in a reduced size, the front portions of the visible speaking-pipes of the mediæval church organs.

The keyboard of the Positive organ in Van Eyck’s picture of the “*Adoration of the Lamb*” shows the complete arrangement of chromatic keys, as in our modern instruments.

A Positive organ of the time of Louis XIII. was in the Loan Collection. It stands about six feet high, two feet six inches wide, and one foot four inches deep. It possesses three registers, with draw-stops on the right-hand side of the case. Two registers are of gilt tin pipes, the third of stopped wooden pipes. The three registers are at octave distances. It has painted doors and is surmounted by a crowing cock placed on the apex of the cornice.

The Regal with its beating reeds, which appear to have been first known in the fifteenth century, may be regarded as an early prototype of the modern harmonium. Nothing certain is known as to the derivation of the name “*Regal*.”

The Portable organ was essentially a processional

instrument, carried by being hung by a strap over the player's shoulder, so as to allow the bellows at the back to be worked by one hand while the keys were played with the fingers of the right hand. It is probable that only one part was played, and the pitch from the necessary shortness of the pipes was high. Mr. Hipkins knows only of two such instruments existing, one at the Brussels Conservatoire and the other at Blair Athole.

The "Bible Regal" is exceedingly rare; Mr. Hipkins knows of only two existing specimens.

Little space remains to speak of the early forms of "stringed" instruments, but one lute exhibited in the

Loan Collection has special interest as showing that at the early date of 1580 there was an English workman, one John Rose, whose work was not surpassed in technical finish nor in artistic feeling by any produced at the time in Italy.

This lute, traditionally supposed to have belonged to Queen Elizabeth, has ten wire strings, tuned in five pairs in unison, and played with a plectrum. Made by John Rose, in the Bridewell, London, 27th July, 1580.

The early forms of stringed instruments, including the viol family and the more immediate ancestors of the violin, are well illustrated in the woodcuts in Naumann's "History of Music."

FOR THE GOOD OF THE FAMILY.

By KATE EYRE, Author of "A Step in the Dark," "A Fool's Harvest," &c. &c.

CHAPTER THE FIFTH.

IN WHICH MRS. FERGUSSON POURS OUT HER TROUBLES TO HER NEPHEW.



IT was not until Mrs. Fergusson was brought face to face with William Darton that she realised how little she was prepared to find him changed. True, she had told herself over and over again that the widower of forty, whose life had, of late years, been so eventful, would bear but a slight resemblance

to the inexperienced boy-husband of twenty-two. But her imagination had failed in the somewhat severe task of re-moulding her nephew's face in accordance with the changes which she endeavoured to realise time and altered conditions must have wrought in it. It was, therefore, with no slight shock that she found herself standing opposite to a man whom she would probably not have recognised had she met him out of doors. The figure of the nephew whom her memory recalled was that of a rather tall young man of slight build; but the man who was advancing towards her, while he appeared to be of only middle height, was very broad; a short, thick, sandy beard grew on the once smooth chin; the down on the upper lip had developed into a moustache that almost hid the mouth; the hair, which was already getting thin, had receded from the temples; the boyishly fair, delicate com-

plexion had given place to a coarse and rather florid skin; while the eyes, which had grown sly and restless, were directing questioning, uneasy glances towards Janet and Mrs. Fergusson.

That the man felt ill at ease was very apparent. Mrs. Fergusson was, however, suffering too severely from nervousness herself to observe signs of agitation in another, while Janet attributed his uneasiness to annoyance at meeting one who had witnessed his ungentlemanly behaviour in the railway carriage.

Mrs. Fergusson had, on several occasions, tried to picture the meeting, and while doing so, she had resolved to offer her nephew the kiss of peace. Surely, she thought, that much, at least, would be expected of her. But as her astonished gaze rested on the portly, almost middle-aged-looking man whom she was forcing herself to regard as her nephew, all intention of offering to embrace him faded from her mind.

"William, I am your aunt: your Aunt Ruth. You remember me; don't you?" she said, extending her hand towards him timidly.

"Remember you? Of course I remember you. Why shouldn't I?" he asked sharply, as he took her proffered hand.

"Yes, yes; of course you do," she replied, smiling nervously, and wondering how much of the very active part she had taken in bringing about her nephew's banishment was now present to his mind. How she wished she had been a little less energetic in those days! "I—I expected you would have come to see me, William."

"You expected I should have come to see you, did you, eh? Well, and so I should have, for the matter of that, as soon as I had had time to turn round a bit. When a man comes to his own after he's been kept out of it for eighteen years, there's a good deal for him to see to, and it all takes time, you know."