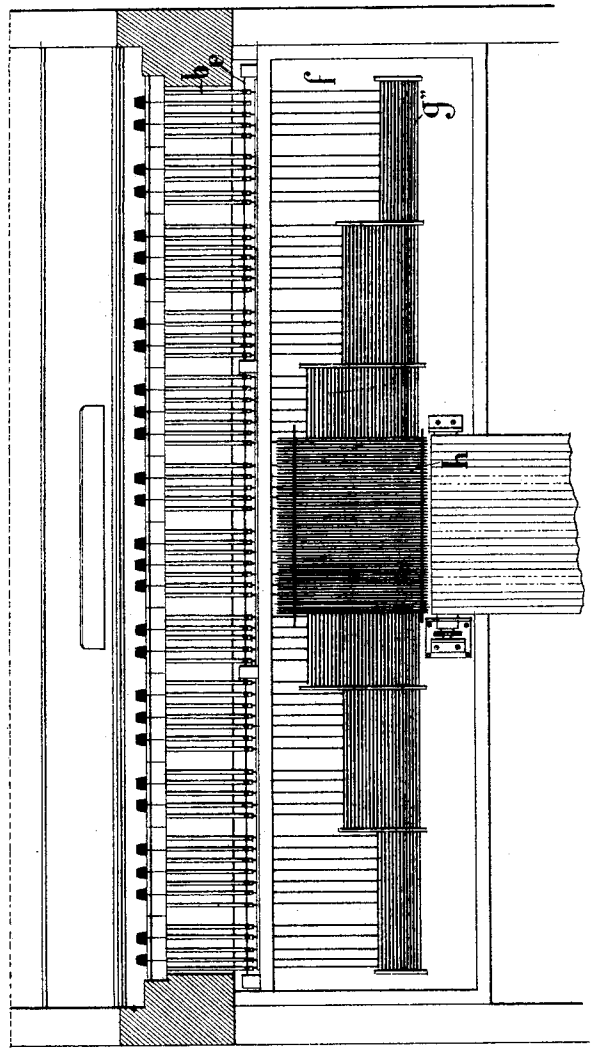
(No Model.) 2 Sheets—Sheet 1.

A. RIVOIRE.

MUSIC RECORDING APPARATUS.

No. 537,937. Patented Apr. 23, 1895.

Fig. 1



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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Fig. 2

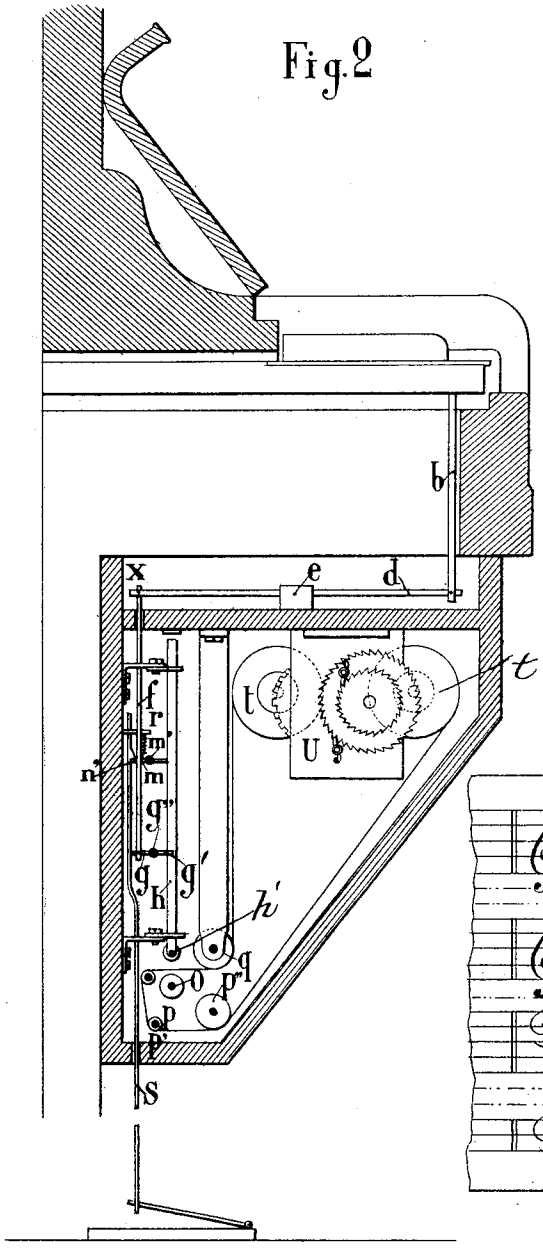


Fig. 3

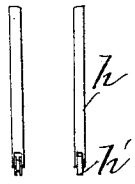


Fig. 4.

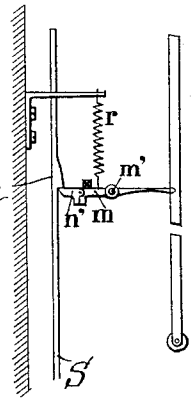
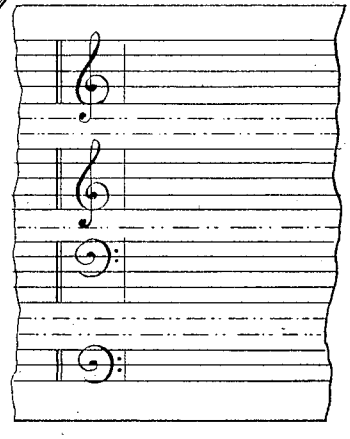


Fig. 5.



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UNITED STATES PATENT OFFICE.

ARTHUR RIVOIRE, OF MARSEILLES, FRANCE.

MUSIC-RECORDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 537,937, dated April 23, 1895.

Application filed November 20, 1894. Serial No. 529,372. (No model.) Patented in France March 5, 1894, No. 236,649.

To all whom it may concern:

Be it known that I, ARTHUR RIVOIRE, a citizen of the Republic of France, residing at Marseilles, in the Republic of France, have invented certain new and useful Improvements in Music-Recording Apparatus, of which the following is a specification, and for which I have received Letters Patent in France, dated March 5, 1894, No. 236,649.

The subject matter of the present invention is an apparatus whereby the musical ideas of a composer are recorded at the time he expresses the same by playing them on a piano.

In the drawings: Figure 1 is a front view of the apparatus placed under a piano. Fig. 2 is a transverse vertical section of the same. Fig 3 is a detailed view, showing the printing disk with which each of the rods *h* is provided. Fig. 4 shows how the mechanism for the measure bars is arranged. Fig. 5 shows how the endless paper is lined.

From each of the white and black keys extends a small maple rod *b* connected to a pivoted lever *d* that can oscillate freely at the point *e*. To the opposite end a rod *f* is connected, the lower end of which (*f*) is secured to an arm *g* of an oscillating shaft *g''*. From the shaft *g''* extends an arm *g'* which operates a vertical rod *h*. It will be understood that there are as many shafts *g''* and rods *h* as there are notes on the key board. Each rod *h* is provided with a printing disk *h'* which presses the paper upon the inking roller and the white and black keys will be indicated by a full black line and two parallel lines respectively as shown by the disks in Fig. 3, one being solid and the other grooved. A clock work U puts in motion cylinders around which the paper winds. Said paper passes around the cylinders *q p, p', p''* to the cylinder *t*. A little below the paper a roller or cylinder O is placed, which has a layer of polycopying gelatine.

It will be seen that as soon as a printing disk presses upon the paper, the latter will come in contact with the roller O and a stroke will be marked upon the paper. The notes will thus be duly recorded upon the paper as soon as one of the keys is pressed down and it will be easily understood that the value of each note will be readily distinguished as the paper unrolls uniformly and the marked strokes will vary as to the intervals between. The notes being marked down, the following mechanism is arranged for distinguishing the measures: the foot of the composer rests upon a pedal which is connected with the rod S provided with a spur K which engages a lever *m* which pivots at the point *m'* while the extremity of said lever actuates a rod similar to the rods *h*. A stop *n'* enables the rod S to rise without carrying along the lever *m* in the opposite direction. Thus, when the pedal is depressed the spur K of the rod S carries along the lever *m* which raises the rod provided with a printing disk. At a given moment the lever *m* reaches a point where the pivoted stop piece (which is unyielding on the downward stroke of the bar S) slips off from the spur K and the spring *r* brings back the lever *m* violently toward the position indicated in the drawings. The disk rod is thus by the momentum of the parts under the force of the spring heavily pushed against the paper and prints a stroke upon the same, which stroke can never be taken for a note, as that stroke will always be of the same size and will always have the same relative position upon the paper. When the performer releases the pedal and the bar *s* rises the spur *k* can pass by the stop *n'* as the latter will yield in an upward direction.

The paper upon which the music is written is of a suitable width and is lined longitudinally with twenty-three black and red lines. A red stroke separates the G clef from the bass clef. The notes above and below the staff are marked by two red strokes so that it is easy to catch the G clef and the bass clef below which makes the reading of the music very easy.

The paper has besides divisions in a direction perpendicular to the unwinding. These divisions are spaced so as to correspond exactly to the space of paper that unwinds during a unit of time. It will thus be easy to read and give the value to the notes according to the length of the strokes, a thick stroke or two thin lines indicating an ordinary note or a sharpened note while a thick stroke, always in the same position indicates the measure.

This mechanism may be applied to an ordinary piano; a grand piano or an organ.

Instead of the particular inking and paper feeding mechanism shown, any well known

mechanism for these purposes may be substituted.

I claim—

1. In combination in a music recorder, the paper guiding mechanism, the type bars with connections to the keys, said type bars having printing disks, one set being adapted to make a single mark and the other set a double mark for the black and white keys, substantially as described.

2. In combination in a music recorder, the paper guiding and feeding mechanism, the type bars, the connection therefrom to the keys arranged to hold the type bars in contact with the paper so long as the keys are pressed, the type bar for the measures, the pedal for operating the same, and the trip connection between the pedal and the said type bar, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

ARTHUR RIVOIRE.

Witnesses:
CLYDE SHROPSHIRE,
CH. CASALONGA.