

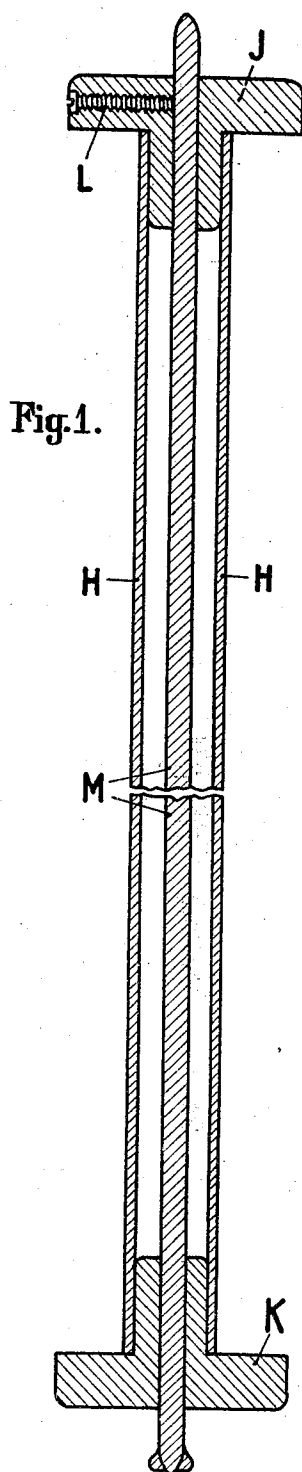
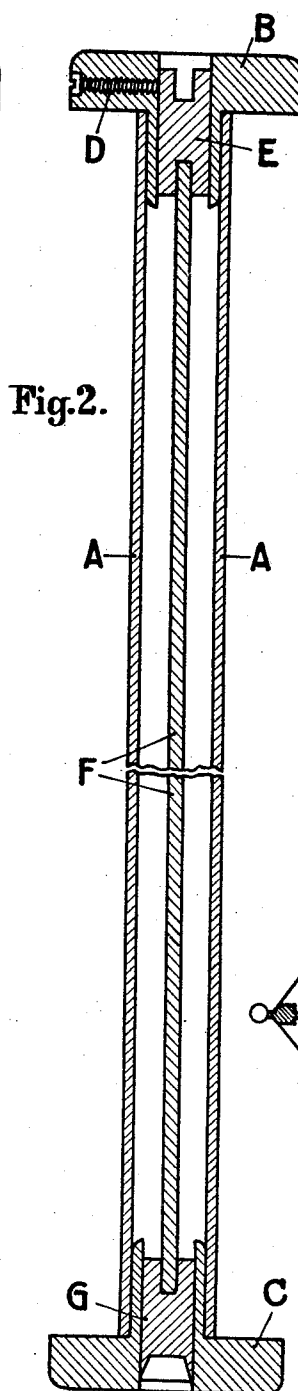
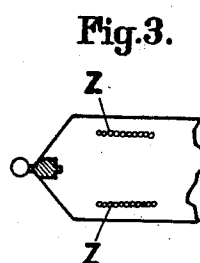
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E. R. DE ARANA

MUSIC ROLL FOR PLAYER PIANOS

Filed June 14, 1923



Inventor.

E. R. De Arana

UNITED STATES PATENT OFFICE.

ERNEST RUIZ DE ARANA, OF MADRID, SPAIN.

MUSIC ROLL FOR PLAYER PIANOS.

Application filed June 14, 1923. Serial No. 645,255.

To all whom it may concern:

Be it known that ERNEST RUIZ DE ARANA, a director of the Sociedad Anonima "E. R. A.", a corporation duly incorporated according to Spanish law, a subject of the King of Spain, residing at Madrid, Alvarado Street No. 5, Spain, has invented certain new and useful Improvements in Music Rolls for Player Pianos, of which the following is a specification.

This invention refers to an extensible frame, which may be regulated at will, for the fixing of rolls of perforated paper in automatic pianos, and the object of which is to obtain the perfect coincidence of the perforations in the paper with the mouths of the flute in automatic apparatus or pianolas.

It has been observed that, owing to some defect in the pianos or in the rolls which have hitherto been manufactured, the coincidence of the perforations in the paper with the mouths of the flute is not always perfect, and this produces, as a natural consequence, the effect that the rolls do not sound properly, and that it is sometimes absolutely impossible to execute the piece.

The present apparatus is designed to remedy these defects, and to obtain, in all pianos, the perfect coincidence of the perforations in the paper with the mouths of the flutes, which is an indispensable factor for the proper sounding of the notes, so that the problem is solved, both for the rolls of 88 notes and for those of 65 notes.

From the following description it will be seen that, taking as a basis the principle of making movable the axle which engages with the supports of autopianos or pianolas, one can move the roll to right or left and as far as may be necessary, so that said roll of perforated paper shall be perfectly centralized and coincide exactly with the mouths of the flute. When this result has been arrived at, the said axle is fixed by means of a screw hereinafter described.

In the drawing:

Figure 1 is a longitudinal sectional view of one form of my invention.

Figure 2 is a similar view of a modification thereof.

The apparatus for 88 notes, Fig. 1, consists of two parts. The first or external part is formed by a tube A fixed to the heads or shields B and C. The head B carries a

pressure screw D to fix the stud E in its final position. The second part, or axle, consists of a rod F which is embedded in two holes made in the terminating studs E and G of the said rod, forming a whole.

The studs E and G have the form indicated in the first figure, being that which is necessary to permit them to engage with the supports of the autopiano or pianola. When the screw D is slackened, the first or external part can be slid to right or left, thus obtaining the desired effect, and when this has been obtained the screw D is tightened, so that the whole apparatus then forms a single body.

The apparatus for 65 notes, Fig. 2, also consists of two parts. The first or external part is formed by a tube H fixed to the heads or shields I and K. The head J carries a pressure screw L to fix the rod M in its final position.

The second part, or axle, consists of a rod M, whose ends have the form shown in the second figure, being that which is necessary to permit them to engage with the supports of the autopiano or pianola. When the screw L is slackened, the first or external part can be slid to right or left, thus obtaining the desired effect, and when this has been obtained the screw L is tightened, so that the whole apparatus then forms a single body.

In order to centralize the rolls with absolute certainty by means of this apparatus, it is necessary that at first—that is to say, before commencing the musical composition printed on them—the said rolls should be perforated with one or more adjusting holes Fig. 3, Z, which coincide with certain notes of the scale, so that, on examining the coincidence of these perforations with the corresponding mouths of the flute of the autopiano, any defect which there may be in the centralization of the roll can be seen and rectified.

All the tubes, rods, heads, screws, etc., which form these appliances, may be made of metal, wood, celluloid, or any other suitable material. All the dimensions may be increased or diminished, according to the case. Both in the apparatus which corresponds to the first sketch and in that which corresponds to the second, the head or shield which carries the pressure screw may be fixed either on the right or the left of what

constitutes the central axle or nucleus, for the result is exactly the same.

Having thus described my invention, what I claim is:

- 5 An adjustable roller support for perforated note sheets, comprising a tubular member, heads secured in the opposite ends thereof and provided with radially extending flanges, each head having an axial opening

therethrough, a journal support disposed 10 in the openings of the heads, and means passing radially through the flange of one head and engaging the support to secure the same against relative movement.

In testimony whereof he affixes his sig- 15 nature.

ERNEST RUIZ DE ARANA.