(No Model.)

F. L. BAUER.

MECHANICAL MUSICAL INSTRUMENT.

No. 553,384. Patented Jan. 21, 1896.

Fig. 1.

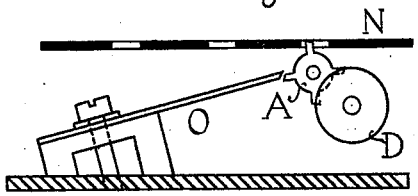


Fig. 2.

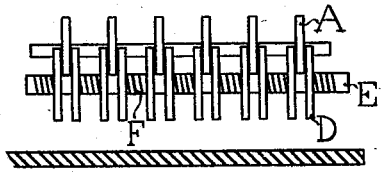


Fig. 3.

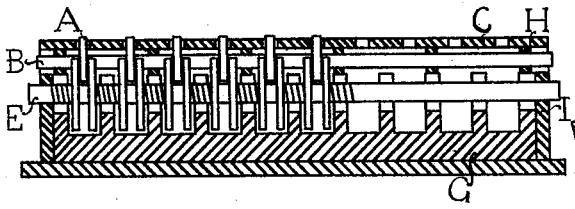


Fig. 4.

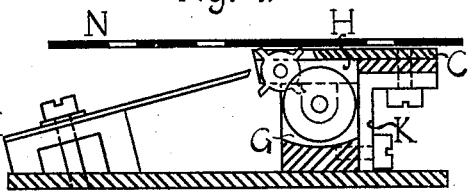


Fig. 5.

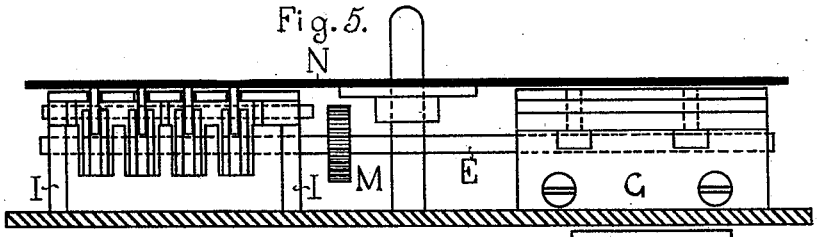
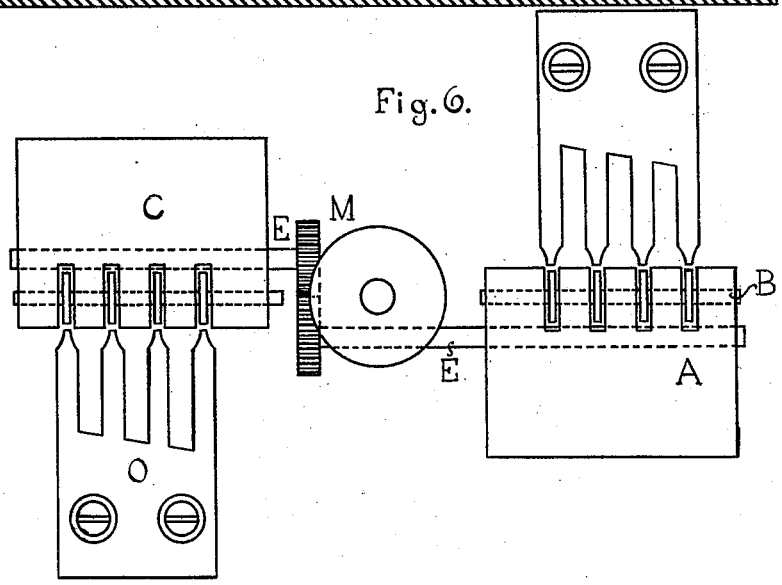


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRANZ LOUIS BAUER, OF LEIPSIC, GERMANY.

MECHANICAL MUSICAL INSTRUMENT.

SPECIFICATION forming part of Letters Patent No. 553,384, dated January 21, 1896.

Application filed August 17, 1895. Serial No. 559,643. (No model.)

To all whom it may concern:

Be it known that I, FRANZ LOUIS BAUER, of Leipsic, in the Kingdom of Saxony, Germany, have invented a new and useful Improvement in Mechanical Musical Instruments, of which the following is a specification.

My invention relates to mechanical musical instruments.

The object of my invention is to produce a mechanism which will be simple and efficient and which will allow the note-striking devices to touch the note-plate gently after striking the tongues.

The invention consists in the features, details of construction and combination of parts which will first be described in connection with the accompanying drawings and then particularly pointed out in the claims.

In the accompanying drawings, Figures 1 and 2 show the striking mechanism without supporting-bearings; Figs. 3 and 4, the same with supports; Figs. 5 and 6, double driving mechanism for playing.

This invention relates to the striking or playing mechanism used in connection with smooth perforated note-plate and musical vibrating springs, (tongues.) The striking-wheels A, which are located on a shaft B, Figs. 1 and 2, are guided at the tops in the part C of the mechanism-support, and are guided at the bottom sidewise, by two disks D each. The latter are so placed upon a shaft E that they turn with it, but at the same time can move laterally upon it. These disks D are pressed toward each other—*i. e.*, against the striking-wheels A—by means of spiral springs F, so that as the disks D are turned they will at the same time turn the striking-disks A, which thus automatically drop into the perforations of the note-plate N and strike against the musical tongues O. The disks D, being pressed together, have the effect of allowing the striking-wheels to touch the note-plate gently after having struck the tongues, instead of springing forward and hitting it hard. For supporting this mechanism there is a mechanism-support composed of two chief parts, the already-mentioned upper guide, C, and the lower portion, G, Figs. 3 and 4. Both these parts are provided with cut-away portions, of which those of the lower part, G, are wider than those of the upper part, C. Close under the upper part, C, there are bearings H for the reception of the shaft B, which supports the striking-wheels. The shaft E rests in two bearings I and receives uninterrupted rotation in any manner. The upper and lower supports are secured together by means of the angle-iron K.

In Figs. 5 and 6 there is shown one manner of carrying out the mechanism already described. Two mechanisms are shown arranged on two different radii of the note-plate. The two shafts E of these two mechanisms are driven by means of a gear-wheel train M in such a manner that by the rotation of one of these shafts, and the consequent rotation of the disks D, both of the mechanisms are brought into action simultaneously.

It is not necessary that the mechanisms be arranged in the same direction on opposite radii of the note-plate surface, as shown in Figs. 5 and 6, for they may be arranged at any desired angle with respect to each other.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with a note plate, and a tongue, of a pair of parallel shafts, a striking wheel located on one of the shafts, arranged to engage the tongue and controlled by the note plate, a rotatable disk located on the other shaft, means for yieldingly holding the disk in frictional contact with the side of the striking wheel, and means for rotating the shaft on which the disk is mounted, substantially as set forth.

2. The combination, with a note plate, and a tongue, of a striking wheel arranged to engage the tongue and controlled by the note plate, a pair of rotatable disks arranged one on each side of the striking wheel, and means for yieldingly forcing the disks toward said wheel, substantially as set forth.

3. The combination, with a note plate, and a tongue, of a striking wheel arranged to engage the tongue and controlled by the note plate, a rotatable shaft, a pair of disks on the shaft, and springs tending to force the said disks into contact with the striking wheel, substantially as set forth.

4. In a mechanical musical instrument, a bearing device comprising an upper and a lower part, the upper one of which has a narrow opening and the lower one a wide opening, substantially as set forth.

5. In a mechanical musical instrument, the combination of an upper bearing having a narrow opening, a striking wheel located in said narrow opening, a lower bearing having a wide opening, and a pair of rotatable disks mounted in said wide opening and engaging the striking wheel, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANZ LOUIS BAUER.

Witnesses:
MAX MATTHAI,
RUDOLPH FRICKE.