

(No Model.)

A. C. JACCARD.
DAMPING MECHANISM FOR MUSIC BOXES.

No. 536,808.

Patented Apr. 2, 1895.

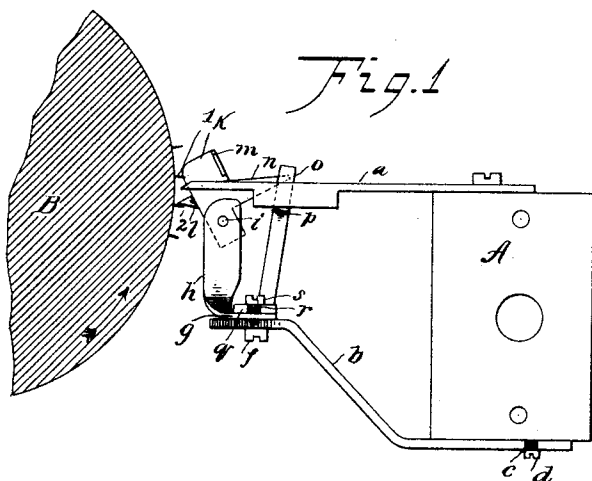


Fig. 2.

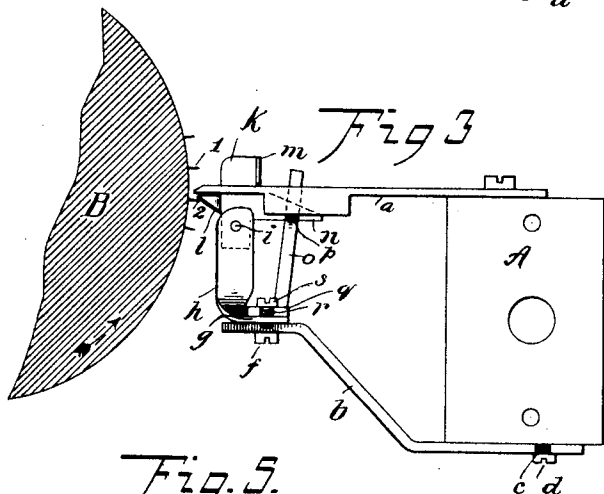
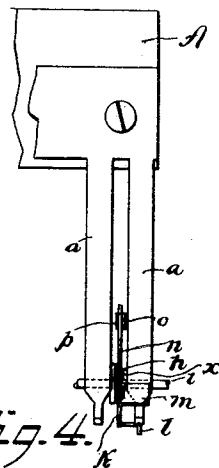


Fig. 4.

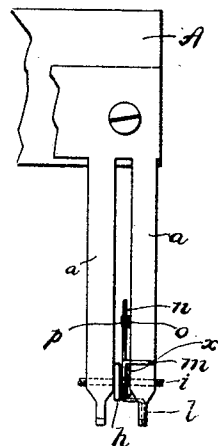


Fig. 5.

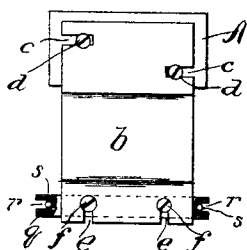


Fig. 6.

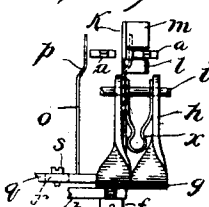


Fig. 7.

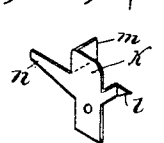
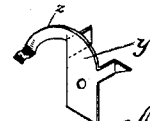


Fig. 8.



WITNESSES:

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DAMPING MECHANISM FOR MUSIC-BOXES.

SPECIFICATION forming part of Letters Patent No. 536,808, dated April 2, 1895.

Application filed January 7, 1895. Serial No. 534,047. (No model.)

To all whom it may concern:

Be it known that I, AMI CONSTANT JACCARD, a citizen of Switzerland, residing at Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and Improved Damping Mechanism for Music-Boxes, of which the following is a full, clear, and exact description.

My invention relates to dampers for music boxes and is more particularly adapted to the Swiss instrument wherein a pin cylinder is employed to cause the vibration of the music tongues, but it is obvious that my damper is equally applicable to other characters of instruments wherein star-wheels or like devices are employed for this purpose.

The object of my invention is to produce a reliable and effective damper which is applicable to any existing form of music box without in any way modifying the construction or arrangement of the parts thereof.

My invention consists in the arrangement and combination of parts in an independent damper mechanism, as hereinafter described and claimed.

In the drawings, wherein the same letters and numerals designate like parts in the various views, Figure 1 is a side view of sufficient number of parts of a music box to illustrate my invention; the damper being shown in its undamped position. Fig. 2 is a top view of the same. Fig. 3 is a similar view of that shown in Fig. 1, the damper being shown applied or in the damped position. Fig. 4 is a top view of the same. Fig. 5 is a bottom view of some of the parts illustrated in the other figures. Fig. 6 is a front view with some of the parts removed. Fig. 7 is a detail view of the damper plate. Fig. 8 shows a modification of the same.

Upon any suitable standard A are secured the usual vibrating tongues *a* to be operated by a suitable pin cylinder B or its equivalent. Projecting from the standard A or from any fixed portion of the music box is a supporting plate *b* which may be provided with longitudinal elongated slots *c* and screws *d* for the purpose of adjustment, as will be hereinafter described.

To the support *b* is adjustably or otherwise secured as by the slots *e* and screws *f*, a dam-

per-plate-support *g* which terminates in separate extensions *h*. These extensions *h* are adapted to form a bearing for a shaft *i* that constitutes the pivot of what I term the damper-plates *k*. These pivoted plates are preferably constructed in the manner shown in Fig. 7 wherein there is a projection *l* extending from the body portion of the damper plate into alignment with a vibrating tongue *a*, and a lug *m* and a finger *n* preferably extending at right angles to each other for purposes which will hereinafter appear.

A spring *x* or other suitable means may be employed for each pivoted damper plate, to retain it in the position into which it is moved.

The damper proper *o* is preferably a spring damper provided with a cam *p* and tending by its spring tension to be forced out of contact with the side of the music tongue which it is to damp, so it is obvious that the tension of the damper may be toward instead of away from the tongue, few changes being necessary to bring about the change in the manner of damping.

The dampers *o* may be secured to a plate *q* which may be made adjustable by any suitable means, as by a slot and screw arrangement *r s* for bringing the dampers in their proper positions with relation to the tongues.

It will be observed that in the construction illustrated, the finger *n* of each damper plate is adapted to extend into the path of the cam *p* of the damper and to force it into contact with the side of the tongue which it is intended to dampen.

The operation of my improved damping mechanism as illustrated in the drawings, is as follows: We will suppose that the parts are in the position shown in Fig. 1 and that a tongue *a* has just been vibrated by pin 1 of the cylinder B. It will be seen that a further rotation of the cylinder will bring the pin 2 in contact with the projection *l* of the damper plate, thus forcing the plate around its pivot, until the finger *n* thereof is forced against the cam *p* of the damper *o* to damp the tongue; the lug *m* on the plate at the same time being brought into engagement with the upper side of the tongue. A still further rotation of the cylinder will cause the pin 2 to be dis-

engaged from the projection *l* of the damper plate and to be brought into engagement with the music tongue; the raising of which, by the pin 2, in the act of vibrating it, will cause the pivoted damper plate *k* to be forced into the position shown in Fig. 1, and it will be held in such position by the spring *x*. By this movement of the damper plate, the finger *n* will be forced out of contact with the cam *p* of the damper and the damper will move out of contact with the music tongue. By a still further movement of the cylinder, the pin of the cylinder will allow the tongue to escape and the vibration thereof to occur. The parts being then in the position shown in Fig. 1, the damper is ready to be operated by the next succeeding pin on the cylinder. Thus it will be seen that a music tongue is damped between the vibrations thereof and each time immediately before a vibration; a point which is of great value in damping mechanism for music boxes.

While I referred throughout to a single damper, damper plate, &c., it will be understood that a damper, damper plate, &c., is provided for each music tongue it may be necessary to dampen.

I have also described with some particularity the various parts of my device, but would have it understood that I do not limit myself thereto since many modifications might be made without departing from the spirit of my invention which consist in a construction wherein a damper is moved to or from the damped position by the tongue itself. For instance in Fig. 8 I have shown a modification wherein a damper *z* is carried directly by a damper plate *y* instead of being separately mounted, as represented in the other figures.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In damping mechanism for music boxes, the combination of a music tongue, means for operating said tongue and a damper which is moved into position relative to the tongue

by the movement of the tongue itself, substantially as described.

2. In damping mechanism for music boxes, the combination of a music tongue, means for operating said tongue and a damper which has means co-operating therewith and with the music tongue to move the damper into position relative to the tongue, substantially as described.

3. In damping mechanism for music boxes, the combination of a music tongue, means for operating said tongue, a damper, and a damper plate controlling said damper and being controlled by the means for operating the tongue and by the tongue itself, substantially as described.

4. In damping mechanism for music boxes, the combination of a music tongue, means for operating said tongue, a damper and a pivoted damper plate controlling said damper and being controlled by the means for operating the tongue and by the tongue itself, and means for retaining the damper plate in the position into which it is moved, substantially as described.

5. In a music box, the combination of a music tongue, a vibrating device therefor, a damper adapted to reach contact with the tongue, and a connection between the tongue and damper, whereby the damper may be moved by the music tongue while it is being acted upon by its vibrating device, substantially as described.

6. In damping mechanism for music boxes, the combination of a music tongue, a pin cylinder, a damper for the music tongue, a pivoted damper plate controlling the damper, said damper plate being provided with a lug adapted to bear upon the music tongue and a projection extending into the path of pins on the pin cylinder, substantially as described.

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Witnesses:

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