

(No Model.)

W. H. HOSCHKE.

DAMPER ATTACHMENT FOR SWISS MUSIC BOXES.

No. 531,036.

Patented Dec. 18, 1894.

Fig. 1.

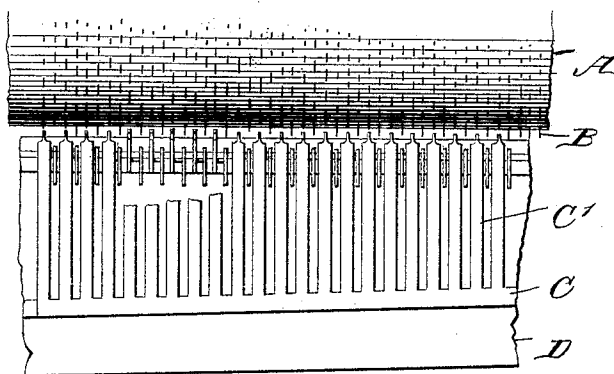


Fig. 3.

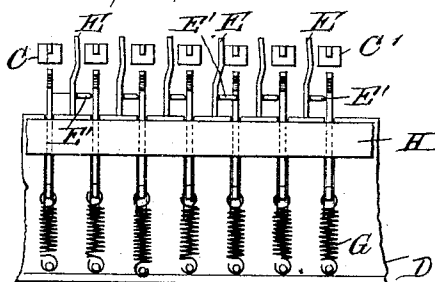


Fig. 2.

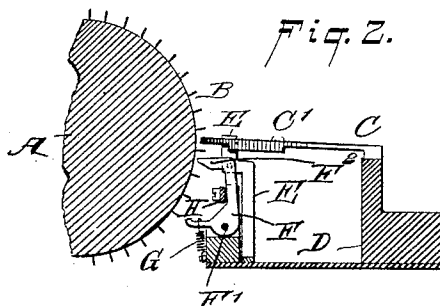


Fig. 4.

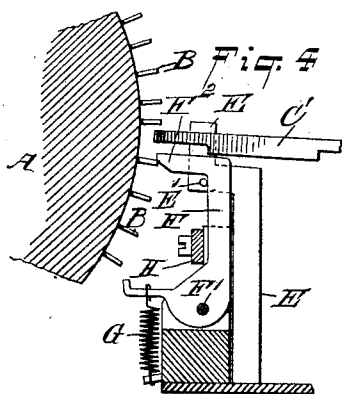


Fig. 5.

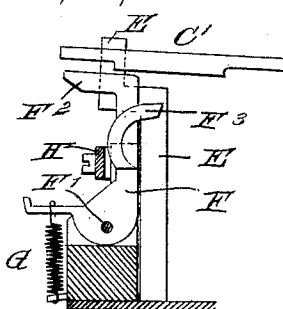
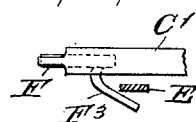


Fig. 6.



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DAMPER ATTACHMENT FOR SWISS MUSIC-BOXES.

SPECIFICATION forming part of Letters Patent No. 531,036, dated December 18, 1894.

Application filed March 23, 1894. Serial No. 504,792. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. HOSCHKE, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Damper Attachment for Swiss Music-Boxes, of which the following is a full, clear, and exact description.

The invention relates to Swiss music boxes having a pin cylinder acting on the teeth of a fixed comb.

The object of the invention is to provide a new and improved independent damper attachment for the teeth of the comb, arranged in such a manner that the tooth is damped immediately previous to the pins of the cylinder actuating the said tooth.

The invention consists of certain parts and details, and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement with some of the comb teeth broken out. Fig. 2 is a transverse section of the same. Fig. 3 is an enlarged front view of the improvement with the pin cylinder removed. Fig. 4 is an enlarged transverse section of the improvement. Fig. 5 is a similar view of a modified form of the lever; and Fig. 6 is a plan view of the same.

The pin cylinder A is provided with the usual pins B adapted to actuate the individual teeth C' of the comb C fixed in the usual manner on the metallic frame or sounding board D of the music box. Each tooth C' of the comb is adapted to be engaged preferably at one side and near its free end by a rod or arm E, preferably made of spring metal and secured at its lower end on the frame-work of the music box. The rod or arm E is normally held out of engagement with its corresponding tooth C' by a lever F fulcrumed at F' on a suitable support on the frame of the music box, the said lever being provided at its upper end with a projection F² in alignment with the pins B for this corresponding tooth, whereby the said projection F² of the lever F is actuated previous to the pin actuating the corresponding tooth C'.

The lever F is engaged at one side by a projection, lug or similar device E' formed on the rod or arm E, so as to hold the said rod or arm normally out of contact with its corresponding tooth C'. Now, when a pin for this tooth engages the arm F² of the lever F, it causes the latter to swing rearward, so that the lever moves away from the lug E', and thereby releases the rod or arm E and permits the same to swing or fall against the side of the tooth C' so as to damp the same.

As soon as the pin B has left the arm F² of the lever F, then the latter is drawn back into its normal position by a spring G drawing on the lower end of the said lever, as is plainly shown in Fig. 4. The forward movement of the lever F is limited by a longitudinally extending bar H forming part of the frame-work of the music box.

It will be seen that when the lever F swings forward by the action of the spring G, and after the pin B has left the arm F², then the rod or arm E is again moved out of contact with the side of the tooth C', as the said lever again engages and presses on the pin E' of the said arm or rod E. It will be understood that in order to obtain this movement, the end of the pin E' which engages the lever F, or the part of the lever engaged thereby, or both, are beveled or rounded, as indicated in Fig. 3, where the ends of the said pins are shown rounded. This takes place while the pin travels from the arm F² to the tooth C', so as to actuate the same in the usual manner. Thus it will be seen that the tooth C' is damped immediately before the tooth is acted on by the pin, so that the tooth will be sounded to its full extent and without having any vibrations left from the action of the previous pin.

It is understood that the rod or arm E is preferably made of spring metal, having a tendency to move against the side of the tooth C' whenever its lug E' is released by the rearward swinging motion of the lever F caused by the pin B of the pin cylinder.

As illustrated in Figs. 5 and 6, the arm E may be pressed against the side of the corresponding tooth C' previous to sounding the latter by the pin of the cylinder A, and in this case the lever F is provided with a cam arm F³ adapted to engage the rod or arm E at the time the lever F is actuated by the pin

of the cylinder A, so as to press the said rod or arm E against the side of the tooth C'. As soon as the pin leaves the arm F² of the lever F, then the latter returns to its normal position by the action of the corresponding spring G, so that the cam arm F³ releases the arm E and the latter moves away from the tooth C' before the latter is struck or actuated by the pin of the cylinder A.

10 It is expressly understood that the damper attachment is wholly independent of and separate from the corresponding tooth, and only acts on the tooth immediately previous to the sounding of the tooth by the corresponding pin of the pin cylinder.

15 I do not limit myself to the especial construction shown and described, as the same may be varied without deviating from the spirit of my invention.

20 Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A damper attachment for Swiss music boxes, comprising a damping rod or arm adapted to come in contact with a tooth of the comb, but normally out of contact therewith, and a lever, one end of which projects adjacent to the said tooth and into the path of travel of the corresponding cylinder pin, so that the said pin will actuate the lever immediately before striking the tooth, in such a manner that the damping rod or arm will move into contact with the tooth when the

said lever is actuated, substantially as described.

2. A damper attachment for Swiss music boxes, comprising a damping rod or arm adapted to come in contact with a tooth of the comb, but normally out of contact therewith, a lever, one end of which projects adjacent to the said tooth and into the path of travel of the corresponding cylinder pin, so that the said pin will actuate the lever immediately before striking the tooth, in such a manner that the damping rod or arm will move into contact with the tooth when the said lever is actuated, and a spring for returning the said lever to its normal position, substantially as described.

3. A damper attachment for Swiss music boxes, comprising an elastic damping rod or arm adapted to be pressed against a tooth of the comb by its own elasticity, and a lever for normally holding the damping arm out of contact with the tooth, one end of said lever projecting adjacent to the said tooth and into the path of travel of the corresponding cylinder pin, so that the said pin, immediately before striking the tooth, will actuate the lever to release the damping arm, substantially as described.

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Witnesses:

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