

(No Model.)

G. J. JACCARD.

STOP MOTION FOR MUSIC BOXES.

No. 395,440.

Patented Jan. 1, 1889.

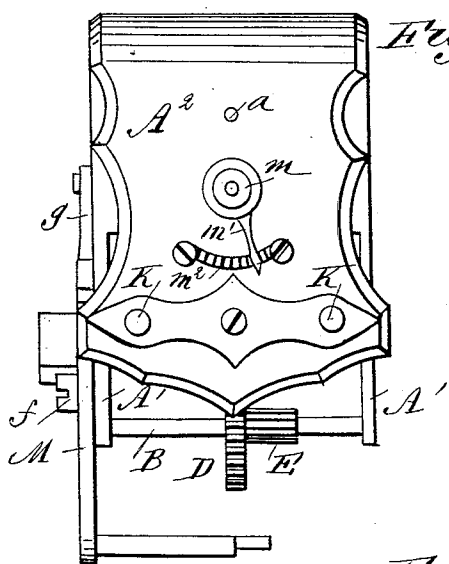


Fig. 1

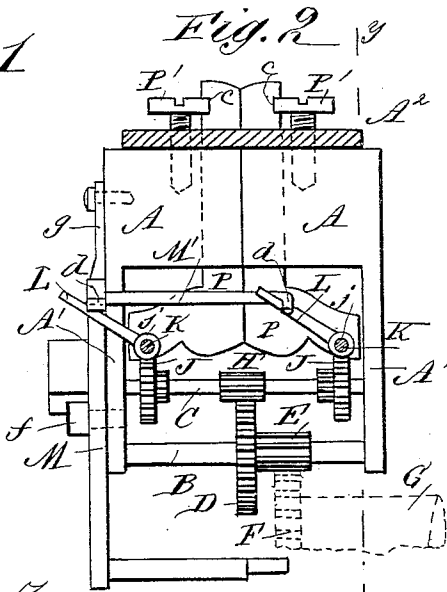


Fig. 2

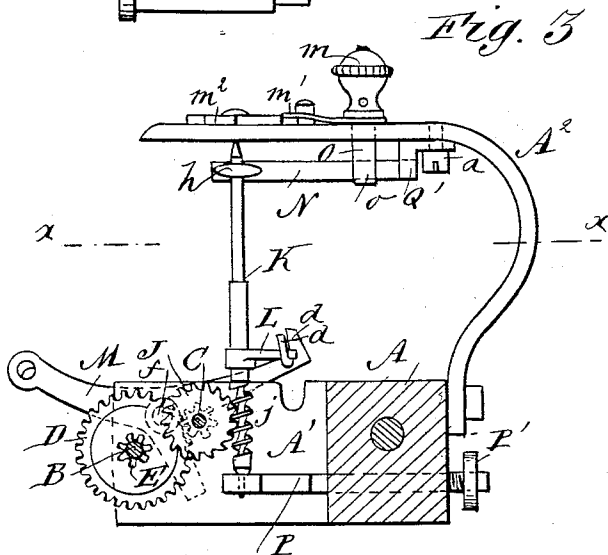


Fig. 3

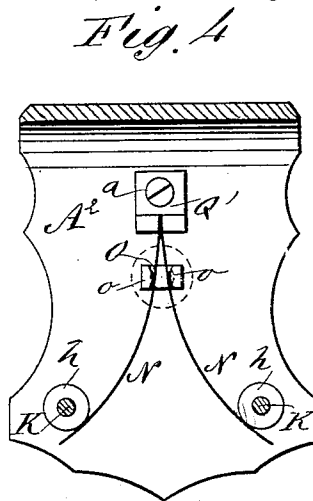
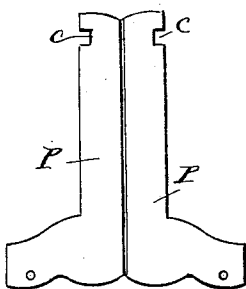


Fig. 4

Fig. 5



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# UNITED STATES PATENT OFFICE.

GUSTAVE J. JACCARD, OF NEW YORK, N. Y.

## STOP-MOTION FOR MUSIC-BOXES.

SPECIFICATION forming part of Letters Patent No. 395,440, dated January 1, 1889.

Application filed February 9, 1888. Serial No. 263,432. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAVE J. JACCARD, of the city, county, and State of New York, have invented a new and Improved Stop-Motion for Music-Boxes, of which the following is a full, clear, and exact description.

My invention relates to the mechanism for stopping, starting, and governing music-boxes; and the invention consists, principally, of a duplex stop acting upon the counter-shaft, so that there will be less strain and less wear upon the vertical shafts which carry the stop-arms.

The invention also consists of means for adjusting the vertical shafts, and also of an improved spring-brake to regulate the time of the music; and the invention finally consists of the construction, arrangement, and combination of parts, all as hereinafter described and claimed.

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 my new and improved stop-motion. Fig. 2 is a sectional plan view of the same, taken on the line *x x* of Fig. 3. Fig. 3 is a vertical section on the line *y y* of Fig. 2. Fig. 4 is an inverted sectional view on line *x x*, Fig. 3, showing the brake-dies. Fig. 5 is a detailed plan view of plates for adjusting the vertical shafts.

The support of the stop-motion in this instance is composed of the base-blocks A, formed with projecting parallel arms or plates A' A', in which are journaled the shaft B and counter-shaft C. The shaft B is provided with the gear-wheel D and pinion E, which meshes with the gear-wheel F of the main-spring barrel G. (Partly shown in Fig. 2.) The gear-wheel D meshes with the pinion H on the counter-shaft C for revolving the same. On said counter-shaft C is secured the two gear-wheels J J, which mesh with the worms *j j* on the vertical shafts K K, so that the motion of the shaft C will communicate very rapid motion to both of the said vertical shafts. The shafts K are each provided with a stop-arm, L, which arms revolve with the shafts, and which are adapted to be simultaneously engaged by the projections *d d* of the main stop-

lever M, pivoted at *f* to one of the side plates, A'. This stop-lever M is of the usual construction, except that it is provided with the arm M', which reaches across the frame, and is formed with two studs, *d d*, to engage with two arms, L, instead of one, as in the common construction, and it is acted upon in the usual manner by the spring *g*, as shown in Figs. 1 and 2. The upper ends of the shafts K are provided with the friction-buttons *h* beneath the curved plate A<sup>2</sup>, in which the upper ends of said shafts are journaled, and against these buttons the curved springs N N are adapted to press, so as to act as brakes to the shafts K, and through them to the music-box. The pressure of the springs N upon the buttons *h* may be diminished by pressing the springs N away from the buttons, which may be done in this instance by the fork O, journaled on the plate A<sup>2</sup>, and provided with a knob, *m*, above the said plate. The members *o o* of the fork span the springs N N, as shown clearly in Fig. 4. The rear ends of the springs are held in the plate Q', secured to the under surface of the plate A<sup>2</sup> by the screw *a*, and the knob *m* is provided with a spring-arm, *m'*, which rests on a notched plate, *m''*, secured to the top of the curved plate A<sup>2</sup>, so that said arm resting in the notches serves to hold the springs N at any desired position to exert the required pressure upon the buttons *h*.

The lower end of each of the vertical shafts K is journaled in an adjusting-plate, P, held loosely in mortises made in the blocks A A. These plates are each acted upon by a screw, P', for moving said plate in or out for carrying the shaft K to or from the gear-wheel J, thus serving to take up any wear and lost motion that may occur. The screws P work in screw-taps made in the back of the blocks A, and the head of each enters a notch, *c*, made in the adjacent edge of the plate P, as shown clearly in Fig. 2, so that by turning the said screw the plate may be moved out or in, as required.

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

1. The herein-described duplex stop-motion for music-boxes, which consists of two vertical shafts having stop-arms, a stop-lever for

each arm, and a counter-shaft provided with gears for revolving the vertical shafts, substantially as described.

2. The shafts K, provided with the brake-  
5 buttons *h*, in combination with the springs N, arranged to press upon the buttons, and the button *m* and fork O, for regulating the springs, substantially as described.

3. The combination, with the shaft C, of  
10 the shafts K, the connecting-gear, and the adjusting-plates P, in which the lower ends of the shafts K are journaled, substantially as described.

4. The stop-lever M, having arm M', and studs or projections *d*, in combination with 15 the two shafts K K, stop-arms L L, shaft C, gear-wheels J J, pinion H, shaft B, gear-wheel D, and pinion E, substantially as described.

5. The springs N N, shafts K K, and buttons  
15 *h* *h*, in combination with the fork O, knob *m*, 20 spring-arm *m'*, and notched plate *m*<sup>2</sup>, all arranged to operate substantially as described.

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Witnesses:

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