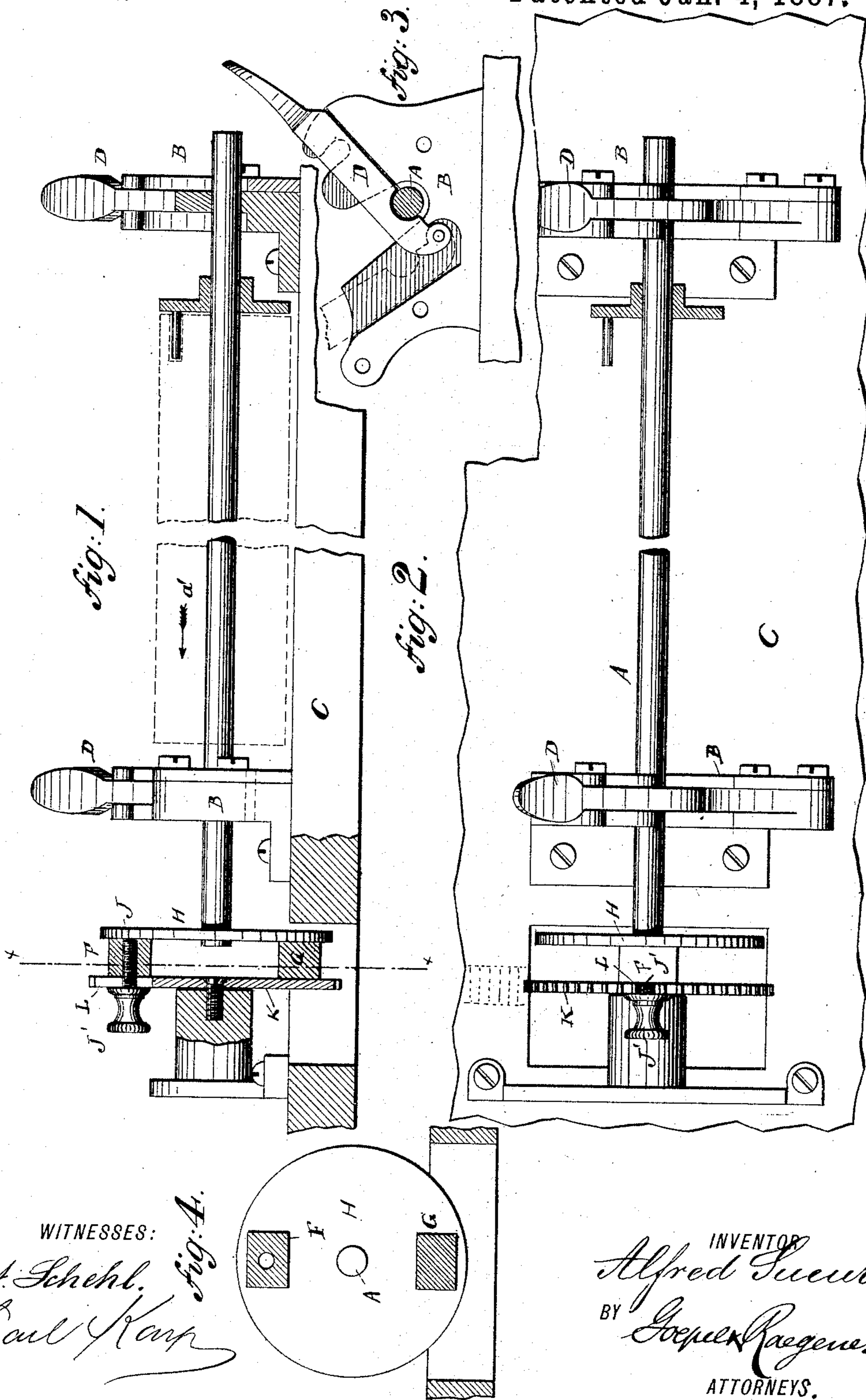


(No Model.)

A. SUEUR.  
MUSIC BOX.

No. 355,484.

Patented Jan. 4, 1887.



WITNESSES:  
*A. Schehl.*  
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# UNITED STATES PATENT OFFICE.

ALFRED SUEUR, OF NEW YORK, N. Y., ASSIGNOR TO M. J. PAILLARD & CO.,  
OF SAME PLACE.

## MUSIC-BOX.

SPECIFICATION forming part of Letters Patent No. 355,484, dated January 4, 1887.

Application filed March 11, 1886. Serial No. 194,763. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED SUEUR, of the city, county, and State of New York, have invented certain new and useful Improvements in Music-Boxes, of which the following is a specification.

Heretofore music-boxes have been constructed with revolving pin-cylinders mounted in the frame of the box in such a manner that they could not be removed, or with cylinders which could be removed to be replaced by others having their pins arranged to play different melodies. Of the removable cylinders there are two kinds, known as the "changeable" and the "interchangeable." The changeable cylinders must be fitted very accurately into the box at the time it is made, and additional cylinders cannot be supplied at a later date, whereas the interchangeable cylinders are provided with a suitable mechanism for adjusting their shafts in place, so as to permit the pins to strike the proper teeth of the comb at the proper time, an adjusting device of this kind being found in the Patent No. 212,108, issued on the 11th day of February, 1879, to M. J. Paillard & Co., assignees of Amedée Paillard.

The object of my invention is to provide a new and improved device for adjusting and locking the shaft carrying the pin-cylinder of a music-box in place in such a manner that it cannot move on its bearings in the direction of its length.

The invention consists in the combination, with said shaft, of a disk or cross-piece on the end of the same, and screws for drawing said disk and projections on the same firmly and tightly against a revolving disk, which is turned by the spring-motor of the box, all as will be described and set forth hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a longitudinal view of a cylinder-shaft and locking devices for the same, of a music-box and of my improved device, parts being broken out and others in section. Fig. 2 is a plan view of the same, parts being broken out. Fig. 3 is a side view of the latch for holding the shaft on its bearings. Fig. 4 is a

cross-sectional view on the line  $xx$ , Fig. 1, of the disk at the end of said shaft.

Similar letters of reference indicate corresponding parts.

The shaft A, on which the pin-cylinder is mounted to slide in the direction of its length, is mounted in the bearings B B, secured on the plate C, said bearings being provided with the latches D, which can be swung into the position shown in Fig. 3 for the purpose of holding the shaft A down in its bearings and preventing the lifting of the same out of its bearings. At the same time all bearings are so constructed as to admit of a slight movement of the shaft A in the direction of its length. On the end of said shaft a disk, H, is mounted rigidly, and is provided with two diametrically-opposite blocks, F and G, projecting from the outer surface. The block F is provided with a screw-threaded aperture for receiving a screw, J, provided with a knob, J'. The cog-wheel K is driven by suitable gearing from a spring-motor, such as is usually employed in music-boxes. The center of said wheel K is directly in line with the center of the shaft A. The wheel K has a notch, L, extending inward from the rim for the screw J, as shown.

The cylinder-shaft is adjusted in the following manner: It is placed on the bearings. The latches D are then swung down into the positions shown in Fig. 3, the screw J, which is screwed out of the block F to a considerable extent, being passed into the notch L. The screw H is then drawn up tight, whereby the shaft is moved in the direction of the arrow  $a'$ , Fig. 1, until the outer ends of the blocks F and G rest firmly against the side of the wheel K, thus preventing any longitudinal movement of the shaft A in its bearings. The wheel K is revolved by the spring-motor, as stated, and carries the disk H round with it, whereby the shaft A and the pin-cylinder on the same are revolved.

The above-described device is very simple, occupies little space, and can be applied to any music-box having removable pin-cylinders.

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

1. In a music-box having removable pin-cylinders, the combination, with the pin-cylinder shaft and bearings for the same, of a disk or cross-piece on the end of said shaft, 5 a disk revolved by the motor of the music-box, and mechanism for coupling the disk revolved by the motor to the disk or cross-piece on the end of the pin-cylinder shaft and drawing the disk on the shaft toward the disk driven 10 by the motor, substantially as herein shown and described.

2. In a music-box having removable pin-cylinders, the combination, with the pin-cylinder shaft and bearings for the same, of a 15 disk or cross-piece on the end of said shaft,

blocks on said disk, a disk revolved by the motor of the music-box, and a screw for coupling the disk or cross-piece on the pin-cylinder shaft to the disk operated by the motor, and drawing said disk on the shaft toward the 20 disk revolved by the motor, substantially as shown and described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

ALFRED SUEUR.

Witnesses:

CARL KARP,  
SIDNEY MANN.