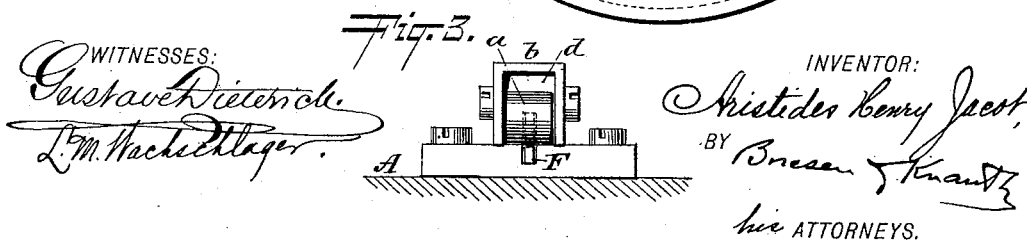
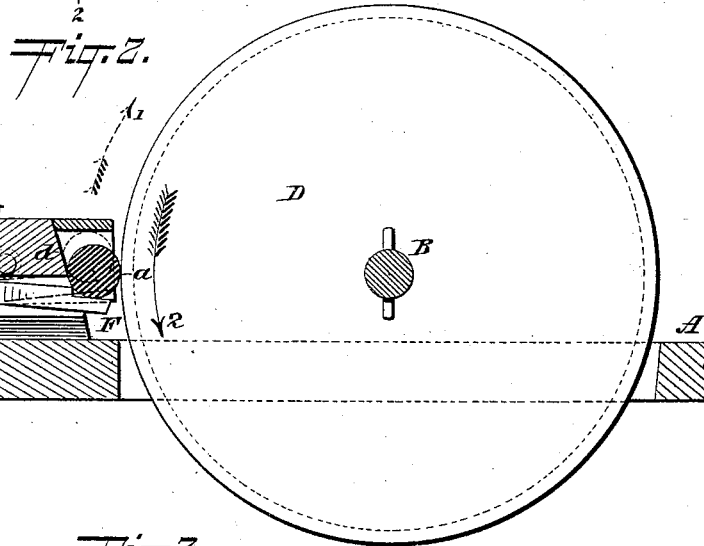


Patented Jan. 10, 1893.



# UNITED STATES PATENT OFFICE.

ARISTIDES HENRY JACOT, OF HOBOKEN, NEW JERSEY, ASSIGNOR TO  
JACOT & SON, OF NEW YORK, N. Y.

## DETENT MECHANISM.

SPECIFICATION forming part of Letters Patent No. 489,480, dated January 10, 1893.

Application filed June 11, 1892. Serial No. 436,327. (No model.)

*To all whom it may concern:*

Be it known that I, ARISTIDES HENRY JACOT, residing at Hoboken, Hudson county, in the State of New Jersey, have invented an Improvement in Detent Mechanism for Music-Boxes and the Like, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof, in which—

10 Figure 1 is a plan or face view of a driving mechanism of a music-box having my improvement. Fig. 2 is a cross-section on the line 2—2, Fig. 1; and Fig. 3 is a detail face view of the detent roller.

15 This invention relates to an improved detent mechanism for the spring-barrels of music-boxes and analogous devices, being the detent which prevents the main-spring when wound from rapidly uncoiling. Heretofore

20 in mechanism of this kind, the detent was mainly constructed of a ratchet or toothed wheel and a pawl engaging into the teeth of said wheel, the pawl being held in place by a spring, and as the wheel in winding the main

25 spring was revolved, the pawl would slip from tooth to tooth and when the winding was stopped the pawl would retain connection with one of the teeth, thereby preventing unwinding. The winding operation of a

30 device having such a pawl and ratchet-detent was always accompanied by more or less noise, as anyone who winds a clock or a watch can easily ascertain; but in music-boxes especially the creation of such noises

35 is at times exceedingly objectionable, since the winding of the instrument frequently has to proceed during its operation. Large orchestrons, being music-boxes of great size, produce when wound particularly objectionable noises. Elastic detents or cushions have

40 also been employed to control the rotation of a wheel but with these devices there is always more or less back action resulting from the elasticity of the detent before it is securely bound to the disk or wheel. By my

45 invention, this temporary interruption is avoided as the detent contact is immediate and continuous, which is of especial importance in music boxes and analogous articles

50 when being wound while in operation.

My invention consists in substituting for the toothed wheel and pawl heretofore used, a smooth-edged wheel or disk and a non-elastic detent roller which bears against an inclined wall, so that as the spring is wound in one direction and the smooth edged disk turned, the detent roller is carried to that part of the inclined wall which is farthest away from the edge of the disk, leaving the winding to proceed without interference and absolutely noiseless; but the moment the disk seeks to revolve in the opposite direction under the influence of the wound spring, the detent-roller will be crowded against that part of the inclined wall which is nearest to the disk and will there bind the disk so as to prevent it from turning any farther. In combination with this roller and inclined wall I also provide a movable rest for the roller which is provided with a handle whereby, whenever desired, the roller can be lifted into the wider space formed by the inclined wall to permit the unwinding, which otherwise said roller automatically prevents.

In the accompanying drawings the letter A represents the framing of a music-box or analogous structure.

B is the winding shaft of the main spring said main spring being contained in a drum C but not shown in the drawings, it being constructed and attached as is usual in this class of structures.

D is a disk rigidly affixed to the winding or spring operated shaft B so as to turn with it as said shaft is employed for winding the spring.

B' is a detachable or other handle for revolving the shaft B and winding the spring.

The disk D which is carried by the shaft B has a smooth edge which is in contact with a non-elastic roller *a* that is contained in a box or receptacle *b*, secured to the frame said box or receptacle having an inclined inner wall *d*, as clearly shown in Fig. 2. The said inclined wall *d* is farthest away from the edge of the wheel or disk D at that end toward which the disk is being revolved in winding the spring, which direction is indicated by the arrow 1 in Fig. 2, so that as the disk D is being revolved in said direction,

the roller *a* will be carried into the wider space of the box *b*, and will hence not interfere with the free rotation of the said disk. But when the handle *E* is let go and the wound up spring in its tendency to uncoil seeks to turn the disk *D* in the direction of the arrow 2, the roller *a* will at once be crowded into the narrower part of the box and will be rigidly wedged between the edge of the disk *D* and that part of the inclined wall *d* which is nearest said disk, thereby immediately binding the disk *D* and preventing the spring from unwinding.

It will be quite clear that the operation of winding the spring in the presence of my improved detent is quite noiseless and that the uncoiling of the spring and the turning of the disk *D* backward are positively and automatically prevented and at the same time the parts are of such a simple and substantial character that they are not liable to get out of order or to break, or to give way, and no slipping or giving of the disk is had as is sometimes the case when elastic rollers or detents are used.

*F* is a pivoted lever which forms a support for the roller *a* engaging or supporting said roller from the under side at all times, whether or not it be in engagement with other parts. This lever or support *F* is pivoted as shown at *e* in the box *b*, or in the frame of the machine and is provided with a handle *f* that extends within reach of the operator of the machine. By depressing this

handle *f* I am enabled to lift the roller *a* out of its binding position, so that I may permit the main-spring to uncoil and to turn the disk *D* backward while holding the handle *E* to prevent too rapid an uncoiling action. The ability of allowing the spring to uncoil by depressing the handle *f* and raising the roller *a* is of advantage because it allows the main-spring to be uncoiled before pieces are taken apart for repairs or inspection and also for many other purposes.

When I speak of the disk *D* as having a smooth edge, I mean an edge not toothed; but a milled edge will be within the definition of the smooth edge for the purposes of my invention.

What I claim and desire to secure by Letters Patent is

The combination of the disk *D* on the shaft *B*, with the non-elastic detent-roller *a* which is placed in contact with the edge of said disk, inclined wall *d* in contact with said roller, and pivoted lever *F* having handle *f*, upon which lever *F* the roller *a* always bears, all arranged so that by means of said movable support *F* the roller *a* can be moved out of its binding position with reference to the edge of said disk *D*, substantially as, and for the purpose herein shown and described.

ARISTIDES HENRY JACOT.

Witnesses:

HARRY M. TURK,  
E. S. SHERMAN.