

(No Model.)

8 Sheets—Sheet 1.

O. WINKLER.
COIN FREED APPARATUS

No. 552,460.

Patented Dec. 31, 1895.

Fig. 1.

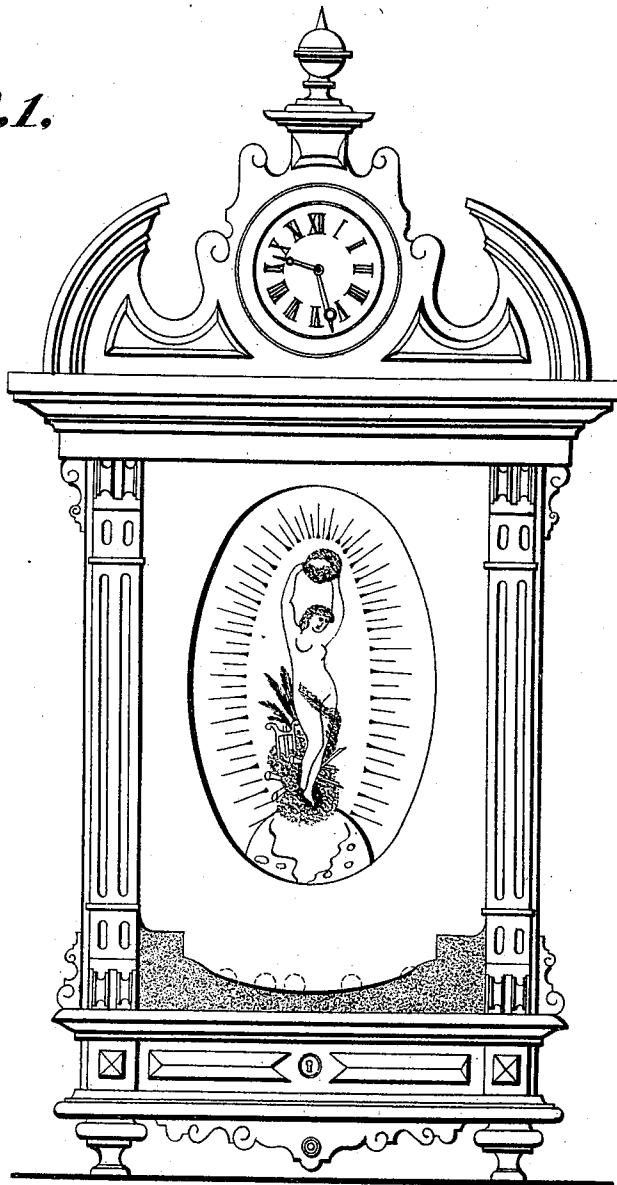
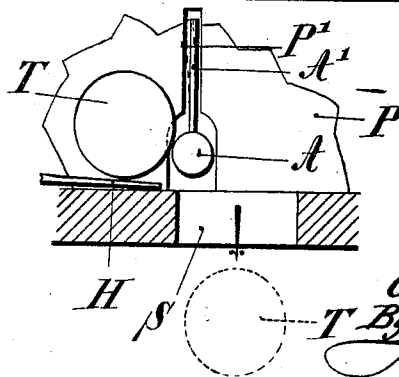


Fig. 4.



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Fig. 2.

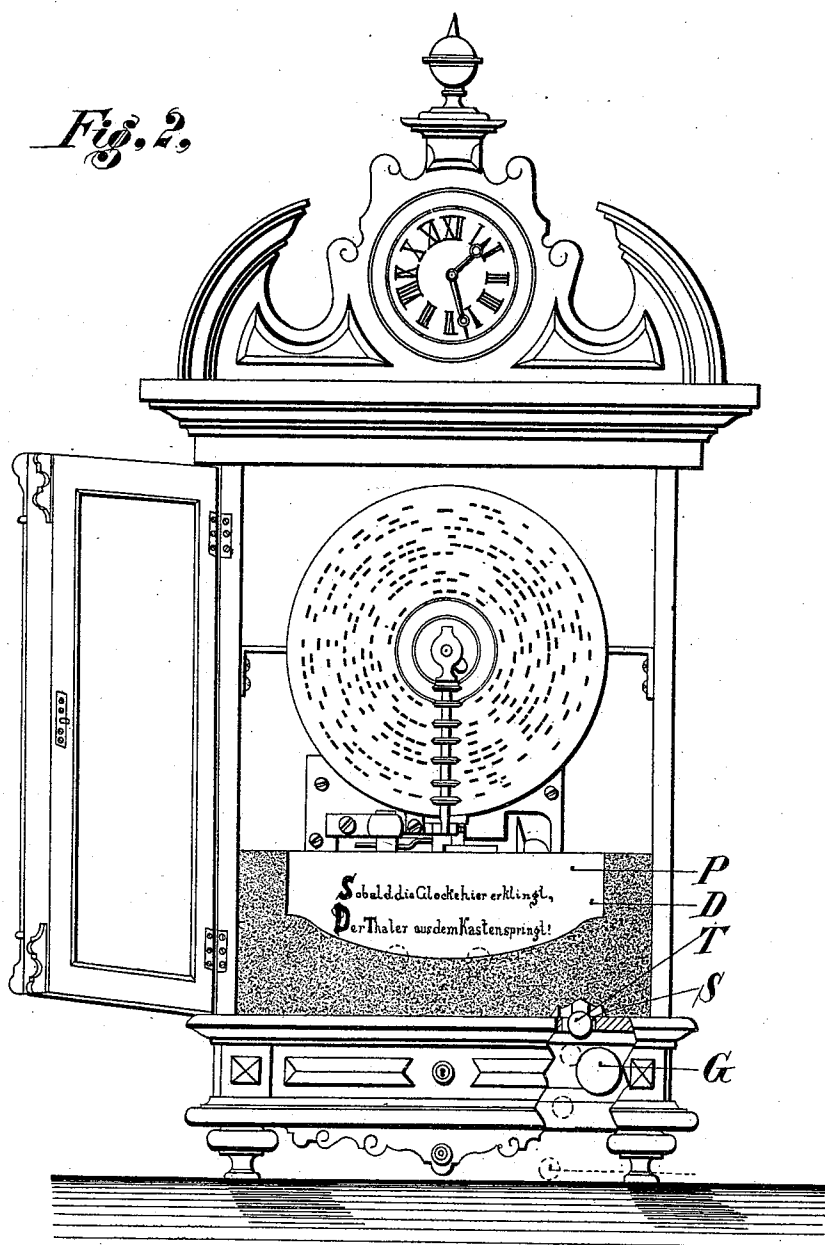
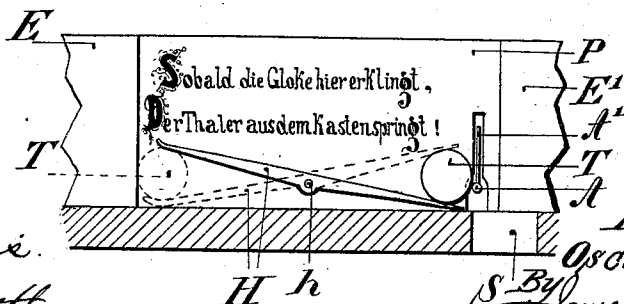


Fig. 3.



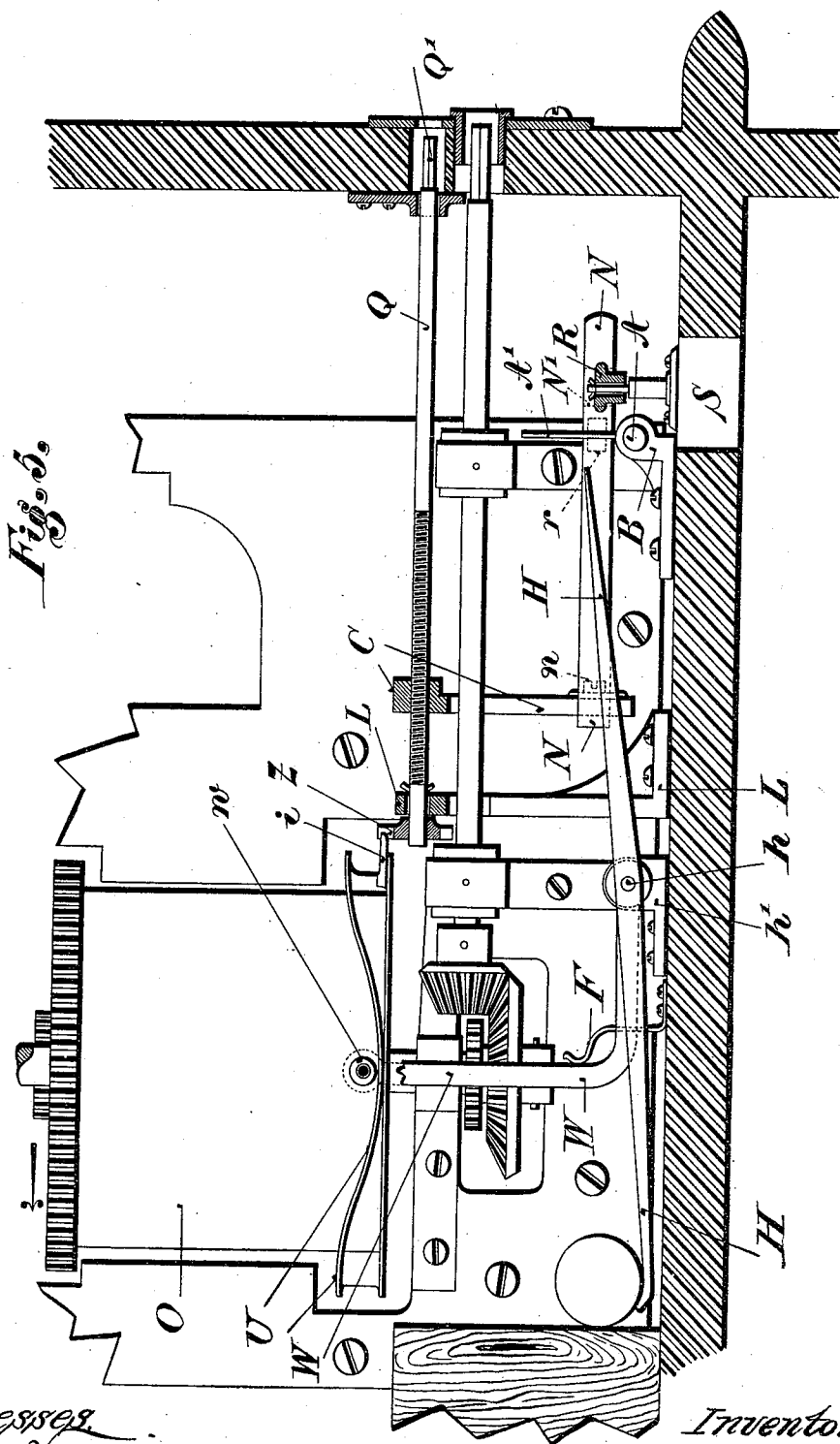
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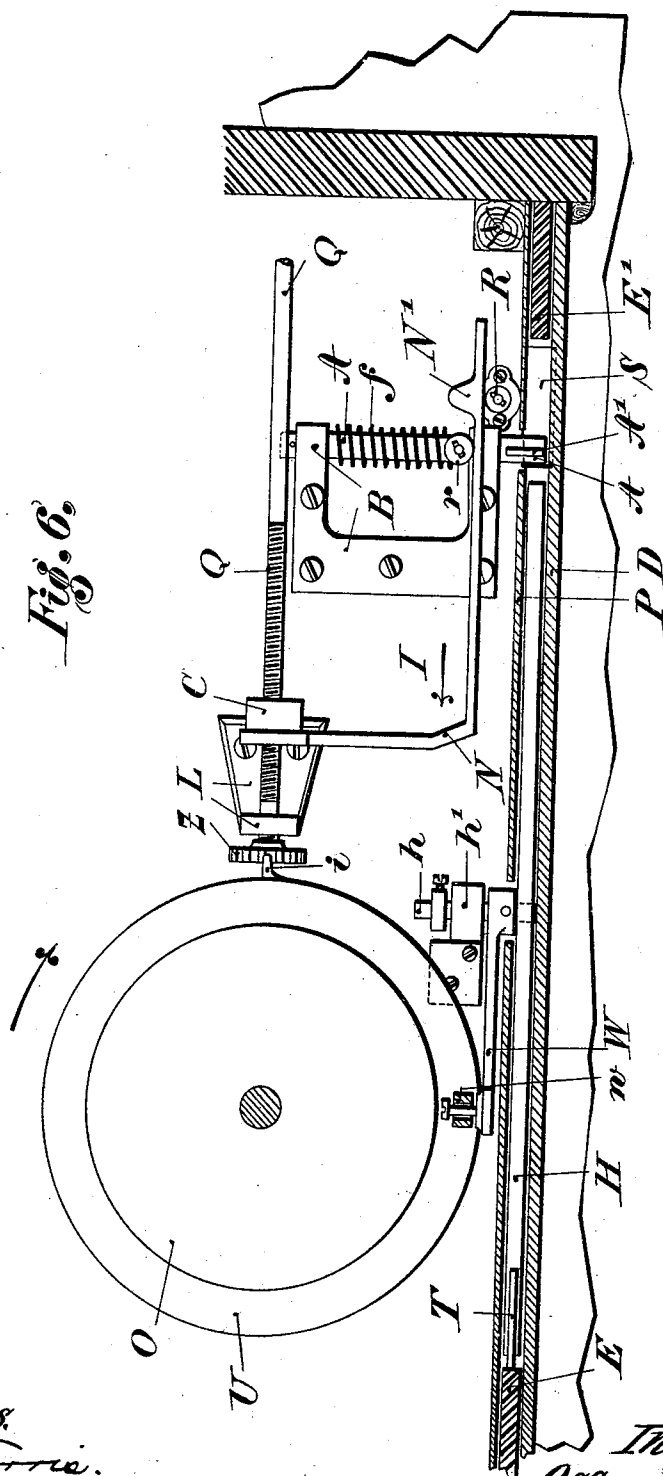
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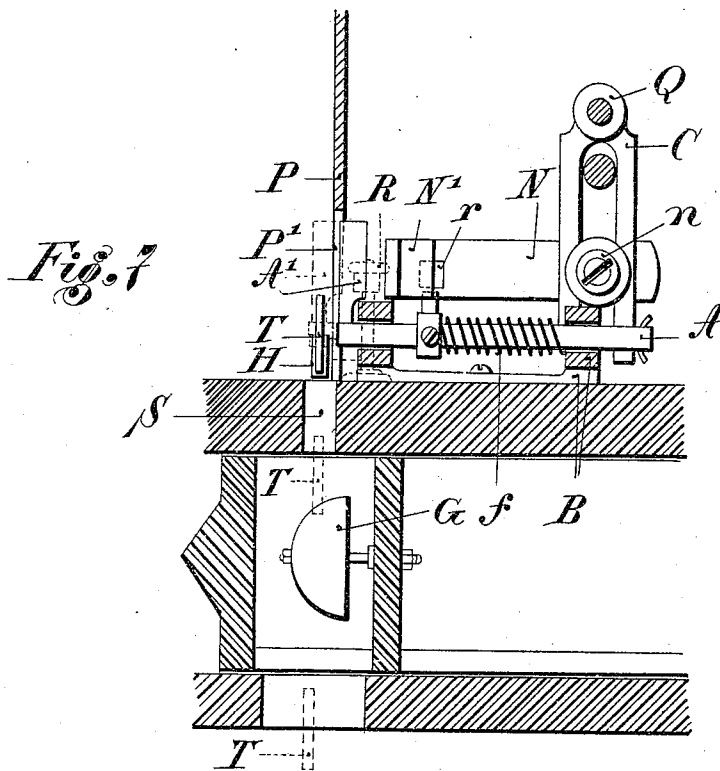
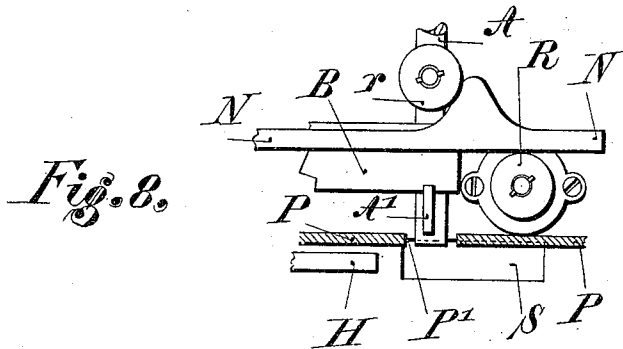
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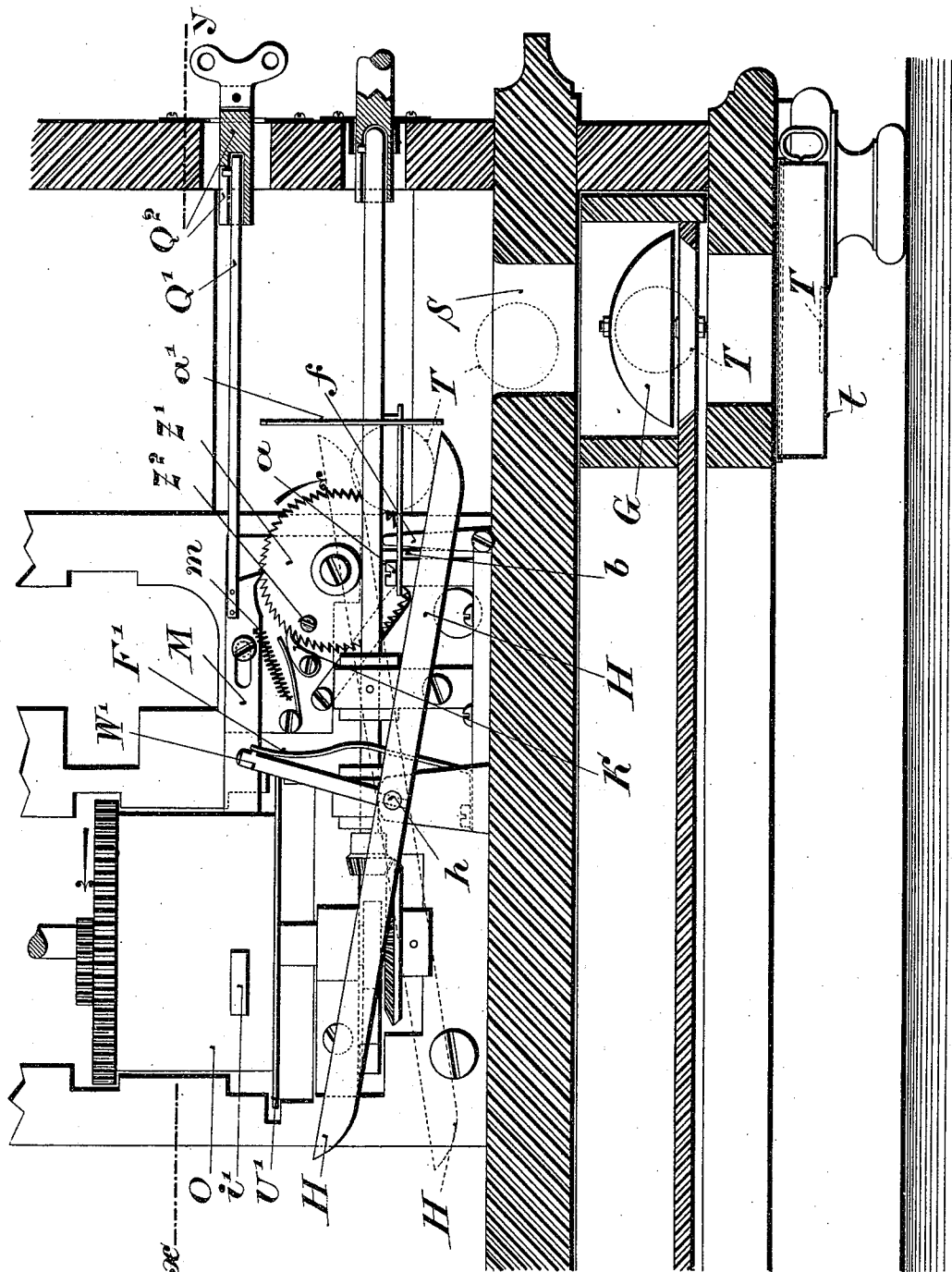
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8 Sheets—Sheet 6.

No. 552,460.

Patented Dec. 31, 1895.



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Fig. 2.

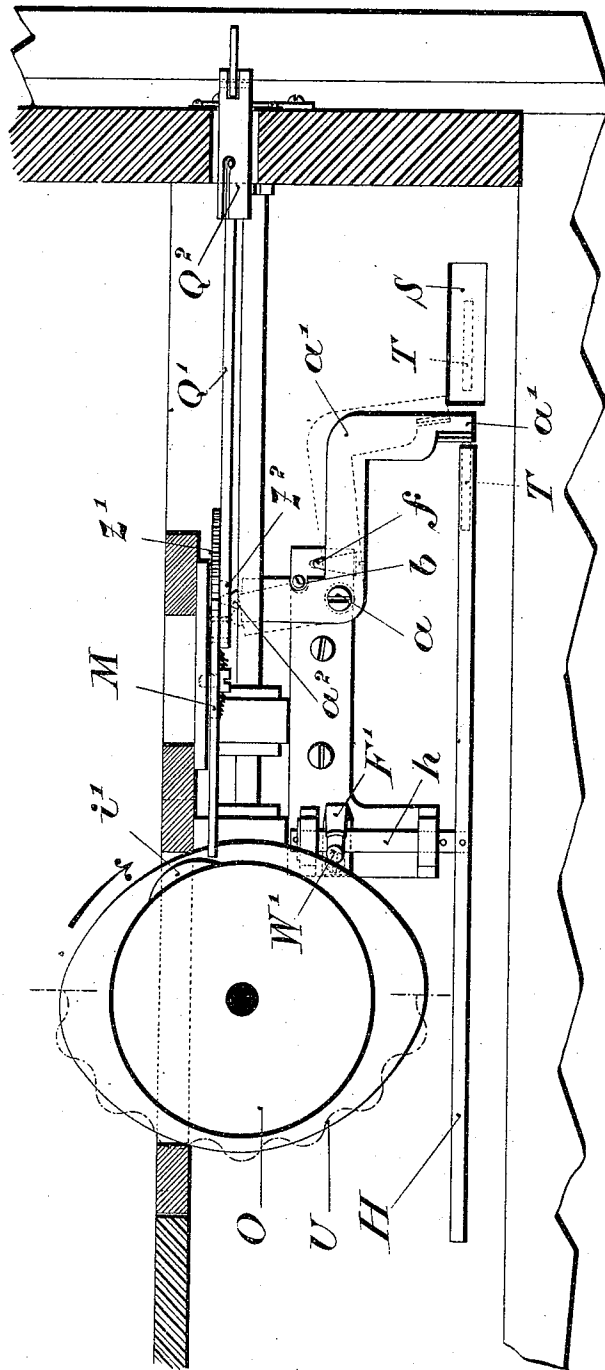
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Fig. 10.



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(No Model.)

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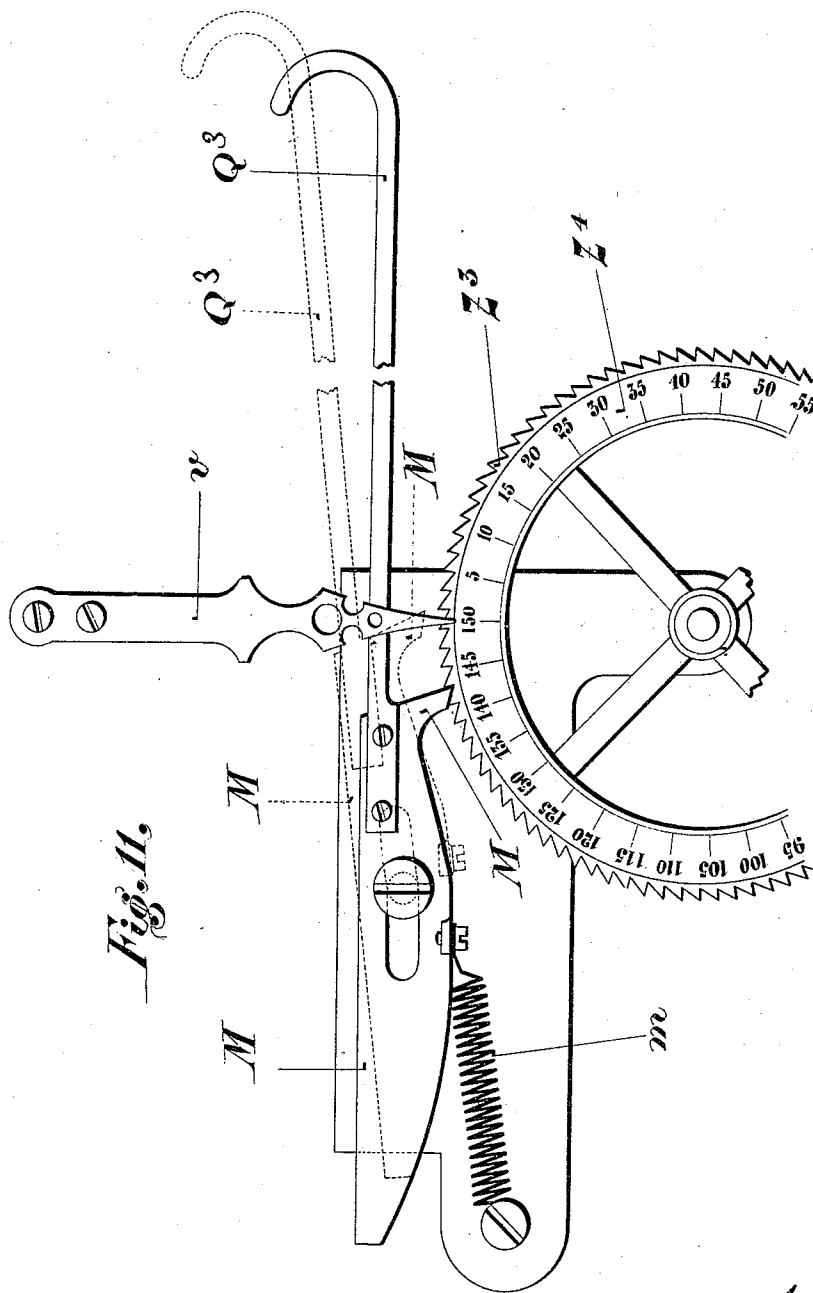


Fig. 11.

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UNITED STATES PATENT OFFICE.

OSCAR WINKLER, OF GOTHIA, GERMANY.

COIN-FREED APPARATUS.

SPECIFICATION forming part of Letters Patent No. 552,460, dated December 31, 1895.

Application filed September 23, 1895. Serial No. 563,381. (No model.)

To all whom it may concern:

Be it known that I, OSCAR WINKLER, a subject of the Duke of Saxe-Coburg-Gotha, residing at Gotha, in the Duchy of Saxe-Coburg-Gotha and German Empire, have invented new and useful Improvements in Coin-Freed Apparatus, of which the following is a specification.

My invention relates to coin-freed apparatus designed to be placed in public rooms, rooms for social gatherings, public places and halls, &c., and used in combination with musical boxes or other devices; and it has for its object to induce the public to patronize such apparatus to a greater extent than usual, for which the apparatus is constructed to deliver a coin or other article as a prize after it has been operated a certain predetermined number of times. The prize, which may consist, for example, of a large coin, such as a two-shilling piece, previously inserted into the apparatus, which I will assume is the one designed to play musical pieces, is caused to appear and disappear at intervals, and finally on the sounding of a bell or other audible signal, after a predetermined number of musical pieces have been played, the coin is discharged from the apparatus and can be received as a prize by the person who has last set the apparatus in operation by inserting therein the proper coin.

A suitable inscription provided on the apparatus over the coin enables the public to know what will happen with the visible prize when the audible signal is sounded.

The apparatus for moving the coin or other prize (hereinafter referred to as the "prize coin") and finally discharging it from the apparatus comprises a rocking beam, upon which the coin is caused to roll to and fro by its own weight when the rocking beam oscillates. This rocking beam is actuated by the motive mechanism of the apparatus and moves with the prize between two walls, of which the rear one carries the aforesaid inscription and the front one is partly transparent, so as to render the prize visible at the proper moment. Near to one end of the rocking beam there is formed in the box or casing of the apparatus a slot which, so long as the prize coin is to remain in the apparatus, is normally covered or bridged over by a mov-

able stop in such a manner as to render it impossible for the prize coin to fall out prematurely. After a predetermined number of revolutions of the mechanism this stop is shifted by means of the spring-barrel of the musical box or other device, so that a discharge-slot, previously obstructed by the said stop, is uncovered and the prize coin then allowed to fall out of the apparatus with an audible signal produced, for instance, by the coin falling upon a bell or gong.

The movement and the automatic discharge of the prize coin from the apparatus can be effected by means other than those hereinbefore mentioned, and the arrangement may also be such that the prize coin and the inscription are not visible until the automaton has been opened, this being more advantageous in the case of a musical apparatus, as the music produced by the operation of the apparatus will be better heard when the door is open than when it is closed.

Figure 1 of the accompanying drawings illustrates in front elevation a musical apparatus of the kind referred to in which the movements of the coin to be won as a prize are visible without its being necessary to open the automaton. Fig. 2 illustrates in front elevation, partly in section, a musical apparatus in which the prize coin and the aforesaid inscription are not visible until the door of the apparatus has been opened. Figs. 3 and 4 are sectional detail views. Fig. 5 shows partly in vertical section and partly in elevation, Fig. 6 in plan, and Fig. 7 partly in front end elevation and partly in cross-section, the apparatus for moving and discharging the prize coin. Fig. 8 is a detail view of the mechanism for disconnecting the apparatus for moving and discharging the prize coin. Fig. 9 is an elevation partly in section, and Fig. 10 is a cross-section on the line $x y$ of Fig. 9, showing a modified arrangement. Fig. 11 is a side elevation illustrating a further modified arrangement.

As will be seen, the several figures are drawn to different scales.

In the arrangement of apparatus shown in Figs. 2 to 8 inclusive, H is the rocking beam that carries the prize coin T. It is situated between two plates P and D, of which, as shown in Figs. 2 and 3, the former carries the

aforesaid inscription and the latter is partly transparent. Two plates E and E', arranged between the plates P and D, serve to provide between them a space in which the rocking beam II is able to move without hinderance. The axle *h*, if the rocking beam II is pivoted at Figs. 5 and 6, carries a bent lever W, which is rigidly fixed thereto. The free upper end of this bent lever W carries an antifriction-roller *w*, which works on an undulating pathway U extending around the driving-spring barrel O of the apparatus, the necessary friction between the sliding surfaces being produced partly by the weight of the lever W and partly by the action of a spring F, which is continually pressing against the said bent lever W, the arrangement being such that when the spring-barrel O moves in the direction indicated by the arrow, Fig. 6, the rocking beam II will be caused to move also. By this means, when the apparatus is in operation, the prize coin T lying on the rocking beam II, as indicated partly in full lines and partly in dotted lines in Figs. 1, 2, 3, and 4, is moved alternately to and fro, disappearing entirely at the end of the downward movement to the right and then again showing itself gradually until it is again almost wholly visible. In these to-and-fro movements, as shown in Figs. 3, 4, and 6, the coin will strike at one end against the plate E and at the other end against a movable stop A, which extends through the plate P. This movable stop A bridges over an outlet-slot S, Figs. 2, 3, 4, 5, 6, and 7, for the coin T, and thus prevents the coin from prematurely falling out of the apparatus. When the stop A, Figs. 6 and 7, is moved back, the coin T will fall through the slot S onto a gong G, which it sounds, and thence passes to the exterior of the apparatus.

In order to move the stop A inward at the proper moment—that is to say, at the predetermined moment fixed by the owner of the apparatus—for the purpose of discharging the prize coin T, there is provided a disconnecting device, as hereinafter described, which is operated by the driving mechanism of the apparatus, and which may obviously be variously constructed and arranged, as also may the mechanism for actuating the prize coin.

In the example shown the spring-barrel O carries on its lower cover-plate a pin *i*, which at every revolution of the spring-barrel moves a toothed wheel Z mounted on a screw-spindle Q forward to the extent of one tooth, so that a nut C formed as a fork and carried by the spindle Q is thereby caused to move in the direction indicated by the arrow I, Fig. 6. The nut C can by means of a squared end Q' of the shaft Q and a corresponding key be set from the exterior of the apparatus to withdraw the stop A and release the coin after any desired number of revolutions of the spring-drum O, or after any desired number of coins have been placed in the apparatus for operating the same. Thus in the present case the

farther the nut C is moved toward the right, Figs. 5 and 6, the greater will be the amount to be received by the apparatus before the prize coin will fall from the rocking beam II out through the slot S and thence to the exterior of the apparatus. The spindle Q is supported at one end in the bearing L and at the other end in the wall of the box.

The nut C, which is made of fork shape for the purpose of allowing of the passage therethrough of other parts belonging to the driving mechanism but forming no part of the present invention, carries close to its lower end a bent or an angle piece N which is fixed thereto by means of a screw *n*. This angle-piece N is provided at its free end with a suitably-formed nose N', is arranged to bear against the adjacent bearing B of the movable stop A, and is guided so as to slide easily between two rollers R *r*, of which *r* is fixed on the stop A. Between this roller *r* of the stop A and the oppositely-situated bearing B there is arranged a coiled spring *f* which normally presses the stop A outward, into the position shown in full lines in Fig. 6.

The stop A has an upwardly-projecting extension A' which, as shown in Figs. 3, 4, 7, and 8, is arranged to pass through a slot P' in the plate P. If now by repeated operation of the apparatus the nut C is moved quite close to the toothed wheel Z—that is to say, to the driving spring-barrel O—the nose N' of the angle-piece N will move into the position shown separately in Fig. 8, and since the stop A with its extension A' is free to move endwise in the slot P' of the plate P, the nose N' will actuate the roller *r* and consequently move the stop A back, whereby the slot S previously bridged over by the stop will be uncovered, Figs. 2 and 7, and the prize coin T will be free to fall out of the apparatus, striking in its passage the bell G, and so giving an audible signal. The spindle Q may then be again set from its end Q' to any desired amount, the spring *f* returning the stop A back into its original position to again prevent the premature falling out of a fresh prize coin T placed upon the rocking beam II.

In the modified arrangement shown in Figs. 9 and 10 the rocking beam II carries on its rearwardly-extended axle *h* an upwardly-projecting rod W', that is constantly held by a spring F' against an elliptical or cam-shaped slideway U', arranged on the spring-barrel O of the driving mechanism. By this means, when the barrel O rotates, there is imparted to the rocking beam carrying the coin T a rocking motion, and by making the elliptical or cam-shaped slideway U' with an undulating or corrugated edge, as is partly indicated by dotted lines in Fig. 10, there will be imparted to the rocking beam II, in addition to its main rocking movement, a series of smaller rocking movements, whereby a jumping motion will be imparted to the prize coin. The spring-drum O of the driving mechanism has a nose *i'*, which at each rotation strikes against

a pawl M, which is under the influence of a spring, whereby the corresponding ratchet-wheel Z' is advanced to the extent of one or more teeth. A pin or stud Z², fixed on this ratchet-wheel Z', strikes after every revolution of the latter against a nose α^2 of a bent lever α' , which is pivoted at α and is under the influence of a spring f , and whereby the said lever is then caused to move from the front out of the outlet-slot S, so that the prize coin is free to pass through such slot, and thence into a drawer t , striking in its passage the bell G. The drawer t can then be readily opened by the prize-winner and the prize removed.

b is a stop against which the bent lever α' is held by the spring f when it is released by the pin or stud Z², so as to obstruct the passage of the prize coin to the slot Z until the required time.

In order to insure that the ratchet-wheel Z' shall only be able to be moved in one direction, a detent k may be provided.

If it be desired to reduce the time of winning—that is to say, to enable the prize to be delivered before the termination of the rotation of the apparatus—the pawl M is moved alternately backward and forward by means of a suitable key Q² through the medium of a rod Q' extending toward the wall of the box, with the result that the ratchet-wheel Z' is moved in the direction of the arrow marked in Fig. 9, and the releasing-pin Z² moved nearer to the nose α^2 of the bent lever α' .

In the further modified arrangement shown in Fig. 11, in place of the rod Q' provided with a key Q², there is provided a hook-shaped handle Q³, which also engages with the pawl M. The latter is guided along a pin, as in the arrangement shown in Figs. 9 and 10, and is drawn back by means of the spring m ; also, in the arrangement shown in Fig. 11, the rotation of the ratchet-wheel, and consequently the release of the coin, can only be accelerated, but cannot be retarded or arrested.

Having now particularly described and ascertained the nature of my invention and in what manner the same is to be performed; I declare that what I claim is—

1. In a coin freed or like apparatus, the combination with a movable part of said apparatus, of a rocking beam adapted to be rocked by said movable part and serving to carry a coin or other prize, a stop normally arranged between the discharging end of said lever and a discharge opening, and releasing mechanism operated from said movable part and adapted to move said stop from between said lever and discharge opening after the apparatus has been operated a predetermined number of times, substantially as described for the purpose specified.

2. In a coin freed or like apparatus, the

combination with a movable part of such apparatus, of a rocking beam arranged to rock between two plates one of which is partly transparent and the other of which serves to bear an inscription, a stop normally located between said lever and a discharge aperture in said apparatus, and a releasing device operated from the said movable part and adapted to move said stop into its inoperative position, substantially as herein described for the purposes specified.

3. In a coin freed or like apparatus, the combination with a movable part of said apparatus of a coin or other prize carrier adapted to be operated by said movable part, a stop arranged to prevent the prize on said carrier from leaving the apparatus, releasing mechanism adapted to move said stop into its inoperative position after a predetermined number of operations of the apparatus, and means for adjusting the position of said releasing mechanism and thereby varying the times at which it will come into operation, substantially as herein described.

4. In a coin freed or like apparatus, the combination with a movable part of said apparatus of a coin or other prize carrier adapted to be operated by said movable part, a stop arranged to prevent the prize on said carrier from leaving the apparatus, releasing mechanism adapted to move said stop into its inoperative position after a predetermined number of operations, and an audible signaling device arranged to be sounded by the prize while being discharged from the apparatus, substantially as herein described.

5. In a coin freed or like apparatus, the combination with a rotary driving part of said apparatus, of a rocking beam arranged to be oscillated by said rotary part and arranged to work between two plates a part of the front one of which is transparent, a spring controlled stop normally located between said rocking beam and a discharge aperture, a sliding plate with projection adapted to act against a projecting part of said stop and move back the latter against the action of its spring, mechanism adapted to be intermittently operated by said rotary driving part and to bring said sliding plate into operative position after a predetermined number of revolutions of said rotary part, and a sounding device arranged below the prize discharging aperture substantially as herein described for the purposes specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

OSCAR WINKLER.

Witnesses:

MARIE LOCH,

WILHELM BINDEWALD.