(No Model.) 3 Sheets—Sheet 1.

W. REEVES.

COIN CONTROLLED MACHINE.

No. 526,539. Patented Sept. 25, 1894.

Fig. 1

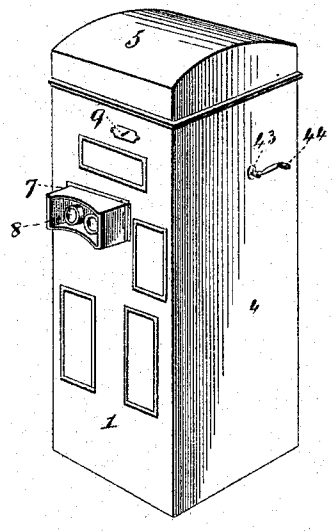


Fig. 2

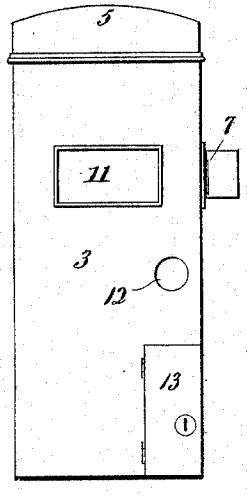
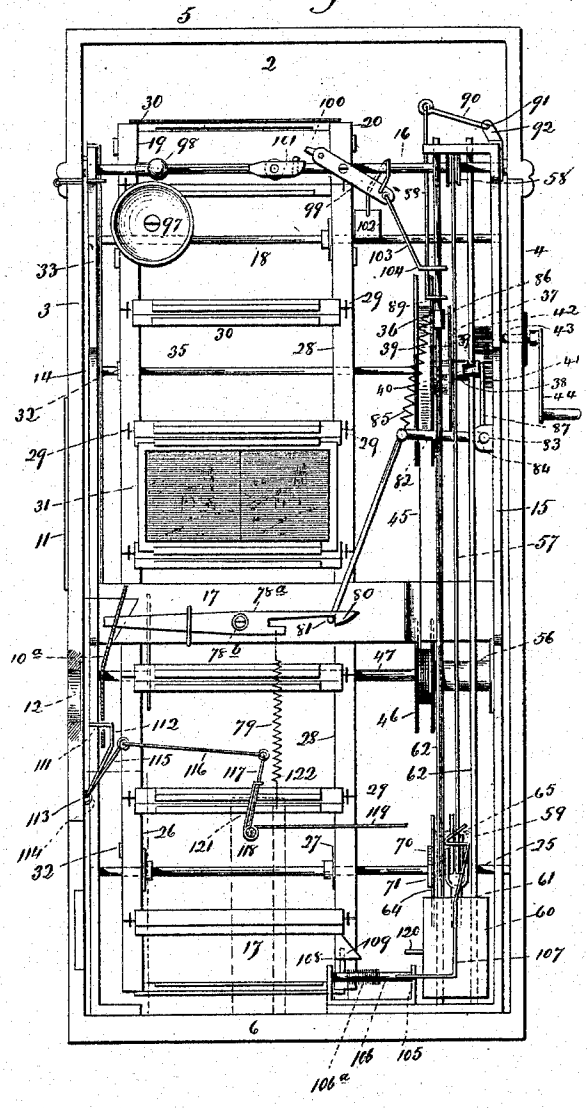


Fig. 3



Witnesses.
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Lillian D. Kelsey

William Reeves.
Inventor
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Earle & Seymour

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

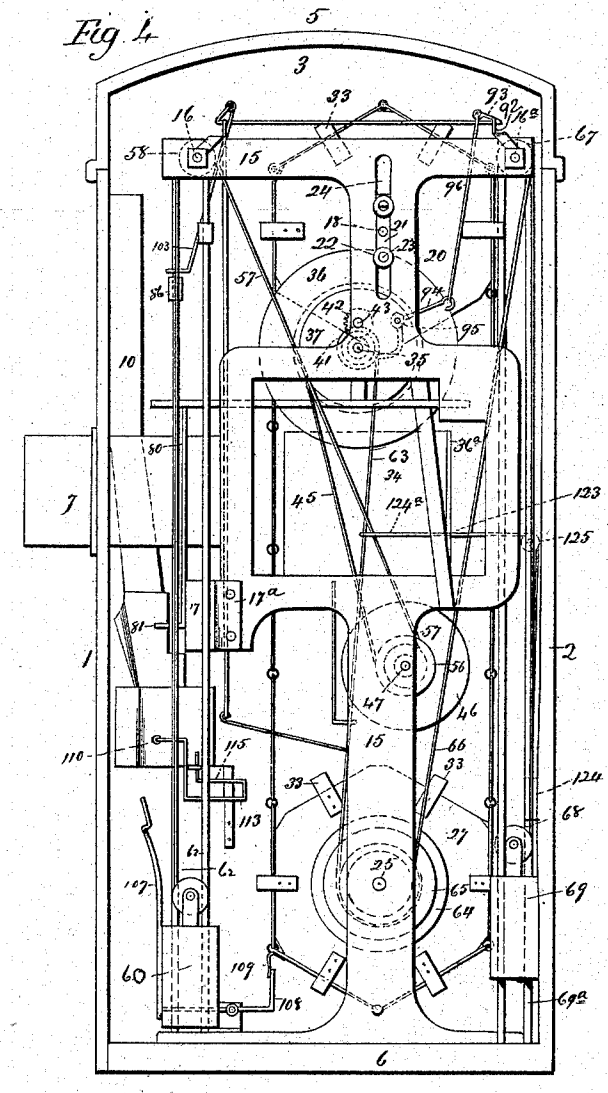
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Fig. 1.



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(No Model.) 3 Sheets—Sheet 3.

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Fig. 5

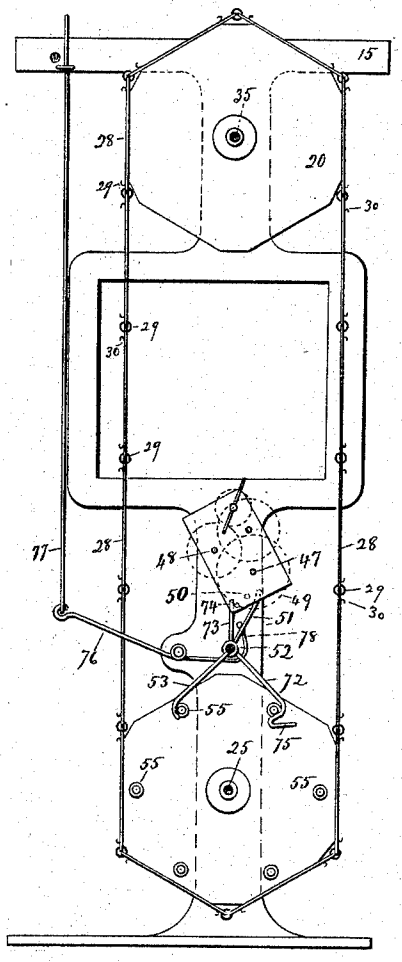


Fig. 7

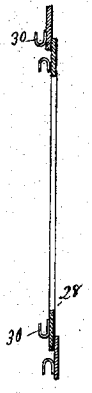
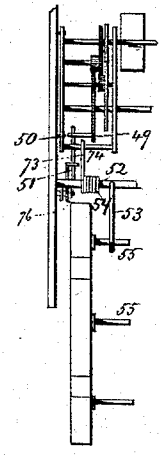


Fig 6



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM REEVES, OF NEW HAVEN, CONNECTICUT.

COIN-CONTROLLED MACHINE.

SPECIFICATION forming part of Letters Patent No. 526,539, dated September 25, 1894.

Application filed August 22, 1893. Renewed June 14, 1894. Serial No. 514,613. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM REEVES, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Coin-Controlled Machines; and I do hereby declare the following, when taken in connection with accompanying drawings and the figures of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a perspective view of the machine; Fig. 2, a side view; Fig. 3, an enlarged front view with the front of the casing removed; Fig. 4, a side view with the side of the casing removed; Fig. 5, a vertical section without the casing; Fig. 6, a detail view of the clock mechanism, and one of the band wheels; Fig. 7, a section of one of the frames of the belt.

My invention relates to coin-controlled apparatus, it being especially designed for the exhibition of pictures. Its object is to show the pictures (transparencies, by transmitted light, thereby giving a distinctness and realism to them far exceeding those shown in the ordinary method, that is by light received on the front surface.

For this purpose my invention consists in certain features of construction and combinations of parts to be hereinafter fully described and then particularized in the claims.

The casing comprises a front 1, back 2, sides 3, 4, and top and bottom 5, 6. A stereoscope 7 is set in the front 1, and is provided with usual lenses 8, through which the pictures are viewed. A slot 9 in the front 1, forms the mouth of the coin-chute or way 10, which extends downwardly therefrom, and is fixed to the inner side of the front. The side 3 has a glazed window 11, through which light is admitted to the interior of the casing, a glazed observation orifice 12, through which the coin is viewed, and which is located above the money box or drawer at the lower end of the coin-chute, and a door 13, by which access may be had to the latter by any authorized person.

The casing having been described, I will now describe the internal working parts of the apparatus.

Vertical skeleton supports 14, 15 and bracket 17, all secured to the bottom 6, support the working parts of the apparatus. A pair of tie-bars 16, 16^a at top, and a bar 17^a midway, connect the supports 14 together, and the whole forms a frame.

On a shaft 18 at the top of the frame, is fixed a pair of polygonal wheels 19, 20, hexagonal in this instance, said shaft being journaled in bearings 21, that are adjustable vertically by means of nuts 22, which take onto screw-threaded projections 23 of said bearings projecting through a vertical slot 24 in each support.

A shaft 25 journaled in bearings near the bottom of the frame, carries wheels 26, 27 similar to wheels 19, 20. Around these wheels 19, 20, 26, 27 passes an endless band or belt, composed of flat rectangular metallic sections 28, which are open and connected to each other by rings 29. The ends of the sections 28 are provided with parallel flanges 30, that constitute guides extending transversely of the band or belt, to receive the transparent pictures, such as 31. When the pictures are inserted, one end of each abuts against a stop 32 on each section.

Pivoted buttons 33 on the outer sides of the wheels, are adapted to project beyond the peripheries thereof, and hold the endless band in position, so that it will not slip off. The front lap of the endless band passes close to the rear of the stereoscope 7, and to one side of and between the front and the rear laps of said band is located the light aperture or window that throws light onto the reflector 34, arranged diagonally of the space between the laps, so as to throw or deflect the light through the picture just behind the stereoscope.

Below the upper pair of wheels 19, 20, is journaled in the upper supports 14, 15, main winding-shaft 35, which carries a large grooved clock winding-wheel 36, and a smaller grooved winding-wheel 37, both fixed thereon close together near the side 4 of the casing. A spring metal strip 36^a secured to support 15, has frictional contact with wheel 36, to brake its movement. A sliding clutch 38, on shaft 35, has projections 39, which take into notches in the head 40, on said shaft, and carries a pinion 41, which is adapted to be brought into

mesh with the pinion 42 on the inner end of the crank-shaft 43, having bearing in the support 15, and projecting out through the side 4, where it carries a crank handle 44.

The upper end of a cord 45, passes around the clock winding-wheel 37, while its lower end passes around a second grooved clock-winding wheel 46, fast on shaft 47, which is journaled in the supports 14, 15 below shaft 35. Ordinary clock mechanism 48, which will not be described in detail, is operated by shaft 47, and has a wheel 49, provided with a side trip-pin 50, which is adapted to engage a trigger 51, projecting from oscillating shaft 52, journaled in bearings below shaft 47. Fixed to and projecting radially from shaft 52 is a catch or hook 53, which is pressed normally downward by means of a torsion spring 54, coiled around and secured at one end to the shaft, and its free end 73 extending upward into contact with a stop 74. A circular series of stop-pins 55, project laterally from the inner side of lower band-wheel 26, and are normally engaged by the hooked end of catch 53.

Over grooved weight elevating wheel 56, fixed on shaft 47 next to wheel 46, passes one end of a cord 57, the other end of which passes up toward the front of the machine, and over a pulley 58, located on tie-rod 16. Thence the cord 57 passes down under the pulley 59 of the clock operating weight 60, and up to the top of support 15 again, where it is fastened. Said weight is provided at each side with eyes or perforations 61, through which pass the guide rods 62, 62, extending from the top to the bottom of support 15. A cord 63 passes at its upper end around grooved wheel 37, and at its lower end around the larger of two grooved wheels 64, 65, which are fixed together, and freely turn in one direction on the lower shaft 25 of the endless band. The lower end of a cord 66 passes around the smaller grooved wheel 65, up over a pulley 67, turning on tie-rod 16ª, thence down under pulley 68, on band-operating weight 69, and then up to the top of support 15, where it is fastened. The weight 69 slides on parallel rods 69ª, similar to rods 62. To cause the shaft 25 to turn when the wheels 64, 65 are revolved in one direction, a ratchet-wheel 70 is secured to said shaft, and a spring-actuated pawl 71 to wheel 64, which pawl is adapted to engage said ratchet-wheel.

On the same shaft 52 which carries the catch or hook 53 is pivoted a gravitating detent 72, which projects oppositely to said catch, and is normally held in position by the said spring 54, which limits its downward movement. This detent prevents the backward movement of the endless band, and has an inclined or bent finger 75, which the pins 55 pass under and raise the detent when the band is being moved forward. A throw-off lever 76 operated by pulley-rod 77, is pivoted to support 14, and has a hooked end 78, adapted to engage the trigger 51 of the catch 53, and throw the latter up, so as to permit the band and its carrying wheels to be moved freely forward, when said operating rod 77 is elevated.

A coin-actuated lever 78ª projects at its front end into the second chute 10ª, in which the coin drops and is pivoted to the bar 17 at 78ᵇ. The front end of the lever 78ª is normally elevated by a spring 79, secured to its rear end, and to bracket 17. The rear end of said lever has a detent 80, under which is adapted to engage a hook 81, projecting downwardly from an arm 82 on rock-shaft 83, which is journaled in bearings 84, fixed to support 15. The inwardly projecting arm 82 of said shaft, tends to turn it downwardly in its bearings, by reason of its weight, but it is held in its upward position when the hook 81 engages under detent 80. The outer end of the arm 82 is connected by means of a spring 85, with a slide 86, that is loose on the inner one of the guide-rods 62.

A bifurcated clutch-arm 87, projects from the rock-shaft 82, and engages and operates the sliding clutch 38. The lower end of a longitudinally movable rod 88 is provided with an eye or collar 89, which receives the inner guide-rod 62, and is located just above slide 86. The upper end of this rod 88 is pivoted to the rock-arm 90 on one end of a rock-shaft 91, which is journaled in bearings 92 on top of support 15, and is provided at its other end with another rock-arm 93. A gravitating pawl 94 pivoted at 95, to support 15, is connected with rock-arm 93, by a link 96, and is normally held out of engagement with the pinion 41 on crank-shaft 43.

A bell 97, is adapted to be struck by a pivoted hammer 98, when the pivoted lever 99 causes its pivoted trip 100, at the forward end, to engage and pass the arm 101, thereby throwing said hammer up and permitting it to fall on and sound the bell. The rear end of the lever 99, bears a weight 102, for throwing the trip 100 past the hammer 98, ready for another operation, which is effected by a rod 103, attached to lever 99, and provided with an eye or collar 104, at its lower end, that is received on inner rod 62, just above the eye or collar 89.

Journaled in bearings 105 above the bottom 6, is a rock-shaft 106, having an outwardly and upwardly extending L-shaped arm 107, the upper end of which is bent outwardly, so as to permit the weight 60 close to it to pass downwardly.

Shaft 106 bears a catch 108, which is adapted to engage behind a lug 109, projecting from one side of the endless band, which engagement is effected by a torsion spring 106ª, coiled around shaft 106. In the chute 10ª behind observation orifice 12, is a hole 110, through which projects the stop or hooked end 111 of hook-shaped detent 112, extending up from a hinge-rod 113, journaled in bearings 114. An operating arm 115 projects from hinge-rod 113, and is pivotally connected with one end of a link 116, the other end of

which is in turn pivotally connected with the upper end of an arm 117, projecting upwardly from a pin 118, on bracket 17, on which pin the arm 117 is pivoted. A rod 119 is also pivoted on pin 118, and projects toward the guide-rods 62, so as to be actuated by the trip-pin 120 of weight 60, when the latter moves up or down on said guide-rods. The rear end of the pivoted rod 119 has a lateral projection 121, provided with a side finger 122, which normally engages the pivoted arm 117.

As the cord 63 becomes alternately slack and taut during the operation of the apparatus, I provide a take-up for the slack, consisting of a cord 123, having a weight 124 at its lower end, and a ring or eye 124^a at its upper end, said cord 123 being guided over a pulley 125 at the back of the casing. The cord 63 passes through ring or eye 124^a.

When one desires to examine the pictures on exhibition, he shoves a coin into the orifice or mouth 9 of the chute, whereupon such coin falls and comes in contact with the projecting end of lever 78^a, depressing it, and throwing the detent 80 out of engagement with the hook 81. It then comes to a stand on the movable stop 111, and can be seen through the observation orifice 12. Immediately the detent 80 and hook 81 are disengaged, shaft 83 is permitted to rock downwardly, thus causing its clutch-arm 87 to throw the clutch 38 into engagement with the head 40 of shaft 35, and bringing the teeth of pinion 41 in engagement with the teeth of pinion 42. The same movement of the rock-shaft 83 permits the weight of the rod 88 and the arms 90, 93 to rock the shaft 91 downwardly, and bring the pawl 94 into engagement with the pinion 41. Before these engagements of parts were effected the crank 44 could be turned in either direction without operating any of the parts. Now, the crank is turned in the direction permitted, thus winding the cord 45 off the grooved clock-winding wheel 46, and onto its other wheel 36. This movement winds the cord 57 upon the grooved wheel 56, on clock-winding shaft 47, and elevates the weight 60, and, at the same time, unwinds cord 63 off the grooved wheel 64, loose on shaft 25, onto the wheel 37 fixed on shaft 35, thus winding cord 66 upon wheel 65, secured to wheel 64, and elevating the weight 69. The wheels 64 and 65 as now turned, do not revolve band-operating shaft 25, for the pawl 71 simply rides over the teeth of ratchet 70, without taking into them.

As soon as the weight 60 comes in contact with slide 86, it moves it up and raises the arm 82 of shaft 83, thus causing the clutch to be disengaged from head 40, and again bringing the hook 81 into engagement with the detent 80, ready to be disengaged by another coin. The alarm is at the same time sounded, and the pawl 94 disengaged from pinion 41. Pinions 41 and 42 being now disengaged, a person can behold the various pictures through the stereoscope 7, as the weight 69 will turn the endless band through the medium of wheel 65, and the weight 60 will operate the clock mechanism 48, through the medium of wheel 56. A picture will pause before the observer during each revolution of the wheel 49 of the clock mechanism, and each time the trip-pin 50 comes against the trigger 51, the catch 53 is released from one stop-pin 55 on band-wheel 26, and the endless band permitted to move and shift the pictures until the next pin 55 is engaged by catch 53, and so on.

Just as the weight 60 is reaching its lowermost position, it strikes the L-shaped arm 107, and brings the catch 108 against the lug 109 of the endless band, and prevents its further movement. The trip-pin 120 of said weight 60, also strikes the pivoted rod 119, causing the finger 122 to engage pivoted arm 117 and operate the detent 112 so as to withdraw the stop or hooked end 111 thereof from under the coin thereon, and permit it to fall into a money receptacle.

When the apparatus has run down, it is ready to be again wound up, which, however, cannot be done until another coin is deposited.

Having fully described my invention, what I claim is—

1. In a coin-controlled apparatus, the combination of a coin-actuated lever, main winding shaft, a clutch adapted to connect with said shaft, a crank-operated pinion, a movable pinion controlled by said clutch, whereby said pinions are adapted to be brought into engagement, and mechanism released by the fall of a coin on said lever, whereby the clutch is operated to connect with said shaft, substantially as set forth.

2. In a coin-controlled apparatus, the combination of a coin actuated lever, main-winding shaft, a clutch adapted to connect with said shaft, a crank operated pinion, a pinion carried by said clutch to bring it into engagement with the first mentioned pinion, and mechanism provided with an arm for operating said clutch, said mechanism having separable connection with said lever, substantially as set forth.

3. In a coin-controlled apparatus, the combination of a coin-actuated lever, a main-winding shaft, a movable pinion on said shaft, adapted to be connected therewith, mechanism controlled by said lever for moving the pinion, and a crank-operated pinion with which said movable pinion may intermesh, whereby the shaft is permitted to be wound only when a coin is deposited, substantially as set forth.

4. In a coin-controlled apparatus, the combination with a main-winding shaft, clock mechanism and its operating weight, of a coin-actuated lever, mechanism released by the fall of a coin on said lever, to permit said shaft to be wound, and a slide connected with the latter mechanism, and adapted to

be engaged by said weight so as to again connect said coin-released mechanism with said lever, substantially as set forth.

5. In a coin-controlled apparatus, the combination with a main winding shaft, clock mechanism and its operating weight, of a coin-actuated lever, mechanism adapted to be released by said lever to permit the shaft to be wound, a slide connected with the latter mechanism, and adapted to be engaged by said weight so as to again connect said coin released lever, and an alarm mechanism actuated by said slide, substantially as set forth.

6. In a coin-controlled apparatus, the combination with a coin actuated lever, a main winding shaft, a movable pinion on said shaft, adapted to be connected therewith, mechanism controlled by said lever for moving the pinion, and a crank operated pinion with which said movable pinion may intermesh, of a clock mechanism and its operating weight, a pawl for engaging the movable pinion, and mechanism actuated by said weight for throwing said pawl and pinion out of engagement substantially as set forth.

7. In a coin-controlled apparatus, the combination with a main winding-shaft, a coin-actuated lever, mechanism adapted to be released by the said lever to permit said shaft to be wound, an endless band for carrying pictures, its supporting wheels, stop-pins on one of the said wheels, and a catch actuated by clock mechanism for engaging said pins and controlling the movement of the band, substantially as described.

8. In a coin-controlled apparatus, the combination with a main winding-shaft, a coin-actuated lever, mechanism released by the said lever to permit said shaft to be wound, an endless band for carrying pictures, its supporting wheels, stop-pins on one of the said wheels, of clock mechanism having a wheel provided with a trip-pin and a catch provided with a trigger adapted to be engaged by said trip-pin for releasing the catch from said stop pins, substantially as described.

9. In a coin-controlled apparatus, the combination with a main winding-shaft, a coin-actuated lever, mechanism released by the said lever to permit said shaft to be wound, an endless band for carrying pictures, its supporting wheel, stop-pins on one of the said wheels, of clock mechanism, a catch actuated by the latter for engaging said pins and controlling the forward movement of the band, and a detent for engaging said pins to prevent backward movement of the band, substantially as set forth.

10. In a coin-controlled apparatus, the combination with a main winding-shaft, a coin-actuated lever, mechanism adapted to be released by the said lever to permit said shaft to be wound, an endless band for carrying pictures, and provided with a lug, of a shaft provided with a catch and an arm, and a device for engaging said arm so as to throw the catch in contact with said lug, substantially as and for the purpose described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM REEVES.

Witnesses:
FRED C. EARLE,
LILLIAN D. KELSEY.