

(No Model.)

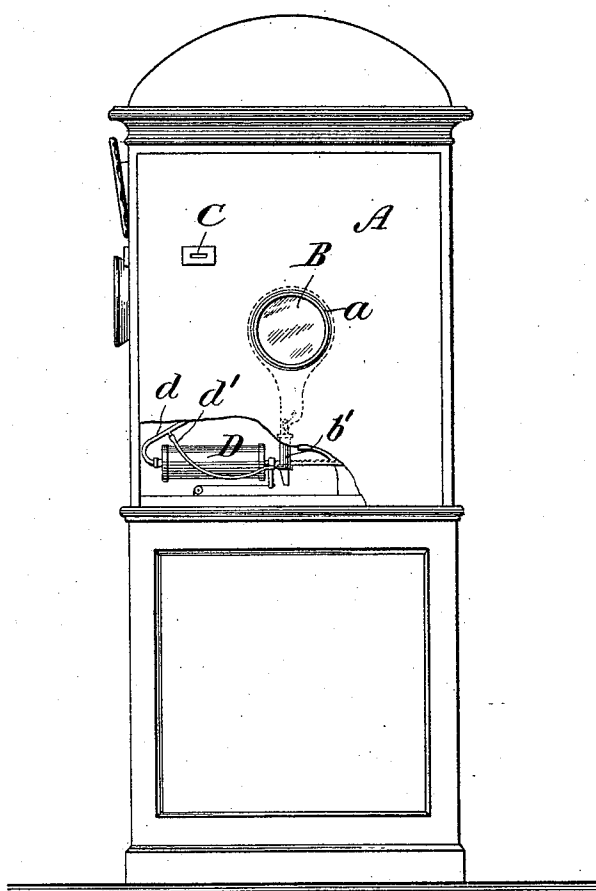
2 Sheets—Sheet 1.

R. LO FORTE.
AUTOMATIC FLUID PRESSURE MACHINE.

No. 575,722.

Patented Jan. 26, 1897.

Fig. 1,



WITNESSES:

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UNITED STATES PATENT OFFICE.

REMIGIO LO FORTE, OF NEW YORK, N. Y., ASSIGNOR TO THE AUTOMATIC PHOTOGRAPH MACHINE COMPANY, OF WEST VIRGINIA.

AUTOMATIC FLUID-PRESSURE MACHINE.

SPECIFICATION forming part of Letters Patent No. 575,722, dated January 26, 1897.

Application filed January 23, 1896. Serial No. 576,480. (No model.)

To all whom it may concern:

Be it known that I, REMIGIO LO FORTE, a citizen of the United States, and a resident of New York, county and State of New York, have invented new and useful Improvements in Automatic Fluid-Pressure Machines, of which the following is a full, clear, and exact description.

This invention relates to that class of machines known as "slot-machines," which are set in motion by the weight of a coin deposited on one end of a lever.

The object of my invention is to furnish improved means by which the contents of machines of this class may be exposed to the view of an observer through the medium of a coin deposited in a specially-provided slot and impinging on a second lever unconnected with the main coin-lever, by which the machine itself is actuated.

A further object of my present invention is to accomplish this end by more simple and compact apparatus than that heretofore devised for the purpose of which I have knowledge.

My invention may be carried out by automatically uncovering, by means of the force used to operate the machine, an aperture in the case of the machine through which an observer may view the progress of the various mechanical operations performed therein and by furnishing artificial illumination for the interior of the casing when necessary.

My invention further relates to those machines of the class described which utilize a fluid under pressure to actuate the motor by which the various portions of the machine are operated. With such a source of power always at hand it becomes convenient and desirable to use the same in operating my improved mechanism, which I have accordingly adapted to the requirements of fluid-pressure.

My invention is illustrated in the accompanying drawings, in which—

Figure 1 represents an ordinary coin-controlled machine; Fig. 2, a side elevation of my improved apparatus, and Fig. 3 an end elevation of the same.

Similar letters refer to similar parts in each figure.

Referring to the drawings by letter, A represents a side entrance or door opening into that part of the machine's casing in which the operating mechanism is situated. This door, forming the side of the machine's casing, is hinged to the main frame at *a' a'* and is provided with a circular aperture *a*, normally closed to the view of an observer by the disk or shutter B. A part of the lower portion of the door A is broken away, (see Fig. 1,) showing the motor-cylinder D, to which fluid under pressure is supplied by main pipe *d*. A branch pipe *d'*, preferably made in part of rubber, connects the main pipe *d* with the shutter-operating cylinder *b'*. The fluid under pressure may be derived from any common source, and is free to pass to cylinder *b'* at all times when it is admitted to the motor-cylinder D. The further mechanism of the main apparatus is not shown, being unnecessary to a full understanding of my present improvement, which is of course applicable to any fluid-operated coin-actuated apparatus.

C represents the coin-chute, by which a coin may fall upon the long end of coin-lever *c*. The lower narrow prolongation of the disk B carries the cylinder *b'*, below which projects the toe *b³*, to one side of which the pawl *c'* is pivoted at *c⁴*. The coin-lever *c* is pivoted at *c⁵* and is provided with the counterbalance *c³* and the pin *c²*.

The cylinder *b'* contains an air-tight piston, (not shown,) to which is attached the piston-rod *b⁴*, pivotally secured at its upper end to the finger *b⁵*, the latter being rigidly attached to the shutter-pivot *b*. The cylinder *b'* carries contact-piece *b²*. *i* is the corresponding contact in the portion of an electric circuit *i² i²*, attached to the door A near its lower hinge in such a manner that the swinging of the door on its hinges need not tend to strain or break the wire or its fastenings.

The purpose of the electric circuit, which passes into the case at any convenient point, is to illuminate lamps within the case when the interior of the same is normally darkened.

Such illumination is not, however, necessary to my improved apparatus, but is simply a preferred form of lighting the interior of the machine-casing when desired or necessary.

- 5 The operation is as follows: A coin deposited in slot C falls upon the long end of lever c, tilting the same to the position shown in dotted lines and rolling thence into a receptacle (not shown) of any approved form, the coin-lever immediately returning to its normal position by reason of the weight of its counterbalance c³. The tilting of the coin-lever causes the pin c² to be moved to a point below the end of the toe b³. During each full
10 operation of the main apparatus fluid-pressure is admitted to the main supply-pipe d by a valve (not herein shown) and passes from thence to branch pipe d' and to the under side of the piston in cylinder b'. It will accordingly be seen that when the pin c² releases toe b³ if fluid-pressure is at the time upon said piston it will tend to press same upward; but as such piston movement is impossible, the finger b⁵ being immovable, the fluid-pressure
15 will react upon the lower head of cylinder b', and as the latter is free to swing to the left on pivot b it will be moved in that direction until the contact-piece b² impinges on contact i, when the movement will be checked. As the cylinder b' is secured to the shutter-shank the movement above described will rotate the shutter to the right on pivot b, clearing the opening a and affording a view of the interior of the case.
20 It will be seen from the foregoing and by reference to Fig. 2 of the drawings that the purpose of the finger b⁵ is to remove the direct thrust of piston-rod of cylinder b' from the fulcrum or pivot b, transferring such line of thrust to a point on the pro-
25 porside of pivot b to cause the desired reactionary movement of the cylinder and shutter.

- Upon the completion of one full operation of the main apparatus the fluid-pressure is released from pipes d and d' and cylinder b' by means of valves, (not shown,) when the weight of the parts below pivot b being greater than that portion of the shutter above the shutter and its connections will be returned
30 by gravity to their normal position, the stop b⁷ on the upper face of the shutter resting against the block b⁶, secured to the door or casing of the machine. In accomplishing this movement the sloping side of toe b³ strikes the pin c², slightly depressing the long end of the coin-lever until the point of the toe has passed over said pin, when the coin-lever again resumes its normal position, as shown in drawings.

- 35 It will be seen that should a coin be dropped upon lever c at a time when fluid-pressure had not been admitted to cylinder b' the resulting depression of the coin-lever would allow pawl c' to fall by its own weight to a perpendicular position, as shown in dotted lines, Fig.

2, in which position it will hold the coin-lever to the dotted-line position and permit of the above-described shutter-movement as soon as fluid-pressure enters cylinder b', pin c² being thus held below the end of toe b³. The object
40 of this detail is to enable a would-be observer to obtain the desired view through aperture a, even should he deposit his coin in advance of the initial movement of the main machine, it being understood that fluid-pressure is withheld from cylinder b', except when the main apparatus is in actual operation. When the shutter returns to its normal position, upon the passage of toe b³ over pin c² the free end of pawl c' will be deflected to the left by pin c², as shown in full lines, Fig. 2, in which normal position it will remain until the coin-lever is again tilted.

Should it be desired to illuminate the interior of the casing by electricity, a circuit may be arranged to be completed at contacts b² and i and will be so held while the shutter is removed from aperture a, contact being broken when the parts return to normal position. The electricity may of course be derived from
45 any common source, and one or more lamps of well-known form may be placed in any suitable position and included in the circuit, a portion of which is represented at i² i³, Fig. 2.

It is evident that my improved mechanism may be placed at any convenient point in the casing of the machine and that an indefinite number of observation-ports may be provided and guarded by my improved apparatus, either upon the door of the machine or elsewhere, without departing from the spirit of my invention.

Having thus described my invention, I claim—

1. In a fluid-pressure, coin-controlled machine, the combination of a motor for the machine, a casing, an opening in the casing, a shutter for said opening, a motor for the shutter carried thereon, a coin-lever governing said shutter and provided with a pin, a toe or
50 projection formed integral with the shutter, and a pawl pivotally secured to said toe and engaging with said pin, substantially as described.

2. In a fluid-pressure, coin-actuated machine, the combination of a casing, an opening therein, a shutter pivotally secured to the casing and carrying a fluid-pressure motor thereon, a coin-lever governing said shutter, and a flexible supply-pipe for the motor, substantially as described.

3. In a fluid-pressure, coin-actuated machine, the combination of a shutter, a coin-actuated lever for the shutter provided with a projection, and a finger for said projection pivotally secured to said shutter and adapted to retain the lever in its release position, substantially as described.

4. In a fluid-pressure, coin-actuated machine, the combination of a casing, an obser-
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5 vation-aperture therein, a shutter, a fluid-pressure motor secured to said shutter, a coin-actuated detent for the shutter, and electric contacts governed by said shutter, substantially as described.

10 5. In a fluid-pressure, coin-actuated machine, the combination of the shutter B, the toe b^3 formed integral with the shank of said shutter, the coin-lever c governing said shutter, the pawl c' pivotally secured to said toe,

and the pin c^2 engaging with said pawl, substantially as described.

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

REMIGIO LO FORTE.

Witnesses:

WM. H. CLARKE,

W. LAIRD GOLDSBOROUGH.