

No. 768,258.

PATENTED AUG. 23, 1904.

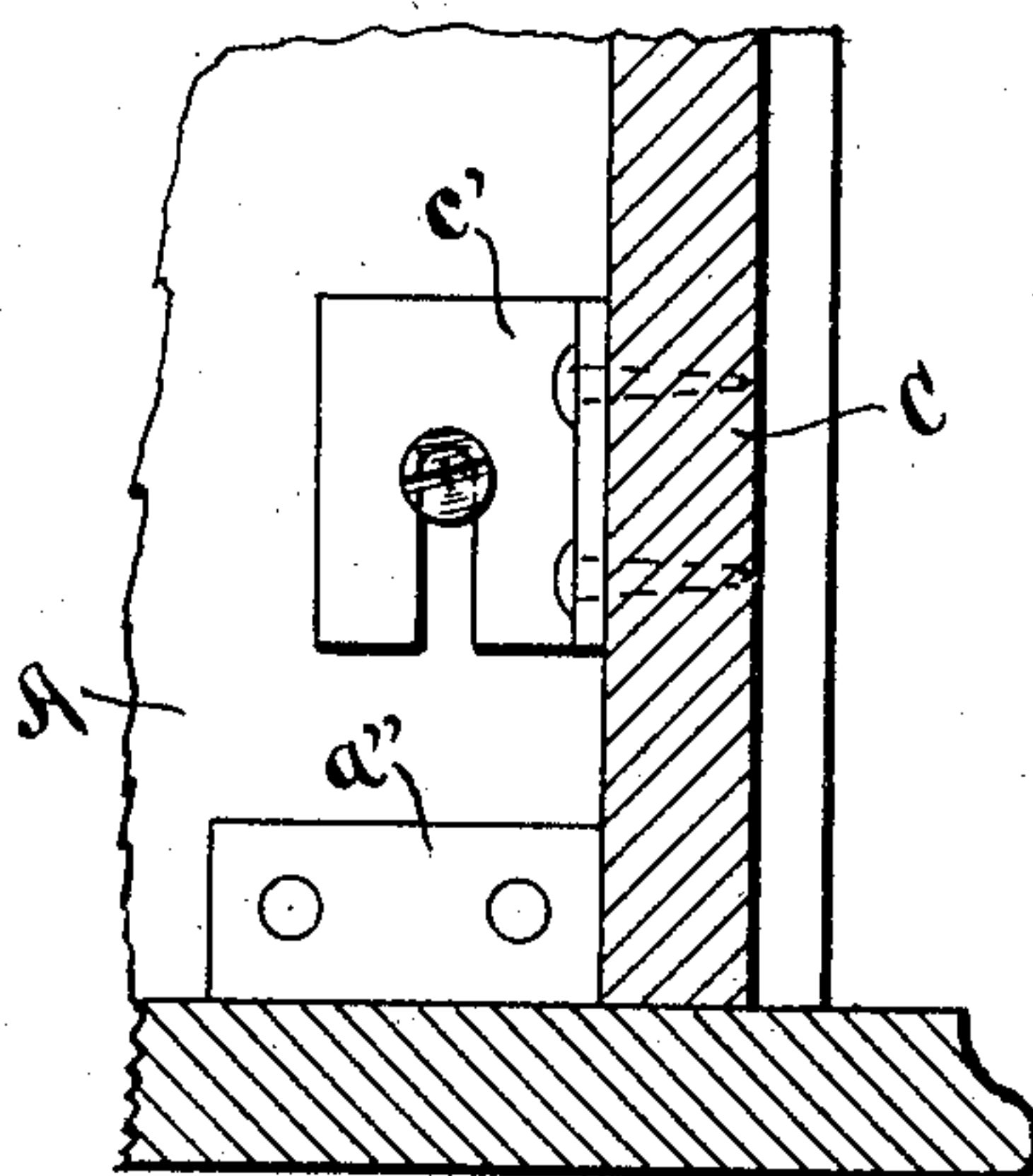
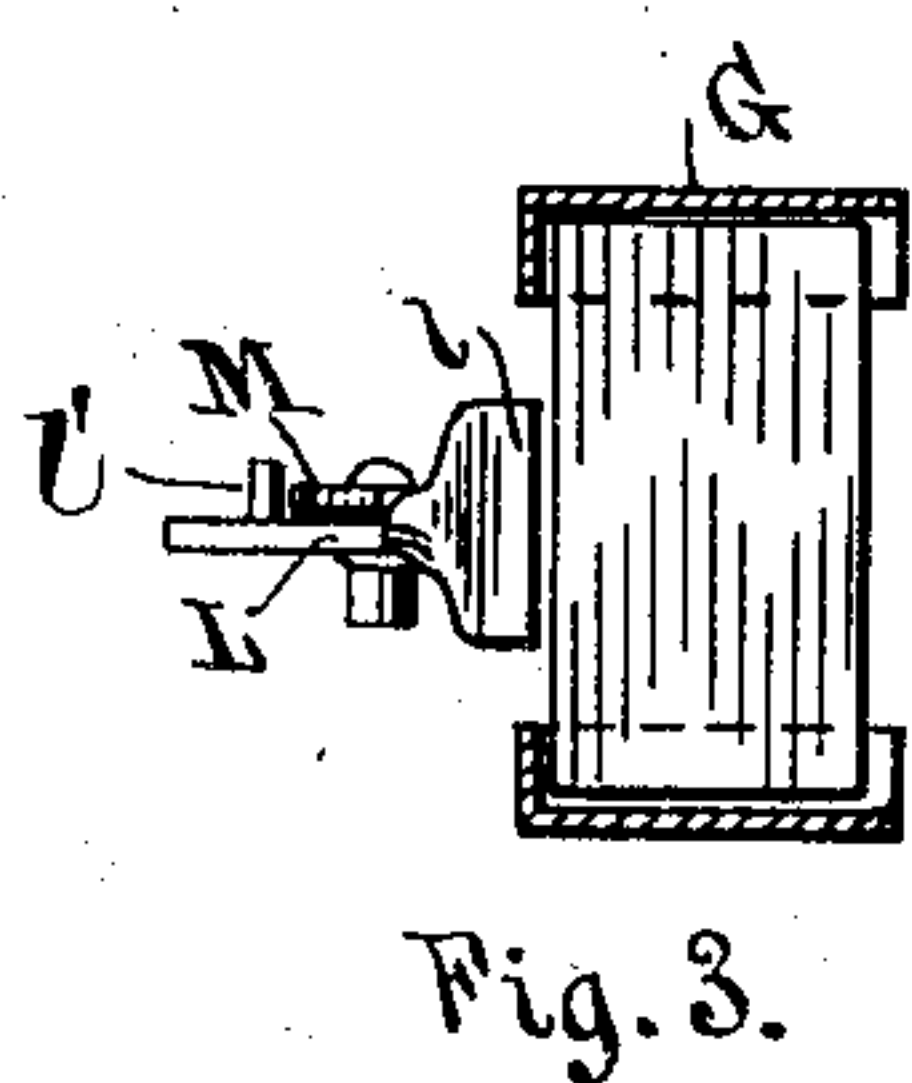
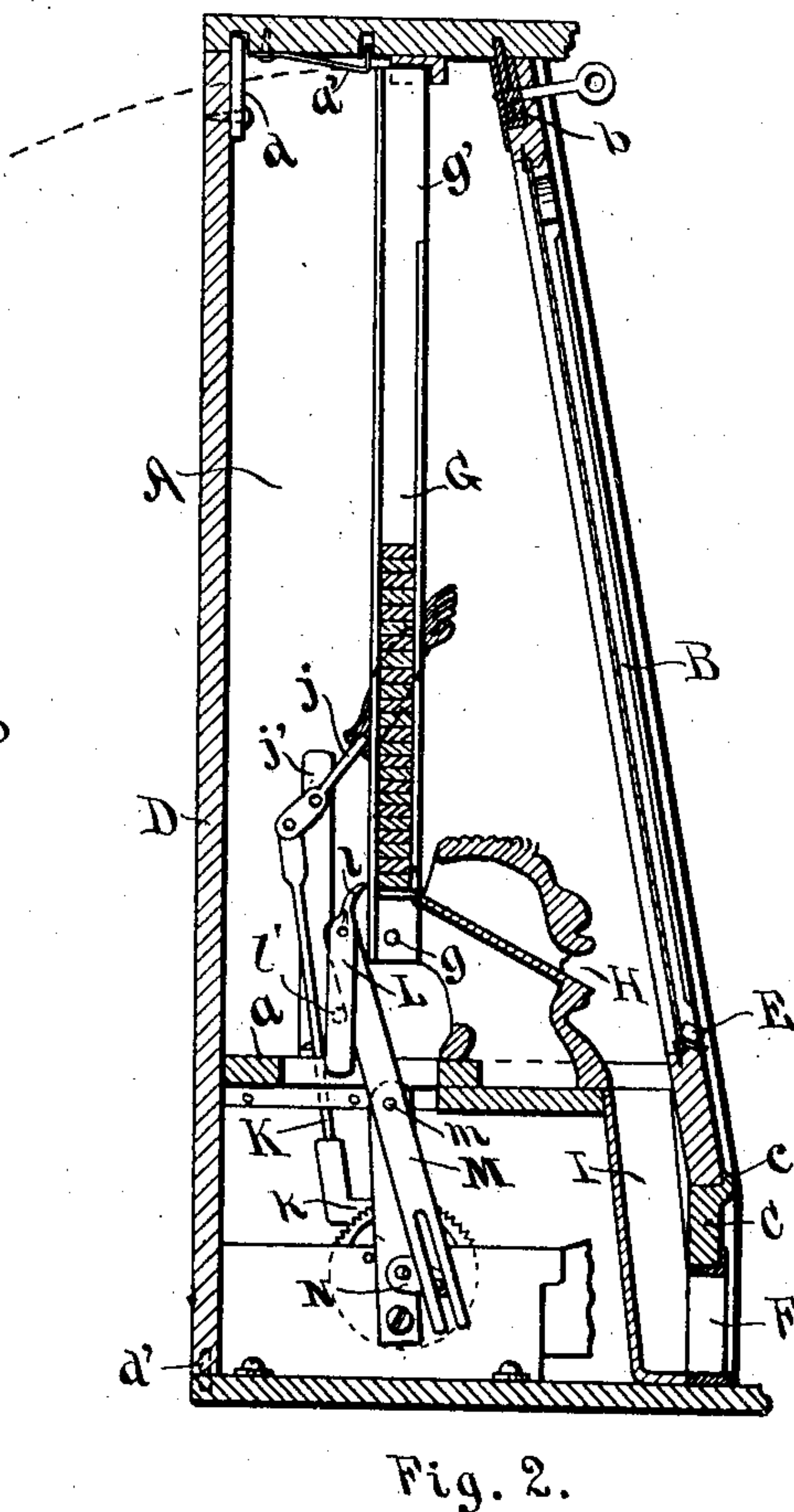
A. Q. ALLIS.

COIN CONTROLLED VENDING MACHINE.

APPLICATION FILED JUNE 9, 1902. RENEWED MAY 5, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES:

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M. E. Verbeck

INVENTOR

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BY

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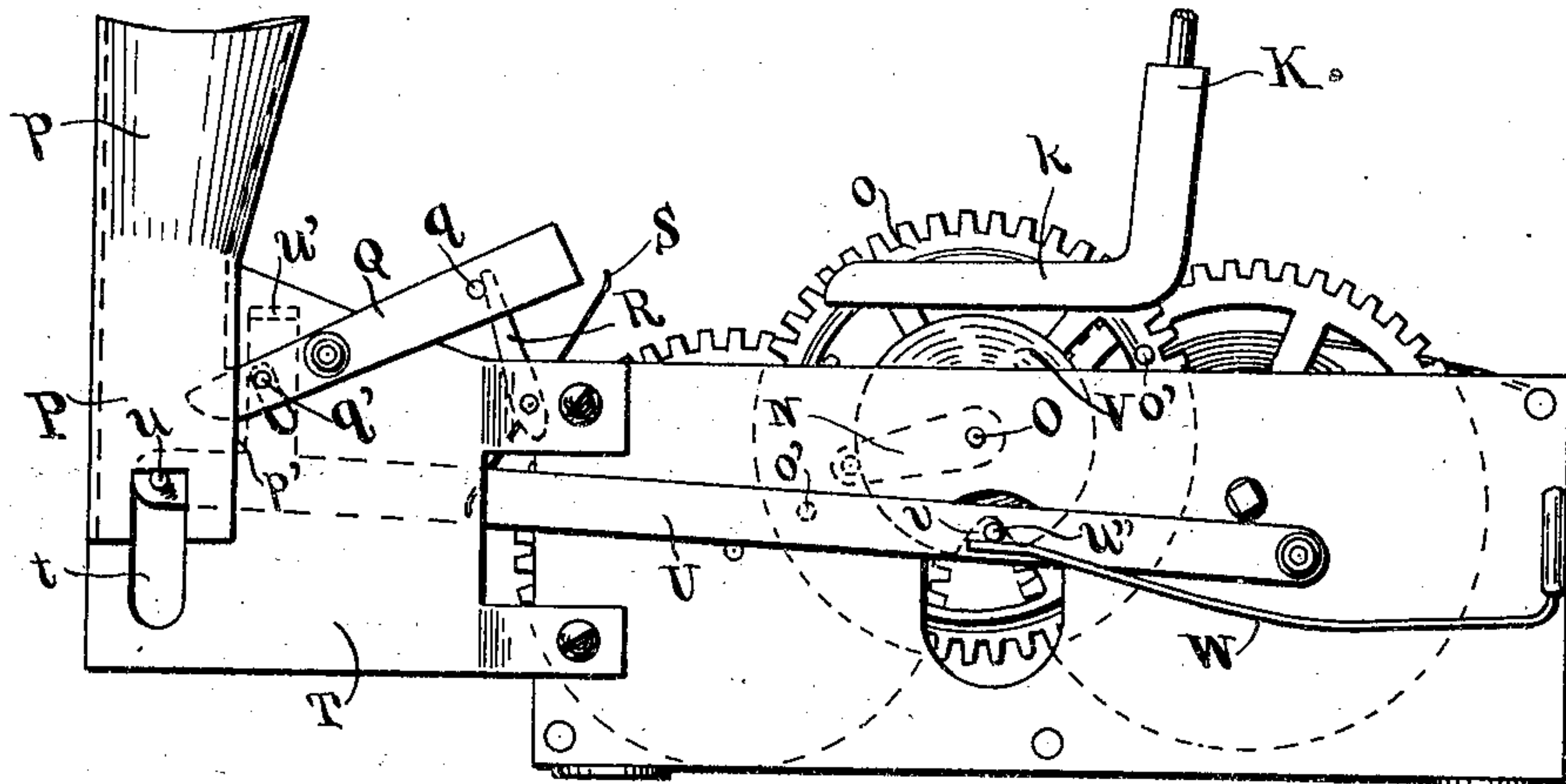


Fig. 5.

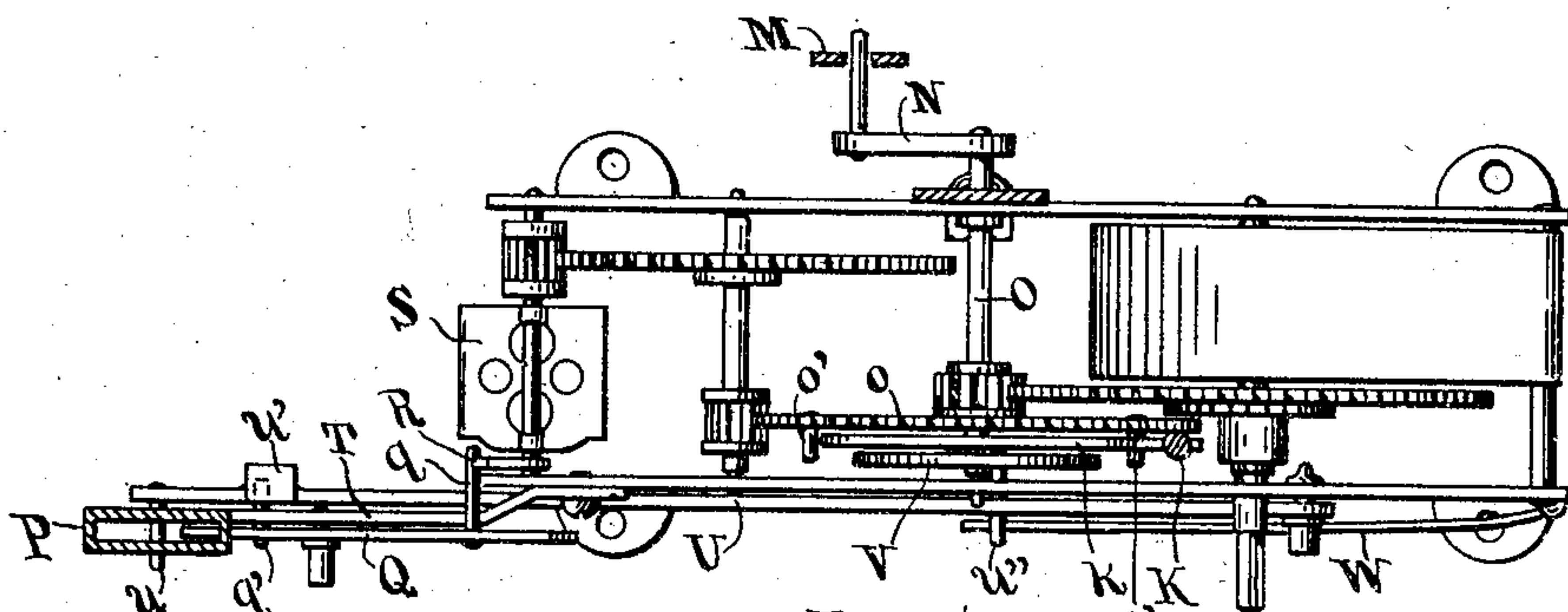


Fig. 6.

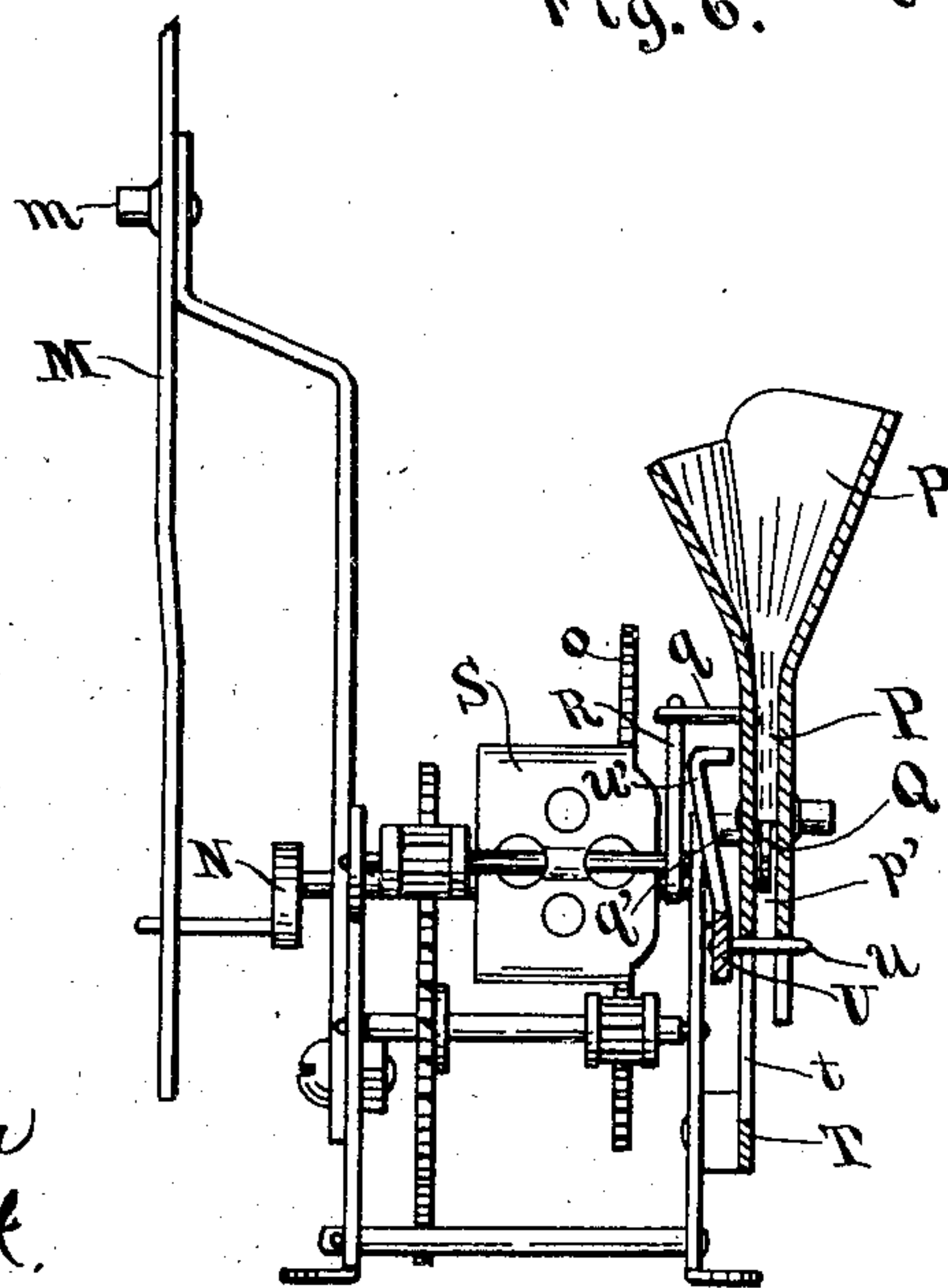


Fig. 7.

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UNITED STATES PATENT OFFICE.

ABRAM Q. ALLIS, OF PENN YAN, NEW YORK.

COIN-CONTROLLED VENDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 768,258, dated August 23, 1904.

Application filed June 9, 1902. Renewed May 5, 1904. Serial No. 206,580. (No model.)

To all whom it may concern:

Be it known that I, ABRAM Q. ALLIS, a citizen of the United States, residing at Penn Yan, in the county of Yates and State of New York, have invented certain new and useful Improvements in Coin-Controlled Vending-Machines, of which the following is a specification.

My invention relates to improvements in that class of vending-machines from which gum, candy, and other commodities in small packages are dispensed upon the deposit of a coin in the machine; and it has to do more particularly with machines in which a clockwork-motor is set in motion by the deposit of the coin to actuate the package-ejector and incidentally to impart motion to an automaton positioned within the containing-case of the machine.

The objects of my invention are to provide improvements in the devices which are actuated by the coin to set the clockwork in motion, to improve the ejecting device, to provide a novel arrangement of the automaton figure, and, finally, to provide improvements in various other details of construction of the machine and its case, as will appear more fully in the following description, and be pointed out particularly in the claims.

I attain the objects of my invention by means of the construction, arrangement, and combination of parts, as illustrated in the accompanying drawings, in which—

Figure 1 represents a front elevation of my complete machine; Fig. 2, a vertical transverse section on the line 2 2 in Fig. 1; Fig. 3, a detail showing in plan view the ejector; Fig. 4, a detail in section showing the manner of securing the front panel of the case in place; and Figs. 5, 6, and 7, a side elevation, plan view, and front elevation, respectively, of the clockwork-motor and coin-actuated releasing devices.

Like letters of reference designate like parts throughout the several views.

A represents the case for the machine, consisting of a rectangular box of ornamental design having an inclined front, as shown in Fig. 2. This front is provided with a glass panel B in order that the interior of the up-

per compartment of the case may be exposed to view. Below the panel B is a closed panel C, and both panels are made removable for the purpose of getting at the compartments of the case. The panel C is a short upright section and is provided with two inturned plates c' , one upon each side, downwardly slotted to receive screws or pins projecting from the sides of the case A, and the lower part of the panel C abuts against the stops a'' , so that when this panel is set in place it will be firmly secured in the manner indicated in Fig. 4. Along the top outer edge of this panel is an upwardly-projecting beading c , which forms a ledge to receive the lower edge of the panel B, and the upper end of this latter panel is provided with a lock at b , whereby when the two panels are placed in position they are securely locked against removal except by the person holding the key. At the back of the case I also provide a removable panel D, which is held in at the bottom by pins d' , which project upward from the bottom of the case, so as to engage sockets provided in the bottom edge of the panel. At the top of the panel is a button, which is thrown up into a socket in the top of the case to secure the panel in place, this locking of the panel into the case being done when the panel B is removed. Instead of the button d I may provide this panel with a lock similar to the lock in panel B in order that the back panel may be removed without disturbing the front panels, if so desired.

The case A is divided into upper and lower compartments by the horizontal partition a , and in the upper compartment so formed is located the magazine G, the lower end of which is secured to the back of a figure-head H, the head in the present instance representing a negro, and the packages in the magazine pass from the bottom thereof into a chute which passes through the head, so that each package as it is thrown out passes out of the mouth of the head H, whence it drops by way of the chute I in the lower compartment to the delivery-opening F in the lower panel C. I preferably pivot the lower end of magazine G to the head H, as indicated at g , and secure the upper end of the magazine by means of a

stop and a spring-catch a' , attached to the top of case A. By this arrangement of the magazine I provide for tilting the upper end of it out from the case when the back D is removed, whereby the magazine may be more readily charged with the packages. The upper portion of the front guides of the magazine, however, may be cut away, as at g' , so that the packages may be inserted from the front without so tilting the magazine. This cutting away of the front guides also facilitates the insertion of the packages when the magazine is tilted out backward. At one side of the magazine is an automaton figure J, which in the present instance represents a negro and which when the motor is set in motion is made to take off its hat and at the same time strike the head H at the moment when the package is expelled from the mouth thereof. The arms of this automaton are carried upon levers j , pivoted upon the upright j'' , fastened to the partition a , and an operating-bar K passes from the levers j through a guideway in the said partition into the lower compartment, where it is provided with a foot k , adapted to be lifted by pins o' , projecting from the side of the gear-wheel o , which forms part of the gear-train of the motor.

The bottom of the magazine is constructed in the usual manner, with side shelves for the packages to rest upon and openings through the front guides equal to or slightly greater than the thickness of one of the packages to permit the passage of the packages one at a time from the magazine as they are acted upon by the ejector. My ejector comprises a pivotal member L, provided with a flattened head I, having a straight edge set parallel to the back sides of the packages, in order that when pushing against a package the ejector will push the package straight forward without permitting it to twist and jam between the sides of the magazine. The portion of the ejector below the pivot acts as a counterweight to hold the ejector in operative position, and a stop is provided, in this instance a pin l' , projecting from the lower portion of the counterweight to engage the bar M on the forward stroke of said bar, whereby the swing of the ejector on its pivot is limited to one direction only. The ejector is pivoted upon the top end of an oscillating bar M, pivoted at m , and provided at the lower end with a slot, which is engaged by a pin on the crank N, which crank is driven by the shaft O of the motor. When the shaft is rotated, the upper end of the bar M will be thrown forward, carrying with it the ejector L, which forces a package out from the magazine, and upon the return stroke of the crank the blade l of the ejector will be tilted forward, so as to pass back freely beneath the next package, which has descended in the magazine to take the place of the one ejected. As soon as the ejector has passed

back from beneath the magazine it will again assume its operative position, all of which will be readily understood from an inspection of Figs. 2 and 3.

In the bottom compartment of case A is located the clockwork-motor and the coin-controlled releasing devices. This motor comprises any of the usual forms of spring-propelled gear-trains, the speed of the motor being governed by the usual fan S. Projecting forward from the motor-frame is a plate T, carrying a coin-chute P, provided at the top with a funnel-shaped inlet p , into which leads a chute from the slot E on the panel B. By reason of this funnel-shaped inlet the coin in its descent from the slot to the chute P is guided so as to enter it properly into said chute. As the coin descends it strikes the projecting end of the pivotal trigger Q, throwing the rear end of said trigger upward and releasing the detent R on the fan S, which detent is engaged by a pin q , projecting from the side of the trigger. The coin is then brought to a stop by the pin u , which projects from a bar U, so as to intercept the passage through the chute, and while so held the coin holds the trigger in elevated position, thereby releasing the fan and setting the motor in motion. As the shaft O of the motor revolves it imparts motion to a cam-disk V, provided with an inclined notch at v , into which projects a pin u'' from the bar U. As the cam turns the inclined surface of the notch v throws the pin u'' downward, thereby throwing the bar U down and releasing the coin from the chute P. As the bar descends the upwardly-projecting arm u' engages a pin q' on the trigger Q and holds the trigger down during one complete revolution of the shaft O. As soon as the disk V, carried by this shaft O, has made its revolution, the notch v will permit the pin u'' to be thrown upward by the spring W, thereby allowing the hold-down-bar U to rise and release the trigger Q. The pin q then drops into position to be engaged by the detent R, and the fan S is stopped and the motor held stationary until another coin has been placed in the machine. As the shaft O rotates it imparts motion to the crank N, which imparts one forward and backward movement to the ejector. At the same time the pins o' on the gear o , which is also carried by the shaft O, engage the foot k on the bar K, raising and lowering the bar, and thereby causing the figure J to bow and strike the head H. As there are two pins o' , this motion will be imparted twice to the figure J during the one revolution, and it will be evident that by using more or less of these pins more or less of these motions may be imparted to the figure.

Having thus described the several parts of my vending-machine and the motions imparted thereto when a coin has been dropped into

the slot and without limiting myself to the precise details of construction as illustrated, what I claim as my invention, and desire to secure by Letters Patent, is—

5 1. In a vending-machine, the combination of a package-magazine, an ejector actuated by a clockwork-motor, a governing-fan on the motor, a pivotal trigger, a detent on the fan engaged thereby, a coin-chute into which one
10 end of the trigger projects, a holddown-bar pivoted at one side of the motor and adapted to engage and hold the trigger down when the bar is depressed, a notched cam-disk on one of the shafts of the motor, a pin project-
15 ing from said bar beneath the cam-disk, and means for holding said pin against the rim of the cam-disk.

2. In a vending-machine, the combination of a package-magazine, an ejector actuated by

a clockwork-motor, a governing-fan on the 20 motor, a pivotal trigger, a detent on the fan engaged thereby, a coin-chute, into which one end of the trigger projects, a holddown-bar pivoted at one side of the motor, an arm pro-
jecting upward from said bar adapted to en- 25 gage and hold the trigger down when the bar is depressed, a pin on the outer end of said bar intercepting the passage through the chute, a notched cam-disk on one of the shafts of the motor, a pin projecting from said bar 30 beneath the cam-disk, and means for holding said pin against the rim of the cam-disk.

In testimony whereof I have affixed my signature in presence of two witnesses.

ABRAM Q. ALLIS.

Witnesses:

LLEWELLYN JOLLEY,
FRED. N. SWARTS.