

W. G. GILMORE.
 APPARATUS FOR ISSUING METAL CHECKS AND THE LIKE.
 APPLICATION FILED NOV. 3, 1911.

1,029,603.

Patented June 18, 1912.

2 SHEETS—SHEET 1.

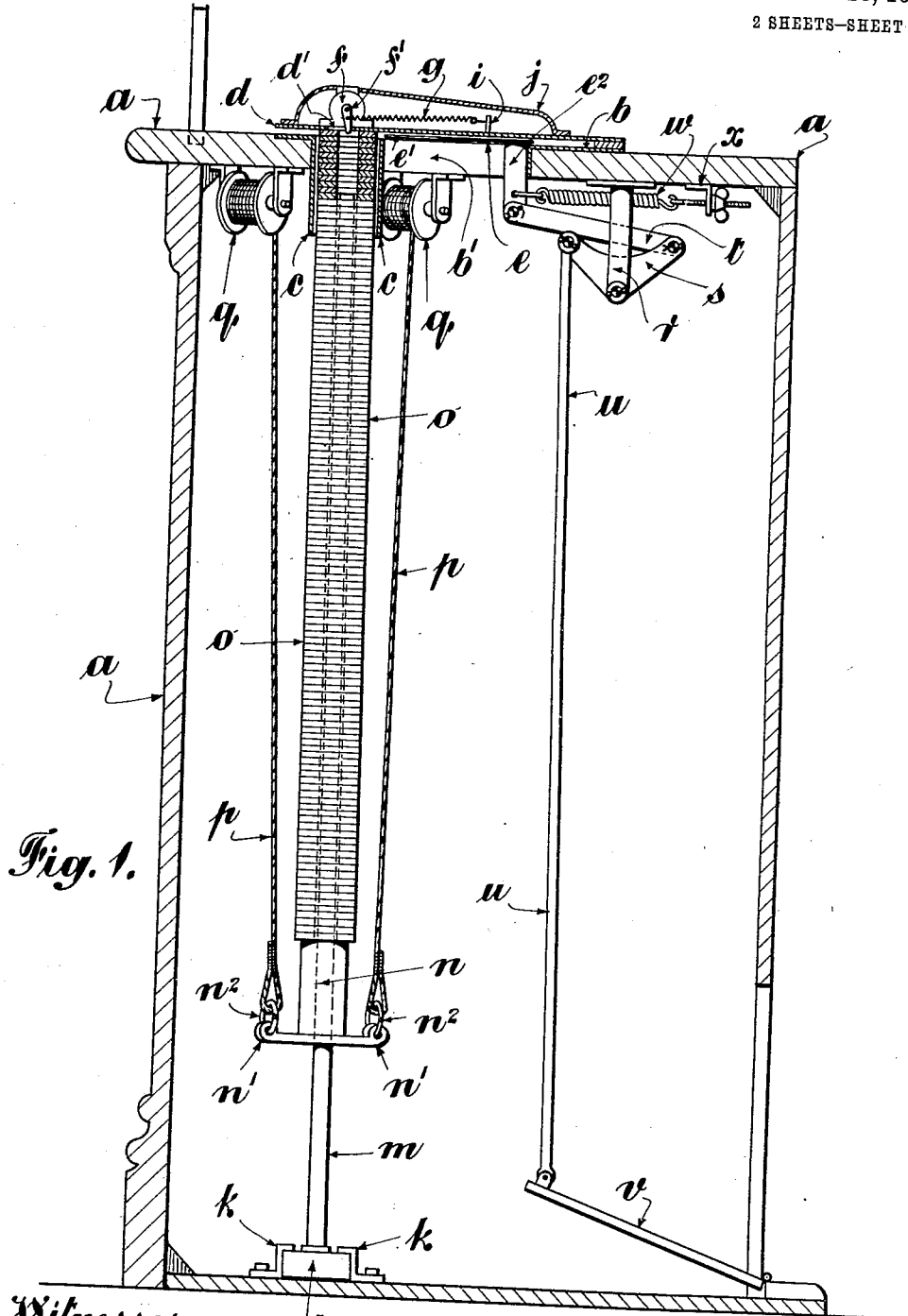


Fig. 1.

Witnesses:-
 John C. Sanders
 John A. Percival

Inventor:
 William George Gilmore
 By his Attorney:- E. M. McLean

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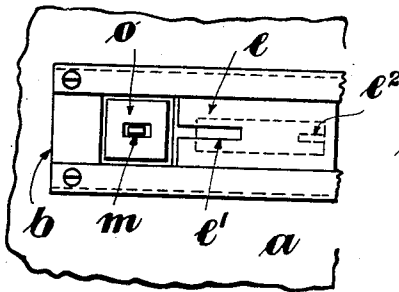


Fig. 2.

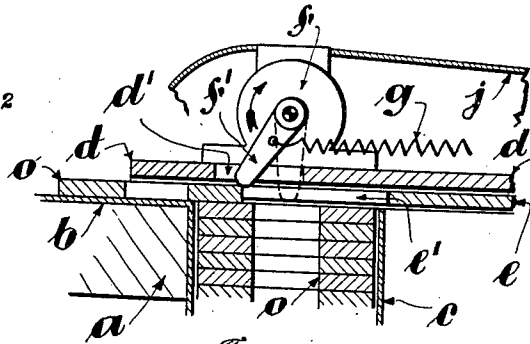


Fig. 4.

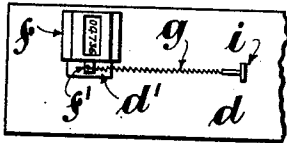


Fig. 3.

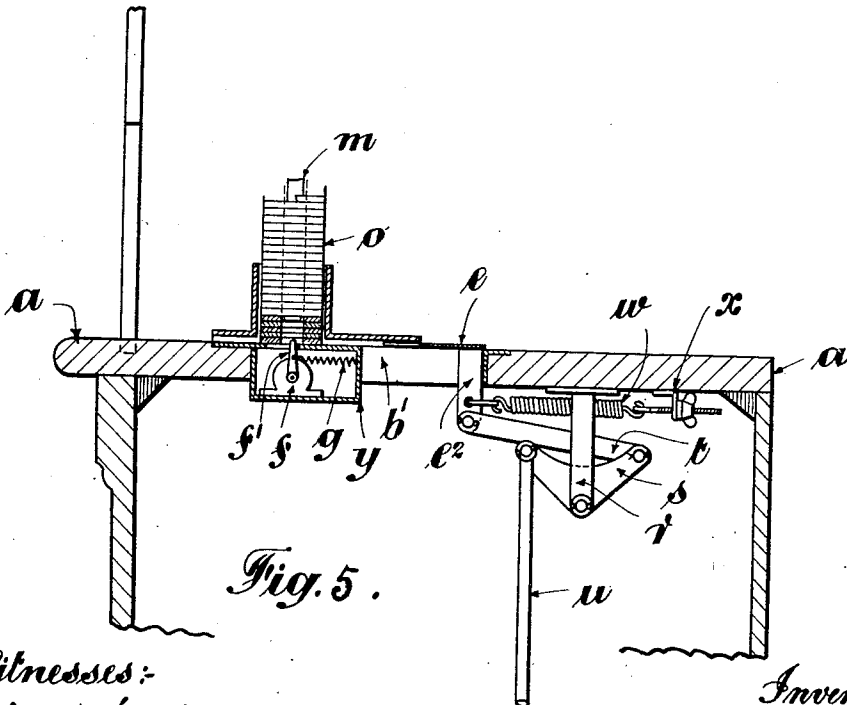


Fig. 5.

Witnesses:

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Inventor:

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UNITED STATES PATENT OFFICE.

WILLIAM GEO. GILMORE, OF STOCKPORT, ENGLAND.

APPARATUS FOR ISSUING METAL CHECKS AND THE LIKE.

1,029,603.

Specification of Letters Patent.

Patented June 18, 1912.

Application filed November 3, 1911. Serial No. 658,337.

To all whom it may concern:

Be it known that I, WILLIAM GEORGE GILMORE, a subject of the King of Great Britain and Ireland, and resident of Stockport, England, have invented certain new and useful Improvements in Apparatus for Issuing Metal Checks and the Like, of which the following is a specification.

These improvements relate to machines as used for issuing metal checks and the like one by one from the pay box of a theater or other like place, and they refer in particular to check-issuing machines of the kind in which a column of the checks is fed upward against a fixed plate and in which the uppermost check is pushed away from the column and delivered on to a pay desk (or down a chute) by means of a sliding member or ejector operated either by hand or foot.

The improvements also refer to check issuing machines in which a counter is used for counting the number of checks issued.

Heretofore, in check-issuing machines of the kind referred to the counter has been operated by the said sliding member or ejector through gearing. With any such arrangement there is a possibility of the checks being delivered without the counter being operated. Moreover, the arrangement is liable to get out of order and is not easily repaired.

The object of this invention is to provide a machine in which a small lever arm on the counter axis shall directly engage a hole in the endmost check of the column while in the column, and in which the said lever arm shall be acted upon directly by the check while being ejected.

A further object is to provide means for returning the lever arm after being moved and released by the endmost check and in such a manner as to cause it to be in position for entering the hole of the next check before the preceding check has been fully ejected and the ejector has made its return movement, thereby rendering it practically impossible for the lever arm to be held in

the advanced position while the next check is moved up and pushed forward.

A further object of the invention is to provide a simple and compact construction of foot-operated machine.

Upon the accompanying drawings, Figure 1 illustrates a side elevation, partly in section of the improved machine. Fig. 2 illustrates a plan of the upper part of the machine with the cover plate and counter removed. Fig. 3 illustrates a plan of the counter and the plate which carries the counter. Fig. 4 illustrates an enlarged side sectional elevation of the upper part of the machine, this view being designed to show the position of a check, the ejector plate, and the counter-operating arm at the moment of ejecting the check and just before the counter-operating arm moves back. Fig. 5 illustrates how the invention may be applied to a machine in which the checks are fed downward.

As shown, the machine is fitted to a pay desk *a* such as is commonly used in theater pay boxes. In such desk is formed an elongated opening and upon and secured by screws or bolts and nuts to the top of the desk and fitting the said opening is a thin metal plate *b*. In such plate is a slot *b'* and from the underside of the plate depends a short tube *c*, which in size and shape is adapted to form the throat in which the upper series of the column of checks shall lie prior to being ejected. Entirely covering the plate *b* and resting on its three raised edges is a further plate *d*, the two plates forming between them a cavity or space for the reception of the slide or ejector *e*. The further plate *d* will preferably be soldered in position.

In the plate *d* is an opening *d'* and over such opening is fitted (soldered) the counter *f*, adapted, by preference, to register up to 99999. Secured to and depending from the actuating spindle of the counter is the small lever arm *f'*, which is of such a length that when vertical it projects downward through the opening *d'* and slightly below the plate

d, see Figs. 1 and 4. By means of a spring *g* and peg *i* and the edge of the plate *d* which acts as a stop, the lever arm *f'* is normally held vertical. Entirely inclosing the peg-spring and counter, except that part of the counter through which the numerals show, is a cover or shield *j*, which is, by preference, soldered to the plate *d*, so that only by unsoldering the cover can it be removed, which thus affords a safeguard against tampering with the counter.

To the floor or other fixed part below the pay desk are secured two angle iron guides *k* between which is slidably fitted a wood or other block *l*. Upon this block rests and is fitted the lower end of a long rod *m* which rod at its upper end extends into the tube *c*. Upon the rod, which is preferably wider in one direction than the other, is loosely threaded a plate or sleeve *n* having arms *n'*. Also loosely threaded upon the rod is a column of checks *o*, each check being formed with a slot of corresponding shape to that of the rod. To the arms *n'* of the sleeve *n*, by means of hooks *n²*, are secured cords *p* which at their other ends are each secured to the periphery of a wide-faced spring drum *q*. Under the tension of the springs within the drums the column of checks is held with the topmost check gently pressing against the underface of the plate *d*, and, as the checks are delivered, the cords *p* wrap upon the drums which are each wide enough to allow for the coiling of the cord.

In the slide or ejector *e* is an open-ended slot *e'* and depending from the underside of the ejector and through the slot *b'* in plate *b* is an arm *e²*. To the underface of the pay desk is secured a further arm or bracket *r* and upon this bracket is pivotally mounted a quadrant lever *s*. One extremity of this lever is connected by a link *t* to the arm *e²* and the other extremity of the lever is connected by a rod *u* to a foot pedal *v*. By means of a spring *w* adjustably secured to the arm *e²* and to a bracket *x*, the slide or ejector *e* is normally held retracted and the foot pedal *v* held raised, as shown.

The working of the parts to deliver a check is as follows:—The operator placing his foot on and pressing down the pedal *v* causes it to pull down the rod *u*, rock the lever *s* about its fulcrum, and, through link *t*, advance the slide *e* against the edge of the uppermost check. The effect of the continued movement of the slide is to push the top check forward and out through the open end of the space between the plates *b*, *d*. As the check passes forward the lever arm *f'* of the counter which has previously been projecting into the slot in the check, is also moved in the direction of the arrow seen in Fig. 4 until the check passes under its free end, when it (the lever arm) remains sta-

tionary until the outer edge of the check passes from beneath it, at which moment the lever arm, losing its support, instantly flies back, under the pull of the spring *g* to its vertical position. At such moment the slide *e* still presses against the check, but, owing to the slot *e'* it offers no obstruction to the lever arm, which is thus free to move back before the slide has completed its forward movement, or, at least before it moves back and before the next check can rise up to take the place of the ejected check. On the slide being fully retracted, which is effected by the spring *w*, the next check of the column rises up and bears against the plate *d*, when the operations may be repeated.

The lever arm will preferably operate the counter on its forward movement, but, if so desired, it may operate it on its return movement. The counter will also preferably be arranged with the numerals readable through the opening in the pay box window, so that the manager or other official may be able to see the numbers without going into the pay box.

The checks may be made of metal, or they may be made of bone or celluloid. They may also be differently shaped or (and) colored to denote their value. Usually the checks will be about $1\frac{1}{2}$ " diameter and the slot in each will be about $\frac{3}{4}$ " long, so that there shall only be a comparatively short distance between the end of the slot and the outer edge of the check, and so also that the lever arm shall be made free to return, after operating the counter, as quickly as possible and before the check is fully ejected.

The checks are placed upon the rod *m* prior to its being introduced into the machine. To recharge the machine with checks the block *l* is removed from the guides *k*, the cords *p* unhooked from the arms of the sleeve *n*, and the rod and sleeve removed from the machine. A fresh rod, fully charged with checks is then placed in the machine, the cords rehooked to the sleeve arms, and the block *l* replaced between the guides *k*.

The working mechanism below the desk *a* will, of course, be inclosed and only accessible by means of a key.

From a consideration of the working of the machine as before described, it should now be seen that one of its important advantages is that it leaves the operator's hands entirely free to take money and give change. A further advantage is that there are comparatively few parts which are all accessible and easy of repair. The main advantage, however, is that the counter lever arm is pocketed in the hole of the endmost check and cannot be moved out without operating the counter, and such lever arm is operated directly by each check as it leaves

the column. Further, the lever arm is moved back ready to be "pocketed" by the next check before the preceding one has been fully ejected, thereby reducing the risks of an inaccurate record to a minimum.

While the invention is chiefly applicable to check-issuing machines in which the column of checks is fed upward, it will be understood that it may be applied to check-issuing machines in which the column of checks is fed downward. Fig. 5 illustrates this application of the invention, the counter *f* being arranged in a box *y* below the desk *a* and the numerals showing through a slot in the desk, while the arm *f'* on the counter axis projects upward and through the opening *b'* in the plate *b* and also into the hole in the lowermost of the column of checks, this latter being fed downward against the plate *d* by gravity. The slide plate *e* is operated in precisely the same manner as the plate *e* in Fig. 1, and a loose weight may be added to feed the checks downward.

In each example of the invention the counter *f* is of the kind which is operated through a ratchet wheel and pawl or free wheel clutch, the arm *f'* having effect on the counter in moving in one direction only.

What I claim is:—

1. In combination in a check-issuing machine, a rod adapted to carry a column of checks, a fixed plate having an opening and against which plate the endmost check of the column of checks presses, a slidable plate or ejector by which the endmost check of the column next the said fixed plate may be ejected, such slidable plate or ejector at that end next the check having an open ended slot, means for operating such slide or ejector to eject the check and return the slide to its normal position, a counter secured to the said fixed plate, a lever arm on the counter axis, the free end of which normally projects through the opening in the plate and into the hole in the endmost check while in the column, the said opening being large enough to allow the arm to be moved to operate the counter, and a spring by which the said arm is normally held against one edge of the said opening and by which, after being moved by the check to operate the counter and released by the check, it is also returned, and caused to again abut against the edge of the opening in the fixed plate ready to project into the hole of the next check in the column as such check is moved forward against the plate, as set forth.

2. In combination, in a check-issuing machine, a rod adapted to carry a column of checks, a fixed desk having an orifice in it through which the checks may pass, a plate secured to the said desk and in which is also an opening, the plate and its opening overlying the said orifice in the desk, a slide or

ejector for ejecting the endmost check of the column of checks, and having an open-ended slot at that end next the check, means for pressing the column of checks toward and the endmost check against the said fixed plate, a counter above and secured to the said fixed plate, a lever arm on the counter axis, the free end of which normally projects through the opening in the plate and into the opening in the endmost check while in the column, and a spring by which the said arm is normally held against one edge of the said opening and by which it is also returned, after being moved by the check to operate the counter and released by the check, and caused to again abut against the edge of the opening in the plate ready to project into the opening of the next check in the column as such check is moved forward against the plate, as set forth.

3. In combination in a check-issuing machine a fixed plate having an opening in it and against which plate the endmost check of the column of checks presses, a slidable plate or ejector for ejecting the checks one by one and said plate having an open-ended slot at that end next the check, a counter secured to the fixed plate, a lever arm on the axis of the counter the free end of which extends through the opening in the fixed plate and into the hole in the endmost check while in the column the said opening being large enough to allow the lever arm to be moved to operate the counter, and a spring whereby the said arm is held normally against one edge of the said opening and, after being moved by the check to operate the counter and released by the check, is returned to its normal position, the slot in the slide or ejector being such as to allow the lever arm to resume its normal position immediately the arm leaves the check, as set forth.

4. In combination in a check issuing machine, a rod adapted to carry a column of checks, means for detachably holding such rod in position, a fixed desk, an orifice in such desk through which the checks on the rod may pass, a plate secured to the desk having an opening, helical springs and drums secured to the desk, a sleeve on the said check carrying rod, cords secured at one end to the drums and to the said sleeve at the other end whereby the column of checks is pressed toward and the endmost checks against the said fixed plate, a slide or ejector having an open-ended slot in that end next the check guides for said ejector, a bell crank lever below the desk, a link connecting one arm of such lever to the ejector, a foot-treadle and a rod connecting such foot treadle to the other arm of the bell-crank lever, a spring for returning the ejector after being moved to eject a check, a counter above and secured to the fixed plate, a lever arm on the axis of such counter the free end

of which extends through the opening in the plate and into the endmost check of the column of checks while in the column, a spring for holding the lever arm normally against one edge of the opening in the plate, 5 which opening is large enough to allow of the movement of the arm to operate the counter, and a plate with slot for covering in the counter except the numerals and the spring, as set forth. 10
In witness whereof I have hereunto set my hand in the presence of two witnesses.
WM. GEO. GILMORE.

Witnesses:

P. D. BAILEY,

F. C. PENNINGTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
