

(No Model.)

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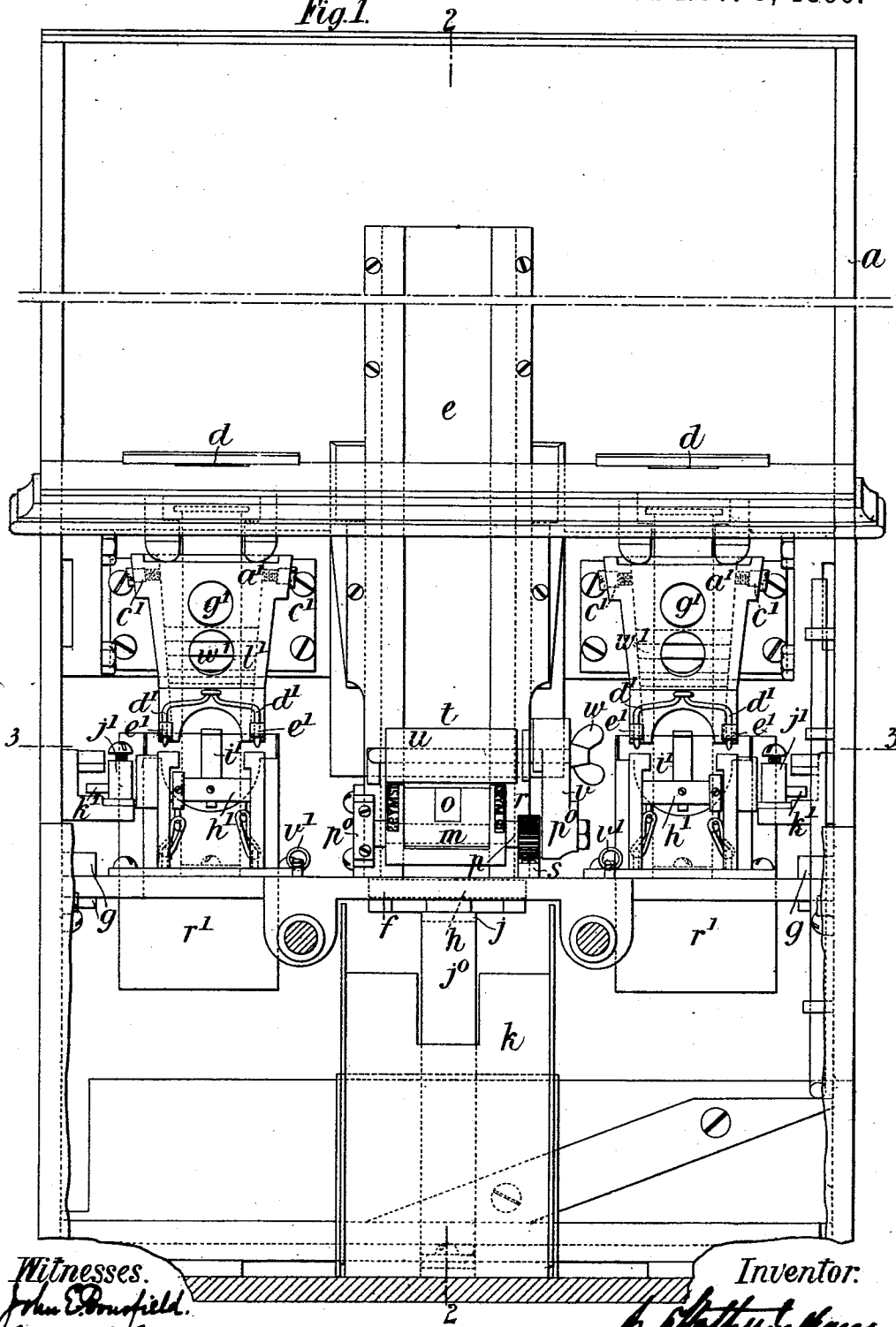
J. FOTHERINGHAM.

COIN FREED APPARATUS FOR DELIVERING TICKETS, SWEETMEATS, &c.

No. 570,849.

Patented Nov. 3, 1896.

Fig 1.



Witnesses.
John E. Donfield.
Charles E. Resper.

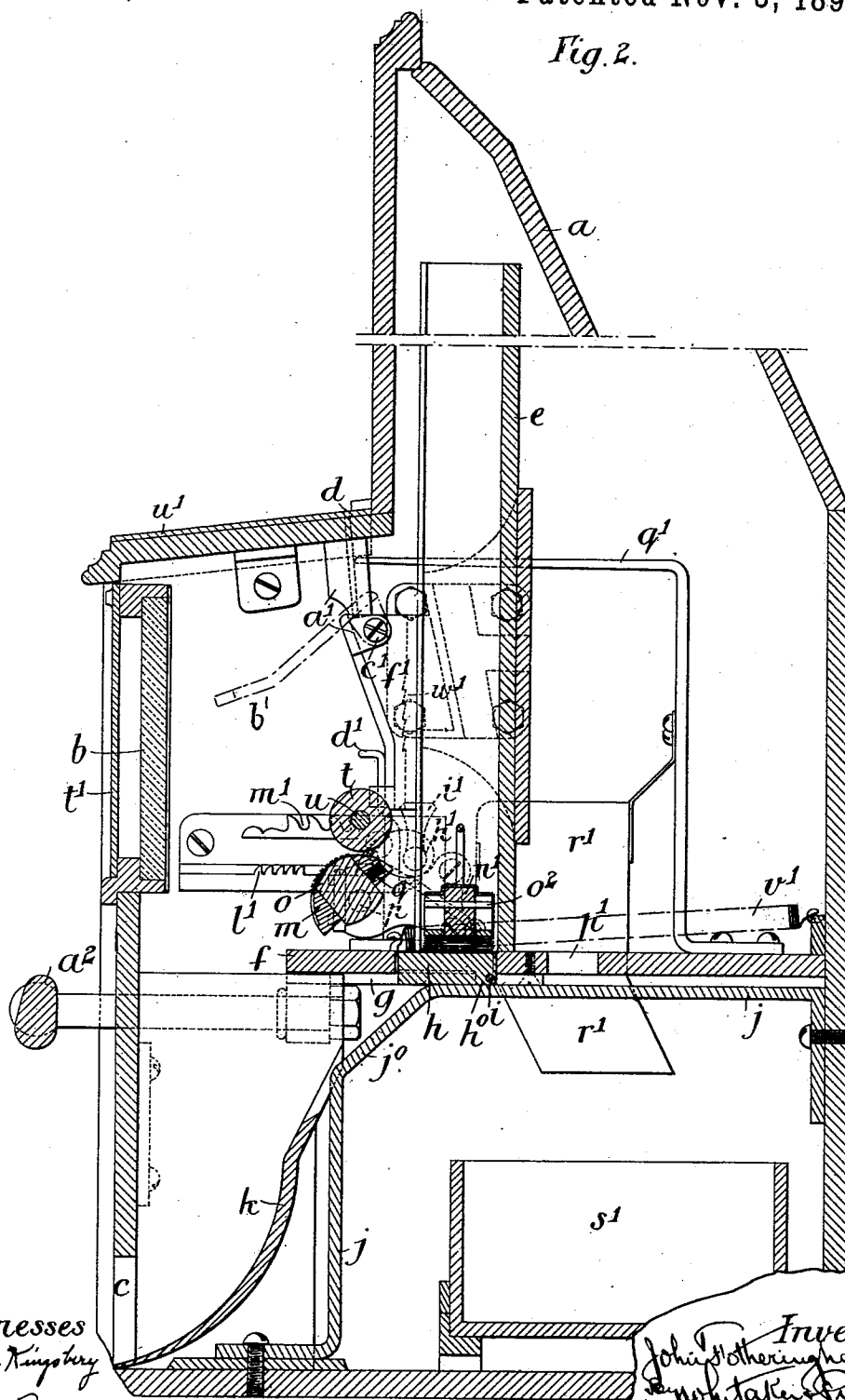
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4 Sheets—Sheet 2.

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Fig. 2.



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4 Sheets—Sheet 3.

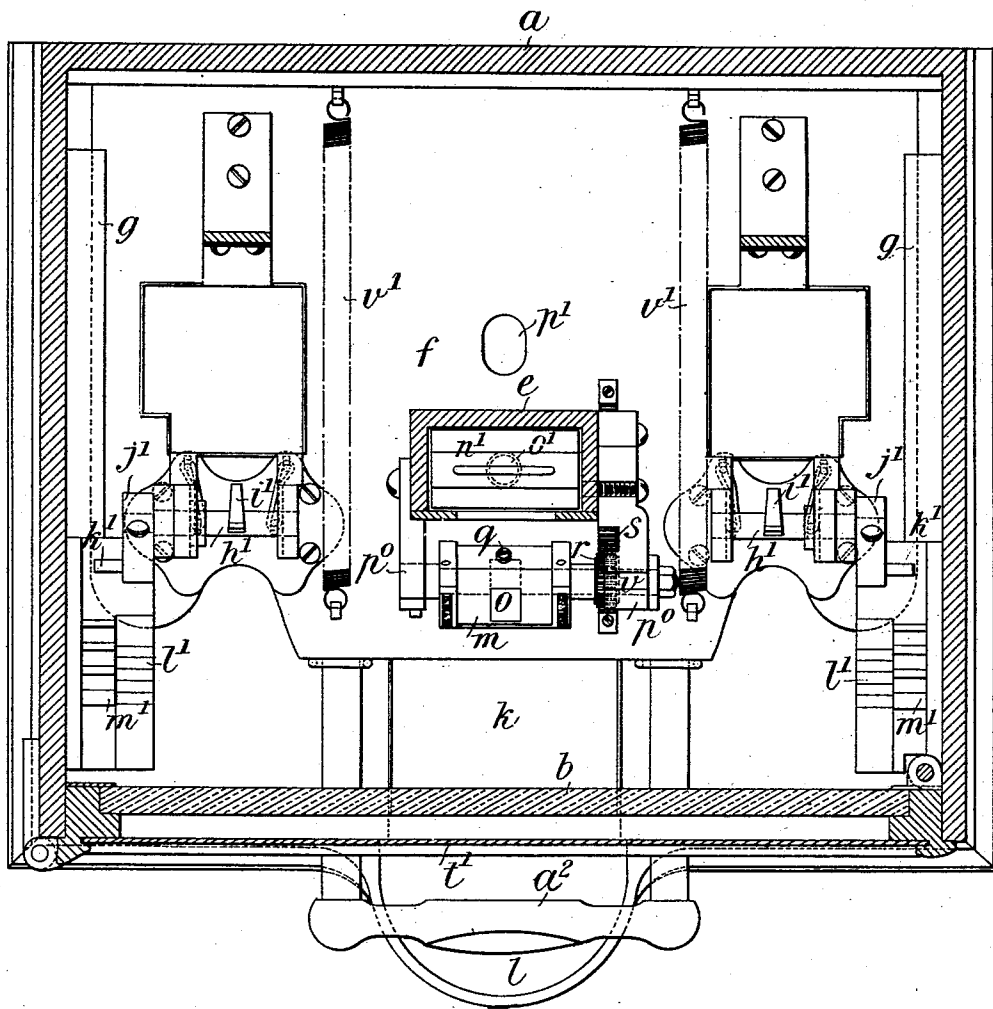
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Fig 3.



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4 Sheets—Sheet 4.

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Fig. 4

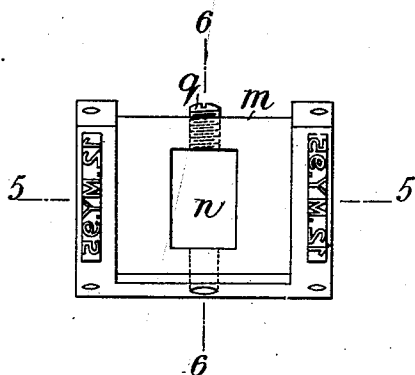


Fig. 3a

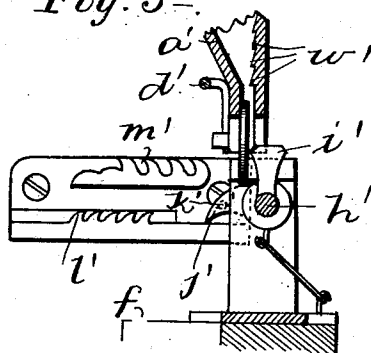


Fig. 5

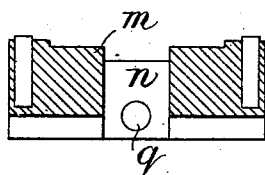


Fig. 6

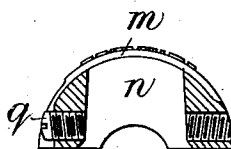
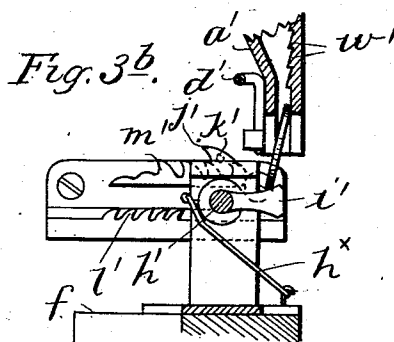
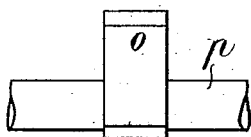


Fig. 7



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UNITED STATES PATENT OFFICE.

JOHN FOTHERINGHAM, OF LONDON, ENGLAND, ASSIGNOR TO THE SWEETMEAT AUTOMATIC DELIVERY COMPANY, LIMITED, OF SAME PLACE.

COIN-FREED APPARATUS FOR DELIVERING TICKETS, SWEETMEATS, &c.

SPECIFICATION forming part of Letters Patent No. 570,849, dated November 3, 1896.

Application filed December 10, 1895. Serial No. 571,872. (No model.) Patented in England February 4, 1896, No. 2,441.

To all whom it may concern:

Be it known that I, JOHN FOTHERINGHAM, a subject of the Queen of Great Britain, residing at London, England, have invented
5 new and useful Improvements in Coin-Freed Apparatus for Delivering Tickets, Sweetmeats, and other Articles or Goods, (for which Letters Patent have been granted to me in Great Britain, No. 2,441, dated February 4,
10 1895,) of which the following is a specification.

This invention relates to improvements in coin-freed apparatus for delivering tickets, sweetmeats, and other articles or goods, the main feature of the invention being an im-
15 proved delivery-slide, as hereinafter more particularly described.

According to this invention the delivery-slide or drawer, having the usual ledge or projection for pushing or pulling out the articles
20 to be delivered, is provided with a hinged door or flap opening downward and of a size somewhat larger than the article to be delivered, the said delivery-slide working between the magazine or receptacle containing the ar-
25 ticles or goods to be delivered and a bar or support which normally retains the flap closed. When the delivery-slide or drawer is in its normal or closed position, the said flap is immediately under the open bottom of the
30 magazine or receptacle containing the goods. The front portion of the bar is inclined in such a manner that as the delivery-slide reaches its outermost position the hinged flap, which, as above stated, opens downward, being no
35 longer supported by the bar, falls or opens and allows the article or packet which had been drawn or pushed out of the magazine and which had previously been lying upon it to slide off through a suitable opening in the
40 apparatus into an open cup or tray adapted to receive it outside the apparatus, the said incline when the slide is returned closing the hinged flap.

Where the apparatus is to be used for de-
45 livering tickets which require to be stamped with the date of issue, such, for example, as in the case of railway-tickets, I provide a printing arrangement, consisting of a segmental type-plate mounted upon a spindle adapted
50 to be operated by a rack on the delivery-slide in such a manner that as the slide is pulled

or pushed out the said spindle will be rotated by the rack, so as to revolve the printing-surface over the ticket which has been drawn
from the magazine or receptacle and before
55 the flap opens to discharge it, the return of the slide carrying back the printing-surface to its normal position.

The segmental printing-plate is detachably connected to an arm on the spindle to allow of
60 its being readily removed for the changing of the date and to allow of its being easily replaced and accurately adjusted relatively with the surface to be printed.

Suitable means, such as an inking-roller, is
65 provided for the inking of the printing-surface as it is revolved.

Where the ticket or article to be delivered is of such value as to require two or more coins for prepayment, I provide a separate money-
70 slot and releasing mechanism for each coin, the said releasing mechanism being advantageously constructed as follows, that is to say: On the delivery-slide beneath such coin-chute is mounted a shaft carrying a trigger-lever, as
75 heretofore, but I now provide the said shaft with a pawl having a laterally-extending pin, the pawl engaging with a rack which prevents the outward movement of the sliding plate, except when the pawl is lifted, while the pin,
80 when the pawl is lifted, is adapted to pass over a fixed rack, which prevents the backward movement of the slide until the latter has been drawn sufficiently forward to discharge the
85 ticket or other article, when the said pin will drop over the front end of the rack and as the slide returns pass back beneath the said rack.

To lock the slide when the magazine is empty, I provide the usual weight, which is
90 placed on the top of the goods in the magazine with a gravity-catch, which, when the lowermost article is withdrawn from the magazine, drops into an opening immediately beneath it in the slide.

To enable my invention to be fully under-
95 stood, I will describe the same by reference to the accompanying drawings, in which—

Figure 1 is a front elevation of a coin-freed apparatus for delivering tickets constructed
according to my invention, the front of the
100 apparatus being shown removed. Fig. 2 is a vertical section on the line 2 2 of Fig. 1. Fig.

3 is a horizontal section on the line 3 3 of Fig. 1. Fig. 3^a is a detail sectional view of the unlocking mechanism, showing the position of the coin with respect to the trigger-lever before the slide is drawn out. Fig. 3^b is a similar view showing the position of the parts when the slide is being drawn forward and before discharging the coin. Fig. 4 is a plan of the type-plate for printing the dates on the tickets. Fig. 5 is a section on the line 5 5 of Fig. 4. Fig. 6 is a section on the line 6 6 of Fig. 4, and Fig. 7 is a side elevation of the spindle and arm on which the type-plate is mounted.

a is the outer casing of the apparatus, *b* a door in the front of the same, and *c* the outlet for the tickets. The machine represented in the drawings is adapted to be used for delivering tickets which are of such value as to require two coins for prepayment, the coins being inserted in the slots *d d* in the outer casing *a*.

e is the magazine or receptacle for containing the tickets to be delivered, and *f* is the delivery-slide or drawer, which slides under the said receptacle or magazine *e* in guides *g*, fixed to the sides of the casing *a*, and is provided with the usual raised ledge or projection for pushing or pulling out the ticket to be delivered.

h is the door or flap, hinged at *i*, so as to open downward, the said door or flap being somewhat larger than the said ticket.

j is the bar or support, which normally keeps the flap *h* closed when it is under the open bottom of the magazine or receptacle *e*, in which case the said slide rests upon the upper horizontal portion of the bar or support *j*, as clearly shown in Fig. 2.

*j*⁰ is the inclined front portion of the bar *j*, the said portion being so arranged that when the slide *f* is pulled sufficiently forward by means of the handle *a*² the end *h*⁰ of the flap reaches the inclined portion *j*⁰, so that the flap opens downward.

k is a curved plate for guiding the ticket down through the opening *c* into the open cup or tray *l* outside the apparatus.

m, Figs. 1, 4, 5, and 6, is the segmental type-plate for printing the date on the tickets.

n is a hole passing vertically through the said type-plate and adapted to fit onto the arm *o*, Fig. 7, fixed to the spindle *p*, pivoted in brackets *p*⁰ on the front of the magazine *e*. The segmental type-plate *m* is fixed to the arm *o* by means of the set-screw *q* and can be easily detached from the same by unscrewing the set-screw. The spindle *p* is provided at one end with a toothed wheel *r*, which

engages with a rack *s* on the slide or drawer *f*, so that when the latter is pulled forward the spindle and segmental type-plate attached thereto are rotated, causing the type to come in contact with the ticket withdrawn from the magazine or receptacle and lying on the flap *h*.

The type is inked by means of an inking-roller *t*, mounted on a spindle *u*, carried in an arm *v* on one of the brackets *p*⁰, as seen clearly in Fig. 1. The inking-roller can be easily secured in position on the arm *v* and detached therefrom by means of the thumb-screw *w*.

a' a' are the two coin-chutes, the lower front portion of each of which, as shown, is hinged at *c' c'*, so that it can be pulled upward, as indicated in dotted lines in Fig. 2, if the coins become blocked in the chute. The said front portions *b' b'* are fixed at their lower extremities by means of pins *d' d'*, which pass through holes in lugs *e' e'* on the fixed back *f'* of the chute. The hinged fronts *b'* are each provided with one or more windows or sight-holes *g' g'* for the purpose of observing the interior of the chute. The backs of the chutes may also be provided with teeth or indentations *w' w'*, so that if a coin when released should fly upward it would be arrested by the said teeth.

h' is the shaft or spindle, mounted beneath each coin-chute and provided with a trigger-lever *i'* in the usual manner.

j' is the pawl, mounted on the outer end of each shaft, the said pawl being provided with a laterally-extending pin *k'* and engaging with the rack *l'*, fixed to the side of the casing *a* of the apparatus. Elastic loops *h^x*, engaging hooks upon the delivery-slide *f* and upon the shaft *h'*, are employed to keep the pawls *k'* in engagement with the racks and the trigger *i'* normally in an upright position.

m' is the fixed rack, with which the pin *k'* engages when it is lifted.

n' is the usual weight, placed on the top of the tickets in the magazine, the said weight, however, being provided on its under side with a gravity-catch *o'*, through which passes a pin *o*², working in slots in the said weight *n'*, the catch being adapted, when the last of the tickets has been discharged from the machine, to drop into the hole *q'* in the sliding drawer, thereby preventing the latter from returning to its normal position.

q' are bars fixed to the sliding drawer and adapted when the latter is pulled outward to come under the slots *d d* in the outer casing, so as to prevent the insertion of coins except when the drawer is in its normal position. It will therefore be obvious that when the magazine is emptied and the gravity-catch *o'* has dropped into the hole *p'*, as above described, another coin cannot be inserted until the said magazine is refilled.

r' are receptacles into which the coins are discharged from the chutes, the said receptacles conducting the coins to the drawer or till *s'*.

The front of the apparatus is provided, as above stated, with a door hinged or otherwise attached to the same. In the drawings the door is represented as made of a sheet of glass *b*, provided with a slide *t'*, which can be lifted

when the portion u' of the casing is raised, so as to expose the interior of the apparatus to view.

$v' v'$ are springs arranged to draw back the slide or drawer.

The operation of the apparatus is as follows: A coin of the required value is inserted into each of the slots $d d$ and falls into the coin-chutes in each case in front of the trigger-lever i' . The slide or drawer is then pulled outward by means of the handle a^2 , whereby the shafts h' are rotated by the contact of the trigger-levers against the coins, so that the pawls j' are lifted out of engagement with the racks l' and the lateral pins k' are lifted onto the upper fixed racks m' , thereby preventing the backward movement of the slide until the pins reach the front ends of the said fixed racks, by which time the drawer has pushed forward a ticket which rests on the flap and the latter has dropped downward and discharged the ticket through the opening c in the outer casing a . The lateral pins k' on reaching the front ends of the fixed racks m' drop, thereby causing the pawls j' to again engage with the racks l' , thus preventing the slide from being again pulled out until the insertion of fresh coins in the slots. During the above operation the ticket is printed in the manner hereinbefore described.

Although I have described my invention as applied for delivering tickets, it is to be understood that it is equally applicable for delivering sweetmeats and other articles or packets, in which case the printing mechanism is not necessary.

It will also be understood that a machine constructed according to my invention, whether for delivering tickets or goods, may be arranged to be released by the insertion of a single coin or by more than two coins.

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

1. In a coin-freed delivering apparatus, the combination with the vertically-disposed magazine, of a delivering-slide moving in straight horizontal guides, and having an aperture therein corresponding to the magazine a door in said aperture completely closing the same, and pivoted to the slide and a rigid support for said door directly beneath the delivery end of said magazine, said slide having a portion in rear of said aperture adapted to be drawn beneath the magazine when the slide is drawn out, substantially as described.

2. In a coin-freed delivering apparatus, the combination with the magazine, of a delivering-slide having a discharging-aperture therein beneath the magazine and a horizontal supporting portion in the rear of said aperture, adapted to support the articles in the magazine when the slide is drawn out, a pivotally-mounted door normally closing said aperture and having its upper face below the plane of said horizontal supporting portion and a support for said door in line with the magazine having a downwardly-extending part out of line with the magazine for supporting the door in open position, substantially as described.

3. In a coin-freed delivering apparatus, the combination with a magazine, of a delivery-slide having a discharging-aperture beneath the magazine, a pivotally-mounted door closing said aperture, a tray, supports for said slide and an independent support for said door, in line with the magazine, having an inclined part out of line with the magazine extending toward the said tray, whereby the articles delivered through said aperture will be discharged directly into said tray, substantially as described.

4. In coin-freed apparatus for delivering tickets and wherein a drop-door is employed, a printing device consisting of a segmental type-plate mounted on a spindle operated by a rack on the delivery-slide, substantially as hereinbefore described.

5. In a coin-freed vending apparatus, the combination with a magazine, of a weight adapted to move in the same, having a flat bottom portion, a gravity-pin carried by said weight and having a vertical movement in respect to said weight, a delivery-slide provided with an aperture, adapted to be engaged by the gravity-pin when the magazine is empty to prevent further operation of the device, substantially as described.

6. In a coin-freed delivering apparatus, the combination with a magazine, a delivery-slide and means for operating the same, of a coin-chute, means for arresting the downward movement of the coin, and a series of horizontal teeth in said chute adjacent to the said arresting means for preventing a backward movement of the coin, substantially as described.

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Witnesses:

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