

April 5, 1932.

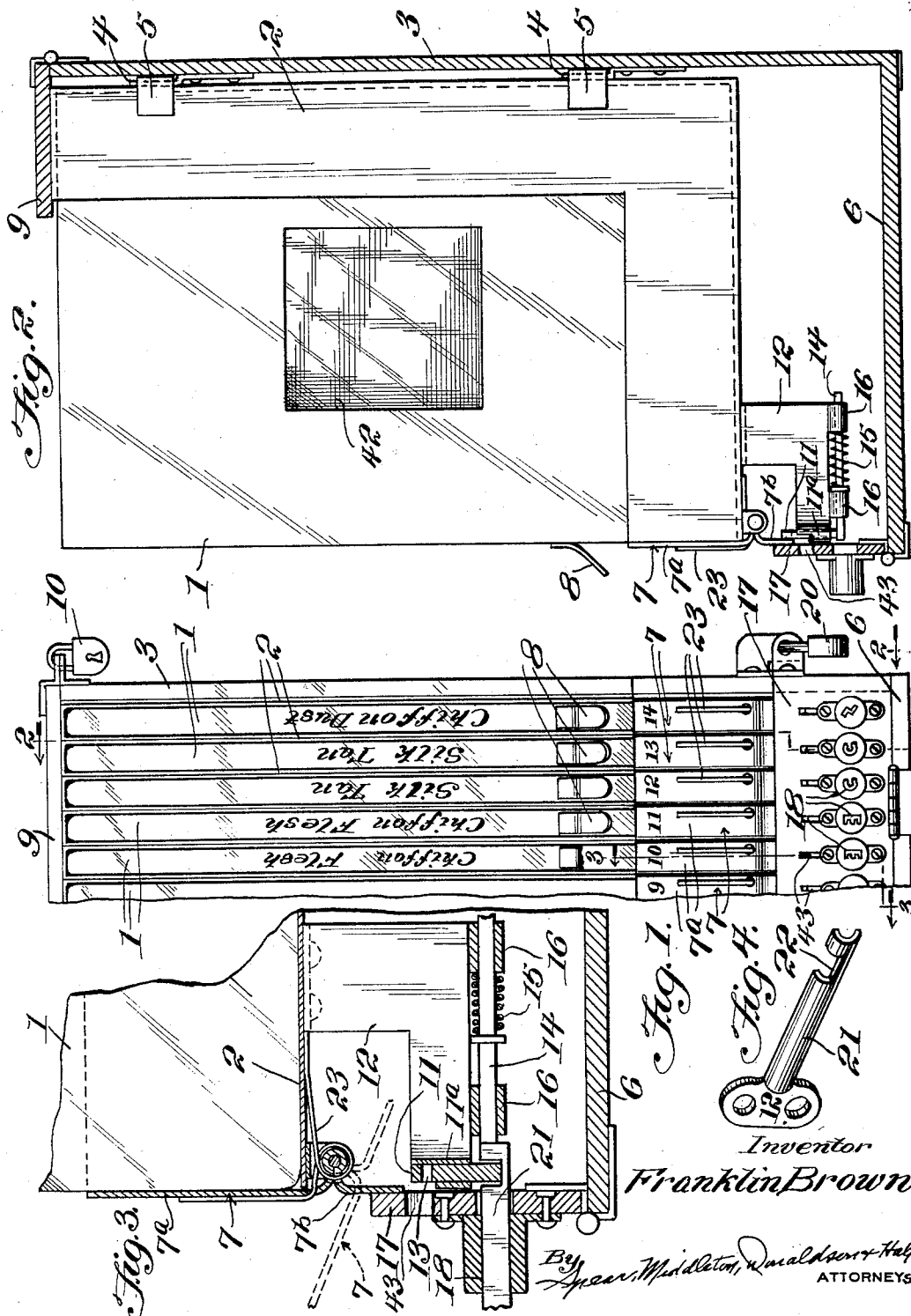
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APPARATUS FOR DISPENSING PACKAGES OF HOSIERY OR THE LIKE

Filed April 17, 1929

3 Sheets-Sheet 1



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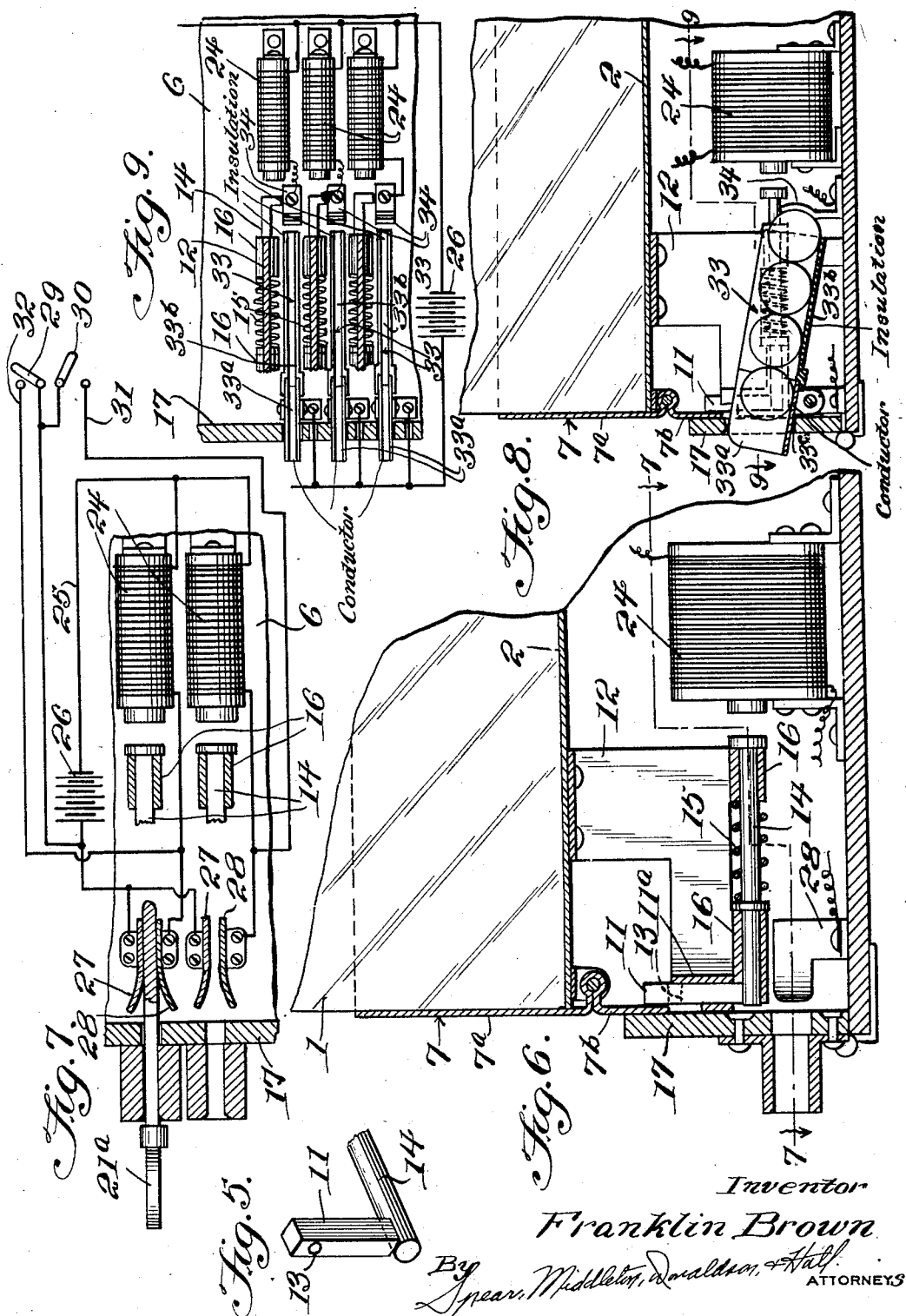
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## UNITED STATES PATENT OFFICE

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## APPARATUS FOR DISPENSING PACKAGES OF HOSIERY OR THE LIKE

Application filed April 17, 1929. Serial No. 355,764.

My present invention relates to improve-  
ments in article dispensing apparatus.

An object of the invention is the provi-  
sion of apparatus for permitting ready in-  
5 spection of the articles by the purchaser in  
making selection, while preventing handling  
and removal of and misplacement and re-  
placement by the purchaser in the wrong  
place, the article being promptly delivered to  
10 the purchaser after selection is made from  
the labeled articles.

Another object is the provision of a novel  
form of individually releasable locking  
means for each article, such as a pair of hose  
15 or stockings entirely encased in a sealed  
package, the package being completely la-  
beled with all desired information.

A further object is to provide such appar-  
atus as will enable the ready dispensing of  
20 articles such as packages of hose, or the like,  
requiring the presence of but a single attend-  
ant in the whole store, which may contain  
any number of the individual releasable arti-  
cle holders or series thereof.

25 Other objects will appear hereinafter.

The invention consists in the features, com-  
bination, and arrangement of parts herein-  
after described and particularly pointed out  
in the claims.

30 In the drawings:

Figure 1 is a fragmentary front elevation  
of an apparatus embodying my invention and  
mechanically controlled by key releasing  
means.

35 Fig. 2 is a section on line 2—2 of Fig. 1  
showing the article and holder in side eleva-  
tion.

Fig. 3 is a section on line 3—3 of Fig. 1  
40 with parts in unlocked position.

Fig. 4 is a view of a key.

Fig. 5 is a detail view of the relative dis-  
position of the vertical and horizontal co-  
operating pins.

45 Fig. 6 is a view similar to Fig. 3 of a modi-  
fied arrangement in which the device is elec-

trically controlled by a solenoid, the circuit  
of which is closed by the key.

Fig. 7 is a section substantially on line  
7—7 of Fig. 6 and showing the wiring for  
the electric circuit.

Fig. 8 shows an embodiment of my inven-  
tion in which the solenoid circuit for releas-  
ing the locking pin is coin controlled, the  
coins closing the circuit.

Fig. 9 is a section on line 9—9 of Fig. 8.

Fig. 10 shows a preferred embodiment of  
my invention in which the solenoid is ar-  
ranged so that it is operable by key, coin, or  
switchboard.

Fig. 11 is a fragmentary front view of the  
apparatus of Fig. 10.

Fig. 12 is a section substantially on line  
12—12 of Fig. 10.

Referring to the drawings, the article 1  
consisting of the sealed package containing  
a pair of stockings or the like is received in  
the holder 2 of which there is one for each  
65 article, the holders being preferably arranged  
in series or banks as shown. As best shown  
in Fig. 2, the holder comprises an L-shaped  
channel member removably attached to the  
frame or casing 3, the frame 3 having up-  
wardly disposed projections or pins 4 adapt-  
ed to engage eye members 5 on the holder to  
support the holder and its contents, with its  
75 lower edge in spaced apart relation to the  
floor 6 of the frame or casing 3.

The lower forward end of the L-shaped  
holder 2 is provided with a movable stop  
member 7, the stop member 7 being movable  
80 into and out of position to restrain and pre-  
vent removal of the article or package from  
the holder.

In operation when the stop is withdrawn,  
the article must be removed by pulling for-  
wardly upon the tab means 8 thereon, the  
upper ends of the holder being covered by a  
cover member 9 hinged to the casing and se-  
curely locked in place by suitable locking  
means 10.

Below the holder in the space between it and the floor 6 of the casing 3 is arranged the locking means for the stop member 7.

In the embodiment shown in Figs. 2, 3, 6, and 8, the stop member consists of a plate 7 pivotally mounted to the holder adjacent its forward open end. The stop member plate consists of an upper stop or closure portion 7a and a lower portion 7b depending below the pivot.

A pin 11 is vertically movable in a guide bore or slot 11a provided in a bracket 12 depending from the holder. The pin 11 is provided with an aperture 13 therein to be engaged by a lifting member or tool of any suitable form having a projection to fit the aperture 13. The pin is thus movable to locking position behind said pivoted stop plate to retain the same in closed position as shown in Figs. 2 and 6.

A horizontally movable pin 14 is disposed with relation to the vertically movable pin 11 to hold the pin 11 in uppermost position as shown in Figs. 5, 2, and 6.

The horizontal pin 14 is spring pressed forwardly by spring 15 and is guided in guide bores 16 carried by the bracket 12.

The front 17 is provided with keyholes 18 and is preferably hinged to the casing and provided with a suitable lock 20, similarly to the hinged cover 9.

With reference to Figs. 1, 2, 3, and 4, the key 21 such as is shown in Fig. 4 and which may be designed with any suitable cross sectional shape, to fit a corresponding keyhole 18, is provided with a cut out portion 22 for receiving the pin 11 as shown in Fig. 3, after the pin 14 has been pushed back by the key.

When the key and vertical pin are in the position shown in Fig. 3, the hinged stop member 7 is free to move to the open position shown in dotted lines. Removal of the article from the holder is then easily accomplished. A spring 23 is preferably provided and urges the stop member 7 to open position.

In the use of this form of my invention, the purchaser makes the desired selection by inspection of the articles which are exposed to view and marked with all necessary information, such as size, shade, and material of the hosiery in the containers. After selection is made, the purchaser goes to the store operator, makes the selection known, and upon payment for the article secures the proper key or keys for the article or articles desired. The purchaser then secures the desired article by insertion of the key which releases the lock, and the article may then be withdrawn by the tab.

In refilling or restocking the dispenser apparatus, the holder is restocked with an article of the proper kind, the stop member is moved to closed position and at the same time, the vertical pin 11 is moved upwardly

by a suitable lifting tool (not shown) inserted through the slots 43 into position, to clear the key and to provide a lock for the pivoted stop plate. This causes the horizontal pin 14 to move beneath the vertical pin. The key is then entirely removed and the device is ready for re-use by the next purchaser.

In Fig. 6, I show a solenoid 24 for effecting the withdrawal of the horizontal pin 14. The solenoid in Fig. 6 is controlled by an electric circuit 25 including source of power 26 such as battery or power line, and adapted to be closed by key 21a closing the space between terminals 27 and 28. The terminals 27 and 28 are fastened to the floor of the casing and are adapted to be sprung slightly apart to allow reception of the key 21a therebetween in firm contact.

Upon insertion of the key 21a, the circuit is closed and the solenoid 24 is energized and acts to withdraw the horizontal pin 14 causing the device to operate as above described with respect to Figs. 1, 2, and 3. The key may be withdrawn by the customer and returned to the operator or the operator may procure the key from the unit when refilling.

As shown in Figs. 7, 9, and 12, the solenoids 24 are arranged, one for each of the lock releasing pins, for each of the individual article holders, and the solenoids may be controlled through circuits in parallel with each other from a common source of power.

Also shown in Fig. 7 are switches 29 and 30 which illustrate independent control by a switchboard controlled by the operator. The use of the switchboard 29 and 30, is independent of the keys, and controls independent circuits 31 and 32 operated by the same power source 16. Thus with the arrangement shown in Fig. 7, the key system or the switchboard system may be used as desired, the device as constructed being capable of use by either system according to the wish of the storekeeper or owner.

The pin 11 in Figs. 6 and 8 is prevented from dropping out by engagement with the bracket 12 in the bores 16 thereof.

In Fig. 9, I have shown an embodiment of my invention in which the solenoids are controlled by circuit closing coins and in which the requisite number of coins of the proper denomination must be inserted. The coin chute 33 is formed of a metal conductor portion 33a and an insulation portion 33b. The first coin inserted is adapted to contact with contact terminal 34 and the last coin inserted is adapted to contact with the conductor portion 33a. The intermediate coins complete the circuit, through the coins, terminal 34, solenoid 24, battery 26 and conductor portion 33a. The separate circuits are arranged in parallel as before and may be controlled from the same power source 26. The coin chute 33 is pivotally mounted at 33a

and bears at its forward end upon the casing front at 33c so that it may be discharged, by unlocking the casing front, swinging the front down about its hinge and then tipping the chute forwardly to discharge the coins.

In Figs. 10, 11, and 12, I show a preferred embodiment of my invention in which the owner storekeeper is given the choice of the switchboard, key, or coin controlled electric system for operating the solenoids. Also in this embodiment is shown a preferred structure of stop member.

The stop member 7c in this embodiment consists of a plunger rod provided with a push button 7d, the rod 7c being spring pressed upwardly by spring 35 and being held in upward position by horizontal pin 14a engaging notch 7e in the rear face of the rod 7c. When the pin 14a is withdrawn, the stop rod 7c must be pushed down before the article can be removed from the holder.

The solenoid 24a, one for each pin 14a, is operated by electric circuits including source of power 26a and controlled either by switchboard 29a, 30a, or by key 21c or by coins in chute 33a'.

The key 21c is provided with insulation 36 and with notch 37, the notch 37 being adapted to be engaged by spring pressed detent 38 to determine and hold the key in proper circuit closing position and to prevent removal of the key by the customer. The detent and notch arrangement serves to prevent removal of the key by the customer.

In this embodiment, the terminals 27c and 28c are also of spring metal and adapted to be spread slightly apart by the key to ensure firm contact. In this embodiment, the detent 38 is lifted by the operator by means of a releasing key 43 which is inserted in key hole 18b alongside the keyhole 18a. The key 21c may then be withdrawn, breaking the solenoid circuit.

The coin controlled circuit is designated in Fig. 12 by the letter A, the key circuit is designated by B and the switchboard circuit by the letter C and may be readily traced from Fig. 12.

Fig. 11 shows the front of the casing with the slots 41 for the insertion of the coins and also shows the stop rods 7c and key holes 18a.

It will be understood that the device shown in Figs. 6 and 7 may, if desired, be provided with the arrangement of Figs. 10, 11, and 12 to prevent removal of the key by the customer, and only by the operator.

The sealed packages containing the articles such as hosiery are preferably each provided with windows 42 to permit inspection of the color and quality of the material. This can be seen on the end package of a series of holders and is, of course, seen upon removal from the holder, to check the label and permit final inspection.

I do not desire to limit myself to the exact

construction shown, it being apparent that many modifications may be made within the scope of my invention as herein described and claimed.

The numerals 9, 10, 11, 12, 13, 14 on the stop members 7 in Fig. 1 are merely illustrative of any desired marking to designate and differentiate the article to be received in the holders.

The invention is intended to greatly facilitate the dispensing of articles such as hosiery, by providing a means whereby a complete hosiery store may be operated by a minimum of attendants, and to eliminate the present great loss entailed by spoiling of the goods by repeated handling by purchasers.

The device also serves to prevent handling and misplacement of the packages by purchasers, it not being intended as a theft proof arrangement at all, though it does serve that purpose to some extent, but is open to inspection and is readily accessible and is intended as a means providing for ready dispensing of articles after selection, and for compelling the selection to be made without handling of the articles.

While the solenoid controlled locking pin is an effective means of accomplishing the object of my invention, the form of my invention embodying the mechanical key control shown in Figs. 1, 2, and 3, is a very practical arrangement. This key is sold or delivered to the customer after the selection is made by the customer.

The customer on entering the store approaches the unit comprising a series or sets of article holders and inspects colors and quality properly marked or labeled with respect to the series or sets or units and on each sealed package of hose. The colors may be displayed upon a well illuminated board or at each package holder. Quality may be displayed by sample upon a display board arranged adjacent or on the units or series of holders, though the quality feature will be accepted from the words "chiffon-service-heavy weight," also through dependence upon the responsible merchants and upon previous knowledge of quality.

A high standard of quality with a lowest possible price is the ultimate purpose of this invention. After the customer determines the kind and price of stocking she desires, the merchant or operator is paid. A key, to fit the lock of the compartment or holder to release the package is given to the customer. The key after having been used to open the lock, cannot be withdrawn by the customer, due to the detent arrangement provided as shown in Figs. 1, 2, 3, 10, 11, and 12.

The switchboard type of control for the solenoid enables the opening of the compartment or holder to allow the package to be removed, by means of an electric switch in the hands of the operator or cashier. The cus-

tomers, after having made a decision as to the hose or article to be purchased, makes this known to the cashier by number or letter such as shown in Fig. 1, paying for the article at the same time. The operator then releases the holder by pushing a switch or electric button.

Applicant's invention is not designed to completely enclose the merchandise, but to expose it to view and ready access by the customer, who removes it manually.

The sealed package for the hose saves thousands of dollars in spoiled goods, prevents handling, keeps the hose pressed and in perfect condition and shape, and keeps the sizes under control.

I claim:

1. In article dispensing apparatus having holders for the articles arranged side by side, said holders comprising L-shaped channel members open at the inner edge, the upper end being closed by a hinged door, the lower forward end being provided with a stop member movable to close and open said end to prevent or permit removal or insertion of the article in the holder, the article being of a shape to fit in the channel of the L-shaped holder and to be exposed therein for ready removal from the holder.

2. Apparatus according to claim 1 in which said stop member comprises a vertically movable slide, a spring pressing said slide upwardly, said slide having a notch in its side, a pin horizontally movable to and from engagement with the notch in said slide to hold the same in elevated operative position or to release the same to permit its being moved downward, and means to operate said pin.

3. In combination, with article dispensing apparatus including holders for the articles arranged side by side, and a stop member on the holder to prevent removal of the article from the holder, of the type in which the stop member comprises a plate pivotally mounted on the holder and movable into elevated operative position and into depressed inoperative position, and releasable locking means for said movable stop member, said locking means according to the present invention comprising a vertically movable pin adapted when lifted to engage the lower end of said pivoted plate to hold it in elevated operative position, and a horizontally movable pin adapted when in advanced position to engage the vertically movable pin to hold it in lifted position, key means for each article and holder manually operable to push the horizontal pin from advanced position to withdraw unlocking position, and to permit dropping of said vertical pin and said pivoted plate, said horizontal pin being spring pressed to advanced position, means providing for lifting of said vertical pin to locking position and for withdrawal of said key, and

a spring urging said pivoted plate to elevated locking position.

4. Apparatus according to claim 3 in which said holder is an L-shaped channel member open at its inner edge and the series of holders are closed at their upper ends by a hinged cover and at their lower forward ends by said individual stop members, and a front keyhole plate for said series of holders below said stop members hinged to swing forwardly.

In testimony whereof, I affix my signature.

FRANKLIN BROWN.