

April 9, 1929.

E. ARNOLD

1,708,407

GROCERY STORE APPLIANCE

Filed April 27, 1928

2 Sheets-Sheet 1

Fig. 1.

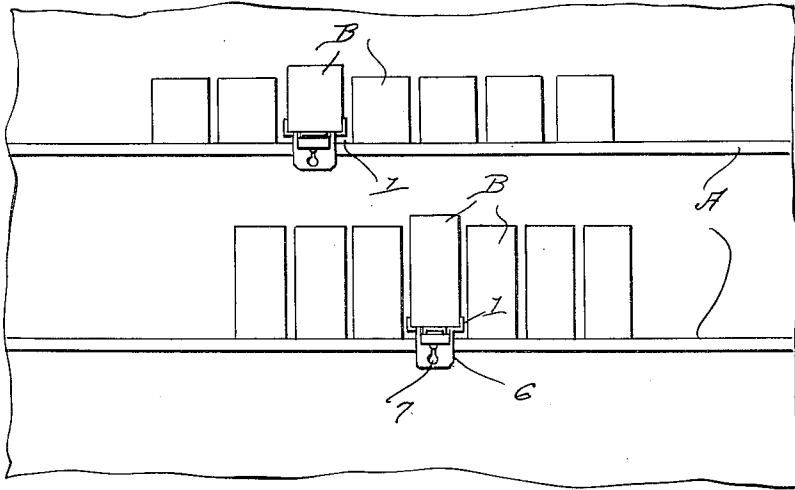


Fig. 3.

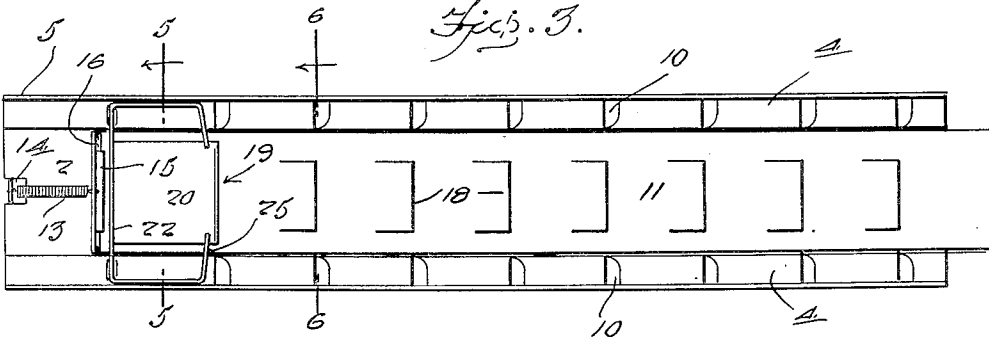


Fig. 6.

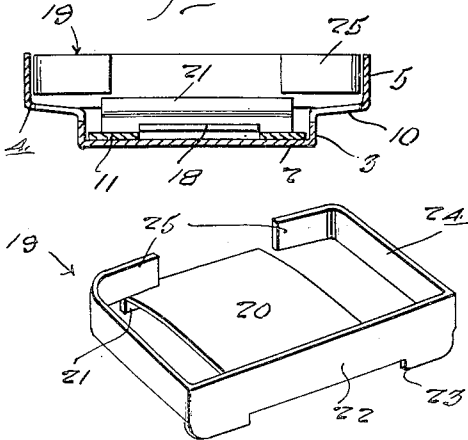
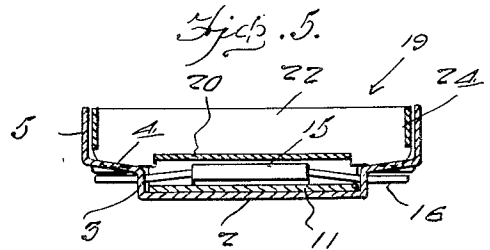


Fig. 5.



Inventor

Fig. 7. Edward Arnold

By *Clarence A. Brien*
Attorney

April 9, 1929.

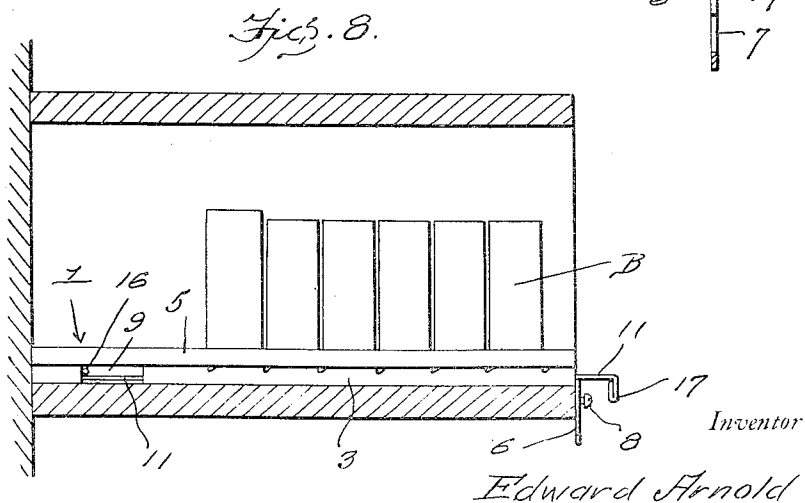
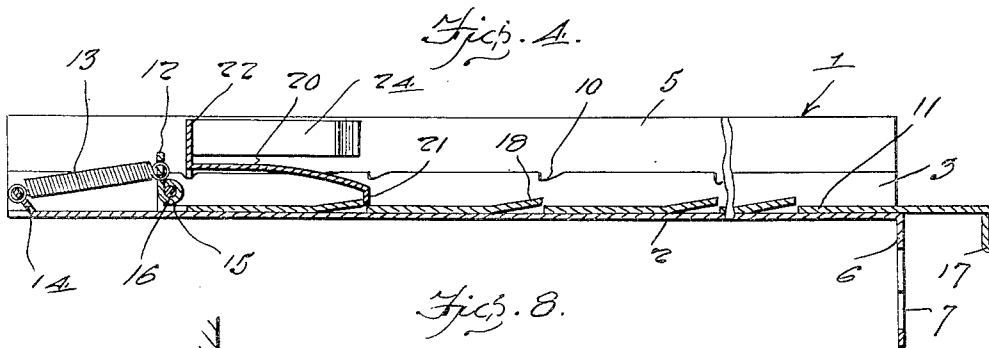
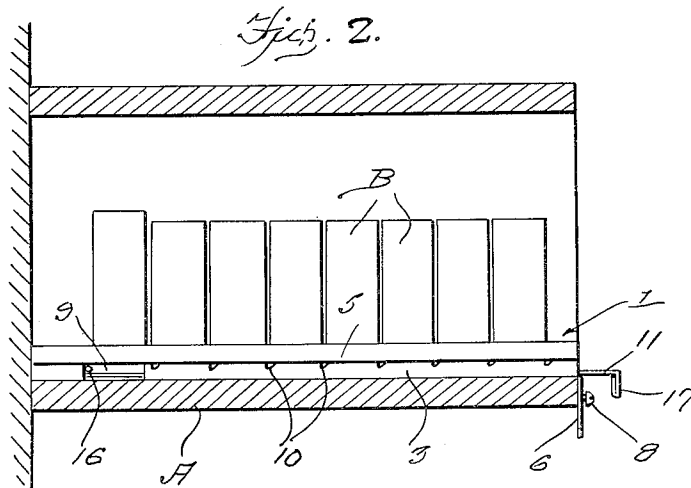
E. ARNOLD

1,708,407

GROCERY STORE APPLIANCE

Filed April 27, 1928

2 Sheets-Sheet 2



Inventor

Edward Arnold

By *Clarence A. O'Brien*, Attorney

UNITED STATES PATENT OFFICE.

EDWARD ARNOLD, OF NACHES, WASHINGTON.

GROCERY-STORE APPLIANCE.

Application filed April 27, 1928. Serial No. 273,282.

The present invention relates to a grocery store appliance and has reference more particularly to a device for feeding a horizontally arranged row of cans or packages of merchandise forwardly on the shelves when the forwardmost can or package is removed, thus always presenting a can or package adjacent the forward edge of the shelves.

One of the important objects of the present invention is to provide a device of the above mentioned character that can be readily and easily placed in position upon the shelves in a store for receiving horizontally arranged rows of commodities to be displayed on the shelves, each device including a member that is operable at the front of the respective shelf for feeding the particular row of cans or packages forwardly.

A further object is to provide a device of the above mentioned character which includes a slidable carriage for receiving the rearmost can or package, the carriage being mounted for slidable movement within a suitable frame that is rigidly secured on the shelf, and within which frame is disposed the row of cans or packages, a normally retracted slidable plate being also arranged within the frame for cooperation with the carriage to effect the forward movement of the latter to feed the articles forwardly in the frame, additional means being provided between the frame and the carriage for limiting the forward sliding movement of said carriage each time the slidable plate is pulled forwardly.

A still further object is to provide a device of the above mentioned character which will at all times be positive and efficient in its operation, the same being further simple in construction, inexpensive, strong and durable and further well adapted to the purpose for which it is designed.

Other objects and advantages of the invention will become apparent during the course of the following description.

In the accompanying drawings wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a fragmentary front elevation of a row of shelves showing the manner in

which my appliance is mounted on each shelf, one row of packages being arranged on the device.

Figure 2 is a side elevation of the appliance showing the same secured on a shelf, and the manner in which a row of commodities is positioned on the device.

Figure 3 is a top plan view of the device per se.

Figure 4 is a longitudinal sectional view therethrough.

Figure 5 is a transverse section taken substantially on the line 5—5 of Figure 3 looking in the direction of the arrows.

Figure 6 is a similar section taken on the line 6—6 of Figure 3.

Figure 7 is a detail perspective view of the slidable carriage, and

Figure 8 is a view similar to Figure 2 showing the position of the commodities after a number of the same have been removed from the shelf.

In the drawings wherein for the purpose of illustration is shown the preferred embodiment of my invention, the numeral 1 designates generally the frame of my appliance, the same including a bottom 2 which is of a length substantially equal to the width or depth of the shelf A. The side edges of the bottom wall 2 are disposed upwardly as at 3 and thence outwardly as at 4 to form the parallel spaced lateral tracks, the purpose of which will be hereinafter more fully described.

The outer edge portions of the laterally disposed portions 4 terminate in the upwardly directed side forming walls 5 and this construction is more clearly shown in Figure 6 of the drawings.

The bottom 2 is formed at its forward end with a depending bracket 6 that is formed with an inverted T-shaped slot 7 for cooperation with a screw 8 that is driven into the forward edge of the shelf A, and normally the shank of this screw is disposed in the smaller portion of the slot. This provides a means whereby the frame will be secured on a shelf in a detachable manner.

The upwardly disposed edge portions 3 are formed adjacent their rear ends with the registering longitudinally extending cut out portions 9 for a purpose to be presently apparent. Each of the laterally disposed

tracks 4 is formed with a series of spaced openings 10, said openings being arranged in pairs and for a purpose also to be presently described. As clearly illustrated in Figures 2, 4, 6 and 8 of the drawings, the inner ends of the openings terminate in the upwardly disposed sides 3.

An elongated plate 11 is arranged for slidable movement along the upper face of the bottom 2 between the upwardly disposed sides 3 of the frame 1. This plate 11 has its inner or rear end disposed upwardly as at 12 and a retractile coil spring 13 is secured at its forward end to the upwardly disposed rear end 12 of the slidable plate 11 and at its rear end to the projection 14 that is struck up from the rear end of the intermediate portion of the bottom wall 2 of the frame 1.

The plate 11 is furthermore formed with a transversely disposed loop 15 that is formed at the juncture of the upwardly disposed rear end 12 and the adjacent portion of the plate 11 and disposed through this loop 15 is the elongated plate 16 the ends being extended through the registering cut out portions 9 in the manner as clearly shown in Figure 5. This pin or rod 16 cooperates with the cut out portions 9 to limit the forward and rearward sliding movement of the plate 11 and the retractile coil spring 13 normally holds the free ends of the pin or rod in engagement with the rear end of the cut out portions 9. The inner ends of the cut out portions 9 terminate forwardly of the inner end of the frame 1 and this will result in the forward end portion of the slidable plate extending beyond the forward or outer end of the frame and this forwardly projecting portion of the slidable plate is provided with a depending finger engaging portion 17 whereby said plate may be actuated in the manner to be hereinafter more fully described.

A series of spaced lips 18 are struck up from the intermediate portion of the slidable plate 11, and the same are arranged a suitable distance apart with respect to each other.

Also adapted for slidable movement within the frame is the carriage designated generally by the numeral 19. This carriage includes a slightly curved bottom 20, the forward edge portion thereof being disposed downwardly to form a flange 21 with which the upwardly disposed lips 18 cooperate. An upstanding wall 22 is formed at the rear edge of the bottom 20 and the ends of this rear wall 22 project beyond the respective sides of the bottom and the lower edges of the outwardly projecting ends extend beyond the bottom 20 for the purpose of providing a pair of ears 23 as shown very clearly in Figure 7.

The carriage 19 further includes the side

forming walls 24 that extend forwardly from the respective ends of the rear walls 22, the forward extremities of the side walls being directed inwardly as at 25 to provide spring clips whereby to hold a can or package on the bottom 20 of the platform 19.

The carriage is of such construction as to cause the bottom 20 to be adapted for slidable movement across the upper face of the plate 11, while the side walls 24 are disposed adjacent the respective side walls 5 of the frame 1 and the depending ears 23 will ride along the laterally disposed tracks 4 and cooperate with the openings 10 formed therein.

In use, the frame 1 is disposed transversely on the bottom of the shelf, and the bracket 6 is secured to the shelf in a rigid manner by the headed screw 8 cooperating with the T-shaped slot 7. The platform 19 is placed at the rear end of the slidable plate 11 so that the depending ears 23 will be in engagement with the rearwardmost pair of openings 10 formed in the lateral rails or tracks 4. A row of cans or packages B is then placed in a horizontal manner on the frame so that the bottoms of the packages or cans will rest on the tracks 4 and the rearmost package or article will be confined within the platform for rest upon the bottom 20 and as the bottom 20 of the platform 19 normally extends above the tracks 4, the upper end of the rearmost can or package B will be disposed above the upper ends or tops of the other articles arranged in the same row as clearly shown in Figures 2 and 8. In the present instance, eight packages are supported on the frame and the forwardmost one is located adjacent the front or open side of the shelf. It is however to be understood that I do not wish to limit myself to the particular number of cans or packages that may be supported on the device.

When the forwardmost package or can is removed, the clerk then pulls outwardly on the depending finger piece 17, causing the forward sliding movement of the plate 11 against the tension of the retractile coil spring 13. As the rearmost upwardly struck out lip 18 is in engagement with the depending flange 21 formed at the forward edge of the bottom 20 of the platform 19, the latter will also be advanced, and as the forward portions of the openings 10 are beveled, the depending ears 23 will move forwardly out of the opening and ride along the lateral tracks 4. This will result in the receptacle carried by the platform feeding the other receptacles in the same row forwardly of the rearmost one forwardly within the frame so that the forwardmost one in the row will be brought into position adjacent the open front side of the shelf and when the row of receptacles are in this position,

the depending ears 23 will have dropped or entered into the next forward pair of openings, and the depending flange 21 will then have been disposed in position for cooperation with the next forwardmost lip 18 of the slidable plate 11.

When the finger engaging portion 17 is released, the spring 13 will return the slidable plate to its normal position and due to the construction of the lip 18, said plate will be free to ride underneath of the flange 21 in a rearward direction.

The plate 11 is continued to be actuated until the platform 19 has reached its forwardmost position in the frame, and when in this position the rearmost receptacle will then be positioned adjacent the front of the shelf and when this particular receptacle is removed, the platform is disengaged from the device by lifting the same bodily upwardly and again placing the same at the rear or inner end of the frame. The frame is then refilled with a horizontal row of receptacles.

It will thus be seen from the foregoing description that I have provided an appliance for displaying merchandise on shelves in stores, and wherein the merchandise is arranged in horizontal rows so that when the forwardmost receptacle containing the merchandise is removed from the shelf, the device can be actuated to feed the receptacles forwardly, thus giving the appearance of the shelves being stocked.

A device of this character may not only be used in grocery stores, but may equally as well be used in drug stores, and other places where merchandise is placed on shelves for display and sale purposes.

Furthermore, a device of this character will at all times be positive and efficient in its operation and will not detract from the appearance of the goods on display on the shelves. The simplicity of my device furthermore enables the same to be constructed at a very low cost and will furthermore be strong and durable.

While I have shown the preferred embodiment of my invention, it is to be understood that various changes in the size, shape and arrangement of parts may be resorted to without departing from the spirit of the invention and the scope of the appended claims.

Having thus described the invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a device of the class described, a frame for disposition upon a shelf, and on which a row of articles are horizontally arranged, a plate slidable in the frame, an actuating handle at the forward end of the plate, a carriage slidable on the frame and engaging the rearmost article and cooperating means between the slidable plate and

said carriage for moving the same forwardly to feed the row of articles toward the forward end of the frame.

2. In a device of the class described, a frame for disposition upon a shelf, and on which a row of articles are horizontally arranged, a plate slidable in the frame, an actuating handle at the forward end of the plate, a carriage slidable on the frame and engaging the rearmost article, cooperating means between the slidable plate and said carriage for moving the same forwardly to feed the row of articles toward the forward end of the frame, and a retractile coil spring associated with the rear end of the frame and the adjacent end of the plate for returning the same to its initial position when said handle is released.

3. In a device of the class described, a frame for disposition upon a shelf, and on which a row of articles are horizontally arranged, a plate slidable in the frame, an actuating handle at the forward end of the plate, a carriage slidable on the frame and engaging the rearmost article, cooperating means between the slidable plate and said carriage for moving the same forwardly to feed the row of articles toward the forward end of the frame, said last mentioned means comprising a series of spaced upwardly extending lips arranged on said slidable plate, and a depending flange at the forward edge of the bottom of the platform with which said lips successively engage.

4. In a device of the class described, a frame for disposition upon a shelf, the side edges of the bottom of the frame being disposed upwardly and thence laterally to provide parallel spaced longitudinal tracks, and on which a row of articles is adapted to be horizontally arranged, a plate slidable on the bottom of the frame between the upwardly disposed sides, the forward end of said plate extending beyond the adjacent end of the frame and providing a handle, a retractile coil spring for normally urging said slidable plate rearwardly, a platform including a bottom, and upstanding sides for slidable movement along said tracks, said platform being adapted to receive the rearmost article, cooperating means between the bottom of the platform and said slidable plate for feeding articles toward the forward end of the frame, and cooperating means between the platform and said track to limit the sliding movement of the platform at each operation of the sliding plate in a forward direction.

5. In a device of the class described, a frame for disposition upon a shelf, the side edges of the bottom of the frame being disposed upwardly and thence laterally to provide parallel spaced longitudinal tracks, and on which a row of articles is adapted to be horizontally arranged, a plate slidable on the

bottom of the frame between the upwardly disposed sides, the forward end of said plate extending beyond the adjacent end of the frame and providing a handle, a retractile coil spring for normally urging said slidable plate rearwardly, a platform including a bottom, and upstanding sides for slidable movement along said tracks, said platform being adapted to receive the rearmost article, cooperating means between the bottom of the platform and said slidable plate for feeding articles toward the forward end of the frame, cooperating means between the platform and said track to limit the sliding movement of the platform at each operation of the sliding plate in a forward direction, said first mentioned means comprising a series of spaced lips struck up from the plate, and a flange depending from the forward edge of the bottom of the platform for successive engagement with said lips.

6. In a device of the class described, a frame for disposition upon a shelf, the side edges of the bottom of the frame being disposed upwardly and thence laterally to provide parallel spaced longitudinal tracks, and on which a row of articles is adapted to be horizontally arranged, a plate slidable on the bottom of the frame between the upwardly disposed sides, the forward end of said plate extending beyond the adjacent end of the frame and providing a handle, a retractile coil spring for normally urging

said slidable plate rearwardly, a platform including a bottom, and upstanding sides for slidable movement along said tracks, said platform being adapted to receive the rearmost article, cooperating means between the bottom of the platform and said slidable plate for feeding articles toward the forward end of the frame, cooperating means between the platform and said track to limit the sliding movement of the platform at each operation of the sliding plate in a forward direction, said last mentioned means comprising a pair of depending ears at the sides of the platform, said tracks being formed with a series of spaced openings arranged in pairs to receive said depending ears.

7. In a device of the class described, a member for disposition upon a shelf and arranged for slidable movement thereon, said member being adapted to support a row of articles that are arranged horizontally thereon, a carriage slidable on the member and engaging the rearwardmost article, cooperating means between the slidable member and the carriage for moving the same forwardly to feed the row of articles toward the forward edge of the shelf when the slidable member is actuated, and spring means associated with the rear end of the slidable member for returning the same to its normal position.

In testimony whereof I affix my signature.
EDWARD ARNOLD.