

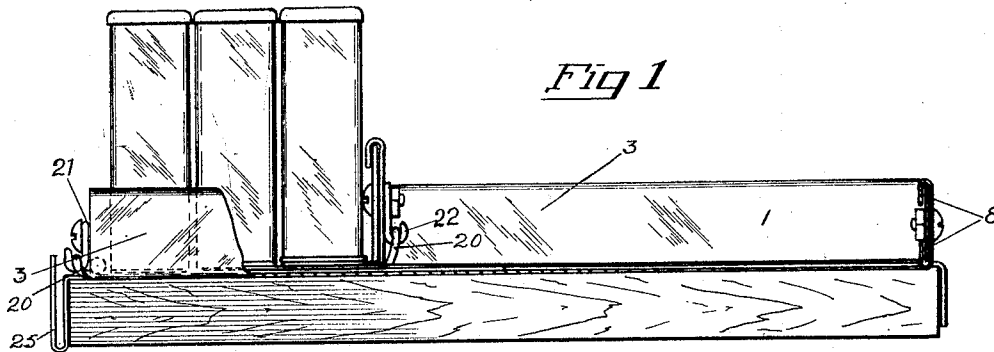
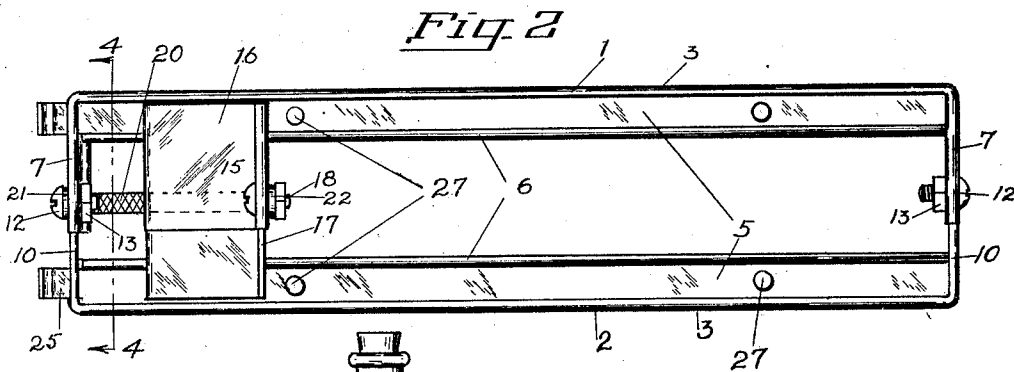
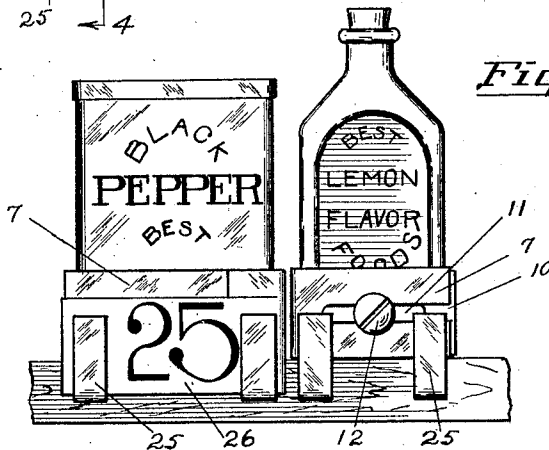
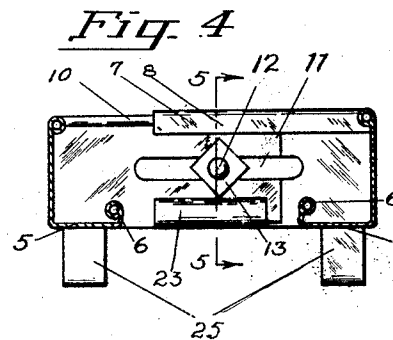
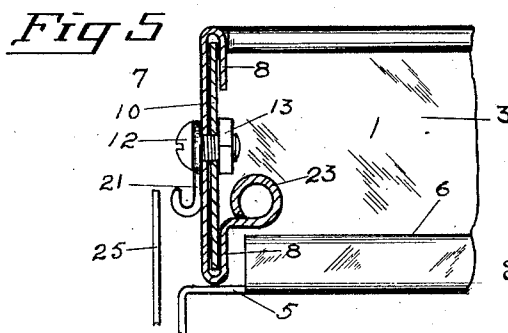
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STORE DELIVERY APPARATUS

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UNITED STATES PATENT OFFICE.

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STORE DELIVERY APPARATUS.

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This invention relates to improvements in store service apparatus.

The object of my invention is the provision of a tray attachment of simple and economical construction which may be readily supported in operative position upon the shelves of retail or other stores, such as grocery stores or drug stores, in which package goods may be placed and maintained in orderly alignment and in excellent condition for display to the public, together with resilient means for advancing the goods forwardly in the tray as they are removed from the front end thereof.

Other objects and advantages of my invention, and objects relating to details of construction and arrangement of parts, will be readily apparent in the course of the detailed description to follow.

In the accompanying drawings, which illustrate by way of example a preferred form of my invention:

Figure 1 is a view in side elevation of my improved tray illustrating specimens of the goods operably mounted therein, the side walls of the tray being broken away.

Fig. 2 is a plan view of the tray substantially as illustrated in Fig. 1.

Fig. 3 is a view in front elevation of a pair of my improved trays arranged in side-by-side relation.

Fig. 4 is a view in cross section on line 4-4 of Fig. 2.

Fig. 5 is a fragmentary cross section on line 5-5 of Fig. 4.

Referring to said views, the reference numerals 1 and 2 indicate, respectively, the two lateral sections of my improved delivery tray which are of substantially similar construction, each having a vertical side wall 3 and a bottom wall 5 extending longitudinally the full length of the sections and inwardly for a relatively slight distance and terminating in an upturned rail 6 upon which the goods are slidably supported, as will be more fully described hereinafter.

The ends of each section are turned at right angles to the respective side walls 3 and are made slidably interfitting to admit the width of the tray to be adjusted.

The section 1 is formed with front and rear wall portions 7 having an inwardly offset flange 8 at its upper and lower edges to afford grooves in which the correspondingly opposed wall portions 10 of the section

2 may be received. Horizontally disposed registering slots 11 are formed in the front and rear portions 7 and 10 of the respective sections wherethrough a bolt 12, or an equivalent device, may extend and secure the sections together by means of a nut 13, so that the width of the space between the side bars 3 may be narrowed or widened to accommodate the packages contained in the tray.

A traveler 15 is disposed within the tray arranged to be moved slidably upon the rail 6 and includes a horizontal portion 16 and a perpendicular portion 17. Said traveler may be formed in two overlapping parts having slots in the vertical portions 17 thereof secured by a bolt 18, whereby the effected length of the traveler in directions transversely of the tray may be adjusted in a manner analogous to the described method of adjusting the width of the tray. Said traveler is yieldingly urged in forward directions in the tray by means of an elastic band 20 which is secured at one end to the front wall of the tray and at its other end to the perpendicular portion 17 of the traveler.

In the illustrated embodiment of the invention a hook 21 is secured about the forward bolt 12 to which the said band may be connected and at its other end may be connected to a similar hook 22 secured by the bolt 18, whereby the band may be maintained in the longitudinal axis of the tray. At the forward end of the tray the lower flange 8 of the front wall portion 7 is extended rearwardly and turned to provide a footing or fulcrum portion 23, for a purpose to be hereinafter explained.

The sections 1 and 2 may be stamped or formed from sheet metal, and in being so formed an integral tab 25 may be extended from the bottom walls 5 at each end, which tabs may be utilized to secure the trays in aligned and fixed position upon a shelf, as indicated in Fig. 1, by turning them down over the side edges of the shelf. In addition, the tabs at the forward end of the tray may be formed to provide a support for a price tag or for other indicia, as indicated at 26 in Fig. 3. Where it is desired to more rigidly secure the trays to the shelves, they may be fixedly positioned by screws, not shown, for which screw holes 27 are provided in convenient locations.

The elastic band 20 employed in my in-

vention may be of the usual endless rubber band or an elastic tape comprised of rubber and fabric, of well-known construction.

The operation of my invention may be described as follows:

After being adjusted to the proper width desired, the tray is positioned and secured upon a shelf with its forward end facing outwardly; and preferably in considerable numbers, or sufficient to supply the grocer's needs, arranged in side-by-side relation, the goods, such as cans of spices, as indicated in Fig. 1, bottles, as indicated in Fig. 3, or any other form of package goods, may then be placed in the tray by pressing back the traveler 15 and lowering the package into the tray and upon the rails 6. The entire tray can be best filled by pressing back the traveler until it is in contact or nearly so with the rear wall of the tray.

Considerable tension will thus be exerted upon the elastic band 20, and the packages will be secured in vertical alignment in the tray with the furthestmost package pressed into contact with the front wall of the tray or at its bottom against the fulcrum portion 23.

When it is desired to supply the needs of a customer, the outermost package is removed from the tray, whereupon the elastic band will assert itself to move the entire line of packages forwardly in the tray and again in contact with the front wall, as before. The further back the traveler is pressed and the more weight of packages to be moved, the greater will be the tension upon the elastic band, sufficient to move the goods forwardly, such tension being released progressively as the number of packages and consequent weight to be moved becomes less.

The provision of the fulcrum portion 23 against which the lower edge of the packages engage admits of the forward can being tilted forwardly in removal without disturbing the packages to its rear. It is found that where the packages are pressed tightly against the forward wall, in some cases, in pulling the first package out, those to the rear will be disarranged. With the fulcrum portion 23, it allows the package to be tilted forwardly for a slight distance to separate it from the other packages and allows it to be withdrawn with ease.

It is found that any form of package goods can be handled with greater economy of space and saving of time than where they are mounted directly upon the shelves. The goods are always presented with a pleasing appearance, as the front lines are unbroken at all times, and as fast as a package is re-

moved the goods replace themselves toward the front.

The use of the trays afford an economy of effort in refilling, as the packages can be inserted readily and they do not have to be lined up with care as is necessary at the present time, where goods are simply mounted on the shelves. The device is very useful for grocery stores, drug stores, and particularly in grocery stores of the self-service type, and the device may be employed in a great many different retail establishments with economy and convenience.

From the foregoing description taken in connection with the accompanying drawings the advantages of the construction and application of my improved store delivery apparatus will be readily apparent, but, while I have described the principle of operation of the invention together with the devices which I now consider the best embodiment thereof, it will be understood that the structures shown are merely illustrative, and that such changes may be made therein as will lie within the scope of the following claims.

Having described my invention, what I claim, is:

1. Store service apparatus, consisting in a laterally extensible frame adapted to support a plurality of packages in a line, a traveler in said frame movable behind said line of packages, an elastic band connected to the front end of said frame and to said traveler to urge the latter forwardly and in pressed engagement with said packages, and a fulcrum-portion positioned in the forward end of the frame upon which the foremost package bears at its lower edge.

2. In a store service apparatus, a pair of lateral sections each provided with a vertical side wall, a front and an end wall, the front and end wall of one section being slidable within the front and end wall of the other section, each of said lateral sections being provided with an inwardly extended upwardly turned rail, a carrier movable on said rails, and an elastic band connected by its opposite ends to the aforesaid front walls and the said traveler.

3. Store service apparatus, consisting in a frame, a movable traveller bearing upon a file of articles in said frame, resilient means tending to advance said traveler in said frame as the articles are removed at the forward end of the file, and a fulcrum engaging the foremost of said articles below the upper edge of the frame and maintaining said articles in spaced relation thereto.

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