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BAG ELEVATOR FOR SUPER MARKET CHECK-OUT COUNTERS

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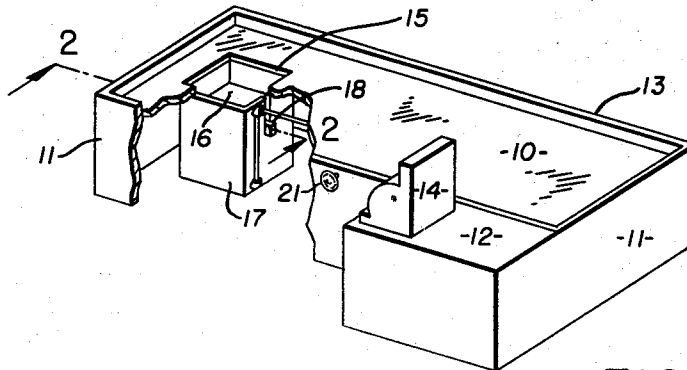


FIG. 1

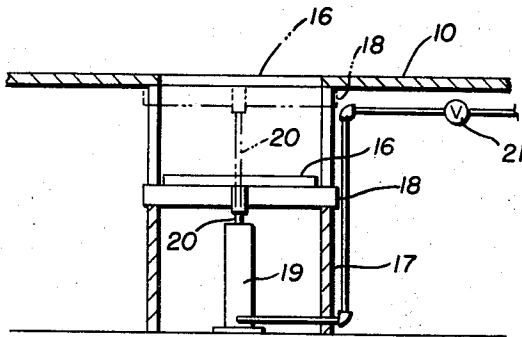


FIG. 2

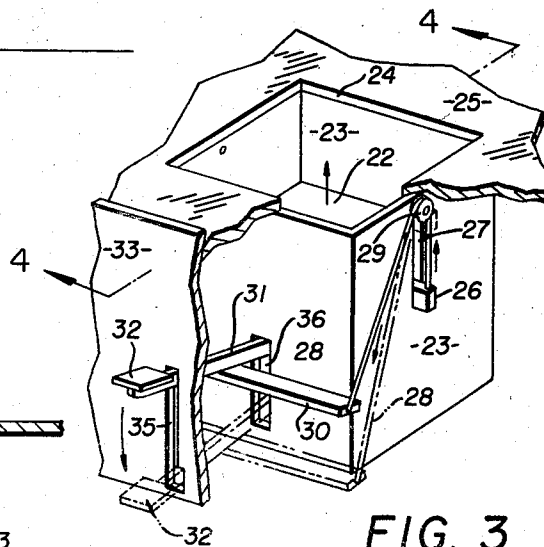


FIG. 3

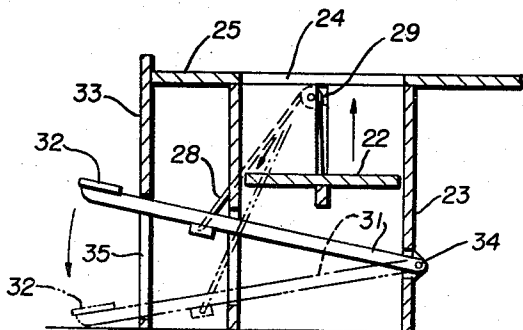


FIG. 4

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BAG ELEVATOR FOR SUPER MARKET CHECK-OUT COUNTERS

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2 Claims. (Cl. 187—17)

This invention relates to super market check-out counters and more particularly to a bag elevator incorporated therein.

The principal object of the invention is the provision of a super market check-out counter having a bag elevator built therein so that grocery bags may be lowered thereon and conveniently filled and subsequently lifted to counter height.

A further object of the invention is the provision of a check-out counter in a super market having means for holding a grocery bag or box and lowering the same relative to said counter so that groceries and the like may be easily positioned in the bag or box without lifting the same upwardly and into the bag or box as has heretofore been necessary.

A still further object of the invention is the provision of a bag elevator for check-out counters incorporating a simple, economically formed device which may be manually or automatically actuated.

A still further object of the invention is the provision of a bag elevator device which may be built into existing super market counters and installed in new super market counters.

The bag elevator for super market check-out counters disclosed herein comprises a simple and efficient means facilitating the placing of groceries and the like in bags or boxes as commonly used in carrying the groceries, etc. from the super market. The problem of lifting groceries and especially canned goods upwardly from the check-out counter and into relatively large bags and boxes presents a problem in the operation of super markets due to the fatigue of the check-out operators. These operators work continuously, and in the course of a few hours, lift large quantities of groceries and other allied items from the counter into the bags or boxes which the customer carrier from the market. By installing the bag elevator disclosed herein, the bag or box may be positioned at a desired and convenient lower level with respect to the check-out counter and the groceries, etc. easily moved downwardly into the bag or box when the same is filled, the bag elevator is actuated to raise the bag to counter height where it then may be removed by the customer in the usual manner. The elevator may be manually actuated as by foot and lever or it may be actuated by automatic means such as will occur to those skilled in the art and would obviously include pneumatic piston and cylinder assemblies or a winch operated by an electric motor.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being the intention to cover all changes and modifications of the example of the invention herein chosen for purposes of the disclosure, which do not constitute departures from the spirit and scope of the invention.

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The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective view of a super market check-out counter with parts broken away and parts in cross section.

Figure 2 is a vertical section of the line 2—2 of Figure 1 in enlarged detail, broken lines illustrating the alternate position of the mechanism.

Figure 3 is a perspective view of a manually actuated bag elevator with parts broken away and parts in cross section, broken lines indicating an alternate positioning of the mechanism.

Figure 4 is a vertical section on line 4—4 in Figure 3 with broken lines indicating the alternate position of the mechanism.

Be referring to the drawings and Figure 1 in particular it will be seen that a super market check-out counter is disclosed and includes a counter-top 10, a support base 11 and an offset section 12. The counter-top 10 is preferably enclosed with a railing 13 and may, if desired, incorporate a conveyor belt as a portion thereof as known in the art. A cash register 14 is positioned on the offset portion 12 of the counter base 11. The counter-top 10 has an opening 15 therein which may be of any desired size and shape and in which opening an elevator 16 is mounted for vertical travel with respect to the counter-top 10. The elevator is preferably enclosed in a guiding and supporting structure 17 and the elevator 16 includes guide means 18 suitably arranged to guide the elevator 16 and maintain it in horizontal position.

By referring now to Figure 2 of the drawings, one embodiment of the invention disclosed herein may be seen wherein the elevator 16 without the housing 17 is adapted to be moved vertically by pneumatic piston and cylinder assembly 19, the piston rod 20 thereof being secured to the lower surface of the elevator 16. Air pressure from a suitable source (not shown) and controlled by a mechanically operated valve 21 enables the pneumatic piston and cylinder assembly to be operated under the control of the cashier. It will thus be seen that when groceries are positioned on the counter 10 and checked out by the cashier past the cash register 14, a bag, box or other receptacle may be positioned on the elevator 16 and lowered through the opening 15 so that the top of the box, bag or other receptacle is on the same general plane as the counter 10 whereupon the groceries may be easily moved into the box, bag or other receptacle without picking them up. When the bag or box is packed, elevator 16 is returned to counter height position whereupon the bag or box of groceries may be picked up easily and removed therefrom. It will occur to those skilled in the art that several mechanisms may be employed for moving the elevator 16 vertically other than the pneumatic piston and cylinder arrangement hereintofore describe. Such means will obviously include a hydraulic piston and cylinder assembly and may include a manual arrangement such as shown in Figures 3 and 4 of the drawing. By referring thereto it will be seen that the elevator 22 is positioned in a supporting structure 23 in registry with an opening 24 in a counter 25, guide means 26 on the elevator register in slots 27 in the supporting structure 23 and a pair of cables 28—28 are secured to the guide means 26 trained upwardly over idlers 29—29 and downwardly to be secured to the ends of an arm 30 which in turn is attached to a lever 31. The lever 31 has a pedal 32 on its foremost end where it extends out of the counter base 33 so that it may be moved manually as by stepping thereon and moving it into position shown on broken lines in Figures 3 and 4. The one end of the lever 31 is pivoted as at 34 to the supporting structure 23 and the other end passes through a slot 35 in the side of the

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counter base 33 as well as passing through an opening 36 in the supporting structure 23. It will occur to those skilled in the art that mechanical means may be substituted for the lever 31 and the pedal 32, for example, an electric motor winch not shown may be employed for moving the cable 28 and hence the elevator 22. It will thus be seen that an elevator such as disclosed herein in combination with a check-out counter provide means by which groceries and like articles may be received, checked out, and moved into carry-out packages such as boxes, bags or the like conveniently and without lifting the groceries and other articles into the boxes, bags, or other receptacles.

It will thus be seen that the device disclosed herein meets the several objects of the invention, and having thus described my invention, what I claim is:

1. In a check-out counter having an opening therein and an elevator positioned in said opening, a support structure positioned beneath said counter about said opening and having oppositely disposed vertical slots therein, said elevator having a transversely extending guide bar

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positioned therebeneath, the opposite ends of said guide bar being slidably engaged in said slots in said support structure, idlers on the outer opposite sides of said support structure, cables trained over said idlers and secured to the ends of said guide bar, a lever pivotally secured to said support structure, one end of said lever extending outwardly of said support structure and counter, said cables being attached to said lever whereby movement of said lever imparts vertical movement to said elevator through said guide bar and cables.

2. The check-out counter elevator set forth in claim 1 and wherein a cross bar is positioned on said lever and said cables are secured to the opposite ends of said cross bar for movement by said levers.

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