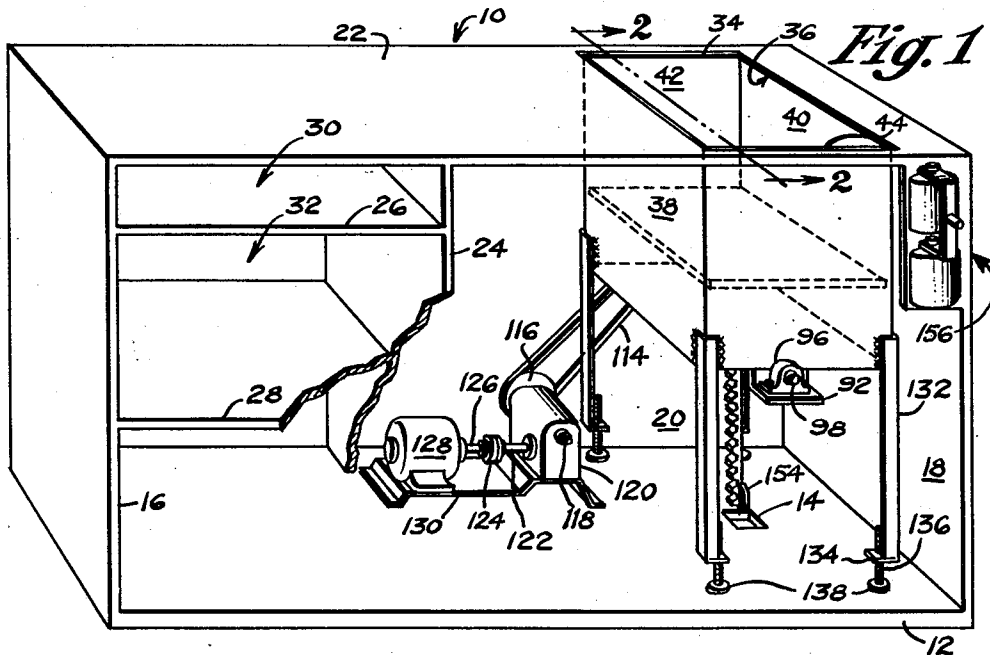
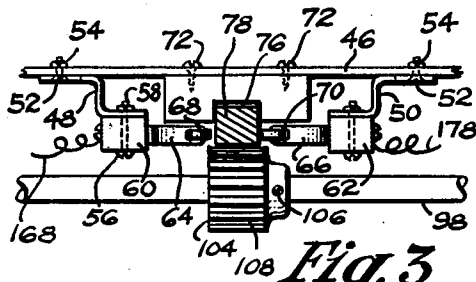
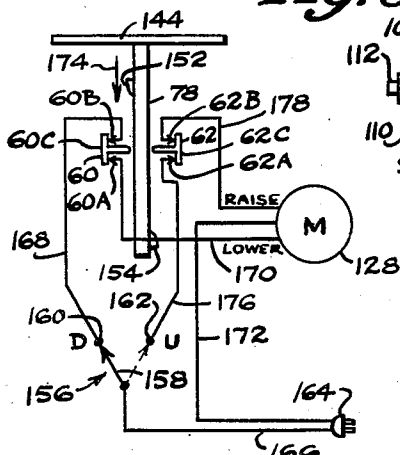
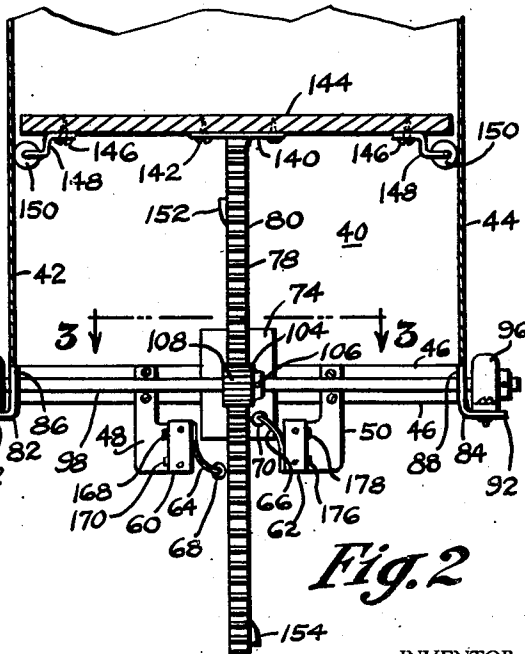


2,808,127

Filed Aug. 1, 1955



INVENTOR

L.M. WESBERRY

BY *Kimmel & Crowell*

ATTORNEYS

1

2,808,127

DEVICE FOR PACKAGING GROCERIES AND
SIMILAR ARTICLES

Leon M. Wesberry, Dallas, Tex.

Application August 1, 1955, Serial No. 525,662

1 Claim. (Cl. 187—19)

This invention relates to an elevating device, and more specifically, the present invention pertains to a grocery sacking machine adapted for installation inside a grocery checker stand to facilitate the checking and packaging of groceries.

One of the primary objects of this invention is to provide in a grocery checking stand a receptacle having an open top and a platform vertically movable therein, together with means for moving the platform into a position substantially flush with the upper side of the grocery checking stand.

A further object of this invention is to provide a grocery sacking machine in a grocery checking stand, the machine being of the type referred to above, together with means for automatically controlling the elevating means for the platform.

A still further object of this invention is to provide a machine of the type described which is economical to manufacture and assemble, non-complex in operation, and which is durable in use.

Other and further objects and advantages of the instant invention will become more evident from a consideration of the following specification when read in conjunction with the annexed drawing, in which:

Figure 1 is a perspective view of a grocery checking stand including a grocery sacking machine constructed in accordance with the present invention.

Figure 2 is an enlarged detail cross-sectional view, partly in elevation, taken on the vertical plane of line 2—2 of Figure 1, looking in the direction of the arrows.

Figure 3 is an enlarged detail top plan view, partly in cross-section, taken on the horizontal plane of line 3—3 of Figure 2, looking in the direction of the arrows.

Figure 4 is a schematic wiring diagram illustrating the control means for the platform elevating motor.

Referring now more specifically to the drawing, reference numeral 10 designates, in general, a grocery checking stand of conventional design. The stand 10 is seen to comprise an elongated substantially rectangular base 12 having a substantially rectangular opening 14 formed adjacent one of its respective ends. The stand 10 includes a pair of oppositely disposed substantially rectangular end walls 16, 18, a back wall 20, and a top wall 22. An intermediate wall 24 extends transversely across the grocery checking stand 10 and is substantially parallel to the end wall 16. The intermediate wall taken together with a pair of shelves 26, 28 define compartments 30, 32 to receive sacks of various sizes.

The top wall 22 is provided with a transversely extending substantially rectangular opening 34 and receives therethrough a substantially rectangular housing designated, in general, by the reference numeral 36. The housing 36 comprises a pair of oppositely disposed spaced and substantially parallel side walls 38, 40 and a pair of oppositely disposed spaced and substantially parallel end walls 42, 44. An elongated substantially rectangular cross-brace 46 has its opposed ends fixedly secured, as by

2

welding, to the end walls 42, 44, the cross-brace 46 being substantially centrally disposed and positioned adjacent the lower end of the housing 36.

A pair of angle members 48, 50 have one of their ends fixedly secured to the cross-brace 46 by means of bolts 52 and nuts 54. The other ends of the angle members 48, 50 have fixedly secured thereto, as by bolts 56 and nuts 58, a pair of micro switches 60, 62. Each of the micro switches 60, 62 are provided with resilient operating levers 64, 66, respectively, the levers 64, 66 having their respective free ends connected with rollers 68, 70.

Screws 72 fixedly secure a substantially rectangular block 74 to the cross-brace 46 intermediate the micro switches 60, 62. The block 74 is formed with a substantially U-shaped vertically extending guide channel 76 which is adapted to receive for reciprocation therethrough a gear rack 78 having rack teeth 80.

A pair of angle members 82, 84 have one of their respective ends 86, 88 fixedly secured by conventional means to the lower ends of the end walls 42, 44. The other sides 90, 92 of the angle members 82, 84 project laterally away from the end walls 42, 44 and have fixedly mounted thereon a pair of bearing blocks 94, 96, respectively, in which are journaled the opposite ends of an elongated shaft 98. Bolts 100 and nuts 102 rigidly secure the bearing blocks 94, 96 to the sides 90, 92 of the angle members 82, 84.

A gear wheel 104 is fixedly secured on the shaft 98 intermediate the end thereof by means of a set screw 106. The teeth 108 of the gear wheel 104 are meshed with the teeth 80 on the gear rack 78.

As is seen in Figures 1 and 2 of the drawings, the shaft 98 projects laterally beyond the bearing block 94 and the extended end thereof has a V-pulley 110 fixedly secured thereto for rotation therewith by means of a set screw 112. The pulley 110 is connected by an endless V-belt 114 with a second pulley 116, the last named pulley being fixedly secured for rotation on the output shaft 118 of a motor speed reducer 120. The power input shaft 122 of the speed reducer 120 is connected by means of the coupler member 124 of the drive shaft 126 of a conventional reversible electric motor 128. The speed reducer 120 and motor 128 are provided with a suitable mounting plate 130 which is fixedly secured by conventional means to the base 12. As is seen in Figure 1 of the drawings, the gear rack 78 is aligned with the opening 14 formed in the base 12 whereby as the gear rack is moved vertically downwardly the same will pass freely therethrough.

A plurality of angle iron standards 132 have their upper ends rigidly secured to the housing 36 adjacent the lower corners thereof, and each of the standards 132 are provided with a laterally extending flange 134 at the lower ends thereof which are centrally apertured and threaded to receive therethrough levelling screws 136 having enlarged button heads 138 adapted for engagement with the base 12.

The upper end of the gear rack 78 terminates in an enlarged substantially rectangular flange 140 which extends substantially perpendicular to the longitudinal axis of the rack 78. The flange 140 has fixedly secured thereto, by screws 142, an elongated substantially rectangular platform 144 to the underside of which is mounted, by screws 146, a pair of angular supports 148 on which are mounted guide rollers 150 adapted for engagement with the end walls 42, 44. The gear rack 78 has secured on opposite sides thereof a pair of wedges 152, 154 which are longitudinally spaced from each other. The wedges 152, 154 are substantially cam shaped, and as is seen in Figure 2 of the drawings, the wedge 152 is adapted to engage the roller 68 mounted on the switch lever 64 as the

gear rack 78 descends. The wedge 154 is adapted to engage the roller 70 mounted on the switch lever 66 as the gear rack 78 is moved vertically.

Referring to Figure 4 of the drawings it is seen that the micro switches 60, 62 each comprise a pair of fixed switch contacts 60A, 60B and 62A, 62B which are adapted to be engaged by and disengaged from switch arms 60C, 62C, respectively. The switch arms 60C, 62C are adapted to be engaged by the levers 64, 66 to open and close electric circuits to the reversible motor 128. In Figure 4, these micro switches 60, 62 are illustrated as being under the control of a hand switch designated, in general, by the reference numeral 156 which is of the single-pole double-throw type and includes the switch arms 158 and two fixed switch contacts 160, 162.

With the switches in the position shown, and assuming that the plug 164 is connected with a source of suitable electric energy, current will flow through the line 166, the switch arm 158, fixed switch contact 160, wire 168, fixed switch contact 60B, the switch arm 60C, the fixed switch contact 60A, the wire 170 to one side of the motor 128. The other side of the motor is connected through wire 172 with the other side of the source of current.

Under these conditions, the platform 144 and the gear rack 78 are moved downwardly in the direction indicated by the arrow 174. As the wedge 152 engages the roller 68, the switch arm 60C is moved out of engagement with the fixed switch contacts 60A, 60B thereby opening the current to the motor 128 and halting the descent of the platform 144.

Should it now be desired to elevate the platform 144, the switch arm 158 is moved from the position shown in full lines in Figure 4 to its dotted line position to engage the fixed switch contact 162. The micro switch 62 being closed, current now flows through the line 166, switch arm 158, fixed switch contact 162, wire 176, the fixed switch contact 62A, switch arm 62C, fixed switch contact 62B, and wire 178 to one side of the motor 128. The other side of the motor 128 is connected with the other side of the source of energy through the wire 172.

Thus the motor 128 is energized in the opposite direction and causes the elevation of the gear rack 78, the elevation being continued until the wedge 154 engages against the roller 70 mounted on the switch lever 66 to effect movement of the switch arm 62C away from engagement with the fixed switch contacts 62A, 62B which deenergizes the motor 128 and halts the upward movement of the gear rack 78.

In operation, let it be assumed that the platform 144 has been lowered to its lowermost position, in which case the switch arm 158 will be in its full line position shown in Figure 4 and the switch arm 60C will have been moved out of engagement with the fixed switch contacts 60A, 60B.

The grocery checker selects a paper bag from one of the compartments 30, 32 and inserts it within the housing 36. The bottom of the paper sack, of course, is engaged against the platform 144. For convenience, the top of the sack protrudes approximately two inches above the top wall 22 of the grocery checking stand 10. Thereafter, the checker sacks the customer's groceries and other articles and when the sack is full, the checker moves the

switch arm 158 from its full line position shown in Figure 4 to its dotted line position thereby energizing the motor 128 to cause the platform 144 to move upwardly in the housing 36. As the platform 144 becomes substantially flush with the upper surface of the top wall 22, the switch arm 62C breaks its engagement with the fixed switch contacts 62A, 62B to deenergize the motor 128 in the manner hereinbefore described.

The paper bag, together with the groceries packed therein, may be now easily removed from the grocery checking stand, and immediately thereafter the switch arm 158 is returned to its full line position shown in Figure 4 to reenergize the motor 128 so that the platform 144 is moved downwardly within the housing 36 until the switch arm 60C is moved out of engagement with its fixed switch contacts 60A, 60B thereby opening the circuit to the motor 128 and effecting a deenergization thereof.

Thus it is seen that as the checker removes the groceries from the customer's basket he checks and places them in the sack previously placed in the machine, so that when the checking is completed the groceries are already sacked and ready to go, thus saving the time and expense of an additional employee or of the checker himself in sacking the groceries after they are checked.

Having described and illustrated one embodiment of this invention in detail, it is to be understood that the same is offered merely by way of example, and that this invention is to be limited only by the scope of the appended claim.

What is claimed is:

In combination with a grocery checking machine having a base and a top wall provided with an opening extending transversely therethrough, a grocery sacking machine, said machine comprising an elongated housing having a pair of vertically spaced open ends, said housing having the upper end thereof received within said opening with the upper edge thereof flush with the upper surface of said top wall, means fixedly secured to the lower ends of said housing and engaging said base to support said housing in an elevated position relative to said base, a platform mounted within said housing for reciprocation from a position flush with said top wall to a position spaced therebelow, a gear rack having one of its ends fixedly secured to said platform with the other end thereof depending therefrom, said base having an opening formed therein aligned with said rack to receive the depending end thereof therethrough as said platform descends in said housing, guide rollers on said platform engaging said housing for guiding the movement of said platform, a shaft journaled for rotation on said housing adjacent the lower open end thereof, a gear wheel mounted for rotation with said shaft and meshing with said gear rack, and means supported on said base and connected with said shaft to effect selective rotation thereof in either direction.

References Cited in the file of this patent

UNITED STATES PATENTS

1,271,314	Helson	July 2, 1918
1,330,927	Watkins	Feb. 17, 1920