

[54] **MANUAL LABELLING APPARATUS**

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 [51] **Int. Cl.²** **B65B 67/10; A47F 10/00**
 [58] **Field of Search** **156/536, 539, 538, 584,**
 156/542, DIG. 48; 53/137, 390; 269/15;
 108/25, 50, 28; 248/130, 128, 131; 426/106,
 129; 312/197, 202

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[57] **ABSTRACT**

Labelling apparatus adapted to facilitate the manual application of labels to packages. The apparatus includes a rotatably mounted, tub-like, open receptacle which may be positioned at the end of a conveyor to receive packages and may include a motor for rotating the receptacle about a substantially vertical axis to insure a fairly even distribution of the packages within the receptacle. A labelling table is supported above the receptacle by means of a U-shaped frame and is dimensioned and positioned with respect to the open mouth of the receptacle such that ready access to the receptacle is provided, thereby facilitating withdrawal of packages manually from the receptacle and positioning them on the labelling table. A label dispenser is mounted above the labelling table within convenient reach of the operator so that labels can be withdrawn manually from the dispenser and readily applied to packages positioned on the labelling table.

9 Claims, 4 Drawing Figures

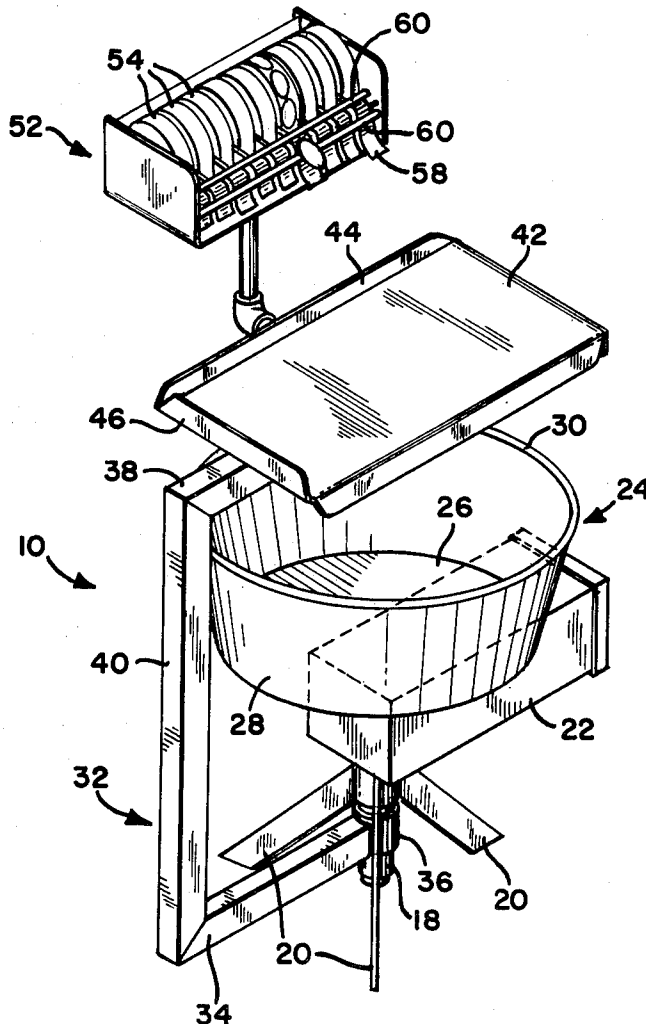


FIG-1

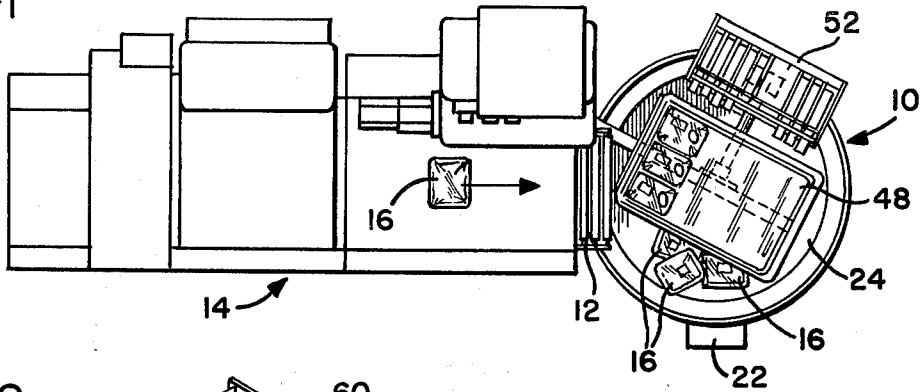


FIG-2

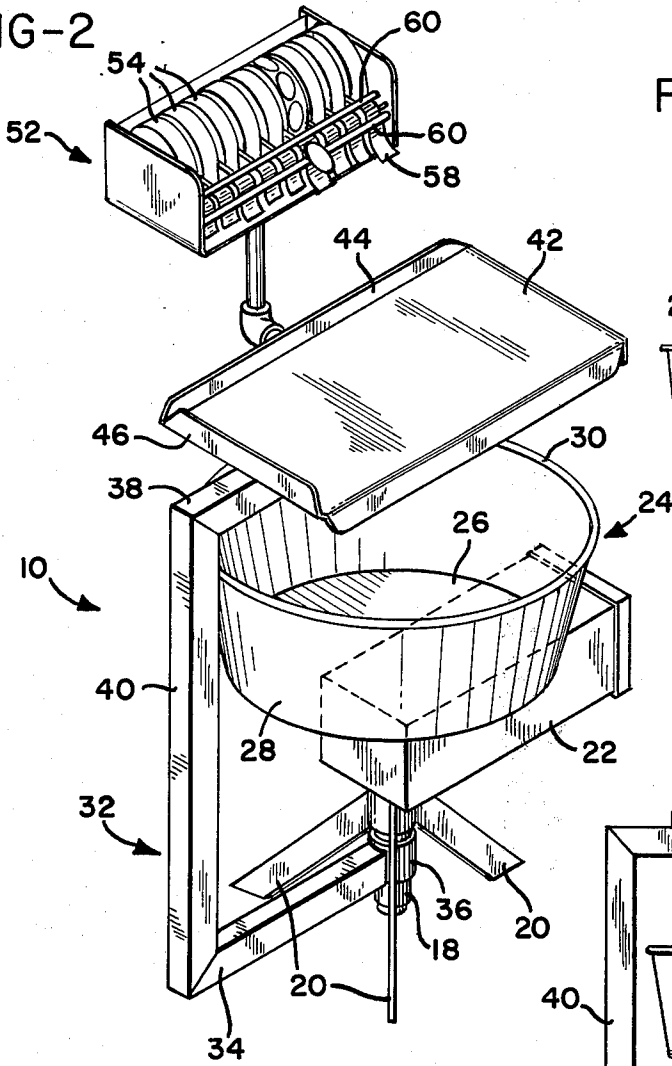


FIG-3

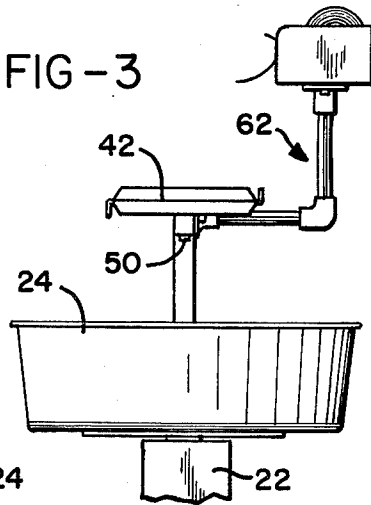
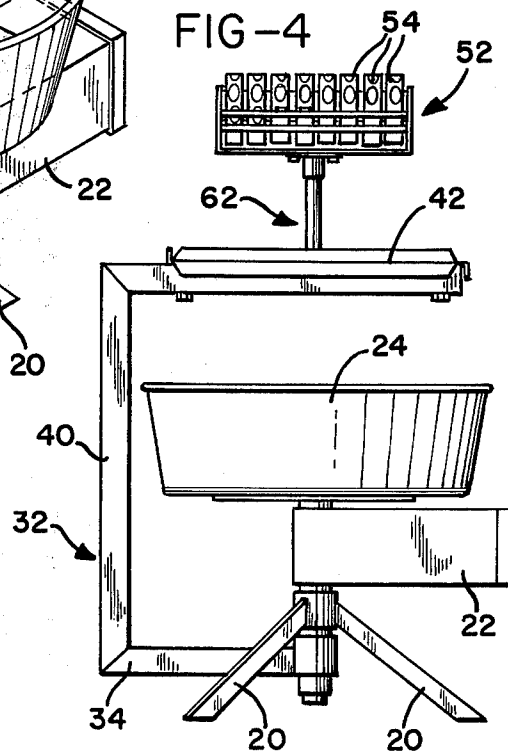


FIG-4



MANUAL LABELLING APPARATUS

BACKGROUND OF THE INVENTION

In the packaging of many articles, even though the weighing of the packages and labelling with weight and price information is carried out automatically, it is often desirable to thereafter place various additional labels to the prepackaged and labelled products. For example, in packaging meat products for retail sales, after the weight and price label is applied to the wrapped packages it is often desirable to apply various labels indicating that certain cuts are suitable for barbecuing, etc. Such labels are often carried in roll form on a continuous backing strip, with the rolls being placed in a dispenser which allows the labels to be withdrawn and automatically peeled from the backing strip.

Despite the advantages provided by dispensers of this type, the flow of packages from the packaging and pricing line may often proceed at a rate such that it is difficult for an operator to pick up each package coming off the conveyor, apply a label to the package and then position it on a tray to be carried out to the display case where the products are to be sold and to perform these operations at an efficient rate of speed. Such operations are, in fact, usually rather inefficient and unduly time consuming.

SUMMARY OF THE INVENTION

The present invention provides a manual labelling apparatus which may be positioned at the end of a conveyor line leading from a packaging and pricing machine to receive the packages in a manner such that they are readily accessible for positioning on a labelling table having a label dispenser positioned adjacent to it.

Thus, packages can be removed from the receptacle, positioned in a layer on a tray on the labelling table, and a series of labels withdrawn from the label dispenser and manually applied to each of the packages. This operation may be repeated until several layers of packages are positioned on the tray, which is thereafter removed from the table and replaced by another.

The apparatus includes a supporting base which rotatably mounts the receptacle on an upper end of the base and a motor or the like may be utilized to provide rotation of the receptacle and an even distribution of the packages within the receptacle. A framework for the labelling table extends from beneath the receptacle upwardly and over the receptacle. As a result, the floor space occupied by the entire apparatus is approximately the same as that that would be occupied by the receptacle alone.

The size of the labelling table and the manner in which it is positioned above the receptacle permit ready access to the receptacle to facilitate removal of the packages from the receptacle and positioning of the packages on the labelling table. In a preferred embodiment of the invention the labelling table is of substantially rectangular configuration and the receptacle has an upstanding cylindrical side wall.

The table is then positioned with respect to the receptacle such that it is above the upper edges of the cylindrical side wall of the receptacle yet positioned inwardly thereof to facilitate, as noted above, removal of the packages from the receptacle and positioning of the packages on the table.

It will be apparent that access to the receptacle could also be facilitated by positioning an edge of the labelling table with respect to the cylindrical side wall of the receptacle such that there is a space therebetween, even though the dimensions of the table in a horizontal plane were greater than the diameter of the receptacle.

Regardless, it will be seen that the present invention provides apparatus which occupies a minimum of floor space and facilitates the manual application of labels to packages on a relatively high volume basis.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a plan view illustrating the relationship of apparatus in accordance with the present invention to a typical source of packages to be labelled;

FIG. 2 is a perspective view of the labelling apparatus of the present invention;

FIG. 3 is a side view of a portion of the apparatus of FIG. 2; and

FIG. 4 is a front view of the apparatus.

DESCRIPTION OF THE PREFERRED EMBODIMENT

As seen in FIG. 1 of the drawings, in a typical installation the manual labelling apparatus 10 of the present invention is positioned at the downstream end of a conveyor 12 associated with weighing and labelling mechanism 14. Thus, after the package, usually prewrapped, is weighed, the total price computed and a sticker bearing the weight, unit price, and total price applied to the package, the package is delivered by the conveyor 12 to the apparatus 10.

Turning now to FIG. 2 of the drawings, it will be seen that the apparatus 10 includes a pedestal base, including an upright vertical column 18 and three downwardly and outwardly extending supporting legs 20 equally spaced about the vertical column 18. While three legs are shown for purposes of illustration it will be apparent that any number can be used that will provide a stable support.

A motor 22 is mounted on the base assembly and drives a receptacle 24 for rotation about a substantially vertical axis. The receptacle 24 is of substantially tub-like configuration, having a bottom wall 26 and a side wall 28 having an upper edge 30.

A substantially U-shaped supporting frame 32 includes a lower, substantially horizontally oriented leg 34 attached by means of a collar 36 to the vertical column 18, an upper, substantially horizontal leg 38 and a substantially vertical oriented leg 40 interconnecting legs 34 and 38.

A labelling table 42 is provided having a substantially rectangular configuration and including upstanding rear and end walls 44 and 46, respectively, which serve to align trays 48 (see FIG. 1) positioned thereon. The length and width of the table 42 are less than the diameter of the receptacle 24 and the table 42 is bolted, as at 50, FIG. 3 of the drawings, to the upper leg 38 in a manner such that table 42 is positioned above the upper edge 30 of the receptacle substantially centrally thereof inwardly of the side wall 28, as best seen in FIGS. 1, 3 and 4 of the drawings.

A dispenser 52, which may be of conventional design, carries a series of rolls 54 of labels 56 carried on backing strips 58 and threaded about rods 60 which allow the labels 56 to be separated from the backing strips as they are removed from the dispenser. A sub-

stantially L-shaped frame 62, as seen in FIG. 3, is attached to the upper leg 38 beneath the table 42 substantially centrally of the ends thereof and carries the dispenser 52 on its upper end.

From the above description it will be apparent that as packages 16 are conveyed to the rotating receptacle 24 they will be distributed fairly uniformly within the receptacle. An operator standing adjacent the receptacle 24 and facing the dispenser 52 is provided with ready access to the receptacle, thereby facilitating the removal of the packages 16 therefrom and the positioning thereof in layers on a tray 48 positioned on the table 42.

Ready access to packages in the receptacle is obtained by proper positioning of the table 42 with respect to the receptacle 24, and in a preferred embodiment of the invention, the dimensioning of the table 42, such that it is unnecessary for the operator to reach beneath the table to gain access to the receptacle 24.

From the above it will be apparent that the present invention provides labelling apparatus for facilitating the manual application of labels to packages on an efficient, fairly high volume basis.

While the form of apparatus herein described constitutes a preferred embodiment of the invention, it is to be understood that the invention is not limited to this precise form of apparatus, and that changes may be made therein without departing from the scope of the invention.

What is claimed is:

1. Labelling apparatus comprising a support base, an open, package receiving receptacle having a substantially cylindrical side wall, means rotatably mounting said receptacle on said supporting base, a labelling table having dimensions in a horizontal plane less than the dimensions of the opening into said open receptacle, and means extending from said base to a point above said receptacle and suspending said labelling table over said open receptacle with said table suspended above upper edges of said receptacle side walls, but inwardly of said receptacle side wall upper edges, to provide ready access to the interior of said receptacle adjacent said side wall thereof, thereby facilitating manual transfer of packages from said receptacle to said table.

2. The apparatus of claim 1 further comprising dispensing means positioned adjacent said table for holding a supply of labels to be applied to packages placed on said table.

3. The apparatus of claim 2 wherein said dispensing means is positioned adjacent said table by means extending from said table mounting means and carrying said dispensing means.

4. The apparatus of claim 1 wherein said receptacle mounting means mounts said receptacle for rotation

about a substantially vertical axis.

5. The apparatus of claim 1 wherein said table mounting means includes a substantially U-shaped frame extending from beneath said receptacle and around and above said receptacle.

6. The apparatus of claim 1 further comprising means for rotating said receptacle with respect to said base.

7. The apparatus of claim 1 wherein said table is positioned substantially centrally of said receptacle.

8. Labelling apparatus comprising a pedestal supporting base including a substantially vertically disposed central column and outwardly and downwardly extending, triangularly arranged supporting legs, a tub-like receptacle having a substantially cylindrical side wall rotatably mounted on an upper end of said vertical column, means for rotating said receptacle on said column, a substantially U-shaped frame including upper and lower substantially horizontally oriented legs and a substantially vertically oriented interconnecting leg extending between said upper and lower legs, means attaching an inner end of said lower horizontal leg to said vertical column beneath said receptacle, a substantially rectangular table having a length and a width each less than the diameter of said receptacle, and means mounting said table on said upper horizontally disposed leg above upper edges of said substantially cylindrical side wall of said receptacle and inwardly thereof.

9. Labelling apparatus comprising a pedestal supporting base including a substantially vertically disposed central column and outwardly and downwardly extending, triangularly arranged supporting legs, a tub-like receptacle having a substantially cylindrical side wall rotatably mounted on an upper end of said vertical column, means for rotating said receptacle on said column, a substantially U-shaped frame including upper and lower substantially horizontally oriented legs and a substantially vertically oriented interconnecting leg extending between said upper and lower legs, means attaching an inner end of said lower horizontal leg to said vertical column beneath said receptacle, a substantially rectangular table, means mounting said table on said upper horizontally disposed leg above upper edges of said substantially cylindrical side wall of said receptacle and inwardly thereof, the length and width of said table being less than the diameter of said receptacle, a label dispenser for holding a supply of labels to be applied to packages placed on said table, a substantially L-shaped support having one end thereof attached to said upper horizontal leg of said substantially U-shaped frame beneath said table intermediate the ends thereof, and means attaching said label dispensing means to an opposite end of said L-shaped support.

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