Nov. 10, 1959 G. E. COLE 2,912,140

LABEL DISPENSER

Filed March 7, 1957

Fig. 1.

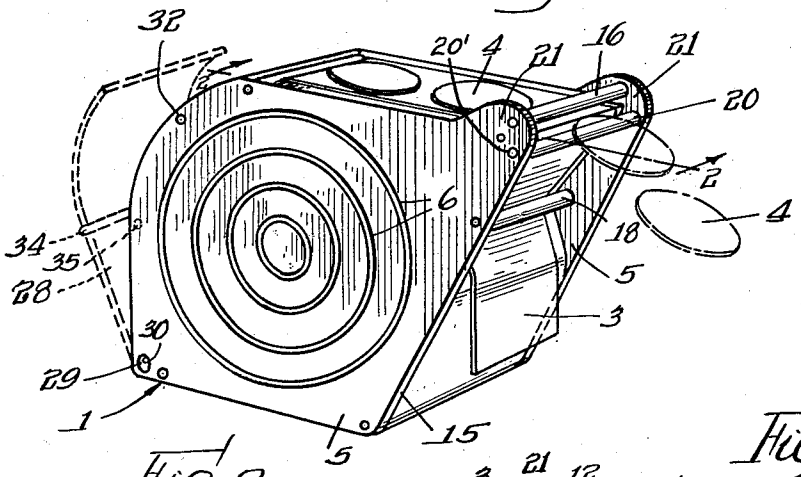


Fig. 2.

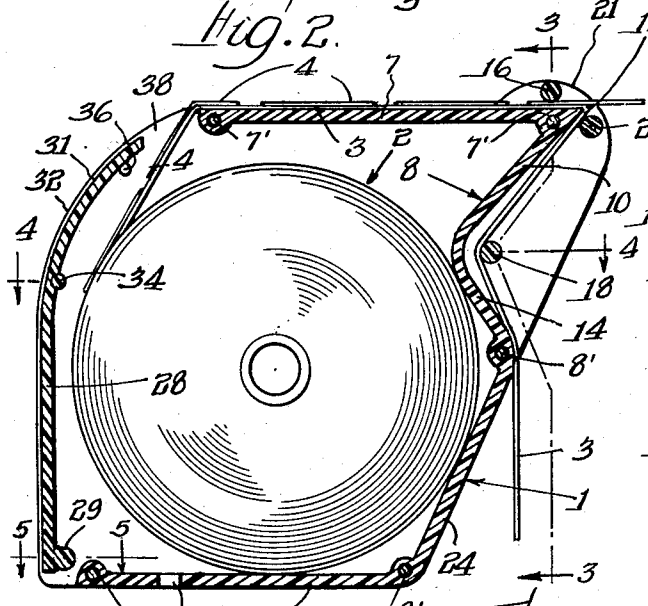


Fig. 3.

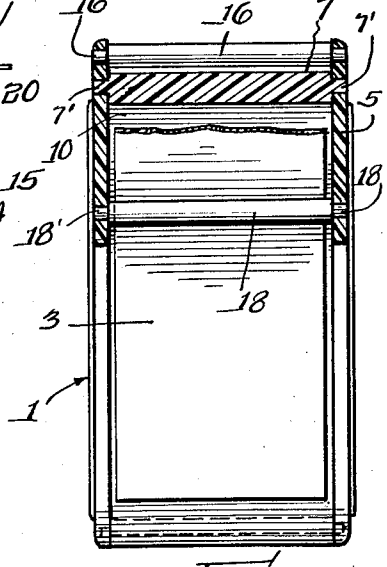


Fig. 4.

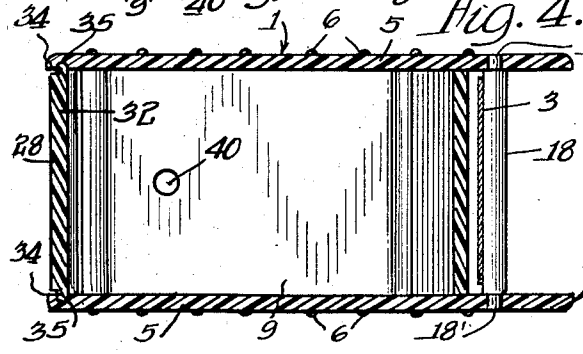
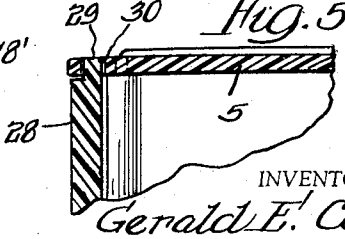


Fig. 5



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LABEL DISPENSER

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5 Claims. (Cl. 221—70)

This invention relates to an improved manual dispenser for labels of the type attached to a backing strip by a pressure-sensitive adhesive which enables the labels to be peeled off the strip.

Many different types of label dispensers have been heretofore designed to dispense these labels from the strip. These usually included a stripping or peeling edge around which the backing strip is bent, with the labels being on the upper or outer surface of the strip. In such case, and particularly if the backing strip is more flexible than the labels, the forward end of the front label separates from the strip at the point that the backing strip sharply bends around the stripping edge. Usually, a label separating means is provided immediately in front of the stripping edge upon which the portion of the label just separating from the strip can bear to aid in the peeling of the rest of the label from the backing strip. Additionally, there is sometimes provided adjacent to the stripping edge a guide or pressure means at or immediately behind the stripping edge for keeping the backing strip close to the stripping edge.

Some of these dispensers are made for mechanical feeding of the strip around the stripping edge by manual-operated levers or motor means and others are made for hand feeding of the strip by grasping the front end of the backing strip and pulling the strip around the stripping edge.

The primary object of the invention is to provide an improved label dispenser of the hand-feeding type having the above-mentioned features found in label dispensers generally, which improved dispenser is of much simpler and hence of less expensive construction than dispensers of a similar type heretofore available.

Another object of the invention is to provide a label dispenser of the hand-feeding type which is much simpler to load and to use than prior devices of a similar type so that practically any person can load and operate it without difficulty.

Still another object of the invention is to provide in a single dispenser features resulting in both simplicity of construction and simplicity in loading and operating the same.

In accordance with the most preferred form of the invention, the dispenser comprises a housing for holding a roll of said label strip and having externally ribbed vertical side walls spaced to provide a narrow housing body to fit easily in the crotch of the user's hand. The ribbing minimizes slippage between the fingers of the hand grasping the dispenser when the front end of the backing strip is pulled by the other hand to unwind a section of the label strip in a label-dispensing operation. The housing has a generally horizontal strip-supporting top wall extending between the upper extremities of the side walls, and, at the front end the top wall, joins a front wall of the housing which in the upper portion thereof has a sharply rearwardly, downwardly inclined guide wall portion which extends at an acute angle with the housing top wall to form a generally forwardly facing, horizontal stripping edge and contiguous sharply angled, strip-holding guide surfaces along which the backing strip of the label roll may be extended. Said uppermost rearwardly inclined wall portion merges with a forwardly extending wall portion.

The backing strip of the label roll is constrained to follow the contour of said stripping edge by a pair of widely spaced apart, generally cylindrical horizontal guide bars extending between extensions of said housing side walls projecting beyond said guide surfaces. One of these bars, to be sometimes referred to as a top guide bar, is spaced a small distance above said top wall at or more preferably slightly behind said stripping edge, the space therebetween being enough to provide clearance for relatively free passage of the label strip thereunder while holding the strip close to the stripping edge. The other guide bar, to be sometimes referred to as a strip-reversing bar, is located appreciably behind and below said guide bar and preferably spaced a small distance from the crotch of the concavity formed at the juncture of said upper, rearwardly extending front wall portion and said forwardly extending front wall portion. The two guide bars normally hold the front section of the backing strip unwound from the label roll in a somewhat taut condition while following generally the contour of said various above-mentioned guide walls or surfaces beneath and behind said guide bars. Consequently, the user, by pulling only slightly on the very end of the backing strip in any direction, causes the backing strip to tightly hug and move around said stripping edge to readily peel off the front label then located just at or behind the stripping edge.

The housing has a third, preferably cylindrical bar, to be sometimes referred to as a label separator bar, located slightly in front and at about the same elevation as said stripping edge, which supports the portion of the label peeling away from the backing strip at the stripping edge. This bar, as in the case of the guide bars, is supported between extensions of the side walls.

The housing further has a bottom wall which joins the bottom of the housing front wall and a hingedly mounted, rear wall which provides a large opening through which the label roll can be inserted into the dispenser housing. The rear wall is lockable in its closed position by any suitable fastening means. The upper end of the rear wall in its closed position is preferably spaced from the rear end of said housing top wall to provide a slot or opening for passage of the label strip end unwound from the label roll. The label strip passes under said top guide bar around said stripping edge and behind said strip-reversing bar beneath and behind said stripping edge at the front wall of the housing.

The above-mentioned one piece dispenser construction, except for the hinged rear wall, need have no moving parts and can be made entirely from molded plastic parts. Moreover, the arrangement of the various bars and wall surfaces is such that any person can load and string the label strip properly through the readily visible exterior portions thereof. Furthermore, only a slight pull in any direction of the end of the backing strip of the label roll will dispense a label by the peeling action above-mentioned.

Other objects, advantages and features of the invention will become apparent upon making reference to the specification to follow and the drawings wherein:

Fig. 1 is a perspective view of a label dispenser constructed in accordance with the present invention;

Fig. 2 is a vertical longitudinal sectional view through the label dispenser in Fig. 1, taken along section line 2—2 therein;

Fig. 3 is a sectional view along section line 3—3 in Fig. 2;

Fig. 4 is a horizontal sectional view of the dispenser taken along section line 4—4 in Fig. 2, and

Fig. 5 is a fragmentary horizontal sectional view, taken along section line 5—5 in Fig. 2.

Referring now to the drawings, the preferred form of the invention illustrated comprises a housing, generally indicated by the reference numeral 1, containing a roll of labels including a suitable backing strip 3 upon which labels 4, carrying a backing of a pressure-sensitive adhesive, are secured by their own adhesive backing. The backing strip and labels may be made in any well-known manner and per se form no part of the present invention.

The housing 1 is preferably entirely made from molded plastic parts and includes side walls 5—5 having concentric circular ribbing 6 extending from the exterior surfaces thereof, and top, front and bottom walls 7, 8 and 9, respectively, secured to the side walls by lateral pins 7', 8' and 9' extending from the walls 7, 8 and 9 and fitting into corresponding holes in the side walls to form an integral housing unit. The various pins may be cemented, fused or otherwise fixed to the defining walls of the corresponding openings in the housing side walls. As illustrated in the drawings, the top, front and bottom walls are made as an integral molded unit.

The top housing wall 7 at its front end merges with a sharply rearwardly, downwardly inclined upper front wall portion 10 to form a horizontally disposed, forwardly facing stripping edge 12 which is rounded preferably to a radius of about 0.010" to prevent tearing of the backing strip. The top wall 7 and the upper front wall portion 10 make an acute angle, preferably less than 45 degrees. This uppermost wall portion merges with a reversely or forwardly extending wall portion 14 at a point spaced appreciably below and to the rear of the stripping edge 12. The housing side walls 5—5 extend appreciably beyond the top wall and the front wall portions 10 and 14 to form support extensions for a number of horizontal cylindrical bars, namely bars 16, 18 and 20.

The front edges of the side walls 5—5 lie preferably in a plane which inclines rearwardly in a downward direction and the upper extremities of the front edges of the side walls merge with rounded projecting portions 21—21 which merge with the lower horizontal upper edges of the side walls 5—5. A bottom front wall portion 24 extending from the forward end of front wall portion 24 extends flush with the downwardly and rearwardly inclined front edges of the side walls 5—5. The bottom housing wall 9 is parallel to the top wall 7 and extends from the bottom of the inclined front wall portion 24.

Extending between the side wall front projecting portions 21—21 at points slightly above the top wall 7 and to the rear of the stripping edge 12 is the bar 16, to be referred to as a top guide bar. The bar is held in place between the side walls by lateral pins 16'—16' cemented or fused to the defining walls of complementary holes in the side walls. The spacing between this bar and the top wall 7 is such that the label strip will be held close to the top wall contiguous to the stripping edge 12 while enabling relatively free longitudinal movement of the label strip thereunder.

Extending between the side wall extensions at a point near the crotch of the concavity formed at the juncture of the rearwardly and forwardly extending front wall portions 10 and 14 is the bar 18, to be referred to as a strip-reversing bar. This bar, which is similarly connected to the side walls 5—5 by pins 18'—18' cemented or fused into complementary side wall holes, is positioned an appreciable distance below and rearwardly of both the stripping edge 12 and the guide bar 16.

Extending between the side wall extensions slightly in front of the upper extremity of the front wall portion 10 is the bar 20, to be referred to as a separator bar, which is similarly held between the side walls by pins 20'—20' cemented or fused into complementary side wall holes.

The top surface of this bar is shown slightly below the stripping edge 12, and the inner surface of the bar is spaced from the upper front wall portion 10 at approximately the same distance as the guide bar 16 is spaced from the top wall 7.

The housing 1 has a rear opening extending substantially the entire height of the housing, the opening being normally closed by a rear wall 28 hinged to the rear end of the housing side walls 5—5. The hinge comprises cylindrical extensions 29—29 extending laterally from a ribbed portion at the bottom of rear wall 28 which extensions fit into corresponding holes 30—30 formed at the bottom rear corners of the housing side walls 5—5. The rear wall has a curved upper portion 31 of a corresponding shape to curved rear edges 32—32 of the housing side walls. The rear wall is held in a closed position where it is flush with the rear edges of the side walls by any suitable fastening means, preferably by laterally extending rounded nibs 34—34 located in a central portion of the rear wall which nibs fit into corresponding recesses 35—35 formed on the inner surfaces of the housing side walls. The housing side walls are sufficiently flexible that the nibs 34—34 can cam apart the side walls to enable the nibs to snap into the recesses 35—35. The resiliency and flexibility of the side walls likewise enable the spreading thereof to an extent where the bottom rear wall extensions 29—29 may slide along the inner surfaces of the side walls where they can snap into the holes 30—30 therein.

The upper free end of the rear housing wall in its closed position is backed by short, inwardly extending cylindrical projections 36—36 formed integrally with the housing side walls. The upper end of the rear wall 28 in the closed position thereof is spaced from the rear end of the housing top wall 7 to provide an opening 38 through which the label strip may extend from the roll 2 within the housing.

In loading the dispenser with the label roll 2, the rear housing wall 28 is pivoted back out of the way so that the roll may be placed into the housing interior. The width of the roll is preferably slightly less than the spacing between the housing side walls and the shape of the interior surfaces of the housing is such that a full cylindrical roll of label strips substantially but not completely fills most of the housing interior, as shown most clearly in Fig. 2.

To string the label strip through the dispenser, the label strip is partially unwound from the roll and the unwound portion is extended through the opening 38, over the top wall 7, around the stripping edge 12, passing under the guide bar 16 and behind the separator bar 20, and then behind the strip-reversing bar 18. The portion of the label strip below the stripping edge 12 initially may be devoid of labels since the labels are peeled from the backing strip only at the stripping edge 12. Upon the application of a slight pull on the portion of the backing strip projecting below forwardly extending front wall portion 14, the label strip is held in a substantially taut condition so that a small additional force will unwind the roll and move the label-carrying portion of the backing strip around the stripping edge 12 to separate the front label from the backing strip by a peeling action, as shown most clearly in Fig. 2. The separator bar by providing support for the label strip immediately in front of the stripping edge inhibits the sagging of the front label and aids in maintaining a stripping or separating force between the label and backing strip until the label has been completely peeled therefrom. It should be noted that the label strip will advance easily no matter what direction the bottom of the backing strip is pulled. Thus, the arrangement of the various parts of the dispenser is such that the manner in which the backing strip is to be threaded through the dispenser can be simply explained.

The dispenser may be held in the crotch of one hand while the other hand applies a small pulling force to the

end of the backing strip, the concentric circular ribs 6 on the side walls providing a ready gripping surface. Alternatively the dispenser housing may be anchored to any support surface by means of a screw or other fastening means, not shown, which extends through a hole 40 formed in the bottom wall of the dispenser housing.

As is now apparent, the simplicity of construction of the dispenser of the invention is such that it can be fabricated very cheaply, completely from molded plastic parts, while at the same time being rugged and easy to load and operate.

It should be understood that numerous modifications may be made of the preferred form of the invention above described without deviating from the broader aspects of the invention.

I claim as my invention:

1. A device for dispensing labels from a backing strip upon which the labels are mounted with a pressure-sensitive adhesive backing on the labels, the labels being adapted to be peeled away from the backing strip by sharply reversely bending the backing strip, the improvement comprising: a housing which contains a roll of such a label strip, said housing having upstanding side walls, an exposed top wall extending between said side walls, a front wall portion extending downwardly and rearwardly from the front end of said top wall and forming therewith a horizontally disposed, forwardly directed stripping edge, said housing side walls having upper extensions above said top wall adjacent to the stripping edge, a horizontal guide bar supported between said upper side wall extensions slightly above the top wall at or slightly behind said stripping edge for guiding the label strip close to the top wall at the stripping edge, and a horizontal strip-reversing bar supported between said side walls substantially below and behind the stripping edge, said label strip extending over said top wall with the labels being arranged at the top of the label strip, the backing strip thereof extending beneath said guide bar around the stripping edge and around the back of said strip-reversing bar.

2. A device for dispensing labels from a backing strip upon which the labels are mounted with a pressure-sensitive adhesive backing on the labels, the labels being adapted to be peeled away from the backing strip by sharply reversely bending the backing strip, the improvement comprising: a housing which contains a roll of such a label strip, said housing having upstanding externally ribbed side walls relatively closely spaced so as to support a narrow label strip roll and to fit comfortably in the crotch of the user's hand, an exposed top wall extending between said side walls, a front wall portion extending downwardly and rearwardly from the front end of said top wall and forming therewith a horizontally disposed, forwardly directed stripping edge, said housing side walls having upper extensions above said top wall adjacent to the stripping edge, a horizontal guide bar supported between said upper side wall extensions slightly behind said stripping edge for guiding the label strip close to the top wall at the stripping edge, and a horizontal strip-reversing bar supported between said side walls substantially below and behind the stripping edge, said label strip extending over said top wall with the labels being arranged at the top of the label strip, the backing strip thereof extending beneath said guide bar around the stripping edge and around the back of said strip-reversing bar.

3. A device for dispensing labels from a backing strip upon which the labels are mounted with a pressure-sensitive adhesive backing on the labels, the labels being adapted to be peeled away from the backing strip by sharply reversely bending the backing strip, the improvement comprising: a housing which contains a roll of such a label strip, said housing having upstanding side walls, an exposed top wall extending between said side walls, a front wall portion extending downwardly and

rearwardly from the front end of said top wall and forming therewith a horizontally disposed, forwardly directed stripping edge, said housing side walls having upper extensions above said top wall adjacent to the stripping edge, a horizontal guide bar supported between said upper side wall extensions slightly above the top wall at or slightly behind said stripping edge for guiding the label strip close to the top wall at the stripping edge, and a horizontal strip-reversing bar extending between said side wall substantially below and behind the stripping edge, said side walls having front extensions in front of said rearwardly extending front wall portion in the vicinity of said stripping edge, a horizontal separator bar supported between said front side wall extensions slightly in front of said stripping edge, said label strip extending over said top wall with the labels being arranged at the top of the label strip, the backing strip thereof extending beneath said guide bar, behind said separator bar to follow generally the contour of the stripping edge, and around the back of said strip-reversing bar.

4. A device for dispensing labels from a backing strip upon which the labels are mounted with a pressure-sensitive adhesive backing on the labels, the labels being adapted to be peeled away from the backing strip by sharply reversely bending the backing strip, the improvement comprising: a housing which contains a roll of such a label strip, said housing having upstanding side walls, an exposed top wall extending between said side walls, said top wall merging with an upper front wall portion extending downwardly and sharply rearwardly from the front end of said top wall and forming therewith a horizontally disposed, forwardly directed stripping edge, a forwardly extending front wall portion merging with said upper, rearwardly extending front wall portion at a point spaced appreciably below and rearwardly of the stripping edge to provide a concavity in the front wall of the housing, said housing side walls having upper extensions above said top wall adjacent to the stripping edge, a horizontal guide bar supported between said upper side wall extensions slightly above the top wall at or slightly behind said stripping edge for guiding the label strip close to the top wall at the stripping edge, said side walls having front extensions in front of said rearwardly and forwardly extending front wall portions, a horizontal strip-reversing bar supported between said front side wall extensions at a point spaced slightly forwardly of the crotch of said front wall concavity, and a horizontal separator bar supported between said front side wall extensions slightly in front of said stripping edge, said label strip extending over said top wall with the labels being arranged at the top of the label strip, the backing strip thereof extending beneath said guide bar, behind said separator bar to follow generally the contour of the stripping edge, and around the back of said strip-reversing bar.

5. A device for dispensing labels from a backing strip upon which the labels are mounted with a pressure-adhesive backing on the labels, the labels being adapted to be peeled away from the backing strip by sharply reversely bending the backing strip, the improvement comprising: a housing which contains a roll of such a label strip, said housing having upstanding side walls, an exposed top wall extending between said side walls, said top wall extending for a major part of the length of the housing, an upper front wall portion extending downwardly and sharply rearwardly from the front end of said top wall and forming therewith a horizontally disposed, forwardly directed stripping edge, a forwardly extending front wall portion merging with said upper rearwardly extending front wall portion at a point spaced appreciably below and rearwardly of the stripping edge to provide a concavity in the front wall of the housing, and a pivotally mounted rear wall whose upper end is spaced from the rear of said top wall to define an opening, means for locking said rear wall in its closed position, the rear wall in its open position uncovering an opening into the dis-

penser housing through which the label strip roll may be inserted into the housing, said housing side walls having upper extensions above said top wall adjacent to the stripping edge, a horizontal guide bar supported between said upper side wall extensions slightly above the top wall at or slightly behind said stripping edge for guiding the label strip close to the top wall at the stripping edge, said side walls having front extensions in front of said rearwardly and forwardly extending front wall portions, a horizontal strip-reversing bar supported between said front side wall extensions at a point spaced slightly forwardly of the crotch of said front wall concavity, a horizontal separator bar supported between said front side wall extensions slightly in front of said stripping edge, and said label strip extending through said opening at the rear of said top wall and over said top wall with the labels

being arranged at the top of the label strip, the backing strip thereof extending beneath said guide bar, behind said separator bar to follow generally the contour of the stripping edge and around the rear of said label-reversing bar.

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