

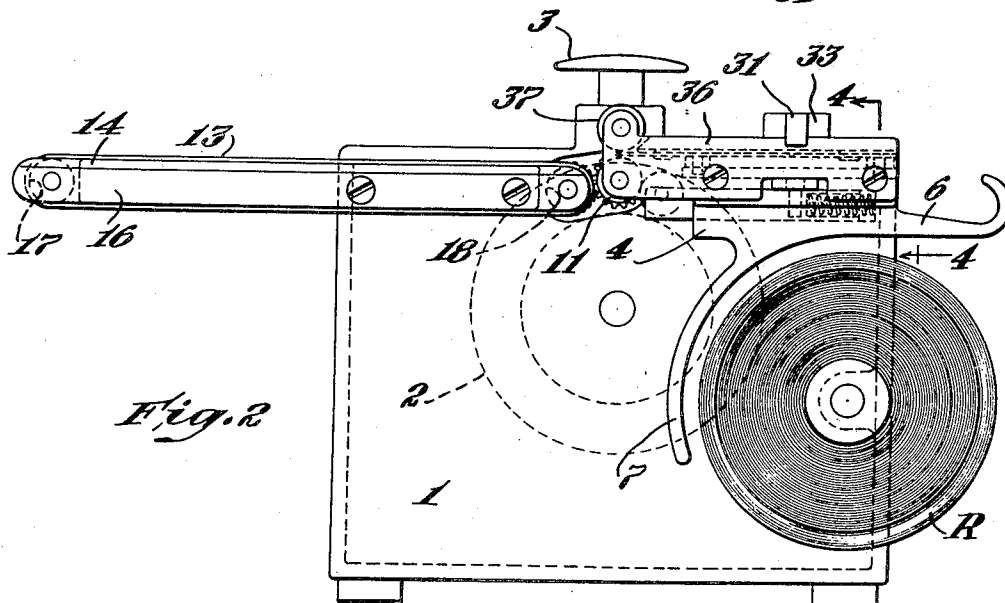
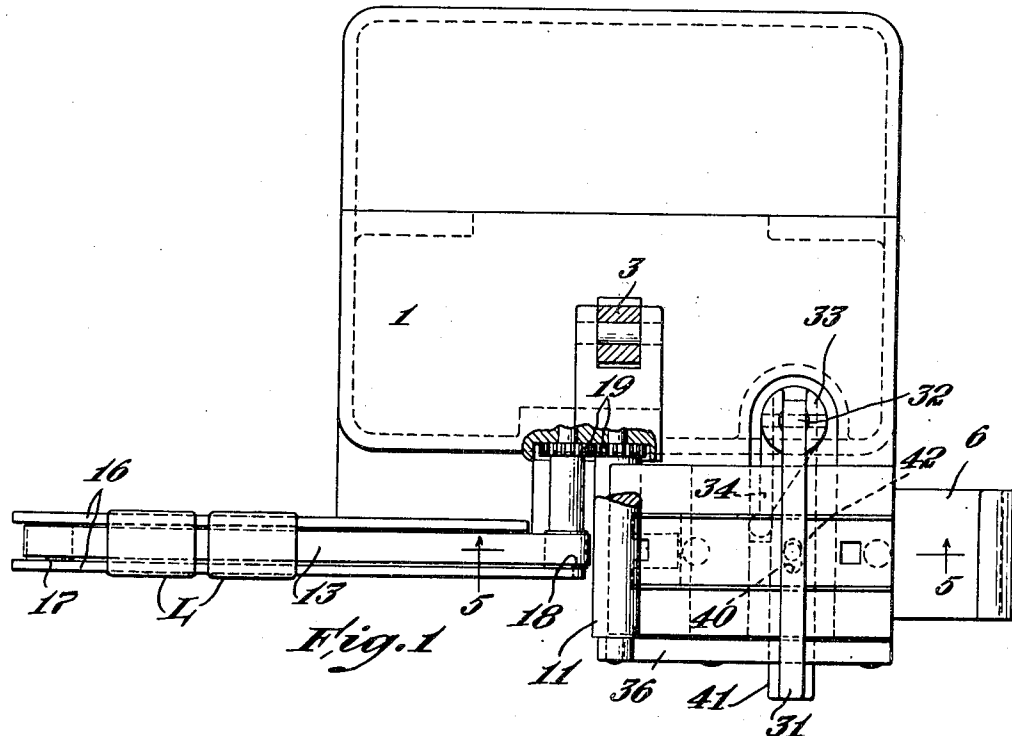
Oct. 18, 1949.

C. A. FLOOD
LABEL DISPENSER

2,484,880

Filed June 30, 1944

5 Sheets-Sheet 1



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5 Sheets-Sheet 2



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5 Sheets-Sheet 3

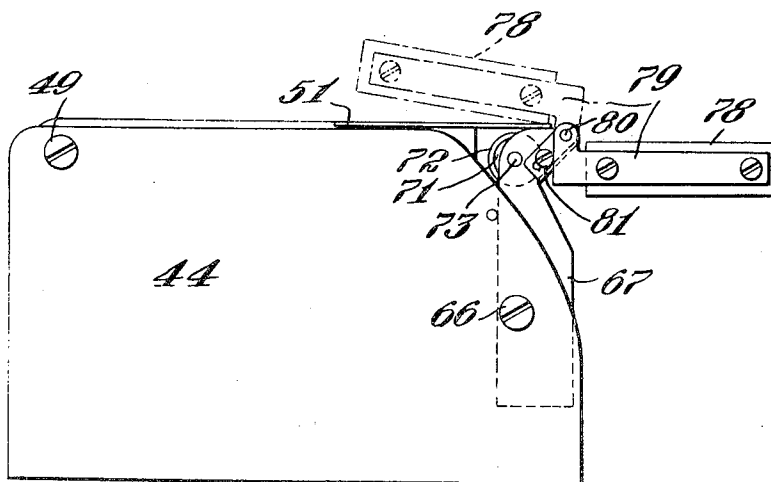
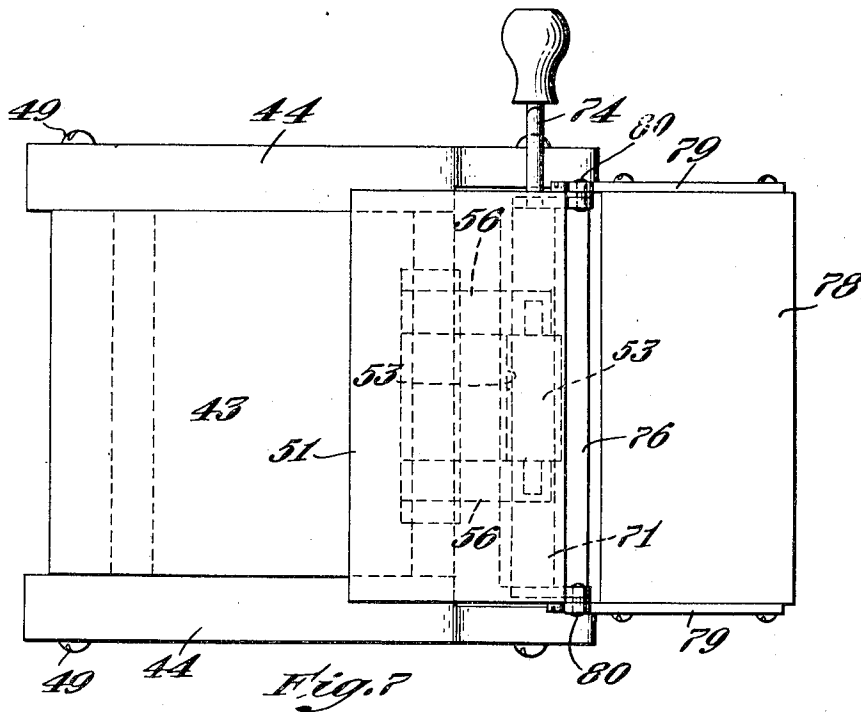


Fig. 8

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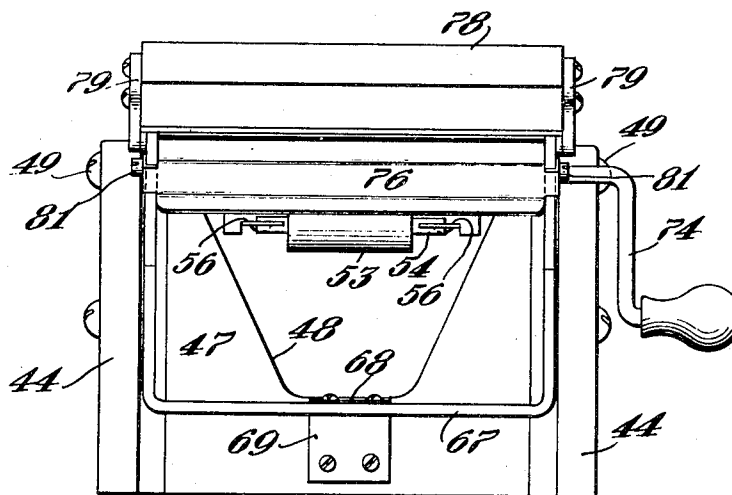


Fig. 9

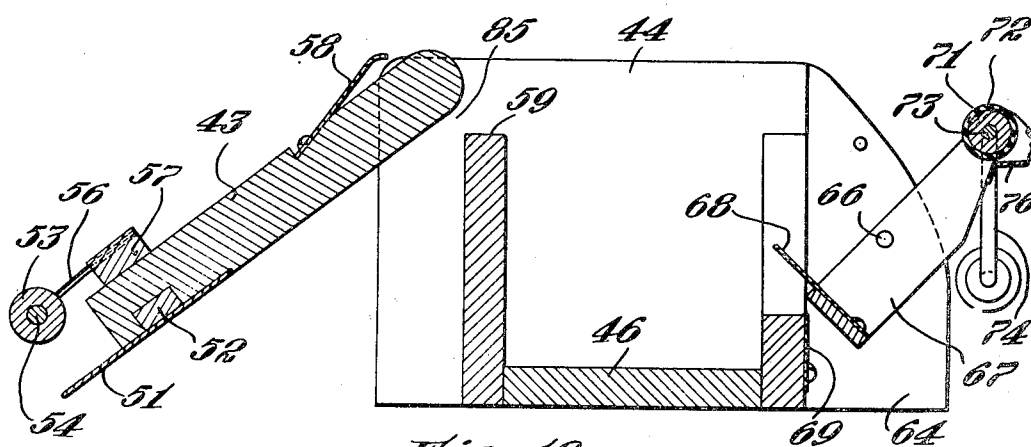


Fig. 10

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5 Sheets-Sheet 5

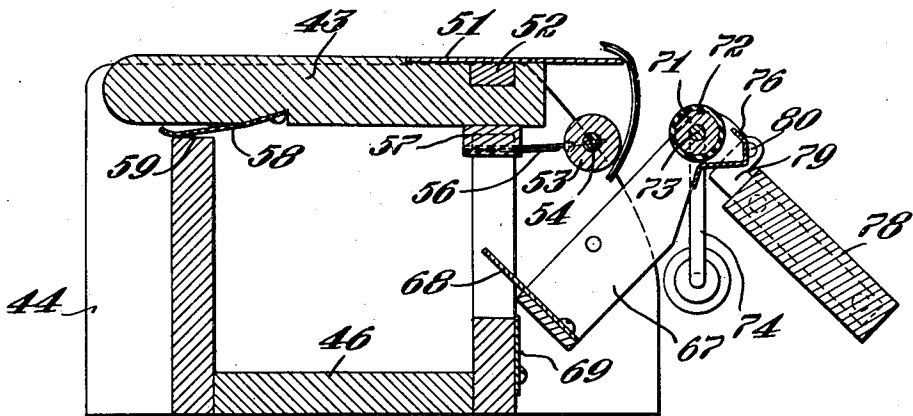


Fig. 11

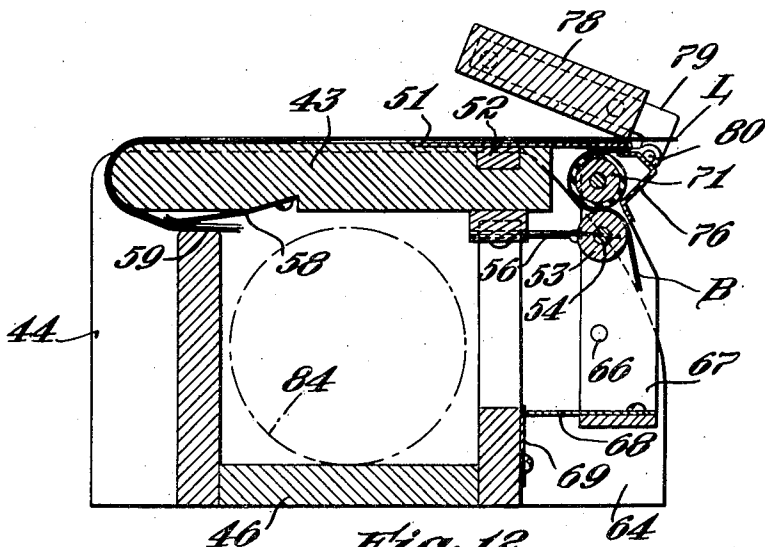


Fig. 12

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UNITED STATES PATENT OFFICE

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LABEL DISPENSER

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12 Claims. (Cl. 271—8)

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This invention relates to devices for dispensing labels which are adhesively mounted on one side of an elongate backing strip and more particularly to labels having normally tacky adhesive which readily peels off the backing sheet.

Objects of the invention are to provide improved dispensing devices which are simple and economical in construction, which are efficient and reliable in use, which are easy to load and which are generally superior to prior devices of the type referred to.

According to the present invention the device has an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively from the backing, together with a guide adjacent the edge for guiding the backing away from the edge at an angle to the labels great enough to peel the backing from the labels and means for drawing the backing over such edge and thence over the guide, characterized by means for movably interconnecting the edge and guide so that they may be separated to thread the backing therebetween. Preferably the aforesaid edge is on a plate along which the backing is fed to the edge and the guide is in the form of a roller having its axis parallel to the edge and its periphery adjacent to the back side of the plate. The means for feeding the backing strip preferably comprises means for turning the aforesaid roller, a pressure roller being associated with the feed roller to press the backing against the feed roller. The means for movably interconnecting the aforesaid edge and guide so that they may be separated to thread the backing therebetween may comprise either means for moving the feed roller away from the plate and pressure roller or means for moving the plate and pressure roller away from the feed roller.

For the purpose of illustration two typical embodiments of the invention are shown in the accompanying drawings of which

Fig. 1 is a plan view of one embodiment;

Fig. 2 is a side view of the same embodiment;

Fig. 3 is a front view of the same embodiment;

Fig. 4 is a section on line 4—4 of Fig. 2;

Figs. 5 and 6 are sections on lines 5—5 of Fig. 1, Fig. 5 showing the parts in operating position and Fig. 6 showing the parts in threading position;

Fig. 7 is a plan view of a second embodiment;

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Fig. 8 is a side view of the second embodiment; Fig. 9 is a front view of the second embodiment; and

Figs. 10, 11 and 12 are central longitudinal sections of the second embodiment, Fig. 10 showing the cover open for loading and the feed roller retracted for threading, Fig. 11 showing the cover closed and the feed roller still retracted for threading purposes and Fig. 12 showing the parts in operative position.

The first embodiment comprises a casing 1 containing a motor and a clutch 2 for causing the apparatus to perform one cycle of operations each time the handle 3 is depressed momentarily. Projecting from the side of the casing is a platform or table 4 which has a rearwardly projecting curved arm 6 and a depending curved arm 7 to guide the backing strip. Adjacent the guides 6 and 7 a roll R of the strip material, comprising labels L on a backing B, is rotatably mounted on a shaft 8 projecting from the side of the casing. As shown in Fig. 5 the label strip feeds from the roll over the curved guide 6, thence over the platform, thence over the peeling edge 9 where the labels are projected, the backing strip then passing between a feed roller 11 and a pressure roller 12. As the labels are projected from the backing they drop on an endless belt 13 which travels around a bar 14 mounted on the outside of the casing. The bar has side plates 16 attached to its opposite sides, the upper edges of the plates being beveled so that the ends of the labels projecting beyond the edges of the belt may easily be grasped between the thumb and finger (Fig. 1). At their forward ends the side plates 16 carry a belt roller 17 and at the rear end of the bar 14 a roller 18 for feeding the belt is journaled at its outer end in the outer plate 16 and at its inner end in the casing 1 (Fig. 1). The rollers 11 and 18 are driven by the aforesaid motor through gearing including gears 19. When the trip lever 3 is depressed the machine operates long enough to fill the upper side of the belt 13 with labels, the belt 13 traveling somewhat faster than the label strip so that the labels are deposited on the belt 13 in spaced relationship.

The aforesaid peeling edge 9 is located at the forward end of a plate 21 which is mounted on a slide 22 by means of rivets 23 and spacers 24, these parts constituting a platform which slides

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in dovetail grooves in the platform 4 (Fig. 4). Detachably mounted on the plate 21 is a strip guide 26 having side flanges 27 between which the label strip feeds to the peeling edge. The guide 26 is detachably mounted on the plate 21 by means of struck-up ears 28 hooking through openings in the plate. Preferably the device is provided with a number of guides 26 of different widths so that the device may be adapted to strips of different widths merely by interchanging the guides.

As shown in Fig. 6 the side flanges 27 of the guide 26 are provided with notches 29 to receive an arm 31 which is mounted on the casing to swing upwardly about a horizontal pivot 32 on a post 33 which is journaled in the casing to swing about a vertical axis. Fast to post 33 is an arm 34 which projects into a recess in the side of plate 22. Fast to the outer side of the casing extension 4 is a plate 36 which also has a notch to receive the arm 31. Thus when the arm is down in normal position (Figs. 1 to 5) the retractile platform is locked in forward position by engagement of the arm 31 in the notches in the guide 26 and the stationary plate 36. However when the arm 31 is lifted the platform is free to be retracted, and by swinging the arm 31 to the rear the platform is retracted by arm 34 to the position shown in Fig. 6. When the platform is in its forward operative position the forward end of the plate 21 projects between the feed roller 11 and a guide roller 37 which prevents the label strip from arching up as it approaches the peeling edge, thereby preventing the labels from following the backing around the edge.

A pressure roller 12 is mounted on the forward end of a slide 38 which is pressed forwardly by a spring 39 and which may be retracted against the action of the spring to the position shown in Fig. 6 by means of a lever 41 pivotally mounted on post 33 with a slot 40 (Fig. 1) to receive a pin 42 on the slide and with its outer end projecting outside the casing (Figs. 3, 4 and 5).

To thread the device the arm 31 is swung up to unlock the sliding platform and then the platform is retracted by swinging the arm to the position shown in Fig. 6. The pressure roller 12 is retracted by pressing the outer end of the lever 41 to the rear. While still holding lever 41 the end of the label strip is inserted between the rollers 11 and 12. Upon releasing the lever 41 spring 39 returns the slide 38 to forward position, thereby pinching the end of the label strip between the two rollers 11 and 12. Then the lever 31 is swung forwardly and downwardly to the position shown in Figs. 1 to 5, thereby projecting the peeling edge 9 between the rollers 11 and 37. With the parts in these positions the lever 3 is depressed to cause the machine to operate through one cycle, thereby depositing a series of labels on the belt 13 as shown in Fig. 1.

In the embodiment shown in Figs. 7-12 the casing, which is preferably formed of wood, comprises a top 43, sides 44, a bottom 46 and a front 47 having a V-shaped opening 48 with a flat bottom. The top 43 is pivotally mounted in the sides 44 by means of two screws 49. In a recess on the upper side of the top 43 a stripping plate 51 is mounted by means of a bar 52 fast to the plate and secured in a groove in the top. Mounted on the under side of the top 43 is a pressure roller 53 which may comprise a wooden roller rotatably mounted on a shaft 54 supported by two leaf springs 56 secured by means of screws in recesses in a strip 57 fast to the bottom of the cover. On

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its lower side the cover 43 also carries a leaf spring 58 which presses the label strip against the upper edge 59 of the rear wall of the casing as shown in Fig. 12, thereby to hold the strip taut as it approaches the peeling edge on plate 51. In this way the strip is prevented from arching away from the plate as it approaches the peeling edge, in which case the labels might follow the backing around the edge instead of being projected away from the backing.

The sides 44 have forward extensions 64 and pivotally mounted in these extensions at 66 is a ball 67 which swings between the retracted position shown in Figs. 10 and 11 and the closed position shown in Figs. 7, 8, 9 and 12. Fast to the bottom of the ball is a spring detent 68 which snaps over the edge of the flat bottom of the recess 48 against a plate 69 to hold the ball in operative position. Journaled between the upper ends of the ball is a feed roller 71 which preferably has a rubber covering 72. The roller is fast to a shaft 73 which extends through openings in the ball 67, one end of the shaft being bent to form a handle 74. The ball 67 also carries a bar 76 which has a horizontal edge projecting close to the under side of the peeling edge of the plate 51 to keep the backing B from arching away from the peeling edge as it leaves the edge. By thus insuring that the backing makes a sharp turn around the peeling edge, any tendency for the labels to follow the backing around the edge instead of being projected from the backing is counteracted. Beyond the aforesaid horizontal edge the bar 76 has an inclined surface to which the tacky side of each label lightly sticks as it leaves the backing if it is not grasped before it falls on this surface. The lower edge of bar 76 serves as a tearing edge to remove the projecting end of the backing from time to time.

The embodiment shown in Figs. 7 to 12 may also be provided with a flat piece 78, of wood or the like, which is pivotally mounted on the ball 67 by means of side arms 79 pivotally connected to the ball at 80. These parts are so shaped that when the flat piece 78 is swung down to the solid-line position shown in Figs. 7 and 8 it serves as a hand rest for writing on the label just before the label reaches the peeling edge, and when the parts are swung upwardly to the position shown in Fig. 12 the lower edge of the piece 78 rests on the label just back of the peeling edge, the weight of the pivoted parts preventing the label strip from arching away from the plate 51, thereby further insuring that the labels are projected from the backing instead of following the backing around the peeling edge. To hold the part 78 in the horizontal position shown in Figs. 7 and 8 screws 81 are mounted in the ball 67 so that the heads serve as abutments for the arms 79.

To load the device shown in Figs. 7 to 12 the parts are opened as shown in Fig. 10. The roll of label material is then placed in the position indicated by the broken line 84 in Fig. 12. After inserting the end of the roll through the space 85 (Fig. 10) the cover 43 is closed. Then the end of the strip is inserted between the two rollers 53 and 71 as indicated in Fig. 11. The ball 67 is then swung to closed position and the extension 78 is swung up to its holding position. As shown in Fig. 12 the feed roller 71 moves in between the plate 51 and the pressure roller 53, flexing the springs 56 downwardly to provide a yielding pressure on the backing B as it passes between the two rollers. Owing to the sharp turn which the backing is caused to take about

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the peeling edge of plate 51, the labels L are projected away from the backing as indicated in Fig. 12 so that they may be lifted away from the device as the tail end of the foremost label passes over the peeling edge.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. For dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, a device having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a guide adjacent said edge for guiding the backing away from said edge at an angle to the labels great enough to peel the backing from the labels, means for drawing the backing over said edge and thence over said guide, and means movably interconnecting said edge and guide so that they may be separated to thread the backing therebetween.

2. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a roller for guiding the backing away from said edge at an angle to the labels great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, means for drawing the backing over said edge and thence over said roller, and means movably interconnecting said plate and roller so that they may be separated to thread the backing therebetween.

3. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, means including a feed roller for drawing the backing over said edge at an angle to the labels great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, and means movably interconnecting said plate and roller so that they may be separated to thread the backing therebetween.

4. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a roller for guiding the backing away from the projected labels at an angle great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, means for drawing the backing forwardly over said edge and thence rearwardly over said roller, and means movably mounting said plate for rearward movement relatively to the roller, whereby the plate and roller may be separated to thread the backing therebetween.

5. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a roller for guiding the backing away from the projected

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labels at an angle great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, means for drawing the backing forwardly over said edge and thence rearwardly over said roller, and means movably mounting said roller for forward movement beyond said edge, whereby the plate and roller may be separated to thread the backing therebetween.

6. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having a forward edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a feed roller for drawing the backing over said edge at an angle to the labels great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, a pressure roller for pressing the backing against the feed roller, the pressure roller being located on the rearward side of the feed roller, and means movably interconnecting said plate and rollers for relative movement lengthwise of the plate, so that the feed roller may be separated from the plate and pressure roller to thread the backing therebetween.

7. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having a forward edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a feed roller for drawing the backing over said edge at an angle to the labels great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, a pressure roller for pressing the backing against the feed roller, the pressure roller being located on the rearward side of the feed roller, and means for moving the feed roller forwardly from said edge and pressure roller to thread the backing therebetween.

8. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having a forward edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a feed roller for drawing the backing over said edge at an angle to the labels great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, a pressure roller for pressing the backing against the feed roller, the pressure roller being located on the rearward side of the feed roller, and means for moving the plate and pressure roller rearwardly from the feed roller to thread the backing therebetween.

9. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a guide in advance of the edge to restrain the backing from arching away from the plate as it approaches the edge, a guide on the other side of the plate for guiding the backing away from the edge at an angle great enough to peel the backing from the labels, and means movably interconnecting said plate and guides so that each guide and plate may be separated relatively to each other for threading the backing therebetween.

10. A device for dispensing labels from a backing upon which the labels are mounted with adhe-

sive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a guide in advance of the edge to restrain the backing from arching away from the plate as it approaches the edge, a guide on the other side of the plate for guiding the backing away from the edge at an angle great enough to peel the backing from the labels, and means movably interconnecting said plate and guides so that each guide and plate may be separated relatively to each other without producing relative movement between the two guides.

11. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, means including a feed roller for drawing the backing over said edge at an angle to the labels great enough to peel the backing from the labels, the roller having its axis parallel to said edge and its periphery adjacent the back side of the plate, a guide on the front side of the plate for restraining the backing from arching away from said plate as it approaches said edge, and means movably interconnecting said plate, roller and guide so that both the plate and roller and also the plate and

guide may be separated from each other for threading purposes.

12. A device for dispensing labels from a backing upon which the labels are mounted with adhesive adapted to peel away from the backing, comprising a plate having an edge over which the backing is stripped to peel the backing away from the labels and project the labels successively, a guide adjacent said edge for guiding the backing away from the edge at an angle great enough to peel the backing from the labels, and means movably interconnecting said plate and guide so that they may be separated relatively to each other for threading the backing therebetween.

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