

April 10, 1945.

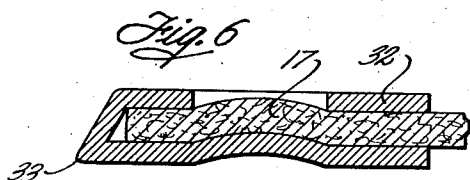
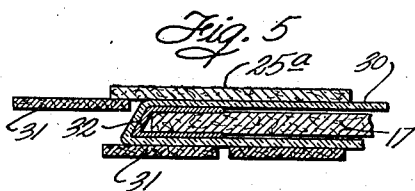
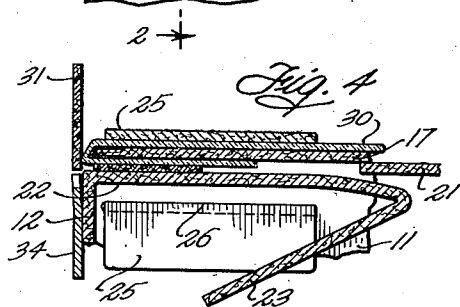
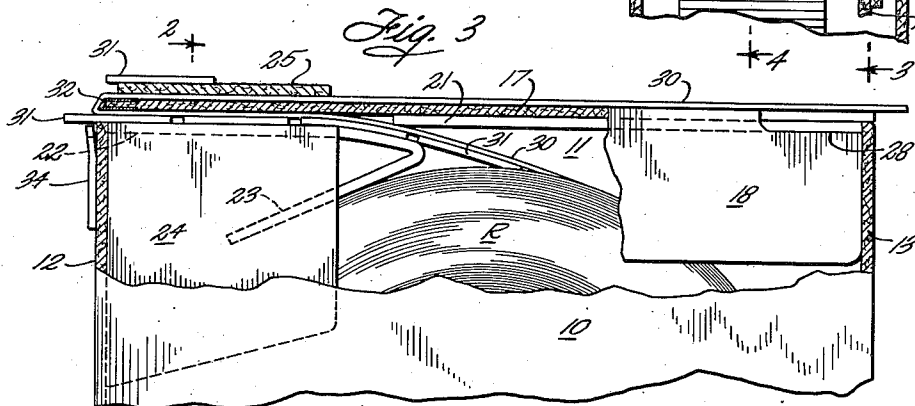
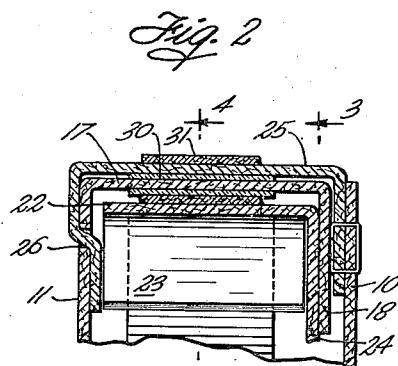
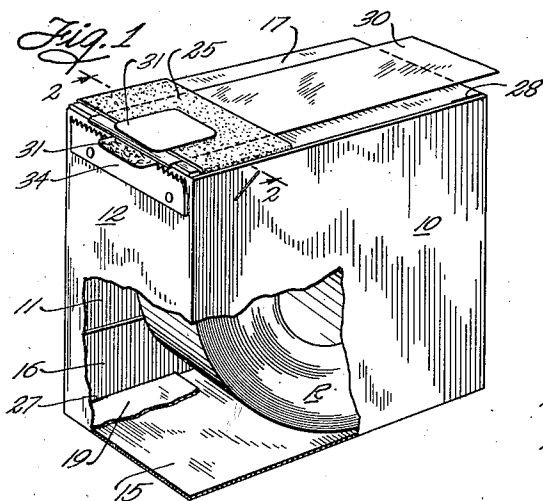
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2,373,092

LABEL AND TAPE DISPENSING MACHINE

Filed Aug. 2, 1940

4 Sheets-Sheet 1



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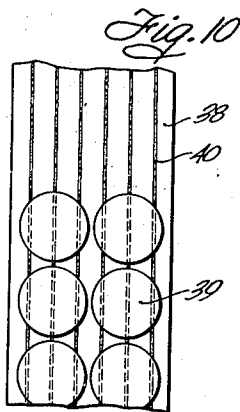
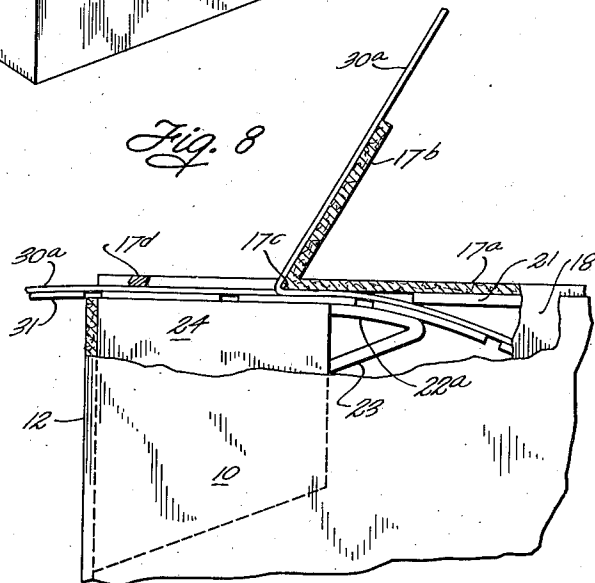
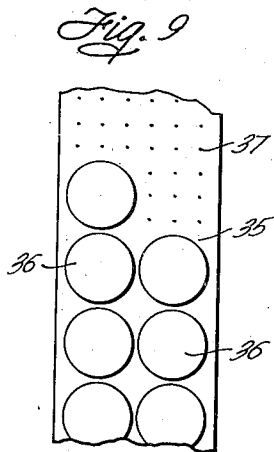
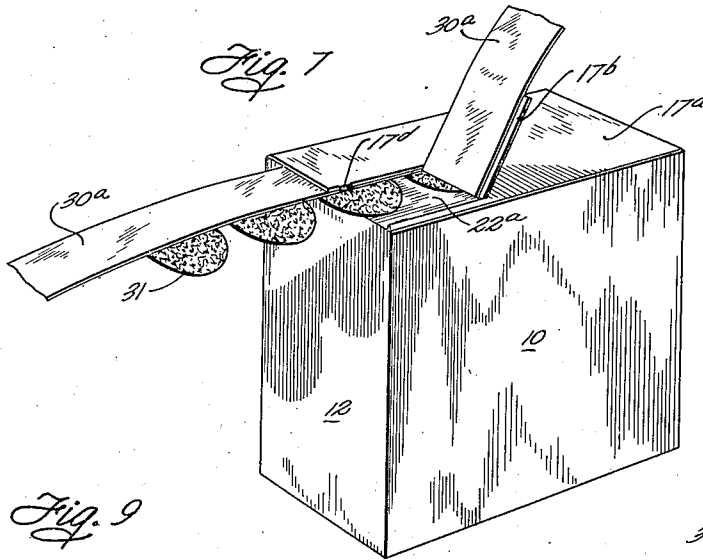
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LABEL AND TAPE DISPENSING MACHINE

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4 Sheets-Sheet 2



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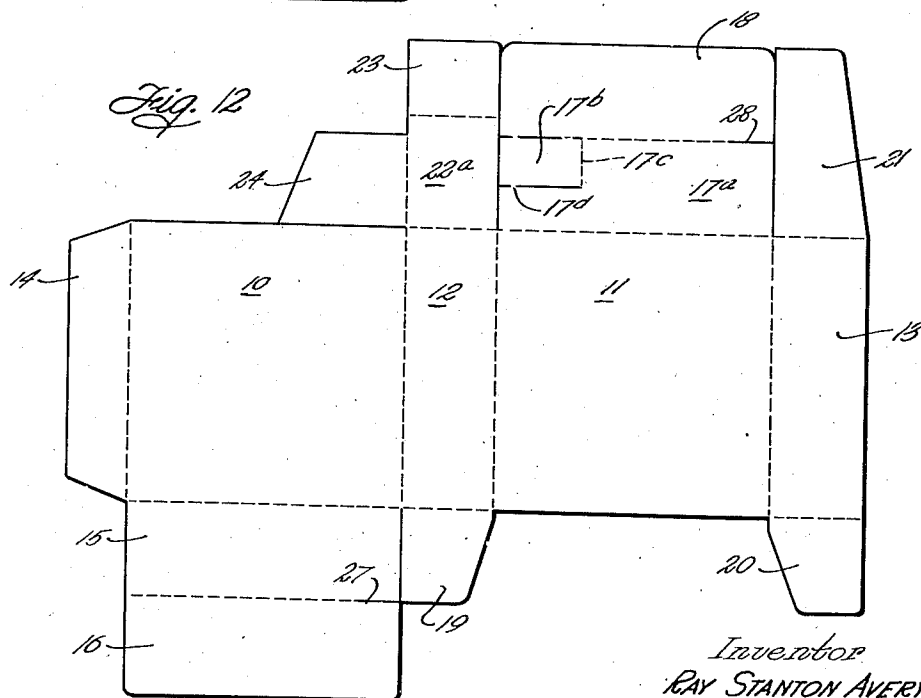
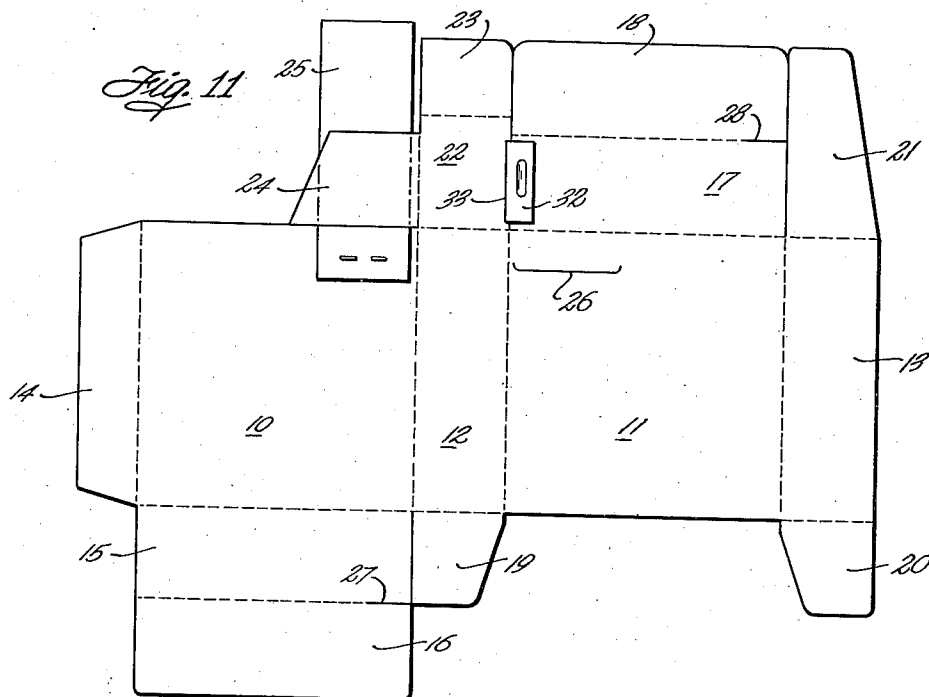
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LABEL AND TAPE DISPENSING MACHINE

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LABEL AND TAPE DISPENSING MACHINE

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4 Sheets-Sheet 4

Fig. 13

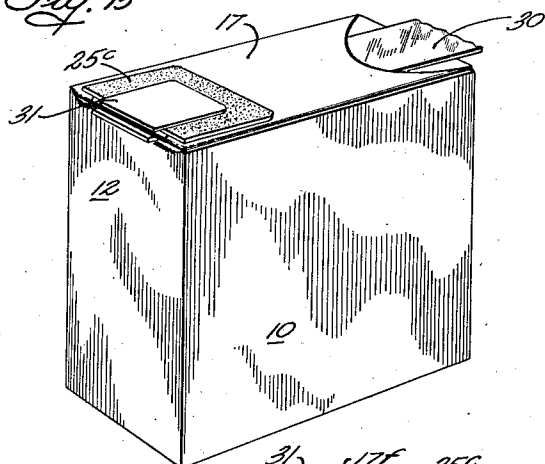


Fig. 14

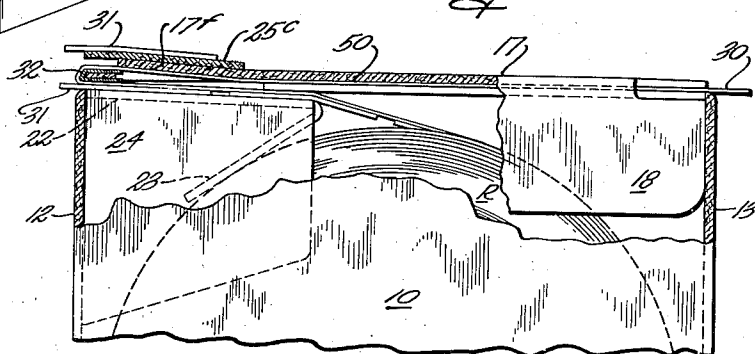
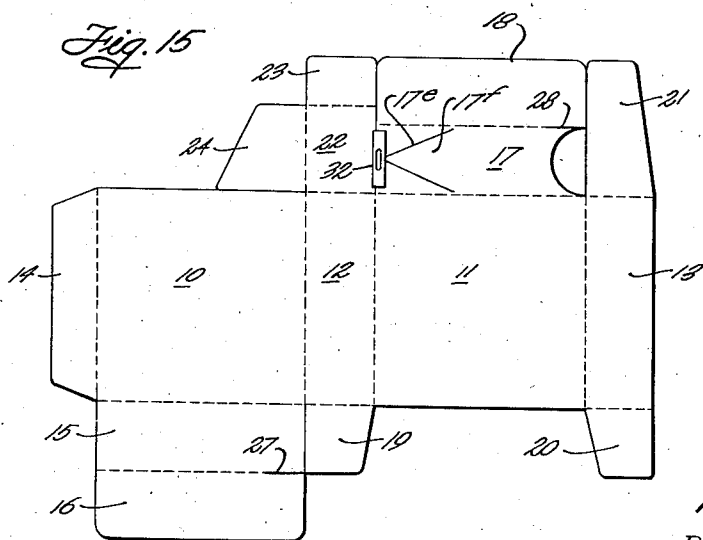


Fig. 15



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UNITED STATES PATENT OFFICE

2,373,092

LABEL AND TAPE DISPENSING MACHINE

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Application August 2, 1940, Serial No. 349,892

12 Claims. (Cl. 206—58)

This invention relates to a method and apparatus for dispensing and removing labels equipped with pressure sensitive adhesive from their backing strips.

Price marking labels have heretofore been developed and marketed in the form of rolls or strips of backing on which the labels are fastened by means of their pressure sensitive adhesive. In some forms of construction the labels have portions which are not equipped with adhesive, thus forming free or detached margins which facilitate grasping the edge of the label to enable its being peeled or stripped from the backing strip.

An object of the present invention is to provide a means and method of removing pressure sensitive labels from backing strips which does not necessitate the labels having free margins or portions which are unequipped with pressure sensitive adhesive. By means of the present invention fully gummed labels may be readily removed from their backing strips and when applied to articles of merchandise will be completely attached thereto by the adhesive.

An object of the present invention is to provide a novel method and means for separating labels equipped with pressure sensitive adhesive from the backing strips which in a sense is automatic in effecting the separation so that the labels on being removed from the backing strip can be easily applied to various articles of merchandise.

Another object of the invention is to provide a dispensing carton within which a roll of backing with the labels attached thereto may be kept and which enables the end of the roll to be withdrawn from the carton, thus withdrawing the labels with it and on being removed to automatically strip or peel the labels and deposit them on a suitable surface to which the pressure sensitive adhesive has very little affinity.

Still a further object of the invention is to provide a carton or package containing a roll of pressure sensitive labels on a backing strip with means for withdrawing the labels from the carton and separating them from the backing strip and to provide a novel and simple means for maintaining the roll within the carton under slight tension to facilitate the proper withdrawal of the end of the roll and the separation of the labels from the backing strip.

Another object of the invention is the provision of a carton or package containing a roll of labels attached to a backing strip which backing strip is caused to pass over a sharp edge to enable peeling or separation of the labels therefrom, there being provision made for forming a channel be-

neath the cover of the carton through which the free end of the backing strip is drawn so that the free end of the backing strip is kept in place and will be naturally drawn in the proper direction with relation to the relatively sharp edge.

With the foregoing and other objects in view, which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a perspective view, parts being broken away illustrating a preferred embodiment of the present invention;

Fig. 2 is a sectional view taken substantially upon the line 2—2 upon Fig. 1;

Fig. 3 is a sectional view taken substantially upon the line 3—3 upon Fig. 2;

Fig. 4 is a sectional view taken substantially upon the line 4—4 upon Fig. 2;

Fig. 5 is a view similar to Fig. 4 illustrating a slightly modified form of construction;

Fig. 6 is a partial view in vertical section illustrating a detail of construction on an enlarged scale;

Fig. 7 is a perspective view of a carton or package embodying a slightly modified form of construction;

Fig. 8 is a partial view in side elevation of the construction shown in Fig. 7, parts being broken away and shown in vertical section;

Fig. 9 is a partial view of a label strip which may be optionally employed in the carton or package embodying the present invention;

Fig. 10 is a partial view of another form of label strip that may be optionally employed;

Fig. 11 is a plan view of the blank used in the construction of the carton illustrated in Fig. 1;

Fig. 12 is a plan view of the blank used in the construction of the carton illustrated in Fig. 7;

Fig. 13 is a perspective view of another form of construction embodying the present invention;

Fig. 14 is a partial view in side elevation of that form of construction shown in Fig. 13, parts being broken away and shown in vertical section; and

Fig. 15 is a plan view of the blank used in the construction of the carton shown in Fig. 13.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, and referring particularly to that form of the construction illustrated in Figs. 1 to 6 and 11, the carton is preferably formed of a single blank of cardboard, paperboard, or the like, stamped, scored, and shaped as illustrated in Fig. 11. It consists of two opposed

side walls 10 and 11, spaced by a front wall 12 and having a back wall 13 adapted to be connected to a connecting flap 14 integral with one of the edges of the side wall 10. At the bottom of the side wall 10 there is a bottom 15 equipped with a sealing flap 16. Similarly, the side wall 11 is equipped with a cover or top 17 having a sealing flap 18. The front and back walls 12 and 13, respectively, have bottom flaps 19 and 20 which, when the carton is set up, are designed to be folded inwardly above the bottom 15. The tops of the front and back walls 12 and 13 are also equipped with flaps. The flap 21 at the top of the back wall is designed to extend a little more than half the distance between the back wall and the front wall as clearly illustrated in Fig. 3. At the top of the front wall 12 there is a flap 22 having at its top a foldable extension 23 and at its side a foldable extension 24. On the inside of the side wall 10 there is stapled or otherwise secured a section of sandpaper 25 and opposite the point of attachment of this sandpaper there is formed a slit 26 in the side wall 11 which when the carton is set up, is designed to receive the end of the sandpaper as clearly shown in Fig. 2.

The various flaps and walls of the blank forming the carton are defined from each other by lines of scoring indicated by dotted lines on Fig. 11. It should be noted, however, that the line of scoring between the bottom 15 and its sealing flap 16 is completely cut through adjacent one end as indicated at 27 for a purpose to be hereinafter described. Similarly, the line of scoring between the cover 17 and its sealing flap 18 is completely cut through adjacent one end as indicated at 28.

The carton is set up in very much the same way as any conventional tubular box construction wherein flap 14 is attached to the rear wall 13 in any suitable manner and the flaps 19, 20, 21, and 22, are folded inwardly. The flap 24 is bent downwardly prior to the inward folding of flap 22 so that it lies against the inner face of side wall 10 and has its edge bearing against the inner side of the front wall 12. Flap 24 acts as a brace for maintaining flap 22 in a substantially horizontal position immediately below the cover 17. The extension 23 is reversely bent about its line of scoring so as to assume a position as shown in Fig. 3.

A roll of labels indicated at R is positioned in the carton prior to the closing of the cover. This roll of labels comprises a backing strip 30 which may be formed of glassine paper, Cellophane, or the like, and has a plurality of labels 31 attached thereto at regular spaced intervals by means of a normally tacky pressure sensitive gum. The free end of the roll is drawn forwardly between the forward end of flap 21 and the top of flap 22, passing between flap 22 and the cover 17. The inherent resiliency of the cardboard causes the extension 23 to normally spring against the roll acting somewhat as a tensioning means keeping the roll in proper position at the back of the carton. The forward edge of the cover 17 is bound by a small metal clip 32 which embraces this edge and extends from side to side. This clip may be merely pressed onto the forward edge of the cover with sufficient force so as to clamp thereon. The forward side of the clip is bent upwardly at approximately a 60° angle to the bottom portion of the clip thus defining a relatively sharp edge 33. While this angle may vary considerably it has been my experience that approximately 60° gives the most desirable results. With the free end of

the roll thus drawn out of the carton between flap 22 and cover 17 the free end can then be reversely folded around the clip 32 and brought rearwardly over the top surface of cover 17. The section of sandpaper 25 is then folded downwardly over the top of the free end of the roll and has its end inserted in slit 26.

With the construction thus assembled labels can be withdrawn from the carton and automatically peeled or removed from the backing strip 30. This is accomplished by pulling the backing strip 30 rearwardly which causes the roll to unwind within the carton and the backing strip to be drawn across the relatively sharp edge 33. The flap 24 which acts as a brake maintaining flap 22 in horizontal position presses the label strip or free end of the roll gently against the underside of the cover thus imposing a type of drag against the cover and a portion of flap 21 against which the backing strip must be pulled. This slight pressure also serves to maintain the labels 31 stiff and in their respective planes while the backing strip is being peeled therefrom.

In Fig. 3, I have illustrated one label 31 as having been removed from the backing strip and as having been positioned upon the sanded surface of the sandpaper 25. I have also illustrated a succeeding label as being in the process of being removed from the backing strip. As the backing strip is pulled rearwardly the labels are drawn forwardly so as to pass beneath the relatively sharp edge 33. These labels tend to continue in their forward direction while the backing strip is being peeled therefrom around the clip 32. However, as clearly shown in Fig. 4, when the backing strip is almost entirely peeled from the label the label is freed of the carton and may follow the backing strip around the clip 32 being positioned by the continued movement of the backing strip on the sanded top surface of the sandpaper 25. Although pressure sensitive gum is normally tacky and will adhere to virtually any dry surface I find there is very little affinity between the gum adhesive on the label and fine sandpaper. Thus while the labels are detached from the backing strip and are positioned on the sandpaper they do not adhere to the sandpaper to any great extent so that on being thus positioned it is very easy to remove the labels from the sandpaper and to apply them to any desired article of merchandise. If the labels are used for price marking purposes, prices may be written or printed on the labels in the course of their manufacture or the price may be written on the labels while they are positioned on the sandpaper. In this way by continually progressively drawing the backing strip 30 rearwardly over the top of the carton the labels can be consecutively peeled from the backing strip and positioned on the sandpaper from which they may be easily removed.

In the construction illustrated in Figs. 1, 2, 3, and 4, the forward edge of the sandpaper is disposed rearwardly of the clip 32 in which case as illustrated in Fig. 4, the labels on being almost entirely peeled from the backing are caused to follow the backing and be positioned on top of the sandpaper.

In the modification shown in Fig. 5, the sandpaper 25a is extended forwardly of the sharp edge 33 so that each label, on passing through the position shown in Fig. 4 will have its trailing edge swung upwardly and deposited against the underside of the sandpaper 25a. This form of

construction may be optionally employed depending on whether it is desirable to have the labels deposited on the top of the sandpaper with the adhesive down or whether it is desired to have the labels positioned against the underside of the sandpaper with the adhesive on the labels disposed uppermost.

As previously noted the ends of the score lines that separate the sealing flaps from the top and bottom, respectively, are cut through as indicated at 27 and 28. This forms a highly efficient lock for locking the top and bottom in closed position when the carton is closed. On closing the bottom of the carton the flaps 19 and 10 are first bent inwardly and then the bottom 15 is swung therebeneath. The sealing flap 16 is inserted so as to occupy a position against the inner side of side wall 11. When the bottom is closed completely the slit 27 opens sufficiently to permit the edge of flap 19 to enter it and when the edge of flap 19 enters the slit 27 there is a slight springing action effectively locking the bottom 15 in closed position. This lock is so strong that under ordinary conditions the bottom cannot be reopened without tearing either the bottom, the sealing flap 16, or the flap 19. In a similar manner, on closing the top 17 the slit 28 receives the edge of flap 21 and is likewise locked against opening. Thus, when the carton is closed with a supply of labels therein it cannot be easily opened resulting in the possible loss of the roll of labels therein contained.

If desired the front of the carton may be equipped with a serrated cutter 34 so that if continuous pressure sensitive tape is kept within the carton, as distinguished from individual labels, and it is desired to detach a suitable length, the adhesive label or tape material may be drawn sharply against this cutter to effect the severance.

The labels or tapes that may be dispersed in the carton or package above described may be in the form of the backing strip 30 with a single row of labels 31 attached thereto by means of adhesive wholly or partially covering the backs of the labels, or a continuous adhesive tape or a continuous adhesive tape broken by perforations.

In Figs. 9 and 10 I have illustrated other forms of labels that may be employed if so desired. In Fig. 9, there is a backing strip indicated at 35 on which there is a double row of labels 36. These labels, instead of being attached to the backing strip by a layer of adhesive covering the entire backs of the labels, may be removably attached to the backing strip by small dots or spots of adhesive indicated at 37. These labels may otherwise be of the conventional remoistening adhesive type.

In Fig. 10 an alternative form of label strip is disclosed consisting of a backing strip 38 which may be of glassine, Cellophane, or the like with labels 39 attached thereto by spaced strips or lines of adhesive indicated at 40.

In Figs. 7, 8, and 12, I have illustrated a modified form of construction embodying the invention. In this form of construction the blank is substantially the same as that illustrated in Fig. 11 with the exception that the sandpaper 25 is omitted, the slit 26 is omitted, and clip 32 is omitted. In the top 17a there is a cutout portion 17b foldable about a fold line 17c and initially kept in closed position by breakable webs 17d. This cutout portion can be swung upwardly into a position as shown in Fig. 7. The label strip or roll employed in this form of construction is the same as that illustrated in Figs. 1 to 4, inclusive,

with the exception that the backing strip 30a is longitudinally divided. One portion of the backing strip is designed to be brought upwardly against the fold line 17c, it being understood that this fold line provides the relatively sharp edge afforded by the clip 32 in the modification shown in Figs. 1 to 4. On progressively pulling this portion of the backing strip upwardly it is peeled from one-half of each label leaving the remaining half of each label attached to the remaining portion of the backing strip which is advanced between the cover 17a and the flap 22a. In this way the labels have approximately one-half of their adhesively coated surfaces exposed the remaining half remaining attached to the backing strip. These remaining portions which remain attached to the backing strip can be easily peeled therefrom by grasping the exposed portions and the labels can then be applied to any article of merchandise desired.

In Figs. 13, 14, and 15 there is illustrated still another form of carton or package embodying the invention. In this form as in Fig. 1, the label may be completely removed from the backing strip as distinguished from the construction illustrated in Fig. 9 in which the label is left partially attached to a portion of the backing strip.

As shown in Fig. 15, the general configuration of the blank for the carton is very similar to the blank illustrated in Figs. 11 and 12, and consequently similar references have been applied to portions of this blank that correspond to the corresponding portions shown in Fig. 11. The important difference in this form of construction and that previously described relates to the cover or top 17 which has a V-shaped slit cut therein indicated at 17e defining a V-shaped tongue 17f, the apex of which is directed or pointed toward the clip 32 and is disposed adjacent thereto. In the preferred form of construction the apex of the tongue overlies the rear edge of the clip. While it is not necessary in all instances to employ sandpaper in order to secure an operative construction the sandpaper when employed, such as that illustrated at 25c, is pasted or otherwise fastened over the top of this tongue and preferably extends forwardly over the top of the clip as clearly shown in Fig. 14. In this form of construction the underside of the top 17 rearwardly of the tongue cooperates with the top surface of the flap 21 to define a channel through which the backing is drawn. It will be understood that as the backing is drawn out of the carton and around the clip that it is inserted beneath the tongue 17e and drawn rearwardly beneath the cover. As the backing strip is pulled rearwardly through this channel 50 it is peeled from the label on being drawn around the relatively sharp edge formed by the clip 32. In the normal operation the body of the label is peeled from the backing but the trailing edge remains attached thereto so that as the trailing edge of the label is drawn around the clip it swings the label through an arc and deposits it on top of the sandpaper 25c. The grains of sand on the sandpaper provide a multiplicity of small areas on which the adhesive coating on the label contacts and as there is no great affinity between the adhesive and these small areas the label can be readily separated from the paper and from the backing and applied to any article of merchandise desired. In situations where the label, instead of being formed of rather flexible paper is formed of a relatively stiff material, it may be deposited on

the sandpaper and have its trailing edge simultaneously detached from the backing strip as shown in Fig. 14, in which case the projecting portion of the trailing edge of the label is available to be grasped to facilitate removal of the label from the sandpaper.

In many instances the sandpaper may be omitted entirely and when the trailing edge of the label is drawn around clip 32 the label can be merely removed by grasping the body of the label and pulling it or peeling it from the backing strip.

It will be noted that in all of the above-described constructions that the labels used may be completely coated with adhesive and that it is unnecessary to have a free margin present. The construction is such as to enable peeling of the labels from the backing strip regardless of whether such free margins or uncoated portions on the labels are present or not.

From the above-described construction it will be appreciated that a new method and means for removing pressure sensitive labels from the backing strip is provided which facilitates the separation of the labels from the backing strip. The method consists essentially of drawing the backing strip over a relatively sharp edge while the labels from which the backing strip is being peeled continue in the direction of their respective planes until nearly a complete separation is effected. This method may be embodied not only in an apparatus of the character illustrated but also may be employed in other forms of equipment for effecting a separation of the labels from the backing strip. The cartons illustrated however provide a relatively cheap and simple apparatus for performing the method. Being readily portable, the carton and its contained roll of labels can be easily transported, the backing strip drawn from the carton, and the labels separated therefrom enabling the labels to be easily applied to articles of merchandise.

Various changes may be made in the details of construction without departing from the spirit or scope of the invention as defined by the appended claims.

I claim:

1. In dispensing labels from a strip having the labels adhesively mounted in a row on a backing which is divided longitudinally into two ribbons, the method of dispensing the labels which comprises feeding the strip lengthwise along a predetermined path, peeling one ribbon from the strip at one location along the path to uncover a part of the adhesive side of each label as it passes that location and at another location farther along said path separating the labels from the other ribbon.

2. An apparatus for separating sheet material from a backing to which the sheet material is attached by normally tacky adhesive comprising means defining a path through which the sheet material and backing may pass together, and means providing a peeling edge extending only partially across said path over which a portion only of the backing may be peeled from the sheet material, leaving the sheet material attached to the remainder of the backing.

3. An apparatus for separating sheet material from a divided backing to which the sheet material is attached by normally tacky adhesive comprising means defining a path through which the sheet material and backing may pass together, and means providing a peeling edge extending across said path only to the line of division of the

backing whereby a portion of the backing may be peeled from the sheet material across said peeling edge, leaving the sheet material remaining adhered to the remainder of the backing.

4. An apparatus for separating sheet material from a divided backing to which the sheet material is attached by normally tacky adhesive comprising means defining a path through which the sheet material and backing may pass together, and means providing a peeling edge extending across said path only to the line of division of the backing whereby a portion of the backing may be peeled from the sheet material across said peeling edge, leaving the sheet material remaining adhered to the remainder of the backing, and means for holding the remainder of the backing and sheet material thereon against following the portion of the backing peeled over said peeling edge.

5. An apparatus for separating sheet material from a backing to which the sheet material is attached by normally tacky adhesive comprising means defining a path through which the sheet material and backing may pass together, and means providing a peeling edge extending only partially across said path over which a portion only of the backing may be peeled from the sheet material, leaving the sheet material attached to the remainder of the backing, and means beyond said peeling edge for holding the remainder of the backing and the sheet material thereon against following the peeled portion of the backing.

6. An apparatus for separating sheet material from a backing to which the sheet material is attached by normally tacky adhesive comprising a container within which a supply of said sheet material and backing may be contained, means providing an outlet from said container through which the sheet material and backing may be drawn together, and means providing a peeling edge extending only partially across the backing whereby a portion of the backing may be drawn across said peeling edge to separate it from the sheet material, leaving the sheet material attached to the remainder of the backing.

7. The method of separating sheet material from a backing to which the sheet material is fastened by normally tacky adhesive which includes causing the sheet material and backing to proceed along a predetermined path, separating a longitudinally extending portion of the backing from the sheet material at one station along said path and allowing another longitudinally extending portion of the backing to remain attached to the sheet material and proceed therewith along said path beyond said station.

8. The method of separating sheet material from a backing to which the sheet material is fastened by normally tacky adhesive which includes causing the sheet material and backing to proceed along a predetermined path, separating a longitudinally extending portion of the backing from the sheet material at one station along said path and allowing another longitudinally extending portion of the backing to remain attached to the sheet material and proceed therewith along said path beyond said station, and subsequently separating the sheet material from the other portion of the backing.

9. The method of separating labels from a backing to which the labels are fastened by a normally tacky adhesive which includes longi-

tudinally moving the backing and labels thereon and during the longitudinal movement peeling a portion of the backing from the labels to expose a portion of the adhesive on the labels at a station along the path of longitudinal movement, and allowing the labels to remain attached to the remainder of the backing and proceed therewith beyond said station.

10. The method of separating labels from a backing to which the labels are fastened by a normally tacky adhesive which includes longitudinally moving the backing and labels thereon and during the longitudinal movement peeling a portion of the backing from the labels to expose a portion of the adhesive on the labels at a station along the path of longitudinal movement, allowing the labels to remain attached to the remainder of the backing and proceed therewith beyond said station, and subsequently detaching the labels from the remainder of the backing. 20

11. The method of separating labels from a

backing to which the labels are fastened by a normally tacky adhesive which includes moving the labels and backing, longitudinally peeling a longitudinally extending portion of the backing from the labels by drawing it over a transversely extending peeling edge and leaving the labels remaining attached to the remainder of the backing beyond said peeling edge.

12. The method of separating labels from a backing to which the labels are fastened by a normally tacky adhesive which includes moving the labels and backing, longitudinally peeling a longitudinally extending portion of the backing from the labels by drawing it over a transversely extending peeling edge and leaving the labels remaining attached to the remainder of the backing beyond said peeling edge, and subsequently separating the labels from the remainder of the backing.

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