Feb. 8, 1944. C. A. FLOOD 2,341,368

DISPENSER FOR SHEET MATERIAL

Filed Nov. 12, 1941 2 Sheets-Sheet 1

Fig. 1

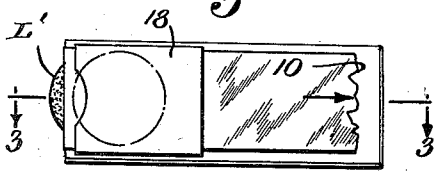


Fig. 3

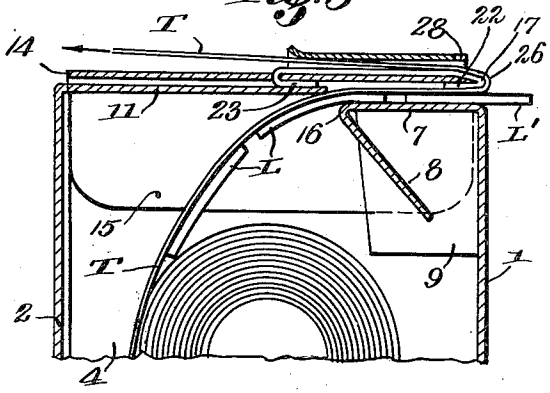


Fig. 2

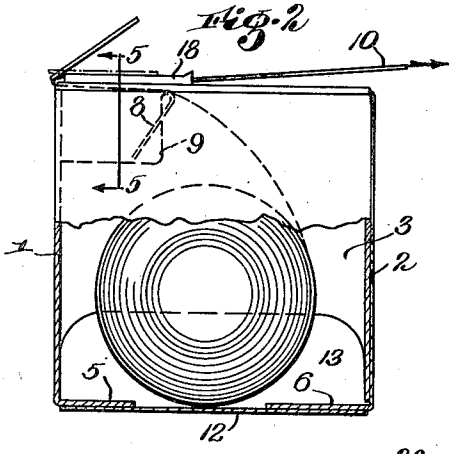


Fig. 4

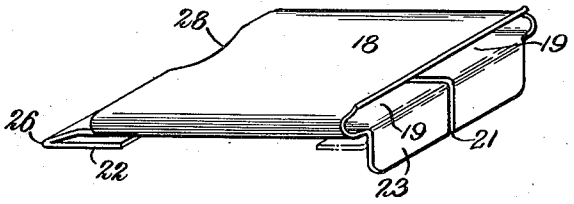


Fig. 5

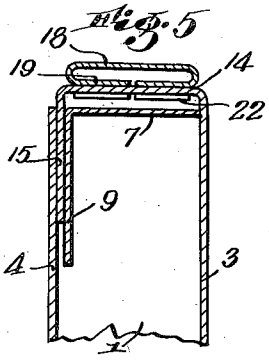


Fig. 9

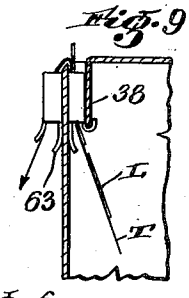


Fig. 8

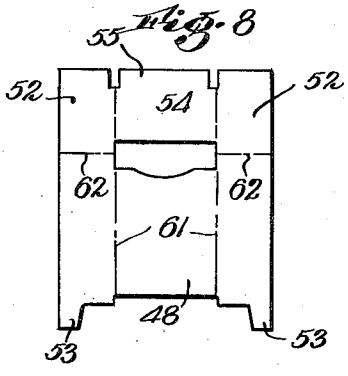


Fig. 6

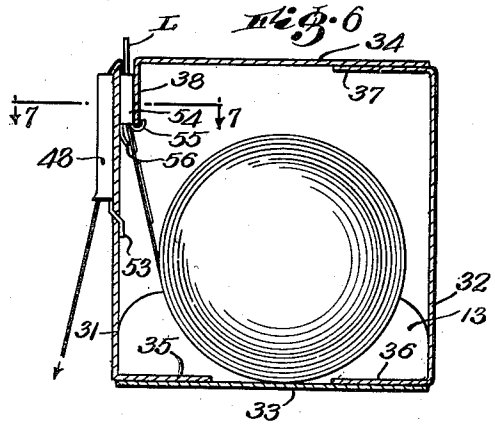
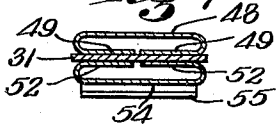


Fig. 7



Inventor:
Carl A. Flood,
By Roberts, Cushman & Woodberry.
His Attys.

Feb. 8, 1944. C. A. FLOOD 2,341,368

DISPENSER FOR SHEET MATERIAL

Filed Nov. 12, 1941 2 Sheets-Sheet 2

Fig. 10

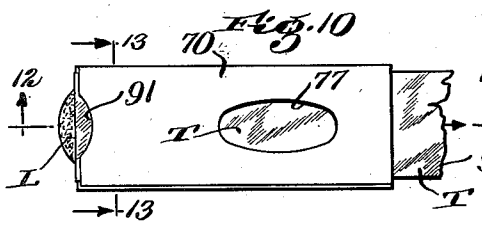


Fig. 12

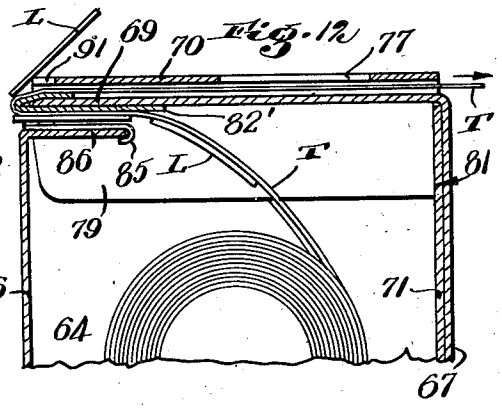


Fig. 11

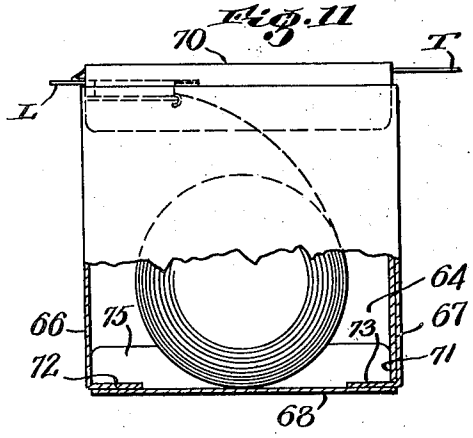


Fig. 14

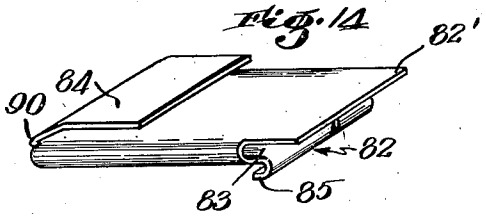


Fig. 13

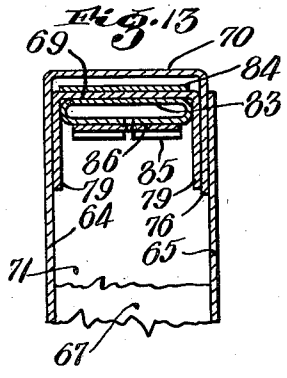


Fig. 15

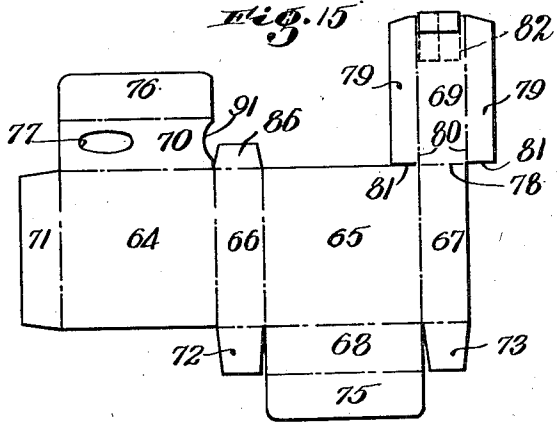
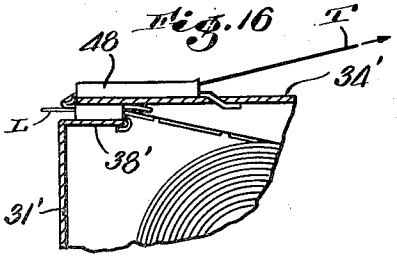


Fig. 16



Inventor:
Carl A. Flood,
By Roberts, Cushman & Woodbury
his Attys.

Patented Feb. 8, 1944

2,341,368

UNITED STATES PATENT OFFICE

2,341,368

DISPENSER FOR SHEET MATERIAL

Carl A. Flood, Framingham, Mass., assignor to Dennison Manufacturing Company, Framingham, Mass., a corporation of Massachusetts

Application November 12, 1941, Serial No. 418,647

24 Claims. (Cl. 206—58)

This invention relates to dispensers for sheet material and more particularly to devices for dispensing a strip of tape having labels or other sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape. In devices of this kind it is possible to peel the tape off the labels and to project the labels successively from the device by drawing the tape over a sharp edge so that the labels are projected out of the device instead of following the tape around the sharp edge. For this purpose it is desirable to keep the tape from arching away from the edge as it approaches the edge, inasmuch as that would permit the labels to follow the tape around the edge instead of being projected out of the device away from the tape. It is also desirable to cause the tape to leave the edge in the opposite direction from which it approaches the edge, more fully to counteract the tendency for the labels to follow the tape around the edge instead of being projected therefrom.

The objects of the present invention are to provide a dispensing device having means for guiding the tape as it approaches or leaves the aforesaid edge or both, which means is simple and economical to produce, which is effective and reliable in operation, and which also provides a hard smooth peeling edge. Thus the guide means is particularly adapted for use on cardboard boxes or other containers the walls of which are too soft to provide a good permanent peeling edge.

In one aspect the present invention involves a guide for an elongate strip of sheet material which is adapted to be attached to a container, the guide having strip-guiding flanges extending inwardly from opposite sides in spaced relation to one face of the guide and a lip extending from one end toward the other end in spaced relation to the back of the guide so that the guide may be attached to a container by sliding an edge of the container under said lip. The guide may also have a tongue at the other end for anchoring the guide to the container. In the preferred embodiments the edges of the aforesaid flanges substantially meet to form a flat tubular passageway for the tape, whether or not the flanges are on the side of the tubular passageway next to the aforesaid edge with the aforesaid lip formed by projecting ends of the flanges folded over the aforesaid edge of the container. In each case the guide should have a passageway on the inside to guide the tape as it approaches the aforesaid edge and in the preferred embodiments it also has a passageway on the outside to guide the tape as it leaves the edge.

In another aspect the invention involves a dispenser for sheet material comprising a container for an elongate strip of material, the container having an outlet through which the strip may be pulled endwise and a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending around the edges of the strip and thence along the other side of the path, together with a lip extending along the back of the guide in spaced relation thereto, the guide being slipped over the edge of the aforesaid outlet with the edge between the back and lip.

In still another aspect the invention involves a package of sheet material comprising a folded box for an elongate strip of the material, the box having a cover hinged to one side with a flap extending into the box along the opposite side and having an outlet at one end of the cover through which the strip may be pulled endwise, in combination with a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending along the edges of the strip and thence along the other side of the path, and a lip folded back along the back of the guide in spaced relation thereto to form a recess to receive the aforesaid end of the cover.

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

Fig. 1 is a top plan view of one embodiment;

Fig. 2 is a side view of the same embodiment with a portion of the container broken away;

Fig. 3 is a section on line 3—3 of Fig. 1;

Fig. 4 is a perspective view of the guide shown in Figs. 1, 2 and 3;

Fig. 5 is a section on line 5—5 of Fig. 2;

Fig. 6 is a section similar to Fig. 3 showing a modification;

Fig. 7 is a section on line 7—7 of Fig. 6;

Fig. 8 is a plan view of the blank from which the guide of Figs. 6 and 7 is formed;

Fig. 9 is a view similar to Fig. 6 showing a further modification;

Fig. 10 is a top plan view of another modification;

Fig. 11 is a side view of the modification shown in Fig. 10, a part of one side of the box being broken away;

Fig. 12 is a section on line 12—12 of Fig. 10;

Fig. 13 is a section on line 13—13 of Fig. 10;

Fig. 14 is a perspective view of the guide shown in Figs. 10 to 13;

Fig. 15 is a plan view of the blank from which the box shown in Figs. 10 to 13 is formed, showing the guide of Fig. 14 applied to the blank; and

Fig. 16 is a section similar to Fig. 6 showing still another modification.

The particular embodiment shown in Figs. 1 to 4, inclusive, comprises a cardboard box having ends 1 and 2, sides 3 and 4, the side 4 having a flap cemented to the inside of end 2, the ends having bottom flaps 5 and 6, the end 1 having a top flap formed in three parts 7, 8 and 9, the end 2 having a top flap 11, a bottom 12 having a flap 13, and a top 14 having a flap 15. Disposed inside the container is a roll of tape T carrying on its inner surface a series of labels L which are temporarily secured to the tape by tacky adhesive which readily peels off the tape. As shown in Fig. 3 the tape feeds out of the container along the horizontal passageway bounded on top by the cover 14 and on the bottom by the horizontal portion 7 of the three-part flap 7—8—9. By providing the extension 8 on the flap and folding it back as shown in Fig. 3 there is formed at 16 a rounded edge which does not catch on the forward edges of the labels as they enter the aforesaid passageway. By providing the portion 9 which seats against the inside of the side 1 the horizontal portion 7 is held up in horizontal position. Thus the strip of tape and labels is closely confined on both sides as it passes through the aforesaid passageway. To peel the tape away from the labels and project the latter away from the container as indicated at L' in Figs. 1 and 3, the tape is peeled back over the edge 17 of the cover 14.

To protect the aforesaid edge and to guide the tape as it leaves the edge the aforesaid guide is fitted over the edge, the guide preferably being made of thin sheet metal fold into tubular form. As shown in Figs. 1 to 4 the guide comprises a flat outer portion 18 and flanges 19 folded inwardly in spaced relation to the inner face of the portion 18, the two flanges substantially meeting at 21. At one end the flanges 19 are provided with extensions 22 which are folded back to form the aforesaid lip. At the other end the flanges are provided with tongues 23 for holding the guide on the cover after the edge 17 of the cover has been slipped under the lip 22, the tongues extending through a slot in the cover and thence being bent over as indicated in broken lines in Fig. 4 and as shown in full lines in Fig. 3.

By locating the crack 21 on the side of the guide next to the part of the container to which the guide is fitted several advantages are obtained. The outside surface then forms a smooth continuous surface for writing purposes. With the lips and tongues on the flanges instead of the uninterrupted side, the guide is held more rigidly in shape. Also there is less danger of tearing the tape if it is pulled obliquely to the top of the container instead of parallel thereto.

To thread the device the strip of tape and labels is extended out of the device before the cover is closed and then the free end of the tape is folded back and inserted through the flat tubular portion of the metallic guide. To project the labels successively from the device as illustrated in Figs. 1, 2 and 3 it is necessary merely to pull on the strip in the direction indicated by the arrows, thereby to peel the tape over the edge 26 of the guide. As shown in Figs. 3 and 4 the edge 26 is so shaped that the sharper portion is on the lower side adjacent the passageway for the strip as it approaches the edge, whereby there is less tendency for the labels to follow the tape around the edge instead of being projected out of the container as intended. Proper action is also ensured by the portion 7 of the flaps 7—8—9 which prevents the strip from arching away from the edge 26 as it approaches the edge. The tubular passageway through the guide serves several useful purposes. In the first place it causes the projecting end of the tape T to lie against the top of the container instead of flapping loosely back and forth. In the second place it prevents an inexperienced user from pulling the tape over the edge 26 in any direction except the direction opposite to that in which the tape approaches the edge, that is the direction in which there is the least tendency for the labels to follow the tape around the edge. Also the flat top 18 provides a surface to catch each label as it flips over the top of the device when the tape is almost completely peeled away from the label. By providing a large smooth surface at 18 it serves as a table upon which the label may be pressed down by the finger to the broken line position shown in Fig. 2 for the purpose of writing on the upper non-adhesive side of the label. After the proper indicia has been applied to the label it may be peeled off the surface 18 by grasping the projecting edge of the label, the surface being recessed at 28 for this purpose. From time to time the end of the tape may be torn off, as indicated at 10 in Fig. 1, and discarded.

In the embodiment shown in Figs. 6, 7 and 8 the guide is fitted to the side 31 instead of the top 34 of the box. The sides 31 and 32 of the box are provided with bottom flaps 35 and 36 and one top flap 37 but the other top flap is omitted. The bottom 33 and the top 34 are provided with guide flaps corresponding to 13 and 15 in the first embodiment and the top is also provided with an end flap 38. As in the first embodiment the guide comprises an outer flat portion 48 with inturned flanges 49 to form a tubular passageway on the outside of the container, at one end the flanges are extended to form lips 52 adapted to be folded back over the edge of the box and at the other end they are provided with tongues 53 for anchoring the guide to the box. However instead of the tongues 53 being folded back they are shaped as shown in Fig. 6. The lips 52 are interconnected by the central portion 54 to provide a tubular passageway for the tape as it approaches the peeling edge in addition to the tubular passageway on the outside of the package for the tape after it leaves the peeling edge. The end 55 of the central portion 54 is bent back to receive the edge of the tongue 38 of the cover and the extreme ends of the lips 52 are bent inwardly as indicated at 56 in Fig. 6 to facilitate the application of the guide to the edge of the box. To project the labels L upwardly from the container the tape is pulled in the direction of the arrow, as shown in Fig. 6. The guide of Figs. 6 and 7 is preferably made from a sheet metal blank such as shown in Fig. 8, the flanges 52—53 first being folded inwardly about the lines 61 and then the upper portion being folded downwardly about the lines 62.

The modification shown in Fig. 9 is like that shown in Figs. 6, 7 and 8 except in that the outer tubular portion is the same length as the

inner tubular portion and instead of having tongues 53 to extend through slots in the side of the box the extreme ends of the flanges are bent outwardly as indicated at 63 to facilitate application of the guide to the edge of the box. In this embodiment the device is held onto the box merely by friction but in each embodiment the pull of the tape tends to hold the guide on the edge to which it is applied.

In the modification shown in Figs. 10 to 15 the box comprises two sides 64 and 65, two ends 66 and 67, bottom 68, an inner cover 69 and an outer cover 70. The side 64 has an extension 71 which is cemented to the inside of the end 67 as shown in Figs. 11, 12 and 13. The ends 66 and 67 have the usual bottom flap ends 72 and 73, the bottom 68 and the top 70 have the usual side flaps 75 and 76 adapted to tuck inside the folder box and the top 70 may have an opening 77 for a purpose hereinafter explained. The inner top 69 is folded inwardly along the line 78 and is provided with side flanges 79 folded downwardly about the lines 80 along the inside of the box. When the cover 69 is thus folded into position the ends 81 of the side flanges 79 seat against the end 67 of the box through the medium of the flap 71 as shown in Fig. 12.

Fitted over the free end of the inner cover 69 opposite the end 78 is a clip 82 similar to those above described, the clip having side flanges 83 folded along one side to provide a passageway and at one end a lip 84 folded back to fit over the edge of the cover by frictional engagement. At the other end the flanges have turned lips 85 to receive the edge of the flap 86 as shown in Fig. 12.

In assembling the package the flap 71 is first cemented to the end 67, the bottom flaps 72 and 73 are turned in and the bottom is then closed. At this point the roll of tape is dropped into the box in the position shown in Figs. 11 and 12 and the end of the tape is threaded upwardly through the tubular passageway in clip 82. Then the inner cover 69 is swung down to horizontal position, and just before it reaches this position the flap 86 is pushed inwardly so as to engage under the lip 85 as the cover approaches the horizontal position. The tape is then folded backwardly over the sharp edge 90 of the clip 82 and the cover 70 is closed over the tape to form a thin passageway for the tape as it is pulled to the right (Figs. 10, 11 and 12). Thus the tubular passageway of the clip 82 causes the tape to approach the peeling edge 90 horizontally and the mid-passageway between the two covers causes the tape to leave the peeling edge horizontally. In this way the tendency for the labels to follow the tape around the edge, instead of being projected from the box, is minimized. The flanges 79 not only stiffen the cover but they further counteract the pull of the tape by seating against the end of the box.

As in the previous embodiments, after the tape has been peeled from substantially the entire surface of a label, the label slips over the top of the box into the position shown in Fig. 12. As shown at 91 the end of the outer cover may be recessed to facilitate picking the label off the top of the box after it is entirely disengaged from the tape. From time to time the projecting end of the tape may be torn off as indicated at 92 in Fig. 10, and if it is torn off too short it may be advanced by frictional engagement through the opening 77.

The modification shown in Fig. 16 is like that shown in Fig. 6 except in that the clip 48 is applied to the cover 34' instead of the side 31 and the flap 38', corresponding to the flap 38 in Fig. 6, is on the side 31' instead of the top 34.

A characteristic feature of the invention involves a flap, such as 38 in Figs. 6 and 9 and 38' in Fig. 16, on the box seating in a turned lip or other shoulder on the clip. In each case this arrangement prevents the accidental removal of the clip from the box and, when the flap is on the cover as in Figs. 6, 9, and 12, it also prevents the cover from swinging in too far.

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. For example, in the embodiments shown in Figs. 1 to 7 the slit in the guide is on the same side of the guide as the peeling edge, whereas in the embodiment shown in Figs. 10 to 15, inclusive, it is on the side opposite to the peeling edge, but it will be understood that in any embodiment it may be on one side or the other as desired.

I claim:

1. A guide for guiding an elongate strip of sheet material as the strip is pulled endwise from a container, strip-guiding flanges extending inwardly from opposite sides in spaced relation to one face of the guide, and a lip extending from one end toward the other end in spaced relation to the back of the guide so that the guide may be attached to a container by sliding an edge of the container under said lip.

2. A guide for guiding an elongate strip of sheet material as the strip is pulled endwise from a container, strip-guiding flanges extending inwardly from opposite sides in spaced relation to one face of the guide, a lip extending along the back of the guide at one end thereof so that the guide may be attached to a container by sliding an edge of the container under said lip, and a tongue at the other end for anchoring the guide to the container.

3. A guide for guiding an elongate strip of sheet material as the strip is pulled endwise from a container, strip-guiding flanges extending inwardly from opposite sides in spaced relation to one face of the guide, the edges of the flanges substantially meeting, and a lip extending from one end of each of said flanges toward the other end in spaced relation to the flange so that the guide may be attached to a container by sliding an edge of the container under said lips.

4. A guide for guiding an elongate strip of sheet material as the strip is pulled endwise from a container, strip-guiding flanges extending inwardly from opposite sides in spaced relation to one face of the guide, the edges of the flanges substantially meeting, a lip extending from one end of each flange toward the other end in spaced relation to the flange so that the guide may be attached to a container by sliding an edge of the container under said lips, and a tongue at said other end of each flange for anchoring the guide to the container.

5. A dispenser for sheet material comprising a container for an elongate strip of the material, the container having an outlet through which the strip may be pulled endwise, a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending around the edges of the strip and thence along the opposite side of the path, and a lip extending along the back of the guide in spaced rela-

tion thereto, the guide being slipped over the edge of said outlet with the edge between said back and lip.

6. A dispenser for sheet material comprising a container for an elongate strip of the material, the container having an outlet through which the strip may be pulled endwise, a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending around the edges of the strip and thence along the opposite side of the path, a lip extending along the back of the guide in spaced relation thereto, the guide being slipped over the edge of said outlet with the edge between said back and lip, and a tongue anchoring the guide to the container.

7. A dispenser for sheet material comprising a container for an elongate strip of the material, the container having an outlet through which the strip may be pulled endwise, a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending around the edges of the strip and thence along the opposite side of the path, the edges of the flanges substantially meeting, and lips extending from one end of the flanges back along the flanges in spaced relation thereto, the guide being slipped over the edge of said outlet with the edge between said flanges and lips.

8. A dispenser for sheet material comprising a container for an elongate strip of the material, the container having an outlet through which the strip may be pulled endwise, a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending around the edges of the strip and thence along the opposite side of the path, the edges of the flanges substantially meeting, lips extending from one end of the flanges back along the flanges in spaced relation thereto, the guide being slipped over the edge of said outlet with the edge between said flanges and lips, and tongues at the other end of said flanges for anchoring the guide to the container.

9. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and an edge adjacent the outlet over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, and a guide fitted over said edge with side flanges overlapping the edges of the tape on the outside of the package to guide the tape after it passes over said edge.

10. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and an edge adjacent the outlet over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, and a guide fitted over said edge with side flanges overlapping the edges of the tape on the inside of the package to guide the tape as it approaches said edge.

11. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and an edge adjacent the outlet over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, and a guide fitted over said edge with side flanges overlapping the edges of the tape on both the inside and the outside of the package to guide the tape as it approaches said edge and after it leaves the edge.

12. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and an edge adjacent the outlet over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, and a guide fitted over said edge with side flanges overlapping the edges of the tape to guide the tape as it is pulled over said edge.

13. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and adjacent the outlet a wall having an edge over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, a guide fitted over said edge with side flanges overlapping the edges of the tape on the outside of the package to guide the tape after it passes over said edge, and means for holding the tape close to said wall as it approaches said edge.

14. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and adjacent the outlet a wall having an edge over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, a guide fitted over said edge with side flanges overlapping the edges of the tape on the outside of the package to guide the tape after it passes over said edge, and a flap on the container for holding the tape close to said wall as it approaches said edge.

15. A package of sheet material comprising a folded box for an elongate strip of the material, the box having a cover hinged to one side with a flap extending into the box along the opposite side and having an outlet at one end of the cover through which the strip may be pulled endwise, a guide for guiding the strip as it is pulled from the container, the guide extending along one side of the path of the strip with flanges extending around the edges of the strip and thence along the other side of the path, and a lip folded back along the back of the guide in spaced relation thereto, the guide being slipped over the said end of the cover with the end between said back and lip.

16. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and an edge adjacent the outlet over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, and a guide fitted over said edge with side flanges overlapping the edges of the tape on the outside of the package to guide the tape along a predetermined path after it passes over said edge,

the edges of the flanges substantially meeting and being between said path and the container.

17. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and an edge adjacent the outlet over which the tape may be drawn to peel it away from the sheet material and project the latter from the package, and a guide fitted over said edge with side flanges overlapping the edges of the tape on the outside of the package to guide the tape along a predetermined path after it passes over said edge, the edges of the flanges substantially meeting and being between said path and the container, the flanges having extensions which are bent over to form a lip fitting over said edge and a substantially continuous peeling edge.

18. A package of sheet material comprising a folded box for an elongate strip of the material, the box having an outer cover hinged to one side with a flap extending into the box along the opposite side and having an inner cover hinged to one end with an edge adjacent to the opposite end, the two covers being disposed in close juxtaposition to form a thin passageway therebetween, and a clip fitted over said edge, whereby the sheet material may be pulled over said edge and thence through said passageway.

19. A package of sheet material comprising a folded box for an elongate strip of the material, the box having an outer cover hinged to one side with a flap extending into the box along the opposite side and having an inner cover hinged to one end with an edge adjacent to the opposite end, the two covers being disposed in close juxtaposition to form a thin passageway therebetween, and a clip fitted over said edge, whereby the sheet material may be pulled over said edge and thence through said passageway, the inner cover having side flanges seating against said first end to counteract the pull of the sheet material against said clip.

20. A dispenser for sheet material comprising a folded box for an elongate strip of material, a clip fitted over an edge of one wall of the container, the clip having a shoulder on one side spacing in the same direction as said edge, and a flap on an adjacent wall of the container seating against said shoulder to restrain accidental dislodgment of the clip in said direction.

21. A guide for guiding an elongate strip of sheet material as the strip is pulled endwise from the container, a lip extending from one end of the guide toward the other end in spaced relation to the back of the guide so that the guide may be attached to a container by sliding an edge of the container under the lip, and a part extending around an edge of the strip and thence along the front of the strip.

22. A flat tubular guide for a strip of peelable labels mounted in a row on a backing ribbon, one side of the tubular guide being extended at one end to form a lip which is folded back in spaced relation to said side so that the tubular guide may be attached to a container by sliding an edge of the container under the lip.

23. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and a wall having an edge adjacent the outlet, a guide fitted over said edge with portions extending along the inner and outer sides of said wall, said portions being integrally interconnected by a peeling edge extending around said edge, the peeling edge being sharp enough to peel the tape away from the material and project the latter from the container when the tape is pulled through said outlet, and said outer portion of the guide having an integral portion extending around one edge of the tape and thence along the outer face of the tape to hold the tape close to said outer portion of the guide as it leaves said peeling edge, thereby to facilitate the peeling operation and to prevent the tacky material from following the tape around the edge.

24. A package comprising a strip of tape and sheet material temporarily adhering to one side of the tape with tacky adhesive which readily peels off the tape, a container having an outlet through which the tape may be pulled endwise and a wall having an edge adjacent the outlet, a sheet-metal guide fitted over said edge with portions extending along the inner and outer sides of said wall, said portions being integrally interconnected by a peeling edge bent around said edge, the peeling edge being sharp enough to peel the tape away from the material and project the latter from the container when the tape is pulled through said outlet, and said outer portion of the guide having at one end an integral tab for securing the guide to said wall and at the other end an integral portion bent around one edge of the tape and thence extending along the outer face of the tape to hold the tape close to said outer portion of the guide as it leaves said peeling edge, thereby to facilitate the peeling operation and to prevent the tacky material from following the tape around the edge.

CARL A. FLOOD.