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M. D. LEE ET AL

1,917,376

SHIPPING AND DISPENSING CONTAINER FOR SHEET MATERIAL

Filed July 30, 1932

2 Sheets-Sheet 1

Fig. 1.

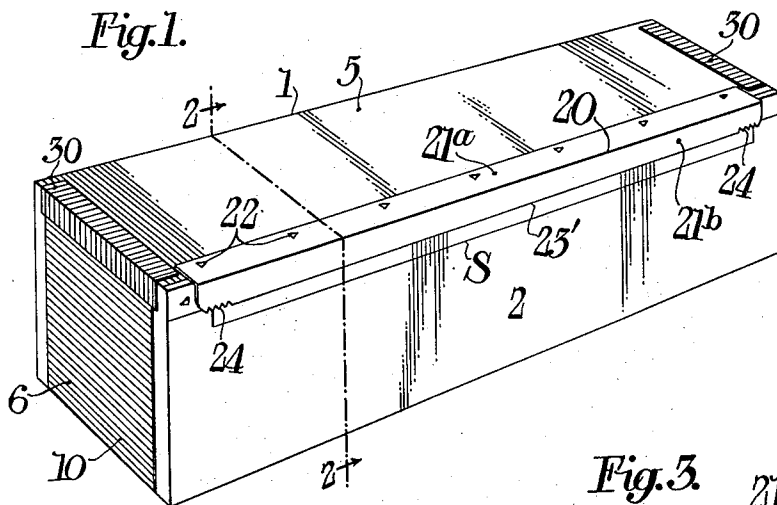


Fig. 2.

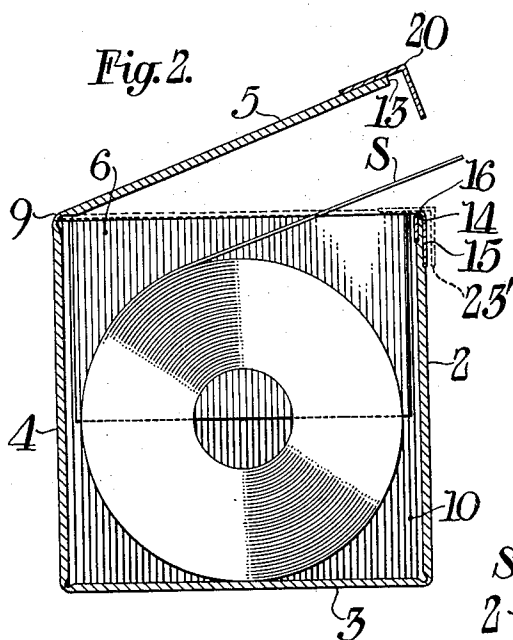


Fig. 3.

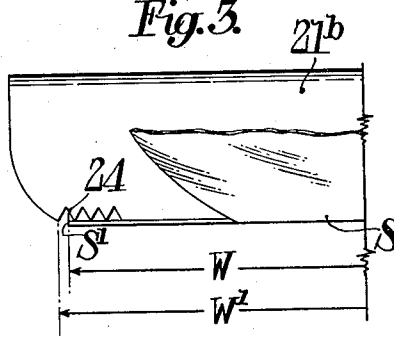
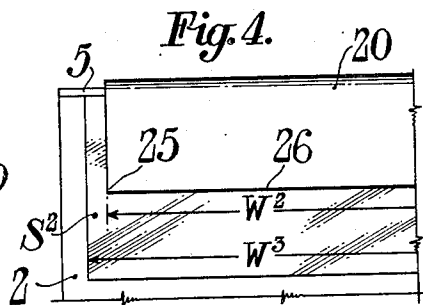


Fig. 4.



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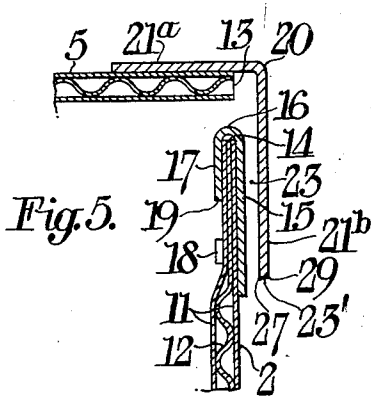
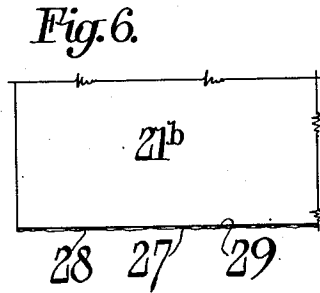
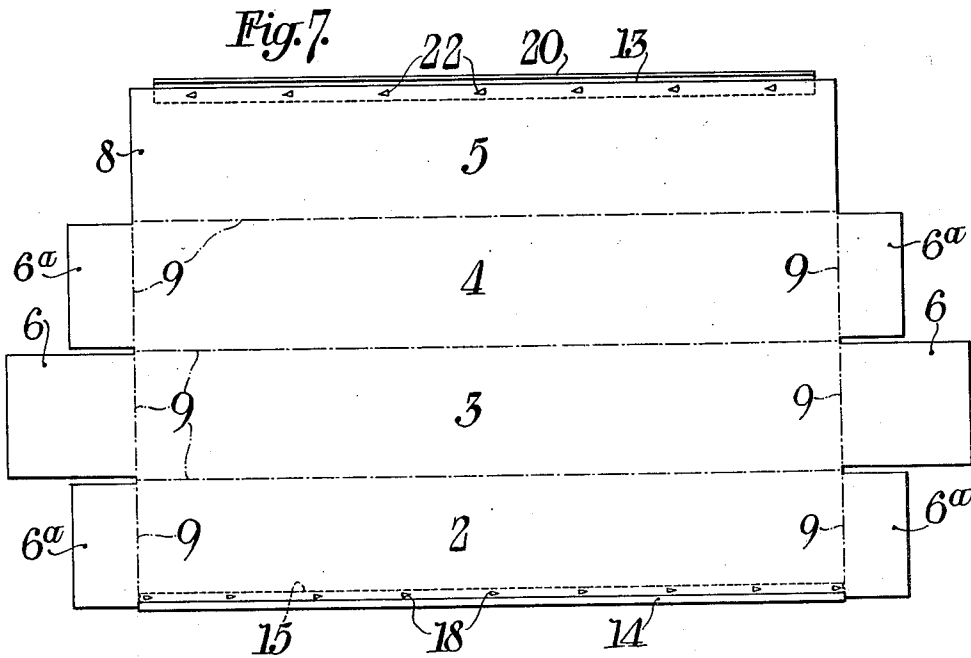
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SHIPPING AND DISPENSING CONTAINER FOR SHEET MATERIAL

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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SHIPPING AND DISPENSING CONTAINER FOR SHEET MATERIAL

Application filed July 30, 1932. Serial No. 626,764.

This invention relates to shipping and dispensing containers for sheet material. It relates particularly to a package in which transparent cellulosic sheeting may be shipped and from which it may be dispensed. One object of our invention is to provide a container which will adequately protect the delicate surface of thin cellulosic material. Another object of our invention is to provide a package which will protect the sheeting and which will at the same time serve as a dispensing device. Another object of our invention is to provide a box-like container for the sheet material and to provide a reinforcing strip for the cover, which will include a cutting edge on which lengths of the sheet material may be torn off. Another object of our invention is to provide an inexpensive dispensing container having a cutting edge with a burr edge attached to the cover of the receptacle. Another object of our invention is to provide a box-like structure with a cover which will tend to open into a position from which the sheet material can be readily withdrawn. Still another object of our invention is to provide on one edge of the box a smooth rounded surface which will not mar the delicate surface of the sheet material and which will cooperate with the cutting member on the cover top to form a restricted passageway, tending to hold the sheet firmly during the cutting operation and other objects will appear from the following specification, the novel features being particularly pointed out in the claims at the end thereof.

With the new transparent cellulosic sheetings, considerable care must be taken in order to preserve the brilliancy of the sheet and in order to prevent marring the surface. Some of the well known types of sheeting are colored and some of the sheets are clear but, in either case, scratches due to dirt or due to roughened areas over which the sheet may be drawn, will render the sheet materially unattractive.

With a box structure in accordance with our invention, these and other difficulties may be overcome.

Coming now to the drawings wherein like reference characters denote like parts throughout, Fig. 1 is a perspective view of a dispensing container constructed in accordance with and embodying a preferred form

of our invention and sealed in condition for shipping the sheet material.

Fig. 2 is an enlarged sectional view of line 2-2 of Fig. 1.

Fig. 3 is an enlarged detailed sectional view showing an end of the cutting edge and the relation of a sheeting to this edge.

Fig. 4 is an enlarged fragmentary view of still another form of cutting edge.

Fig. 5 is an enlarged fragmentary detailed section through the reenforcing and cutting member showing its relation to the reenforcing edge for the front of the box.

Fig. 6 is a greatly magnified view of the cutting edge showing the burr as would appear through a powerful magnifying glass.

Fig. 7 is a plan view of a blank from which our container may be folded.

As indicated in Figs. 1 and 2, a preferred form of our invention may comprise a box-like receptacle designated broadly as 1. This box may consist of a front wall 2, bottom wall 3, rear wall 4 and cover 5. There are end walls 6, which, as best indicated in Fig. 7, preferably consist of a number of layers of material. As indicated in this figure, the blank from which our box may be folded preferably consists of a single sheet 8 of material, the various walls of the container being divided by weakened lines 9 upon which the blank may be folded in a well known manner.

The end walls 6 may consist of flaps bent along the weakened lines 9 and attached to the bottom wall 3. After these flaps are folded upwardly, the flaps 6a may be folded over the outside of the flaps 6 and thus form a double wall. A pasteur 10, as indicated in Fig. 1 and Fig. 2, is then used to hold the double end walls together.

We prefer to form the blank shown in Fig. 5 of corrugated board having smooth surfaces 11 on each side of the inner corrugated material 12. This is a well known type of material which will withstand considerable rough handling and which will adequately protect the roll of cellulosic material.

The box is reenforced at the ends 6 by means of the double wall above described. The remaining two edges 13 on the cover and 14 on the front wall of the box are also reenforced, preferably by metal strips. Edge 14 is reenforced by metal strip 15, which, as best shown in Fig. 5, is folded over the edge 14 and is compressed upon it, forming a smooth rounded upper surface 16 against which the

sheet material may contact and tending to compress the two walls 11 and the corrugated portion 12. The strip 15 is folded over at 17 and just beneath the edge 17 there may be a series of triangular fastening members 18 struck out from the material of strip 15 and folded over on the inside of the front wall 2.

This reinforcing member not only provides a rounded edge 16 which may contact with the strip material, but since it depresses and compacts the edge 14 of the front wall 2, it reinforces this edge and, since the lower edge 19 of the material is pressed inwardly against the wall 2, there is no sharp projecting edge which would tend to mar the surface of the cellulosic sheeting.

The edge 13 of the top of the cover 5 is reinforced by an L-shaped member 20. One arm 21a of the L-shaped member 20 may be attached to the cover 5 by means of triangular punched out portions 22, such as are well known in this art and the other arm 21b extends away from the front wall 2 a short distance, providing a passageway 23 between the plate 15 and the arm 21b.

The lower edge 23' of the L-shaped member constitutes a cutting edge on which a sheet of material drawn from the box 1 may be torn. There are several ways that this cutting edge can be made.

The preferred form is shown in Fig. 1 wherein the ends of member 21b are provided with sharpened teeth 24 to engage the edge of the cellulosic sheeting and start the cutting operation. This operation may be continued on the edge 23' since it tears readily after once starting.

In Fig. 3 the relation of the cellulosic sheet S to the piercing teeth 24 is clearly shown, the edge S' of the sheet always being adapted to engage some of the teeth 24 at either end. In other words, the width W of the cellulosic sheet is somewhat less than the width W' of the outer edge of the teeth 24. It is only necessary with this type of cutting edge to have a single tooth perforate the material to start the cutting operation.

In a second embodiment shown in Fig. 4, instead of the cutting teeth 24, there might be provided a sharp single tooth 25 on the corner of the L-shaped member 20. In this form, the width W² of the cutting edge 26 is less than the width W³ of the cellulosic material S², so that when drawing up the sheet against the cutting edge, the sharpened point 25 will pierce the cellulosic material, starting the cutting operation.

Regardless of which type of cutting edge is used, there is one feature of our invention which has been found extremely useful. By properly adjusting the shearing tools which cut out the L-shaped member 20 and which shear the lower edge 27 of this member, it is possible to produce a burr 28. This burr, under the microscope, would appear as shown

in Fig. 6. That is, there would be one smooth straight edge 29 on the outer edge of the member 22 and the inner edge 27 would have a burr in the form of a fine, irregular, extremely sharp edge drawn from the metal as the shearing operation is performed. Such an edge is not ordinarily formed by shearing metal. It can, however, be formed by properly adjusting the dies and it is particularly useful in forming a cutting edge for cellulosic sheeting, because the sheeting can be torn off rapidly in a smooth perfectly straight line when drawn over a burred edge of this type.

It is not essential that a sharp edge, such as a tooth 24, or a sharp point, such as the corner 25, be provided on the L-shaped member 20, but it is preferable to do so because, when there is such a sharp point to pierce the cellulosic sheet and start the tearing operation, the burr 28 may be extremely fine and still very smoothly cut through the sheet.

With an edge of this kind, it is obvious that it is not desirable to draw sheeting through the passageway 23 in drawing out a length to be severed. Accordingly, as shown in Fig. 2, the weakened line 9 is pressed in the blank to such a degree that the cover 5 tends to spring open into the position shown in this figure. This resiliency remains in the carton a sufficient time to utilize the contents thereof.

When a package of this cellulosic sheeting is shipped in the box 1, the cover 5 is fastened down in any suitable manner or, as shown in Fig. 1, by means of pasters 30 which may be fastened over the edges of the cover 5. It is preferable to allow the edge of the sheet material S to project slightly below the cutting edge 23, say half an inch.

In using this package, the paster 30 may be readily severed permitting the cover 5 to spring upwardly to the position shown in Fig. 2, in which the cellulosic sheeting S can be drawn from the box without contacting with either of the reinforcing members along the edges 13 or 14. No harm will result to the sheet if it is drawn over the smoothly rounded edge 16 of the reinforcing member 15.

After the appropriate length of sheeting has been drawn out, the cover 5 may be pressed down, thus passing a small portion of the sheet through the passageway 23 and that portion of the L-shaped member which forms the cutting edge 27 rests against the cellulosic sheet so that, as it is drawn against the cutting edge, a sharp point, such as 24 or 25 pierces the sheet and it will tear smoothly along the burred edge 27.

While we have described a preferred form of our application and a preferred form of the cutting device forming a part of our invention, it is obvious that various changes can be made from the form shown in the

drawings and we contemplate as within the scope of our invention all such forms as may come within the terms of the appended claims.

5 Having now described our invention, what we claim as new and desire to be secured by Letters Patent of the United States is:

1. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, a reinforcing and cutting strip attached to an edge of the cover, said strip comprising a member L-shaped in cross section one part of which projects from said edge of said cover.

15 2. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, a reinforcing and cutting strip attached to an edge of the cover, said strip comprising a member L-shaped in cross section one part of which projects from said edge of said cover, and a burr on an edge of said part projecting from said cover adapted to serve as a cutting edge for said strip material.

25 3. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, a reinforcing and cutting strip attached to an edge of the cover, said strip comprising a member L-shaped in cross section one part of which projects from said edge of said cover, a burr on an edge of said part projecting from said cover, and a sharp point on said part towards an end thereof adapted to pierce the strip material whereby said sheet may be cut by drawing it across the burred edge.

35 4. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, a reinforcing and cutting strip attached to an edge of the cover, said strip comprising a member L-shaped in cross section one part of which projects from said edge of said cover, a burr on an edge of said part projecting from said cover adapted to serve as a cutting edge for said strip material, said burr extending between sharp points located on the cutting edge towards the end thereof.

50 5. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, reinforcing strips for the edges of the cover and the front wall positioned to lie in spaced relation when said cover is closed, said reinforcing strip for the cover comprising an L-shaped member one portion of which is attached to said cover, and another portion of which projects downwardly therefrom to form a cutting edge, said edge being adapted to lie outside of the reinforcing strip on the front wall of the box.

60 6. In a box for packaging and dispensing

sheet material, the combination with a box member including end, front, back and bottom walls, of a top wall hingedly attached to the back wall, and an L-shaped reinforcing strip for an edge of the hinged top, a portion of said L-shaped member being attached to the top with another portion thereof extending downwardly therefrom and a sharpened point adapted to pierce a portion of sheet material being dispensed, said sharpened point being included in a downwardly projecting edge of the L-shaped member.

7. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, reinforcing strips for the edges of the cover and the front wall positioned to lie in spaced relation when said cover is closed, said reinforcing strip for the cover comprising an L-shaped member one portion of which is attached to said cover and another portion of which projects downwardly therefrom to form a cutting edge, said cutting edge being so located that it lies on the outside of the reinforcing strip on the front wall of the box and is spaced therefrom providing a smooth passageway therebetween.

8. A shipping and dispensing box for thin cellulosic sheeting comprising a one-piece blank of corrugated board folded into front, back, bottom and end walls and a cover integrally attached to said back wall, reinforcing strips for the exposed front edges of the cover and front wall, the reinforcing strip for the front wall including a metallic strip bent in a smooth curve about the front wall, said reinforcing strip for the cover comprising metallic member L-shaped in cross section, one portion being so attached to the cover that the other portion of said L-shaped member overlies and is spaced from the first mentioned reinforcing strip, said portion of said L-shaped member including a burr on one edge adapted to serve as a cutting edge.

9. A dispensing box for strip material comprising side, end and bottom walls, a cover for these walls, a reinforcing and cutting strip attached to an edge of the cover, said strip comprising a member L-shaped in cross section, one part of which projects from said edge of said cover on the outside of said box, a burr along one side of an edge of said projecting part adapted to form a cutting edge, said burred edge being located on that side of said projecting part which faces said box.

Signed at Rochester, New York, this 27th day of July, 1932.

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