July 4, 1933. L. BISCHOFF 1,916,854

RECEPTACLE

Filed Dec. 29, 1932

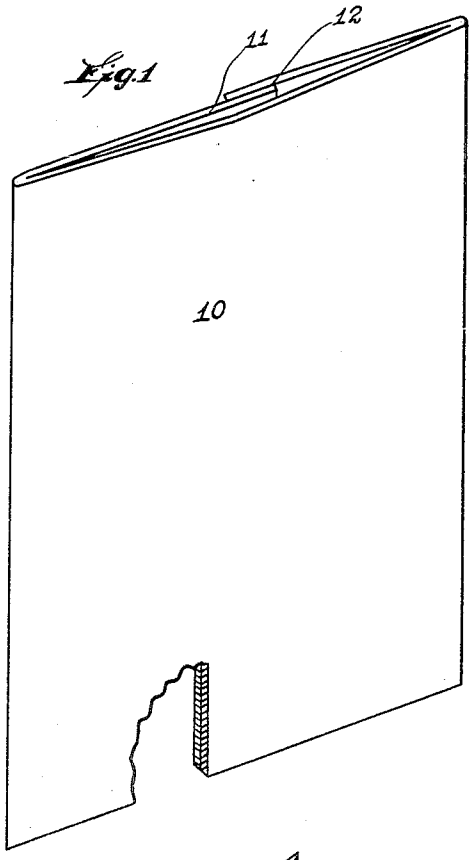


Fig. 1

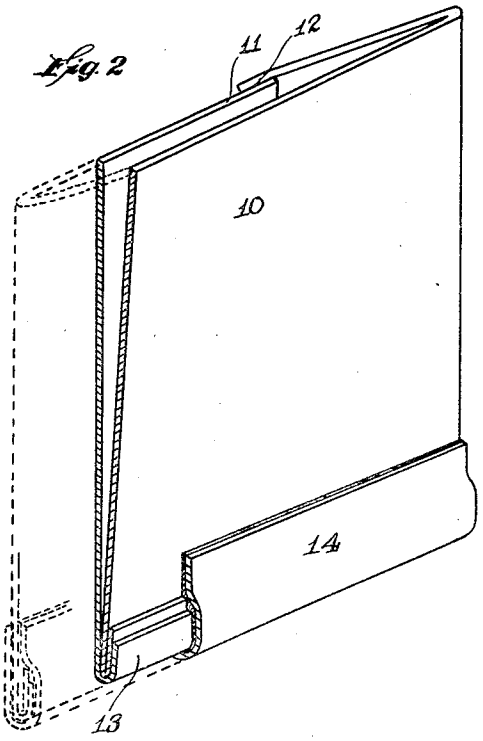


Fig. 2

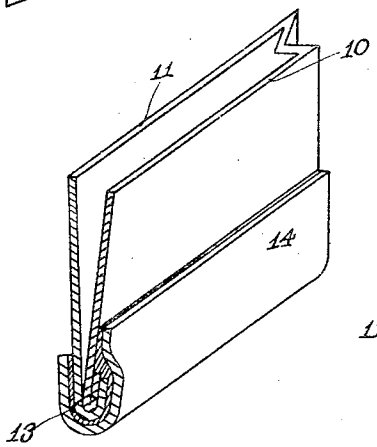


Fig. 3

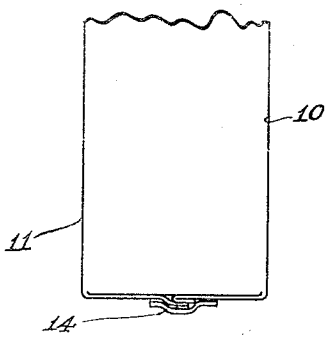


Fig. 4

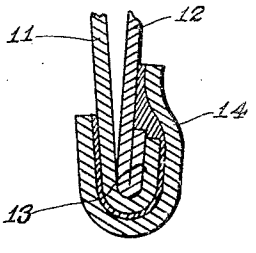


Fig. 5

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UNITED STATES PATENT OFFICE

LUDWIG BISCHOFF, OF BROOKLYN, NEW YORK

RECEPTACLE

Application filed December 29, 1932. Serial No. 649,427.

This invention relates to receptacles and, more particularly, to bags or wrappers made of "cellophane", ordinary paper and the like, and, among other objects, aims to provide an improved type of machine made bag having flush cut ends and a strip of material adhesively secured to a folded up end, providing efficient sealing means and serving also to reinforce the closed end. My object is to produce a strong bag bottom that is well sealed and to economize with the bag material, especially in making the bags of "cellophane", glassine and other more or less expensive materials.

This application is a continuation in part of my application, Serial Number 595,321, filed February 26, 1932.

In the manufacture of bags, it is common practice to make the body of the bag in the form of a tube which is cut automatically from a continuous web having its opposite ends overlapped to provide the longitudinal seam. The end closure is usually made by folding back the end portion of the tube and adhesively securing it to one face or side wall of the bag. One side of the bag blank is made longer than the other and is folded up on the outside to present an inner sealing surface which will adhere to the smooth face of the bag above the upper edge of the inner folded up layer or end. This makes it necessary to cut both the upper and lower ends of the bag or tube alike, to avoid waste of material. In many cases, the upper and lower end edges are serrated because it has been found that serrated edges adhere better than smooth edges. However, serrated edges are very objectionable if "cellophane" is used in making the bags, because this material will tear very easily through any of the serrations or notches.

To form the usual bag seal, it is necessary to fold up a considerable length of the material so as to provide ample pasting surface of the longer folded up layer above the folded up inner layer. Moreover, it has been found to be exceedingly difficult to produce a good seal because the folded up end does not stick or adhere well at the opposite edges of the bag. This is a common fault found with cellophane and other bags made of expensive material. Moreover, the waste of material is quite considerable.

With the foregoing considerations in mind, it is the principal object of the present invention to provide a bag having an improved reinforced and sealed closure which makes it possible to economize with the material used. I am able to accomplish this result by cutting the bag blanks with both ends flush or with straight cuts and by folding up a materially shorter portion to form the closed bottom, but with the addition thereto of a strip of material which covers the folded over bottom and constitutes the sole sealing means for the short folded up end. The strip of material may be the same as that used in the bag or may be of a different material, without departing from the invention. In the case of "cellophane" bags, for example, it is contemplated that pasted on paper strips will be used, because they are much cheaper and also provide a surface for ordinary printing or advertising matter.

Features of the invention, other than those specified, will be apparent from the hereinafter detailed description and claims, when read in conjunction with the accompanying drawing, wherein:

Fig. 1 is a perspective view of a flush cut blank for making a flat bag, in accordance with the invention;

Fig. 2 is a perspective section of a flat bag having its bottom sealed;

Fig. 3 is a perspective section of a square bag embodying the invention;

Fig. 4 is a side elevation of an opened square bag; and

Fig. 5 is a fragmentary sectional view on an enlarged scale, showing the sealed end.

Referring to Figs. 1 and 2, showing the mode of making the flat bag, the material is first made in the form of a tube which is flattened to present walls 10 and 11, the wall 11 having the usual pasted seam 12 where the edges of the material overlap. This tube is cut to a length appropriate for making the individual bags and, while the cut may be serrated according to the usual practice, it is not necessary nor desirable. On the con-

trary, both ends are preferably cut straight or flush, it being understood that the blanks are cut rapidly and automatically as the material is fed through the machine. The end of the blank is next folded up by the machine. In this instance, the folded up portion 13 is much shorter than is the folded up portion of an ordinary bag. In fact, the fold may be, and preferably is, only about a third as long as that of the ordinary bag. Referring to Fig. 2, it will be noted that the outer layer of the folded up portion is shown as having its upper edge below the upper edge of the inner layer because the outer layer envelops the inner layer at the fold.

In accordance with this invention, no paste need be applied to the folded over end or to either of the layers, but the closed end is sealed by a strip of material 14 which is folded on the end and is adhesively secured to the opposite faces 10 and 11 of the bag and to the folded over portion 13. It is contemplated that paste will be applied to this material automatically as it is fed into the machine and that, as the end of the bag is folded up, it will be engaged by the strip so that it is ready to be sealed down by the usual presser roll. The upper edge of the sealing and reinforcing strip extends well above the edges of the two folded up plies and adheres to the flat, smooth face 10 of the bag. Since the inner folded up ply is slightly above the outer ply, as previously described, the paste on the strip serves to seal the edges and thus securely seals the end of the bag. The strip extends the full width of the bag so as to seal and reinforce the end from one edge to the other. Inasmuch as the edges of the folded up portion are covered, there is no chance of their coming loose or unfolding. The outer folded up ply adheres firmly to the strip and holds the inner ply folded against the smooth face 10 of the bag. This makes it possible to save considerable material in the folded portion. The bag blank can be made shorter.

Referring to Figs. 3 and 4, the invention is illustrated as being applied to a square bag which differs from the flat bag shown in Figs. 1 and 2, only in that it has folds or plaits at the opposite edges of the bag blank. This is a commercial type of bag, which is adapted to open up in the form of a rectangular receptacle, as best shown in Fig. 4. In this case, the opposite walls of the bag will be narrower than are the walls of a flat bag of the same capacity. Hence, the adhesive strip 14 will be shorter. The strip is very effective to produce a good seal at the opposite edges of square bags where there are eight thicknesses of material in the folded up portion. Heretofore, it has been practically impossible to produce uniformly good seals at the opposite edges of such bags, especially when they are made of "cellophane", glassine, and the like.

The invention further constitutes a solution of the problem of sealing flat or square bags which are waxed on the inside. In the manufacture of these bags, according to prior practice, it was necessary to apply considerable heat to the wax at the bottom fold over portion in order to make the fold over portion stick due to the presence of wax. With the present invention, however, the bag is cut off flush and no matter how much wax there may be on the inside of the bag, the fold over portion may be sealed in a thoroughly efficient manner by the addition of the strip as specified without the necessity of additional manufacturing costs and without extra assembly operations of heating, etc.

The invention has been particularly described as a bag closed at one end and open at the other, but both ends may be closed in the manner described, if desired, this being particularly useful in making long, narrow bags constituting individual packages or wrappers for cigars. At present, there is no satisfactory method of uniting the opposite ends of "cellophane" cigar wrappers. The present invention provides a satisfactory solution to this problem.

The foregoing detailed description sets forth the invention in its preferred, practical form, but the invention is to be understood as fully commensurate with the appended claims.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. As an article of manufacture, a bag comprising a tubular body having one end cut off flush and a short portion thereof folded back upon one face of the body so that the inner folded back ply projects slightly beyond the edge of the outer folded back ply; and a strip of material folded on the closed end and adhesively secured to the opposite side walls of the body above the folded end and to both folded back plies from one edge to the other of the bag, said adhesively secured strip constituting the sole sealing means for the folded back ends.

2. As an article of manufacture, a bag comprising a tubular body having flush cut ends; a short folded back portion on one end abutting a side wall of the body with the end edges of the plies exposed; and an imperforate adhesive strip secured to the closed end of the bag on the opposite side walls covering the folded back plies from one side edge of the bag to the other, said adhesive strip being also secured to the outer face of the outer folded back ply and to the exposed end edges of both folded back plies constituting the sole sealing means for the closed end.

In testimony whereof, I have signed the foregoing specification.

LUDWIG BISCHOFF.