

Dec. 1, 1931.

L. A. BECKER ET AL

1,834,570

CONTAINER

Filed Nov. 27, 1928

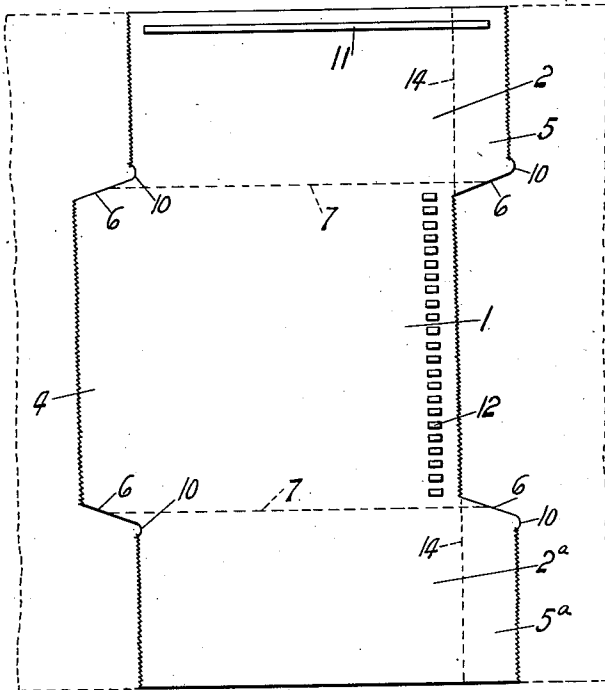


Fig. 1

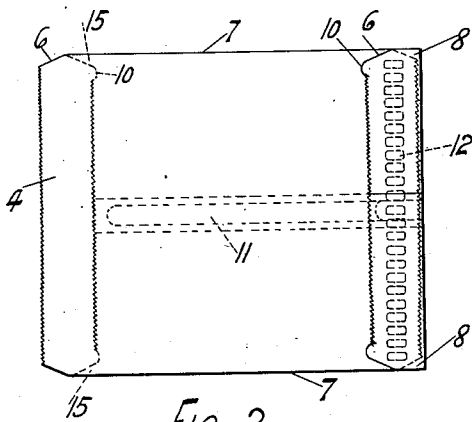


Fig. 2

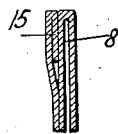


Fig. 6

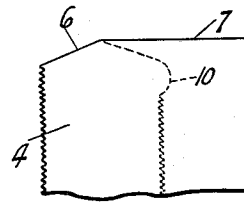


Fig. 3

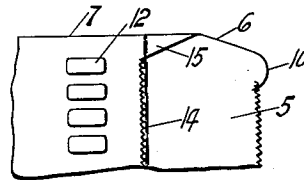


Fig. 4

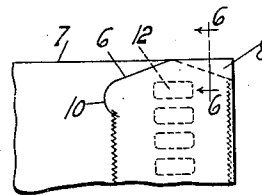


Fig. 5

INVENTOR.
LOGAN A. BECKER
JOHN M. MUNSON.

BY

Ely & Barrow
ATTORNEYS.

UNITED STATES PATENT OFFICE

LOGAN A. BECKER AND JOHN M. MUNSON, OF LAKEWOOD, OHIO, ASSIGNORS TO THE DOBECKMUN COMPANY, OF LAKEWOOD, OHIO, A CORPORATION OF OHIO

CONTAINER

Application filed November 27, 1928. Serial No. 322,151.

The present invention relates to a new and improved form of bag, container or envelope having features of novelty and improvement over prior forms of bags as will be explained and pointed out in detail.

While the form of bag shown is useful in cases where the bag is made of paper or other material, it is particularly adapted and useful in the manufacture of bags from regenerated cellulose sheeting, known in the trade as "Cellophane." The object of the invention has been primarily to construct a form of bag which can advantageously and successfully be manufactured from this newly developed material. One of the objects of the invention is to construct a bag which will not permit any points of weakness at the corners or angles of the bag so that it can not easily be torn or destroyed at this point. Were the bag to be folded as paper bags are ordinarily folded, a tendency to tear would easily be set up at the angle or corner of the bag, but by the construction shown and described, this is obviated. It is also an object to construct a bag which will be siftproof at the corners, so that finely divided or powdered material can be retained in the bag without leakage. This construction also reinforces the bag at the corners.

There are also other objects and advantages obtained by the construction shown and described, particularly as to economy in material and ease of manufacture. The process of manufacturing the bag or container, and a typical machine for manufacturing it, is contained in copending application Serial No. 319,130 filed November 13, 1928.

It will be appreciated that the details of construction of the bag as shown and described herein are not essential to all embodiments of the invention, and changes and modifications may be made therein within the scope of the invention as defined by the prior art.

In the drawings, in which the best known or preferred form of the invention is shown:

Figure 1 is a plan view of the blank from which the bag is formed;

Figure 2 is a plan view of the completed bag;

Figure 3 is an enlarged detail of a corner of the bag at the mouth thereof;

Figure 4 is an enlarged detail of a corner of the bag at the closed end thereof before the folding operation;

Figure 5 is an enlarged detail of the folded corner of the bag at the closed end; and

Figure 6 is a section on the line 6-6 of Figure 5.

As shown in Figure 1, the bag blank is cut from a strip or sheet of material, preferably regenerated cellulose sheeting, and comprises a central panel 1 and narrower wings or side portions 2 and 2^a. The wings are of the same length as the central panel, but are offset therefrom in the same direction, so that a portion of the central panel constitutes a flap 4, which closes the mouth of the bag after the contents are placed therein. The oppositely positioned extensions 5 and 5^a of the wings constitute, when the bag is folded, the closure flap for the closed end of the bag.

As indicated by the dotted lines in Figure 1, a succession of blanks may be cut from a sheet without waste, every portion of the original stock being usefully employed in the completed bags, which feature is economical and greatly facilitates the machine manufacture of the bag, as there are no scraps to be disposed of. The cutting off of the blanks is done preferably by a saw-toothed blade which gives the roughened edges shown in the drawings.

The ends of the flap 4 and, therefore, the inner sides of the wing extensions 5 and 5^a are bounded by substantially diagonal lines 6 which diverge in the manner shown. The wings are folded over the central panel of the blank along lines 7 which intersect the lines 6 at intermediate points. This construction gives rise to the formation of pockets 8 at the corners of the bag and gives four thicknesses of material at these points, as shown in Figure 6.

The cuts 6 terminate in curved extensions 10 so that the cut is hook-shaped or in the form of a letter J. This avoids a sharp corner at the point where the cut 6 meets the edge of the blank to form a bag or indentation at the corner of the bag mouth. It has been

found that if the longitudinal cut and the transverse cut meet in a sharp corner, the bag will rip or tear easily at this point, and this is particularly true in dealing with regenerated cellulose sheeting as this material, when once started, will tear easily. The formation of the recessed or curved corner or angle prevents tearing of the material to such an extent that the mouth of the bag can be spread in filling without danger of rupture. This is an especially valuable feature of the invention for it is apparent that when the mouth of the bag is spread in the filling operation, there will be a considerable strain at the corners, and if an ordinary, angular cut were located at this point, the strain upon the mouth of the bag would cause a tear to start, and as the material is easily torn, a bag of regenerated cellulose sheeting not having this feature would be easily destroyed at this point. The recessed or reentrant formation makes a very strong corner for the bag, and one which will resist destruction. It will also be observed that as the angle of the bag mouth is cut upon a reentrant line or is recessed, when the side cuts 10 are made it is not necessary to have exact registration of the transverse cuts with the cuts 6, and the transverse cuts may be made slightly longer than necessary to meet the cuts 6. This advantage is secured by reason of the fact that the formation 10 is recessed or reentrant. This feature is illustrated in the drawings, particularly in Figures 4 and 5, where the transverse cut is shown overlapping the terminus of the cut 6. If two straight angular cuts were made to form the corner of the bag mouth, exact registration would be difficult to obtain, and the projection of one cut across the other would start a tear in the bag. This would also be true with any type of cut in which the reentrant formation 10 was not present. The curved formation 10 at the end of the cut 6 is, in reality, a continuation of the straight cut 6, but other forms of continuations of this line may be devised for the same purpose.

The first operation of making the bag from the blank is to fold the wings 2 and 2^a over the central panel of the blank on the lines 7. The wings overlap slightly and a strip of gum 11 holds the overlapped wings in place, thereby forming a tube. As the folds 7 intersect the diagonal cuts 6, portions of each cut will be on opposite sides of the folded bag. It will be evident that straight cuts are not essential and other forms of cut may be devised, the benefits of this feature of the invention being secured by any form of cut, provided that it is arranged with respect to the fold 7 so that its opposite ends terminate upon opposite sides of the fold.

When the tube has been folded, a second strip of gum 12 is placed on the central panel near the closed end of the blank and the two wings are creased at 14 near the edge of the

central panel, and the closed end flap is folded over to complete the closure of the bag.

It will be observed that as the cut 6 is intersected by the fold 7, it makes a small triangular gusset 15 at each corner of the bag which, in the subsequent folding of the bag, gives the pocket at the corner which not only reinforces the bag at this point, but gives the siftproof qualities to the bag. When the closed end flap is folded over, the bag is completed and ready to receive the contents. After filling, the flap 4 is folded over to close the end of the bag and pockets are thereby formed at the corners of the bag to give the siftproof closure at these points.

What is claimed is:

1. A bag or envelope formed from a blank and having a central panel and oppositely positioned wings, said wings being of the same length as the panel but offset with respect thereto in the same direction, the wings and the panel being connected by edges arranged in substantially diagonal direction with respect to the center line of the blank; the edges on each side of the panel being in register longitudinally of the blank, the blank being folded along lines which intersect the edges at points between the termini thereof, the ends of the wings extending beyond the panel being folded over to produce a closure, and the protruding portion of the panel forming a flap.

2. A bag or envelope formed from a blank and having a central panel and oppositely positioned wings, said wings being of the same length as the panel but offset with respect thereto in the same direction, the wings and the panel being connected by edges arranged in substantially diagonal direction with respect to the center line of the blank, the edges on each side of the panel being in register longitudinally of the blank, the blank being folded along lines which intersect the edges at points between the termini thereof, the ends of the wings extending beyond the panel being folded over on a line substantially coincident with the end of the panel to produce a closure, and the protruding portion of the panel forming a flap.

3. A bag or envelope formed from a blank and having a central panel and wings on each side of said panel, said wings being offset with respect to the panel in the same direction whereby a protruding flap is formed by the panel extending across the bag at one end thereof and two smaller protruding flaps are formed at the other end of the bag, the wings being folded onto the central panel to form a tube and the smaller flaps being folded over at the base of the central panel to make a closure for the end of the bag, each of the flaps being bounded laterally by diagonally positioned cuts, said cuts on the same side of the panel being in register longitudinally of the blank, and the folds between the wings

and the central panel intersecting each of the cuts at points between the termini thereof.

curved termini to form arc-shaped recesses in the edges of the blank.

11. A blank for the manufacture of bags, envelopes or the like, comprising a central panel, an integral, outwardly extending flap, and integral, laterally extending wings, the sides of said flap being formed by cuts arranged diagonally of the blank and having curved termini to form arc-shaped recesses in the edges of the blank, the lines of folds between the panel and the wings intersecting the cuts.

12. A bag or envelope formed from a blank and having a central panel and oppositely positioned wings, said wings being offset with respect thereto in the same direction, the wings and panel being connected at both ends by edges arranged in substantially diagonal directions with respect to the center line of the blanks, and folded along lines which intersect the edges at each end of the bag or envelope at points between the termini thereof, the ends of the wings extending beyond the panel being folded over to produce a closure and the protruding portions of the panel forming the flap.

13. A bag or envelope formed from a blank and having a central panel and oppositely positioned wings, said wings being offset with respect thereto in the same direction, the wings and panel being connected at both ends by edges arranged in substantially diagonal directions with respect to the center line of the blanks, and folded along lines which intersect the edges at each end of the bag or envelope at points between the termini thereof, the ends of the wings extending beyond the panel being folded over on a line substantially coincident with the end of the panel to produce a closure and the protruding portions of the panel forming the flap.

LOGAN A. BECKER.
JOHN M. MUNSON.

4. A bag having at one end thereof sift-proof corners, said corners being constituted by four plies of the bag material composed of a central panel, a flap, a wing connected with the panel by a longitudinal fold and having an edge coinciding with the juncture of the flap and central panel, and a gusset located in the angle between the wing and the central panel and flap, said bag having a flap at the other end extending from the central panel, bounded by gussets at each side which extend from intermediate portions of the flap to the wings, so as to form additional sift-proof pockets when the flap is folded over.

5. A bag having at one end thereof corners with pockets therein, said pockets being formed by a central panel and a wing folded on one another, a flap, said wing having an edge coinciding with the juncture between the flap and central panel, substantially triangular gussets extending across the angles between the central panels and the wings, said bag having at the other end a flap extending from the central panel, bounded by gussets at each end which extend from intermediate portions of the flap to the wings, so as to form additional sift-proof pockets when the flap is folded over.

6. A bag or envelope having a body portion and an extending closure flap, the flap being connected to the body portion and bounded laterally by a cut having a reentrant curved portion to form a curvilinear recess at the corner of the mouth of the bag.

7. A blank for the manufacture of bags, envelopes or the like, comprising a central panel having an integral, outwardly extending flap and an integral wing at the side of the panel, the sides of the flap being defined by lines terminating at the base of the flap in curves to form bays in the edge of the blank,

8. A blank for the manufacture of bags, envelopes or the like, comprising a central panel, an integral, outwardly extending flap, and integral, laterally extending wings, the angles between said flap and wings being defined by reentrant curved lines which form recesses in the edge of the wing.

9. A blank for the manufacture of bags, envelopes or the like, comprising a central panel, an integral, outwardly extending flap, and integral, laterally extending wings, the sides of said flap being formed by cuts having curved termini to form arc-shaped bays in the edges of the blank.

10. A blank for the manufacture of bags, envelopes or the like, comprising a central panel, an integral, outwardly extending flap, and integral, laterally extending wings, the sides of said flap being formed by cuts arranged diagonally of the blank and having

70

75

80

85

90

95

100

105

110

115

120

125

130