

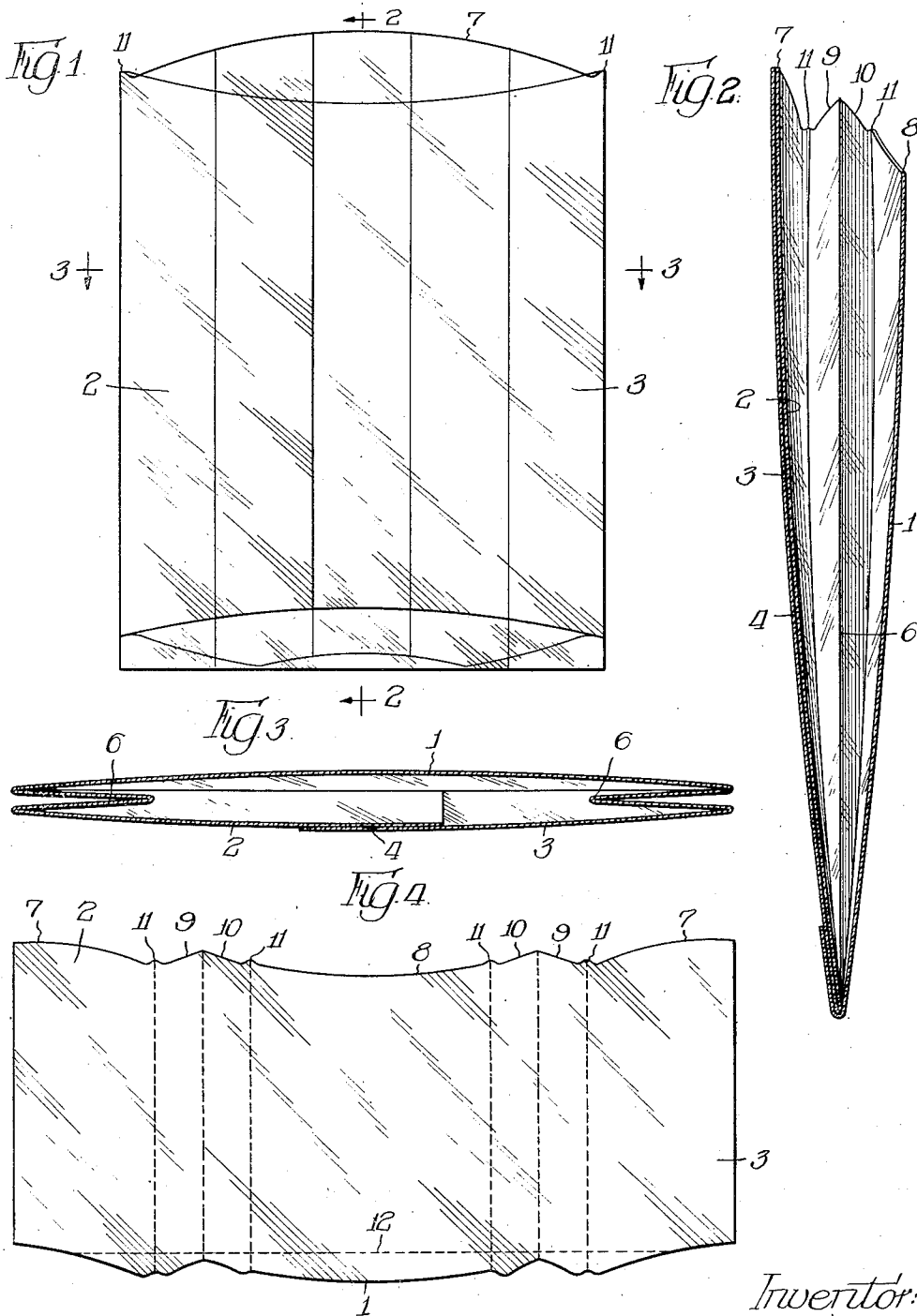
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2,000,345

BAG

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2,000,345

BAG

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The present invention relates to the construction of bags from transparent cellulose and similar material, and has particular reference to improvements by which such bags are strengthened.

A principal object of my invention is to provide an improved bag, envelope, or the like, in which a sheet of a transparent cellulose sheeting, such as "Cellophane", is employed.

An additional object is to provide a bag or envelope of transparent cellulose sheeting having smooth-cut lip portions joined at a crease which is terminated by a tangential upwardly extending portion.

These and other objects will be apparent from a consideration of the following description and by reference to the accompanying drawing, in which

Fig. 1 is a front view of a bag constructed in accordance with my invention from a sheet of transparent cellulose sheeting;

Fig. 2 is a sectional view taken along line 2—2 of Fig. 1;

Fig. 3 is a cross sectional view taken along line 3—3 of Fig. 1; and

Fig. 4 is a plan view of a bag shown in Fig. 1 in unfolded condition.

To construct the bag shown in the drawing, it is preferred that the side portions of a continuous web of transparent cellulose sheeting, such as "Cellophane", be folded over about a suitable former or template and adhesively secured together to form a tube portion, as is customary in the formation of bags. From this continuous tube blanks or bag lengths are cut. The lower end of each bag length is turned up and adhesively secured to the side of the bag to form a bottom.

Fig. 4 represents the bag in unfolded and unglued condition and shows the nature of the cuts by which the bag length is severed from the continuous tube. The portion 1 represents the front of the bag about which the free sides 2 and 3 of the web are folded, the latter being adhesively secured together, in overlapped relation to form the back of the bag, as shown at 4 in Fig. 3. The sides of the flattened bag are provided with the bellows folds 5 and 6.

When the bag lengths are severed from the tube by means of a striker bar, as is customary with respect to paper bags, the serrated edges which remain on the top edge of the bag greatly weaken the bag structure as the cellulose sheeting tears easily along the valleys of the serrations. Where the bag length is severed from the tube with a smooth cut so that one layer of the

bag is provided with an upwardly extending lip and the other layer of the bag is provided with a downwardly extending lip, the two layers meet at the creases adjacent the side of the bag which are ordinarily the weakest portion of the bag structure, for the cellulose sheeting tends to tear along the somewhat sharp line of meeting of the two layers of material. Where a bellows fold is provided in the tube before cutting and the bellows fold is cut along the line of the upwardly extending lip portion, the outer creases are weak, in that the layers of material come together at downwardly extending points. If the bellows fold is cut along the line of the downwardly extending top edge of the opposite layer, then the inward edge of the bellows fold forms a low point which weakens the bag. In accordance with my invention, the tube length is cut in such a manner that each of the creases occurs along an upwardly extending portion.

In the embodiment of my invention shown in the drawings, the layer of cellulose sheeting which represents the folded-over sides 2 and 3 is provided with a smooth-cut edge 7 which curves upwardly toward the center of the bag. The layer 1 is cut to form a smooth-cut, curved edge 8 which extends downwardly toward its central portion. The bellows folds 9 and 10 are cut along the edge of the upwardly extending lip. At the outer edge of the top of the bag the layers of cellulose material are cut so that the edges 7 and 8 are joined to the bellows fold portions 9 and 10, respectively, along upwardly extending portions or tongues 11. As shown in the drawing, the upwardly projecting portions 11 are joined to the edges 7 along a reverse curve which is tangential to the edges 7. The portions 11 are joined to the edges 9 along a similar tangential reverse curve.

The upstanding portions 11 which join the edges 10 and 8 are formed in a similar manner. The edge 8 is reversed with respect to the edges 7, and the edge of the bag between the edge 8 and the upstanding portions 11 forms a smooth curve.

When the bag shown in Fig. 1 is open for the insertion of merchandise or the like, the upper edge of the bag is apt to be stretched or strained. These upstanding portions 11, which are provided at the weakest points of the bag structure, the seams, prevent the bag from tearing along the seams when the top of the bag is opened unduly wide or otherwise subjected to strain.

If the bag blank is cut from a continuous tube, the bottom portion of the bag has a shape which

is the complement of the top edge of the bag, described heretofore. Consequently, the bottom edge of the seams opposite the portions 11 are quite weak, since they are indented. However,

5 this bottom portion is turned over, for example, along the dotted line 12, shown in Fig. 4, and the turned-over portion is adhesively secured to the side portions 2 and 3 to form a bottom for the bag, thereby preventing the creased edges at
10 the bottom from weakening the bag.

By reference herein and in the appended claims to "cellulose sheeting", it is intended to include sheets made of plastic regenerated cellulose material such as the product known as
15 "Cellophane." That is, it is intended to refer to materials of this type which have a tendency to tear easily unless constructed in accordance with my invention as described herein.

It will be understood that the bag may be
20 constructed from individual sheets of cellulose sheeting, rather than from a continuous tube, although the latter method is preferred. Also, it is not essential that the bag have a bellows fold, since it is obvious that my invention is applicable
25 to bags of the envelope type or to other articles of cellulose sheeting. These and other modifications coming within the spirit of my invention are intended to be included in the appended claims.

30 I claim:

1. A bag made from non-fibrous cellulose sheeting having smooth-cut lips and being creased at its edge portions into flattened con-

dition, said edge portions terminating in tangential, upwardly extending portions.

2. A bag, comprising a flat tube section of non-fibrous cellulose sheeting having smooth-cut lip portions joined by tangential upwardly extending portions and being provided with a crease
5 between said last named portions.

3. A bag, comprising a flattened tube portion of non-fibrous cellulose sheeting having a bellows fold adjacent its side, the outer edge of said
10 bellows fold terminating in a tangential upwardly extending smooth-cut lip portion.

4. A bag, comprising a tube portion of non-fibrous transparent cellulose sheeting, having
15 bellows folds in its sides, one layer of said tube portion having a smooth-cut lip curving upwardly toward the center of the bag, the other layer of said tube portion having a smooth-cut lip curving downwardly toward the center of the bag, said lip portions being jointed by a tangential
20 upwardly extending portion.

5. A bag made of transparent non-fibrous cellulose sheeting creased at its edge portions into flattened condition, said edge portions terminating in upwardly extending tongue portions,
25 and said bag having a smooth-cut lip.

6. A bag made from non-fibrous cellulose sheeting and creased at its edge portions into flattened condition, said sheeting being provided with smooth-cut lips joined by an upwardly
30 extending portion along the creases therein.

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