

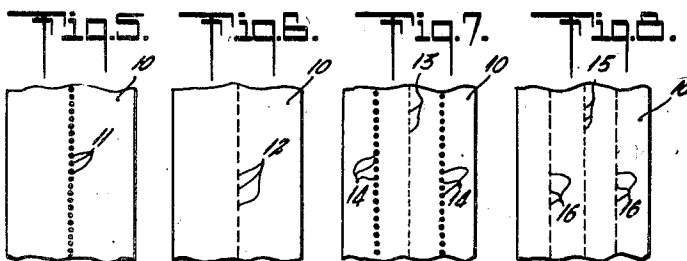
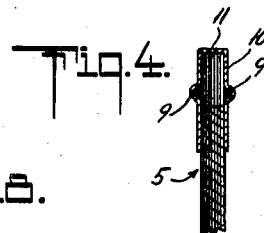
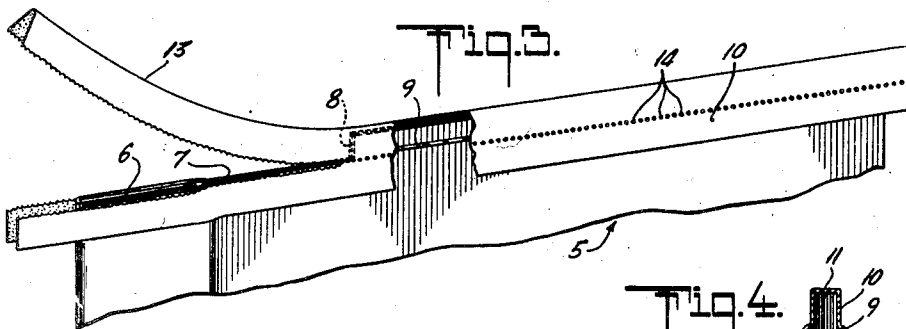
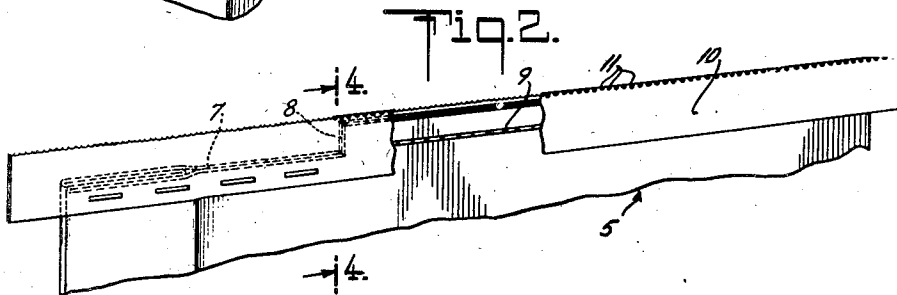
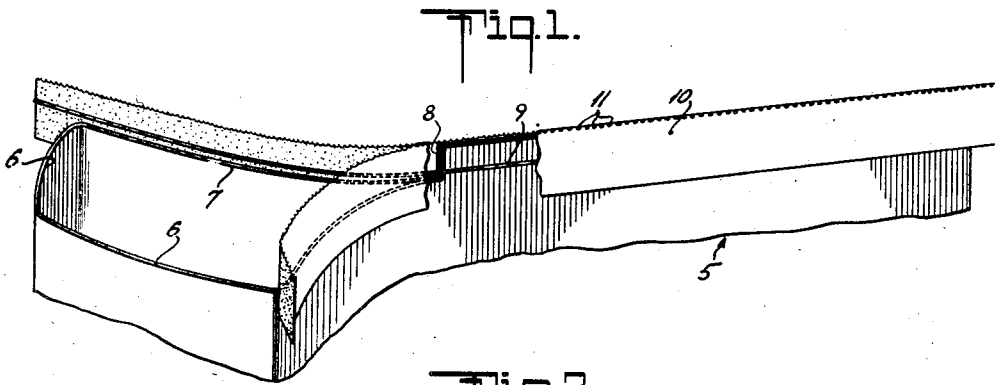
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BAG CLOSURE

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BAG CLOSURE

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This invention relates to new and useful improvements in closures for multiwall paper bags and particularly seeks to provide a novel, easily opened closure for multiwall bags of the offset or notched corner type.

An object of this invention is to provide a multiwall bag of the offset or notched corner type in which the major portion of the bag end is closed by a transverse line of stitching with a sealing closure tape overlying the entire bag end including the offset or notched corner portion which can be readily displaced from its position overlying the corner portion for filling operations.

Another object of this invention is to provide a closure of the character stated in which the sealing tape is folded along its longitudinal axis to extend down over opposite wall portions of the associated bag end and in which the tape is provided with at least one line of perforations or similar discontinuous portions in order that the areas of the tape lying on either side of such perforations may be torn therealong in the area of the notched corner to enable the offset or notched corner of the bag to be opened up for bag filling purposes while still retaining a sufficient width of tape in the area of the notch for final closure purposes.

Another object of this invention is to provide a bag closure of the character stated in which the line of perforations extends along the median fold line of the tape at least in the area overlying the offset or notched corner of the bag.

Another object of the invention is to provide a bag closure of the character stated in which the perforations may be formed on both sides of the tape and disposed in a plane lying below the median fold of the tape and within the area of the notch.

With these and other objects in view, the nature of which will become more apparent, the invention will be more fully understood by reference to the drawings, the accompanying detailed description, and the appended claims.

In the drawings,

Fig. 1 is a perspective view of the upper end of a multiwall bag embodying a closure constructed in accordance with this invention;

Fig. 2 is a view similar to Fig. 1 with the line of stitching omitted within the area of the corner notch in order to more clearly illustrate the notched corner portion of the closed bag but shows the closure in its finally secured position;

Fig. 3 is a perspective view of the upper end of a multiwall bag showing a modification of the

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manner of perforating the sealing tape and here again the line of stitching has been omitted within the area of the corner notch;

Fig. 4 is a fragmentary vertical section taken on line 4-4 of Fig. 2 and indicates that the bag is of four-ply construction; and

Figs. 5, 6, 7 and 8 are fragmentary plan views of portions of sealing tapes which may be used and which embody several differently arranged lines of perforations or slits.

Referring to the drawings in detail, the invention as illustrated is embodied in a multiwall bag generally indicated at 5, having gussets 6, 6 and a notched corner portion including a horizontal shoulder 7 and a vertical shoulder 8.

During the manufacture of bags of this type the individual bag blanks are formed from a continuous length of multiply bag tubing and severed therefrom to form individual bags blanks of proper configuration. The bottom (not shown) is square cut and is passed through a sewing machine which places a line of stitching parallel to the bottom edge and across the full width of the bottom, and this line of stitching is preferably covered by a sealing tape overlying the same and adhesively secured to the bag. The top of the bag is provided with a line of stitching indicated at 9 which extends entirely across the top end of the bag in spaced parallel relation to the top edge thereof and is disposed below the top edge a distance less than the length of the shoulder 8 of the corner notch in order that the paper outlining the area of the corner notch will remain unsecured until after the bag has been filled. By reference to Fig. 1 of the drawings it will be observed that the line of stitching 9 is located in a plane slightly above that of the shoulder 7 of the corner notch. After this line of stitching has been applied a sealing tape 10 (see Fig. 5) having a median line of perforations 11 is adhesively secured over the upper end of the bag with the line of perforations overlying the top edge thereof. It will be appreciated that prior to the time at which the bag is filled the gussets 6, 6 thereof are folded inwardly and in the manner indicated in Figs. 2 and 3 of the drawings.

When a fresh bag is to be filled the operator at the filling station merely picks up the bag, inserts his two thumbs into the gusset fold immediately underlying the top sealing tape and in the area of the corner notch and abruptly moves his thumbs apart. This action, of course, causes the gussets to separate towards the position indicated at Fig. 1 of the drawings and si-

multaneously causes the two sections of the sealing tape 10 to separate along the line of perforations 11 to thereby effect the formation of a filling opening. After the bag has been filled the gussets 6, 6 are again folded inwardly and the upstanding portions of the torn area of the sealing tape 10 which are disposed within the area of the corner notch are finally sealed as through the medium of a plurality of steps or securing devices indicated at 12.

As indicated in Fig. 6 of the drawings, the tape 10 may be provided with a medially disposed line of slits 12 which perform the same functions as the perforations 11 but which are more easily formed in the tape in commercial operations. It is well known that a line of closely spaced, individual perforations can be formed in a tape of paper only at relatively slow speeds whereas a line of relatively long, individual slits can be formed in a similar tape of paper much more rapidly. Inasmuch as multiwall bags of the type described herein are produced commercially in accordance with commercially accepted methods of manufacture it may prove more feasible in connection with the manufacture of the present closure to employ a line of slits, each of which is relatively long by comparison with the intervening areas of paper rather than a continuous line of very closely spaced perforations. It will, of course, be apparent that it is preferable for the spaces between individual slits in the tape to be approximately the same length as the spaces between individual perforations where perforations are employed in a similar tape.

In Fig. 7 of the drawings there is illustrated another modification of the closure sealing tape 10 which is adapted to be folded along a medial fold line 13. In this particular form of tape there are illustrated two parallel rows of perforations 14, 14 disposed equi-distantly on either side of the medial fold line 13. In connection with this particular modified form of sealing tape Fig. 3 of the drawings illustrates its manner of application to a multiwall bag of the notched corner type.

The same general type of closure may be formed with still another modified version of seal in which the tape 10 (see Fig. 8) is provided with a medial fold line 15 and in which there are also provided spaced parallel lines of slits 16, 16 equidistantly disposed to either side of the medial fold line 15.

Whenever a sealing tape of the form disclosed in Figs. 3, 7 and 8 of the drawings is employed with a notched corner bag the final closure after completion of filling may be effected by displacing the separated portion of the tape within the area of the corner notch down to the point at which the medial fold line 13 or 15 thereof immediately overlies the shoulder 7 of the notch so that the depending areas of the tape overlie the adjacent wall portions of the bag. When this has been done it is, of course, entirely practical to employ closure-securing devices such as staples, rivets, or even a supplementary line of stitching adjacent the area of the corner notch.

Thus it will be seen that the invention disclosed herein provides a novel closure for multiwall paper bags of the offset or notched corner type in which the sealing tape thereof is readily separated into two portions within the area of the notch prior to filling and which can be secured in filling-opening-sealing relation after the bag has been filled.

It is, of course, to be understood that various

details of arrangements and proportions of parts may be modified within the scope of the appended claims.

I claim:

1. A sealing means for the closure of a gusseted notched corner multiwall paper bag wherein is provided a line of stitching securing the opposing walls of the open end of the bag and disposed in a plane above that of the horizontal shoulder of the notch, comprising a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag and overlying the stitching, said strip being provided with a line of perforations disposed along said medial fold line in at least the area of said notched corner whereby the notched corner of said bag can be opened for filling purposes by tearing along said line of perforations.

2. A sealing means for the closure of a gusseted notched corner multiwall paper bag wherein is provided a line of stitching securing the opposing walls of the open end of the bag and disposed in a plane above that of the horizontal shoulder of the notch, comprising a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag and overlying the stitching, said strip being provided with a line of perforations disposed along said medial fold line whereby the notched corner of said bag can be opened for filling purposes by tearing along said line of perforations.

3. A sealing means for the closure of a gusseted notched corner multiwall paper bag wherein is provided a line of stitching securing the opposing walls of the open end of the bag and disposed in a plane above that of the horizontal shoulder of the notch, comprising a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag and overlying the stitching, said strip being provided with a line of discontinuous severed areas along said medial fold line in at least the area of said notched corner whereby the notched corner of said bag can be opened for filling purposes by tearing along said discontinuous line.

4. A sealing means for the closure of a gusseted notched corner multiwall paper bag wherein is provided a line of stitching securing the opposing walls of the open end of the bag and disposed in a plane above that of the horizontal shoulder of the notch, comprising a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag and overlying the stitching, said strip being provided with a line of discontinuous severed areas along said medial fold line whereby the notched corner of said bag can be opened for filling purposes by tearing along said discontinuous line.

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