

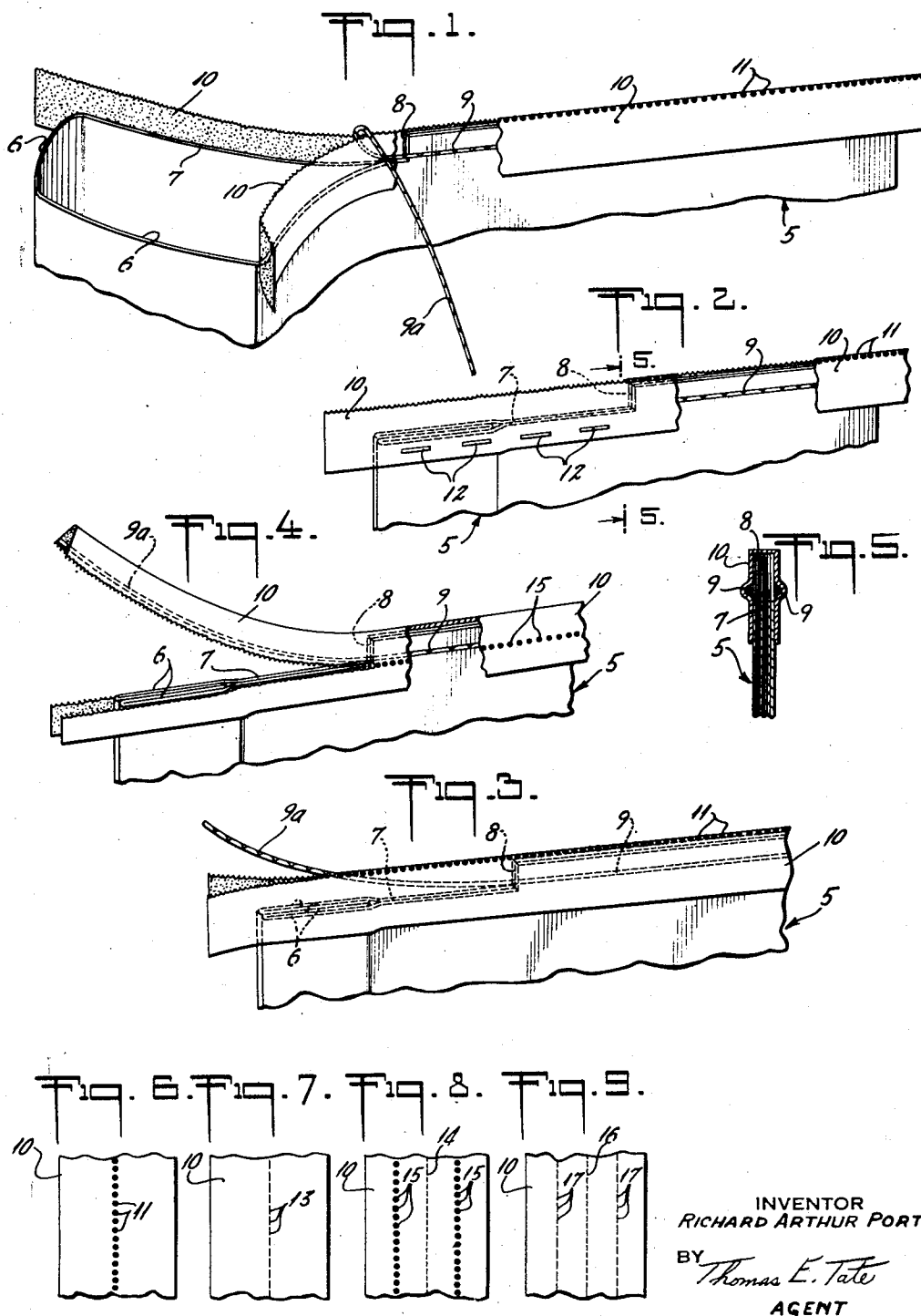
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BAG CLOSURE

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BAG CLOSURE

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3 Claims. (Cl. 229—66)

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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 line of stitching is disposed in a plane slightly above that of the horizontal shoulder portion of the notched corner of the bag end and terminates in a free end extending a distance at least equal to the length of the notched bag corner and in which the sealing strip or closure tape is provided with a line of weakened areas in at least the area of the notched corner so that the notched corner of the bag can be opened for filling purposes by grasping the freely extending portion of the stitching adjacent the area of the notched corner and ripping the closure tape along the aforementioned weakened line.

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

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invention will be more fully understood by reference to the drawings, the accompanying detailed description, and the appended claims.

In the drawings,

5 Fig. 1 is a perspective view of the upper end of a multiwall bag embodying a closure constructed in accordance with this invention and shows the notch-containing corner portion of the bag opened up for filling purposes;

10 Fig. 2 is a view similar to Fig. 1 but shows the closure in its finally secured position;

Fig. 3 is a view similar to Figs. 1 and 2 but shows the closure at the initial stages of being opened for filling purposes;

15 Fig. 4 is a perspective view of the upper end of a multiwall bag showing a modification of the manner of perforating the sealing tape and of effecting the opening of the filling corners of the bag;

20 Fig. 5 is a fragmentary vertical section taken on line 5—5 of Fig. 2 and indicates that the bag is of four-ply construction; and

25 Figs. 6, 7, 8 and 9 are fragmentary plan views of portions of sealing tapes which may be used and which embody several differently arranged lines of perforations or slits.

This application is a continuation-in-part of my copending application Ser. No. 752,027, filed June 3, 1947. 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.

35 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 bag 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 associated wall portions of the bag. It is, of course, entirely possible to employ a pasted bag bottom rather than a sewn bottom construction such as described above. The top of the bag is provided with a line of stitching indicated at 9 which extends entirely 40 across the top end of the bag from one edge thereof to the top end of the bag from one edge thereof to the vertical shoulder 8 of the notched corner portion and terminates in a freely extending outer end portion 9a which extends a distance at least equal to the length of the hori- 55

zontal shoulder portion 7 of the notch. It will be noted that the line of stitching 9 is disposed in spaced parallel relation to the top edge of the bag and a distance below the same less than the length of the vertical shoulder 8 of the notch. As a general rule sewn bag ends of this nature employ special stitching which may include a cushioning cord and in which the securing stitches themselves may be disposed in zigzag relation embracing the cushioning cord or alternately may be sewed directly through a cushioning cord as well as through the material of the bag walls. The stitching itself forms no part of the present invention but is conveniently illustrated in United States Letters Patent 1,913,825 granted to Webster Noyes Baker on June 13, 1933.

It will be understood that by disposing the line of stitching in the manner described above the paper outlining the area of the corner notch of the bag will remain unsecured by stitching until after the bag has been filled. After the line of stitching has been applied a sealing tape 10 (see Fig. 6) having a median line of perforations 11 is adhesively secured over the free end of the bag with the line of perforations overlying the top edge thereof as indicated in Figs. 1, 2 and 4 of the drawings. It will be understood that prior to the time at which the bag is filled the gussets 6, 6 thereof are folded inwardly in the manner indicated in Figs. 2, 3 and 4 of the drawings.

When a fresh bag having a closure of the type embraced by this invention is to be filled the operator at the filling station merely picks up the bag, spreads apart with his fingers the extreme end portion of the sealing tape 10 adjacent the corner notch portion of the bag and grasps the free end portion 9a of the line of stitching and thereafter pulls the same upwardly to effect a separation of the two halves of the sealing tape along the line of perforations, as indicated in Fig. 3 of the drawings. This ripping or tearing movement is, of course, continued until the free end of the stitching has been carried back to a point adjacent the vertical shoulder of the notch to effect the complete uncovering of the notched corner of the bag and to permit the gussets 6, 6 thereof to be pulled outwardly in order to form 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 staples or securing devices indicated at 12 in Fig. 2 of the drawings. It will be appreciated that this final closure could be effected by stapling through the sealing tape and the underlying wall portions of the bag as shown or the stapling could be effected merely through the upstanding portion of the sealing tape per se within the area of the notched corner of the bag.

As indicated in Fig. 7 of the drawings, the tape 10 may be provided with a medially disposed line of slits 13 which perform the same function as the perforations 11 but which may be 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 tape having 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.

In Fig. 8 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 14. In this particular form of tape there are illustrated two parallel rows of perforations 15, 15 disposed equidistant on either side of the medial fold line 14. In connection with this particular modification of the sealing tape Fig. 4 of the drawings illustrates its application to a multiwall bag of the notched corner type. The same general type of closure may be formed with still another modified variation of seal in which the tape 10 (see Fig. 9) is provided with a medial fold line 16 and a pair of spaced parallel lines of slits 17, 17 equidistantly disposed to either side of the medial fold line 16.

Whenever a sealing tape of the form disclosed in Figs. 4, 8 and 9 of the drawings is employed with a notched corner bag the final closure after completion of filling may be effected by depressing the separated portion of the tape within the area of the corner notch down to the point at which the medial fold line 14 or 16 thereof immediately overlies the shoulder portion 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. Whenever these modified forms of sealing tapes are employed it will be appreciated that a horizontal tearing of the tape along the lines of perforations or slits, as the case may be, is all that is necessary to open up the notched corner of the bag for filling purposes. In such cases it will not be necessary or desirable to employ the freely extending portion 9a of the line of stitching to rip the closure tape in 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 may be readily separated into two portions within the area of the corner 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 closure for the open end of a multiwall paper bag which includes a notched corner having a substantially horizontal shoulder portion inset from the bag end and an upwardly extending portion extending between the bag end and said shoulder portion, comprising a line of stitching securing the opposing walls of the open end of the bag and disposed in a plane above that of the said horizontal shoulder portion of the notch, said line of stitching terminating in a free end extending beyond said upwardly extending notch portion a distance at least equal to the length of said horizontal shoulder portion, and a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag end and overlying the stitching and said notched

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corner portion, said strip being provided with a line of weakened areas in at least the area of said notched corner portion whereby the notched corner of said bag can be opened for filling purposes by grasping the freely extending portion of said stitching adjacent the area of said notched corner and ripping said strip along said weakened line.

2. A closure for the open end of a multiwall paper bag which includes a notched corner having a substantially horizontal shoulder portion inset from the bag end and an upwardly extending portion extending between the bag end and said shoulder portion, comprising a line of stitching securing the opposing walls of the open end of the bag and disposed in a plane above that of the said horizontal shoulder portion of the notch, said line of stitching terminating in a free end extending beyond said upwardly extending notch portion a distance at least equal to the length of said horizontal shoulder portion, and a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag end and overlying the stitching and said notched corner portion, said strip being provided with a line of perforations disposed along said medial fold line in at least the area of said notched corner portion whereby the notched corner of said bag can be opened for filling purposes by grasping the freely extending portion of said stitching adjacent the area of said notched corner and ripping said strip along said line of perforations.

3. A closure for the open end of a multiwall paper bag which includes a notched corner having a substantially horizontal shoulder portion inset from the bag end and an upwardly extending portion extending between the bag end and said shoulder portion, comprising a line of stitching

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ing securing the opposing walls of the open end of the bag and disposed in a plane above that of the said horizontal shoulder portion of the notch, said line of stitching terminating in a free end extending beyond said upwardly extending notch portion a distance at least equal to the length of said horizontal shoulder portion, and a sealing strip medially folded and adhesively secured to the exterior surface of each wall of the bag end and overlying the stitching and said notched corner portion, 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 portion whereby the notched corner of said bag can be opened for filling purposes by grasping the freely extending portion of said stitching adjacent the area of said notched corner and ripping said strip along said discontinuous line.

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