May 4, 1937. G. C. NYDEGGER 2,079,523

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Filed Oct. 1, 1934 2 Sheets-Sheet 1

FIG_1

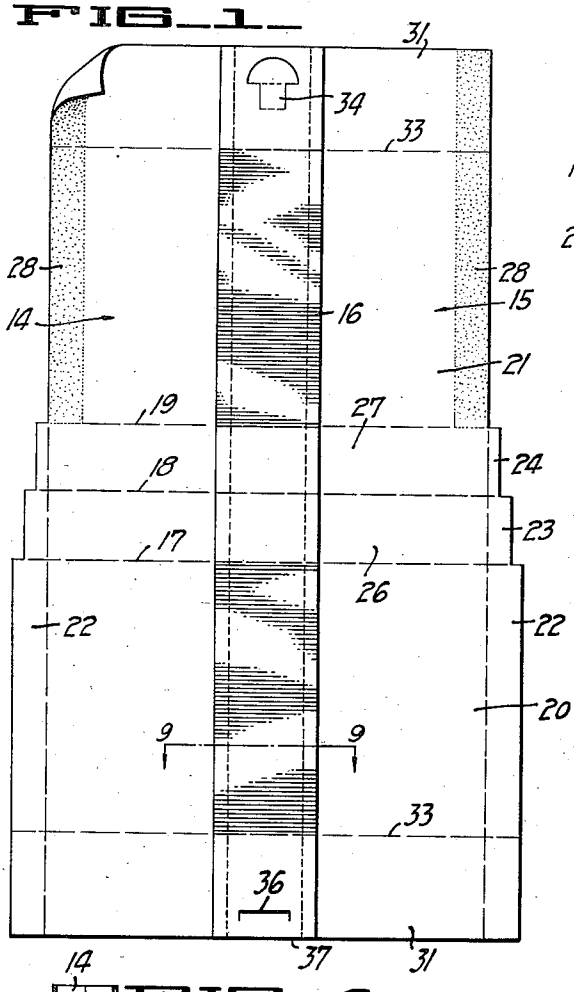


FIG_2

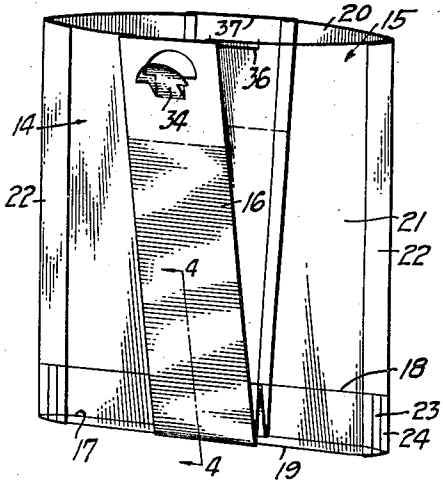


FIG_3

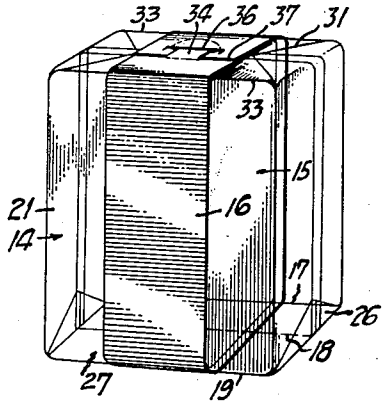


FIG_4

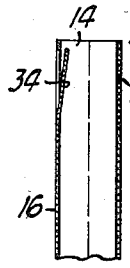


FIG_7

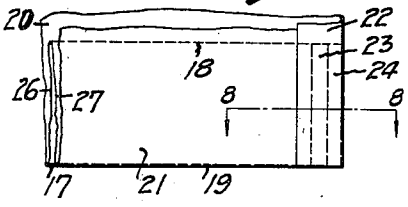


FIG_5

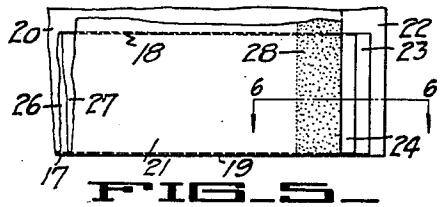


FIG_6



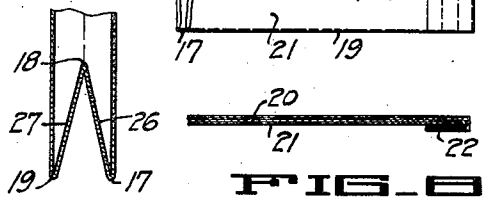
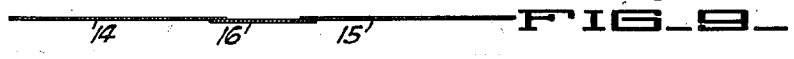


FIG_8

FIG_9



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May 4, 1937. G. C. NYDEGGER 2,079,523

BAG

Filed Oct. 1, 1934 2 Sheets-Sheet 2

FIG. 10.

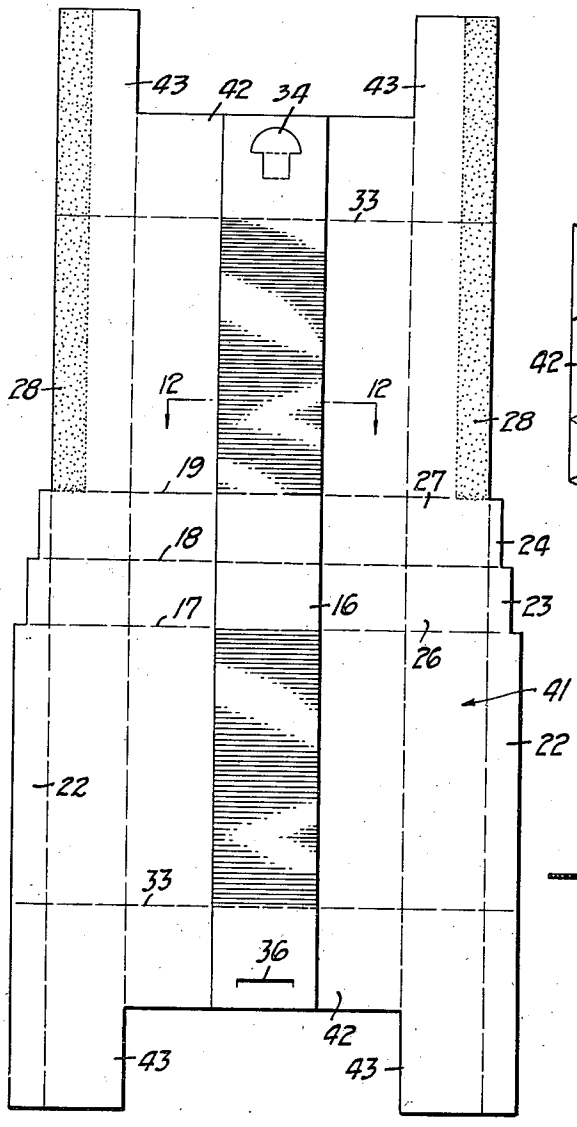


FIG. 11.

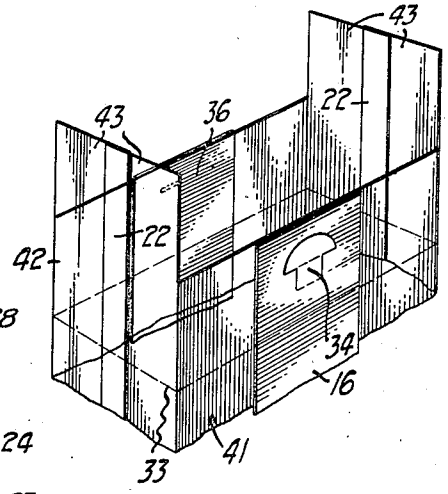
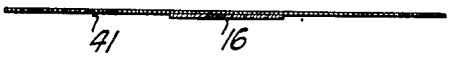


FIG. 12.



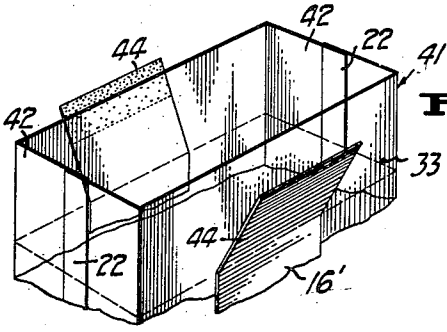


FIG. 13.

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Application October 1, 1934, Serial No. 746,334

1 Claim. (Cl. 229—53)

The invention relates to bags or sacks made of paper or cloth, and in the present embodiment is applied to bags formed at least in part of a flexible sheet material of a transparent character such as "cellophane". The latter word is for convenience used throughout the specification for denoting this class of material.

An object of the invention is to provide a "cellophane" bag which permits the printed matter to be applied with equal facility to both of the exposed sides of the bag.

Another object of the invention is to provide a bag of the character described in which there is incorporated as part of the bag structure a section which not only lends itself to the more effective display of the printed matter on the bag but serves as a means of substantially reinforcing such structure.

A further object of the invention is to provide a bag of the character described which lends itself to the effective display of printed matter on the top and bottom of the bag as well as on each of the sides thereof.

An additional object of the invention is to provide a bag affording the above mentioned features, yet is so constructed that it may be folded flat for storage, will readily assume an open position to facilitate filling the bag, and when filled and closed will retain its fully extended form and otherwise present an attractive appearance.

A still further object of the invention is to provide a paper bag having a self-locking top or closure means which will assist in keeping the bag in proper form as well as closed when the means is in operative position, and yet is of a design which will not prevent the reuse of the means for the subsequent closing of the bag once the means and bag have been respectively disconnected and opened.

Yet another object of the invention is to provide a bag in which the portions arranged to fold for closing the bag are so constructed that with the use of a minimum of material and without causing any bulging thereof when the bag is filled and closed, there will be no danger of said portions becoming accidentally withdrawn from folded position or leaving any cracks or spaces for exposing the contents.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of the preferred form of the invention which is illustrated in the drawings accompanying and forming part of the specification. It is to be understood, however, that variations in the showing made by the said drawings and description may be adopted within the scope of the invention as set form in the claim.

Referring to said drawings:

Figure 1 is a side elevation of the parts of the bag as extended before being folded and secured in receptacle forming position.

Figure 2 is a perspective view of the completed bag as folded for storage.

Figure 3 is a perspective view of the bag as filled and completely closed.

Figure 4 is a longitudinal sectional view of the bag, the plane of the section being roughly indicated by the line 4—4 of Figure 2.

Figure 5 is a fragmentary side view of the bag showing the same before the side edges are connected.

Figure 6 is a sectional view of the portion of the bag as shown in Figure 5.

Figure 7 is a view similar to Figure 5 but showing the side edges of the bag connected.

Figure 8 is a cross-sectional view of the bag portion as shown in Figure 7.

Figure 9 is a transverse sectional view of the bag as taken on the line 9—9 of Figure 1.

Figure 10 is a side view of the blank bag as shown in Figure 1, but illustrating a somewhat modified construction.

Figure 11 is a perspective view of the upper portion of the bag shown in Figure 10 with the parts assembled and secured and shown fully extended as for filling.

Figure 12 is a fragmentary transverse sectional view of one of the sides of the bag, the section being taken on line 12—12 of Figure 10.

Figure 13 is a fragmentary perspective view of another form of the bag.

In the preferred embodiment of the invention, the bag as will be particularly clear from Figures 1 to 3, comprises a pair of side body sections 14 and 15 and a center body section 16 which combine to provide the complete bag including, as will be hereinafter explained, a self-contained self-locking means for holding the bag in a closed position when filled. The sections 14 and 15 are designed to comprise the major portion of the bag and are formed of a flexible transparent sheet material such as "cellophane". The section 16 is arranged to be secured to each of the sections 14 and 15 so as to form a single unit with sections 14 and 15 flanking the side edges of section 16. As here shown attachment of the sections is effected by gluing the same together along their adjoining edges, the section 16 being disposed to lie out-

side, that is with its side edges overlapping the side edges of the other sections.

In the past considerable difficulty has been encountered in printing directly on "cellophane" bags. This has been especially so in multi-color work. Not only is the difficulty due to the character of the surface of the material itself, but owing to the fact that the seams in the bag occurred directly on the side walls thereof—which is obviously the most appropriate and in most instances the only place where the printed matter may be positioned to advantage. With the bag made in accordance with my invention the printing may be applied directly to each of the exposed sides of the bag in a most effective manner, and at the same time both the structure of the bag as well as its general utility is considerably improved over the ordinary type of "cellophane" bag. In my bag the central section 16 is formed of a material such as paper or thin flexible cardboard which has a surface adapted to afford substantially perfect printing reproduction. The section 16 being also non-transparent, the printed matter therein will obviously be much more discernible than on "cellophane". However, aside from the matter of printing and display, the section 16 affords the bag considerable advantage in structure and strength, since such strip by reason of its position on the bag may be formed of relatively tough paper or cardboard without interfering with its adaptability to printing or to the use or handling of the bag at any stage.

The section 16, as will be clear from Figure 1, is preferably of the same length as the sections 14 and 15, and its width is usually such as is appropriate with the amount and nature of the printed matter to be delineated on the bag. As here shown, the section 16 has a width approximately equal to one-half of the combined width of both sections 14 and 15 at the sides of the bag. The printing is usually applied to section 16 prior to attachment thereof to the sections 14 and 15, and it may be here noted that since section 16 overlies the other sections, the full width of the exposed side of the former is available for printing, etc.

In setting up the bag, the bag blank with the sections united as illustrated in Figure 1, is folded centrally of its length along three lines 17, 18, and 19, the form of the fold being such as to define a bellows at one end or bottom of the bag with the middle fold line 18, extended upwardly and disposed between the sides when the bag is flat. The side edges of the front and back portions 20 and 21 of the sections 14 and 15 when folded as aforesaid are also united by gluing, and for effecting such jointure, the front portion 20 of the sections is provided with lateral extensions 22 which are folded over and upon the edge portions of the back portion 21 as clearly shown in Figure 2. By referring back again to Figure 1, it will be seen that the extensions 22 are continued longitudinally so as to provide extensions 23 and 24 for the portions 26 and 27 of the bag, which are defined between the folded lines 17, 18, and 19, and form the bottom of the bag. The extensions 22, 23, and 24 are folded over the edges of the back portion, subsequent to the folding of the bag to provide the bellows bottom as aforesaid, and in order that the various portions may be properly united with but a single gluing operation, the extensions 23 and 24 and back portion 21 are successively foreshortened. Thus, when the three extensions are folded over the back portion of the bag, as shown in Figures 7 and 8, each of said extensions, notwithstanding their overlying relation, will for the full length of the bottom portions 26 and 27 be exposed for engagement with said back portion. In this manner the single strip 28 of adhesive at each edge of the outer face of the back portion will suffice for uniting the associated edge portions of the bag air tight for the full length thereof.

Preferably the material of which section 16 is formed is somewhat stiffer than the "cellophane", and therefore with the bag folded and set up as above, while the bag will lie very flat when the sides are pressed together, the sides will by reason of the bellows bottom tend to separate when released and thus facilitate filling the bag or obtaining access to the interior.

An important part of the invention resides, as aforesaid, in the utilization of the section 16 as a self-locking means for holding the bag closed when the latter is filled with its contents. As will be seen, at each of the longitudinal extremities of the three sections there are provided portions 31 which define the opening to the bag and combine to provide a closure for the top of the bag when folded. The closure portions are arranged to be folded along a line 33 so as to generally lie at right angles to the sides, or in other words, about parallel to the bottom when the latter is fully extended. The closure portions provide opposed side and end flaps which preferably fold one under the other with both side flaps uppermost. To keep the closure portions down in position there is provided in one end of the section 16 a tongue 34 which is struck from the section and arranged to be inserted through a transversely extending slit 36 formed in the other end of the section, the tongue being desirably formed with an enlarged head which is of such width as to tend to resist withdrawal from the slit when advanced therethrough. It is to be noted that such form of holding means is entirely a self contained part of the bag and owing to its inclusion as part of the section, when the tongue is locked not only will there be no strain on the "cellophane", but the bag and contents will be protected by a strong band completely encircling the bag. A further feature of importance in connection with the closure means is that the latter serves to hold the opposite side walls of the bag in proper spaced relation irrespective of whether the bag is completely filled. In this connection, as will be clear from Figure 3, the portion of section 16 between the slit and the associated end 37 of the section is designed to engage between the tongue and the portion of the section from which the tongue has been struck, and the relationship of the parts are such that the end 37 will abut against the base of the tongue when the side walls are spaced apart the desired amount. Preferably when the parts are thus disposed, the rear edge of the tongue head will abut against an edge of the slit so as to thus lock the parts against accidental withdrawal. It will be evident such form of closure and lock affords a smoothness at the top practically comparable with that at the sides and bottom of the bag. Furthermore since the section 16 is thus caused to extend practically continuous around the bag, the printed or decorative matter on the section may be extended to include the top and bottom of the bag as well as each side thereof.

While I prefer, as in the embodiment illustrated

in Figures 1 to 3, to have the section 16 form a portion of the bag wall in place of a substantially corresponding portion of "cellophane", if desired the bag may be formed to provide a continuous portion of "cellophane" for the full width of each side of the bag. An arrangement of this latter type is illustrated in Figures 10 to 12 where the bag is formed of but a single piece 41 of "cellophane" with the section 16 located in the same central position but entirely on the outer side of the bag. In such arrangement the tongue 34 and slit 36 is preferably still confined entirely to the section 16, the attachment between the section and the "cellophane" being effected by narrow strips of glue along each of the longitudinal edges of the section. By thus arranging the parts, full imperforate surfaces of "cellophane" will be available for folding over the bag contents and closing the opening, and the tongue as will be clear, will, after being inserted through the slit, be confined between a side wall of "cellophane" and the overlying portion of the section. To provide a greater overlapping of the closure portions of the bag when the bag is filled and closed, there may be formed on the closure portions 42 between the front and rear sides of the bag, longitudinal extensions 43 which are preferably long enough to permit of their overlapping one another under the ends of section 16 when such ends are locked together as aforesaid. Such an arrangement, as will be clear, does not affect the proper positioning and locking of the section ends and at the same time affords ample assurance that the closure portions 42 will not become accidentally loosened or withdrawn when the bag is closed and locked.

Another form of the bag, in which the "cellophane" extends for the full width of the sides, is illustrated in Figure 13. As here shown, the section 16' is positioned on the bag somewhat the same as in the previously described embodiments, except that the end portions 44 thereof are unattached to the portions of the sides of the bag arranged to be folded over to provide the closure. This design permits of the closure portions being readily sealed by an adhesive or the like when such portions are folded one over the other so as to permit of the interior of the bag being rendered air tight. Also in this embodiment the end portions 44 of the section are arranged to be secured together over the "cellophane" closure portions by gluing one end portion over the other.

It is of importance to note that in the bag as described in the second and third embodiments, the longitudinal seams are confined exclusively to the portion of the bag at the side edges thereof, and that since there are no seams at the bottom, the entire surface of the bag, both at the front and rear sides thereof, will be smooth and entirely uninterrupted. In view of this, should it be desired to omit the section 16 or 16' either in whole or in parts, printing may be readily and effectively applied to practically any portion of the surface of said sides.

I claim:

In a bag of the character described, front and back walls of relatively thin paper, a bellows bottom united with said walls, a strip portion of relatively heavy paper overlying and secured on the outer surface of said bellows and designed in one position to fold inwardly, with the bellows between said sides and in another position to be extended to hold said walls in spaced relation, and strip portions on said walls at the upper ends thereof arranged to engage one another when the bag is closed to keep said walls in spaced relation in cooperation with the strip portion in the bellows.

GEORGE C. NYDEGGER.