June 11, 1929. T. H. HAMMOND 1,716,818

PAPER BAG

Filed Dec. 17, 1927

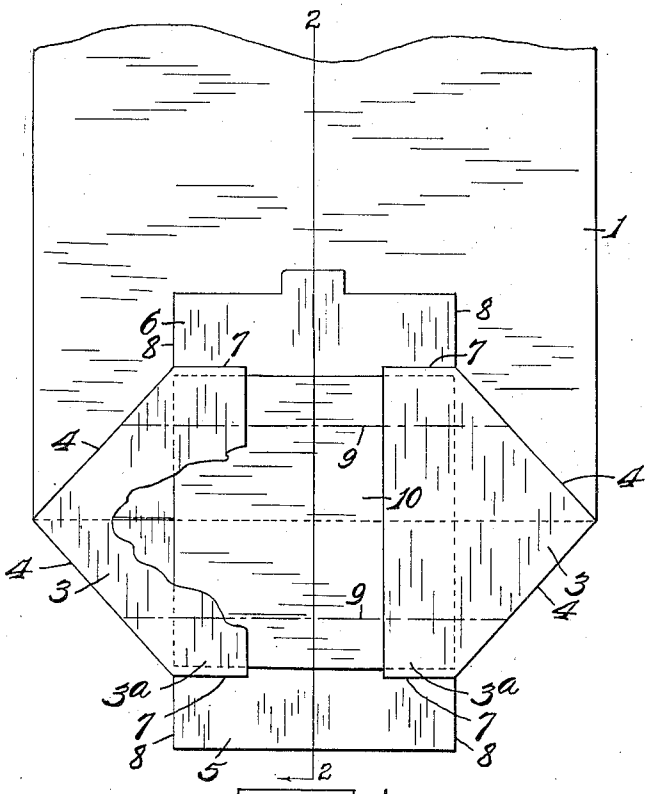


FIG 1

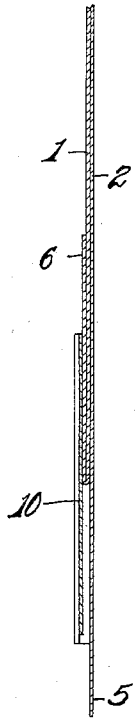


FIG 2

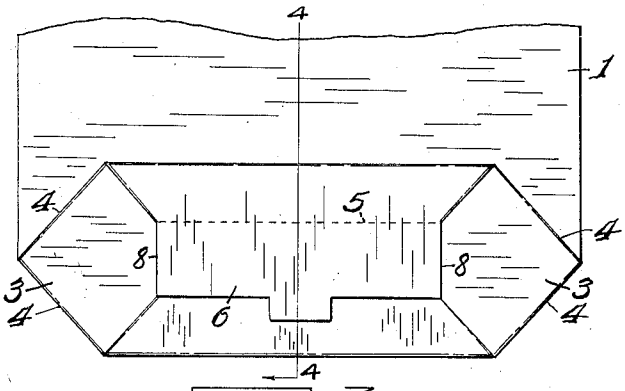


FIG 3

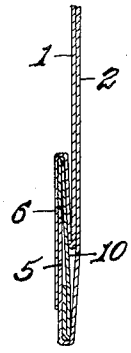


FIG 4

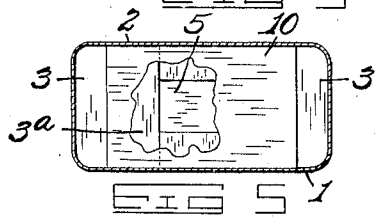


FIG 5

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UNITED STATES PATENT OFFICE.

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PAPER BAG.

Application filed December 17, 1927. Serial No. 240,733.

This invention relates to improvements in paper bags, and it has for its primary object to provide, in a paper bag of the type which embodies a satchel bottom, means whereby such bottom is rendered leak-proof, thus adapting the bag for use as a container for materials of granulated or powdered form.

In the prevailing commercial forms of paper bags of satchel-bottom type, the overlapping folds of the bottom are designed to be held in closed relation by internal pressure exerted by the contents of the bag. However, leakage is frequently permitted between the folds; and in order to overcome this, the practice of providing a double bottom has been resorted to, such double bottom being formed by applying a sealing strip or sheet of paper exteriorly to the satchel bottom, or in enclosing relation to the folds. While such practice is more or less effective, it frequently occurs that the contents of the bag works through the bottom folds and, loosening the pasted-on enclosing sheet by pressure upon the latter, effects its escape.

The present invention is designed to overcome the above-recited objectionable features of the heretofore prevailing forms of bags of the type mentioned.

In describing the invention in detail, reference is herein had to the accompanying drawings, in which—

Figure 1 is a plan view, partially broken, of the bottom end of a collapsed paper bag as it appears prior to inward folding and sealing of the bottom flaps;

Figure 2 is a section of the same on line 2—2, Fig. 1;

Figure 3 is a view similar to Fig. 1, showing the bottom completed;

Figure 4 is a section on line 4—4, Fig. 3; and

Figure 5 is a reduced interior view of the bottom end of the bag, expanded.

Referring to said drawings, the reference characters 1 and 2 designate the opposite side walls of the body of a paper bag which is formed, as ordinarily, of a length of paper tubing; and 3 indicates the usual opposite inwardly turned folds of the bottom. In the process of manufacture and prior to filling the bag, the body of the latter is of flat form, the sides 1 and 2 being in substantial contact throughout. The bottom folds 3 are divided equally between extensions of the sides 1 and 2 so that the divergently related defining edge portions 4 of each will ordinarily be disposed substantially at right angles to each other, as shown.

Oppositely disposed flaps 5 and 6 of substantially rectangular form are produced by slitting the paper of the tube, thereby to form the edge portions 7 and 8 of the folds 3 and the flaps 5 and 6, respectively. The opposite edge portions 7 constitute the ends of rectangular extensions 3^a of said folds 3, as shown in Fig. 1.

The reference characters 9 in Fig. 1 indicate lines upon which the bag is folded for turning the flaps 5 and 6 inwardly into the relatively-overlapping bottom-closing relation shown in Figs. 3 and 4. The bottom is permanently sealed in closed form by an adhesive applied to one or the other of said flaps 5 and 6.

Due to the fact that the ends of the folds 3 are free with respect to the flaps 5 and 6, being merely seated upon the latter, leakage of the powdered or granulated contents of the bag more or less frequently occurs, such contents finding passage between the folds 3 and the inner flap 5.

The noted objectionable feature, which exists in all prior bag structures of the character above described, is eliminated by my invention which resides in introducing a rectangular paper sheet 10, preferably of light weight stock, in a position inwardly with respect to the extensions 3^a of the folds 3. Said sheet preferably possesses a length approximating that of the rectangular extensions 3^a and a width approximating the lengths of the flaps 5 and 6.

In the open, or expanded, condition of the bag, the sheet 10 occupies overlying relation to those portions of the extensions 3^a located between the fold lines 9 and a portion of the inner flap 5, and has its opposite ends turned on said fold lines into underlying relation to the opposite end portions of said extensions 3^a. So disposed, said sheet coacts with said folds 3 to close the unsealed openings against leakage.

What is claimed is—

A bag having a bottom provided with oppositely disposed inwardly turned parts which are spaced apart at their inner sides, oppositely disposed flaps extending outwardly for a distance beyond the respective top

and bottom edges of the inwardly turned parts, and a flexible sheet of material disposed between the flaps and the inwardly turned parts and extending across the space between said parts, the top and bottom portions of the said parts and the inner ends of the flaps together with the end portions of said sheet being bent over one another to dispose the flaps in overlapping relation, said overlapped flaps extending across the space between the said inwardly turned parts.

In testimony whereof, I affix my signature.

TALBOT H. HAMMOND.