Aug. 9, 1938. W. J. MISKELLA 2,126,203

BAG

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Fig. 1.

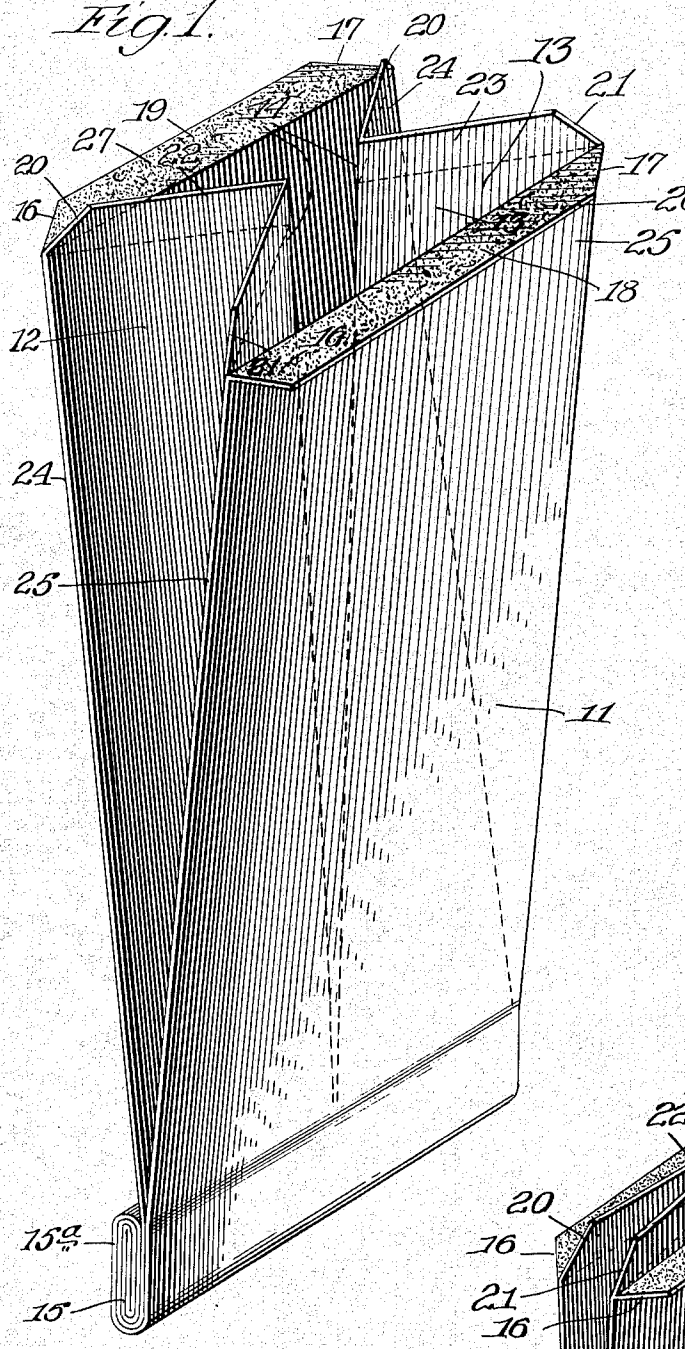

Fig. 2.

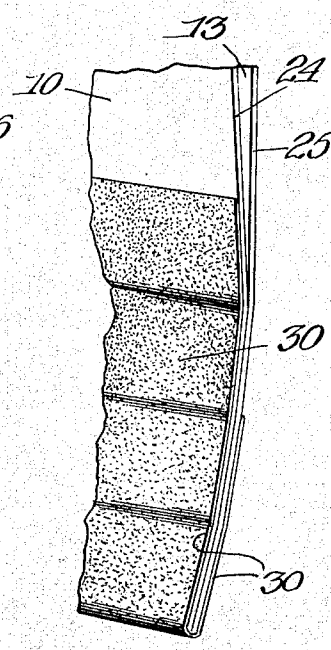

Fig. 3.

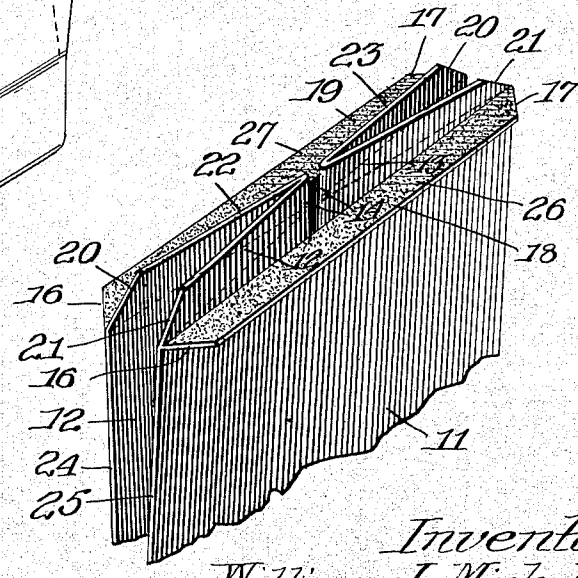

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Fig. 4.

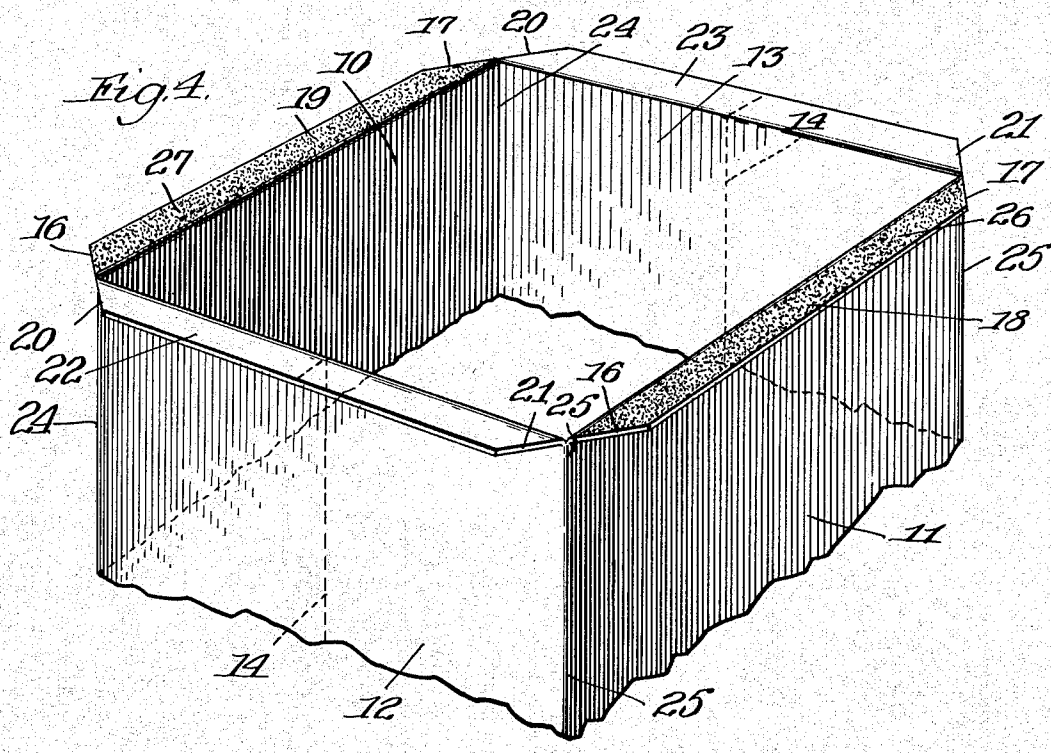
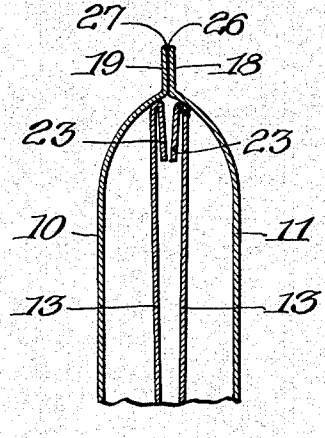


Fig. 5.



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Patented Aug. 9, 1938 2,126,203

UNITED STATES PATENT OFFICE

2,126,203

BAG

William J. Miskella, Cincinnati, Ohio, assignor to The Globe-Wernicke Co., a corporation of Ohio

Application March 15, 1937, Serial No. 131,081

5 Claims. (Cl. 229—62)

This invention relates to a bag, and more particularly to a paper bag which is suitable for use in toilet receptacles, garbage containers and the like, but which may also be used for other purposes.

An important object of the invention is to provide a foldable bag which is adapted to contain liquids and which may be readily sealed for easy disposal. A more specific object is to provide a foldable bag in which coatings of latex are used to effect the seal and in which uncoated end portions are utilized to separate the latex coatings before the bag is unfolded for use.

Another object is to provide a foldable bag which when being used and in open unfolded condition is reinforced by top end flaps which maintain the top end edges rigid and prevent the ends from refolding.

A further object is to provide a bag in which coatings of latex are employed for sealing the bottom of the bag against leakage. Still another object is to provide a second seal to insure against leakage at the bottom of the bag by again folding the sealed edge. Other specific objects will appear as the specification proceeds.

A preferred embodiment of the invention is illustrated by the accompanying drawings in which—

Fig. 1 is a perspective view of the bag partly unfolded and showing the top flaps; Fig. 2, a broken perspective view of the bottom of the bag after the coatings of latex material are applied but before the multiple fold is made; Fig. 3, a broken perspective view of the top of the bag, this view showing the bag substantially folded but with the front side flap turned partly down; Fig. 4, a broken perspective view of the top of the bag when it is fully opened and with the top flaps turned down; and Fig. 5, a detail sectional view taken in a vertical plane perpendicular with the sides, this view showing the bag in sealed condition ready for disposal.

As illustrated, my improved bag has front and back side walls 10 and 11, and has end walls 12 and 13 which have center creases 14 for allowing the bag to be folded into flat condition. These walls may be formed of a single sheet of paper in the manner well known in the art. The material from which the walls are formed is preferably a strong paper which has been impregnated with tar or other compound by which the paper is made water-proof.

The bottom edges of the bag are given a coating of latex material. The latex material used in this coating preferably contains a small amount of solvent, such as benzine, for I have found that the benzine or other solvent aids in enabling the latex to form an intimate union with the treated paper. As shown by Fig. 2, the latex coatings 30 extend upward of the bottom edges and along the exterior of sides 10 and 11 to cover the lower portion of the sides. The bottom edges are first doubled back and pressed together against a side wall to form an edge fold 15. This serves to bring the latex coatings together and form a water-tight seal, the latex coatings being cohesive and tenacious. However, I form a further seal by folding edge fold 15 tightly over against side 10 once or twice to bring the latex coatings on the sides of the bag into contact with each other. The multiple fold 15a thus formed is tightly pressed out at its edges, and prevents the contents of the bag from making the turns in the multiple fold. When the bottom folds are made in the manner just described, the liquid within the bag, in order to leak from the bottom, must break into and make the turns in the multiple fold 15a, then break through the latex seal at the edge of the paper, and then break down the seal formed with coatings on side wall 10 again making the turns of the multiple fold.

At the top of the bag I provide side and end flaps by simply clipping the top corners of the bag while in folded condition. The particular shape of the piece clipped off may be as desired. In the embodiment illustrated a triangular shaped piece is clipped off so as to provide flaps having tapering edges. With the corners removed in this way it will be seen that the tapered edges 16 and 17, of side flaps 18 and 19, are even and uniform with the tapered edges 20 and 21 of end flaps 22 and 23. Instead of clipping the corners of the bag, the end folds 24 and 25 may simply be slit or torn down from the top to form the side and end flaps, if desired. It is essential only that the ends be severed from the sides at the top, so that the tops of the ends may be turned down as flaps when it becomes necessary.

The side flaps 18 and 19 are given a coat of latex on their inside surfaces. A convenient way of doing this is to stack the bags with the top ends offset so as to expose a portion of the end of each bag. Then with flaps 18 turned down the coatings 26 of latex are administered to many bags at one time. In a similar way coatings 27 of latex are given to flaps 19 of the bags. The latex material here used should preferably contain a small amount of benzine as before explained in connection with the bottom seal. No special precautions need be taken for the protection of coatings 26 and 27, for until the bags are to be used the end

flaps 22 and 23 are in contact with these coatings and automatically protect them during packaging and shipment. Due to the peculiar qualities of the latex, it will not adhere to the paper of the end flaps, and consequently there is no danger of the flaps being stuck fast before the bag is used.

In the use of the improved bag, the sides 10 and 11 are spread apart, causing the end folds 24 and 25 to be expanded. When the bag is completely opened and the ends and sides are at right-angles, the end flaps 22 and 23 are turned downward in a manner illustrated in Fig. 4. By creasing the end flaps slightly at their base they are caused to remain approximately at right-angles to the body of the ends. If the bag is to be used in a toilet receptacle of rectangular form, both the side and end flaps may be turned down as just explained, and the bag inserted into the container so that the side and end flaps extend over the top of the receptacle. The flaps then serve as a means of securing the bag in place. For example, a toilet seat may rest upon flaps 22 and 23 and open directly into the bag.

The end flaps 22 and 23 when thus turned down, perform an important function in strengthening the ends against falling inward. In ordinary types of folding bags there is a great tendency for the ends to fall inward, and this tendency has been very troublesome. Where it is essential that the top opening of the bag be full and free, this tendency presents a serious disadvantage. The end flaps 22 and 23 when turned down in the position shown in Fig. 4, make the top edge rigid and all tendency of the ends to refold is overcome. The effect of the flap in preventing the inward bending of the ends is comparable to the effect of an angle iron when used to reinforce a member against bending.

If preferred, the flaps may be bent over farther so that the tops of the flaps are directed downward. With the flaps turned backward in this manner the top edge portion has a U-shaped cross-section. In some situations it is preferable that the flaps be turned down in this fashion rather than as shown in Fig. 4. For instance, the flap may be turned down inside the top edge of a metal container, and in such case the ends are held rigid and prevented from falling inward by the U-shaped fold.

When the bag has been used and is to be disposed of with its contents, the side flaps 18 and 19 may be easily brought together by pressing only slightly downwardly and inwardly against flaps 22 and 23 at their centers where the creases 14 are. This pressure will cause the ends to fold inwardly with their flaps folded downwardly as indicated in Fig. 5, so that as side flaps 18 and 19 are brought together, the end flaps will not now keep coatings 26 and 27 apart. By firmly pressing side flaps 18 and 19 together with the fingers so as to bring their coatings completely into contact, a very tight and secure seal is formed. Thus sealed, the bag with its contents may easily be carried to a place of disposal. The bag may be ruptured to allow the contents to spill out and then may be burned.

The bag constructed as just described is not affected by the disinfectants and deodorants which are commonly used in toilets and garbage pails, and the latex coatings employed in this improved bag provide an important safeguard against the spilling of such disinfectants and waste matter about the premises.

While I have described a specific structure as illustrative of my invention, it will be understood that many changes in the construction may be made without departing from the spirit of my invention. The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

What I claim as new, and desire to secure by Letters Patent, is:

1. A bag of the character set forth having front and back sides and inwardly folded ends, the top edge portions of said sides being provided with coatings of cohesive material, said ends extending between said coatings while said bag is in folded condition.

2. A bag of the character set forth having front and back sides and inwardly folded ends, the top edge portions of said sides being provided with coatings of latex material on their inside surfaces, said ends extending between said coatings to maintain said coatings apart while said bag is in folded condition.

3. A bag of the character set forth having front and back sides and inwardly foldable ends, the top portion of said ends being severed from said sides and adapted to be turned downwardly, the top edge portions of said sides being provided with coatings of cohesive material on their inside surfaces.

4. A bag of the character set forth having front and back sides and inwardly foldable ends, the top edge portions of said ends being severed from said sides and adapted to be turned downwardly, the top edge portions of said sides being provided with coatings of a material adapting them to cohere when brought into contact but non-adhesive to the top portions of said ends.

5. A bag of the character set forth having front and back sides and ends creased inwardly to form a pair of folds at each end of the bag, said end folds being cut away at their top portions to provide side and end flaps, said side flaps carrying on their inside surfaces coatings of latex material, said end flaps extending between said coatings to separate said coatings when said ends are folded inwardly.

WILLIAM J. MISKELLA.