March 19, 1963 W. V. OWENS 3,081,930

BAG OPENING DEVICE

Original Filed Oct. 17, 1957

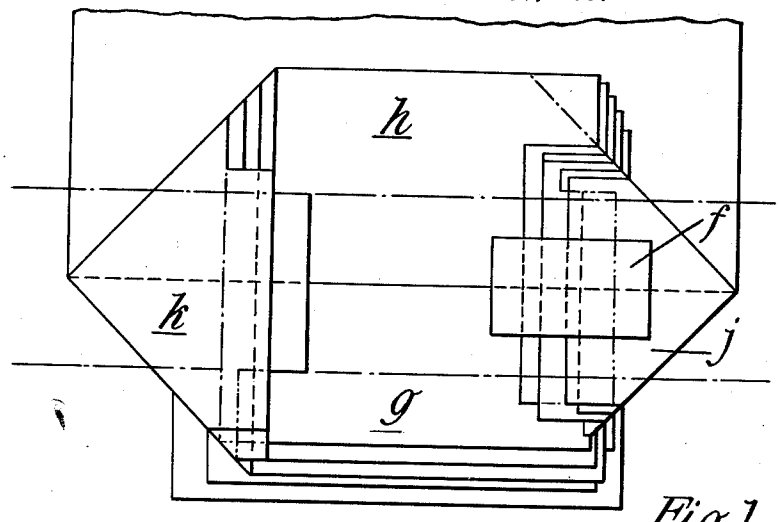


Fig. 1.

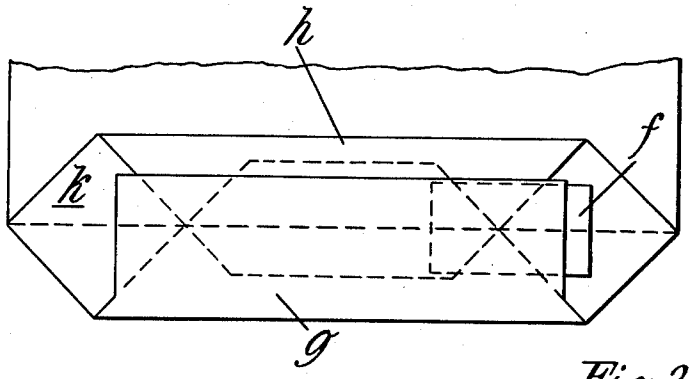


Fig. 2.

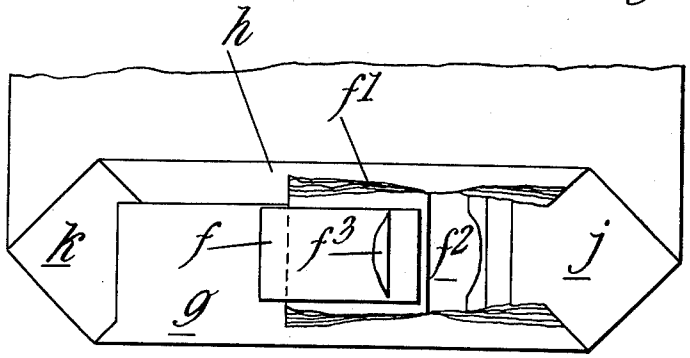


Fig. 3.

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BAG OPENING DEVICE

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Original application Oct. 17, 1957, Ser. No. 690,844, now Patent No. 2,956,724, dated Oct. 18, 1960. Divided and this application June 27, 1960, Ser. No. 38,953

Claims priority, application Great Britain Oct. 25, 1956

1 Claim. (Cl. 229—66)

This invention relates to multiply valved or open mouth paper bags of the type having blockbottom or like end-folded closures, and the subject matter of the present application is divided from U.S.A. patent application No. 690,844 filed October 17, 1957, now Patent No. 2,956,-724.

It is customary to open bags of the above type containing cement or lime, for example, by rupturing the paper by the stroke of a spade or other tool and is, generally speaking, satisfactory for this class of contents which may be released over a broad area or into a wide opening and where some spillage or waste may be permissible. When, however, the contents is of a character which requires more or less careful discharge and is such as should not be spilled, there is difficulty in satisfactorily opening the bags as they are tough and difficult to tear neatly, and usually a knife or tool has to be used with some care to make an appropriate incision for a pouring orifice.

The present invention is particularly applicable to bags intended to contain foodstuffs, such as flour and the like meals, fertilisers or chemicals which may be in powder, granular or pellet form, and the invention has for its object the provision of means in a bag of the character indicated whereby an opening of appropriate predetermined size may be quickly made in a bag without the aid of a tool, through which the contents can be emptied or dispensed.

The invention consists in a bag of the type indicated having a tab or marginal portion projecting under the plies of a closed blockbottom, at the blockbottom valved or non-valved corner folds and associated therewith in such a manner that upon seizure by the operator he can shear or tear the folded corner plies in the tab zone to expose a pouring orifice.

In the accompanying drawings:

FIGURE 1 is a plan view of a blockbottom of a multiply bag in the preliminary folding stage in which the tear tab is disposed lengthwise of the bottom in the diamond fold closure area of the bottom.

FIGURE 2 is a plan view of the blockbottom completed closure with the tab projecting over the triangular corner flap of the diamond fold, and

FIGURE 4 is a plan view showing the tab seen in FIGURE 2 after it has been seized and pulled in the direction of the length of the bottom to expose a pouring orifice.

Hereinafter the invention will be described as applied both with reference to bags made from flush-ended bag tubes and to bags in which the folded plies at each face of the flattened bag are so arranged that the bag tube ends thereof progressively overlap to provide stepped or staggered headings to which those of one face are adhesively secured to those of the other face in folding the closure.

In carrying the invention into effect according to one

mode, described by way of example, as applied to a non-valved corner fold of a blockbottom bag, in which the corner folds *j* and *k* are stepped or of the flush type, a tab *f* in the form of a rectangular piece of tough paper or thin card is pasted over the inwardly folded triangular corner flap *j* after the first blockbottom folding operation (FIGURE 1) has been completed, to secure it in position, so that its outer end will project freely beyond the subsequently folded face flap *g* as in FIGURE 2.

When the corner to which the tab is applied is to be a valved corner the inner and outer flaps *h* and *g* are folded over and pasted one upon the other but no paste is applied to the corner flap and under the side of the tab so that a valve opening is left. The tab piece is free of the triangular corner flap *j* and adhesively stuck to the under side of the adjacent ends of the face flaps *g* and *h* so that the tab is secured to what may be referred to as the roof of the valve opening.

For a non-valve corner flap the tab piece may be pasted to the flap *h* and folded therewith, and pasted to the triangular corner flap *j*, and finally pasted over by face flap *g*.

Usually when the tab is secured in a non-valve corner of a valved bag it is preferred to locate it in the blockbottom at the opposite end of the bag to that in which the valve is located. The tab may be similarly provided in a corner of valve bags of the kind in which the face and corner flaps are cut flush and not stepped.

In opening a bag having a corner-located tab, the tab is seized by the operator and pulled upwardly and towards the centre of the length of the blockbottom when the sides of the tab will shear through the adjacent oblique ends of the face flaps *g* and *h* and make an irregular tear through the face flaps as at f^1 exposing a pouring orifice f^2, FIGURE 3. Where the tab is in a non-valved corner the tab will free itself from the pasting at the corner flap *j*, possibly leaving a piece of one or more of the plies attached to the tab, as seen at f^3.

I claim:

A multiply paper bag which includes multiply triangular corner flaps at one end of the bag on opposite sides thereof, a multiply inner face flap folded over said triangular corner flaps, a multiply outer face flap folded over and adhesively secured to said inner face flap, a rectangular flat tab of substantial width having a tear strength greater than that of said face flaps, said tab being positioned lengthwise across the end of the bag between the inner face flap and one of said triangular corner flaps and adhesively secured to said face flaps and to the innermost ply of said multiply triangular corner flaps to seal said bag end, lines across the face flaps defined by the longitudinal edges of said flat tab, and a free end portion of said tab extending from under said face flaps for grasping and pulling across the end of the bag whereby the said face flaps may be torn along the region of said lines to expose said triangular corner flaps, whereby said corner flap can be folded outwardly to form a pouring spout with the untorn portion of said face flaps.

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