

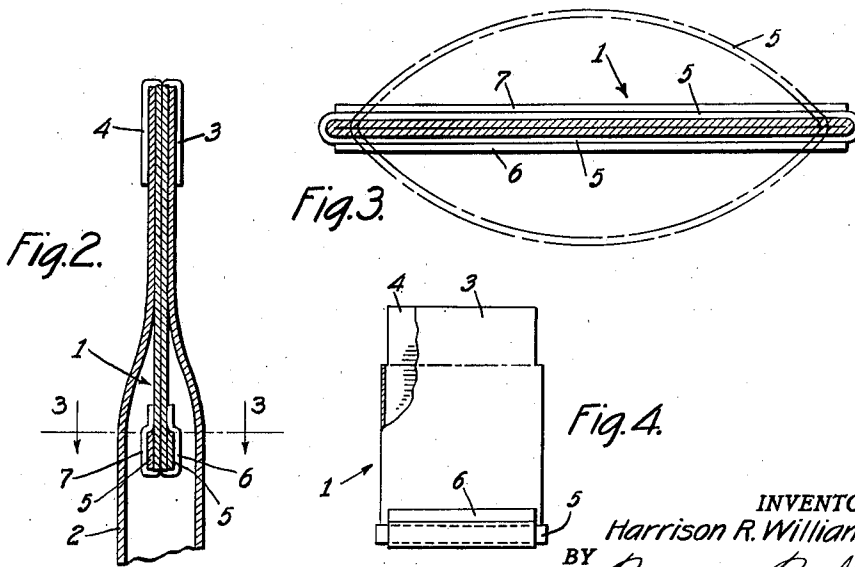
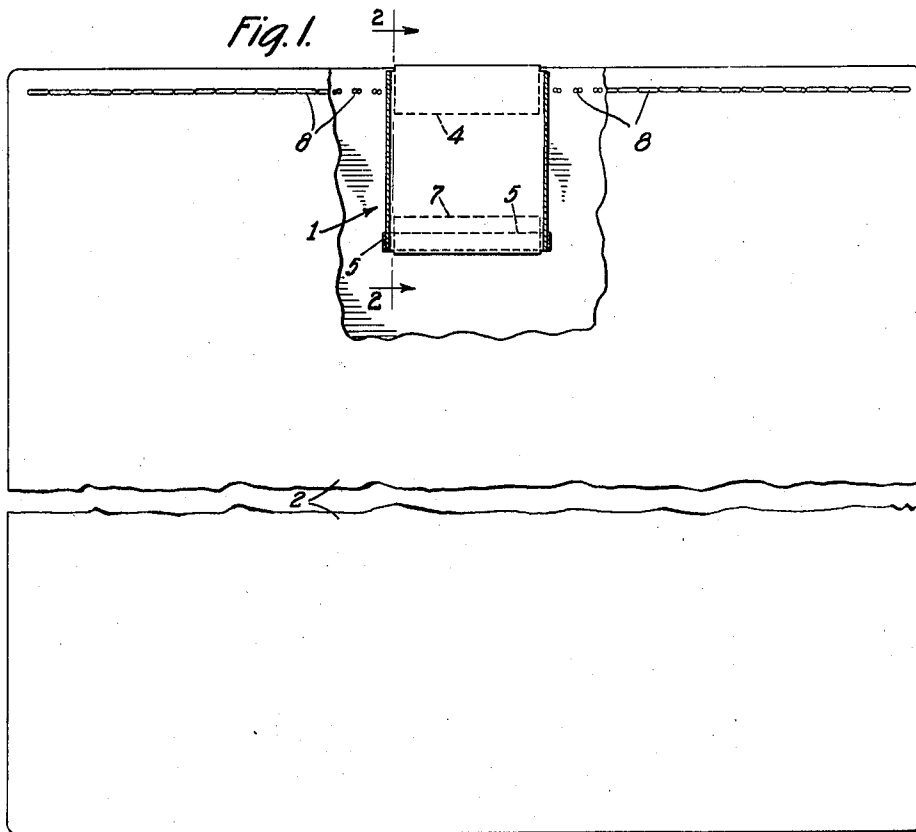
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VALVE BAG CLOSURE

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UNITED STATES PATENT OFFICE

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VALVE BAG CLOSURE

Application filed May 4, 1929. Serial No. 380,352.

This invention relates generally to bag valves, and has for its object the provision of an improved type of such valve provided with a more effective closure than is customarily employed.

It has been customary to provide a bag with an opening for filling purposes, and to rely upon the outward pressure of the material in the filled bag to close such opening.

10 The present invention provides a valve wherein a positive closure is effected, independently of the pressure or weight of the contents of the bag. The invention will best be understood by reference to the accompanying drawings, wherein is illustrated the present preferred embodiment thereof, and in which

15 Figure 1 is a side elevation of a cloth or paper bag, partly broken away in order to show in section a valve embodying the invention.

20 Figure 2 is a vertical section taken on the line 2—2 of Figure 1.

25 Figure 3 is a horizontal section taken on the line 3—3 of Figure 2.

Figure 4 is a detail side elevation of the valve, a portion thereof being shown as broken away in order to more clearly illustrate the construction employed.

30 Like reference characters indicate like parts throughout the drawings.

Referring to the drawings (Fig. 4), the valve, designated generally by the reference numeral 1, comprises a paper sleeve, open at both ends and adapted to be inserted in an opening left in the upper edge of a paper bag 2, and to be attached to the walls of said bag. The sleeve is provided with two upwardly-extending flaps 3 and 4, which are folded outwardly to embrace a portion of the upper surfaces of the bag walls.

45 These flaps are to be attached to the walls of the bag by suitable adhesive material, the positions of the several parts being indicated in Fig. 2. Embracing the sleeve near the bottom thereof is a resilient metal band, 5, retained in position upon the sleeve by means of two bottom flaps, 6 and 7, which are folded upwardly and attached by adhesive material to the band itself, to the outer walls

of the sleeve, or to both such band and outer walls.

The mode of operation of the device is as follows: with the valve installed in the bag (which is closed on either side of the valve as by stitching 8), a filling nozzle (not shown), leading to a supply of material, is passed through the valve and into the bag proper. During this process, the metal band 5 and the walls of the sleeve are distended after the manner indicated by dotted lines in Fig. 3. After the bag is filled, the nozzle is withdrawn from the valve, and the resilience of band 5 restores it to the normal position of parallelism of its two sides, thereby effectually and positively closing the valve and insuring against egress of material contained in the bag.

The valve is simple in construction, it may be economically and easily attached to a bag, it readily opens when a nozzle is passed therethrough, and it closes with certainty upon the withdrawal of the nozzle.

I have described what I believe to be the best embodiment of my invention. I do not wish, however, to be confined to the embodiment shown, but what I desire to cover by letters patent is set forth in the appended claims.

I claim:

1. In a valve bag, in combination, a body portion forming the bag structure, a valve sleeve extending into the bag, and a spring clip surrounding the inner end of said sleeve, normally maintaining said inner end closed but adapted to be distorted by a spreading element thrust into the sleeve to permit filling of the bag.

2. In a valve bag, in combination, a body portion forming the bag structure, a valve sleeve extending into the bag, and spring means connected to the inner end of said sleeve, normally maintaining said inner end closed but adapted to be distorted by a spreading element thrust into the sleeve to permit filling of the bag.

3. In a valve bag, in combination, a body portion forming the bag structure, a valve sleeve extending into the bag, and a spring normally maintaining the inner end of the

valve sleeve in a flat closed condition but yieldable to permit the sleeve walls to be spread apart by pressure exerted from within the sleeve.

5 4. In a valve bag, in combination, a body portion forming the bag structure, a valve sleeve extending into the bag, and a spring normally maintaining the walls of the inner end of the sleeve pressed together but adapted to be spread by pressure exerted from
10 within the sleeve and effective automatically to press the walls of the inner end of the sleeve together upon the pressure from within the sleeve being relieved.

15 5. In a valve bag, in combination, a body portion forming the bag structure, a valve sleeve extending into the bag, and means imbedded in the sleeve at the inner end thereof and automatically maintaining the inner
20 end of the sleeve in a flat closed condition but adapted to be spread by pressure exerted from within the sleeve to permit filling of the bag.

In testimony, whereof I have affixed my
25 signature to this specification.

HARRISON R. WILLIAMS.

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