March 14, 1939. H. E. WEINSTEIN 2,150,753

BAGGER

Filed Oct. 21, 1937

Fig. 1.

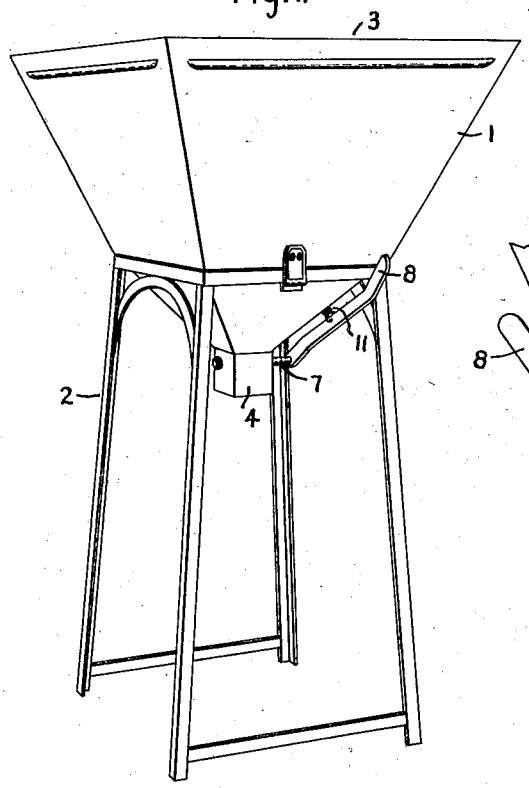


Fig. 2.

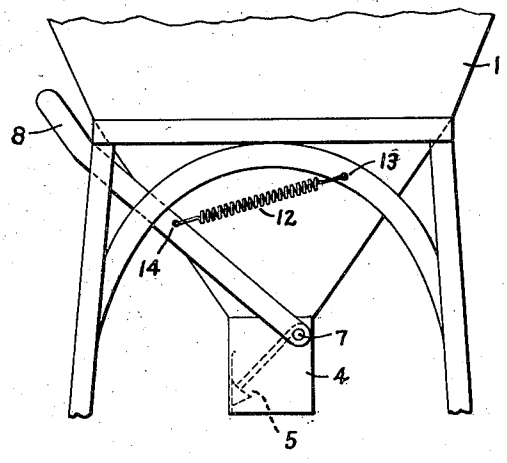


Fig. 3.

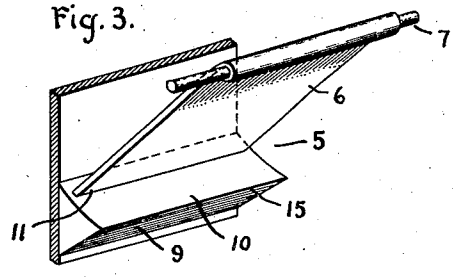
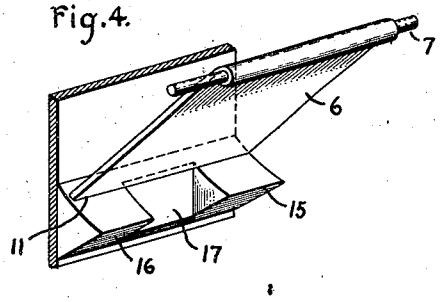


Fig. 4.



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by
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UNITED STATES PATENT OFFICE

2,150,753

BAGGER

Herman E. Weinstein, Saratoga Springs, N. Y., assignor to Simplex Baggers, Inc., a corporation of New York

Application October 21, 1937, Serial No. 170,228

1 Claim. (Cl. 226—58)

This invention relates to a bagger and specifically to a device adapted to do bulk bagging at high speed and low cost of free flowing material, such as sugar, rice, nutmeats, macaroni, dry cereals, tea, etc.

The bagger of the present invention is sturdy in construction, light in weight, and easily and readily moved to any convenient location for operation. It is simple in construction with no working parts to get out of order and may be operated by unskilled help. The bagger is so constructed that it can be used with available scale equipment used for measuring bulk goods.

A particularly novel and practical feature of the bagger of the present invention resides in the valve mechanism of the device which provides for complete control and instantaneous cut-off of flow of the bulk goods being bagged. The valve mechanism requires no adjustment in changing from the bagging of one type of product to the next. The bagger of my invention handles with equal facility fine grained or larger sized bulk merchandise.

The invention will be more particularly set forth in the following detailed description thereof in connection with the accompanying drawing and its scope pointed out in the appended claim.

In the drawing, Figure 1 is a view in perspective of the bagger; Figure 2 is a fragmentary view in elevation of a portion of the bagger showing the valve mechanism; Figure 3 is a fragmentary view in perspective of the preferred type of valve mechanism; and Figure 4 is a fragmentary view in perspective of a modified type of valve mechanism.

Referring to the drawing and particularly Figure 1 thereof, a hopper 1 preferably constructed of sheet steel for strength and lightness is mounted on a framework 2 of angle iron. The hopper may be of any desired shape but is preferably constructed with a relatively large opening 3 at its upper end to receive the bulk goods to be bagged. The lower part of the hopper converges to a spout 4 in which is located the valve mechanism indicated generally at 5. The valve mechanism comprises a valve proper which is constructed preferably of a piece of stiff sheet steel in the shape of a plate 6 one end of which is rolled over and securely fastened to a shaft 7 which in turn is journaled in opposite sides of the spout 4. An operating lever 8 is secured at one end thereof to the shaft 7.

Mounted within the spout 4 below the shaft 7 and opposite therefrom is a cut-off member or extension 9 the upper surface 10 of which is arcuate in contour and is slidingly engaged by the lower edge 11 of plate 6 when the valve is in its normally closed position. The valve is maintained in this closed position by means of a spring 12 one end of which is fastened to the framework as at 13 and the other end of which is fastened to the operating lever 8 as at 14.

The cut-off member 9 performs an important function. As will be observed, the plate 6 of the valve mechanism 5 slidingly engages the arcuate surface 10 and when the lever 8 is moved against the tension of the spring 12 the lower edge of the plate moves across the arcuate surface until it reaches edge 15 after which the material being bagged is free to flow instantly to bags or other receptacles placed beneath the spout 4. Conversely, when the lever 8 is released the tension of the spring 12 brings the lower edge of the plate back immediately to the arcuate surface and instantly cuts off the flow of the material from the hopper. Since the arcuate surface of the cut-off member 9 is of relatively large cross-section there is an instantaneous cleaning action as the plate 6 sweeps over it back into normally closed position. Thus, the operator can easily control the flow of even the smallest grained material almost to the point of dispensing only a few grains of material being bagged and hence the operator can accurately and speedily weigh the material being bagged without any skill or tiresome operations.

In Figure 4, I have indicated a modified form of cut-off member 16 which differs from that shown in Figure 3 in that the central portion is cut out forming an opening 17. This construction is particularly adapted for use with the finer grained materials being dispensed or bagged and provides a still greater degree of control of flow of material. It will be obvious that as the cut-off valve mechanism is operated to dispense the material first the lower edge 11 of the plate 6 moves across the opening 17 allowing a small volume to flow through the spout and as the plate moves farther across the opening the volume of flow increases until the maximum volume of flow may be obtained. Similarly, when the valve is returned to its normal or closed position the volume of material being dispensed is cut off in stages or degrees as the lower edge of plate 6 first sweeps back across the edge 14 and then finally entirely closes the opening 17.

What I claim as new and desire to secure by Letters Patent of the United States, is:

A bagger for free-flowing material comprising in combination, a hopper for receiving the material to be bagged, having a delivery spout at

the bottom thereof, said spout having side walls, a shaft journaled in the walls of the spout, a valve in said spout comprising a flat plate fixed at one edge to the shaft and extending at an angle downwardly across the spout, a cutoff member mounted within the spout and having an arcuate surface, said cutoff member comprising an extension mounted on the wall opposite to and below the valve shaft, the free edge of the valve plate traversing the arcuate surface during operation of the valve, spring means for normally holding the free edge of the valve plate on said arcuate surface beyond the marginal edge thereof, the free end of the valve plate and the arcuate surface of the cutoff member cooperating during opening and closing of the valve to provide instantaneous flow and stoppage of flow of the material being bagged.

HERMAN E. WEINSTEIN.