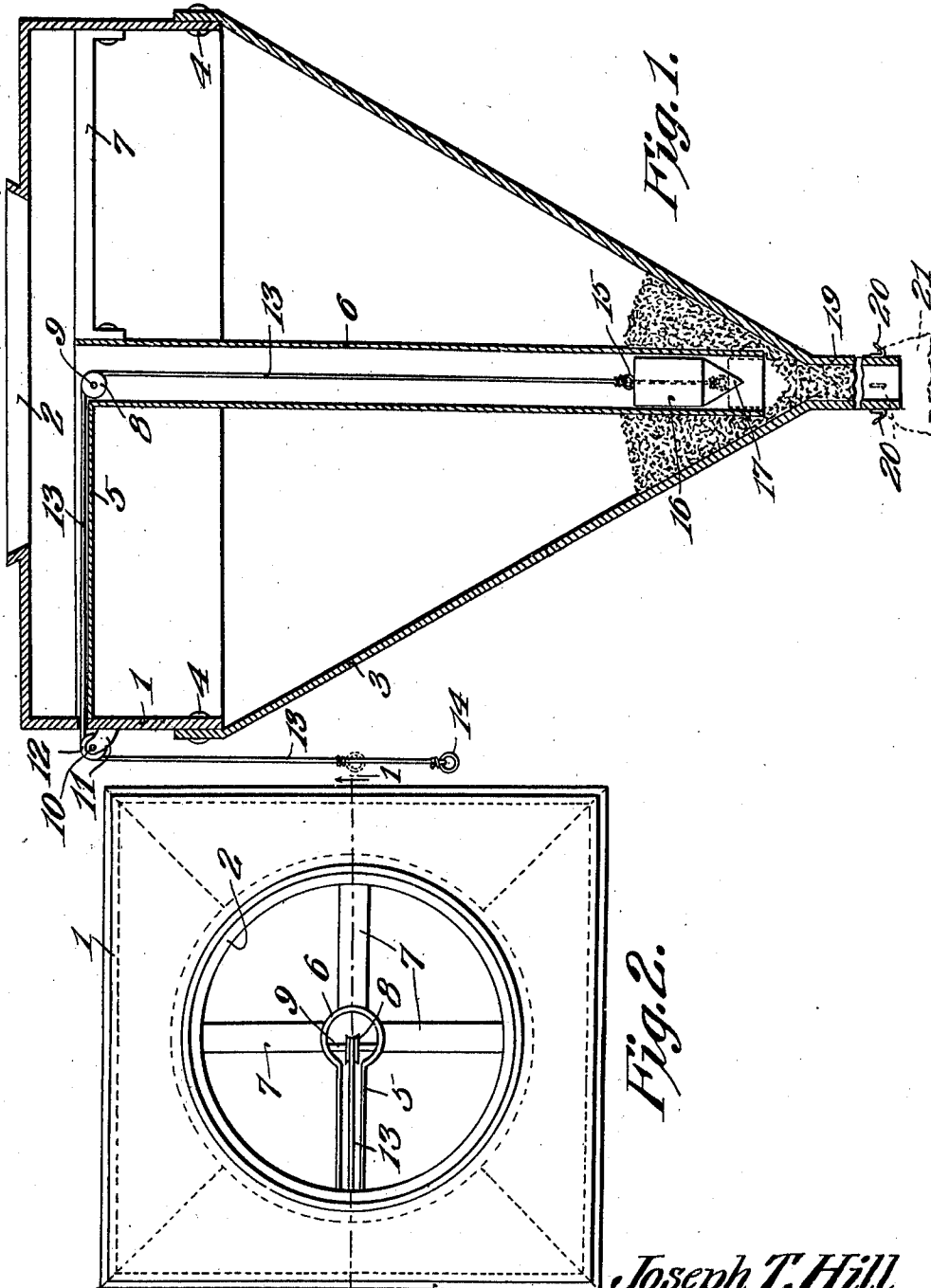


J. T. HILL.
 APPARATUS FOR FILLING BAGS AND THE LIKE.
 APPLICATION FILED SEPT. 15, 1910.

989,010.

Patented Apr. 11, 1911.



Witnesses

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UNITED STATES PATENT OFFICE

JOSEPH THOMAS HILL, OF SPENCER, INDIANA.

APPARATUS FOR FILLING BAGS AND THE LIKE.

989,010.

Specification of Letters Patent.

Patented Apr. 11, 1911.

Application filed September 15, 1910. Serial No. 582,190.

To all whom it may concern:

Be it known that I, JOSEPH T. HILL, a citizen of the United States, residing at Spencer, in the county of Owen and State of Indiana, have invented a new and useful Apparatus for Filling Bags and the Like, of which the following is a specification.

This invention relates to apparatus for filling bags, boxes, barrels or the like, and its object is to provide apparatus of this character which is simple in construction and designed to feed cereals or other materials by gravity into bags or other receptacles supported thereunder, there being a novel form of cut-off valve for use in controlling the discharge of materials from the apparatus.

A further object is to provide a combined guide and shield whereby the cut-off valve is permitted to move freely toward or away from its seat and without objectionable interference by the material contained within the apparatus.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:—Figure 1 is a central vertical section through the apparatus, the valve being shown raised from its seat and a portion of the outlet tube of the apparatus being removed. Fig. 2 is a plan view of the parts shown in Fig. 1.

Referring to the figures by characters of reference 1 designates a preferably rectangular casing provided with an inlet opening 2, through which the material enters the casing. A hopper 3 is rigidly connected to the casing as shown at 4, and merges into a conical lower or outlet portion. Extending radially from one side of the casing to the center thereof is a channeled brace 5 integral with or secured to a central tubular shield and guide 6. Additional braces 7 connect the guide 6 to the casing 1. A sheave 8 is journaled, as at 9, in the upper end of guide 6 and another sheave 12 is journaled, as at 10, in a bracket 11 extend-

ing from the casing 1 near the outer end of the brace 5. These sheaves support a cord 13, one end of which is provided with a gripping ring 14 while the other end is secured in an eye 15 extending from one end of a cut-off valve 16. The said valve 16, has a cylindrical body slidable in guide 6 and provided with a conical lower end 17 so that, when the valve is lowered, it will readily move into material in the path thereof and become seated in the outlet opening 18 in the hopper 3. The lower extremity of the guide 6 is spaced a short distance above the outlet opening 18. An outlet tube 19, extends down from the opening 18 and a bag may be secured thereto to receive material discharged from the hopper. This tube 19 may also be extended into a box or barrel or any other receptacle to be filled. In order to suspend a bag from the tube 19, hooks 20 are provided. A bag is shown at 21 in the drawings.

When it is desired to use the apparatus, the cut-off valve 16 is permitted to move downward by gravity until its conical end becomes seated upon the lower portion of the hopper 3 and with its apex extended into the tube 19. The casing is then filled with the cereal or other material to be supplied therefrom and this material will extend around the tube 6 but cannot enter the same. When the valve is in its closed position, as indicated by dotted lines in Fig. 1, it obviously prevents any portion of the contents of the hopper from being forced upwardly into the guide tube 6. The bag 21 to be filled is placed in engagement with the hooks 20 and valve 16 is pulled upwardly by means of the cord 13. As soon as the conical end of the valve is unseated, a portion of the contents of the hopper will pass downwardly by gravity into the tube 19 and thence into the bag. As the guide tube 6 contains nothing that will interfere with the upward movement of the valve 16, the said valve can be readily elevated. After a desired quantity of material has passed outward into the bag or other receptacle by way of tube 19, the valve 16 can be released and will drop by gravity. The pointed lower end of the valve will act as a wedge and spread the material in the path thereof so as to permit the valve to quickly and positively assume its position on its seat, thus cutting off further escape of the contents of the hopper.

It will be noticed that the upper end of the valve is constantly housed within the guide tube 6 so that there is no chance of any material getting into the path of the valve so as to interfere with its upward movement.

What is claimed is:—

Filling apparatus of the class described including a conical hopper having an outlet tube at the bottom or apex thereof, an imperforate guide tube fixedly supported above the outlet tube and out of contact with the hopper, a combined weight and valve having a conical lower end normally seated by gravity upon the bottom portion of the hopper and projecting into the out-

let tube to close said tube, the upper end of the valve being constantly located within the guide tube, and flexible means connected to the valve and within the guide tube and extending beyond the hopper, for elevating the valve into the guide tube to open the outlet tube, said guide tube being normally closed at the lower end by the valve.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH THOMAS HILL.

Witnesses:

JOHN B. GREENE,
BERT F. SLOAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
