March 16, 1926. 1,576,660

P. LASSEN

COMBINED BAG HOLDER AND CUT-OFF

Filed Dec 19, 1924 2 Sheets-Sheet 1

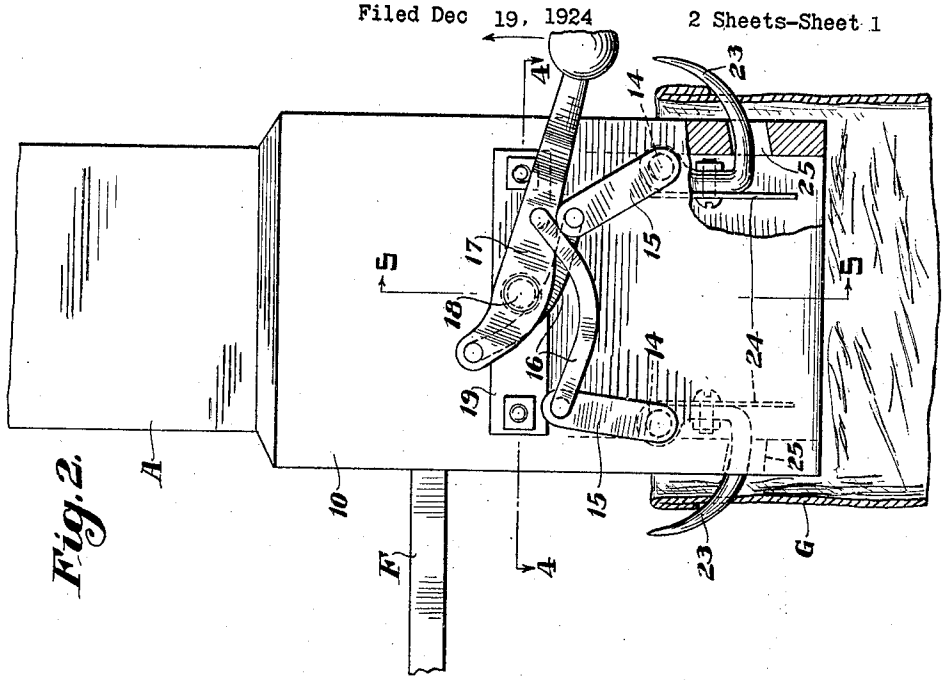


Fig. 2.

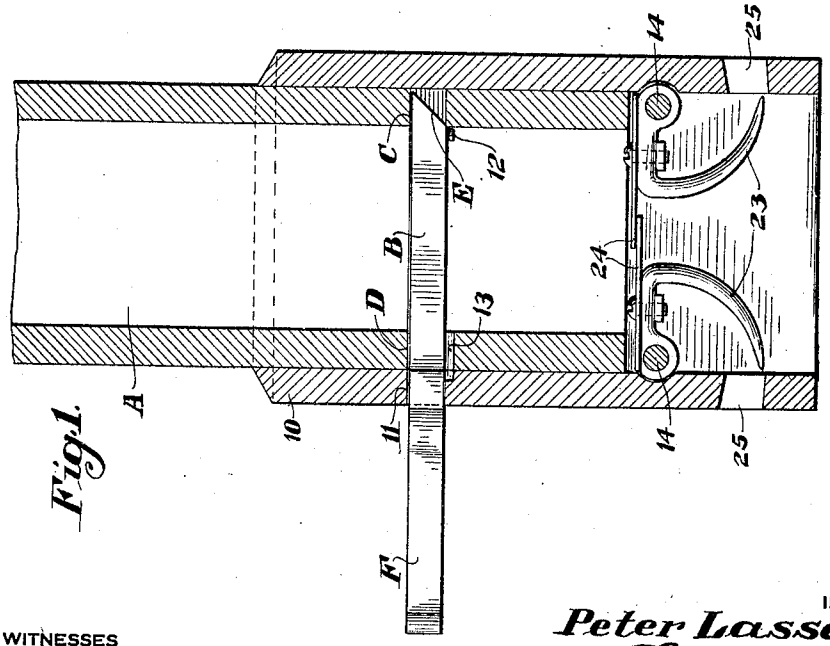


Fig. 1.

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Fig. 4.

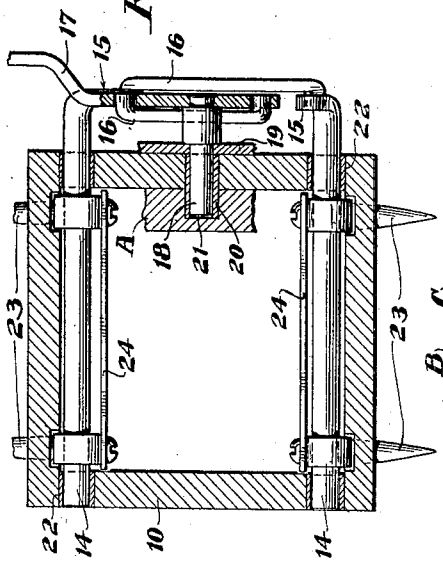
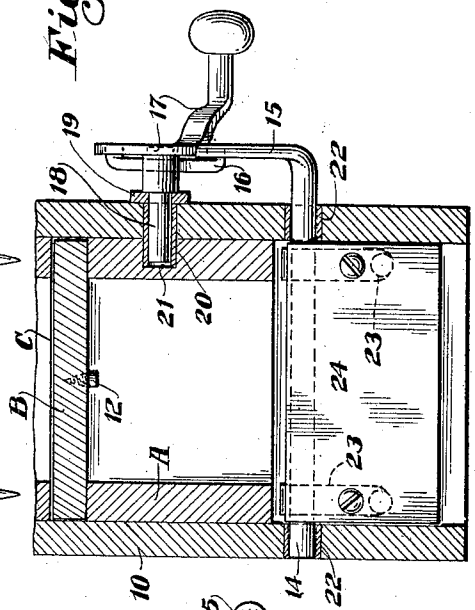


Fig. 5.



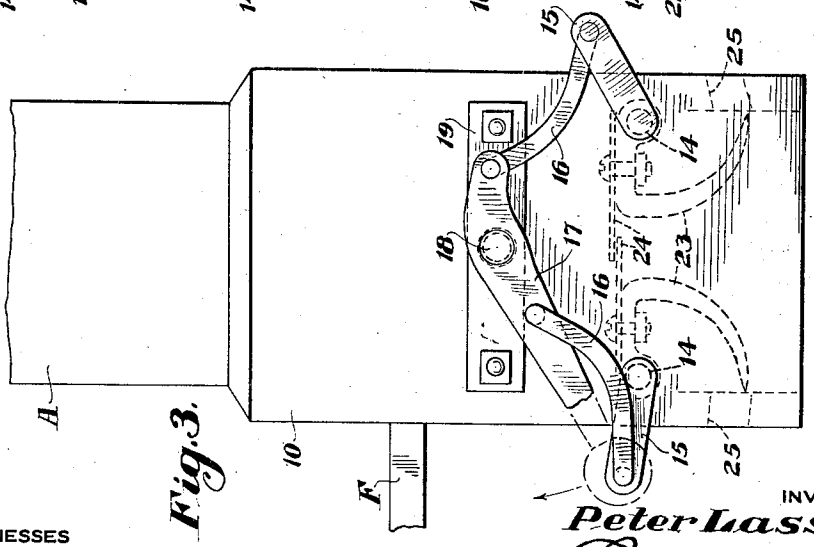


Fig. 3.

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Patented Mar. 16, 1926. 1,576,660

UNITED STATES PATENT OFFICE.

PETER LASSEN, OF ROANOKE, TEXAS, ASSIGNOR OF ONE-HALF TO ERICH G. LASSEN, OF ROANOKE, TEXAS.

COMBINED BAG HOLDER AND CUT-OFF.

Application filed December 19, 1924. Serial No. 756,972.

To all whom it may concern:

Be it known that I, PETER LASSEN, a citizen of the United States, residing at Roanoke, in the county of Denton and State of Texas, have invented new and useful Improvements in Combined Bag Holders and Cut-Offs, of which the following is a specification.

This invention relates to devices for use in connection with chutes, spouts or the like through which granular or other dry material is passed for the purpose of conducting it to receptacles, and has for its primary object the provision of a combined bag holder and cut-off mechanism so constructed and arranged that when the bag-holding means is in operative or bag holding position, the cut-off will be in the open position to permit the passage of material through the chute, the cut-off being moved automatically to closed position when the bag holding means is moved into bag releasing position.

An important object of the invention is to provide a combined device of this character actuated by movement of a single control lever or handle conveniently operable to effect the desired action.

A further object is to provide a mechanism of this character which may be built into or onto already existing chutes or spouts, or which may, if preferred, be constructed as a separate and complete entity adapted for attachment to such already existing chutes, spouts or other structures.

A still further object of the invention is to provide a combined bag holder and cut-off which may be used in connection with or absolutely independently of the usual slide provided in grain or other chutes or spouts, the cut-off means acting with certainty to prevent passage of material through the chute or spout, except when the device is operated to bring the bag holding means into play.

In carrying out the objects, I provide a pair of rock shafts carrying bag holding hooks, and also carrying plates or doors forming the cut-off mechanism, the rock shafts being equipped with crank arms having link connections with a single operating lever, the construction being such that when the bag holding hooks are in released or inoperative position they are contained entirely within the device and consequently protected against damage and are also incapable of being struck against and causing injury to workmen and others.

To the attainment of the foregoing and other objects and advantages, the invention consists in the details of construction and the arrangement of parts to be hereinafter more fully described and claimed and illustrated in the accompanying drawings, though it should be of course understood that the disclosure is merely a preferred embodiment of the invention, as the right is reserved to make all such changes as will increase the adaptability and widen the field of utility of the device, provided such variations and modifications fall within the spirit of the invention and constitute no departure from the appended claims.

In the drawings, wherein like reference characters designate corresponding parts throughout the several views,

Figure 1 is a vertical section through the device applied to a chute or spout, this view showing the cut-off in closed position and the bag holding means in retracted or inoperative position;

Figure 2 is a side elevation of the device showing the bag holding means in operative position and the cut-off in open position, a portion of the structure being broken away and in section to show the construction more clearly;

Figure 3 is an elevation of the operative side, showing the bag holding means in retracted position and the cut-off in closed position;

Figure 4 is a horizontal section on the line 4—4 of Figure 2 and

Figure 5 is a vertical section on the line 5—5 of Figure 2.

Referring to the drawings in detail, the letter A designates a chute or spout such as is used in mills and other places where grain or other dry granular material is handled, and B designates the usual slide ordinarily provided for cutting off the passage of material through the chute or spout. The chute or spout A is necessarily slotted as shown at C and D for the accommodation of the slide, and the slide itself has a beveled end E which facilitates forcing it

through the column of material descending through the chute. The other end of the slide is, of course, provided with a suitable handle F, whereby it may be conveniently manipulated.

The device forming the subject matter of the present invention may be built onto or formed as an attachment to the chute or spout A, as preferred, and includes a hollow body or casing 10 fitting upon the chute A, and suitably secured thereto so as to project beyond the lower end thereof. This casing 10 is provided in one side with a slot 11 for the accommodation and passage of the slide B. It is of course desirable that some means be provided for preventing the slide from being entirely withdrawn from the chute and attachment, and for this reason I have illustrated a projection 12 on the underside of the slide near its beveled end adapted to be accommodated within a groove or slot 13 communicating with the slot B. This slot 13 does not extend entirely through the body or casing 10, and it is consequently apparent that when the projection 12 reaches the end of the slot 13, movement of the slide will be stopped.

Journaled through the casing 10 beneath the lower end of the chute or spout A, and preferably near the side of the casing, are spaced parallel rock shafts 14 formed or otherwise provided at one end, and exteriorly of the casing, with crank arms 15, with which are pivotally connected links 16, in turn pivotally connected with an operating lever or handle 17, journaled at one side of the casing. The exact mounting of the lever is a matter which might be varied within wide limits, though for the sake of illustration I have shown the lever as carrying a stub shaft or trunnion 18, journaled through a bearing plate or strip 19, and engaged within a suitable bushing 20, extending through one wall of the casing, and into a recess 21 in the chute or spout A. It is preferable to provide bushings 22 for the rock shaft 14, especially if the casing 10 be made of wood. The above-described links 16 are connected with the lever 17 at equal distances from the pivot thereof, so that when the lever is moved in one direction or the other, the rock shafts will be correspondingly moved and both to the same extent.

Suitably secured upon the rock shafts 14 are oppositely arranged curved hooks 23, to the shank portions of which are mounted plate members 24 which constitute doors, and which are adapted to be brought into overlapping relation, as shown particularly in Fig. 1, to define a cut-off means, which will prevent flow of material through the chute or spout and through the device. The hooks 23 constitute the bag-holding means, and are adapted to be projected through openings 25 in the opposite sides of the casing 10 so as to penetrate and engage a bag G, arranged in encircling relation to the casing 10, as clearly shown in Figure 2.

In the use of the device, it will be seen that when the lever or handle 17 is in one position, as shown in Figure 3, the rock shafts 14 will be in such position that the hooks 23 will be retracted and contained entirely within the casing, with the plate or door members 24 in overlapping relation to form a closure or cut-off at the bottom of the chute or spout, so that granular material cannot pass through the device. When the parts are in this position, it is clear that the enclosing of the hooks within the device will protect them from being damaged, and will also prevent them from causing injury to workmen and others employed about the device.

When it is desired to sack whatever material is being handled, the sack G is disposed about the lower end of the casing 10, and the handle or lever 17 is swung in the other direction, whereupon, by virtue of the links and crank arms, the rock shafts 14 will be partially rotated and the hooks 23 swung outwardly and upwardly through the openings 25 into penetrating engagement with the bag, so that the bag will be supported (Fig. 2). At the same time, the plates or doors 24 are swung downwardly into non-obstructing relation to the chute or spout, so that the material passing therethrough may flow into the bag.

Attention is directed to the fact that the construction and arrangement of the parts is such that the hooks will engage through the bag before the heaviest material handled by the device can reach the bottom of the bag. In actual practice the device will be so mounted with respect to a chute or spout, and the chute or spout itself will be so arranged, that when a bag is engaged by the hooks 23, it will be suspended only a short distance above the floor, or it may be supported on the floor of the mill. When the bag is filled to the desired extent, and it is desired to discontinue the flow of material thereinto, the lever 17 is swung in the opposite direction or into its original position, whereupon the hooks 23 are withdrawn from the bag, permitting the bag to be removed. By the time that the hooks are withdrawn through the openings 25, the plates or doors 24 are closed and will positively prevent the passage of any additional material into the bag.

From the foregoing description and a study of the drawings, it will be apparent that I have thus provided a simply constructed and extremely easily operated combined bag holder and cut-off for grain or other chutes, spouts and the like. The device will be of great convenience, inasmuch as it will save time, labor and annoyance in

bagging grain or other similar material. While the ordinary slide is shown and described, it will be readily apparent that its use is not essential, inasmuch as the cut-off feature of the invention is entirely adequate to control the flow of material at all times without it being necessary to utilize the slide at all, the principal purpose for the slide being to cut off the flow and relieve the strain from my device, when there are no bagging operations contemplated.

Having thus described the invention, I claim:—

1. In combination with a chute, a pair of rock shafts journaled within the same, hooks carried by the rock shafts and movable outwardly through openings in the chute, a cut-off also carried by the rock shafts, and means for simultaneously operating the cut-off and moving the hooks.

2. In combination with a conducting chute, a pair of rock shafts journaled in transverse relation to the chute, oppositely arranged hooks carried by the rock shafts and adapted to be moved outwardly into penetrating engagement with a bag, plates carried by the rock shafts and constituting a cut-off for the chute when the hooks are in inoperative position, and means for moving the rock shafts.

3. In combination with a conducting chute, a pair of rock shafts journaled in transverse relation to the chute, oppositely arranged hooks carried by the rock shafts and adapted to be moved outwardly into penetrating engagement with a bag, plates carried by the rock shafts and constituting a cut-off for the chute when the hooks are in inoperative position, and means for moving the rock shafts comprising a single pivotally mounted operating lever, and connections between the lever and the rock shafts.

4. In combination with a conducting chute, a pair of rock shafts journaled in transverse relation to the chute, oppositely arranged hooks carried by the rock shafts and adapted to be moved outwardly into penetrating engagement with a bag, plates carried by the rock shafts and constituting a cut-off for the chute when the hooks are in inoperative position, and means for moving the rock shafts, comprising a single pivotally mounted operating lever, crank arms carried by the rock shafts, and links pivotally connected with the crank arms and with the lever at opposite sides of the pivot thereof.

5. A combined bag holder and cut-off for conducting chutes comprising a casing, a pair of rock shafts journaled transversely of the casing, oppositely arranged hooks mounted on the rock shafts and constituting penetrating members for engagement with a bag, plates carried by the rock shafts and defining cut-off means, and means for simultaneously moving both rock shafts whereby to project the hooks and open the cut-off, or to retract the hooks and close the cut-off.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature.

PETER LASSEN.