A. L. JOHNSON.

SACKER.

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1,250,316.

Patented Dec. 18, 1917.

Fig. 1.

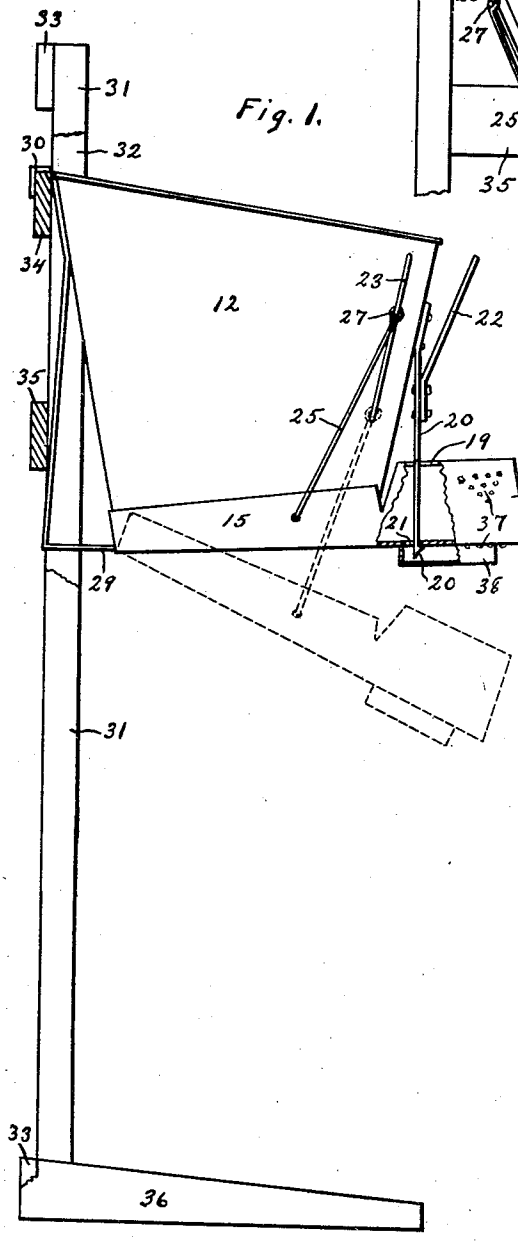


Fig. 2.

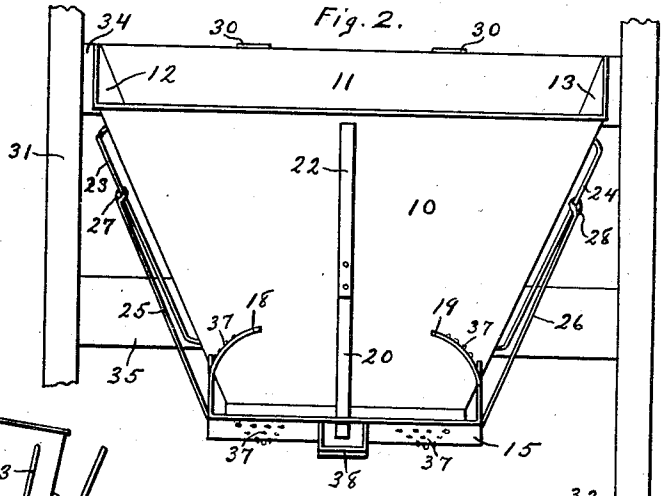
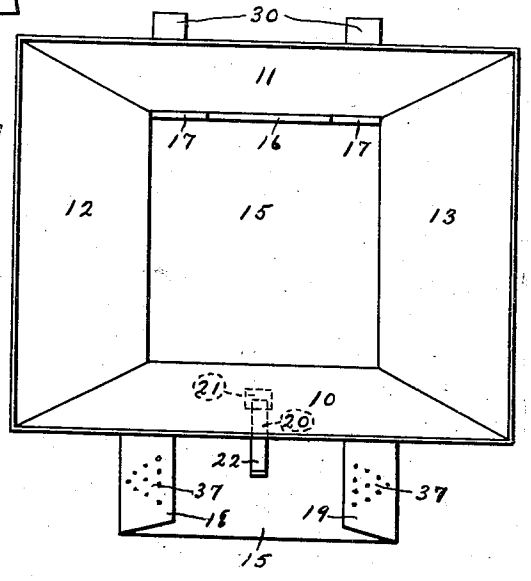


Fig. 3.



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SACKER.

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To all whom it may concern:

Be it known that I, ALFRED L. JOHNSON, a citizen of the United States, residing in Ogden, county of Boone, and State of Iowa, have invented a new and useful Improvement in Sackers, of which the following is a specification.

The object of this invention is to provide an improved construction for a bag-filling device.

A further object of this invention is to provide an improved receptacle adapted to receive a quantity of grain, vegetables or the like, and having a hinged bottom in the form of a chute through which such substance may be delivered to a sack or bag.

A further object of this invention is to provide improved means for supporting a bag-filling device.

A further object of this invention is to facilitate the sacking of substances such as grain or vegetables and permit such work to be done by one person through the use of a device which shall combine simplicity and convenience with strength, lightness and longevity.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a side elevation, partly in section, showing the bag filler in position on the rack, dotted lines indicating open position of the filling chute. Fig. 2 is a front view of the device, showing only a portion of the supporting rack. Fig. 3 is a plan of the bag filler detached from the rack.

In the construction of the device as shown a hopper is provided and is formed of sheet metal, with a front wall 10, rear wall 11, and side walls 12, 13, preferably being formed in one piece, open at bottom and top, and formed with a rolled and wired upper margin. The hopper so formed preferably is of materially greater length and breadth at its top than at its bottom. A trough or chute 14 is separately formed, preferably of sheet metal, and is hinged at its rear margin to the lower margin of the rear wall 11 of the hopper, said wall being formed with an elongated hinge member 16 to which are pivotally secured hinge members 17 on said trough or chute. The trough or chute 15 thus forms a hinged bottom for the hopper, and the side flanges thereof project upwardly outside of the lower portions of the side walls 12, 13, to any suitable distance. The trough 15 projects materially forwardly beyond the forward margin of the bottom of the hopper, and is formed at its forward end with inwardly curved wings 18, 19 arching toward the median line of the device above the bottom of the trough, thus forming a chute or spout-like terminus for the said trough. A spring detent 20 is fixed at its upper end on the outer face of the front wall 10, extends downwardly and has its hooked lower end projecting through a hole 21 in the bottom of the trough 15, and adapted to engage a margin of said hole at times and hold the trough in closed position. A handle 22 may be fixed to the detent 20, intermediate of the ends thereof, for convenience in manipulating said detent, particularly for releasing or unlatching the same. Yoke-shaped slide bearings 23, 24 are mounted vertically on and secured to and adjacent the forward margins of the side walls 12, 13, and links 25, 26 are formed with eyes 27, 28 on their upper ends slidingly engaging said slide bearings. The lower ends of the links 25, 26 are pivotally secured in and intermediate the ends of the side flanges of the trough 15, thus providing a means for limiting downward movement of the forward end of said trough, and holding it in the proper position for delivering substances from the hopper to a bag, such position being indicated by dotted lines in Fig. 1.

Metal straps 29 are spaced apart and fixed at one end each to the lower margin of the rear wall 11, project rearwardly in substantially the plane of the bottom of the hopper, are then bent at angles and extend upwardly in a vertical plane substantially at right angles to their first course, are secured at their upper ends to the upper portion of the said rear wall, and project rearwardly and downwardly from such point of fastening in the form of hooks 30, by which the device may be suspended from a suitable support.

I prefer to construct a special form of supporting rack for the device, which consists of spaced uprights 31, 32 secured together by vertically spaced cross-bars 33, 34, 35; and sills 36 fixed to the lower ends of said uprights and projecting at right angles thereto, said sills adapted to rest on the ground or other supporting surface and maintain the uprights in vertical position.

The cross-bar 34 provides a suitable place for engagement of the hooks 30 to support the hopper and devices attached thereto; and the lower cross-bar 35 forms a bearing for the lower portions of the straps 29, where they are spaced from the bottom of the hopper, to hold the bottom of the hopper away from the rack and maintain the bottom of the device in substantially a horizontal plane, or even with the forward end a trifle higher than the rear end, as shown. This provides a strong, convenient and portable means for supporting the bag filling device proper.

In practical use substances such as grains, potatoes, apples or anything else which it is desired to sack is placed in the hopper, the trough bottom 15 first being closed and latched. If desired the hopper may be made of a known capacity, so as to partake also of the characteristics of a measuring device, to deliver a known quantity of substance to each sack. When the desired quantity of substance has been placed in the hopper, a bag is held with its mouth over the mouth of the trough or chute 15, which, particularly with the aid of the wings 18, 19, has the effect of spreading the mouth of the bag. I prefer to form burred or roughened surfaces such as 37 on the bottom of the forward end of the trough, and on the wings 18, 19, to assist in maintaining the mouth of the bag in proper position for filling; or if desired other devices such as hooks (not shown) may be employed for this purpose. The detent 20 is then pressed rearwardly at its lower end, as by pressing on the handle 22, and disengaged from the hole 21, thereby permitting the trough 15 to articulate on its hinges, the forward end dropping down, with the bag, to the position indicated by dotted lines in Fig. 1, where it is held by the links 25, 26. Thereupon the substance in the hopper is discharged by gravity into the sack or bag.

A small chute 38 preferably is formed on the bottom of the trough 15, encompassing the hole 21, and open at its forward end, so that when the device is employed for small grains any of the substance which may pass through the hole 21 will be delivered by said small chute 38 to the bag.

I claim as my invention—

1. In a bag filler, a hopper, a horizontally arranged trough pivoted at its inner end to and forming a bottom for the hopper, said trough at its free end extending beyond the hopper front and having lateral inwardly curved wings to form a chute-like discharge and being formed to receive and engage a bag or the like, said trough having a hole in its bottom, a latch connected to the hopper and engaged through said hole to hold the trough closed, and a member secured to the trough bottom beneath said hole and open at its front to trap material passing through said hole and to discharge same into the bag or the like when the trough is in discharging position.

2. In a bag filler, a hopper, a pivoted trough forming a bottom for the hopper, stationary substantially vertical guide rods fixed at their ends to the sides of the hopper so as to leave space between said sides of the hopper and the major portions of the rods, links pivoted at their lower ends to the sides of the trough, and eyes on the upper ends of the links receiving said guide rods therethrough and sliding in the space between the guide rods and hopper sides, said eyes being engageable with the lower ends of the guide rods to hold the hopper bottom in down position.

ALFRED L. JOHNSON.

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