May 16, 1933. D. A. EVANS 1,909,670

SACKING DEVICE

Filed June 29, 1931

Fig. 2.

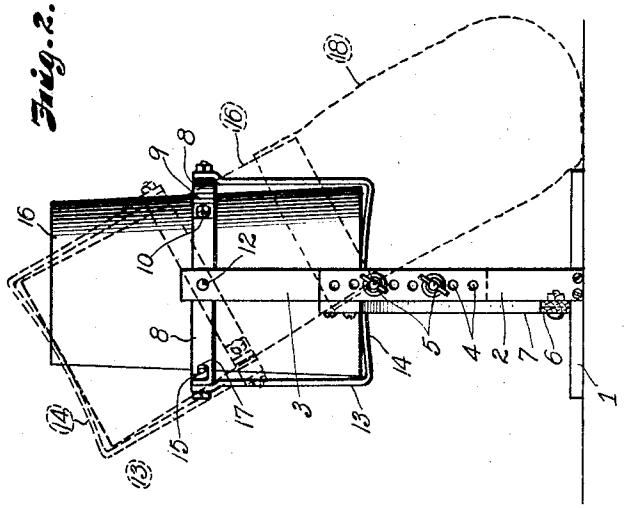


Fig. 4.

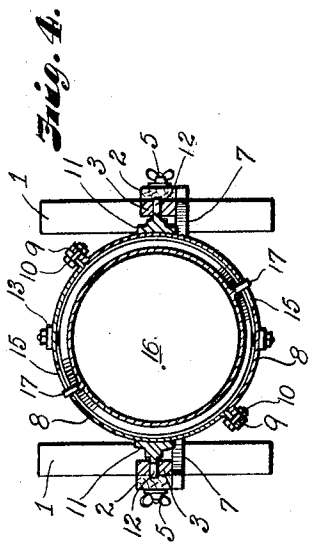


Fig. 1.

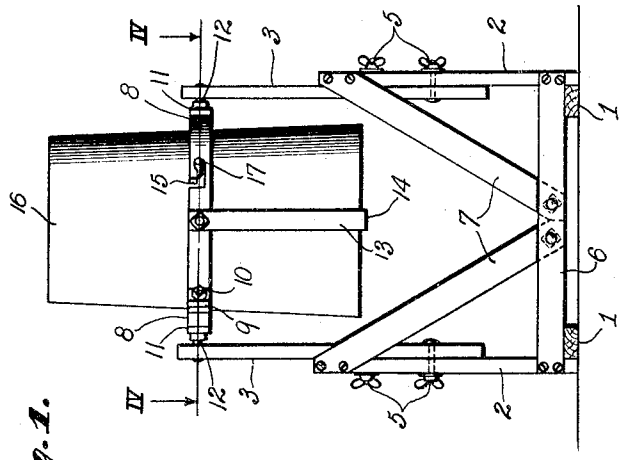
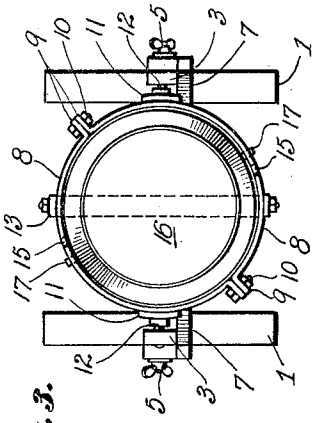


Fig. 3.



INVENTOR
David A. Evans.

BY
Thorpe & Thorpe
ATTORNEYS

Patented May 16, 1933 1,909,670

UNITED STATES PATENT OFFICE

DAVID A. EVANS, OF KANSAS CITY, MISSOURI

SACKING DEVICE

Application filed June 29, 1931. Serial No. 547,567.

This invention relates to sacking devices, and more especially to devices of the class named for handling sand and the like, although capable of facilitating the fill of bags with potatoes, apples and other products.

It is customary for concerns which use sand in making up their products and in retailing or wholesaling sand in bags or sacks, to receive the sand in bulk by the carload, and to unload the sand from the car in sacked condition, one man holding a sack open and another shoveling the sand into the sack. This is a slow and expensive process and the holders of sacks frequently suffer injury to their hands from the shovels, and it is also common practice, particularly at highway markets, for the sellers of apples, potatoes and the like, to dump from filled bushel or peck measure containers into sacks held upright and open by an assistant, with more or less bruising of the commodity, or to endeavor to fill the sack without assistance, and in so doing find it necessary to scramble about to pick up the apples or the like which escaped in the dumping operation.

My object is to provide a pivotally suspended container for holding a measured quantity placed therein by shoveling or otherwise, and which, after an inverted empty sack is fitted thereon, can be quickly and easily swung to inverted position to discharge its contents into the sack, and which, after the filled sack is removed, will swing back automatically to upright position for refilling.

Another object is to produce a device of the character mentioned which makes provision for guarding against accidental dislocation of the container relative to its pivoted supporting means, when the former is in its inverted or dumping position, and a still further object is to provide such a device of knock-down construction for convenience of shipping.

With the objects mentioned in view, the invention consists in certain novel and useful features of construction and arrangement of parts as hereinafter described and claimed; and in order that it may be fully understood, reference is to be had to the accompanying drawing, in which:—

Figure 1 is a front elevation of a bag filling device embodying the invention.

Figure 2 is a side elevation of the device with the container in sack-filling position in dotted lines.

Figure 3 is a top plan view of the device.

Figure 4 is a horizontal section on the line IV—IV of Figure 1.

In the said drawing a skeleton frame is shown, constructed as follows: 1 indicates a pair of ground-engaging bars, and mounted thereon is a pair of extensible vertical sides, each consisting of fixed bars 2 and adjustable bars 3, each pair of said bars having lines of perforations 4, and bolts and nuts 5 engage selected perforations of the bars to secure them at the desired point of adjustment. The bars 1 are connected by a cross bar 6, and a pair of inclined braces 7 connect bars 2 with the cross bar 6, this arrangement of parts providing a simple, cheap and strong frame of knock-down type.

A sectional ring 8 is composed of two half-rings provided with end lugs 9 bolted together as at 10, and secured to the ring at diametrically-opposite points are plates 11 provided with outwardly-projecting trunnions 12 pivotally engaging openings in the upper ends of members 3 of the extensible sides of the frame. The ring is provided with a depending U-shaped stirrup of resilient metal, and the bridge portion 14 of the stirrup is bowed upward slightly. The stirrup is preferably disposed at right angles to the axial line of the trunnions as shown, and the ring, in another radial plane, is provided with L-shaped or bayonet-joint slots 15.

A container 16 which preferably, but not necessarily tapers upward slightly, fits within the ring and stirrup, and has a pair of opposite pins 17 adapted, under sufficient downward pressure applied on the container to partly flatten the bowed bottom 14 of the stirrup, to enter the vertical arms of the bayonet slots. When thus disposed, the container is turned to dispose the pins 17 in the horizontal arms of said slots. As downward pressure

on the container is released, the bottom of the stirrup reacts and, by pressing the pins 17 against the upper walls of said horizontal slots, guards against accidental reverse turning of the container.

It will be noted that the preponderating weight of the container is below the ring and that the former will therefore normally stand in the position indicated by Figure 1. When so disposed, it is convenient for the operator to fit the mouth of a sack 18 upon the upper end of the container and then invert the container by rotating it with the ring around the axes of the trunnions until the sack bottom rests upon the floor or ground so that the sand or the like, can flow into the sack without requiring the operator to exert strength to uphold the sack as its weight increases in the charging operation, it being necessary of course for the operator to retain his hold on the upper end of the sack to prevent disengagement thereof from the container until the filling operation is completed. As this occurs the sack is slipped off the container and the latter immediately resumes its normal or upright position. It will be noted that without the utilization of the bayonet-slot connection or its equivalent, there would be a possibility of the container slipping out of the ring when inverted, and the chance consequently of its striking and perhaps injuring a foot of the attendant. It is also desirable to have the stirrup act as a clamping element, as by its action it minimizes the chance of the container rotating around its longitudinal axis and thereby dsposing pins 17 opposite the upright arms of the angle or bayonet-joint slots and hence permitting the container, when inverted, to slip downward through the ring.

For convenience of shipment the frame and ring are of knock-down construction and are made up of parts capable of being stored within the container, and the members of the sides of the frame are adjustable to accommodate containers of different height and capacity.

The device has been found to materially expedite and cheapen the cost of sacking sand and the like, and can be utilized to advantage in sacking other materials, and while the preferred construction is exemplified by the drawing, it is to be understood that it is susceptible of modification within the principle of construction involved.

I claim:

1. A sacking device comprising a frame, a ring horizontally pivoted on the frame and provided with a depending stirrup, a container extending through the ring and within the stirrup and resting on the bottom of the latter and having a bayonet-slot connection with the ring, the stirrup being of resilient character to possess the capacity of reacting to hold the container and ring in frictional engagement.

2. A sacking device comprising a frame, a ring horizontally pivoted on the frame and provided with a depending stirrup, a container extending through the ring and within the stirrup and resting on the bottom of the latter and having a bayonet-slot connection with the ring; the stirrup being resilient and having an arched bottom to yield to downward pressure imposed by the container, and then react upon relaxation of such pressure, to yieldingly clamp the container to the ring.

3. In a sacking device, spaced supporting means, a horizontal ring between the spaced means and pivotally carried thereby at diametrically-opposite points, and provided with a resilient part underlying the space circumscribed by said ring, and a container fitting loosely through said ring and having a pin-and-slot connection therewith and resting upon said resilient part and pressed endwise by the latter to create friction in the pin-and-slot connection inhibiting accidental turning movement of the container around its longitudial axis.

In testimony whereof I affix my signature.

DAVID A. EVANS.