L. B. SHAMBLEN.

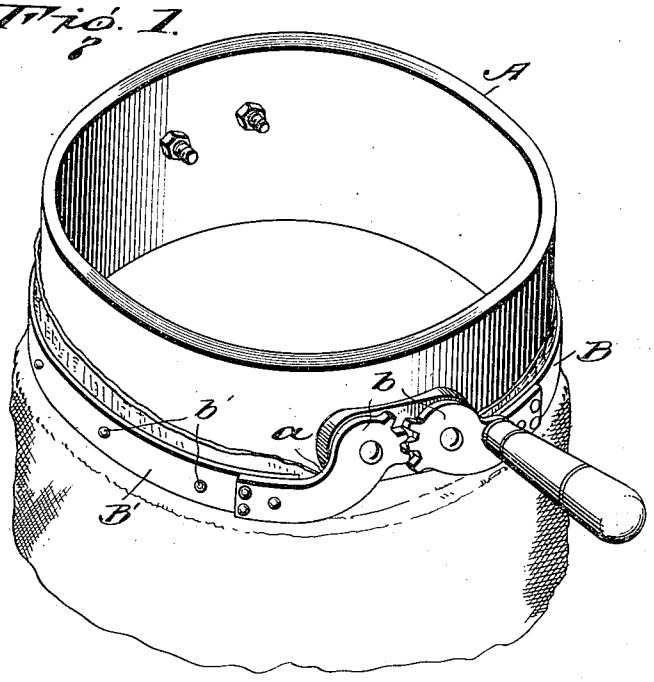
BAG HOLDER.

APPLICATION FILED JUNE 2, 1920.

1,373,839.

Patented Apr. 5, 1921.

Fig. 1.



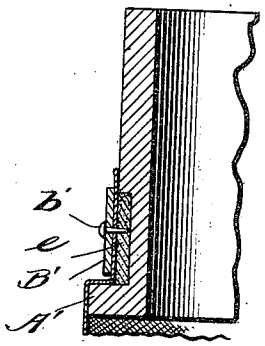


Fig. 4.

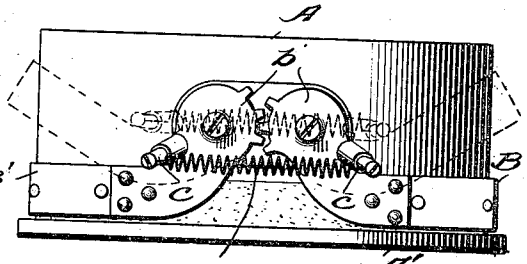


Fig. 2.

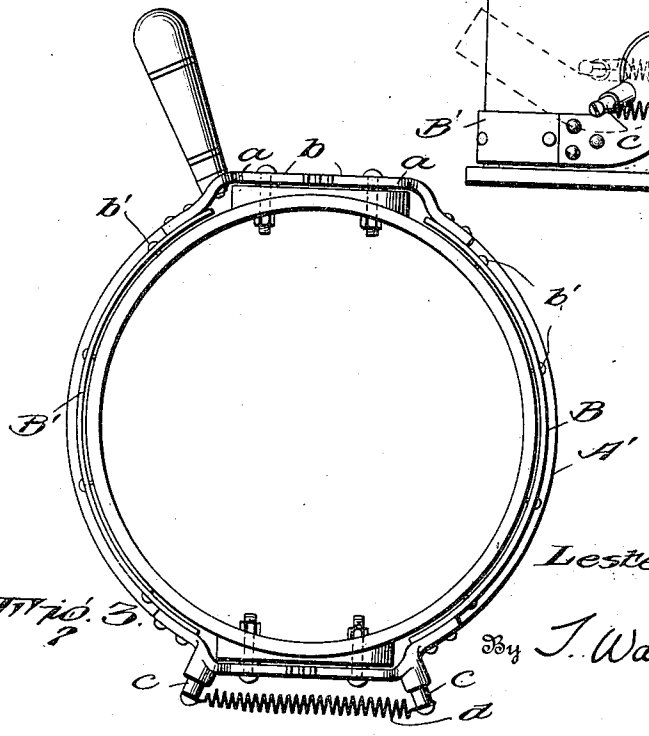


Fig. 3.

Inventor

Lester B. Shamblen

By J. Walter Fowler

Attorney

UNITED STATES PATENT OFFICE.

LESTER B. SHAMBLEN, OF OMAHA, NEBRASKA, ASSIGNOR OF ONE-HALF TO UNITED ALFALFA COMPANY, OF OMAHA, NEBRASKA, A CORPORATION OF NEBRASKA.

BAG-HOLDER.

1,373,839. Specification of Letters Patent. Patented Apr. 5, 1921.

Application filed June 2, 1920. Serial No. 385,930.

To all whom it may concern:

Be it known that I, LESTER B. SHAMBLEN, a citizen of the United States, residing at Omaha, in the county of Douglas and State of Nebraska, have invented certain new and useful Improvements in Bag-Holders, of which the following is a specification.

This invention relates to certain new and useful improvements in bag-holders; that is, devices which are designed to have fitted to them and to secure the upper or mouth-end of a bag while being filled, and which devices are adapted for convenient release of the mouth end of the bag after the desired contents have been placed within said bag.

A leading object of the present invention is to improve this type of devices and to provide a bag holder which most effectively clamps the mouth of the bag and holds the bag open so that it may properly receive the intended material, said clamping means being attached to a frame or ring of appropriate size and design and being so mounted thereon that its sections may be quickly opened or expanded to receive the bag and, after the bag is positioned may be readily tripped to cause the sections to more or less automatically clamp the open edges of the bag to the exterior of the frame or ring, and where said sections may be readily expanded or removed from their clamping position so as to permit the quick release of the filled bag.

With the above and other objects in view my invention consists of the parts and the constructions, arrangements and combinations of parts forming the improved bag holder which I will hereinafter describe and claim.

In the accompanying drawings forming part of this specification, and in which similar reference characters indicate like parts in the several views,

Figure 1 is a perspective view of a bag-holder embodying my invention and showing a bag attached thereto.

Fig. 2 is an elevation looking toward the opposite side of the holder from that shown in Fig. 1, the clamping sections of the holder being shown by dotted lines in their expanded position.

Fig. 3 is a top plan view.

Fig. 4 is a sectional detail, to be referred to.

In carrying out my invention I construct the body of the holder as an open-center frame, A, which may take the form of the ring or annulus commonly employed in the construction of bag-holders, and which ring may be constructed of any appropriate material and have such design and dimensions as will best suit it for the particular uses for which it is intended. Ordinarily, this frame or ring or equivalent structure is fitted to or placed beneath the delivery end of the chute of a bin or like receptacle containing the material to be sacked and which material passes through the ring into the open mouth of the empty bag.

In order that the mouth end of the bag may be properly held to the holder, I employ a pair of similar and co-acting clamping sections or members, B B′. Each of these sections or members is in the form of substantially a semi-circle, the two sections when attached to the ring substantially circumscribing the exterior thereof. Each of the clamping sections, B B′ has its ends curved upwardly as shown at *a*, said curved extensions being fashioned in the form of heads, *b* which are pivotally secured to the sides of the ring at points above the bottom thereof and above the plane of the clamping portions of the sections, said heads being provided with toothed segmental portions, so positioned that they interengage. In other words, the clamping sections of my bag holder are geared together at diametrically opposite sides of the ring so that the sections operate in unison in both their opening and closing action. If desired, the sections may be provided with pins, *b′*, which will pierce the fabric of the bag and assist in holding the bag during the filling operation.

At one side, each of the clamping sections is provided at a point below and at one side of the pivotal center of the section with a projection or lug, *c*, to which latter are connected the opposite ends of a coiled or other spring, *d*. By locating this spring and its point of connection below the pivotal centers of the sections, said spring exerts a closing action on the sections and thus tends to maintain the inner surfaces of the sections in secure clamping engagement with the mouth edge of the bag and holding this edge securely confined between the sections and the outer surface of the ring. The projections to which the aforesaid spring is

attached may also serve the useful purpose of finger pieces for facilitating the expansion of the spring and the release of the bag and the elevation of the clamping sections from their clamping position shown in full lines in Fig. 2 to the open or expanded position shown in dotted lines in Fig. 2, the arrangement of the spring and its connection being such that when the sections are opened as shown in the dotted position, the centers of the projections are substantially horizontally in line with or slightly above the centers of the pivots about which the clamping sections turn, whereby the spring tends to automatically hold the clamping sections in their open position to allow the mouth of the bag to be properly adjusted over the lower flanged end of the ring; when a slight pressure is now brought upon the sections it causes the projections to move out of line with or below the plane of the pivots of said sections whereby the spring immediately contracts and draws the sections down closely against the open edge of the bag and clamps this edge firmly between the sections and the exterior of the ring.

At the side of the ring opposite to that carrying the spring, one of the sections is provided with a handle which will also be found useful in tripping the sections from their open or elevated position into their closed or lowered position, and which handle will also serve as a means for holding the ring in proper position beneath the delivery end of the chute or other source of supply.

In brief, the present bag holder includes the open center frame, to which the open mouth of the bag is fitted, and two similar sections of substantially segmental form whose inner ends are vertically offset and are geared together so as to cause the sections to operate in unison both in their opening and closing movements, and a restraining spring which is positioned to hold the clamping sections in their open position and which, when the sections are released from the restraint of said spring will be caused to bind the open edges of the bag closely between the curved inner faces of the sections and the corresponding curved outer face of the ring. To increase frictional engagement between the parts, the ring or frame may, if desired, be supplied with a leather, rubber or other band, *e*, (Fig. 4) against which the material of the bag will be directly pressed and which band receives the points of the pins, *b'*, if such pins are employed.

While I have shown the so-called ring as being in the form of an annulus, it is quite manifest that it may partake of other shapes without departing from the spirit of my invention, it only being necessary that this part of the structure shall have an opening through it for the passage of the material to be delivered into the bag. The particular design of the opening in this part of the holder itself will vary according to the style of the delivery pipe beneath which the bag-holder is intended to be fitted or on which it is intended to be placed; therefore, I desire it understood that I do not limit the balance of my invention in association with any particular character or design of frame or holder.

A device such as I have described has been found by experiment to have great holding capacity; that is, when the bag has been fitted over the flanged end of the ring, or holder, and the clamping sections released so as to embrace the top edge of the bag it is practically impossible for the bag to become loose, and because of the pivoting of the sections at a point above the plane of the major portion of said sections any tendency to pull the bag from the ring or holder will only result in the sections being caused to more tightly grip said bag. Also, the release of the bag is readily performed and is absolutely positive, and the smooth surfaces between the clamping sections and the exterior of the ring or holder overcomes any tendency to tear the top of the bag, an objectionable feature which is present in so many bag holders and in fact in such holders as employ hooks which penetrate the bag fabric and from which the bag is practically suspended during the filling operation. By forming the frame or ring, A, with a bottom flange, A', the latter forms a seat against which the bottom edges of the clamping sections will securely clamp the bag, in addition to the clamping action which occurs between the inner curved surfaces of the sections and the opposed outer surface of the frame or ring.

Any one, however unskilled, may operate my improved bag holder with perfect success, and the facility with which the bag can be attached and detached, insures great speed in the sacking of grains and granular materials such as commonly supplied with such holders.

Having thus described my invention what I claim as as new and desire to secure by Letters Patent is:—

1. A bag holder comprising an apertured frame and a pair of clamping sections pivotally mounted thereon having intergeared ends, said sections having substantially horizontal lower edges and said frame having a base flange against which the sections seat edgewise.

2. A bag holder, comprising an apertured frame and a pair of similar and coacting segmental clamping sections, said sections having their ends vertically offset and piv-

otally mounted on the frame at points above the main portions of the sections, and provided with intergeared edges, and a spring connecting the sections so that they operate in unison.

3. A bag holder, comprising an apertured frame and a pair of similar and coacting segmental clamping sections, said sections having their major portions horizontally disposed and having their ends vertically offset from said major portions and pivotally mounted on the frame at points above the main portions of the sections, and provided with intergeared edges, and a spring connecting the sections so that they operate in unison, said spring having its ends connected to the sections below the pivotal centers thereof.

4. A bag holder, comprising an apertured frame and a pair of similar and coacting segmental clamping sections, said sections being horizontally disposed for a greater portion of their length and having their ends vertically offset and pivotally mounted on the frame at points above the main portions of the sections, and provided with intergeared edges, a spring connecting the sections so that they operate in unison, and a handle on the offset end of one of the sections on the side of the holder opposite to that carrying the spring.

5. A bag holder, comprising an apertured frame having a circumscribing base flange and a pair of similar and coacting segmental clamping sections, said sections having their ends vertically offset and pivotally mounted on the frame at points above the main portions of the sections, and provided with intergeared edges, and a spring connecting the sections so that they operate in unison, said frame having a circumscribing friction band around its lower portion.

6. A bag holder having an apertured ring provided with a base flange; a pair of similar and coacting clamping sections substantially circumscribing the ring adjacent said flange, said sections having their ends vertically offset and pivotally mounted and having intergeared edges; a handle at one side of the holder; lugs projecting from the offset ends of the sections at the opposite side of the holder, said lugs being positioned below and at one side of the pivotal points of the sections; and a coiled spring having its ends connected to the lugs of the respective sections.

In testimony whereof I affix my signature.

LESTER B. SHAMBLEN.