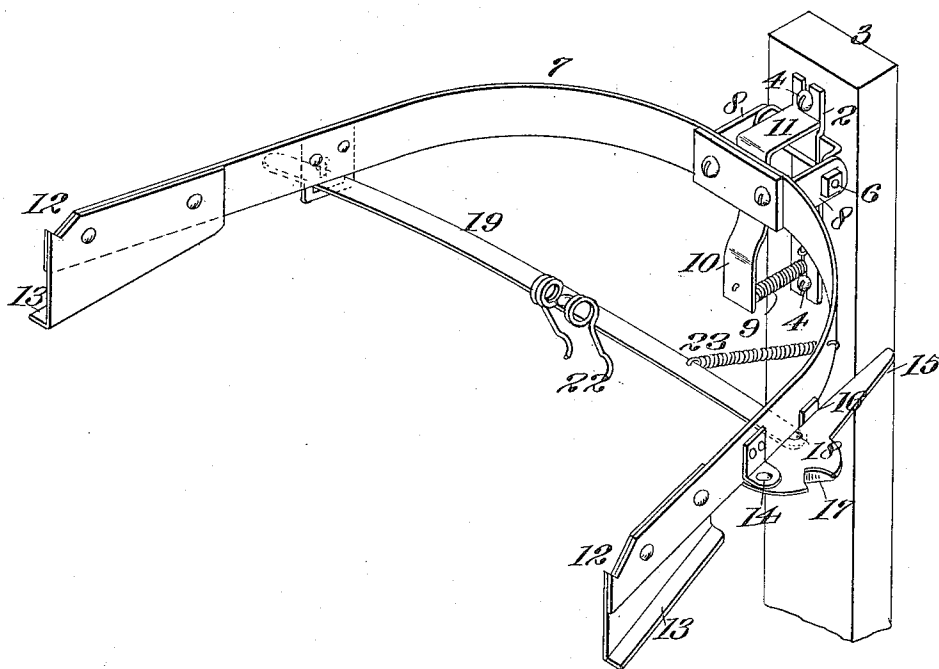


F. C. VONDERAHE.
BAG HOLDER.
APPLICATION FILED JUNE 3, 1914.

1,158,013.

Patented Oct. 26, 1915.
2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

Charles Fickles
Thomas A. Heng

INVENTOR

Frederick C. Vonderahe

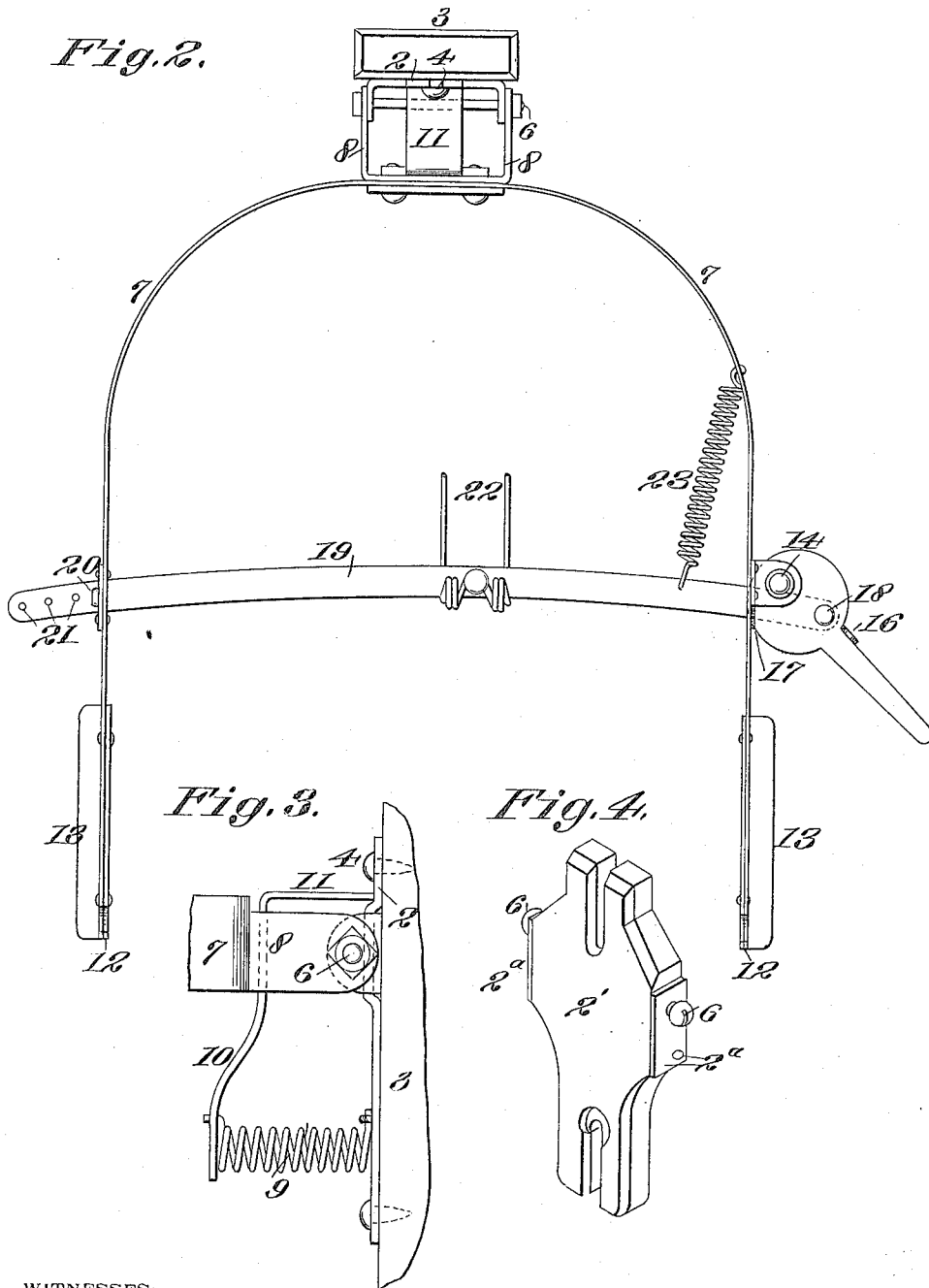
BY *L. H. Strong*

ATTORNEY

F. C. VONDERAHE.
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WITNESSES:

Charles Pickles
Max Lustberg

INVENTOR

Frederick C. Vonderahe

BY *G. H. Strong*

ATTORNEY

UNITED STATES PATENT OFFICE.

FREDERICK C. VONDERAHE, OF PORTLAND, OREGON.

BAG-HOLDER.

1,158,013.

Specification of Letters Patent.

Patented Oct. 26, 1915.

Application filed June 3, 1914. Serial No. 842,635.

To all whom it may concern:

Be it known that I, FREDERICK C. VONDERAHE, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented new and useful Improvements in Bag-Holders, of which the following is a specification.

This invention relates to bag holders, and particularly to improvements in bag holders of the type disclosed in my Patents Nos. 945,645 and 974,615, dated respectively January 4th, 1910, and November 1st, 1910.

My present invention has for one object the provision of a means whereby bags may be attached to and released from the apparatus with great facility by avoiding the manual operation of its parts for the clamping and releasing of bags; and consequently decrease the amount of time required for the operation of attaching and detaching bags.

A further object of the invention is to provide means for holding the bag so that its front edge will lie in a lower plane than the rear edge of the bag when attached to the holder; and a further object of the invention is to provide a supporting device which is of simple, inexpensive, practicable construction, of few and substantial parts, which may be secured with a minimum requirement of labor in their formation and construction, and which are simple and light; and particularly to provide a yielding support whereby the bag will be lowered automatically as it is filled; and which is of such design, construction and arrangement as to be free of interference with the operations of attaching, filling and releasing a bag; and a further object is to provide an improved means for holding or gripping the bags, particularly effective in the event that the bag mouth is mutilated or has no selvage edge.

The invention consists of the parts and the construction and combination of parts, as hereinafter more fully described, having reference to the accompanying drawings, in which—

Figure 1 is a perspective of the improved bag holder, shown in the expanded bag-holding position. Fig. 2 is a plan view of the bag holder in its contracted bag-releasing or cleared position. Fig. 3 is a detail side elevation of the holder support. Fig. 4 is a perspective of a modified form of back plate or support.

A back plate or support 2 of suitable construction is adjustably clamped upon a convenient wall, standard or other fixed or stationary part 3 by screws 4, or other means. Transversely pivoted, upon a pivot rod or bolt 6, and projecting forwardly from the plate 2 is a bag-grasping device 7 in the form of a U-shaped frame with spring-arms to the central rear portion of which is secured in any suitable manner, journal ears or brackets 8, which are mounted upon the pivot 6.

The spring bow or bag-engaging member 7 is normally held in an approximately horizontal plane by means of an expansile spring 9, one end of which is suitably connected to the back plate or support 2, and the front end of which engages a part 10 rigidly secured and depending from the rear central portion of the bag supporting member 7, and the upward swinging movement above the horizontal of the bow 7 is prevented by the abutment of a horn or stop 11 rigidly secured to the bow; the rear end of the horn or stop contacting with the back plate 2. In the present case, I have shown the member 10 as a piece of strap iron bent angularly to form the horn 11, and rigidly secured to the central rear portion of the bag supporting bow 7.

For the purpose of providing a simple, ready and inexpensive structure, the back plate 2, the journal members 8 and the part 10 may all be constructed of similar stock, as strap metal, as shown in Fig. 1.

The outer free arms of the spring bow 7 are made to form hooks 12, the points of which are considerably below the top edge of the bow 7, and upon the ends of the bow there are attached or formed lateral downwardly turned flanges 13, which are inclined from the bottom rearwardly and upwardly so that when the free ends of the bow 7 are contracted or sprung toward each other, and a bag A is placed with its upper open mouth end around the flanges 13, then when the bow arms are released and spring outwardly the front edge of the mouth of the bag will lie lower than the rear edge of the mouth of the bag toward the support 2.

For contracting the arms of the bow 7 there is pivoted at 14 on one of the arms a lever 15 of suitable shaped and having stops 16—17, the lever being pivotally connected at 18 eccentric to its pivot 14 to the connecting link 19, the opposite end of which is

adjustably connected to the other arm of the bow by suitable means here shown as comprising a pin 20 which may be inserted in either of a series of pin-holes 21 in the end of the link 19, the resilient arm springing into contact with the pin 20, and thereby limiting the spread or separation of the free ends of the bow. The relation of the lever 15 to its arm of the bow is such that when it is turned about its pivot 14 from a rearward position the link pivot 18 is drawn around the pivot 14, and the link acts to draw the opposite bow ends toward each other. While the spring arms are in the contracted position, the operator lifts the mouth of a bag about the bag-engaging flanges 13 on the ends of the bow, and arranges the rear edges of the mouth of the bag over a suitable supporting hook, as 22, which may be mounted or formed upon the central portion of the link 19. The bag-engaging flanges and the hook, or back edge supporting hook 22 cooperate to hold the bag mouth open in the desired manner.

It is one of the important objects and features of this invention to eliminate the necessity of the operator having to manually throw the contracting lever 15 open after the mouth of the bag has been positioned over the bag supporting members on the bow; and to that end I have provided means for automatically retracting the lever 15 operating to release the contracting mechanism, which includes in this case, the lever 15 and the tension link 19. When the bow arms are contracted by the forward movement of the lever 15 about its pivot 14, the pivot 18 of the link 19 passes over a line between the pivot 14 and the connection or pin 20 of the opposite end of the link 19 with its adjacent arm of the bow; and therefore, the contracting lever is automatically locked in its forward position.

I have provided means whereby upon the slight contraction or moving toward each other of the ends of the bow 7, the eccentric lever 15 will be partially unlocked and then automatically completely unlocked and drawn around to carry the link pivot 18 rearwardly past the center line of the pivot 14 and stop the pin 20. This means comprises in the form here shown, a contractile spring 23 of suitable proportions, one end of which connects to the tension link 19 and the opposite end to a convenient position of an arm of the bow; thus as the operator contracts the bow arms by swinging the eccentric lever 15 forwardly about its pivot 14, and through this means the link 19 operates to draw the bow arms toward each other, and simultaneously tensions the automatically operating unlocking spring 23. Then, after arranging the mouth of the bag about the bag-engaging members 13—22 he has but to slightly press the ends of the

bow 7 toward each other, whereupon the pressure of the expansile arm of the bow will be relieved from the stop-pin 20, and the pivot 18 of the connecting link, and then the tensioned spring will instantly operate, its force being applied perpendicularly to the length of the link 19 to pull the lever 15 about its pivot 14, thus unlocking the contracting device and permitting the arms of the bow to immediately expand into bag-supporting position. After the bag has been adapted to the folder it is held in such a position that the front edge of its mouth is in a lower plane than the rear edge, because of the angular arrangement of the bag-grasping flanges 13; and while in this position it is easier to fill the bag from any means employed, such as a basket, shovel or other device; and as the filling of the bag proceeds, the weight of the material in the bag causes the spring bow 7 to rock slowly about its pivot 6 of the bag, the spring 9 reacting through the abutment member 10 of the bow to support the bag holder, and its load as the bag is filled.

Because of the arrangement and design of the parts comprising the holder and the support 2, I am enabled to use a short, substantial spring 9, thus economizing in the cost of construction, and yet obtaining a resiliently movable bag holder which will yield as the load in the bag increases.

By forming the bow ends with hooked portions, mutilated bags, or bags without a selvage about the mouth are effectually held by the holder, because of the engagement of the hook portions of the material of which the bag is formed, and where the gripping flanges 13 might otherwise fail to hold.

In Fig. 4 I have shown a modified form of back-plate or support 2, which comprises a member 2' which may be formed of wood of the desired shape, transversely pierced to receive the pivot bolt 6, the edges of the support being provided with wearing plates 2^a at the portions where the journal members 8 of the holder engage.

The kicker or release spring attachment is to eliminate, or do away with the necessity of releasing the tension or grip of the bag holding or gripping arms with one hand while holding in the slack of the mouth of the bag with the other hand, making the operation more awkward, unhandy, or slower than by this new attachment. The release with the new kicker, or release spring, to allow the spring bag holding arms to spread, or expand to cause them to tighten on to, and grip the mouth of the bag with this new attachment, is made by simply giving the spring bag holding arms a slight sudden, or somewhat quick pressure inwardly, or toward each other after the mouth or selvage of the bag has been drawn over the bag-gripping flanges of the bag-

holding arms. By this gentle pressure, the releasing, or eccentric lever is slightly released, while the tension or action of the new kicker, or release spring completes the complete release of the lever, and at the same time the spring bag holding spring arms expand while the bag slips easily and smoothly into place, so that neither hand needs to be taken from the mouth of the bag, thereby making it far more convenient and swift in operating and sacking grains or vegetables, etc., thereby saving much time and labor over the old way of releasing the eccentric lever by hand.

This new device minimizes the amount of material, making less parts; also minimizes the time on assembly; taking up less space in the granary, root-house, warehouse, or in crating for shipment or transportation, by saving fully two-thirds the weight and fully one-third in the material; also making the support much stronger, firmer, or less wiggly, or less liable to break; and the coil compression spring between the front and the rear brackets of the support can be of small diameter, as it does not need to give or spring so much in order to allow the main spring bag holder arms to settle according to the length of the different length bags used, and still allows a greater variation in the lowering or downward movement, and at the same time without friction, giving a smooth movement; the bag-gripping flanges on the bag-holding arms being made lower at the front or ends allow the front of the bag to go or hang lower than the back part for convenience in filling, and so the bag-holding arms do not need to tilt so much from the start in filling the bag, etc., etc.

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

1. In combination with a pivoted bag holding means and a support therefor, a vertical member secured to said means and having its top end extending above the pivot and provided with a stop to engage the support and having its other end extending on the opposite side of the pivot,

and a spring interposed between the last named end of the member and the front face of the support to normally hold the stop against the support, but to allow the holding means to move downwardly against the tension of the spring.

2. In combination with a support, and a bag holding means pivoted thereto, a vertical member rigidly connected to said means and having its upper end bent at right angles to form a stop which engages the support to limit upward pivotal movement of the means and having its opposite end extending below the pivot and spaced from the support, and a spring interposed between the last named end of the member and the support.

3. In combination with a U-shaped bag holder, a link extending across the arms of the holder and movably connected at one end to one of said arms, and a device pivoted to the other arm and to the other end of the link, and movable to a position to cause its pivotal connection with the link to be disposed on opposite sides of the pivotal connection of the device with said other arm and a spring connected to the link, whereby when the arms are locked together by said device and the arms are pressed by hand toward each other, the device will be first partially moved and then automatically moved to release the arms.

4. In combination with a bag holder having resilient arms, manually operable means to lock said arms in contracted position while a bag is being positioned thereon, and means whereby upon further compression of the arms by the hands of the operator moving the arms toward each other, said locking means will be first partially moved and then automatically released.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

FREDERICK C. VONDERAHE.

Witnesses:

W. G. WARD,
A. L. RANSFORD.