J. STURROCK.

BAG HOLDER.

APPLICATION FILED MAR. 6, 1919.

1,415,960. Patented May 16, 1922.

Fig. 1.

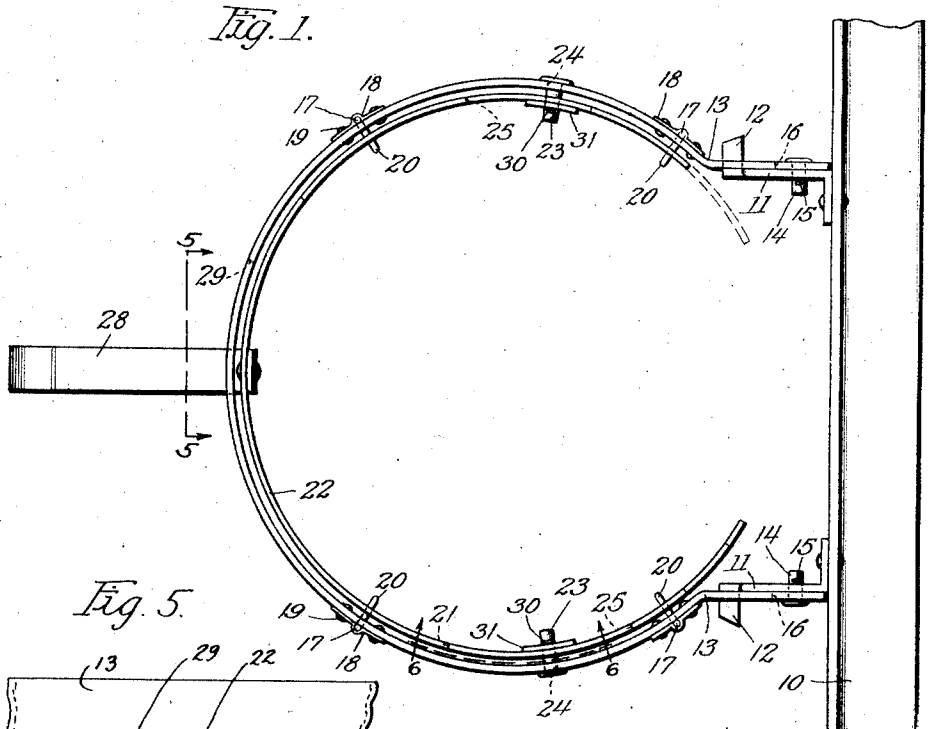


Fig. 5.

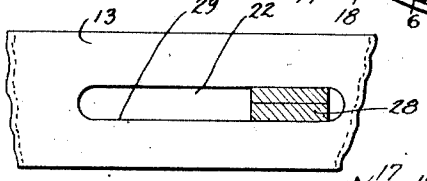


Fig. 2.

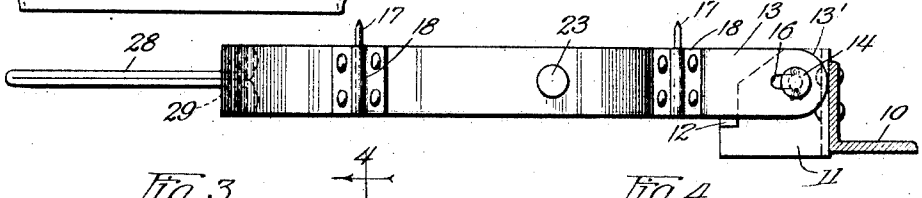


Fig. 3.

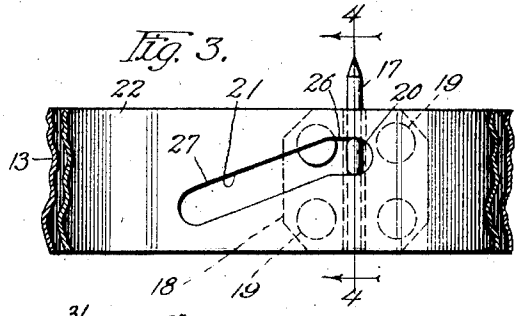
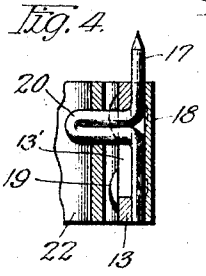


Fig. 4.



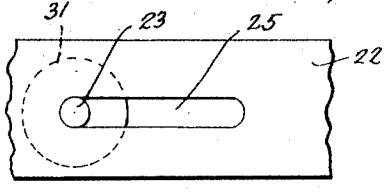


Fig. 6.

Inventor:
John Sturrock.
Chas. E. Lord
Atty.

UNITED STATES PATENT OFFICE.

JOHN STURROCK, OF CHICAGO, ILLINOIS, ASSIGNOR TO INTERNATIONAL HARVESTER COMPANY, A CORPORATION OF NEW JERSEY.

BAG HOLDER.

1,415,960. Specification of Letters Patent. Patented May 16, 1922.

Application filed March 6, 1919. Serial No. 281,050.

To all whom it may concern:

Be it known that I, JOHN STURROCK, a subject of the King of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Bag Holders, of which the following is a full, clear, and exact specification.

This invention relates to bag holding means and more particularly to the type of bag holder used in supporting large fabric bags upon threshing machines and machines of like character, and in a position to be filled with grain.

The object of the invention is to provide bag supporting and holding means for firmly and securely holding the bag in position to receive grain and other material discharged from a chute, and also to provide means whereby the bag may be easily and quickly released when the bag has been filled.

A further object is to provide bag releasing means which may be operated without any material effort on the part of the operator and without the necessity of lifting the bag on the support.

With these objects in view I have illustrated in the accompanying drawing one practical embodiment of the invention, and,

Figure 1 illustrates the improved construction in plan view;

Fig. 2 is a side elevation of the construction shown in Fig. 1;

Fig. 3 is an enlarged detail view illustrating the bag holding or piercing means, and the means for reciprocating the bag piercing means;

Fig. 4 is a vertical section taken on line 4—4 of Fig. 3, looking in the direction of the arrows.

Figure 5 is a detail view taken on the line 5—5 of Fig. 1 showing the slot in the main frame and the handle mounted therein; and Fig. 6 is a detail view taken on the line 6—6 of Fig. 1 showing the means for supporting the ring on the main frame.

The support 10 for the bag holding means is stationary, and in a practical embodiment will probably form a part of the machine frame. This support is provided with a pair of outwardly extending brackets 11, each of which is provided with an offset lug 12, these lugs forming rests for the frame of the bag holding means in its operative position. The main frame 13 of the bag holder is pivoted on the brackets 11 by means of pivot pins 14, cotter pins 15 being provided to retain the pivot pins in position. The pins 14 pass through suitable apertures in the brackes 11 and through slots 16 in the frame 13, these slots being provided for a purpose hereinafter set forth. The rear ends of the frame 13 are rounded and made semi-circular as shown at 13′, whereby the frame 13 may be lifted on the pins 14 to inoperative position. When the frame has been lifted to substantially vertical position the weight of the frame will cause it to drop to a position in which the pins 14 are disposed at the opposite ends of the slots 16, from that in which the pins 14 are shown in Fig. 2 the frame thereby being retained in its vertical or inoperative position. In order to again swing the frame to operative position, the operator lifts the frame sufficiently to position the pins 14 in the lower ends of the slots 16 and then allows the frame to fall to the position shown in Fig. 2.

The bag holding means in the present embodiment consists of a plurality of pins 17 reciprocally mounted in clamping members 18 secured to the frame 13 in any suitable manner, as by rivets 19. The pins 17 are provided intermediate their ends with rearwardly extending offset portions or lugs 20 which are slidable in vertical slots 13′ provided in the frame 13 and these lugs pass through inclined slots 21 formed in a ring 22 reciprocally supported on the frame 13 by means of pins 23. The pins 23 pass through apertures 24 in the frame 13 and through slots 25 formed in the ring 22.

As illustrated in Fig. 3, the upper portion of each of the slots 21 is substantially horizontal as shown at 26, whereas the remaining portion is inclined downwardly as shown at 27. Means is also provided for reciprocating or rotating the ring 22, this means being embodied in a handle 28 secured in any suitable manner to the ring 22 in passing through a slot 29 in the frame 13. Cotter pins 30 and suitable washers 31 are carried by the pins 23 and retain the pins in place.

The improved bag holding means is manipulated in the following manner: In full lines in Figs. 1 to 4 I have shown the positions of the various elements when the bag holding or piercing pins 17 are in operative

position, or in position to hold the bag. When the bag has been filled to capacity and the operator desires to release the bag, the handle 28 is manipulated, being moved in a clockwise direction (see Fig. 1), and through this handle the controlling ring 22 is also moved to the dotted line position shown in Fig. 1. As the controlling ring 22 is moved to this dotted line position, the lugs 20 carried by the pins 17 will be drawn downwardly by the inclined portions 27 of the slots 21, and thus the pins will be withdrawn from the bag, releasing the bag.

The method of swinging the bag holder to inoperative position has been already described and therefore will not be further explained.

From the above description it will be seen that an exceedingly simple and efficient construction has been provided for performing the desired functions, and moreover, a construction which will firmly and securely retain the bag in position to receive material, and a construction which may be manipulated with little effort to release the bag when desired.

While I have in the above specification described one practical embodiment of my invention, it should be distinctly understood that I do not intend to be limited to the exact construction and arrangement of parts illustrated and defined. Modifications may therefore be employed without departing from the spirit and scope of the invention as expressed in the following claims.

1. In a bag holder, a frame, a ring positioned within said frame and concentrically movable with respect to said frame, bag piercing means carried thereby, and means fixed to said frame and extending through said ring for guiding said ring in its movement in actuating said piercing means to operative and inoperative position.

2. In a bag holder, a frame, a ring arranged concentrically with respect to said frame, vertically movable bag holding means carried by said frame, said means having lugs formed thereon and inclined slots formed in said ring engaging said lugs for moving said bag holding means to operative and inoperative positions.

3. In a bag holder, a ring positioned within said frame, reciprocable bag holding pins carried by said frame and slidable with respect to said ring and a controlling handle connected to said ring and extending through said frame for guiding said ring and for controlling the actuation of said pins.

4. In a bag holder, a frame, reciprocable bag holding pins carried thereby, controlling means for said reciprocable bag holding pins movably mounted on said frame, and means carried by said controlling means and extending through said frame whereby said controlling means may be manipulated.

5. In a bag holder, a substantially circular frame, reciprocable bag piercing means carried thereby, and a substantially circular controlling member movably mounted on said frame and engaging said piercing means and means for moving said piercing means by said controlling member to operative and inoperative positions.

6. In a bag holder, a frame, bodily movable bag holding pins carried thereby and having laterally projecting lugs, bag controlling means having inclined slots therein engaging said lugs, whereby said bag holding pins may be moved to operative and inoperative positions.

7. In a bag holder, a frame, reciprocable bag piercing means carried thereby and having laterally projecting lugs, and a bag controlling movable member positioned within and movable concentrically with respect to said frame, said member having inclined slots engaging said lugs whereby said bag piercing means can be moved to operative and inoperative positions.

8. A bag holder consisting of a support, a main frame secured thereto, bag piercing pins mounted in said frame and vertically movable therein, a movable ring within said main frame having guide slots for said pins, said pins having lugs in said slots; means connected with said inner ring and passing through said main frame for reciprocating said ring, and means connected with said main frame and extending into said ring for supporting the latter in its reciprocating movements.

In testimony whereof I affix my signature.

JOHN STURROCK.