Nov. 20, 1928. 1,692,443

W. B. HEBBARD

BAG HOLDER

Filed July 23, 1926

Fig. 1.

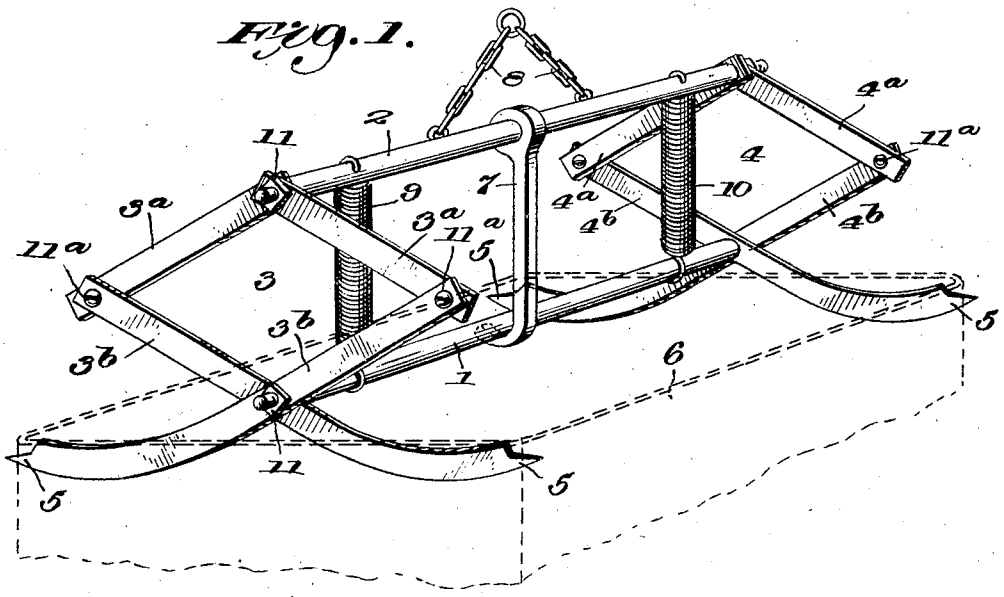


Fig. 2.

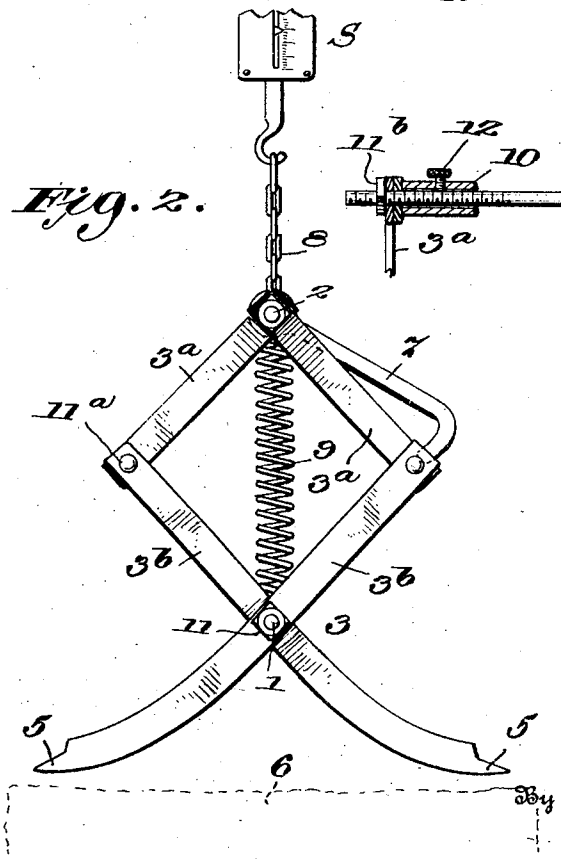
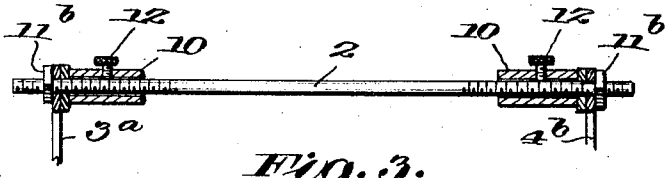


Fig. 3.



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BAG HOLDER.

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My invention relates to packing and storing vessels and especially to holders for receptacles that are to be filled with grain and the like. It has for its objects the production of an automatic holder for bags, in particular, by means of which an empty bag may be supported from a standard or scale, filled, and then when the desired weight or fullness of the bag is reached, the same may be tripped and allowed to fall on the platform and the holder released for further use.

I attain my object by providing a pair of parallel rods carrying a pair of toggles, each comprising a lazy tong structure pivoted on the adjacent ends of the two rods, so that when the latter are moved toward and away from each other the projecting free ends of the tongs will open and close, whereby they may be conveniently engaged within the four corners of the bag and by drawing the parallel rods together may forcibly hold the same against disengagement, as by projecting points extending through the walls of the bags. The parallel rods are normally drawn together by tension springs, and when filling is complete may be locked by means of a swinging hook pivoted on one rod and when the two are drawn together adapted to engage and lock the other.

My invention is illustrated in the accompanying drawings, in which—

Fig. 1 is a perspective view of the device complete, with a bag shown in dotted lines in the engaged position;

Fig. 2 is an end view of the structure of Fig. 1 with the locking hook tripped, the springs pulled down by the weight of the filled bags and the latter just being disengaged from the holder; and

Fig. 3 is a detailed view of a modification showing the upper rod of the device provided with adjustable end bearings for the tongs, whereby the latter may be set for different sizes of bags or other receptacles.

Referring to the drawings and particularly to Figs. 1 and 2, 1—2 are a pair of parallel rods carrying on opposite ends parallel pairs of lazy tongs 3—4 having points 5 on the ends of their free projecting members adapted to engage within the corners of a bag 6. When the rods 1—2 are pulled apart, the points 5 are retracted toward each other as shown in Fig. 2, and when they are spread out they engage the bag as shown in Fig. 1. The latter is the position while loading or filling and at such times the parallel rods 1—2 are drawn together by the springs 9—10 and may be locked against disengagement from the bag by the hook 7 pivoted on the upper rod and latching around the lower rod. The lazy tongs 3 comprises members 3^a—3^b pivoted at the two points 11 and at their outer ends 11^a in a manner well understood in the art, so that when the rods are moved up and down, toward and away from each other the pivots 11 will approach and recede, causing the members 3^a—3^b to swing around the pivots 11^a and retract their points 5, as heretofore stated. The lazy tongs 4 is constructed in a similar manner with members 4^a—4^b.

To suspend the device from a steelyard S as shown in Fig. 2 or from a rigid support if desired, any suitable attaching device may be provided such as a chain suspension 8. The strength of the springs 9—10 may be regulated so as to yield only to a certain weight or tension, so that for example if the device is to be used with the standard bag of wheat or some other grain of which the weight is known, the springs 9—10 may be so constructed as to yield to that weight exactly, no more and no less. In such case, the latch 7 need not be employed, but the springs take the place of steelyards, permitting the device to open when the bag is filled to the requisite amount, and releasing the same on the platform automatically. Otherwise the operation would be as shown in Fig. 2, to trip the latch 7 when the steelyard S shows the desired weight. Where the device is to be used for variable weights the springs 9—10 are made weak enough to yield to the smallest weight, and strong enough to normally close the lazy tongs 3—4 when idle.

Referring to Fig. 3, the rod 2 is shown with its ends threaded, and fitted with sleeves 10 having lock nuts 12 and outside bearing nuts 11^b. The upper arms 3^a—4^b of the two lazy tongs 3—4 are shown in this figure, and it is obvious that by loosening the nuts 11^b the sleeves 10 may be set in or out to accommodate any size bag. The operation and the rest of the construction is the same as in Fig. 1.

Having thus described my invention, what I claim is:

1. A loading support for receptacles comprising symmetrically arranged pairs of parallel projecting members adapted to engage and hold a receptacle, a pair of parallel connecting rods symmetrically connected at their ends to said projecting members and adapted to have relative movement with respect to

each other to advance and retract said projecting members thereby, and means to hold the parts normally in operative position to engage and hold a receptacle.

2. The device claimed in claim 1, in which a tension spring is connected between the parallel connecting rods to normally hold the same and connected parts in operative position.

3. The device claimed in claim 1, in which the projecting members are parallel pairs of lazy tongs and the connecting rods have tension springs normally drawing them together so as to spread apart the projecting members of the holding means.

4. The device claimed in claim 1, in which the connecting rods have a detachable latch member adapted to secure them together and lock the projecting members in engagement with a receptacle.

5. The device claimed in claim 1, in which the connecting rods have transverse toggle frames pivoted on their opposite ends, and tension springs connected to said rods and normally drawing the same toward each other.

6. The device claimed in claim 1, in which the connecting rods have at their opposite ends parallel pairs of toggle levers, or lazy tongs, each having a pair of free projecting points to engage with the bag or other receptacle, and said points adapted to be moved toward and away from each other when such parallel rods are moved away from or toward each other respectively.

7. The device claimed in claim 1, in which the holder is normally maintained in engagement with a receptacle by means of a tension spring adapted to support a predetermined weight of material and when that weight has been deposited in the receptacle to free the same from the holder automatically.

8. A bag holder as claimed in claim 1 comprising a frame structure carrying transverse toggle members or lazy tongs pivoted at its opposite ends, means for adjusting the end bearings with respect to the frame and means for locking the same when adjusted, whereby the bag holder may be adapted to different sizes of bags.

9. A bag holder as claimed in claim 1 comprising a pair of parallel rods with threaded ends, movable sleeves adapted to be adjusted and locked in position on said ends, transverse toggle levers or lazy tongs with free projecting ends pivoted on said rods against said sleeves, and means for holding said toggle levers in position.

In testimony whereof I hereunto affix my signature.

WILLIAM BRADFORD HEBBARD.