W. G. PRICE.

BAG HOLDER.

APPLICATION FILED APR. 2, 1917.

1,363,012. Patented Dec. 21, 1920.

FIG. 1

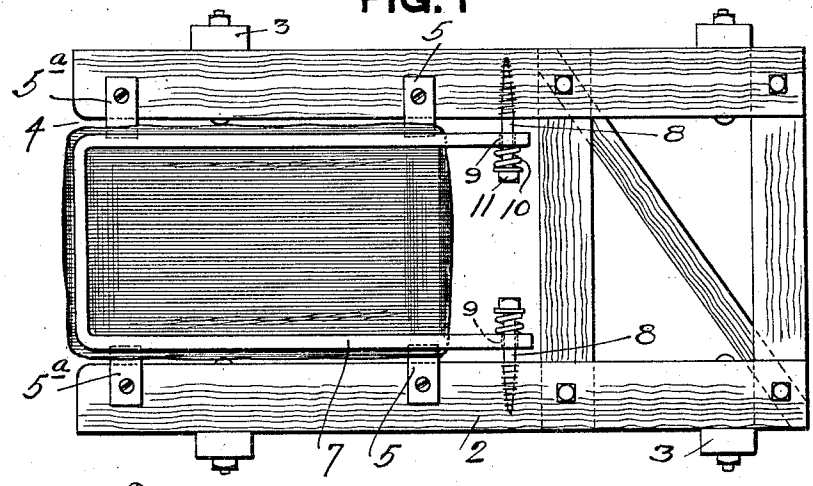


FIG. 2

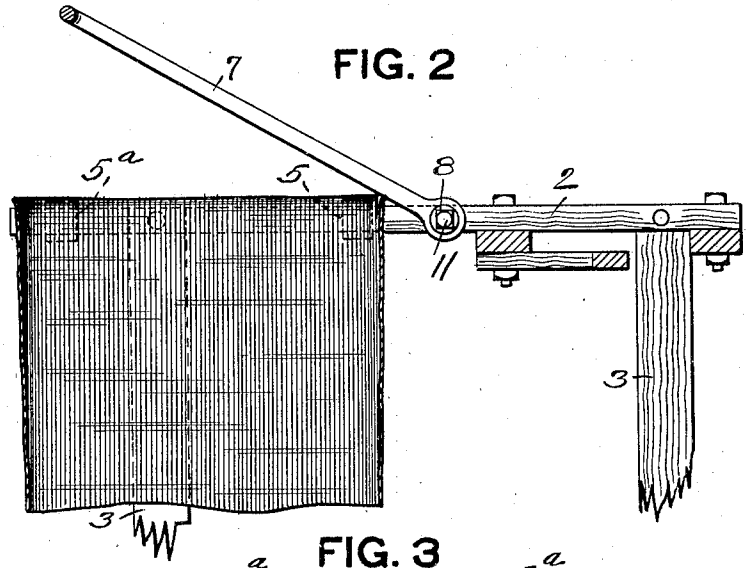
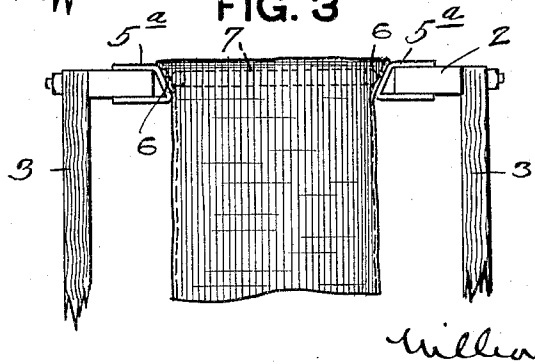


FIG. 3



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UNITED STATES PATENT OFFICE.

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BAG-HOLDER.

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To all whom it may concern:

Be it known that I, WILLIAM G. PRICE, a citizen of the United States, and resident of North Yakima, in the county of Yakima and State of Washington, have invented a new and useful Improvement in Bag-Holders; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a bag-holder and more especially a device of this character which is adapted for holding bags in position to be filled with apples, potatoes or other commodities, delivered thereto from a sorting machine.

The object of my invention is to provide a device of this character in which the bag is held securely and evenly at all points so that no greater strain will be brought upon the bag at one point than another and thus preventing the tearing or sagging of the bag.

In the accompanying drawing, Figure 1 is a plan view; Fig. 2 is a longitudinal sectional view on the line 2—2, Fig. 1; and Fig. 3 is an end view.

In the drawing the numeral 2 designates a suitable frame or support which is carried by the legs 3. This frame 2 is open at one end as at 4. Secured to the frame 2 are the clamp-pieces or gripping lugs 5 and 5ª formed of steel or other suitable metal and with the beveled faces 6.

A clamping or gripping bail 7 is hinged to the frame in any suitable manner. In the form illustrated, lag-screws 8 pass openings 9 in the ends of the bail, and springs 10 are interposed between the heads 11 of the lag-screws and the ends of the bail. The resilient action of the springs 10 permits the bail 7 to swing and slide down on the beveled surfaces of the gripping lugs 5 until the bail contacts with the beveled surfaces of the gripping lugs 5ª, so that all of the gripping lugs 5 and 5ª are thus put into gripping action when the bail is lowered into this position as will more fully hereinafter appear. Furthermore by the use of the springs 10 the bail is held by friction in any position of its arc of swing.

Instead of employing the springs 10 to give the required resiliency, it is apparent that the bail may itself be made of spring-steel to give the necessary resiliency for clamping the bag securely against the four beveled surfaces of the gripping lugs 5 and 5ª. It is therefore essential to have the bail resilient in order to pinch or grip the bag at the four gripping points, and by gripping the bag at these four points the bag is sure to be clamped at its four corners and liability of its being pulled out of place at any one point is obviated.

In practice the bail 7 is raised as shown in Fig. 2 and the empty bag is inserted and held by the operator against the gripping lugs 5. The bail is then lowered part way down and grips the bag at two points between the bail and the faces 6 of the gripping lugs 5. The operator then adjusts the front end of the bag with reference to the gripping lugs 5ª and then further lowers the bail and presses it down so that the bag is pinched or gripped between the bail and the beveled surfaces of the gripping lugs 5ª. The weight of the bag and contents as the bag is filled pulls the bail downward by friction and causes it to grip the bag more securely between said bail and the bevel surfaces of the gripping lugs 5 and 5ª. To release the bag the bail is lifted by grasping its front cross bar and raising it to the position shown in Fig. 2.

By my improved bag-holder the bag can be readily and quickly adjusted into position and the bail also, so as to secure the bag securely in position at four points. The bag is held between the rounded smooth face of the bail and the bevel faces and consequently there is nothing to tear or mutilate the bags as is the case where hooks or other devices are employed.

The flexibility of the bail permits it to give in case there should be a thick portion or seam at the gripping point. In this way, I provide for clamping with equal effect at all points a bag which may vary in thickness.

Prior bag-holding devices of the bail type, having circular or annular gripping bails, have had the disadvantage that the bag is not held securely, because that part of the bag which is thickened by the seam or by a fold will hold tightly, but other parts of the circumference of the bag will be pulled out of the clamping device by the weight of the material in the bag. The circumference of the bag is always larger than the band over which the bail is intended to fit, so that there is a fold of at least three thicknesses of bag cloth at some place between the bail and the band. These extra thicknesses hold the bail and the band apart and pull the bail tightly against the band at the opposite

point in its circumference, with the result that the bag is held tightly only at two points in its circumference. I have therefore substituted for the continuous bail, which has heretofore been used, the U-shaped bail shown and described herein, the arms of the bail being adapted to independently and resiliently engage the isolated gripping lugs, and the resilience of the bail arms being especially useful at the inner end of the bail. The outer end of the bail is substantially rigid and therefore it will be seen that the inner and outer portions of the bail engage the gripping lugs in different ways, the inner part of the bail being in spring engagement with the gripping lugs and the outer part exerting a substantial wedging action upon the outer gripping lugs. Also, since the bail is loosely supported upon its pivots, it is enabled to move laterally to a small extent in order to accommodate varying thicknesses of cloth which may happen to come between the gripping lugs and the bail.

My improved bag holder is especially adapted for use in connection with fruit or vegetable sorting machines, as it is necessary with such machines to have the bag automatically filled to the top and very essential that its bottom be above the floor which puts all the weight on the bag-holder.

What I claim is:

1. In a bag-holder, the combination with a suitable frame of a U-shaped bail having resilient arms, and four isolated gripping lugs having beveled upper surfaces adapted to coöperate with the said bail, the portion of the said bail adjacent to its open end being adapted to grip the bag by independent spring compression of each arm of the said bail against one of the said beveled lugs and the outer portion of the said bail being adapted to grip the bag by rigid wedging pressure against the outer lugs.

2. In a bag-holder the combination with a suitable frame of four isolated lugs having beveled gripping surfaces, a U-shaped swinging flexible bail carried by the said frame and having resilient arms, the said bail being adapted to engage the said gripping lugs, means for loosely supporting the ends of the said bail, springs carried by the said supporting means and acting to spread apart the ends of the said resilient arms, a bar connecting the outer corners of the said bail and acting to resist compression thereof, the said bail being adapted to first clamp the bag upon two of the said gripping lugs by compression of the said bail and thereafter being adapted, by an additional downward swing, to clamp the bag against the two outer beveled lugs by rigid wedging contact.

3. In a bag-holder, the combination with a suitable frame, of four isolated beveled gripping lugs and a flexible bail having resilient arms adapted to engage the said lugs, means for loosely supporting and yieldingly spreading apart the ends of the said arms, the portion of the said bail adjacent to the said supporting means being adapted to grip the bag by spring compression of the said arms between two of the said lugs and the outer portion of the said bail being adapted to grip the bag by rigid pressure against the two outer lugs.

4. In a bag-holder, the combination with a suitable frame, of a plurality of isolated lugs carried by said frame and having beveled gripping surfaces, a pivotally movable U-shaped bail adapted to be swung into cooperation with all of the said lugs to grip the bag, and means for frictionally holding the said bail from swinging by gravity.

5. In a bag-holder, the combination with a suitable frame, of four isolated lugs carried by said frame and having beveled gripping surfaces and a U-shaped bail pivotally supported near the free end of its arms, the portion of the bail adjacent to its pivot being adapted to grip the bag against two of the said lugs by compression of each arm of the said bail independently against one of the said lugs and the outer portion of the said bail being adapted to grip the bag by a pressing or wedging pressure between and against the outer lugs.

In testimony whereof I, the said WILLIAM G. PRICE, have hereunto set my hand.

WILLIAM G. PRICE.

Witnesses:
CARRIE GROSENBAUGH,
CHAS. H. LOMBARD.