Nov. 30, 1937. A. E. BENNETT 2,100,501

BAG HOLDER

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Fig. 1.

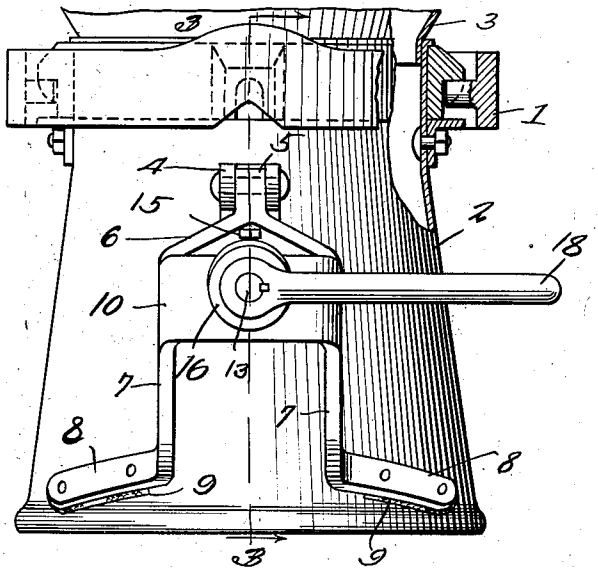

Fig. 2.

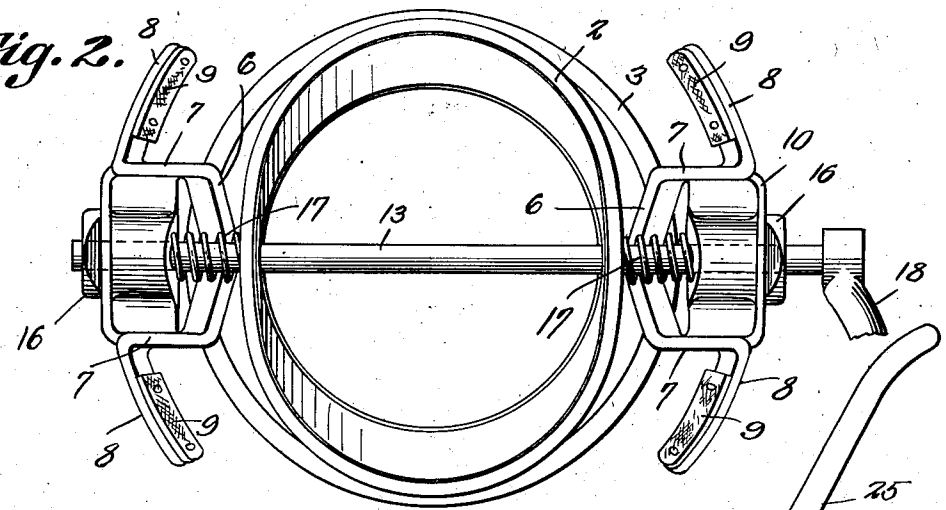

Fig. 5.

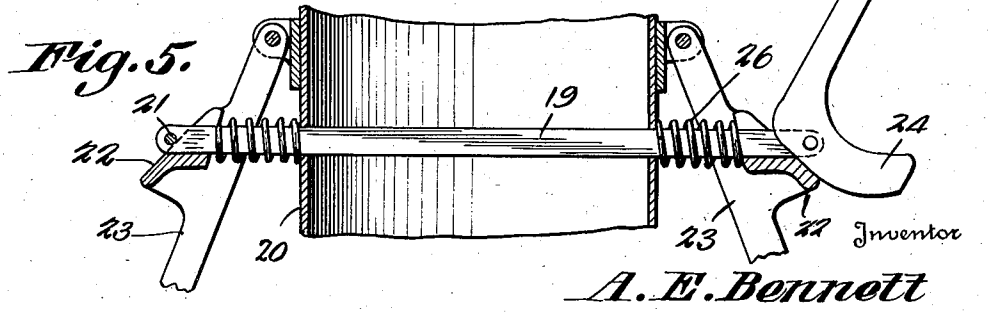

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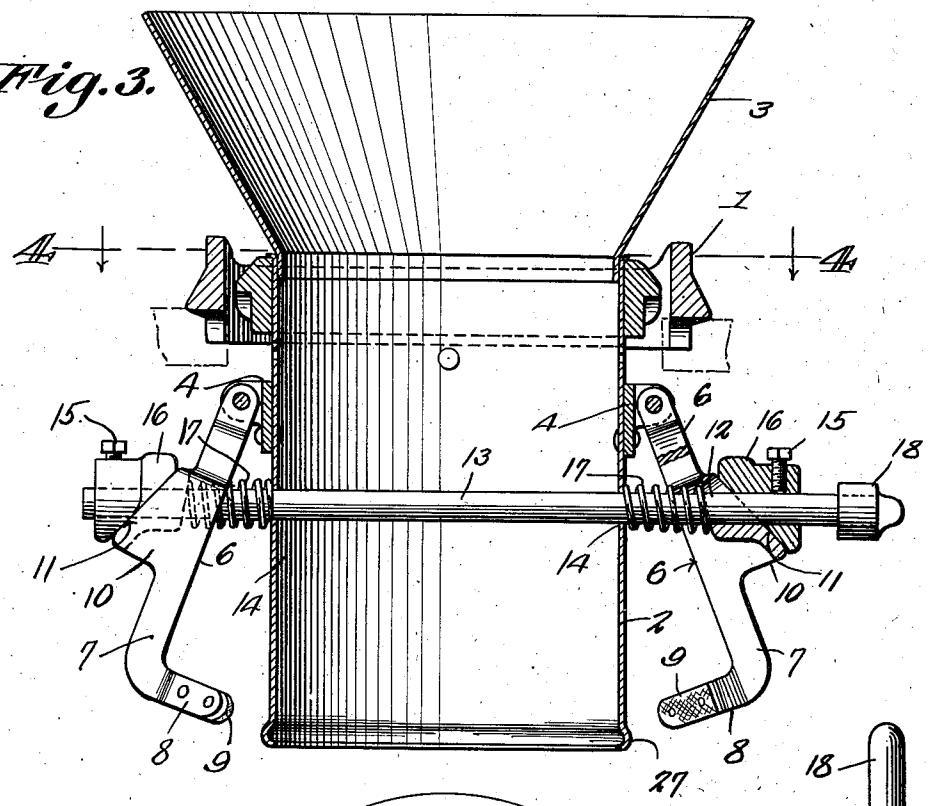
Fig. 3.



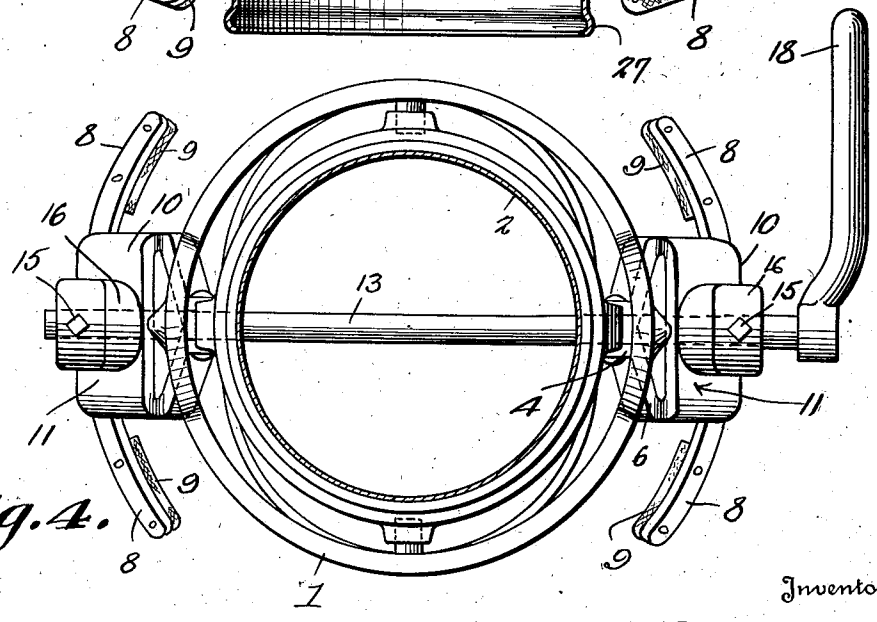


Fig. 4.

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UNITED STATES PATENT OFFICE

2,100,501

BAG HOLDER

Albert E. Bennett, Green Cove Springs, Fla.

Application September 25, 1936, Serial No. 102,602

6 Claims. (Cl. 248—101)

This invention relates to bag holders designed primarily for use on scales such as used for weighing fertilizer, grain, flour, or any other materials to be contained in sacks.

Because of the weight of the contents of the sack, when filled, a difficulty has been experienced in devising a holder which will properly support the sack, while it is being filled and weighed, to prevent spillage or waste of contents, and tearing or other injury to the sack, this being experienced more especially in the handling of paper bags.

An object of the present invention is to provide a simple and efficient form of sack holder which can be operated by one person both to fasten the sack to its support and to release it therefrom without spilling the contents or damaging the bag. Its special features are such that it does not wrinkle or mar the shape of the bag in any way, this being especially valuable when used with paper bags as they have to be sewed with a machine, and wrinkling of the bags makes it very difficult for them to get through the machine.

Another object is to provide a holder which is simple and compact in construction and formed of few parts so that it will not readily get out of order.

With the foregoing and other objects in view which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts hereinafter more fully described and pointed out in the claims, it being understood that changes may be made in the construction and arrangement of parts without departing from the spirit of the invention as claimed.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings:

Figure 1 is a side elevation of a bag or sack filling spout having the present improvements applied thereto.

Figure 2 is a bottom plan view of the structure shown in Figure 1.

Figure 3 is a section on line 3—3, Figure 1.

Figure 4 is a section on line 4—4, Figure 3.

Figure 5 is a section through a portion of a modified form of bag holder.

Referring to the figures by characters of reference 1 designates a portion of a scales used for weighing the contents of a bag and these scales support a filling spout or sleeve 2 having a funnel-like inlet 3 at its upper end.

Secured to the sleeve 2 at diametrically opposed points are brackets 4 in each of which is pivotally mounted an ear 5 extended from the center of a yoke 6 the arms 7 of which are preferably substantially parallel and merge, at their free ends, into oppositely extending arcuate jaws 8 each of which has a gripping surface 9 formed of a covering of leather or other suitable material.

A cross bar 10 joins the arms 7 of the yoke and is provided with an inclined bearing surface 11 constituting a non-rotatable cam member.

An opening 12 is extended through the cross bar 10 for receiving a rod 13 extending diametrically across the sleeve 2, there being openings 14 in the wall of this sleeve through which the rod can move freely.

Adjustably secured to rod 13 as by means of set screws 15, are rotatable cams 16 which cooperate with the cam members 11 so that when the rod is rotated in one direction, these cams 16 will exert a thrust upon the cam members 11, thereby to cause the yokes 6 to swing toward each other and the gripping portions 9 to clamp a bag or other inserted object firmly against the outer surface of the sleeve 2. However, when the rod is turned in the opposite direction, springs 17, which are mounted on the rod 13 and interposed between sleeve 2 and the cross bars 10, will thrust the yokes 6 outwardly away from the sleeve to the positions shown for example in Figure 3, thereby releasing any sack or other object which may have been gripped between the members 9 and the outer surface of the sleeve.

For the purpose of rotating rod 13 a handle 18 can be fastened to one end thereof. However, if preferred, and as shown for example in Figure 5, instead of using a rotatable rod 13, a slidable rod 19 may be mounted in the sleeve 20. A cross pin 21 carried by one end portion of this rod, can hold it loosely in engagement with the cross bar 22 of one of the yokes 23 while the other end of the rod can be engaged by a cam 24 pivotally mounted thereon and having a lever 25 for operating it. Springs 26 are interposed between the cross bars 22 and the wall of the sleeve 20 so as to hold the yokes normally pressed outwardly away from the sleeve. However by pulling down upon the lever 25 as shown in Figure 5, cam 24 will ride on the adjacent cross bar 22 and push its yoke 23 toward sleeve 20, at the same time pulling rod 19 so that the other yoke 23 will also be pulled against the sleeve. These movements of the yokes will be against the action of the springs 26. Consequently when lever 25 is swung upwardly, the

springs 26 will be brought into play and swing the yokes 23 away from the sleeve 20.

When either form of bag holder is used, the operation of gripping a bag is substantially the same. The open end of the bag is placed around the lower end of sleeve 2 and while it is thus held the rod 13 or 19 is actuated to swing the yokes toward each other. This will cause the gripping members 9 on the yokes to engage the bag and press it tightly against the outer surface of the sleeve 2. The cams, in both structures illustrated, will be held by friction in the positions to which they are adjusted while the holder is in gripping position. As the rods are slidable longitudinally they not only serve as connections between the opposed yokes but they also act as equalizing means so that should the material engaged by one yoke be of greater thickness than that engaged by the other yoke, the pressures exerted by both yokes upon the engaged portions of the bag will be the same. Thus the holder need be given no attention during the filling operation following the attachment of the bag.

The material to be placed in the bag will flow downwardly through the sleeve thereinto and after the proper weight has been indicated by the scales, the operator reverses the movement of the rod so as to release the bag from the gripping action of the jaws. This release is of course effected by the movement of the cams.

It has been found in practice that a bag holder such as herein described is not only easy to operate but will speed up the work. Furthermore it is formed of but few parts and, consequently, will not get out of order readily. It is possible to adjust the holder simply by shifting the positions of the cams shown in Figure 3.

For the purpose of more securely holding the bag on the sleeve while gripped, it is preferred to form the sleeve at its lower end with an annular bead 27.

Importance is attached to the fact that this bag holder, through the cam arrangement, is quickly shifted into and out of gripping position.

What is claimed is:

1. A bag holder for weighing scales or the like including a filling sleeve, yokes pivotally connected to opposed portions thereof and having diverging jaws, a cam portion carried by each yoke, springs interposed between the yokes and the sleeve, a slidable equalizing and connecting rod extending diametrically through the sleeve and movably seated in the cam portions of the yokes, and a cam carried by the rod and cooperating with one of the yokes for shifting both of said yokes toward each other.

2. In a bag holder the combination with a filling sleeve, and jaw carrying members pivotally connected to diametrically opposed portions thereof, of a longitudinally slidable equalizing and connecting rod extending diametrically across the sleeve and through said members, springs on the rod and interposed between the sleeve and members, and a cam cooperating with one of the members and connected to the rod for actuating both members to grip a bag between them and the sleeve.

3. A bag holder for weighing scales or the like including a filling sleeve, opposed yokes pivotally connected to the sleeve, gripping arms carried by each yoke, a slidable equalizing and connecting rod extending diametrically through the sleeve and yokes, springs on the rod between the sleeve and yokes for holding the yokes normally pressed away from the sleeve to provide a bag receiving clearance between the gripping arms and the sleeve, and a cam secured to the rod and cooperating with one of the yokes for actuating both yokes to grip a bag between the arms and sleeve.

4. A bag holder including a filling sleeve, yokes pivotally connected to opposed portions of the sleeve and having diverging gripping arms, a rod movably mounted within and extending diametrically through the sleeve and extending movably through the yokes, means on the rod and interposed between the sleeve and yokes for holding the gripping arms normally spaced from the sleeve to provide bag receiving clearances, each yoke having a cam portion, cams secured to the rod and cooperating with said portions, and means for rotating the rod and the cams to shift the yokes toward each other.

5. A bag holder including a filling sleeve, opposed yokes pivotally connected thereto and having diverging gripping arms, a longitudinally slidable equalizing and connecting rod extending diametrically across the sleeve and through the yokes, a cam carried by the rod, and means for actuating the cam to shift the rod and move the yokes toward the sleeve into bag gripping positions.

6. A bag holder including a filling sleeve, opposed yokes pivotally connected thereto and having bag gripping portions for cooperation with the sleeve, a rod extending diametrically through the sleeve and extending freely through the yokes, springs on the rod between the yokes and sleeve for holding the yokes normally pressed away from the sleeve to provide bag receiving clearances, means connected to one end portion of the rod for preventing withdrawal of the rod through one of the yokes, and a cam carried by the other end portion of the rod and cooperating with the adjacent yoke to shift the rod longitudinally and move the yokes toward the sleeve into bag gripping positions.

ALBERT E. BENNETT.