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N. SIEGMAN ET AL
BAG SPREADER AND HOLDER

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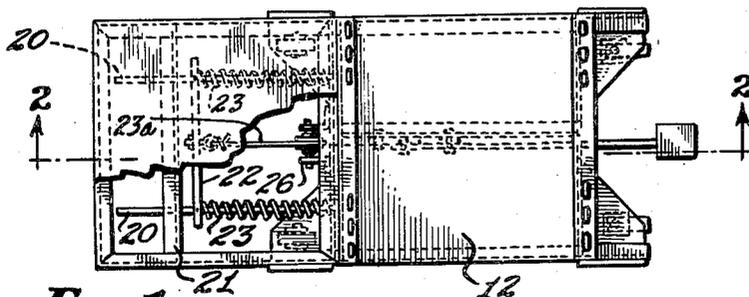


FIG. 1.

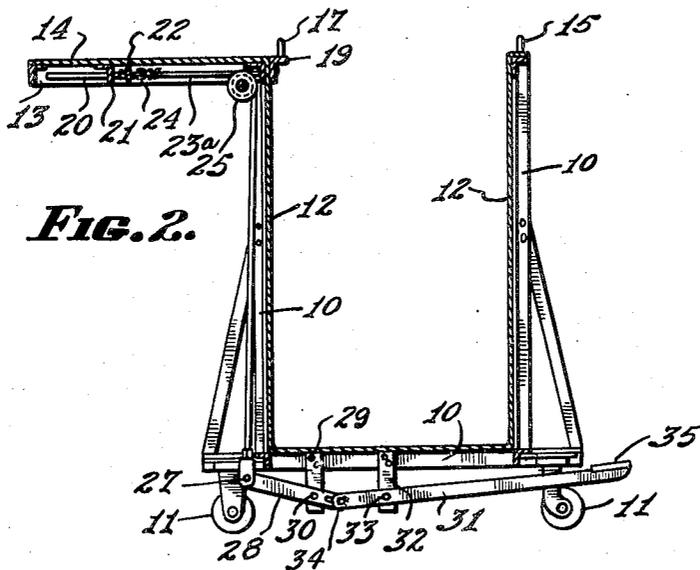


FIG. 2.

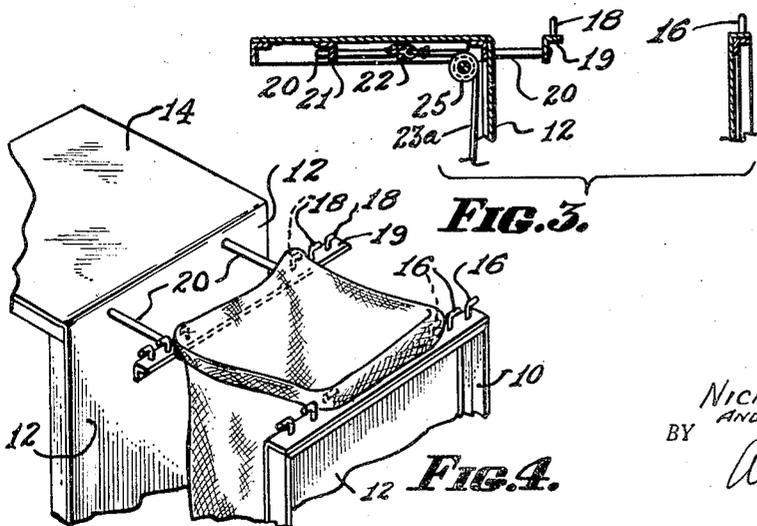


FIG. 3.

FIG. 4.

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BAG SPREADER AND HOLDER

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This invention relates to devices for spreading and holding bags. While, as will appear hereinafter, the invention is applicable to many and varied uses in connection with bags, it is particularly useful in connection with the filling of open mesh bags, such as are used by laundries.

It is conventional in laundries to put a number of articles belonging to an individual customer into a single open mesh bag for washing. The bag is closed and appropriately tagged with the customer's number or other indicia, and then the entire bag is placed in the laundry machine and washed.

The open mesh bags which are used for the above purpose in laundries are extremely flexible and must be supported adjacent the top and held open in some manner so that they may be filled. A great deal of time is lost in the bag filling operation.

With the above considerations in mind, it is an object of our invention to provide a device which will, with a minimum of effort on the part of the operator, spread and hold open a laundry bag so that it may be filled. It is another object of our invention to provide a device as outlined, in which the laundry bag can easily be removed from the holding means. It is a further object of our invention to provide a device as outlined above which is portable so that it may be moved about from work station to work station. Other objects of our invention include the provision of a device of this character which will be relatively simple and inexpensive to manufacture, which will be durable in use, and simple in operation.

These and other objects of our invention which will be pointed out in more detail hereinafter, or which will appear to one skilled in the art upon reading these specifications, we accomplish by that certain construction and arrangement of parts of which we shall now describe an exemplary embodiment.

Reference may be had to the drawings which form a part hereof, and in which:

Figure 1 is a plan view with parts broken away of a device according to our invention.

Figure 2 is a cross sectional view of the same taken along the line 2, 2, of Figure 1.

Figure 3 is a partial cross sectional view similar to Figure 2, but showing the device in another stage of operation.

Figure 4 is a partial perspective view showing the device in use.

Briefly, in the practice of our invention, we provide what might be termed an open-sided bin structure mounted upon casters so that it may be

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wheeled about at will. On the level with the top of said bin-like structure, we provide a shelf-like extension and we provide a series of pairs of hook elements on each side of said bin-like structure, one of said sets of hooks being movable with respect to the other by means of a foot pedal.

Referring now more particularly to the drawings, we have shown an open sided bin-like structure composed of a series of angle members constituting a framework, indicated generally at 10. This framework is preferably mounted upon caster wheels 11 in any desired manner. The framework 10 is provided with smooth surfaces on the inner side which may be formed from sheets of any suitable material 12. These bin faces 12 may be of galvanized sheet metal, stainless steel, plastic, or other suitable material. Thus, in the region to be occupied by the bag there will be no projecting corners which might catch on and tear the material being loaded into the bag.

On one side of the structure 10 at the top thereof, we provide a framework extension 13 which is provided with a suitable surfacing 14 which may be made from the same material as the bin faces 12. The member 14 thus constitutes a shelf upon which the material to be loaded into the bag may be placed for sorting, counting, or checking.

At the top of one of the bin walls as indicated in Figure 2 at 15, we provide a series of pairs of fixed hook members indicated at 16 in Figure 4. It will be clear that any suitable number of pairs of hook members may be used, and for purposes of illustration, we have shown three such pairs. The pairs of hook members are pointed in opposite directions as clearly shown in Figure 4. With three pairs of hooks, it will be convenient to use the inner pair for small bags, the middle pair for intermediate size bags, and the outer pair for large bags.

At the top of the other bin face, as at 17 in Figure 2, we provide a series of pairs of hooks 18 similar in all respects to the hooks 16 and similarly arranged. The hooks 18 are, however, mounted on a separate angle member 19. Fastened to the angle 19 in any suitable manner are the guide rods 20, which are supported in holes in the framework member 10 and in another transverse angle member 21. The angle member 19 carrying the hook member 17 is thus free to move toward the right in Figures 1, 2, and 3 to bring the hooks 18 closer to the hooks 16.

The members 20 are connected by a bar 22 to which they are securely fastened in any suit-

able manner, and compression springs 23 surrounding the members 20 between the framework 10 and the transverse member 22 tend to urge the member 22 together with the rods 20 and the angle 19 and the hooks 18 toward the left of Figures 1 to 3, inclusive. A chain or other suitable flexible connection indicated at 23^a is fastened to the member 22 in any suitable manner, such as indicated at 24. The chain 23^a passes over a pulley 25; suitably fastened to the frame 10 or as by means of brackets or the like 26. The chain 23^a is fastened at its lower end at 27 to a lever 28 which is pivoted to an extension 29 of the frame, as at 30. A treadle member 31 is pivoted to another extension 32 of the frame at 33 and is pivotally and slidably connected to the lever 28, as at 34. At its outer end, the lever 31 carries a pedal 35.

From the foregoing description, the operation of the device will be clear. When the operator desires to fill a laundry bag, he will depress the pedal 35. This action will cause the point 34 to swing upwardly, causing the lever 28 to pivot in a counterclockwise manner, and causing the point 27 to move downwardly. Downward motion of the point 27 will, by means of the chain 23^a, produce motion to the right of the member 22, and its associated parts, and will cause the hook members 18 to approach the hook members 16, as seen in Figure 3. The operator will then, while continuing to depress the pedal 35, turn the upper edge of the laundry bag over the appropriate pair of hooks 18 and a corresponding pair of hooks 16. Then the operator will remove his foot from the pedal 35, whereupon the assembly carrying the hooks 18 will move toward the left of Figures 1 to 3, inclusive, under the influence of the compression springs 23. The bag will then be held firmly in opened condition, as best seen in Figure 4. After the bag is filled, pressure on the pedal 35 will again cause the hook members 18 to approach the hook members 16, and the operator can simply lift the bag off the hooks.

Although we have designed this specific embodiment for use in laundries for the purposes described, it will be clear that, either without modification, or with minor modifications, this device will be of utility for spreading and holding bags for filling in a variety of fields. It will also be clear that numerous modifications can be made without departing from the spirit of our invention, and we therefore do not intend to limit ourselves, except as pointed out in the claims which follow.

Having now fully described our invention, what we claim as new and desire to secure by Letters Patent is:

1. A device of the character described, comprising an open-sided bin-like structure, a pair of bag-engaging hooks mounted at the top of one side of said structure, a bag carrying a pair of bag-engaging hooks reciprocally mounted at the top of the other side of said structure, spring means for yieldingly holding said bar against said side, a pedal, and means comprising a linkage between said bar and said pedal for moving said bar toward said first mentioned side.

2. A device of the character described, comprising an open-sided bin-like structure having smooth inner surfaces, a pair of bag-engaging hooks mounted at the top of one side of said structure, a bar carrying a pair of bag-engaging hooks reciprocally mounted at the top of the other side of said structure, spring means for yieldably holding said bar against said side, a pedal, and means comprising a linkage between said bar and said pedal for moving said bar toward said first mentioned side.

3. A device of the character described, comprising an open-sided bin-like structure having smooth inner surfaces, a shelf extending substantially horizontally from one side of said structure adjacent the top thereof, a hook carrying bar having guide rods slidably supported under said shelf whereby said bar can be moved toward or away from said side, spring means for urging said bar toward said side, a pedal, and means comprising a linkage between said bar and said pedal for moving said bar away from said side against the compression of said spring means, and fixed hooks at the top of the other side of said structure.

4. A device of the character described, comprising an open-sided bin-like structure having smooth inner surfaces, said structure being mounted upon casters, a shelf extending substantially horizontally from one side of said structure adjacent the top thereof, a hook carrying bar having guide rods slidably supported under said shelf whereby said bar can be moved toward or away from said side, spring means for urging said bar toward said side, a pedal, and means comprising a linkage between the bar and said pedal for moving said bar away from said side against the compression of said spring means, and fixed hooks at the top of the other side of said structure.

5. A device of the character described, comprising an open-sided bin-like structure, bag-engaging elements mounted at the top of one side of said structure, a bar carrying bag-engaging elements reciprocally mounted at the top of the other side of said structure, spring means for yieldingly holding said bar against said side, a pedal and means comprising a linkage between said bar and said pedal for moving said bar toward said first mentioned side.

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