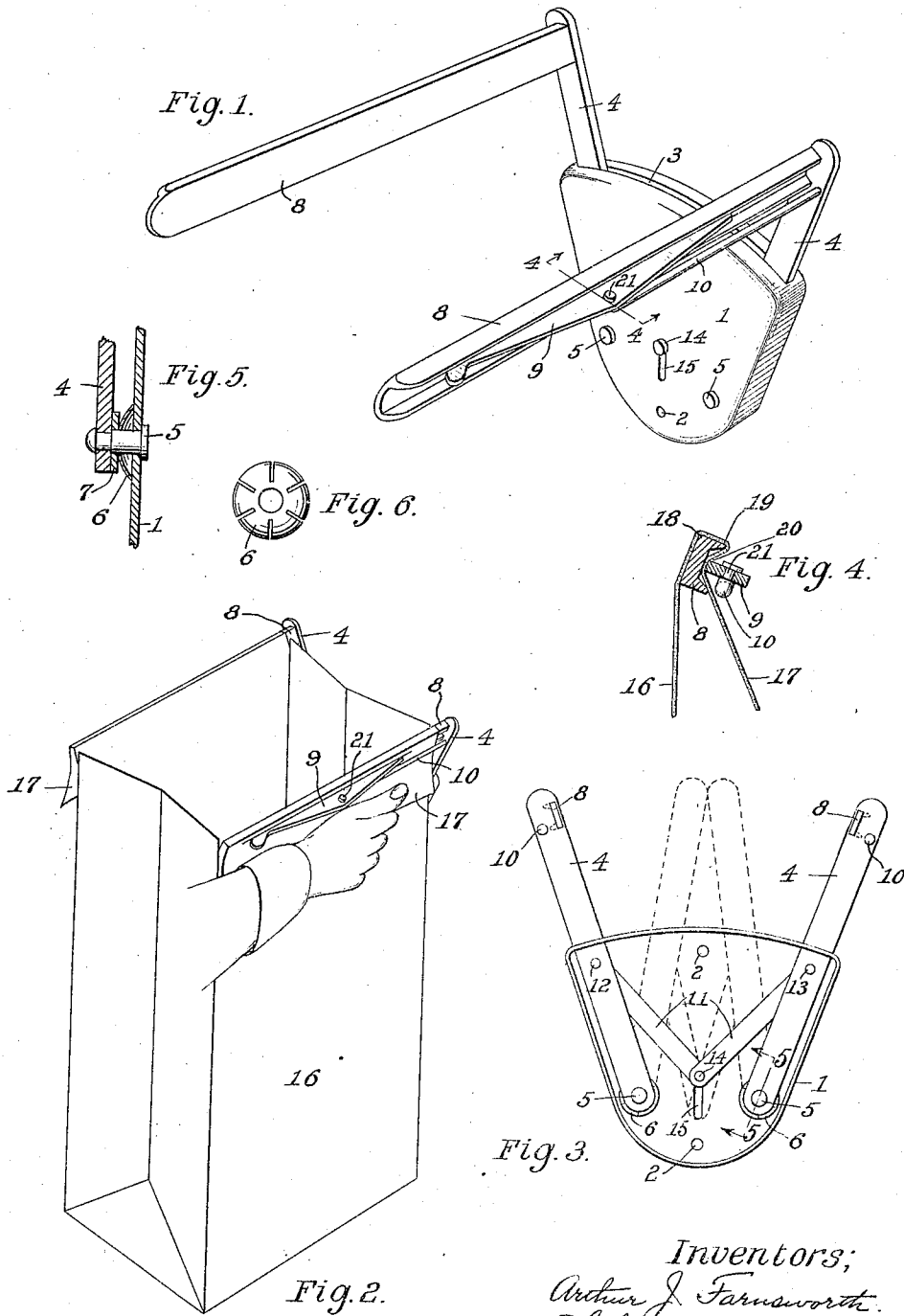


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BAG HOLDER.

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BAG-HOLDER.

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To all whom it may concern:

Be it known that we, ARTHUR J. FARNSWORTH and ETHELBERT M. ST. CLAIRE, citizens of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented a new and useful Bag-Holder, of which the following is a specification.

Our invention relates to improvements in bag holders and refers more particularly to a device in which the bag may be held with its mouth either open or closed as desired.

Among the salient objects of the invention are, first, to provide a construction adapted to support a bag in such a manner that the weight of its contents will be sustained by a relatively large portion of the material of which the bag is composed so that the strength of the material may be utilized to the utmost; second, to afford facilities for quickly and firmly attaching the bag to the holder; third, to furnish convenient means for holding the bag in either open or closed position; and, fourth, to produce a device of this nature that is simple, reliable, and relatively inexpensive to manufacture.

This invention, although adapted for holding bags made of any ordinary material, is especially suited for supporting paper bags for the disposition of garbage, or other waste material, and we have selected for illustrative purposes this particular form of the device as shown in the accompanying drawing in which—

Figure 1 is a perspective view of the bag holder complete; Fig. 2 is a perspective view, on a smaller scale, showing a paper bag in position on the holder and indicating the manner in which it is applied; Fig. 3 is a rear view of the device, showing the mechanism controlling the movement of the bag holding arms; Fig. 4 is a section through the central portion of one of the bag holding arms, as on the line 4—4 of Fig. 1, and with a portion of a bag in place; Fig. 5 is a fragmentary section on the same enlarged scale, taken on the line 5—5 of Fig. 3; and Fig. 6 is a front view, on the same scale, of one of the spring washers used in the device.

Similar numerals refer to similar parts throughout the several views.

The base 1 is preferably a flanged metal stamping provided with screw holes 2 for

attaching it to a convenient supporting surface. A slot 3 in the upper portion of the flange acts as a guide for the levers 4 which are attached to the base at their lower ends by means of the pivots 5. The latter are riveted to the levers in the manner indicated more particularly in Fig. 5, and are free to turn in holes provided for that purpose in the base. Pivots 5 have enlarged heads, as shown, to maintain them in their proper axial position with respect to the base.

Cup shaped washers 6, made of spring metal with radial slots, may be mounted on pivots 5 between the levers and the base to serve as a convenient means for introducing frictional resistance to the movement of the levers so that they will normally remain in the position in which they are placed. Spacing washers 7, (Fig. 5) may also be added, if desirable, to increase the tension of the spring washers or to permit the use of spring washers having less convexity than would otherwise be required.

At the upper ends of levers 4, and extending forwardly therefrom, are the horizontal bag holding arms 8. These are preferably made channel shaped, in pairs, with their forward ends rounded to allow the material of the bag to slip over them easily. The rear ends of these arms have a portion of their flanges and webs milled off to form tongues that are passed through rectangular slots in the upper ends of levers 4 and riveted over on the back sides thereof. This construction is indicated more particularly in Fig. 3.

Clamping bars 9 are provided for each supporting arm to serve for gripping the bag material. Only one of these is shown in the views on account of the position selected for illustrating the device. These bars are centrally pivoted on the up-turned forward ends of spring bars 10 of which there are also two, one being hidden from view in the figures. The rear ends of bars 10 are riveted into holes provided for that purpose in the upper ends of levers 4, and they are adjusted by bending in such a manner that clamping bars 9 will normally be held firmly against the web of the bag holding arms 8.

Levers 4 are connected together within the casing by means of the links 11, pinned to the levers at 12 and 13 respectively and to each other at 14. Pin 14 is elongated to

extend forwardly through the guiding slot 15 in the base, and is provided at its outer end with a head to hold it in position relative thereto, as indicated in Fig. 1. Any angular movement of either lever will obviously cause a corresponding reversed angular movement of the other.

Pivots 5 are so spaced that the moments of the downward pull of the bag and its contents will tend to keep levers 4 at the extremes of their motion, and consequently the mouth of the bag will remain either open or closed as desired. The closed position of levers 4 and links 11 is indicated by dotted lines in Fig. 3.

For supporting a bag made of paper, or other relatively weak material, as shown at 16, it is desirable to have the bag made with extended sides turned over outwardly at the top, to form flaps, as indicated at 17 in Fig. 2 and Fig. 4. An ordinary paper bag may be used, however, by slitting the upper corners and turning down the sides to form flaps. Bags made of relatively strong material may have their sides turned down without slitting the corners, since the resultant folds in the material in this case will not be of consequence. In applying a paper bag the flaps 17 are grasped respectively by both hands near the inner ends, in the manner indicated in Fig. 2. The flaps are then placed over the bag holding arms 8 and slid inwardly under the clamping bars 9 to position. The clamping bars serve to crimp the bag material into the channels of the arms and thereby hold it firmly in place.

This method of fastening is very secure for the reason that the pull of the bag material is snubbed around three corners at 18, 19, and 20. There is in fact very little tendency for the material to slip past the clamping bars at 20, and a light tension of the spring 10 is all that is required to hold the bag firmly in place.

This fastening method is also particularly satisfactory as a means for utilizing the

strength of the bag material to the utmost, as is necessary in the case of paper bags and others made of relatively weak material. The weight of the contents of the bag is supported equally by its two sides, and is distributed in a uniform manner along the whole of their extent by reason of the self adjustment of the flexibly mounted clamping bar. A paper bag supported in this manner will sustain many times the load it would carry if rigidly clamped to the holding arms.

We desire to call attention particularly to the central pivotal mounting of clamping bars 9 on springs 10, as shown at 21. By this means the pressure exerted by the springs is equalized and distributed uniformly throughout the whole of the bearing surface of the clamping bars. Also, by reason of the leverage, this construction makes it easier to insert the bag material when a bag is being placed on the holder. The single small point of engagement between the clamping bar and spring, together with the resiliency of the spring itself provides the necessary flexibility for self adjustment of the clamping bar mentioned in the paragraphs just preceding.

It is obvious that the form of the device may be varied in many ways, and that the invention is not limited to the details of construction herein shown and described, except as set forth in the appended claims.

We claim as our invention:

1. A bag holder comprising supports, bag holding arms thereon, spring bars extending from said supports, and clamping bars pivoted at their centers to said spring bars and bearing against said bag holding arms.

2. A bag holder comprising movable supporting levers, bag supporting arms thereon, spring bars connected directly with said support, and bag clamping bars pivoted to said spring bars and bearing against said arms.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."