

March 2, 1948.

T. O. SMITH

2,437,233

BAG HOLDER

Filed June 18, 1945

2 Sheets-Sheet 1

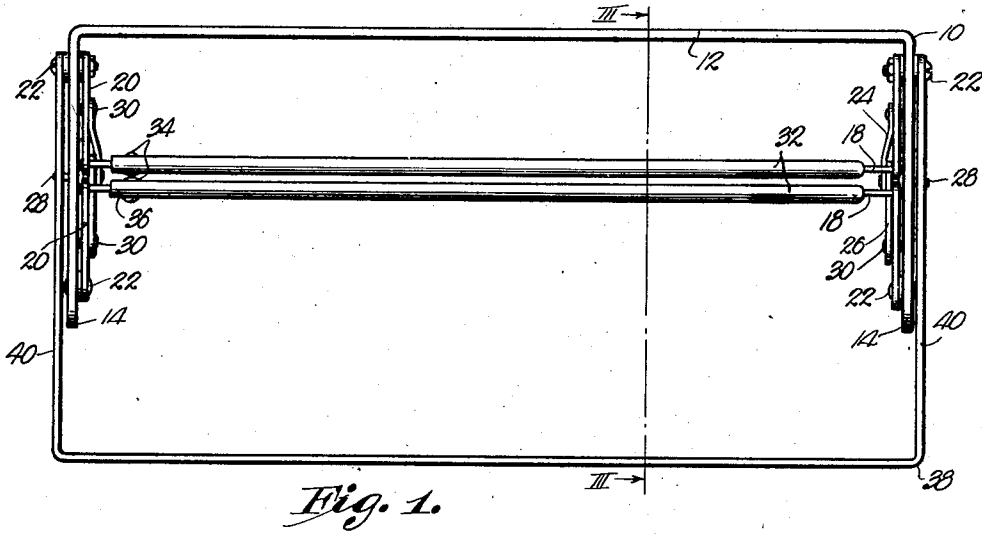


Fig. 1.

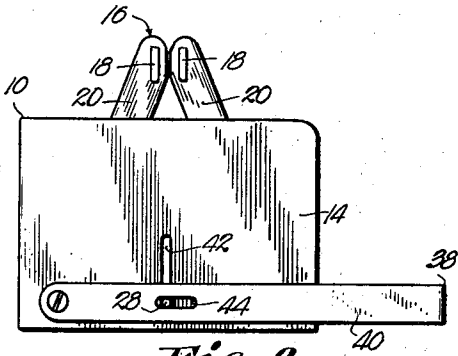


Fig. 2.

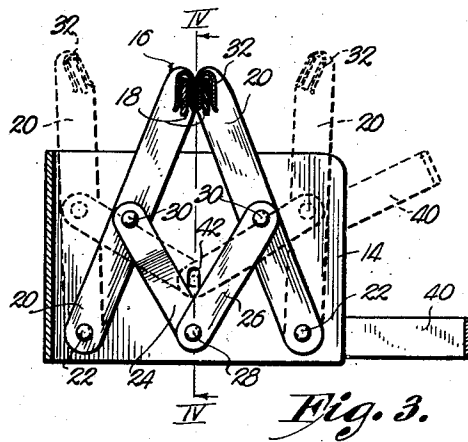


Fig. 3.

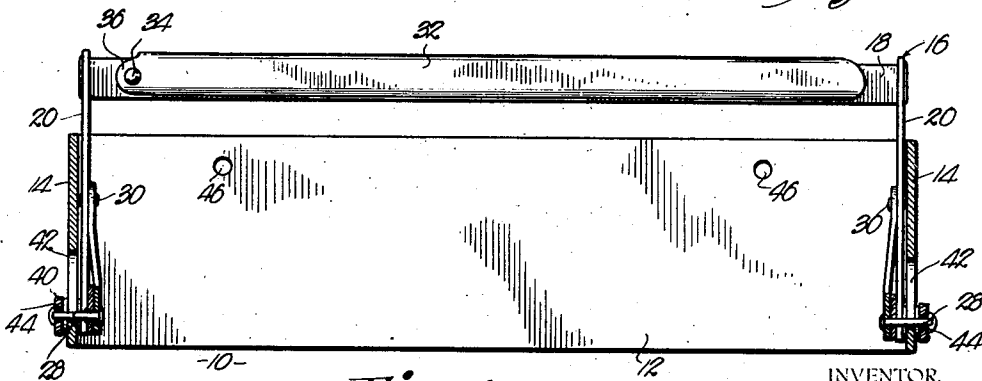


Fig. 4.

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2 Sheets-Sheet 2

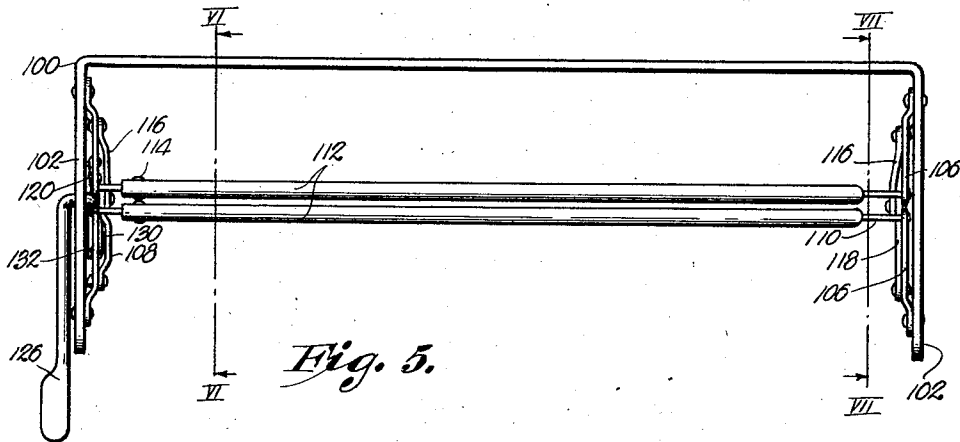


Fig. 5.

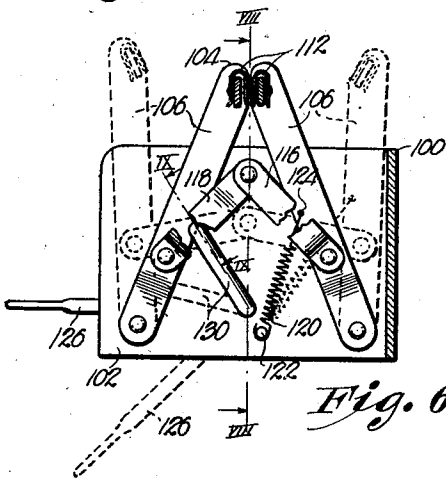


Fig. 6.

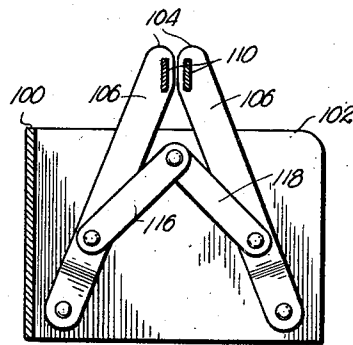


Fig. 7.

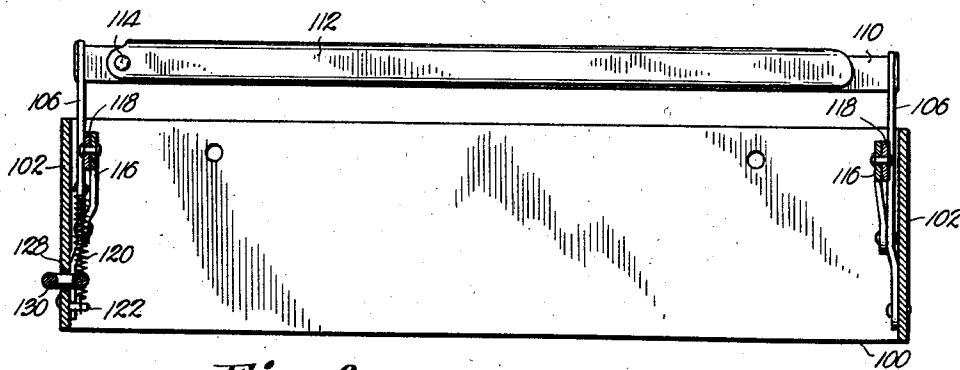


Fig. 8.



Fig. 9.

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BAG HOLDER

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Application June 18, 1945, Serial No. 600,183

4 Claims. (Cl. 248—101)

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Bag holders of the type having manually manipulable means for opening and closing the mouth thereof constitutes the subject matter of my invention and the primary aim is to provide simple, effective, durable and inexpensive structure for supporting paper bags or the like adjacent to a point of work where material may be easily deposited into the bag for later disposition.

One of the primary aims of my invention is the provision of a bag holder capable of being mounted upon a supporting surface such as a wall, kitchen cabinet or an element adjacent to the point of work that includes a pair of specially formed jaws and means for actuating these jaws to and from a closed position where the mouth of the bag is maintained in a shut condition.

Other objects of this invention include the provision of a bag holder of the aforementioned character wherein the said jaws are operably secured together and mounted upon a specially designed frame, all to the end that the assembly may be moved as a unit to and from a supporting surface and easily manipulated by the operator by exerting force upon a shiftable trigger or the like carried by the main frame of the holder; that will automatically return the mouth of the bag to the shut position when the manually operable member is shifted through a portion of its path of travel toward the condition assumed when the jaws are closed; and that is capable of securing the mouth of the bag in a completely shut condition where odors may not escape from the bag and where flies or insects may not enter the bag that is supported by the holder.

Other aims of the invention will appear during the course of the following specification referring to the accompanying drawing illustrating two forms of the invention and wherein:

Fig. 1 is a top plan view of a bag holder made pursuant to the present invention.

Fig. 2 is an end elevational view of the holder shown in Fig. 1.

Fig. 3 is a sectional view taken on line III—III of Fig. 1 and looking in the direction of the arrows.

Fig. 4 is a longitudinal central sectional view taken on line IV—IV of Fig. 3 and looking in the direction of the arrows.

Fig. 5 is a top plan view of a bag holder made in accordance with the modified form of the invention.

Fig. 6 is a cross sectional view of the holder pictured in Fig. 5 and taken on line VI—VI of Fig. 5 looking in the direction of the arrows.

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Fig. 7 is another cross sectional view through the holder shown in Fig. 5 taken on line VII—VII of Fig. 5.

Fig. 8 is a longitudinal sectional view through the modified form of the holder taken on line VIII—VIII of Fig. 6, and

Fig. 9 is a detailed sectional view showing the form of joint between two of the members of the holder taken on line IX—IX of Fig. 6.

Bag holders of the character forming the subject matter of my invention are employed where it is necessary or desirable to quickly dispose of waste material such as garbage and, therefore, is primarily adapted for employment in kitchens but may be used at bedsides for example, where patients are desirous of disposing of waste matter.

The holders carry a bag, not here shown, but which is commonly known in the art as a "paper sack" having an open mouth and which, when folded, lies in a flat condition. The bags which I have found to be satisfactory are kraft paper with a water-proof lining or a special parchment type paper bag which will not allow water to pass through the material from which it is constructed. The bag, therefore, being of conventional and well known character, is not illustrated in the drawing.

As indicated in the objects above, it is desirable to have the bag holder operable by the application of pressure of a general nature rather than of a specific type and to a confined or relatively small part. Therefore, the form of the invention illustrated in Figs. 1 to 4 is highly desirable for the same may be shifted from the closed to the open position and vice versa, by the hand, elbow or knee. In the form of the invention illustrated in the said figures, the holder comprises a U-shaped frame generally designated by the numeral 10 and including a flat bight 12 from which extends a pair of legs 14. A pair of cooperating jaws that are U-shaped in form and designated by the numeral 16 are pivotally secured to frame 10 as clearly illustrated in Fig. 3. The jaws 16 each incorporate a straight bight 18 formed from a strip of material and a pair of legs 20, the free ends whereof are pivotally secured as at 22. The pivotal connections 22 permit movement of jaws 16 to and from the full line position shown in Figs. 1, 2 and 3 and to the position illustrated in dotted lines of Fig. 3.

To ensure equalized movement, the legs 20 of jaws 16 are interconnected by a pair of links 24 and 26, there being a pair of said links at each end of the U-shaped jaws 16. These links 24 and 26 are articulated as at 28 at their innermost over-

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lapped ends while their outer ends are pivotally mounted by rivets or the like as at 30 to the respective legs 20 of jaws.

Each jaw 16 has a clamp 32 pivotally secured thereto, as shown in Figs. 1, 3 and 4. These clamps 32 are U-shaped in transverse cross section and embrace the bights 18 of the jaws 16 as indicated in Fig. 3. Thus, when the marginal edge of the bag at the mouth thereof is folded over the straight bights 18 of jaws 16, the clamps will secure said marginal edge against accidental displacement even when the bags are subjected to a considerable amount of weight due to the material emptied thereinto. Each clamp 32 is pivoted at one end to its respective bight 18 through the medium of a transverse pin or rivet 34, passing through the depending sides of the clamp 32 and to insure that the clamp may be swung upwardly to extend perpendicularly to its respective bight 18, the depending sides of clamp 32 are extended as at 36 to receive the rivet 34. Strips 18 forming the bights of jaws 16 are disposed at an angle with respect to the longitudinal axes of the legs 20 as shown in Figs. 2 and 3. Thus the bights 18 are in parallelism when the jaws 16 are closed and are flared outwardly as indicated in dotted lines of Fig. 3 when the jaws are open and the mouth of the bag is distended to receive waste material. This is an important feature for the mouth of the bag is maintained closed by the close contact between the inner proximal edges of clamp 32 when the jaws are in a shut condition. An operating member 38 is in the form of a U-shaped yoke overlapping the legs 14 of frame 10 and extending to a point near the base of said legs where the free ends of the arms 40 and yoke 38 are engaged by the member 22 which serves to pivotally support one of the jaws 16. Member 28 which pivotally interconnects the inner overlapped ends of links 24 and 26 is extended outwardly through a slot 42 formed in the legs 14 of frame 10 and into engagement with a slot 44 provided in the respective proximal arm 40 of operating member 38. In other words, each end of jaws 16 are operably joined to member 38 through links 24 and 26 and pin 28. Pin 28 rides along slots 42 and 44 as member 38 is shifted to and from the position shown in full lines of Fig. 3 and when the said member 38 is in the position illustrated in dotted lines of said figure the jaws are parted and the bag is open. The weight of member 38 and the position of links 24 and 26 (dotted lines of Fig. 3) is such as to employ the action of gravity to automatically move the jaws 16 to the closed position as soon as the lifting action on member 38 is discontinued. In other words, when the bag is to be opened, member 38 is pushed upwardly to the dotted line position shown in Fig. 3 and after the material has been dropped into the bag held by jaws 16 and the upward force on member 38 is released, the entire mechanism will return to the closed condition. Holes 46 in frame 10 may be employed to mounting bag holder in a convenient location for use.

The form of the bag holder illustrated in Figs. 5 to 9 inclusive, is slightly different from that just described. Frame 100 is precisely the same in form with the exception of the slots in the legs 102 thereof and jaws 104 are of the same form as previously described. They are U-shaped, have legs 106 and bights 110 with each of which is associated a U-shaped clamp 112 pivotally secured as at 114. Links 116 and 118 are provided at each end of jaws 104 to insure equal-

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ized movement when the mechanism is moved from the position shown in full lines of Fig. 6 to the condition shown in dotted lines of said figure. A spring 120 having one end secured as at 122 to frame 100 and the other end secured as at 124 to one of the legs 106 of one of the jaws 104, yieldably maintains the said jaws in the shut position. Means for actuating the jaws in this form of the invention is a lever 126 rebent upon itself and journaled in an opening 128 formed in one leg 102 of frame 100. Lever 126 is bent at an acute angle as illustrated in Fig. 6 and one arm 130 of lever 126 is shorter than that to be engaged by the hand of the operator. The free end of arm 130 is notched as at 132 to embrace one edge of the legs 106. This frictional engagement between the members, when the parts are designed and proportioned as shown in Fig. 6, will cause jaws 104 to move apart when lever 126 is forced downwardly to the dotted line position of Fig. 6. When lever 126 is in such downward position, arm 130 will be substantially horizontal and an upward force on lever 126 will lift the arm 130 to an angle where the strength of spring 120 will snap jaws 104 back and hold the same together in the shut position.

The advantages arising from a bag holder made as illustrated in Figs. 5 to 9 inclusive are substantially the same as those emanating from the invention as it is shown in Figs. 1 to 4 inclusive.

It is understood that such modifications and changes as fall within the scope of the invention may be made without departing from the terms of the appended claims.

Having thus described my invention what I claim as new and desire to be secured by Letters Patent is:

1. A bag holder of the kind specified comprising a frame; a pair of substantially parallel, U-shaped bag supporting jaws pivotally mounted on the frame for movement to and from a closed position where the bights of the jaws are in juxtaposition and the bag is held shut; a manually manipulable operating member shiftably carried by the frame for actuating the jaws to and from the closed position, said operating member being held at one end of its path of travel where the jaws are closed by the action of gravity; a pair of links interconnecting the jaws to insure equalized movement about the respective axes of the jaws, said operating member being joined to the links whereby movement of the said member is imparted to the jaws through the said links; and a pin for pivotally joining said links, said member being U-shaped and having a slot in one leg thereof through which said pin projects for sliding movement therein.

2. A bag holder of the kind specified comprising a frame; a pair of substantially parallel, U-shaped bag supporting jaws pivotally mounted on the frame for movement to and from a closed position where the bights of the jaws are in juxtaposition and the bag is held shut; a manually manipulable operating member shiftably carried by the frame for actuating the jaws to and from the closed position; means for yieldably holding the jaws in a closed position when said operating member is at one end of its path of travel; and links interconnecting the jaws to insure equalized movement about the respective axes of the jaws, said operating member being a lever slidably engaging one of the legs of one of said jaws and formed to move the jaws from each other about their pivots as pressure is applied to the lever.

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3. A bag holder of the kind specified comprising a frame; a pair of substantially parallel, U-shaped bag supporting jaws pivotally mounted on the frame for movement to and from a closed position where the bights of the jaws are in juxtaposition and the bag is held shut; a manually manipulable operating member shiftably carried by the frame for actuating the jaws to and from the closed position; a retrieving spring attached to one of said jaws for yieldably holding the jaws in a closed position; and links interconnecting the jaws to insure equalized movement about the respective axes of the jaws, said operating member being a lever slidably engaging one of the legs of one of said jaws and formed to move the jaws from each other about their pivots as pressure is applied to the lever.

4. A bag holder of the kind specified comprising a frame; a pair of substantially parallel U-shaped bag supporting jaws pivotally mounted on the frame for movement to and from a closed position where the bights of the jaws are in juxtaposition and the bag is held shut; a manually manipulable operating member shiftably carried by the frame for actuating the jaws to and from the closed position; a retrieving spring interconnecting the frame and one of said jaws, said spring being disposed to yieldably hold the jaws in the closed position; and links interconnecting the jaws to insure equalized movement about the respective axes of the jaws, said operating mem-

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ber being a lever pivotally mounted on the frame and having an arm slidably engaging one leg of one of said jaws when said lever is manipulated, said operating member being held at one end of its path of travel by said one leg when the jaws are held closed by said spring.

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