

April 10, 1928.

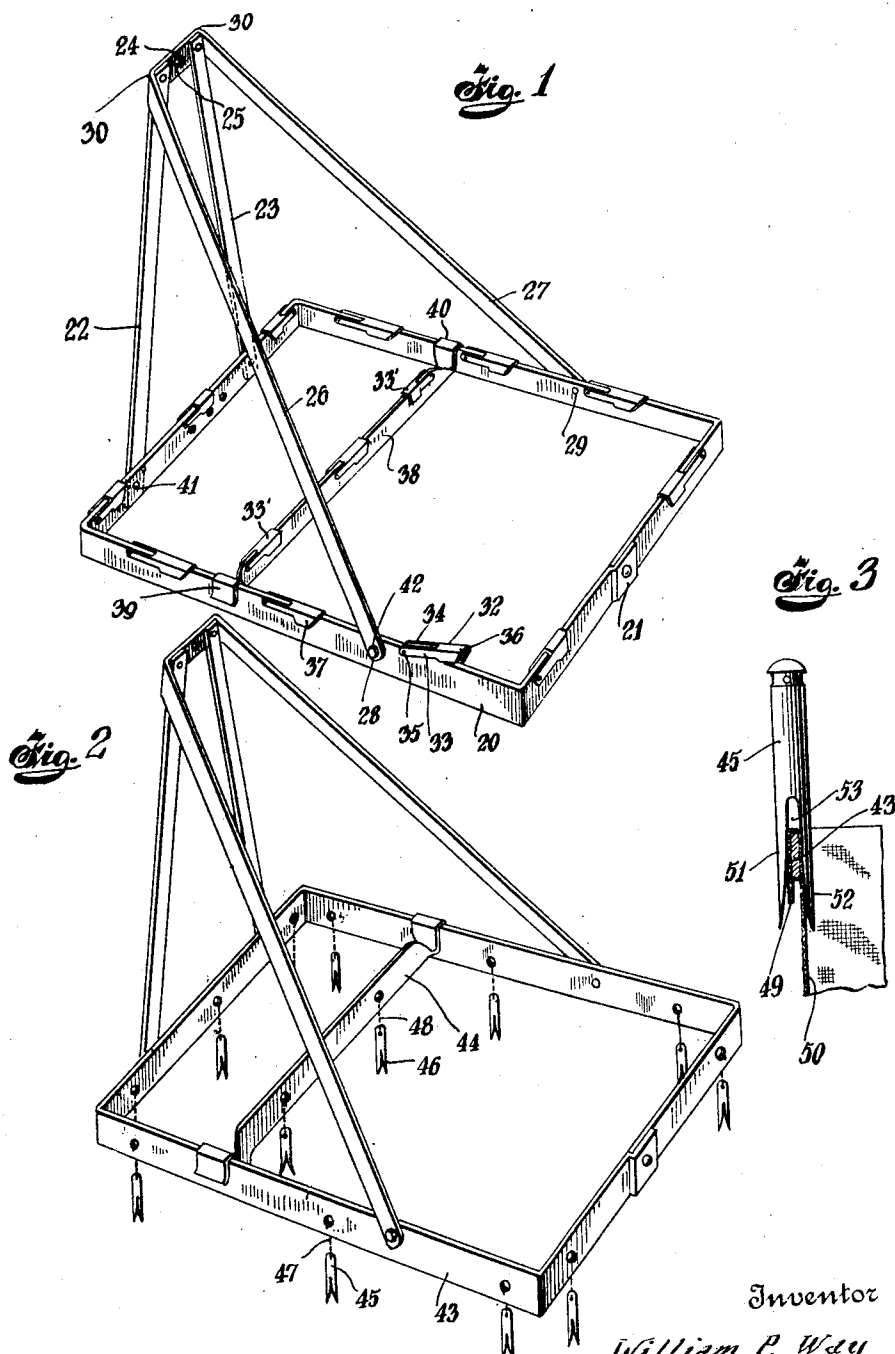
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BAG HOLDER AND SPREADER

Filed Feb. 12, 1927

3 Sheets-Sheet 1



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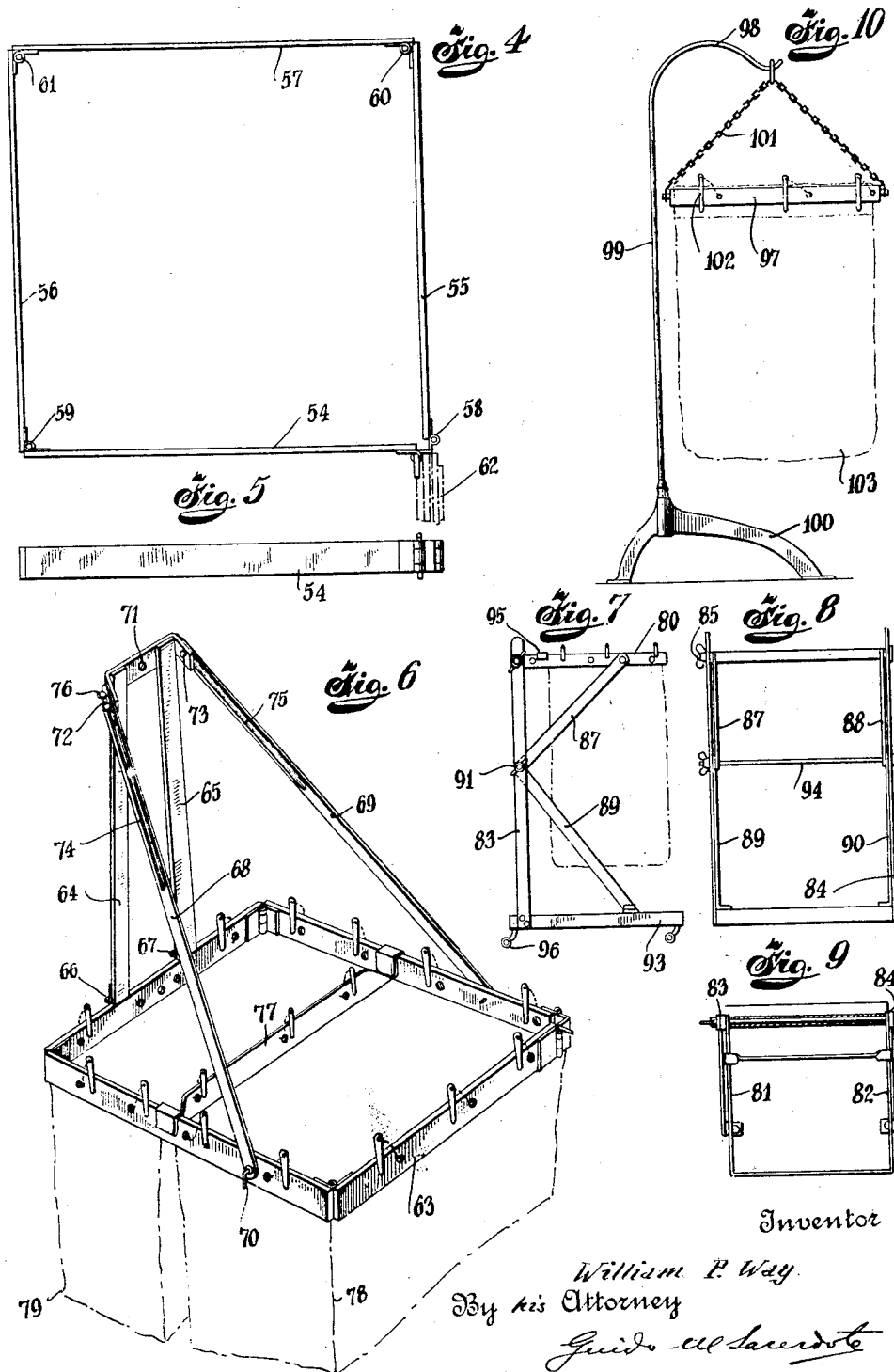
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3 Sheets-Sheet 3

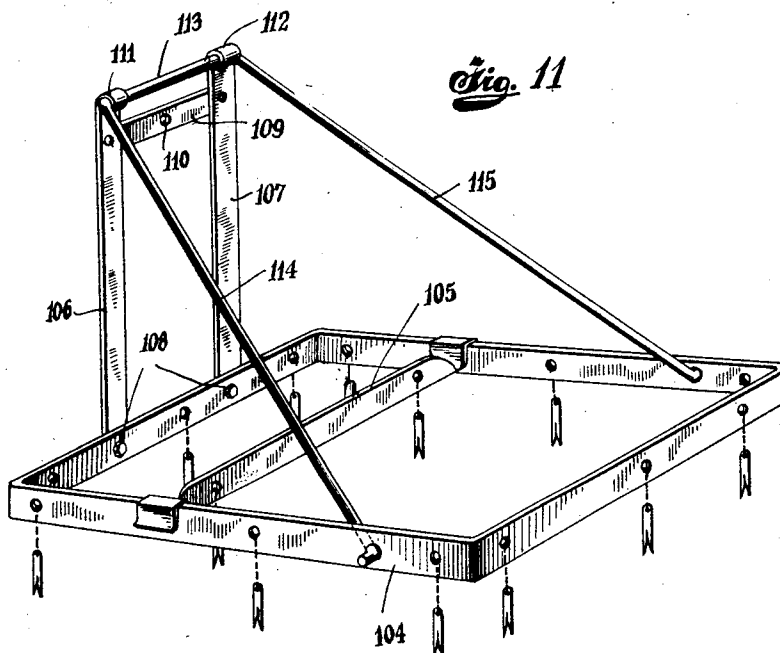
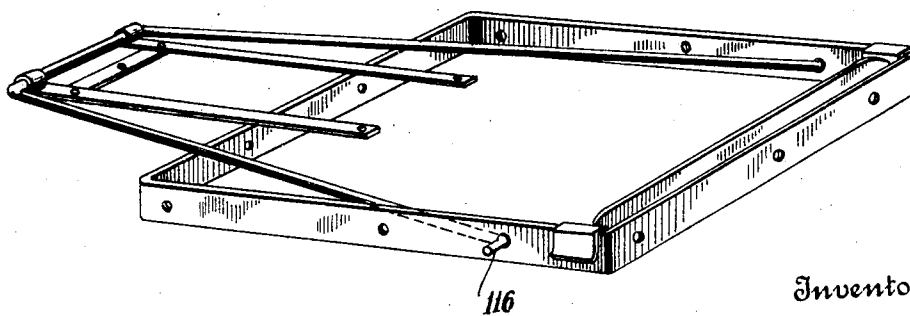


Fig. 12



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BAG HOLDER AND SPREADER.

Application filed February 12, 1927. Serial No. 167,733.

This invention relates to devices for holding bags in a suspended position and with the mouth open to permit the filling thereof, and its primary object is to provide a simple and inexpensive device adapted for home use for holding bags in a convenient position for receiving scrap paper, waste, etc.

Another object of the invention is to provide a simple and inexpensive device of a collapsible or demountable nature adapted to provide a convenient means of suspending a bag with its mouth open, ready for filling, said device being equipped with easily operated, positive means for clamping the bag in position.

A still further object is to provide in a device of the class specified, means of a simple character for adjusting the part of the frame from which the bag is to be suspended to the size of the mouth of the bag.

Other objects and advantages of the present invention will more fully appear as the description proceeds and will be set forth and claimed in the appended claims.

Bags of all sizes and descriptions are ordinarily employed in small homes for the collection of paper scraps, waste materials, and the like; but as a general rule, these bags are placed on the floor of the cellar, or else they are hung onto a nail upon the wall, and in either case they constitute a constant source of danger from fire; they are apt to create unsanitary conditions especially when gathering dust from the floor, and altogether they are unsightly objects, out of place in a well ordered home.

I have therefore devised a simple and convenient appliance in the nature of a frame onto which the edge of the bag's mouth may be secured, adapted to hold the bag in a suspended position, detached from the wall and from the floor; thus eliminating at one stroke all objections which apply to the present method from a sanitary standpoint, materially decreasing the fire risk, and insuring a condition whereby the bag is held wide open at all times, ready to receive waste materials in bulk without any difficulty.

The device is also provided with means for positively securing the bag's mouth's edge to the frame at various points, thus distributing the weight of the bag, said means being pref-

erably of such a nature as to absolutely prevent any damage to the bag itself.

In the annexed drawings, I illustrate a few typical embodiments of my invention, and in the same:

Fig. 1 is a view in perspective of a device illustrating one of the possible embodiments of my invention;

Fig. 2 is a perspective view of the same device provided with a different arrangement of clamping means for securing a bag to the device;

Fig. 3 is a detail cross sectional view in elevation of one of the sides of the frame, illustrating the preferred way of securing the bag onto the frame;

Fig. 4 is a detail plan view of a collapsible frame which may be used in connection with my device;

Fig. 5 is a front view in elevation of the same;

Fig. 6 is a view in perspective of a foldable frame also embodying my invention;

Fig. 7 is a side view in elevation of a bag holder frame mounted on a stand;

Fig. 8 is a front view in elevation of the same;

Fig. 9 is a plan view of the same;

Fig. 10 is a side view in elevation of a bag holding frame suspended from an arm laterally extending from a foot stand;

Fig. 11 is a view in perspective of a foldable frame of a construction somewhat different from the one shown in Fig. 6; and

Fig. 12 is a view in perspective of the same folded up ready for packing.

My invention comprises essentially a relatively light frame along which the edge of a bag's mouth may be secured, allowing the open bag to hang down therefrom, and means for holding the frame in position.

In the preferred form, the means for securing the bag onto the frame are also an integral part of the device, being permanently attached to said frame. The device is also preferably provided with means for adjusting the outline of the portion of the frame onto which the bag is attached, to the sides of the bag, the means provided to this end being eventually also adapted to divide the frame into two portions, each of which may be used to hold a separate bag.

The device illustrated in Fig. 1, comprises a square or rectangular frame 20, preferably made of a single flat metal strip bent in the desired shape and having its two ends joined at 21. Two suspension members 22, 23, also made of flat metal strips, extend upwardly at the rear of the frame and are preferably made to converge so that their upper ends are relatively close to each other, being connected and reinforced by a transversal member 24.

Said member 24 may be provided with an opening 25 by means of which the device may be suspended to a wall.

The device is furthermore provided with two side braces 26, 27, extending forwardly and downwardly from the upper part of the uprights, connecting the same to the forward portion of the sides of the frame as shown at 28, 29. Said braces are preferably made integral with transversal member 24 merely by bending a piece of strip metal at 30, 31.

The upper edge of the bag may be folded over the frame and then clamped in position at various points by means of clamping members such as 32, provided at various points along the frame. Said clamping members are obtained from a piece of sheet metal bent to form two legs 33, 34, which may be pivotally attached to the frame at the rear as shown at 35; the front part of said two legs being joined by a bridge portion 36 and being provided with two downward extensions such as 37 adapted to embrace the upper edge of the strip out of which the frame is formed.

By virtue of this arrangement the bag is suspended from various points of its upper edge so that the load is fairly well distributed all along the periphery of the bag mouth.

In view of the fact that bags vary in size to a considerable extent, I also prefer to equip the frame with a removable transverse frame member such as 38, having its two ends bent to form clamping members 39, 40, adapted to be inserted over the longitudinal sides of the frame at any desired point. Said transverse member is also provided with clamping devices 33', and is adapted to complete a section of frame delimited by one of the ends of said frame and by the two portions of the sides intervening between said end and the transverse member.

The various parts of which the frame is composed with the exception of the removable transverse member may be permanently connected together, but in order to reduce the bulk of the device and in order to arrange it in a manner convenient for packing and shipping, I prefer to connect the various parts by means of screws or small bolts such as 41, 42, so that the entire structure may be taken apart and compactly arranged in a substantially flat shallow package, the width and length of which substantially

correspond to the width and length of the frame.

Although the device described is very simple, I have found that the operation of attaching and detaching a bag from the frame may be carried out more quickly and conveniently if the clamping members hang freely from the frame instead of interfering with the clamping space thereof.

I have also found that by adopting simple clamping members of the type resembling the well known clothes pins universally used for hanging clothes on lines, the cost of manufacture may be somewhat reduced.

Such an arrangement of clamping means is illustrated in Figs. 2 and 3 where the frame 43 and the transverse member 44 are both provided with a plurality of bifurcated clamping members 45, 46, distributed at various points along said frame and transverse member, being suspended therefrom by means of chains or flexible suspension means 47, 48.

The manner of using this type of clamping members, is clearly illustrated in Fig. 3, where it is seen that the edge 49 of the bag 50 is folded over the top edge of the frame 43 and is then clamped in position by the two legs 51, 52, formed at the lower end of the clamping member by a wedge slot 53 of a suitable width.

In Figs. 4 and 5, I illustrate the possibility of also making the frame itself of a collapsible nature. The frame is composed of four sides 54, 55, 56, 57, connected by hinges 58, 59, 60, 61, at the corners. One of said hinges such as for instance 58 may be a double hinge, and the opposite hinge 61 may have a removable pin making it possible to disconnect side 56 from side 57. When this is done, said sides 56, 57 may be folded inwardly to abut against sides 54, 55, respectively, and then said sides 54, 55 may be spread apart and turned over to form a zigzag closed structure such as fragmentarily illustrated in dotted lines at 62.

The structure may be made foldable or collapsible without entailing the necessity of disassembling its various parts. For instance, in Fig. 6, I illustrate a frame 63, to which the upright members 64, 65 at the rear are attached by means of hinges 66, 67, permitting said uprights to be folded inwardly, parallel to the frame. The side braces 68, 69, are attached to the sides of the frame by means of detachable hook and eye connections, such as 70, and furthermore they are preferably connected to the upper transverse member 71, extending between uprights 64, 65, by means of pin and slot connections provided by pins 72, 73, laterally projecting from the transverse member, slots 74, 75 provided at the upper end of braces 68, 69, through which said pins are inserted, and wing nuts such as 76, affording

means for securing said braces onto said pins.

For packing and shipping purposes, the device is folded relatively flat without disassembling it, merely by detaching the lower ends of braces 68, 69 from the sides of the frame, then folding the uprights 64, 65, inwardly, parallel to the frame and then releasing nuts 76 in order to slide braces 68, 69 inwardly, so as to arrange them symmetrically lengthwise of the frame.

The frame may be of the rigid type as shown in Figs. 1 and 2, or else it may be of the collapsible type as shown. In this case also, I prefer to provide the frame with a transverse removable member 77, adapted to be placed at any intermediate position between the front and the rear sides of the frame. This transverse member affords the added advantage which is illustrated in Fig. 6, of enabling the frame to be used to hold two bags 78, 79, open one in front of the other, as shown.

In this manner, with a single frame, I provide means for suspending two bags with their mouth open ready to receive waste materials so that different classes of waste may be separately collected in the two bags.

The two bags which can thus be suspended from a single frame, provide therefore a convenient means for collecting empty cans and metal scrap in one bag and scrap paper and rags in the other bag.

In Figs. 7, 8, and 9, I illustrate a device designed for the same purpose, comprising a U frame 80, open at the rear end, where its leg or side members 81, 82, are connected to uprights 83, 84, by means of a through bolt 85, being spaced by a tubular member 86, inserted over said bolt between said two leg members.

The sides of said frame are supported by inclined braces 87, 88, extending downwardly therefrom to the sides of uprights 83, 84, and said uprights are furthermore supported and reinforced by additional braces 89, 90, extending from point 91 of attachment of braces 87, 88, to point 92 of the base 93, on which the entire structure rests. The connection between braces 87, 88, and 89, 90, with uprights 83, 84, is obtained by means of a through bolt 94, as shown.

The fourth side of the frame is constituted by a transverse member 95, which may be removably placed on top of the side members 81, 82, although it is not always necessary to attach the bag all around, especially when only light weight materials such as scrap paper are collected in the bag. In such cases, the removable transverse member of the frame may be omitted, the bag being attached only along three sides of the frame, and the resulting arrangement being sufficient to satisfactorily answer such light duty requirements.

In the arrangement described, the frame 80 is placed at a sufficient distance from the base to accommodate the bag as shown in dot-and-dash lines in Fig. 7. The arrangement is particularly suitable for use where it is not possible or desirable to hang the frame from the wall, and is also particularly useful in such cases where it would be convenient to move the bag from place to place in order to collect waste at various points.

The device may obviously acquire other forms. For instance, in Fig. 10, I illustrate a frame 97, which may be round, or square, or rectangular, suspended from an arm 98 laterally extending from a standard or upright 99 mounted on a base 100. The frame may be suspended from arm 98 in any suitable manner, for instance by means of chains 101 as shown, said frame being provided like in the previous cases with means for attaching the bag onto a frame such as clamping pins 102. The bag 103, is shown in dot-and-dash lines hanging from the frame with its mouth open.

In Figs. 11 and 12, I illustrate another type of collapsible device, the construction of which is somewhat different from that illustrated in Fig. 6. In the same 104, designates the frame, 105 the transverse movable frame member, the use of which is optional as stated. Like in the case of Fig. 6, the frame is provided with two uprights 106, 107, at the rear which are attached to the frame by means of bolts or screws 108. At the top, said uprights are preferably connected by transverse member 109, provided with an opening 110, for a suspending hook or screw.

The upper end of said uprights is turned over to form coaxial eye portions 111, 112, and through these is inserted a piece of round metal wire or rod 113, having its ends bent inwardly and downwardly to form braces 114, 115. The outer ends of said braces are turned outwardly at right angle so as to be insertable through holes 116, provided at the forward end of the sides of the frame, as shown. Said two brace members 114, 115, may be inserted in position merely by forcing them inwardly, to permit of their ends being inserted between the sides of the frame in correspondence of openings 116, and then releasing the pressure and allowing the outwardly bent ends of said brace members to penetrate through holes 116, due to the resiliency of the material itself.

The resulting structure is illustrated in Fig. 11, and in Fig. 12; it will be seen that the brace members may be folded downwardly about their outer ends inserted in holes 116, as a fulcrum, and the uprights may be turned frontwardly so as to remain horizontally disposed close to the frame, merely by removing bolts or screws 108.

This construction has the advantage previously pointed out in connection with the device of Fig. 6, of permitting packing and shipping of the device in a relatively shallow package, the present construction being somewhat less expensive and therefore preferable to that of Fig. 6, due to the use of the spring acting braces made integral with cross member 113.

From the foregoing, it is seen that I produce a relatively simple and inexpensive device thoroughly efficient and serviceable, affording a convenient means of collecting waste matter in a sanitary and orderly manner.

The details of construction of the device may vary from those shown and described without departing from the inventive idea, and the drawings should be understood as being intended for illustrative purposes only and not in a limiting sense; therefore, I reserve myself the right to carry my invention into practice in all those ways and manners which may enter fairly into the scope of the appended claims.

I claim:

1. A device of the class described, comprising a substantially rectangular bag holding frame having two ends and two opposing sides, and a movable member adapted to bridge the space between said sides at various distances from said ends in order to adjust the size of the frame portion delimited thereby.

2. A device of the class described, comprising a substantially rectangular bag holding frame having two ends and two opposing sides, a movable member adapted to bridge the space between said sides at various distances from said ends in order to adjust the size of the frame portion delimited thereby, and means for clamping the edge of the bag at various points along said frame and movable member.

3. A device of the class described, comprising a substantially rectangular bag holding frame having two ends and two opposing sides, a movable member adapted to bridge the space between said sides at various distances from said ends in order to adjust the size of the bag holding frame portion delimited thereby, a plurality of bifurcated wedge members adapted to clamp the edge of a bag onto said frame and movable member, and flexible means for attaching said wedge members to said frame and movable member.

4. A device of the class described, comprising a substantially rectangular frame, an upright detachably secured to said frame, brace members extending forwardly and downwardly from the upper end of said upright to the sides of said frame, said brace members being pivotally connected to said upright and to said frame in order to

provide a foldable structure, a movable cross member adapted to bridge the space between two opposing sides of said frame in order to adjust the bag holding portion of said frame, and wedge members adapted to clamp the edge of a bag onto said frame at various points along the periphery thereof.

5. A device of the class described, comprising a substantially rectangular closed frame having two ends and two opposing sides, provided with a transversal member adapted to bridge the space between said sides at various points and to divide said frame into two bag holding sections, means for supporting said frame, and means for clamping the mouth's edges of two bags, one onto each of said sections at various points spaced along said frame and said transversal member.

6. A device of the class described, comprising a bag holding member made of flat metallic strip bent to form a substantially rectangular frame, a suspending member therefor, detachably secured to the rear thereof, and a reinforcing member consisting of a length of metallic rod bent to form a cross member pivotally connected to said suspending member, and two brace members depending therefrom adapted for pivotal connection to the sides of said frame.

7. A device of the class described, comprising a bag holding member made of flat metallic strip bent to form a substantially rectangular frame, a suspending member therefor, detachably secured to the rear thereof, and a reinforcing member consisting of a length of metallic rod bent to form a cross member pivotally connected to said suspending member, and two spring acting brace members depending therefrom, the outer ends of said brace members being bent outwardly and being adapted to snap into pivotal connection with the sides of said frame.

8. A device of the class described, comprising a bag holding member made of flat metallic strip bent to form a substantially rectangular frame, a suspending member therefor, detachably secured to the rear thereof, a reinforcing member consisting of a length of metallic rod bent to form a cross member pivotally connected to said suspending member, and two brace members depending therefrom adapted for pivotal connection to the sides of said frame, a movable cross member adapted to bridge the space between two opposing sides of said frame, and wedge members adapted to clamp the edge of a bag onto said frame and cross member at various points along the periphery thereof.

9. A bag holder and spreader comprising a supporting frame comprising side, front and rear members, a suspending member attached to the rear frame member, bracing members connected to the suspending mem-

ber and to the side frame members, and a plurality of individually independent clamping members spaced on the periphery of the frame for clamping the open end of a bag 5 to the frame.

10. A bag holder and spreader comprising a supporting frame comprising side, front and rear members, two spaced upright members secured at their lower ends to the rear frame member, a transverse member 10 secured to the upper ends of said upright members, and side bracing members extending from the upper ends of said upright members and connected to opposite side members of the frame.

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