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2,470,271

RECEPTACLE SUPPORT

Filed Sept. 4, 1945

2 Sheets-Sheet 1

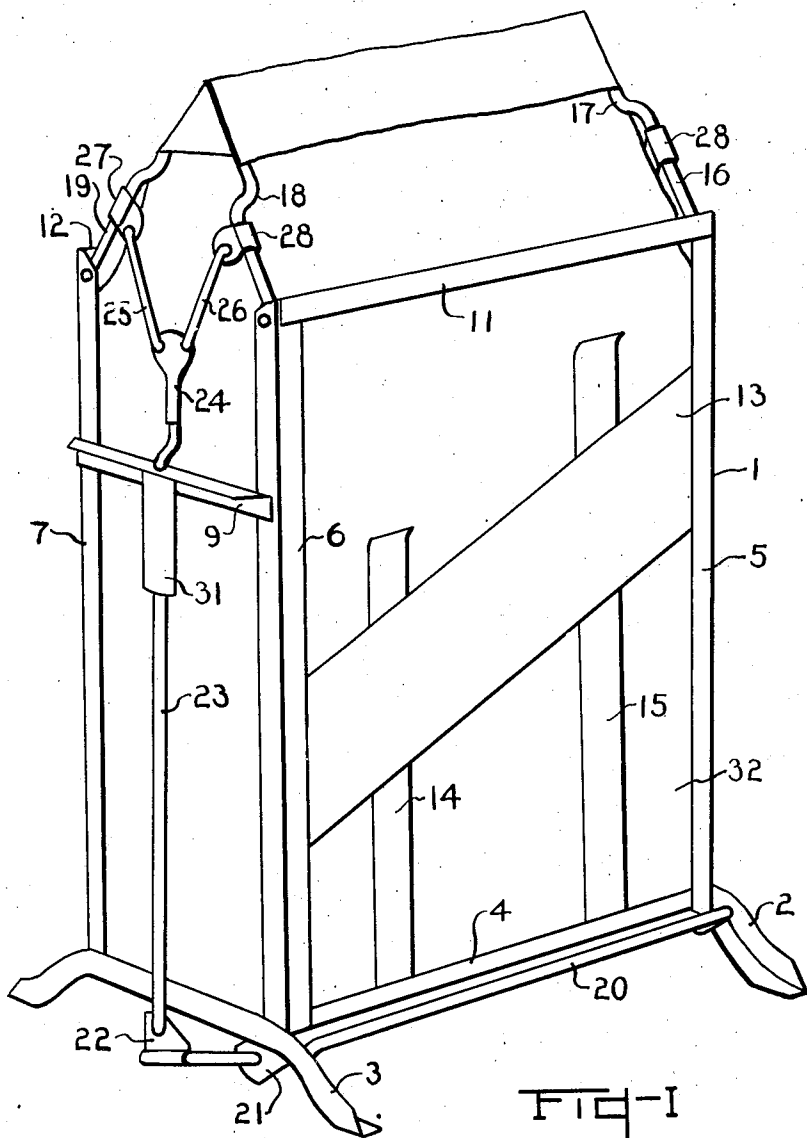


FIG-1

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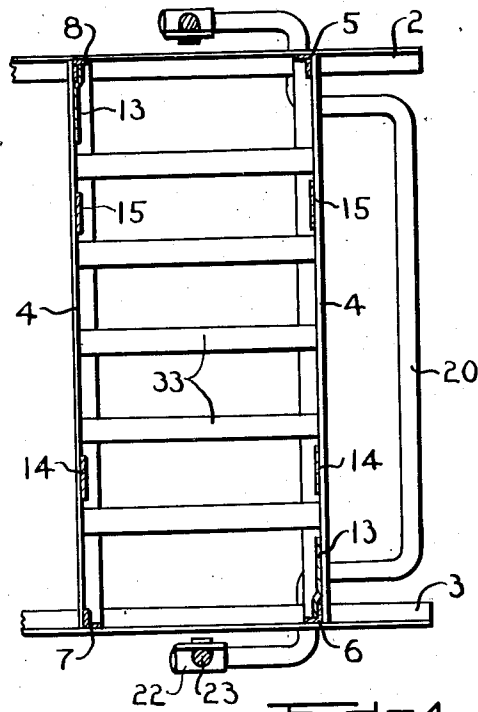
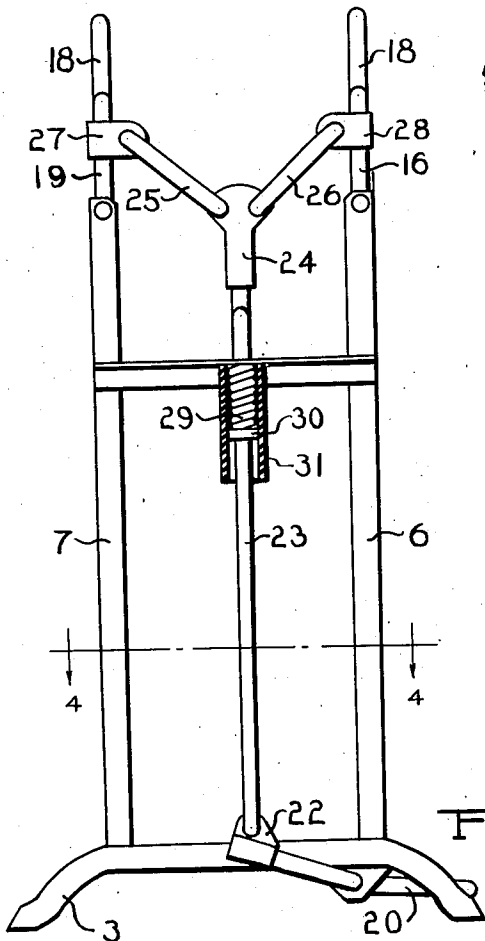
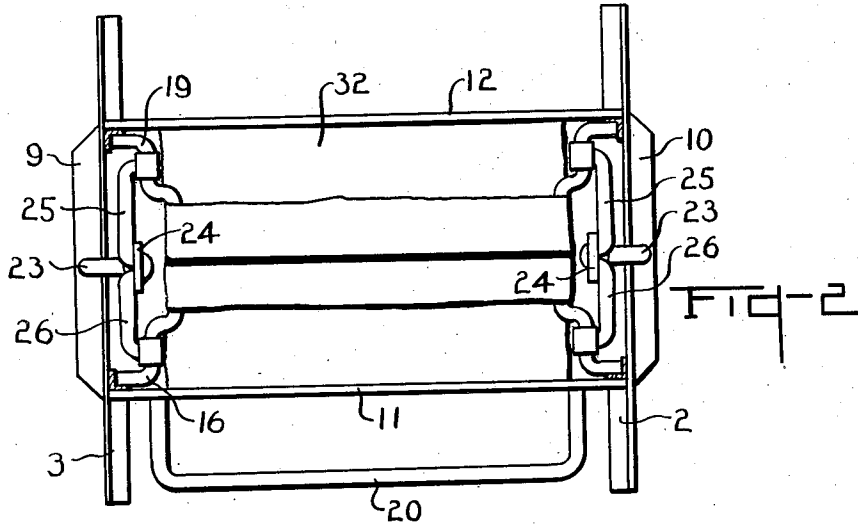
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2 Sheets-Sheet 2



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RECEPTACLE SUPPORT

Le Roy S. Steinbacher, Battle Creek, Mich.

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11 Claims. (Cl. 248—97)

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The present invention relates broadly to receptacles, and in its specific phases to a bag containing assembly with a foot operated mechanism for opening and closing the bag top.

In the handling of garbage or other material which may be of waste character, or otherwise, it has been common practice to use a garbage pail set in a housing with foot operated cover. Those garbage pail assemblies are not wholly satisfactory since they are filthy, require washing at regular intervals, and in use rust out in a relatively short time. The use of a bag with the top turned out over a fixed size supported ring has also been proposed, but that construction presents the disadvantage of the contents of the bag being exposed at all times to the atmosphere and access of flies, thus producing an unsanitary condition. It was with a knowledge of these and other disadvantages and shortcomings of the receptacles on the market which led to the discovery and development of the present invention.

Accordingly among the objects of the present invention is the provision of a bag holding receptacle with foot operated means for opening and closing the top of the bag.

Another object is the provision of a light weight receptacle wherein the foot operated bag top opening mechanism will automatically close the bag top when the operator's foot is removed.

Another object is to provide an assembly in which a bag is mounted with its upper end connected to a pair of pivoted members adapted to be simultaneously moved to and from each other in manner closing and opening the bag top.

A further object is to provide a receptacle in which a bag is mounted with its upper end connected to a pair of pivoted members which are actuated by a foot operated mechanism so as to be simultaneously moved to and from each other in manner closing and opening the bag top.

A further object is to provide a garbage receiving receptacle utilizing a moisture proof bag the top of which is opened and closed by a foot operated mechanism so as to seal the bag between intervals of use and make same more sanitary.

A further object is to provide a foot operated closeable top bag containing receptacle, for garbage or other material, wherein the assembly is highly useful, of simple construction, and exceptionally attractive.

Still further objects and advantages of the invention will appear as the description proceeds.

To the accomplishment of the foregoing and

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related ends, the invention, then, consists of the means hereinafter fully described and particularly pointed out in the claims, the annexed drawings and the following description setting forth in detail certain means for carrying out the invention, such disclosed means illustrating, however, but one of various ways in which the principle of the invention may be used.

In the annexed drawings:

Figure 1 shows a perspective view of a preferred form of the present invention with a bag in place and its top closed.

Figure 2 shows a top view of the assembly illustrated in Figure 1, but with the bails and operating linkage shown on an exaggerated scale for clarity of understanding.

Figure 3 shows a partially sectioned side view of the assembly with the bag omitted, and the foot operated mechanism depressed in manner moving the bails to upright or open position.

Figure 4 shows a sectional view of the assembly as taken along line 4—4 of Figure 3, looking in the direction of the arrows.

Referring more particularly to Figure 1 of the drawings, the receptacle 1 has a pair of foot members 2 and 3 joined by a pair of angle members 4 spaced apart a distance equal to or slightly greater than the thickness of the unfolded bag to be used in the assembly. At the corner junctions of angle members 4 and foot members 2 and 3 are fastened substantially parallel upright angle corner members 5, 6, 7, and 8. The upper ends of corner members 6 and 7 are held in suitable spaced position by means of angle tie member 9, while the upper ends of corner members 5 and 8 are held in suitable spaced position by means of angle tie member 10. The upper ends of corner members 5 and 6 are suitably fastened together by strip member 11, while the upper ends of corner members 7 and 8 are suitably held in place by strip member 12. To stiffen the assembly and improve its appearance, a cross member 13 is used to join corner members 5 and 6 at points between their ends, the cross member 13 preferably being placed out of perpendicular to the corner members which it joins. Fastened to angle member 4 and to cross member 13 are a pair of guide members 14 and 15. For ease of inserting a bag into the assembly, the upper end of each of the guide members 14 and 15 is preferably curved outward. At the opposite side of the apparatus, and joined to corner members 7 and 8, is another cross member 13, with a second set of guide members 14 and 15 joined to it and to angle member 4.

Pivotally mounted on the upper end of each of the corner members 5 and 6 is a bail 16 which has offsets 17 and 18 for a purpose to be hereinafter described. Pivotally mounted on the upper end of each of the corner members 7 and 8 is a bail member 19 with offsets corresponding to offsets 17 and 18 of bail member 16.

A foot operated member 20 is pivoted at each end on supporting ears 21 which in turn are preferably fastened to foot members 2 and 3. Fastened on the free ends of foot member 20 are pivot members 22. Connected to pivot member 22 is a substantially upright link 23, the upper end of which passes through a suitable opening in angle tie member 9 and is offset inwardly thereabove. Mounted on the upper end of upright link 23 is a pivot member 24 on which are pivotally connected links 25 and 26. Link 25 in turn is joined to bail member 19 by means of a pivot member 27 fixedly mounted thereon. Link member 26 is likewise pivotally joined to bail 16 by means of pivot member 28 fixedly joined thereto. In order to hold bail members 16 and 19 in closed position as shown in Figure 1, a compression spring 29 (Figure 3) is mounted on upright link 23 between the under face of angle tie member 9 and a suitable stop member 30 mounted on the upright link. Compression spring 29 is so mounted and of such length that it will not only hold bails 16 and 19 in retracted position shown in Figure 1 but will also permit the bails to be swung outward to the upright position shown in Figure 3. As a matter of improving the appearance of the assembly a tubular sleeve 31 anchored to the under side of cross tie 9 may be used to enclose the compression spring 29. In preferred construction there will be a bail operating linkage at each end of the assembly as shown, although the invention is not limited to that construction since in a cheaper assembly only one such linkage would be used.

The offsets 17 and 18 of the bails are for the purpose of providing clearance for the bag 32 at the operating linkage ends thereof, a thing which avoids the necessity of closing in the end of the frame work and permits the bails and linkage to work more freely.

The type of bag 32 to be used will depend to considerable extent upon the type of material to be placed therein. Light weight dry material, for instance, could be readily handled by a conventional grocery type bag, while materials such as garbage would preferably be handled by means of a moisture proof bag which in extreme cases might be made from two or more plies of paper, adhesively fastened together with pitch or the like. That type of construction would not only hold moisture but would substantially prevent odors from passing through same.

Suitable means for supporting the bag 32 in the frame work may be provided and a simple form of same is cross slats 33, Figure 4, which may be spot welded or otherwise fastened to the turned flanges of angle members 4.

A bag 32 of suitable size for the frame is used therewith and such bag is preferably approximately one inch longer than the distance from the top of slats 33 to the upper end of bails 16 and 19, when same are in upright position, as shown in Figure 3. The excess length of the bag top is then folded down on the outside of the bag so that when the bag is to be inserted in place in the frame work, the offset upper end of bails 16 and 19 can be slipped in between the bag proper and the out-turned upper edge of same.

Then with the bails turned outward as shown in Figure 3, the top of the bag will be opened full size for the reception of material to be placed therein. During the period that the bag top is held open in this manner foot operating member 20 is in its depressed position. Most bags have a natural fold, or may be given one, so that they will bellows inward when pressure on the foot operating member 20 is released and bails 16 and 19 are forced together at their upper end under pressure exerted by compression spring 29. It thus becomes a simple matter to depress foot operating member 20 to open the upper end of the bag for reception of material and to remove the pressure on the foot operating member to allow the bag to be closed.

When it is desired to remove the bag, it is only necessary to open the upper end thereof by stepping on foot operating member 20 followed by lifting the bag upward out of the assembly. A new bag with suitably downturned upper edge may then be slipped in place inside the frame work and over the bails following which the apparatus is ready for use once more.

Other modes of applying the principle of my invention may be employed instead of the one explained, change being made as regards the article and its mechanism herein disclosed, provided the means stated by any of the following claims or the equivalent of such stated means be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A receiving and holding assembly for a removable refill container of foldable type having a closed bottom and an open top, comprising floor contacting means, upwardly extending open top means mounted on said floor contacting means and serving as a receiver of said container, pivoted means mounted on the upper end of said last named means, the upper end of said container being fastenable to said pivoted means, and means for actuating said pivoted means, whereby the foldable container top when mounted thereon may be opened and closed as desired.

2. A receiving and holding assembly for a removable refill container of foldable type having a closed bottom and an open top, comprising floor contacting means, an upwardly extending open top container receiving means mounted on said floor contacting means, a pair of bails pivotally mounted on the upper end of said container receiving means with the pivots at opposite sides thereof, the upper end of said container being fastenable to the top portion of said bails, and means connected to both of said bails for pivotally actuating same simultaneously, whereby the foldable container top when mounted thereon may be opened and closed as desired.

3. A receiving and holding assembly with a removable refill container of foldable type having a closed bottom and an open top, comprising floor contacting means, an upwardly extending open top container receiving means mounted on said floor contacting means, a pair of bails pivotally mounted on the upper end of said container receiving means with the pivots at opposite sides thereof, the upper end of said container being fastened to the top portion of said bails, a foot operated means, and a linkage connecting said foot operated means to said bails in manner such that when the foot operated means is depressed both of the bails will pivot away from each other simultaneously and open the top of the foldable container mounted thereon.

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4. A receiving and holding assembly with a removable refill container of foldable type having a closed bottom and an open top, comprising floor contacting means, an upwardly extending open top container receiving means mounted on said floor contacting means, a pair of bails pivotally mounted on the upper end of said container receiving means with the pivots at opposite sides thereof, the upper end of said container being fastened to the top portion of said bails, a foot operated means, a linkage connecting said foot operated means to said bails in manner such that when the foot operated means is depressed both of the bails will simultaneously pivot away from each other and open the top of the foldable container mounted thereon, and means for simultaneously moving said bails on their pivots back to initial position with the foldable container top closed when pressure on the foot operated means is released.

5. A receiving and holding means for a bag having an outturned and folded down top portion, which includes an upwardly extending open top body portion, and a pair of bails pivotally mounted on the upper end of same, the upper portion of said bails being adapted to be slipped into the outturned folds at the opposite sides of the top portion of said bag.

6. A receiving and holding means for a bag having an outturned and folded down top portion, which includes an upwardly extending open top body portion, a pair of bails pivotally mounted on the upper end of same, the upper portion of said bails being adapted to be slipped into the outturned folds at the opposite sides of the top portion of said bag, and means for pivotally moving both of said bails in manner opening and closing the top of said bag.

7. A receiving and holding means for a bag having an outturned and folded down top portion, which includes an upwardly extending open top body portion, a bag supporting means at the bottom of said body portion, a pair of bails pivotally mounted on opposite sides of the top of said body member, the upper portion of said bails being adapted to be slipped into the outturned folds at the opposite sides of the top portion of said bag, and means for pivotally moving both of said bails in manner opening and closing the top of said bag.

8. A receiving and holding means for a bag having an outturned and folded down top portion, which includes an upwardly extending open top body portion, a bag supporting means at the bottom of said body portion, a pair of bails pivotally mounted on opposite sides of the top of said body member, the upper portion of said bails being adapted to be slipped into the outturned folds at the opposite sides of the top portion of said bag, means for pivotally moving both of said bails so as to open the top of said bag, and means in connection with said last named means for pivotally moving both of said bails in manner closing the

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top of said bag when opening pressure is released.

9. A receiving and holding means for a bag having an outturned and folded down top portion, which includes an upwardly extending open top body portion, a bag supporting means at the bottom of said body portion, a pair of bails pivotally mounted on opposite sides of the top of said body member, the upper portion of said bails being adapted to be slipped into the outturned folds at the opposite sides of the top portion of said bag, a linkage connected to said bails, foot operated means connected to said linkage for pivotally moving both of said bails so as to open the top of said bag, and means connected to said linkage for pivotally moving both of said bails to close the top of said bag when the opening pressure on the foot operated means is released.

10. An apparatus of the character described adapted to receive, hold, and manipulate the opening and closing of the upper end of a bag having an outturned and folded down top, such apparatus having a pair of downturned U-shaped pivoted bails with substantially straight upper edges adapted to engage the outturned and folded down bag top and be moved in unison from inturned juxta-position to substantially upright position and back, whereby the foldable top of the bag is opened and closed.

11. A receptacle for holding an outturned and folded down top bag in upright position, which consists of a body member, means at the bottom of said body member for supporting said bag, means at the sides of said body member for supporting the sides of said bag, a pair of upwardly extending bails each of which are of inverted U-shape with the points outturned and pivotally mounted on opposite sides of the top of said body member, the upper end of each of said mounted bails being offset to a narrower width to provide clearance for the ends of said bag when the latter is mounted thereon, the upper end of said bails being adapted to be slipped into the outturned and downwardly extending folds at the opposite sides of the top of said bag, a linkage connected to said bails, a foot operated means connected to said linkage for pivotally moving both of said bails simultaneously so as to open the top of said bag, and spring means connected to said linkage for pivotally moving both of said bails simultaneously to foldably close the top of said bag when the opening pressure on the foot operated means is released.

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