Oct. 23, 1956 H. B. MARDER 2,767,757

RECEPTACLE CONSTRUCTION

Filed April 20, 1955 2 Sheets-Sheet 1

Fig. 1

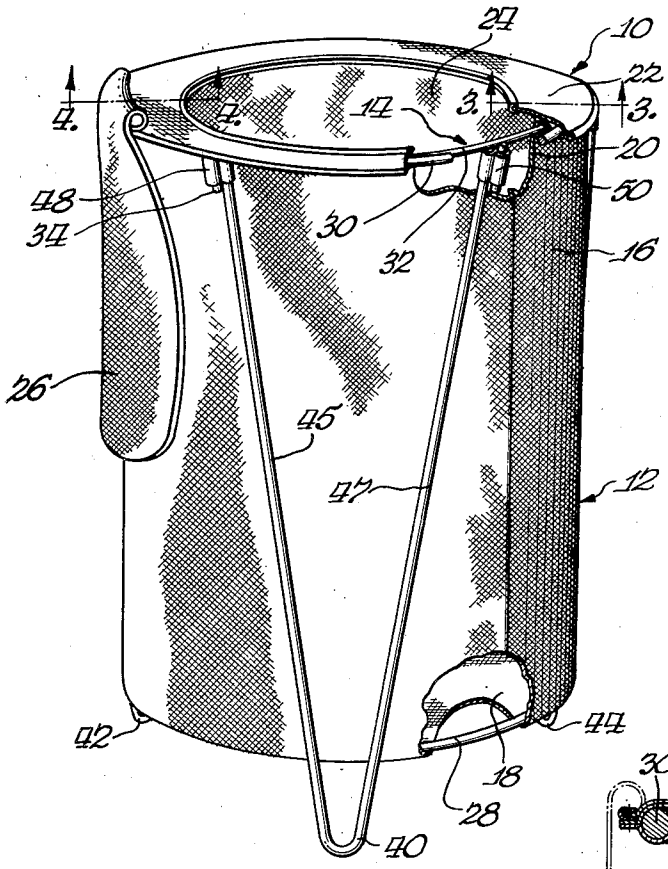


Fig. 3

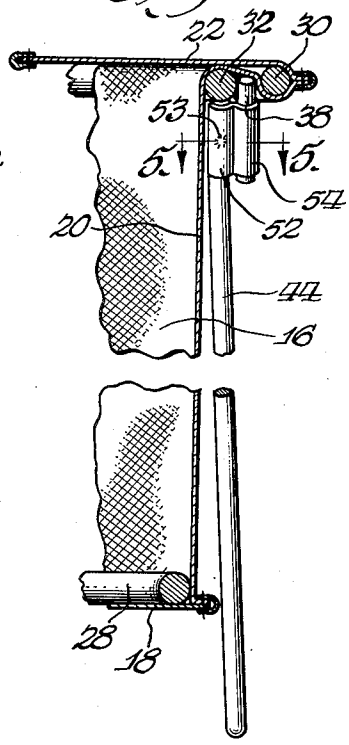


Fig. 4

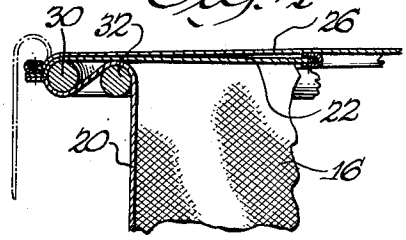


Fig. 2

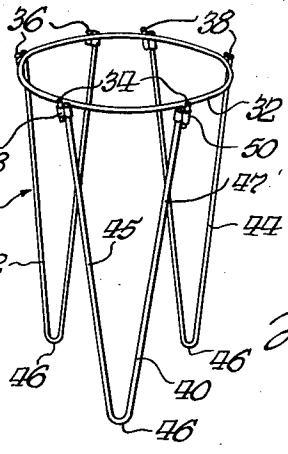
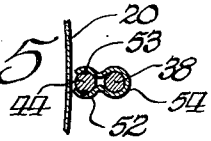


Fig. 5



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Fig. 6

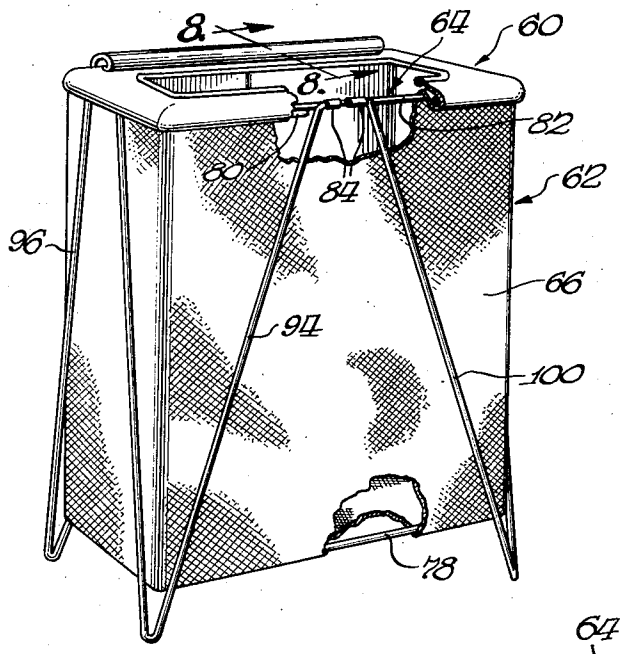


Fig. 7

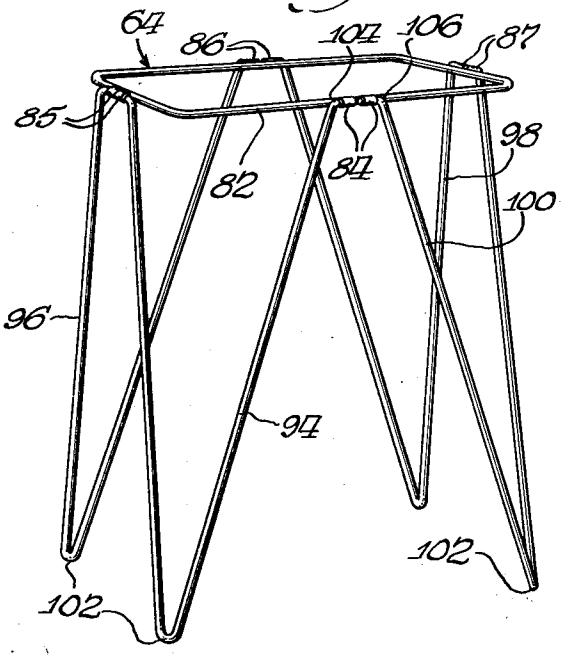
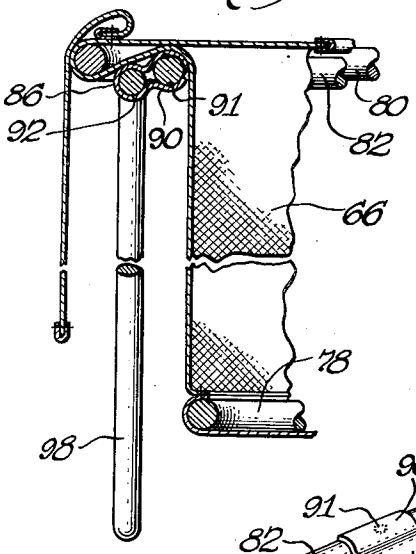


Fig. 8



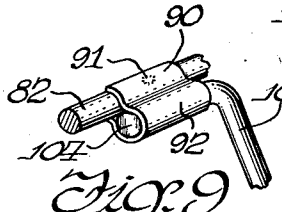


Fig. 9

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United States Patent Office 2,767,757 Patented Oct. 23, 1956

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RECEPTACLE CONSTRUCTION

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Application April 20, 1955, Serial No. 502,594

3 Claims. (Cl. 150—51)

This invention relates generally to a self-supporting receptacle, and more particularly to a collapsible container and a supporting frame therefor.

It is a primary object of this invention to provide a receptacle of novel construction for use as a laundry hamper, wastebasket, or like container, wherein an inexpensive knock-down assembly is achieved, employing a freely supported, fabric bag capable of being conveniently removed for separate carrying and laundering.

It is another object of this invention to provide a receptacle comprising, in combination, a collapsible container and base frame wherein the frame includes a base ring fixedly positioned in elevated relation for co-operation with a pair of form rings disposed within a fabric bag so as to freely suspend the bag within the frame in expanded form.

It is a further object to provide a collapsible container and base frame combination of the type described, which is readily adaptable to construction in a variety of convenient geometric forms.

It is still another object to provide a supporting frame for suspending a collapsible container in expanded form, where the frame includes a base ring and a plurality of rigidly secured, but readily detached, legs co-operating therewith to position the ring in elevated relation.

Further objects and advantages of this invention will become apparent as the following description proceeds, and the features of novelty which characteirze this invention will be pointed out with particularity in the claims annexed to and forming part of this specification.

A preferred embodiment of the invention is shown in the accompanying drawing, in which:

Figure 1 is a perspective view, partly broken away, of a container and frame combination constructed in accordance with the present invention, wherein the collapsible bag is of generally circular cross-sectional form;

Figure 2 is a perspective view, on a reduced scale, of the base frame structure employed in the construction of Figure 1;

Figure 3 is a fragmentary vertical cross-sectional view, on an enlarged scale, taken substantially as indicated by the line 3—3 on Figure 1;

Figure 4 is another fragmentary vertical cross-sectional view taken substantially as indicated by the line 4—4 on Figure 1;

Figure 5 is a fragmentary horizontal cross-sectional view taken substantially as indicated by the line 5—5 on Figure 3;

Figure 6 is a perspective view similar to Figure 1 showing a modified form of construction, wherein the collapsible bag is of generally rectangular cross-sectional form;

Figure 7 is perspective view similar to Figure 2, showing the base frame structure for the modified construction of Figure 6;

Figure 8 is a fragmentary vertical cross-sectional view

on an enlarged scale, taken substantially as indicated by the line 8—8 on Figure 6; and

Figure 9 is a fragmentary perspective view showing details of the detachably interconnected portions of a supporting leg and the base ring of the construction of Figures 6 to 8.

Referring now more particularly to Figures 1 through 5 of the drawing, I have illustrated a first embodiment of the present invention providing a receptacle assembly **10** which is adaptable for use as a laundry hamper, wastebasket, or like container. The assembly **10** comprises a collapsible container unit **12** and a base frame or container supporting structure **14**.

The container unit **12** includes a collapsible bag **16** formed of a flexible material, preferably in the nature of a sturdy and low-cost washable fabric such as terry cloth. As shown, the bag **16** is of generally tubular form having a circular bottom **18**, a cylindrical side **20**, an annular top **22** defining an access opening **24** into the bag **16**, and a swingable cover flap **26** adapted to close the access opening **24**.

In order to maintain the bag **16** in substantially fully expanded form, and to provide means for supportably suspending the bag within the base frame structure **14**, a pair of spaced apart form rings **28** and **30** are disposed within the bag **16**. The lower form ring **28** is positioned upon the bag bottom **18**, and is of sufficiently large size to lie closely adjacent the cylindrical bag side **20** about its full periphery. The upper form ring **30** is similarly positioned immediately below the annular bag top **22**, and is normally in engagement therewith, as will hereinafter appear, closely adjacent the cylindrical side **20** about its full periphery.

The base frame structure **14** includes a base ring **32** adapted to be fixedly positioned in elevated relation above a suitable flat supporting surface such as the floor. In the embodiment shown in Figures 1 through 5, the base ring **32** and the lower and upper form rings **28** and **30** are all of generally circular form to provide a co-operating geometry for the cylindrically shaped bag **16**. It will be understood, however, that the bag may be of any convenient cross-sectional form, and the rings **28**, **30** and **32** should be correspondingly shaped for co-operation with the bag cross-section. This will be made more apparent in connection with the description hereinafter of the embodiment of Figures 6 through 9 wherein a construction of rectangular cross-sectional form is disclosed. It is intended, therefore, that the term "ring" shall signify any peripherally continuous loop form, whether of closed curve form such as a circle or an elipse, or of polygonal form such as a triangle or rectangle.

The relative dimensions of the base ring **32** and the two form rings **28** and **30** are particularly proportioned for co-operation with each other and with the flexible bag **16**. It is an important feature of this invention that the base ring **32** be sufficiently large to permit the lower end of bag **16**, when in its expanded form, to be readily passed therethrough.

It is necessary, therefore, to proportion the lower form ring **28** so as to permit it to be readily inserted through the access opening **24** into the bag **16** and positioned flat at the bottom thereof, in the manner shown in Figure 1 of the drawing, thereby providing expanded shaping for the lower end of the bag **16** while at the same time permitting the bottom of the bag to be readily passed through the base ring **32**. For this purpose, it is of essential importance that the form ring **28** be of slightly smaller size than the base ring **32**.

The upper form ring **30** must be at least equal in size to the base ring **32**, and preferably slightly larger in size, so as to prevent the upper end of the bag **16** from being

drawn through the base ring 32 while at the same time providing expanded shaping for the upper end of the bag 16. In this way, the bag 16 may be readily suspended from the base ring 32 in expanded form by first placing the smaller or lower form ring 28 in the bag in flat position at the bottom thereof, next placing the larger or upper form ring 30 in the bag 16 in flat engagement against the under surface of the annular bag top 22. While holding the upper form ring 30 in position at the top of the bag 16, the lower end of the bag may be inserted through the base ring 32 and lowered therethrough until the upper form ring 30 over-lies the base ring 32. If the rings 30 and 32 are substantially equal in size, the form ring 30 will be seated in supporting relation directly on the base ring 32 with a thickness of bag material therebetween. If the form ring 30 is slightly larger than the base ring 32, as shown in Figures 3 and 4 of the drawing, there will be some overhanging of the form ring 30 about the base ring 32, but, nevertheless, equally effective supporting co-operation.

To complete the construction, it is necessary to provide suitable leg means for fixedly positioning the base ring 32 in sufficiently elevated relation above a supporting surface so as to permit the bag 16 to be suspended freely in spaced relation above such surface. For this purpose, the base ring 32 of the embodiment of Figures 1 through 5 is provided with three pairs of peripherally spaced connector rods 34, 36 and 38. These rods are each suitably attached to the outside of the ring 32 and angularly inclined in a downward direction in a particular manner hereinafter described.

For purposes of simple and low-cost construction, the rings 28, 30, and 32 are preferably formed of wrought iron rod, and integral connections between various portions are suitably made by welding. Three supporting legs 40, 42, and 44, also preferably of wrought iron rod formation, are provided for corresponding co-operation with respective pairs of connector rods 34, 36, and 38. The legs are formed by bending into generally V-shaped a unitary length of rod so as to provide a point of surface support 46 at the lower or apex end and a spaced pair of resiliently movable arms 45 and 47 at the diverging upper end. A pair of connector clips 48 and 50 are rigidly carried by the arms 45 and 47, respectively, at their uppermost terminal ends.

The connector clips 48 and 50 are each of generally U-shaped form defining adjacent recess loops or convolutions 52 and 54 for fixed attachment to the upper ends of leg arms 45 and 47, and for coupling co-operation with the ring connector rods, respectively. The clips 48 and 50 are preferably formed from sheet metal, and may be suitably secured to the terminal ends of leg arms 45 and 47 by welding as indicated at 53 in Figures 3 and 5.

Where a solid and direct joining between the base ring 32, and the three supporting legs 40, 42, and 44 is desired, the pairs of connector rods 34, 36, and 38, and the connector clips 48 and 50 attached to each supporting leg, may be eliminated; and the upper ends of leg arms 45 and 47 of each supporting leg may be rigidly attached by welding or the like to the ring 32, and angularly inclined in a downward direction.

It is an important feature of this invention to angularly incline each pair of connector rods toward each other in a downward direction so as to be correspondingly parallel to the upwardly diverging leg arms 45 and 47 of a corresponding supporting leg. In this way, the loop portions 54 of the connector clips will readily receive corresponding connector rods of the base ring 32 to effect a rigid yet readily detachable coupling of the supporting legs to the base ring.

As clearly seen in Figure 3 of the drawing, each pair of connector clips 48 and 50 is secured to the corresponding upper ends of the arms 45 and 47 of a supporting leg so as to position the rod receiving loops 54 in an outermost orientation, thereby permitting the leg arm attachment loops 52 to underlie the ring 32 in abutting engagement therewith so as to provide a rigid supporting interconnection.

In Figures 6 through 9 of the drawing, I have shown a modified form of construction 60, wherein a rectangular receptacle geometry is provided. The assembly 60 includes a container unit 62 and a base frame structure 64, in the manner of the embodiment of Figures 1 through 5. A bag 66 having a generally rectangular cross-section is provided, and includes a lower form ring 78 and an upper form ring 80, both of generally rectangular shape for conformity with the bag 66. A base ring 82, also of rectangular form is provided for suspending the container unit 62 in expanded form therefrom. Four pairs of closely adjacent connector clips 84, 85, 86, and 87, substantially identical in form with the clips 48 and 50 of the embodiment of Figures 1 through 5, are rigidly attached to the base ring 82 at the mid-points of its four sides. Preferably, the rings 78 and 80 and the base frame structure 64 are formed of wrought iron rod, and rigid connections are made by welding.

Each of the connector clips of the pairs 84, 85, 86 and 87 provide a loop 90 to permit welding at 91 to the base ring 82, and a loop 92 for detachable coupling to co-operating portions of a plurality of supporting legs 94, 96, 98 and 100. The legs are substantially the same V-shaped formation as those of Figures 1 through 5, providing support points 102 at the lower or apex end and resiliently-spaced, upwardly-diverging arms at the upper end. The upper ends of the legs are each outturned to provide an oppositely directed pair of connector portions or ears 104 and 106 adapted to be received respectively within the loops 92 of corresponding connector clips, one for each of two adjacent pairs of clips. In this way, the leg arms are attached to the base ring 82 at mid-points thereof, providing a rigid structural assembly having good stability for freely supporting the collapsible container unit 62 in expanded form.

Changes may be made in the construction and arrangement of the parts of my receptacle construction without departing from the real spirit and purpose of my invention, and it is my intention to cover by the claims any modified forms of structure or use of mechanical improvements which may be reasonably included within their scope.

What I claim as new and desire to obtain by Letters Patent of the United States is:

1. A receptacle comprising, in combination, a collapsible container and a base frame; said frame including a base ring and leg means detachably secured thereto by means of cooperating coupling elements fixedly carried by said base ring and said leg means respectively, said leg means serving to fixedly position said base ring in elevated relation; said container including a bag formed of flexible material and providing an upwardly open enclosure, a pair of form rings disposed within said bag at the bottom and top thereof respectively, the lower of said form rings being smaller than said base ring to permit the bottom of said bag to pass therethrough, and the upper of said form rings being at least as large as said base ring to prevent the top of said bag from being drawn therethrough, whereby said upper form ring and said base ring cooperate to freely suspend said bag within said frame, and said lower form ring cooperates with said upper form ring to maintain said bag in expanded form.

2. A receptacle comprising, in combination, a collapsible container and a base frame; said frame including a base ring and leg means detachably secured thereto by means of coupling elements fixedly carried by said base ring, said leg means serving to fixedly position said base ring in elevated relation; said container including a bag formed of flexible material and providing an upwardly open enclosure, a pair of form rings disposed within said bag at the bottom and top thereof respectively, the lower of said form rings being smaller than said base ring to

permit the bottom of said bag to pass therethrough, and the upper of said form rings being at least as large as said base ring to prevent the top of said bag from being drawn therethrough, whereby said upper form ring and said base ring cooperate to freely suspend said bag within said frame, and said lower form ring cooperates with said upper form ring to maintain said bag in expanded form.

3. A receptacle comprising, in combination, a collapsible container and a base frame; said frame including a base ring and detachable leg means adapted to fixedly position said base ring in elevated relation; said container including a bag formed of flexible material and providing an enclosure having a closed bottom, a peripherally continuous side, and a top defining an access opening therethrough, upper and lower form rings freely disposed within said bag, said upper form ring being located closely adjacent said bag side and the inner surface of said bag top, said lower form ring being located closely adjacent said

bag side and the inner surface of said bag bottom, said lower form ring being smaller than said base ring to permit the bottom of said bag to pass therethrough and said upper form ring being at least as large as said base ring to prevent the top of said bag from being drawn therethrough, whereby said upper form ring and said base ring cooperate to freely suspend said bag within said frame, and said lower form ring cooperates with said upper form ring to maintain said bag in expanded form.

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