Oct. 1, 1963 R. S. EWERS 3,105,594

GARBAGE CAN HOLDER

Filed Sept. 8, 1961 2 Sheets-Sheet 1

Fig. 1

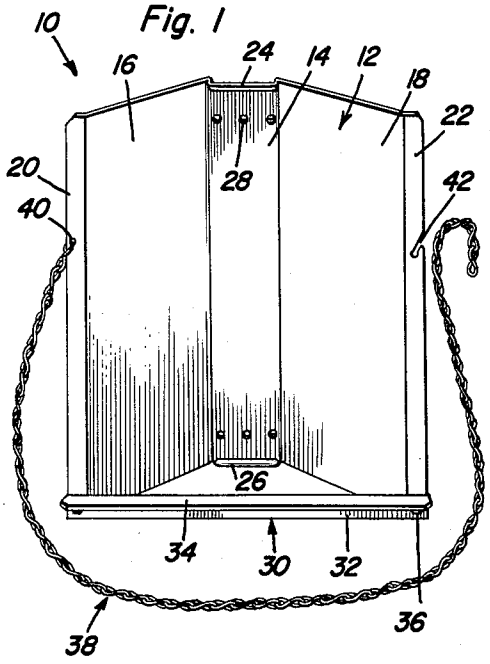


Fig. 2

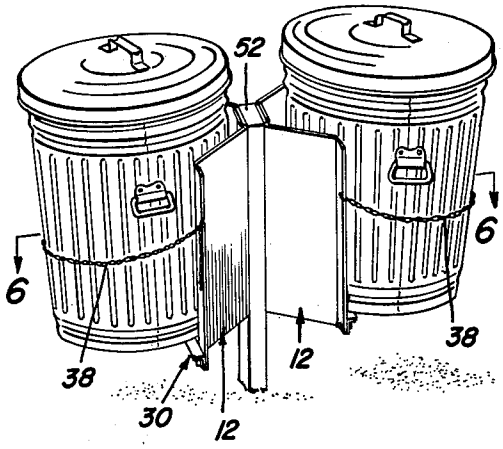


Fig. 3

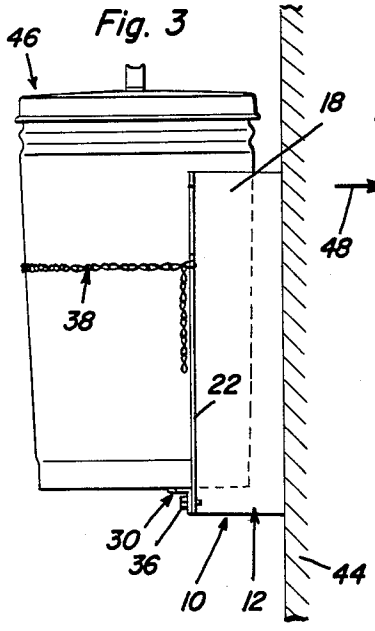


Fig. 4

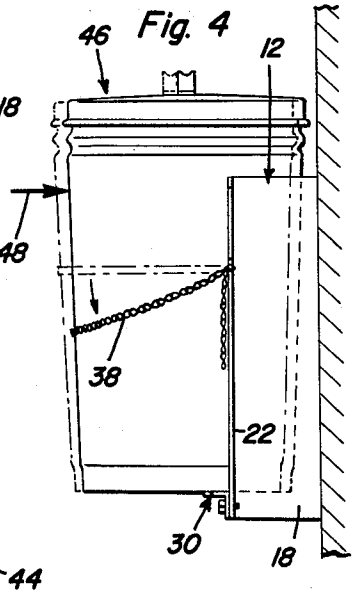
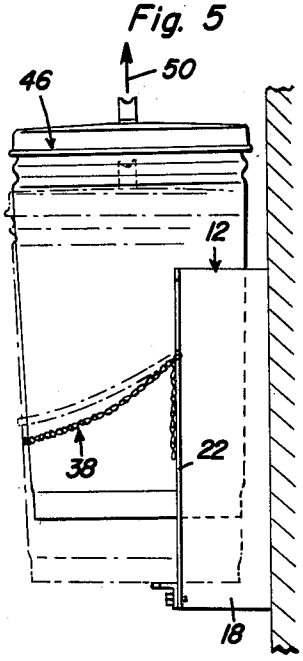


Fig. 5



Rolo S. Ewers

INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson

Attorneys

Oct. 1, 1963 R. S. EWERS 3,105,594

GARBAGE CAN HOLDER

Filed Sept. 8, 1961 2 Sheets-Sheet 2

Fig. 6

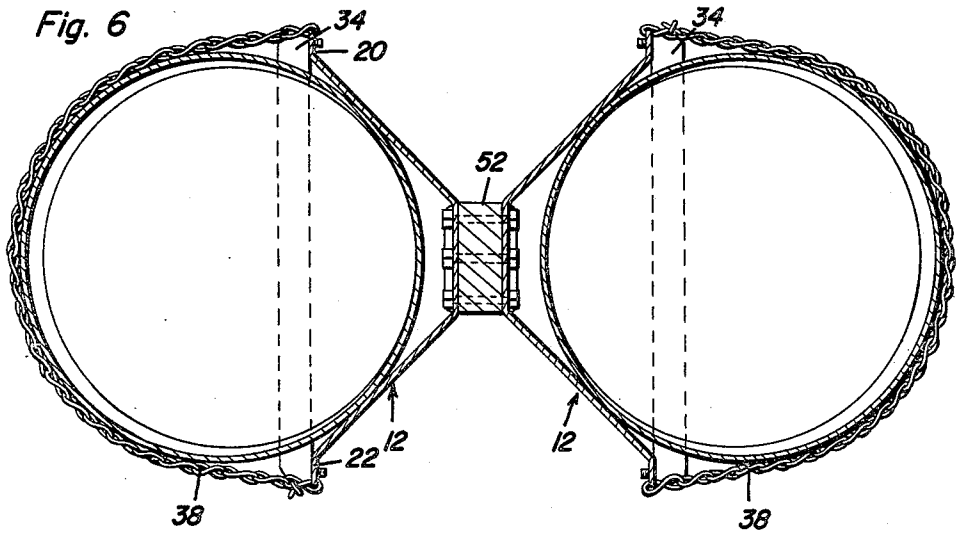


Fig. 7

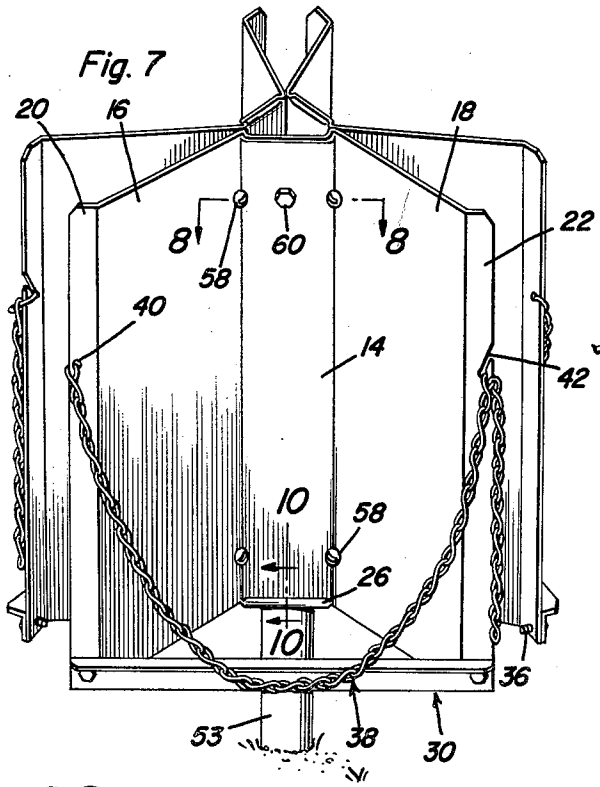


Fig. 8

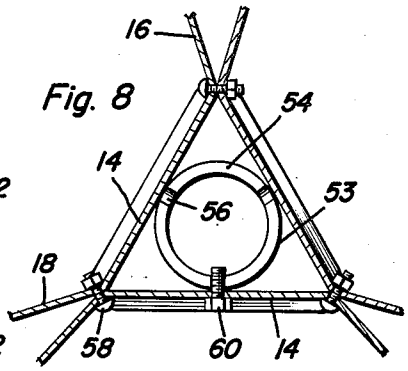


Fig. 9

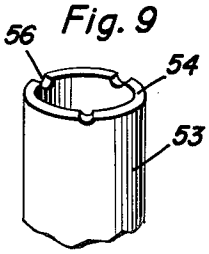
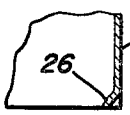


Fig. 10



Rolo S. Ewers
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

United States Patent Office

3,105,594

Patented Oct. 1, 1963

3,105,594

GARBAGE CAN HOLDER

Rolo S. Ewers, P.O. Box 777, Glendale, Ariz.

Filed Sept. 8, 1961, Ser. No. 136,898
10 Claims. (Cl. 211—72)

This invention relates to a receptacle holder and more particularly to a holder assembly adapted to support trash cans or the like.

One of the most important objects of the present invention is to provide a receptacle holder that will securely hold and accept trash cans of all sizes.

Another object of this invention is to provide a receptacle holder which will accept trash cans made of different types of materials having different physical properties including for example rigid or yieldable materials.

A further object of this invention is to provide a trash can holder which will securely hold a trash can in an upright position, resisting vibration of the trash can within the holder and yet permitting easy removal by displacement of the trash can in an upward direction.

An additional object of this invention is to provide a trash can holder assembly which is unexpectedly simple and economical from a manufacturing standpoint despite its aforementioned attributes, and having parts which may be efficiently stacked to occupy a minimum amount of space facilitating storage and transport of the parts constituting the receptacle holder assembly.

Other objects of the present invention are to provide a trash can holder which will securely hold a trash can in spaced non-interfering relation to the mounting structure and also a holder which is flexible as to its mounting installation.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of a holder assembly made in accordance with the present invention.

FIGURE 2 is a perspective view of one form of installation for two holder assemblies.

FIGURES 3 through 5 are side elevational views of a mounted holder assembly and trash can in different phases or conditions.

FIGURE 6 is a sectional view taken substantially through a plane indicated by section line 6—6 in FIGURE 2.

FIGURE 7 is a perspective view of another form of installation for a plurality of holder assemblies.

FIGURE 8 is a sectional view taken through a plane indicated by section line 8—8 in FIGURE 7.

FIGURE 9 is a partial perspective view of the upper portion of the supporting post of FIGURE 7.

FIGURE 10 is a partial sectional view taken through a plane indicated by section line 10—10 in FIGURE 7.

Referring now to the drawings in detail, FIGURE 1 illustrates a basic single trash can holder assembly generally referred to by reference numeral 10. The holder assembly includes a generally V-shaped resilient bracket or grip-engaging member generally referred to by reference numeral 12 which is made of sheet metal of the proper thickness to resist the bending loads applied thereto and yet capable of being elastically deformed to an extent sufficient to support the function hereafter explained in further detail. The grip-engaging member 12 therefore includes a generally flat, centrally disposed vertically mounted apex or mounting portion 14 to which are connected a pair of forwardly diverging receptacle-

engaging portions or wings 16 and 18. The engaging portions 16 and 18 have connected thereto vertical edge portions or flanges 20 and 22 disposed in a common plane parallel to the plane of the mounting portion 14 and spaced forwardly of the mounting portion 14. In order to further stiffen the central mounting portion 14, the upper and lower ends 24 and 26 are bent forwardly from the plane of the mounting portion. Also, disposed adjacent the upper and lower ends of the mounting portion, are facilities for attaching tne holder to some supporting structure as for example, apertures 28.

Connected to the lower end of the grip-engaging member 12, is a rigid frame member or bar generally referred to by reference numeral 30. The rigid frame member may be in the form of a right angle member having a vertical leg 32 and a horizontal receptacle supporting leg 34. The vertical leg 32 is rigidly connected by suitable fasteners such as bolts 36 to the vertical edge portions 20 and 22 at the lower ends thereof so that deformation of the lower end of the engaging member 12 is resisted by the frame member. Also, the positioning of the frame member 30 forwardly of the mounting portion 14 provides facilities through the horizontal leg portion 34 for supporting the bottom of the trash can thereabove.

The third basic component of the trash can holder, consists of a flexible embracing member generally referred to by reference numeral 38 that will hold trash cans of different sizes against the diverging engaging walls 16 and 18 of the holder. The flexible member 38 may therefore be in the form of a link chain one end of which is permanently connected to the engaging member 12 by means of an aperture 40 through which an end link extends. The aperture 40 is therefore located in the forward edge portion 20 of the member 12 disposed intermediate the lower and upper ends thereof. The chain 38 may be adjustably connected in embracing relation to a trash can by hooking a link adjacent the other end of the chain 38 into the hook formation 42 formed in the opposite forward edge portion 22 of the member 12. The hook formation therefore is in the form of a downwardly inclined slot so as to prevent removal of the chain link from the slot 42 by any pull that is directed downwardly or horizontally.

Referring now to FIGURES 3 through 5, it will be observed that the receptacle holder 10 is mounted on some supporting structure 44 as for example the exterior siding of a house. A trash can 46 having the usual downwardly tapering configuration, is received between the diverging engaging portions 16 and 18 of the holder as seen in FIGURE 3 with the can 46 resting on top of the rigid frame member 30. It will therefore be appreciated, that trash cans of different sizes may be accepted by the holder 10 the diverging sides of which will contact the can somewhere between the rear and forward vertical boundaries of the diverging portions dependent on the cross-sectional dimension of the trash can. In any event, the trash can will always be spaced from the rear mounting portion 14 so as not to interfere with any attaching structure by means of which the holder is attached to the supporting structure. It will, however, be apparent that the trash can may under its own weight tilt forwardly from the holder despite its engagement by the diverging engaging sides of the holder and the bottom supporting frame member 30. Accordingly, the flexible chain 38 is adjustably connected to the edge portion 22 of the holder through the slot formation 42 in embracing relation to the trash can as shown in FIGURE 3. Inasmuch as the chain 38 is connected to the hook formation 42 through a link thereof, there will necessarily be a certain amount of slack in the chain that would ordinarily not hold the trash can 46 within the holder with sufficient rigidity to prevent vibration

of the can. It will therefore be observed that once the trash can has been installed within the holder as depicted in FIGURE 3, a displacing force applied thereto as indicated by arrow 48 in FIGURE 4 will displace the can 46 in view of the elastically deformable property of the engaging member 12 at its upper portions, so that the embracing chain 38 will sag from its original substantially horizontal position as shown by dotted lines in FIGURE 4 to the position as shown in solid lines in FIGURE 4. Upon subsequent removal of the displacing force 48, the engaging member 12 because of its elastic property, will return to its original position and therefore apply a force to the trash can 46 tending to return it to its original position. The chain 38 in its downwardly sagged position, however, will resist complete return of the can 46 to its original position and therefore tightly grip the can 46 within the holder. Vibration of the can with respect to the holder will therefore be prevented. Despite the rigid securing of the can 46 within the holder, removal of the can is facilitated when the chain 38 is in its tightly securing sag position. Referring therefore to FIGURE 5, it will be apparent that an upwardly displacing force as represented by arrow 50 applied to the can 46 will not be resisted by the chain 38 since upward displacement of the can 46 will tend to reduce the diameter of the can about which the chain 38 is engaged in view of the downward taper thereof. Easy removal of the trash can 46 is therefore possible as indicated by the upward displacement of the can 46 between the dotted line position and the solid line position shown in FIGURE 5.

Referring now to FIGURES 2 and 6, another example of the manner in which trash can holder assemblies of the present invention may be mounted, is illustrated. Accordingly, a pair of holders are shown mounted on a supporting post 52 on opposite sides thereof. Two trash cans may therefore be supported and separately engaged and removed as described with respect to FIGURES 3 through 5.

FIGURES 7 through 10 illustrate another form of mounting for a plurality of trash can holders, and are further indicative of the mounting flexibility of the holder assembly. A mounting post 53 may be provided having an upper rim 54 containing a plurality of circumferentially spaced notches 56. The plurality of trash can holders may therefore be interconnected by means of any suitable fasteners such as the screw and nut assemblies 58 inserted between the intersections of the diverging portions 16 and 18 with the mounting portions 14 adjacent the upper and lower ends thereof so that the mounting portions 14 of the interconnected holder assemblies form an equilateral polygon the sides of which may loosely contact the circular tubular post 53 as more clearly seen in FIGURE 8. The interconnected assembly of holders, may be supported from the top rim portion 54 of the post 53 by means of a bolt 60 connected to one of the holders and projecting rearwardly from the mounting portion 14 thereof adjacent the upper end for reception within one of the spaced notches 56 on the rim portion of the post. The interconnected holder assemblies may therefore be angularly positioned or repositioned with respect to the post 53 for any desired purpose.

Not only do the trash can holders of the present invention retain trash cans in a novel and beneficial manner to both resist vibration of the can within the holder and yet permit easy removal thereof, but also enables each holder assembly to be mounted with unexpected flexibility as hereinbefore demonstrated. Furthermore, by virtue of the engaging nature of the member 12 with a trash can, it will be impossible to so position the trash can within the holder as to interfere with or contact any attaching structure that may secure the mounting portion of the holder to a supporting structure which has heretofore caused both damage to the trash can and the attaching structure from constant impact. The aforementioned advantages of the holder assembly of the present

invention are further enhanced by the fact that the holder assembly may be manufactured with great economy and the disassembled parts thereof easily stacked for both storage and transport purposes. It will therefore be appreciated, that the engaging member 12 is made of a single sheet of material and even in its final form may be efficiently stacked when disassembled from the rigid frame member 30 and flexible chain 38. Also, the adjustable attachment of the flexible chain 38 to the engaging member 12 through the edge portions 20 and 22, facilitates the securing of the chain about the trash can in view of the plane in which the edge portions 20 and 22 are disposed requiring no twisting of the chain for embracing the trash cans as more clearly seen in FIGURE 6. It will also be apparent that the receptacle holder assemblies will accept receptacles not only of different sizes because of the diverging relation of the engaging portions 16 and 18 but also receptacles made of different materials whether they are yieldable or rigid.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A receptacle holder assembly mounted on a supporting post having an upper rim end with circumferentially spaced notches comprising a plurality of interconnected receptacle holders positioned about said post, and assembly supporting means projecting rearwardly from one of said holders and adapted to rest on the upper end of the post for angularly positioning said assembly with respect to said post by reception of said assembly supporting means in one of said notches.

2. The combination of claim 1 wherein each of said receptacle holders comprises receptacle grip-engaging means, rigid means operatively connected to one end of the engaging means, and flexible embracing means operatively connected to the engaging means for adjustably holding a receptacle supported on the rigid means against the engaging means.

3. The combination of claim 2, wherein said engaging means comprises a vertically mounted member made of sheet material folded to form a central mounting portion and forwardly diverging receptacle engaging portions.

4. The combination of claim 3, wherein said central mounting portions of the holder form an equilateral polygon in contact with said post and said assembly supporting means comprises a bolt projecting from an upper end portion of one of said central mounting portions.

5. A receptacle holder comprising a generally V-shaped bracket of resilient, manually bendable sheet metal for vertical mounting on a support and including divergent wings for wedgingly receiving a receptacle therebetween to be bent and tensioned thereby for clampingly engaging and frictionally gripping same, a bar extending between the lower portions of the wings for supporting the receptacle therebetween, and a flexible adjustable member extending between the wings and connected thereto for retaining the receptacle therebetween in wedging engagement therewith and maintaining the tension of said wings thereon.

6. A receptacle holder comprising a generally V-shaped bracket of resilient, manually bendable sheet metal for vertical mounting on a support and including divergent wings for wedgingly receiving a receptacle therebetween to be bent and tensioned thereby for clampingly engaging and frictionally gripping same, a bar extending between the lower portions of the wings for supporting the receptacle therebetween, and a flexible adjustable member extending between the wings and con-

nected thereto for retaining the receptacle therebetween in wedging engagement therewith and maintaining the tension of said wings thereon, said bracket further including a substantially flat apex portion connecting the wings and adapted to abut the support, and means for attaching said apex portion to the support.

7. A receptacle holder in accordance with claim 6, said apex portion having at least one opening therein, said means including an element mounted in the opening and operatively engaged with the support.

8. A receptacle holder in accordance with claim 7, said element comprising a headed, threaded member rotatable in the opening.

9. A receptacle holder in accordance with claim 5, said flexible member including a link chain having one end connected to one of the wings, and a hook on the other wing engageable selectively in the links of the chain for adjustably and detachably connecting the other end portion thereof to said other wing.

10. A receptacle holder assembly comprising a cylindrical tubular post having spaced notches in its upper end, a plurality of generally V-shaped receptacle brackets secured together and encircling the post, and a member on one of the brackets resting on said upper end of the post for supporting the brackets thereon and engageable selectively in the notches for releasably securing the brackets against rotation on said post.

References Cited in the file of this patent

UNITED STATES PATENTS

1,552,535	Beerstecher	Sept. 8, 1925
2,084,635	Friedrich	June 22, 1937
2,448,456	Niskanen	Aug. 31, 1948
2,615,238	Highwood	Oct. 28, 1952
2,670,853	Schneider	Mar. 2, 1954
2,963,165	Steiner	Dec. 6, 1960