

Fig. 1

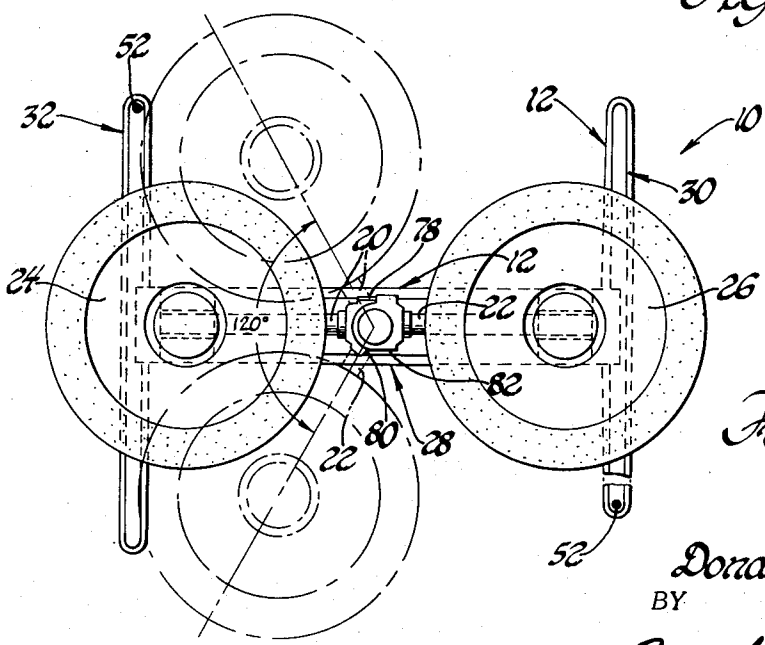


Fig. 2

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[54] **SUPPORT ASSEMBLY FOR GARBAGE CANS**

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[58] Field of Search.....**211/78, 77, 81, 75, 56, 129, 211/128, 88; 248/DIG. 7, 145, 131; 108/142, 94; 222/173**

[56] **References Cited**

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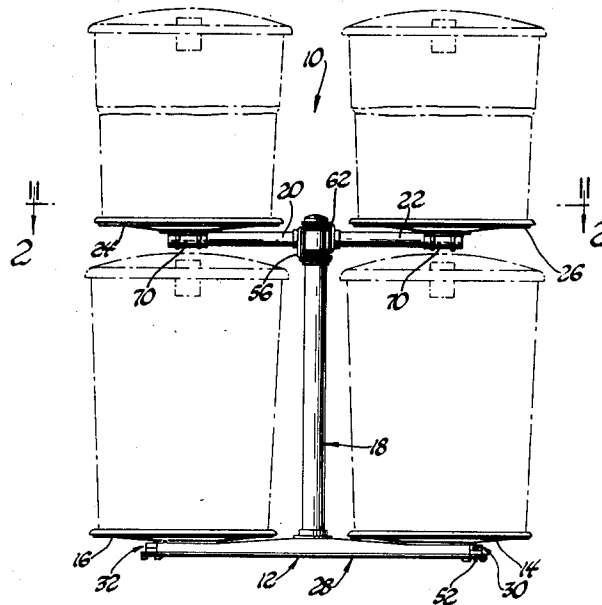
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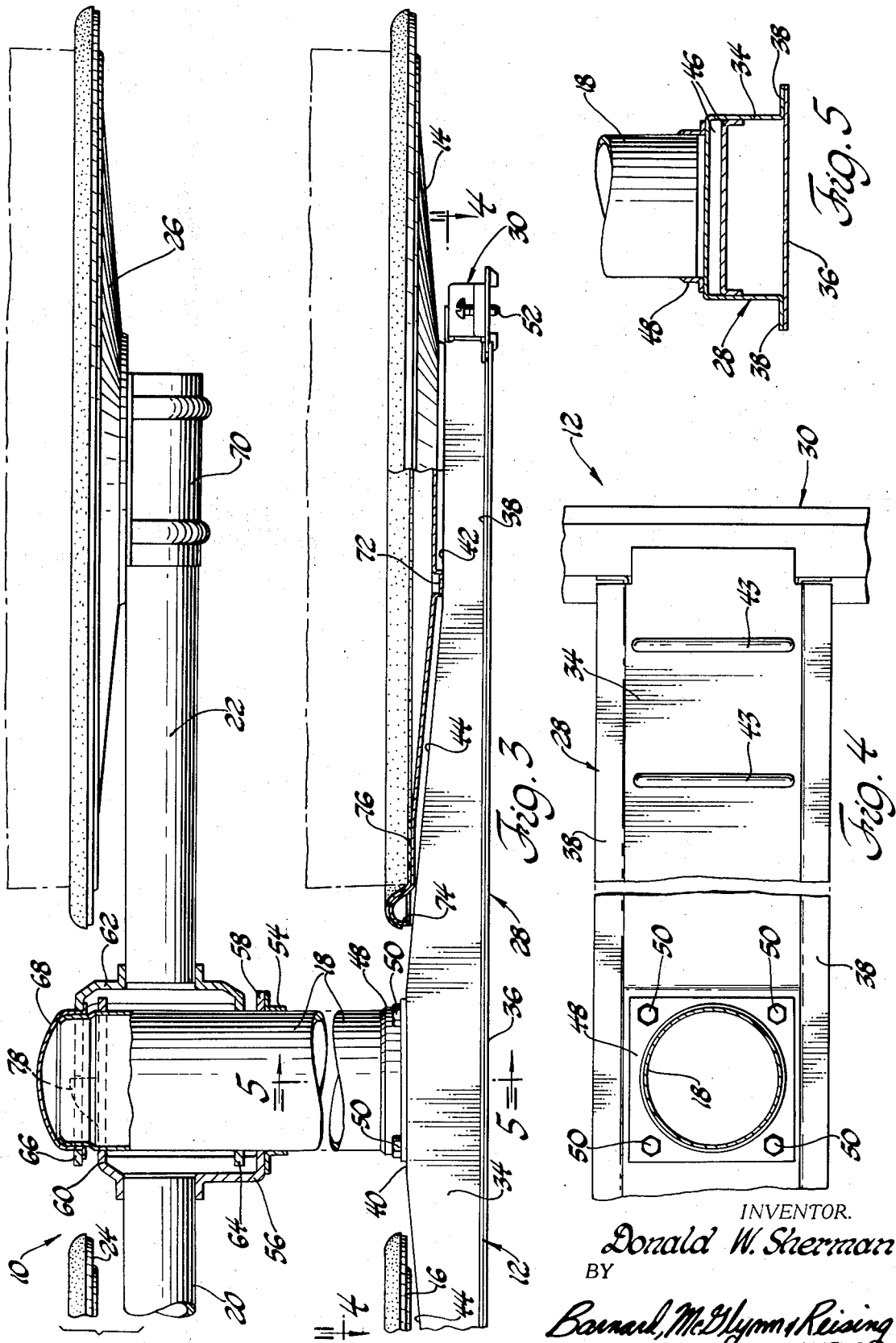
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[57] **ABSTRACT**

A support assembly of the type which may be utilized to support garbage cans, as in a homeowner's garage. The assembly includes a base having an H-shaped configuration. A pair of circular trays are welded to the sides of the H-shaped base. A tubular post is removably attached to the base by bolts and extends upwardly therefrom. A pair of support arms are rotatably supported at the top of the post by a pair of clevises and a circular tray is welded to the distal end of each arm.

5 Claims, 5 Drawing Figures





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SUPPORT ASSEMBLY FOR GARBAGE CANS

This invention relates to a support assembly suitable for supporting garbage cans and the like.

For many years it has been the practice, for obvious reasons, to store garbage cans out-of-doors. Today, however, with garbage disposal units being commonplace, garbage cans are typically stored within a homeowner's garage and merely receive trash and not garbage.

In most suburban garages, space is always at a premium and garbage cans are frequently found in a completely unorganized array.

There is known to the prior art garbage can supports which are normally used out-of-doors for supporting garbage cans above the ground. Examples of such assemblies are U.S. Pat. Nos. 3,522,036; 2,905,333 and 3,491,895.

There are, of course, known to the prior art various other support assemblies for supporting various different containers. Two of the most pertinent assemblies are disclosed in U.S. Pat. Nos. 860,019 and 1,226,676.

There is not known to the prior art, however, a support assembly suitable for supporting garbage cans in a garage in an organized and neat arrangement and in a space saving manner while being lightweight and structurally sound and economically manufactured of low cost and low weight materials yet being capable of being shipped knockdown and easily assembled.

Accordingly, it is an object and feature of this invention to provide a support assembly which will satisfy these needs.

Other objects, advantages and features of the invention will become apparent from the following description taken in connection with the accompanying drawings in which:

FIG. 1 is an elevational view showing a preferred embodiment of the instant invention;

FIG. 2 is a plan view taken substantially along line 2—2 and showing the upper support trays in a moved position in phantom;

FIG. 3 is an enlarged fragmentary cross-sectional view like FIG. 1;

FIG. 4 is a fragmentary cross-sectional view taken substantially along line 4—4 of FIG. 3; and

FIG. 5 is a fragmentary cross-sectional view taken substantially along line 5—5 of FIG. 3.

Referring now to the drawings wherein like numerals indicate like or corresponding parts throughout the several views, a preferred embodiment of a support assembly for supporting garbage cans or the like constructed in accordance with the instant invention is generally shown at 10.

The assembly 10 includes a base having a generally H configuration as viewed in plan and as generally indicated at 12. A pair of first and second support trays 14 and 16 are attached to the base 12. All of the components of the assembly are preferably made of a low cost steel and the trays 14 and 16 are preferably welded to the base 12.

A center tubular post 18 extends upwardly from the central portion of the base 12.

A pair of first and second arms 20 and 22 extend radially from the post 18 and are vertically spaced from the base 12. The arms 20 and 22 are rotatably connected to the post 18 for rotation about the axis of the post 18.

A third support tray 24 is attached, as by welding, to the first arm 20 and a fourth support tray 26 is attached, as by welding, to the second arm 22. The arms 20 and 22, as will become more clear hereinafter, are removably supported on the upper end of the post 18.

The base 12 includes a central base beam, generally indicated at 28, which supports the post 18 at the mid-portion thereof. The base 12 further includes a first cross beam 30 attached to and extending transversely of one end of the base beam 28 and a second cross beam 32 attached to and extending transversely of the opposite end of the base beam 28. Preferably the cross beams 30 and 32 are welded to the base beam 28.

As best illustrated in FIG. 5, the base beam 28 has a closed box-like cross-section defined by a hat-shaped upper element 34 and a flat sheet-like lower element 36. The sheet-like element 36 is preferably welded to the flanges 38 which extend outwardly from the bottom of the hat-shaped upper element 34. In a similar manner, the cross beams 30 and 32 may have a closed box-like cross-section defined by a hat-shaped upper element and a flat sheet-like lower element welded thereto, although in the preferred embodiment the bottoms of the beams 30 and 32 are open. The upper hat-shaped elements of the base beam and the cross beams are preferably welded together.

The hat-shaped upper element 34 of the base beam, as viewed in elevation and as best illustrated in FIG. 3, includes a central horizontal upper surface 40 and lower horizontal flat surfaces 42 at each end thereof for supporting the trays 14 and 16. The hat-shaped upper element 34 also includes slanted surfaces 44 which extend downwardly from the central surface 40 to the flat surfaces 42. As illustrated in FIG. 4, the horizontal outward flat surfaces have ribs 43 therein for strengthening purposes.

As illustrated in FIG. 5, a channel-shaped member 46 is welded or otherwise secured to the interior of the upper element 34 of the base beam 28. A flange 48 is disposed about the bottom end of the post 18 and is welded thereto. The assembly includes connecting means comprising bolts 50 which extend through the flange 48 and through the channel member 46 for removably connecting the post 18 to the base beam 28. The holes in the channel member 46 are threaded to threadedly receive the bolts 50 or the bolts 50 are self-tapping.

An adjustment means comprising the adjustment screws 52 are disposed at least at one end of each of the cross beams 30 and 32 for contacting a support surface for leveling the assembly. In other words, an adjustment screw is disposed at one end of the support beam 30 and another adjustment screw is disposed at the opposite end of the support beam 32. The cross beams 30 and 32 are therefore identical in configuration but reversely disposed.

As alluded to hereinbefore, the post 18 has a circular cross-section. A flanged washer 54 is secured to the post 18, as by a pressed fit, in spaced relationship to the upper end of the post 18.

A first clevis 56 is secured to one end of the first arm 20. The clevis 56 and the arm 20 may be connected together by welding. The upper and lower legs 58 and 60 of the first clevis 56 have openings therein disposed about the post 18 and the lower leg 58 thereof is rotatably supported on the flanged washer 54. In other

words, the flanged washer 54 prevents the clevis 58 from moving downwardly along the post 18.

A second clevis 62 is secured, as by welding, to the end of the second arm 22. The lower leg 64 has an opening therethrough so as to be disposed about the post 18. The upper leg 66 is supported by a cap or cup-shaped member 68 which is rotatably supported by and disposed over the upper end of the post 18. In other words, the cap 68 is rotatably supported on the upper end of the post 18 and prevents the clevis 62 from moving downwardly along the post 18.

The lower leg 64 of the second clevis 62 is disposed above the lower leg 58 of the first clevis 56 and the upper leg 66 of the second clevis 62 is disposed above the upper leg 60 of the first clevis 56. Thus, the lower leg 64 of the second clevis 62 is between the two legs 58 and 60 of the first clevis 56. As will be appreciated, first and second clevises 56 and 62 may be together lifted upwardly and slid off the top of the post 18.

The arms 20 and 22 are tubular and the assembly includes a ribbed bracket 70 disposed about each arm and welded to the tray disposed thereon for securing the third and fourth trays 24 and 26 to the arms 20 and 22 respectively. The ribbed brackets 70 are welded to the arms 20 and 22 and to the respective trays 24 and 26.

Each of the trays 14, 16, 24 and 26 are circular, are generally dish shaped, include a circular groove 72 and have curled under peripheries 74. In some instances, it may be preferable to utilize protective pads 76 which may be made of paper, plastic, or the like.

The first and second clevises 56 and 62 include control means defined by abutments for preventing relative movement between the arms 20 and 22 when the arms are approximately aligned or 180° apart and the first arm is rotated in one direction and when the arms 20 and 22 are approximately 120° apart and the first arm is rotated in the opposite direction whereby the angle through which the arms may rotate relative to one another is approximately 120°. The abutments include the upwardly extending tab 78 which extends upwardly from the first clevis 56 to engage an abutment on the second clevis 62. As best shown in FIG. 2, the clevises 56 and 62 are abutting one another through the upwardly extending flange 78 so that if the arm 20 is rotated in the clockwise direction, the arm 22 would also rotate in the clockwise direction to maintain the arms 20 and 22 aligned or 180° apart. The first clevis 56 also includes an abutment 80 which engages the second clevis 62 at 82 as shown in FIG. 2 so that the arm 20, as illustrated in FIG. 2, may be rotated in the counterclockwise direction until the abutment 80 hits the abutment 82, at which point the arm 20 will have rotated relative to the arm 22 approximately 120°. It will be appreciated that the rotation of the arms 20 and 22 facilitates access to the lower garbage cans. The feature of preventing relative movement between the arms 20 and 22 when the arms are rotated in one direction to maintain the arms aligned while the relative movement between the arms in the opposite direction is limited to approximately 120° accommodates various manipulations of the arms to provide access to the lower cans in various space situations.

As will be appreciated, the abutments defining the control means limits the angle through which one of the

arms 20 and 22 may rotate relative to the other arm to an angle which is approximately 120°. Said another way, the control means prevents the arms from being rotated toward one another to a position where the angle between the arms is any less than approximately 120°. In other words, the arms can be rotated toward one another but no closer than an enclosed angle of approximately 120°. This 120° angle is shown in FIG. 2. FIG. 2 shows the upper arm in a phantom position and to reach this phantom position from the aligned position shown in full lines, the arm 22 is rotated in a clockwise direction until the abutment 82 contacts the abutment 80 whereupon further rotation of the arm 22 in the clockwise direction moves the arm 20 to the phantom position shown in FIG. 2.

The invention has been described in an illustrative manner and it is to be understood that the terminology which has been used is intended to be in the nature of words of description rather than of limitation.

Obviously, many modifications and variations of the present invention are possible in light of the above teachings. It is, therefore, to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

I claim:

1. A support assembly for garbage cans and the like comprising: a base, a pair of first and second support trays attached to said base, a center post extending upwardly from said base, a pair of first and second arms extending radially from said post and spaced from said base, said first and second arms being rotatably connected to said post for rotation about the axis of said post, a third support tray attached to said first arm, and a fourth support tray attached to said second arm, said base including a base beam supporting said post at the midportion thereof and a first cross beam attached to an extending transversely of one end of said base beam and a second cross beam attached to and extending transversely of the opposite end of said base beam, said base beam having a closed box-like cross section, said cross beams each having a generally inverted U-shaped open section, connecting means for removably connecting said post to said base beam, each of said trays being circular with a curled under periphery, adjustment means at least at one end of each of said cross beams for contacting a support surface, a flanged washer secured to said post in spaced relation to the upper end of said post, a first clevis secured to one end of said first arm with openings through the upper and lower legs thereof so as to be disposed about said post with the lower leg thereof rotatably supported on said flanged washer, a second clevis secured to one end of said second arm with an opening through the lower leg thereof so as to be disposed about said post and a cap connected to the upper leg thereof, said cap being rotatably supported by and disposed over the upper end of said post.

2. An assembly as set forth in claim 1 wherein the lower leg of said second clevis is above said lower leg of said first clevis and said upper leg of said second clevis is above said upper leg of said first clevis and said lower leg of said second clevis being between said legs of said first clevis.

3. An assembly as set forth in claim 2 wherein each of said arms are tubular and including a ribbed bracket

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disposed about each arm and welded to the tray disposed thereon for securing said third and fourth trays to said arms, a flange welded to the bottom end of said post, a channel member welded to said base beam on the interior thereof, said connecting means comprising bolts extending through said flange and through said channel member for removably connecting said post to said base beam, said first and second trays being welded to the outward ends of said base beam, said base beam comprising a hat-shaped upper element and a flat sheet-like lower element welded thereto, said hat-shaped upper element of said base beam as viewed in elevation including a central horizontal upper surface and lower horizontal flat surface at each end thereof for supporting said first and second trays and including slanted surfaces extending downwardly from the central surface to said flat surfaces, each of said cross beams comprising a hat-shaped upper element.

4. An assembly as set forth in claim 3 wherein said first and second clevises includes control means defined by abutments for preventing relative movement between said arms when said arms are approximately aligned and 180° apart and said first arm is rotated in one direction and when said arms are approximately 120° apart and said first arm is rotated in

the opposite direction whereby the angle through which said arms may rotate relative to one another is approximately 60°.

5. A support assembly for garbage cans and the like comprising: a base, a pair of first and second support trays attached to said base, a center post extending upwardly from said base, a pair of first and second arms extending radially from said post and spaced from said base, said first and second arms being rotatably connected to said post for rotation about the axis of said post, a third support tray attached to said first arm, and a fourth support tray attached to said second arm, a flanged washer secured to said post in spaced relation to the upper end of said post, a first clevis secured to one end of said first arm with openings through the upper and lower legs thereof so as to be disposed about said post with the lower leg thereof rotatably supported on said flanged washer, a second clevis secured to one end of said second arm with an opening through the lower leg thereof so as to be disposed about said post and a cap connected to the upper leg thereof, said cap being rotatably supported by and disposed over the upper end of said post.

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