April 3, 1962 D. E. WILLIAMS 3,028,015

GARBAGE CAN HOLDER WITH LID OPERATOR

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Fig. 1

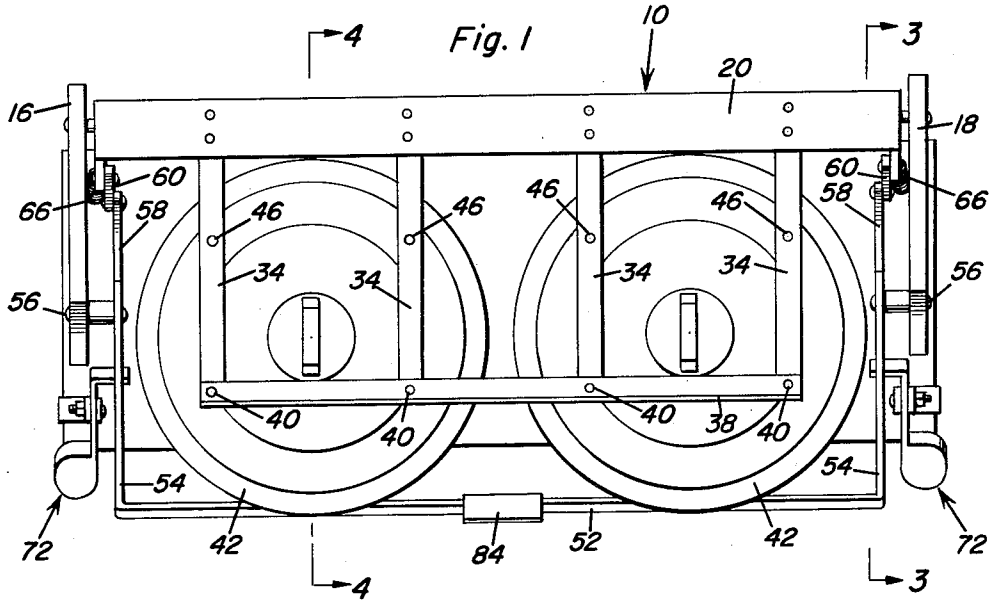
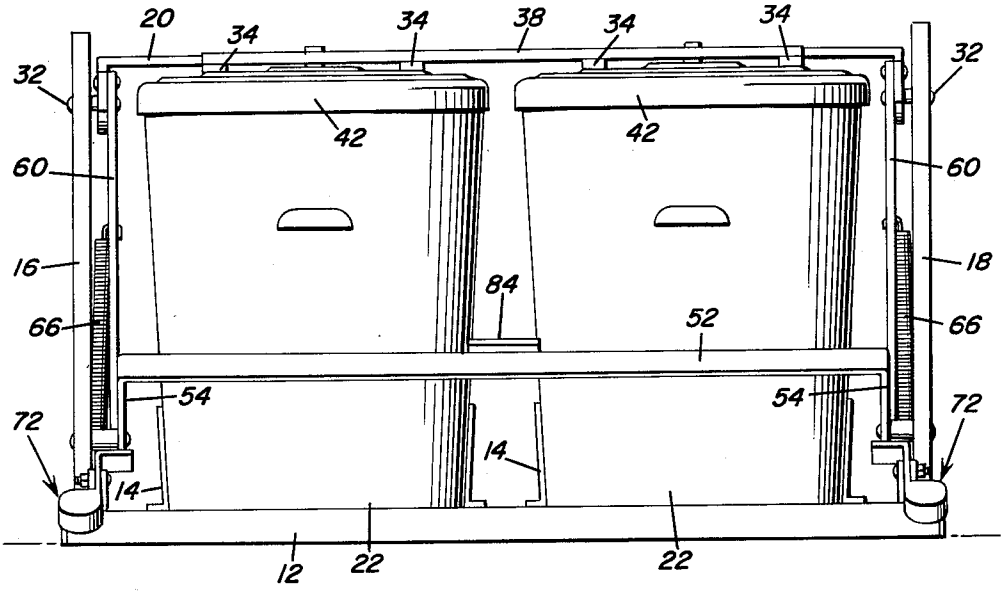



Fig. 2




Dean E. Williams

INVENTOR.

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

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GARBAGE CAN HOLDER WITH LID OPERATOR

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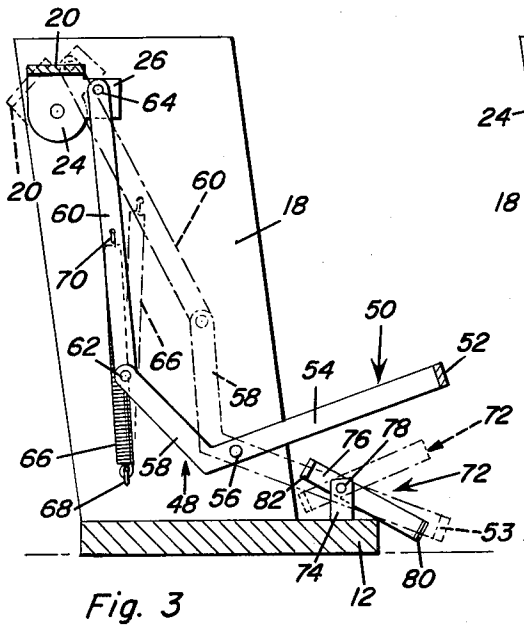



Fig. 3

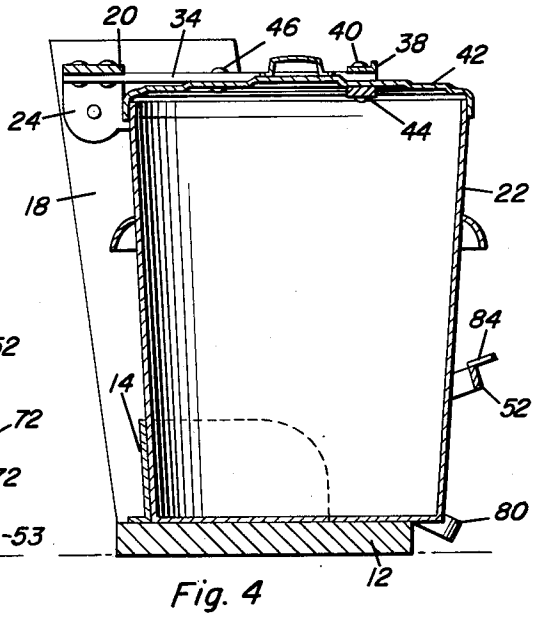
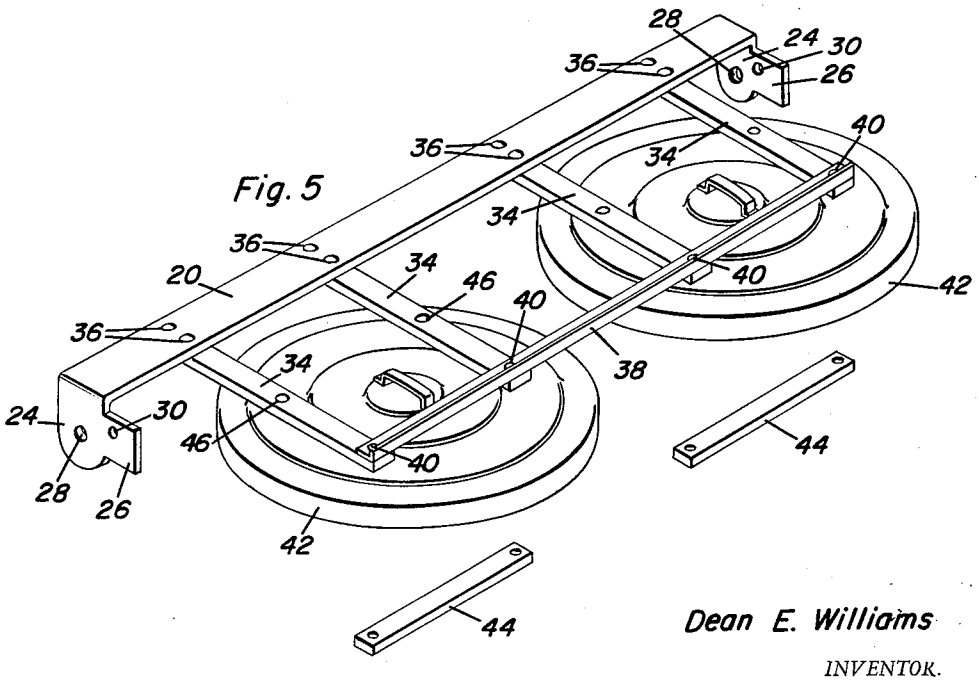



Fig. 4

Fig. 5




Dean E. Williams

INVENTOR.

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

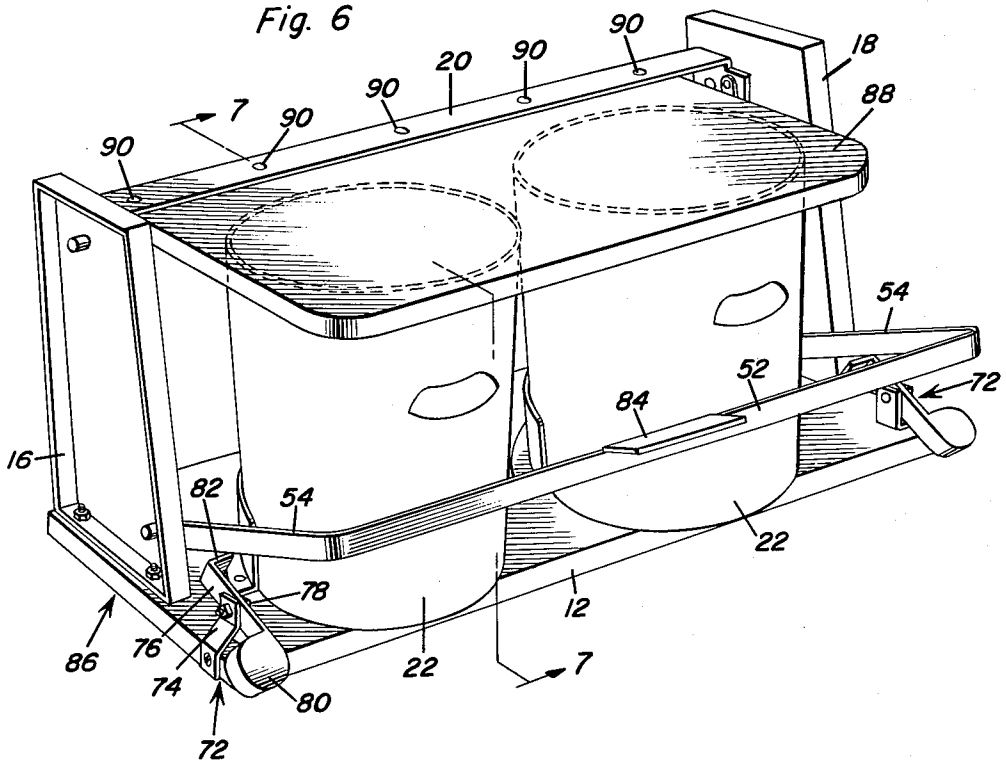
Attorneys

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Fig. 6



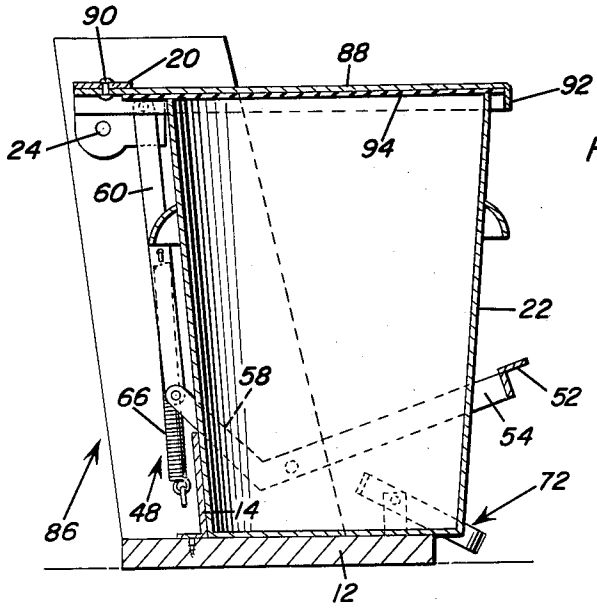




Fig. 7

Dean E. Williams

INVENTOR.

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

Attorneys

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3,028,015

# GARBAGE CAN HOLDER WITH LID OPERATOR

Dean E. Williams, 5122 Classen Station 18, Oklahoma City, Okla.

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10 Claims. (Cl. 211—83)

This invention relates in general to new and useful improvements in garbage can holders, and more particularly to a garbage can holder which is provided with a lid operator.

Quite often when the housewife carries garbage out to a garbage can her hands are full with the result that it is necessary for her to set down the garbage in order to be in a position to remove the cover from the garbage can. This, of course, is highly undesirable.

It is therefore the primary object of this invention to provide a garbage can holder which is provided with a lid operator, the lid operator being connected to the lid of a garbage can and being provided with a foot operated mechanism which, when actuated, will swing a garbage can cover to an out-of-the-way position so that the garbage carried by the individual may be readily deposited into the garbage can.

In many instances, particularly in apartment houses and in housing developments, persons are careless in replacing the garbage can covers. As a result, quite often the garbage can covers are either not replaced or are loosely positioned on the garbage cans with the result that should there be a high wind the garbage can cover will blow away and under all conditions the garbage and its contents are subject to be overturned by stray animals.

It is therefore another object of this invention to provide a novel garbage can holder which includes a lid operator for automatically returning the garbage can lid or cover to a sealed position with respect to the garbage can when the mechanism supporting the garbage can cover is released.

Still another object of the invention is to provide a novel garbage can holder which includes a base on which a garbage can may be set, a standard extending upwardly alongside the garbage can and secured to the base, an arm pivotally connected to the upper part of the standard with the garbage can cover being secured to the arm, and a foot operated mechanism for swinging the garbage can cover to an out-of-the-way position, the foot operated mechanism including an over center linkage whereby the garbage can cover is held in an open position until the linkage is tripped for return to its normal position, after which the garbage can cover will be automatically returned to its garbage can covering position under the closing bias influence of the over-center linkage.

A further object of the invention is to provide a novel garbage can holder and lid operator wherein a single lid operator may be utilized for the purpose of moving a plurality of garbage can covers to inoperative positions and returning the covers to the garbage cans, the lid operator including an arm which extends above the plane of the garbage can and to which a plurality of individual garbage can covers are attached.

Still another object of this invention is to provide a novel lid construction for garbage cans, the lid construction being in the form of a single elongated cover which will extend above a plurality of garbage cans to simultaneously close a plurality of garbage cans set in side-by-side relation, the cover being provided with a suitable operator for swinging it between a garbage can covering position and an uncovered position.

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 top plan view of the garbage can holder which is the subject of this invention and shows generally the details thereof;

FIGURE 2 is a front elevational view of the garbage can holder and shows the general arrangement of the mechanism for removing and replacing the garbage can covers;

FIGURE 3 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 3—3 of FIGURE 1 and shows the operating linkage for swinging the garbage can covers between can covering positions and out-of-the-way positions, the operative position of the mechanism being shown in dotted lines;

FIGURE 4 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 4—4 of FIGURE 1 and shows the relationship between a garbage can, a garbage can cover and the garbage can holder;

FIGURE 5 is an exploded perspective view showing the manner in which the garbage can covers are attached to a pivotally mounted arm for swinging movement between a can covering position and an out-of-the-way position;

FIGURE 6 is a perspective view of a modified form of garbage can holder wherein a single cover is provided for a plurality of garbage cans; and

FIGURE 7 is a transverse vertical sectional view taken substantially upon the plane indicated by the section line 7—7 of FIGURE 6 and shows the relationship of the garbage can cover with respect to a garbage can.

Referring now to the drawings in detail, the first embodiment of the invention is illustrated in FIGURES 1–5, inclusive. The garbage can holder illustrated in these views is generally referred to by the reference numeral **10**. The garbage can holder **10** includes a base **12** on which one or more garbage cans may be set, depending upon the particular requirements of the garbage can holder. A guide **14** is secured to the base **12** for facilitating the positioning of garbage cans thereon.

A pair of standards **16**, **18** are secured to the base **12** adjacent opposite ends thereof and extend vertically therefrom. The standards **16**, **18** may be of any construction which may be considered the most economically feasible. An arm **20** extends between the standards **16**, **18** above the plane of the garbage cans, which are referred to by the numeral **22**, and is mounted for swinging about a horizontal axis.

Referring now to FIGURE 5 in particular, it will be seen that the arm **20** ls provided at opposite ends thereof with depending flanges **24**. A forwardly projecting ear **26** is connected to each of the flanges **24**. The flanges **24** are provided with alined apertures **28** and the ears **26** are provided with alined apertures **30**.

In the mounting of the arm **20** a pair of pivot bolts or pins **32** are passed through the standards **16**, **18** in alinement with each other and through the apertures **28** in the flanges **24**. When so mounted, the main part of the arm **20** is disposed uppermost.

A plurality of straps **34** are secured to the arm **20** by means of fasteners **36** and project forwardly therefrom. The forward ends of the straps **34** are connected together by a transverse member **38** which is in the form of an angle iron. The transverse member **38** is secured to the straps **34** by elongated fasteners **40**.

In the form of the invention illustrated in FIGURES 1–5, inclusive, a separate cover **42** is provided for each of the garbage cans **22**. The cover **42** is secured to the arm **20** through the straps **34**. The fasteners **40** pass down through the straps **34** and through the garbage can covers **42**. A bar **44** is disposed on the underside of each

of the covers 42 and is secured in clamping relation thereto by two of the fasteners 40. Additional fasteners 46 also secure the garbage can covers 42 to the straps 34. In this manner the garbage can covers 42 are rigidly connected to the arm 20 for swinging therewith.

In order to facilitate the swinging movement of the garbage can covers 42 from the garbage can covering positions to out-of-the-way positions, a foot operated mechanism, generally referred to by the numeral 48, is provided. The foot operated mechanism 48 includes a generally U-shaped operator referred to in general by the reference numeral 50. The U-shaped operator 50 includes a crossbar 52 which may be engaged by one's foot, the crossbar 52 being disposed forwardly of the forward edge of the base 12 and a short distance thereabove. A pair of rearwardly extending legs 54 are secured to the ends of the crossbar 52. The legs 54 are pivotally connected to their respective ones of the standards 16, 18 by pivot pins 56 which are transversely alined.

Each of the legs 54 has connected to the rear edge thereof an integral link 58, the link 58 being offset and extending upwardly from its connection with the leg 54. An elongated link 60 is pivotally conntected to the link 58 by a pivot pin 62 and to a respective one of the ears 26 by a pivot pin 64 which passes through the aperture 30 in the ear. A tension member 66 in the form of a coil spring is anchored to each of the standards 16, 18 as at 68 and to an intermediate part of a respective one of the links 60 as at 70. The tension member 66 serves to urge the link 60 downwardly to swing the arm 20 and the garbage can covers 42 secured thereto downwardly to move the garbage can covers 42 to their can covering positions of FIGURES 1, 2 and 4.

The arrangement of the linkage, that is links 58 and 60, is such that when the garbage can covers 42 are swung to their out-of-the-way positions, the links 58 and 60 assume an over center position so as to hold the garbage can covers 42 in their out-of-the-way positions. In order to facilitate the releasing of the linkage from its over center position, a trip mechanism, generally referred to by the reference numeral 72, is secured to each forward corner of the base 72. Each trip mechanism 72 includes a mounting bracket 74 which is secured to the base 12 and projects upwardly therefrom. A lever 76 is pivotally connected to the mounting bracket 74 by means of a pivot pin 78. The forward end of the lever 76 is shaped to form a foot engaging portion 80. The rear end of the lever 76 terminates in an offset portion 82 which underlies the associated leg 54.

When it is desired to deposit garbage into one of the garbage cans 22, it is merely necessary to step onto the crossbar 52 to swing it from its solid line position of FIGURE 3 to its dotted line position of the same figure. If desired, a foot engaging member 84 may be secured to the central part of the crossbar 52. When the crossbar 52 is swung downwardly to its dotted line position of FIGURE 3, the linkage connected thereto will have swung the arm 20 to its dotted line position of FIGURE 3 with the result that the garbage can covers or lids 42 are swung upwardly to out-of-the-way positions. As the legs 54 are swung downwardly by the downward movement of the crossbar 52, they will engage the offset portions 82 of the trip mechanisms 72 with the result that the trip mechanisms 72 will be swung to their dotted line positions of FIGURE 3. After the garbage has been deposited into the garbage cans 22, the garbage can covers 42 may automatically be returned to their can covering positions by stepping upon one of the trip mechanisms 72 which will serve to force the legs 54 and the crossbar 52 upwardly to move the linkage back past its over center position, after which the tension members 66 will continue the movement of the operating mechanism to its normal at rest position. The tension members 66 have the added function of applying a pressure on the garbage can covers 42 to hold them in place on the garbage cans 22, thereby preventing the removal of the garbage can covers by dogs and other animals.



At this time it is pointed out that although two garbage cans 22 have been illustrated as being mounted on the base 12, the garbage can holder 10 may be particularly designed to hold either a single garbage can, or a number of garbage cans in excess of two.

A modified form of garbage can holder, generally referred to by the numeral 86, is illustrated in FIGURES 6 and 7. The garbage can holder 86 differs from the garbage can holder 10 only in the arrangement of the covers for the garbage cans 22. All other components of the garbage can holder 86 are identical with like components of the garbage can holder 10.

In the construction of the garbage can holder 86, the straps 34 and their associated components are omitted and a very large, generally rectangular garbage can cover 88 is provided. A rear portion of the garbage can cover 88 is secured to the arm 20 by means of a plurality of fasteners 90. As is illustrated in FIGURE 6, the garbage can holder 86 is of a size to hold two garbage cans 22. Accordingly, the garbage can cover 88 is of a suitable size to overlie the two garbage cans 22. Of course, the garbage can holder 86 may be of a size to hold more or less garbage cans with the result that the garbage can cover 88 would be of a proper size to cover the garbage cans.

As is best illustrated in FIGURE 7, the garbage can cover 88 is provided with a peripheral flange 92. The flange 92 serves to reinforce and stiffen the garbage can cover 88. A suitable felt or other type of liner 94 is secured to the underside of the garbage can cover 88. The liner 94 serves to both form a seal with the upper edges of the garbage cans 22 and to eliminate the noise which generally results from the garbage can cover being swung back into seating engagement with the garbage cans 22.

The arm 20 is identical with the arm 20 of the garbage can holder 10 and is swung between a garbage can covering position and an out-of-the-way position by means of a foot operated mechanism 48 which is secured to each of its standards 16, 18. Also, a trip mechanism 72 is secured to each forward corner of the base 12 for returning the linkage of the foot operated mechanism 48 back past its over center position.

Since the mechanism for swinging the garbage can cover 88 between its can covering position and its out-of-the-way position is the same as that disclosed with respect to the garbage can holder 10, no further description is believed to be necessary.

From the foregoing it will be readily apparent that there has been devised a highly desirable garbage can holder which will not only hold the garbage cans in position on a suitable base, but will also permit the movement of the garbage can cover or covers to an out-of-way position by a person having his hands full, the garbage can covers having a foot operated mechanism for swinging them to their out-of-the-way positions. In addition to this, a suitable trip mechanism has been provided which permits one, with his foot, to release the foot operated mechanism and thus permit the automatic swinging of the garbage can covers back into garbage can closing positions.

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 garbage can holder comprising a base for supporting at least one garbage can, a standard extending upwardly from said base adjacent one end thereof, an arm

pivotally connected to said standard for swinging about a generally horizontal axis, a garbage can cover secured to said arm, a foot operated mechanism connected to said arm, said mechanism being disposed above said base and mounted on said standard forwardly of the horizontal axis for pivoting said arm and cover against a closing bias mechanically applied directly to the foot operated mechanism until a garbage can uncovered position is approached, said foot operated mechanism including an over center linkage pivotally connected directly to the arm to automatically retain the cover in a garbage can uncovered position, and trip mechanism mounted independently of the foot operated mechanism for swinging said foot operated mechanism back past the over center position into the influence of said closing bias.

2. A garbage can holder comprising a base for supporting at least one garbage can, a standard extending upwardly from said base adjacent one end thereof, an arm pivotally connected to said standard for swinging about a generally horizontal axis, a garbage can cover secured to said arm, a foot operated mechanism connected to said arm for pivoting said arm to a garbage can uncovering position, over-center means comprising a spring connected directly to said foot operated mechanism for applying a closing bias to the can and automatically retaining said garbage can cover in a garbage can uncovered position, trip mechanism for swinging said foot operated mechanism back past the over center position into the closing bias influence of said spring, and garbage can positioning means carried by said base.

3. A garbage can holder comprising a base for supporting a plurality of garbage cans, a standard extending upwardly from said base adjacent opposite ends thereof, an arm extending between said standards above the normal level of garbage cans, pivot means pivotally connecting said arm to said standards for pivoting about a horizontal axis, garbage can cover means carried by said arm, a generally U-shaped operated including a crossbar and a pair of legs, means pivotally connecting said legs to said standard with said crossbar disposed above said base, and linkage means disposed above said base and mounted on said standard forwardly of the horizontal axis connecting said arm so said legs for pivoting said cover against a closing bias mechanically applied directly to the linkage means until the cover means approaches a final open position.

4. A garbage can holder comprising a base for supporting a plurality of garbage cans, a standard extending upwardly from said base adjacent opposite ends thereof, an arm extending between said standards above the normal level of garbage cans, pivot means pivotally connecting said arm to said standards for pivoting about a horizontal axis, garbage can cover means carried by said arm, a generally U-shaped operator including a crossbar and a pair of legs, means pivotally connecting said legs to said standard with said crossbar disposed above said base, linkage means disposed above said base and mounted on said standard connecting said arm to said legs, said legs and link means being operative as an over center mechanism to automatically retain said can cover means in a garbage can uncovered position, and trip mechanism engageable with said legs for swinging said link means back past over center position.

5. The garbage can holder of claim 3 wherein said garbage can cover means includes a separate garbage can cover for each garbage can carried by said base.



6. The garbage can holder of claim 3 wherein said garbage can cover means includes a separate garbage can can cover for overlying a plurality of garbage cans.

7. A garbage can rack comprising, frame means for supporting garbage cans in predetermined positions, can lid means pivotally mounted on said frame means about a first axis, foot operated mechanism mounted on said frame means and operatively connected to said lid means for actuating said lid means toward open position, holding means operatively connected to said foot operated mechanism for applying a closing bias to the lid means and holding said lid means in open position, and separate trip means mounted on said frame means independent of the foot operated mechanism and operative by engagement with said foot operated mechanism to move said lid means toward closed position.

8. The rack as defined in claim 7, wherein said foot operated mechanism comprises lever means pivotally mounted on said frame means forwardly of said first axis and a single link directly connected between said lever means and lid means.

9. The rack as defined in claim 8, wherein said holding means comprises a single spring directly connected between said frame means and link for pivotal displacement by the link, to form an over-center mechanism.

10. A garbage can rack comprising, frame means for removably supporting a garbage can in a predetermined position thereon, lid means pivotally mounted by the frame means about a first axis for movement between closed and open positions always under the closing influence of gravity, treadle means pivotally mounted by the frame means forwardly of and below said first axis about a second axis, said treadle means including a forward portion projecting forwardly of the frame means and a rear portion projecting rearwardly of and upwardly from the second axis, link means pivotally interconnecting the rear portion of the treadle means and the lid means forwardly of the first axis, over-center spring means pivotally mounted on the frame means and connected to the link means for pivotal and upward displacement therewith to apply a closing bias influence on the lid means until it approaches said open position, and thereafter holding the lid means in open position, trip means pivotally mounted by the frame means forwardly of and below said second axis for engagement by the forward portion of the treadle means when the lid means is in open position to thereby condition the trip means for pivotally displacing the treadle means and lid means into the closing bias influence of the spring means.


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