Oct. 19, 1937. C. K. BRANDSTROM 2,096,506

APPARATUS FOR STABILIZING AND COVERING GARBAGE CANS

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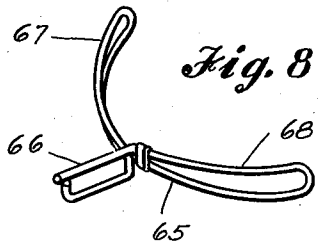


Fig. 8

Fig. 1

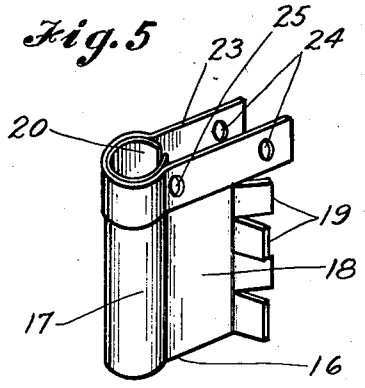


Fig. 5

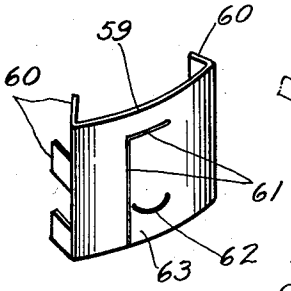


Fig. 6

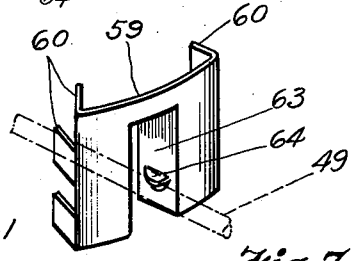


Fig. 7

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APPARATUS FOR STABILIZING AND COVERING GARBAGE CANS

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Fig. 2

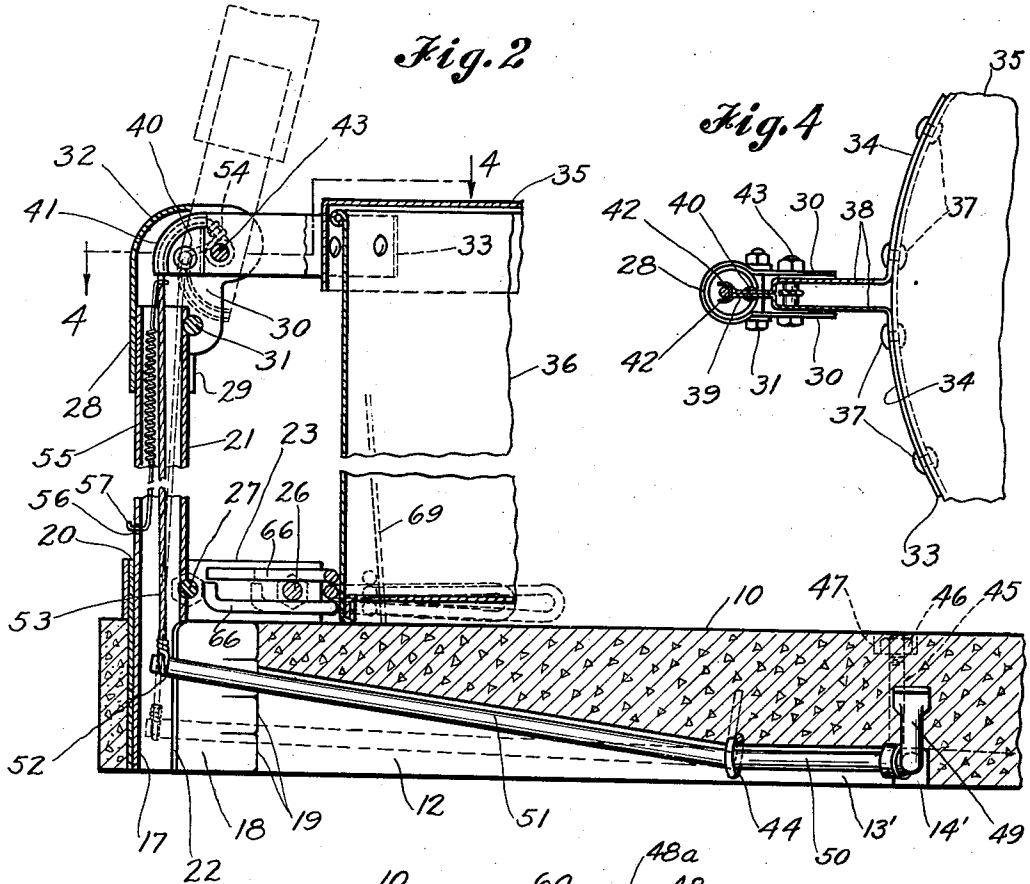
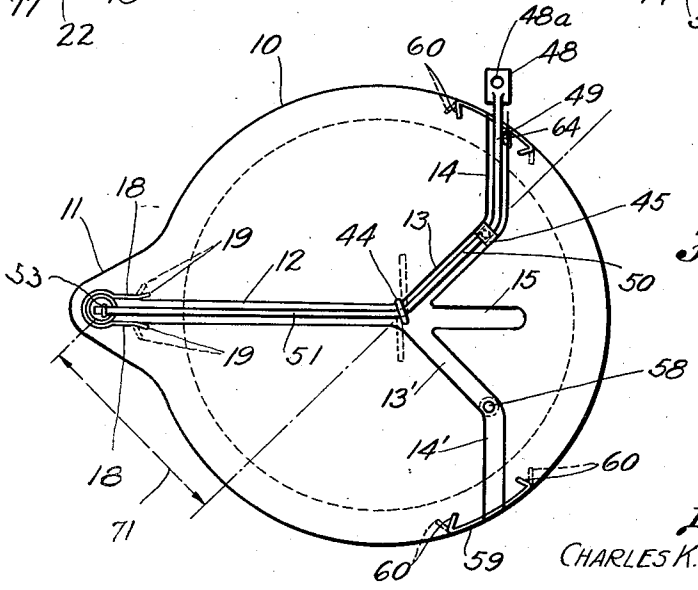


Fig. 4

Fig. 3



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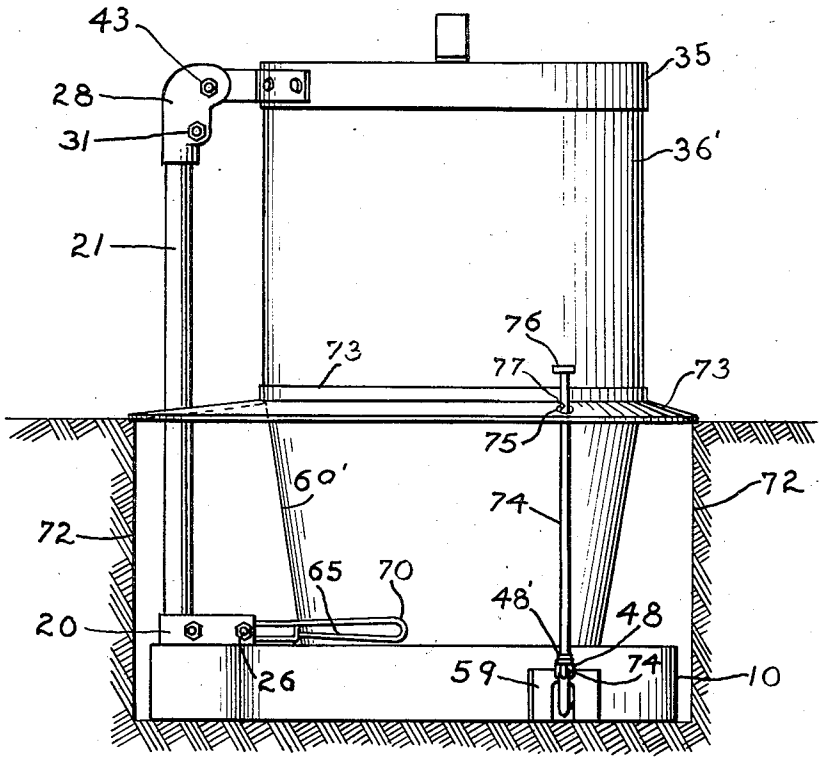


Fig. 9

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APPARATUS FOR STABILIZING AND COVERING GARBAGE CANS

Charles K. Brandstrom, Seattle, Wash.

Application April 28, 1936, Serial No. 76,788

3 Claims. (Cl. 248—147)

This invention relates to apparatus for stabilizing garbage cans, and for operating the covers therefor.

In the ordinary use of garbage cans, they are frequently positioned near a kitchen door, and usually without any guard to prevent the overturning thereof by dogs, etc., whereby the contents become scattered. Again, the ordinary covers are frequently dropped and become misshapen or lost. Such cans when positioned on the ground, outside the house are frequently on a much lower level, and the user must descend to that point to open and close the cans.

It is therefore an object of this invention to provide a base block on which the cans may be supported, with a tubular post rising from the rear edge of such base, and a suitable cover for cans, adjustably operated at the top of the post.

Another object is to provide such block and post with an adjustable guide or locating device thereon for fixing the position of cans of various sizes and shapes, upon the block, so that the cover on the post will fit over any of such cans.

A further object is to provide means actuated by a pedal for raising such covers by the pressure of either foot, together with adjustable means for actuating such pedal either at the base of such cans or at any desired distance above the same.

A still further object is to provide such a post with a can cover connected in hinged relation at the top thereof, with an eccentrically mounted quadrant, or arm, for lifting such covers, when such pedal is depressed; together with means for retaining such covers in elevated position when the can is to be removed or emptied.

With these and other objects, to be hereinafter shown, I have illustratively exemplified my invention by the accompanying drawings, of which

Figure 1 is a side elevation of my apparatus showing a garbage can in position on a block,

Figure 2 is a fragmentary view, partly in section showing my device more in detail,

Figure 3 is the bottom view of my device,

Figure 4 is a section upon the line 4—4 of Figure 2,

Figure 5 is a perspective of a lower footing and bracket for a tubular post,

Figure 6 is a perspective of a guide plate for the block,

Figure 7 is a similar view of a guide plate but formed to provide an opening for a pedal lever, with a latch extended,

Figure 8 is a perspective of a locating bracket for the garbage cans.

Figure 9 is a side elevation of a modified form of can, with sloping sides below the center and with a reduced bottom diameter, set in a well, and surrounded by a shield, and provided with an auxiliary foot pedal.

Like numerals on the different figures represent like parts.

Numeral 10 represents the base block which is preferably made of concrete or similar substance upon which the garbage can is supported, and to which the lifting device is attached. The base block may be made in any desired shape but preferably as shown in Figure 3 with a boss or projection 11. The bottom of the base is provided with grooves 12—13—14—15—13′ and 14′ the objects of which will be hereinafter described.

Into the projection 11, of the base is cast a footing, represented in its entirety by reference numeral 16 (Fig. 5). The footing is preferably made of sheet metal and formed into the shape shown in Fig. 5, consisting of a circular portion 17 and flat walls 18 slit at their outer edges which are bent as shown to form prongs 19 for rigidly securing it into the concrete base. The flat walls 18 are spaced apart as shown in Figure 3. The top of the circular portion 17 is curved as shown at 20 (Figure 5) so as to form almost a complete circle.

A small circular portion 20 projects above the boss as shown in Figures 1 and 2. Into this circular portion 20 is positioned a post or tube 21, cut away in part at the bottom as shown at 22 (Figure 2). The tube is held in place by means of a clamp 23 bent into the shape shown in Figure 5 and slipped over the top portion 20 of the footing 16 (Figs. 1—2—5). The clamp 23 is provided with holes 24 and 25 through which are passed binding bolts 26 and 27. The hole 25 is drilled so near the center of the circular portion 20 of the footing 16 that the tube has to be notched out to receive the bolt 27 as is clearly shown in Figure 2.

To the top of tube 21 is secured a head, represented in its entirety by reference numeral 28. This head consists of a circular portion 29 and flat parallel walls 30 (Figures 1—2—4). The head 28 is secured to the top of the tube by means of a binding bolt 31, located in such a position that the side of the tube 21, has to be notched out to receive it. The top of the head is partially covered as at 32 (Figure 2) to limit the opening of the cover for a can beyond its center of gravity.

Between the parallel walls 30 of the head 28, is pivoted a lever bracket, represented in its entirety by reference numeral 33. This bracket

consists of curved portions 34, secured to the cover 35 of the garbage can 36 by means of rivets 37. The bracket 33 is provided with parallel sides 38, bent and jointed together as shown at 39, by means of rivet 40. The edge of the joint portion 39 is curved in the form of a quadrant 41, and the terminals of which are spread as shown at 42—42 (Figure 4) to form a groove or sheave as shown (Figures 2—4). Said bracket 33 is pivoted in the head 28 by means of bolt 43 (Figures 1—2—4). It will be noted that the pivot bolt 43 is positioned eccentric with quadrant 41, the lower portion of the quadrant, being farther from the pivot bolt 43 than the top of the quadrant.

At the junction of the block grooves 12—13—13' is imbedded a pivot loop 44, preferably made of a heavy wire or strap. Near the junction of grooves 13 and 14 is placed an eyebolt 45 (Figs. 2—3). A nut 46 is countersunk into a recess 47, (Figure 2). The lower end of eyebolt is preferably flat, as a strap, to form a better wearing and holding means.

In loop 44 and eyebolt 45 is pivoted a heavy rod provided with a foot pedal 48, lever portion 49, axis portion 50 and lever portion 51. On the end of lever 51 is a groove 52 around which is secured the lower end of a rope or cable 53. The upper end of this cable 53 is passed around the quadrant 41 as shown, then downward and around pivot bolt 43 (Figure 2) and fastened back on itself as shown at 54. Near the upper end of cable 53 is secured the upper end of an equalizing spring 55. The lower end of the spring passes through a small hole 56 in the tube 21 and is secured by means of a loop as shown at 57.

The object of the grooves 13' and 14' is to make the device reversible, so the foot pedal may project either from the right or left hand side of the base as preferred. If changed the eyebolt 45 would be passed through the hole 58 (Figure 3) near the junction of the grooves 13' and 14'. The object of the extended groove 15 is to provide for assembling of the operating rod for the pedal etc.

The outer end of groove 14' is covered by a guide plate or tube shown in Figure 6. This plate is preferably shaped as shown, consisting of body portion 59 and prongs 60 which hold it into the base. The plate is provided with slits 61—62. The flap section formed by the slits 61 may be bent inward as shown at 63 (Figure 7). The small flap formed by slit 62 may be bent outward as shown at 64 (Figure 7). A plate formed in this manner (Figure 7) is placed over the groove 14 (Figure 3). The lever 49 passing through the opening provided by folding the flap 63 inward as shown in Figure 7. The object of the small flap 64 being to provide a catch for the rod 49, when the foot pedal 48 is to be held depressed, and the cover held elevated.

Between the parallel sides of clamp 23 (Figures 1—2—5) is mounted a locating or guide bracket 65 and 66, preferably made of a heavy wire or light rod formed with yoke ends 67 and 68 as shown in Figure 8. This bracket consists of the looped end 66 which fits between the side walls of bracket 23, and surrounds the clamping bolt 26. It also carries two curved arms 67 and 68 which are bent to conform to the outside of any garbage can.

For a given can with straight sides the bracket 65 is clamped in the position shown in solid lines (Figures 1—2). For cans as indicated by 36' with sloping sides 69', as shown at dotted lines 69, the clamping bolt 26 is loosened and the bracket 65 moved outward to the right as shown in the dotted lines 70, till it touches the sides of the smaller can and is then bound in place by means of the bolts 26.

The method of operation is as follows: As the foot pedal 48 is depressed the lower lever system will rotate about the axis 50, (Figure 3) the outer end of lever 51 scribing an arc equivalent to a crank or lever indicated by double pointed arrow 71. The parallel sides 18 of the footing 16 being sufficiently separated to allow lateral movement for the arc to be scribed by the end of the lever 51. As the end of lever 51 moves downward the cable will move downward causing the quadrant 41 to rotate about the pivot bolt 43, thereby causing the cover 35 to be swung upward.

Due to the eccentric mounting of the quadrant 41 with respect to the pivot bolt 43, as previously described, the leverage of the quadrant 41 about the pivot 43 is greater during the first part of the lifting operation than later when the cover approaches the vertical or open position as will be noted by the dotted lines at top of Figure 2.

The object of spring 55 is to partly counterbalance the weight of the cover and keep it from slamming down when the foot pedal is released.

The cover cannot be opened to a full vertical position due to the bracket 33, striking against the cover portion 32 of the head portion 28, as indicated by dotted position Figure 2. This is provided so the cover will automatically start to close when the foot pedal 48 is released.

When it is desired to hold the cover open, as for removing the can, the foot pedal 48 may be moved slightly to one side, then depressed, so the lever 49 will latch under the small latch flap 64 as shown more clearly in Figure 7.

In case the can is set into a well or depression as indicated by dotted lines 72 (Figure 1) the can may be surrounded by a shield 73 to cover the top of the depression. In this case for convenience an extension rod 74 with a shoulder 48' near its bottom may be passed into the hole 48a, in the foot pedal 48. This rod extends upward as though a hole 75 in the shield plate 73. The top of rod 74 may be provided with a head 76. to serve as an auxiliary foot pedal. The rod 74 may also be provided with a notch 77 near its top, which may be latched under the plate 73 to hold it in a depressed position when it is desired to remove the can or insert the same in position on the base block.

While I have shown and described a particular form or embodiment of my invention I am aware that many minor changes will readily suggest themselves to those skilled in the art without departing from the spirit and scope of my invention. I, therefore, desire to avoid being limited to the particular form of embodiment which I have herein above shown and described.

Having described my invention, I claim as new:

1. An apparatus for stabilizing and covering garbage cans, comprising, a base block to support a garbage can, a tubular post extending up from one side of the block, a head member on top of the post, a lifting lever pivotally connected to said head, the inner end of said lever curved and provided with a grooved quadrant along the extremity thereof, a cable connected to said lever near the end thereof and positioned along said groove and extending down through said post to the bottom of said block, a pedal lever rotatably mounted on the bottom of said block with the inner end thereof attached to the lower end of

said cable and the outer end of said last named lever provided with a pedal and adapted to draw said cable downward and elevate said lifting lever, a can cover affixed to the outer end of said lifting lever, and said cover adapted to close the top of a can and hold the same in position on said block, a guide bracket yoke mounted over said block adapted to be slidably adjusted laterally for positioning cans of various sizes and shapes on said block in alignment beneath said can cover, a guard positioned on said head over said post for limiting the elevation of said cover, and means for sustaining said cover in elevated position for the removal of cans therefrom.

2. An apparatus for holding garbage cans, and for lifting covers therefrom, comprising, a support for such cans, a post extending up from one edge of said support, a lifting bracket lever extended laterally from a head on the top of said post, a cover for such cans affixed to the outer end of said lever, a fulcrum pin positioned through said head piece on the top of said post for pivotal support of said lever, the inner end of said lever curved and extending in quadrant eccentric relation with said pin for equalizing the power required for elevating said lever and cover at different positions in the travel thereof, a cable connected to the said lever and extended along said groove and down along said post to said base, a foot lever mounted on said base and connected to the lower end of said cable for operating said lifting lever, and a spring mounted in said cable to partly balance the weight of said cover and prevent the same from falling rapidly when said levers are released by the operator.

3. An apparatus for holding garbage cans and for operating covers therefor, comprising, a block for supporting such cans, a post extending up from one side of said block to a point opposite the top of such cans, a lifting bracket lever pivotally connected from the top of said post, a can cover affixed to the outer end of said lever and adapted to normally fit and rest over said cans by gravity on said block, the inner end of said lever projected on a curve back from said pivotal connection and provided with a cable groove on the extremity thereof, a foot lever mounted on said block, and a cable attached at each end thereof to the respective inner ends of said levers, a pedal on the outer end of said foot lever adapted to depress the same and to elevate said can cover thereby, an extension rod connected with and projecting above said pedal to a point above said can to facilitate the use of said levers by an operator from such elevated position, a shield around said can, and a notch in the side of said rod adapted to be latched beneath said shield for sustaining said cover and to prevent the falling therof by gravity on the removal of a can.

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