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CLOSURE OPERATING MECHANISM FOR WASTE CANS

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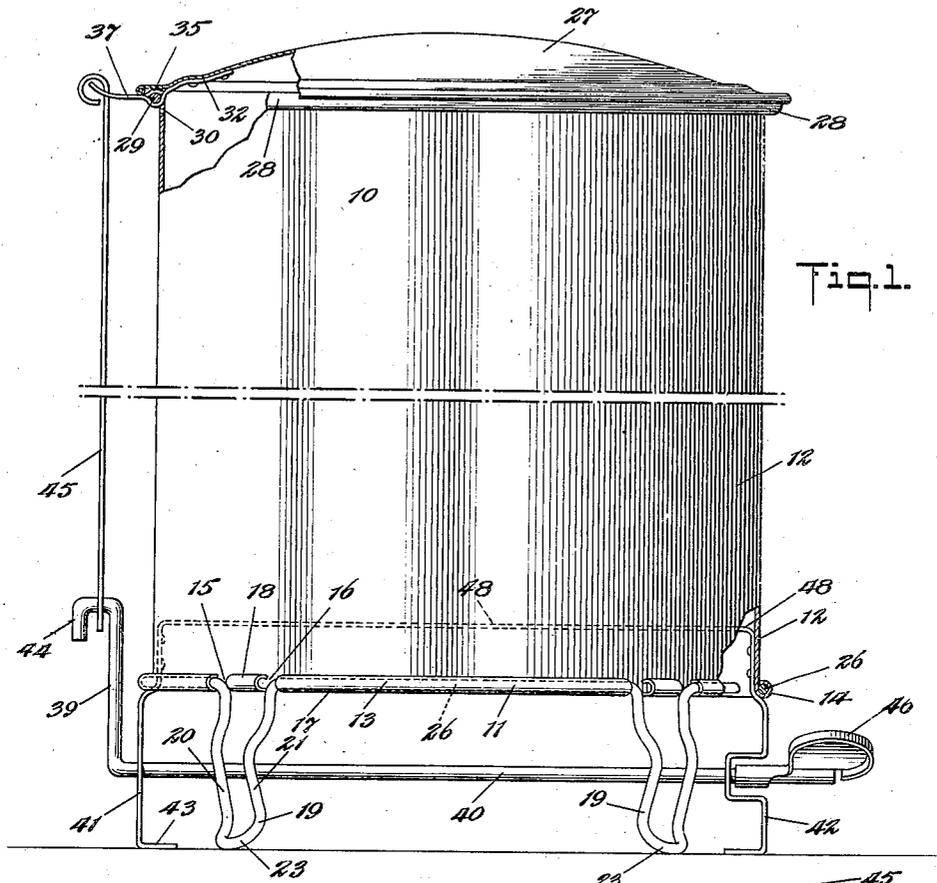


Fig. 1.

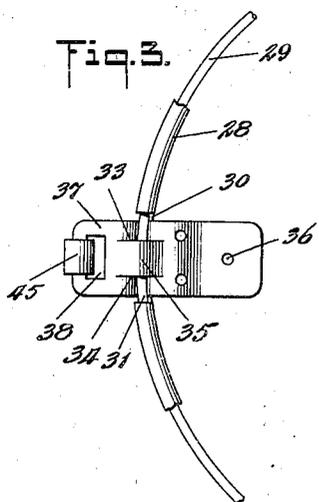


Fig. 3.

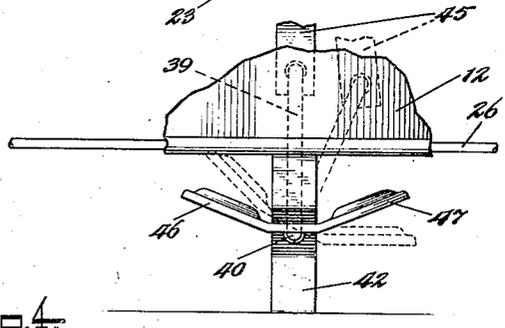


Fig. 2.

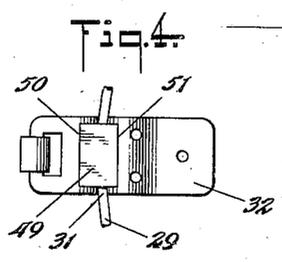


Fig. 4.

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## CLOSURE OPERATING MECHANISM FOR WASTE CANS

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Original application August 28, 1935, Serial No.  
38,176. Divided and this application January  
23, 1936, Serial No. 60,441

4 Claims. (Cl. 220—36)

The invention relates in general to metallic receptacles such as open top and bottom containers for garbage and other waste cans and particularly relates to the mechanism for actuating the closures of such containers and specifically relates to the combined hinge strap and actuating lever journalled on the bead wire at the top of the container.

The present application constitutes a division of my copending application entitled "Garbage and waste cans", Serial No. 38,176 filed August 28, 1935.

The primary object of the invention is to provide an improved form of receptacle of the type outlined and particularly to provide an improved and simplified mechanism for lifting and lowering the top closure and associated parts.

Various other objects and advantages of the invention will be in part obvious from an inspection of the accompanying drawing and in part will be more fully set forth in the following particular description of one form of the device embodying the invention, and the invention also consists in certain new and novel features of construction and combination of parts hereinafter set forth and claimed.

Fig. 1 is a view in side elevation of a garbage can illustrating a preferred embodiment of the invention;

Fig. 2 is a detailed view of the pedals at the lower right side of Fig. 1;

Fig. 3 is a detailed plan view of the hinge connection at the upper left side of Fig. 1; and

Fig. 4 is a modified form of the hinge strap.

Referring to the drawing there is disclosed a receptacle 10 in the instant case showing the open bottom can or container for receiving the usual garbage can (not shown). The lower edge 11 of the upstanding cylindrical wall 12 is bent back upon itself to form an edge reinforcement bead 13. The outer side 14 of the bead 13 is cut away to provide a plurality, one for each leg, of pairs of openings 15 and 16. This forms a series of long beads 17 between the short, hollow, tubular beads 18 defining the inner ends of the openings 15 and 16.

There is provided a plurality of wire legs 19, one for each pair of interruptions of the bead. These legs are each of bifurcated form comprising substantially parallel sides 20 and 21 connected at their lower ends to form wide spreading feet 23. At the upper end of each leg, the sides 20 and 21 are bent outwardly, intruded into the adjacent ends of the long beads 17 and are secured in place by being clamped within the long beads. These

legs are connected by the length of wire therebetween forming the combined tie and bead wire 26.

The receptacle 10 is provided at its upper end with a hinged closure 27. The upper edge of the receptacle 10 is bent back upon itself to form a bead 28 and in this bead is contained an endless bead wire 29. The bead is interrupted at the rear portion of the can to form an opening 30 with a portion of the wire 29 bridged across the opening and forming a hinge pin located slightly exteriorly of the adjacent side of the receptacle. Secured to the cover 27 is a length of rigid material forming a combined actuating lever and hinge strap 32. The strap is provided with two parallel slits 33 and 34 with the portion of the material between the slits bent in one direction out of the plane of the remaining portion of the plate to form one side of a transversely extending hinge eye 35 and the material to the outside of the two slits is bent in the opposite direction, out of the general plane of the slits and into a groove, to complete the formation of the eye so that there is provided a relatively long hinge connection between the closure and the body of the receptacle. To one side of the hinge connection, the plate is provided with a plurality of apertures 36 by means of which it is riveted or otherwise secured to the underside of the closure 27. The portion of the plate to the opposite side, that is outwardly of the hinge connection, forms a rearwardly extending lever 37 having its outer end upturned and provided with a transversely elongated slot 38.

Directly below the lever 37 is located the upstanding lever arm 39 of a rocking shaft 40 which extends diametrically beneath the receptacle 10. The shaft 40 is journalled adjacent its opposite ends in supplemental legs 41 and 42 which function additionally to provide two supports for the receptacle 10 in addition to the legs 19 and these two legs are disposed to transmit to the ground, floor, or other support, strains which may be imposed thereon by the operator in the act of lifting or closing the closure 27. In the illustrated instance the legs 40 and 42 are formed at the ends of a bent strip of flat material having inturned feet 43 and secured at their upper portions to the wall 12 in the region reinforced by the lower bead and its associated bead wire. The lever 39 terminates in a hooked end 44 and a rigid reach rod 45 extends between and is pivotally connected at its opposite end with the levers 37 and 39. It is herein suggested that the upper ends of the legs 41 and 42 be connected by the strap 48 which tends to reinforce the open bottom of the receptacle.

The forward end of the shaft 40 is provided with two transversely extending pedals 46 and 47 forming foot actuated levers projecting from opposite sides of the shaft, normally disposed as shown in Fig. 2 in a horizontal position and disposed so that the shaft 40 is rotated to elevate the closure 27 whenever the operator steps indifferently on either pedal 46 or 47.

In place of the form of hinge strap shown in Fig. 3, it is suggested that the eye encircling the hinge pin 31 be formed of two parts, as shown in Fig. 4, and without the slits 33 and 34. One part 32 corresponds to the strip bent into a transversely extending groove to form the overlapping portion of the eye as shown in side elevation in Fig. 1 and the underside of the eye formed of a thin flat rectangular strip of metal 49 bridging across the groove and welded along opposite edges 50 and 51 to the portion of the plate 32 on opposite sides of the groove.

By means of the eye form of connections shown in both Figs. 3 and 4, it is possible in the act of mounting the upper bead wire 29 in place to string the hinge leaf 32 on to the bead wire before the upper bead is bent into place and in this way the strap is restrained from falling off the wire during the fabrication of the can.

In operation and assuming that the operator has stepped on the right hand pedal 47 to lower it from the elevated into the dotted line position shown in Fig. 2, the shaft 40 will be rotated over a small angle in a clockwise direction which similarly rotates lever 39 and this lever lowering the reach rod 49 will move the closure 27 from its closed into an elevated open position and in which position the closure has a tendency to remain due to the fact that when elevated the center of mass of the cover is slightly outside of the vertical plane containing the axis of rotation of the closure. As the right hand pedal 47 is lowered, it will be noted that the left hand pedal 46 will be elevated. It is then simply required that the operator step on whatever may be the elevated pedal, in this instance the pedal 46, to rotate the shaft in an anticlockwise direction and thus positively lower the closure 27 into its closed position. The fact that the closure may be moved from its open position, past its position above its axis, is due perhaps to the outward or upward bent of the lever 37 which resolves the upward thrust of the rod 45 into an outwardly directed component to rotate the lever.

While there have been shown, described, and pointed out in the annexed claims, certain novel features of the invention, it will be understood that various omissions, substitutions and changes in the form and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention.

I claim:

1. An open top can provided with a closure hinged thereto, mechanism for controlling the opening and closing of the closure, said mechanism including a lever secured to the closure at its hinge connection, a rocking shaft journaled at the bottom of the can and having one end upturned and normally located in a vertical position and vertically in alignment with and beneath the lever, a reach rod connecting the upturned end with the lever, the opposite end of the rocking shaft provided with two pedals located on op-

posite sides of and spaced from the axis of rotation of the shaft, said pedals normally disposed in relative horizontal position when the closure is in its closing position and adapted whenever pressure is imposed on either of the pedals when so disposed to act with a leverage effect and thus depress one of the pedals and elevate the other and to rotate the shaft to cause a lowering of the reach rod and an elevating of the closure and when pressure is applied to the elevated pedal to cause it to act with a leverage effect on the shaft to restore the pedals to their normal horizontal position and to elevate the reach rod and thus to lower the closure into its normal position closing the can.

2. An open top can having its upper edge bent back upon itself to form a bead, said bead being interrupted at one point to form an opening, a bead wire contained in the bead and bridging said opening, said bridging portion constituting a hinge pin, a closure for the open top of the can, a single strip constituting a combined lever and hinge strap for the closure, said strip having two longitudinally extending parallel slits within its outline, the material between the slits bent in one direction and the material to the outside of the two slits bent in the opposite direction out of the general plane of the strip to form a transversely extending hinge eye fitted in said bead opening and encircling the hinge pin, the end of the strip on one side of the eye secured to the closure and the other end projecting from the can and provided with means for engaging a closure controlling mechanism.

3. A can closure actuating mechanism including a rocking shaft mounted for rotary movement about a horizontal axis, a pair of foot pedals constituting levers secured to the shaft to rotate the same and projecting diametrically in opposite directions from the shaft and normally disposed in a horizontal plane, said shaft provided with a closure-actuating arm projecting laterally from the axis of the shaft, and disposed in a vertical direction when the foot pedals are in their horizontal plane, and said arm adapted to be swung out of its vertical position on the rotation of the shaft in either rotary directions by pressure on either pedal.

4. A can, a closure therefor, mechanism for actuating the closure including a rocking shaft having one end extending at right angles to the shaft and connected to the closure with said end vertically disposed when the closure is in closed position, and disposed to open the closure when the end is rotated from its normal vertically extending position in either rotary direction, said shaft provided at its other end with two pedals extending therefrom in opposite directions from the axis of rotation of the shaft and each pedal constituting a foot actuated lever for rotating the shaft, and said pedals normally disposed in relative horizontal position when the first named shaft end is in its vertical, closure-closed position and said pedals adapted whenever pressure is imposed on either of the pedals to depress one and elevate the other and thus rotate the shaft to shift the end vertically and thus open the closure and when pressure is applied to the elevated pedal to restore the pedals to their normal horizontal position.

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