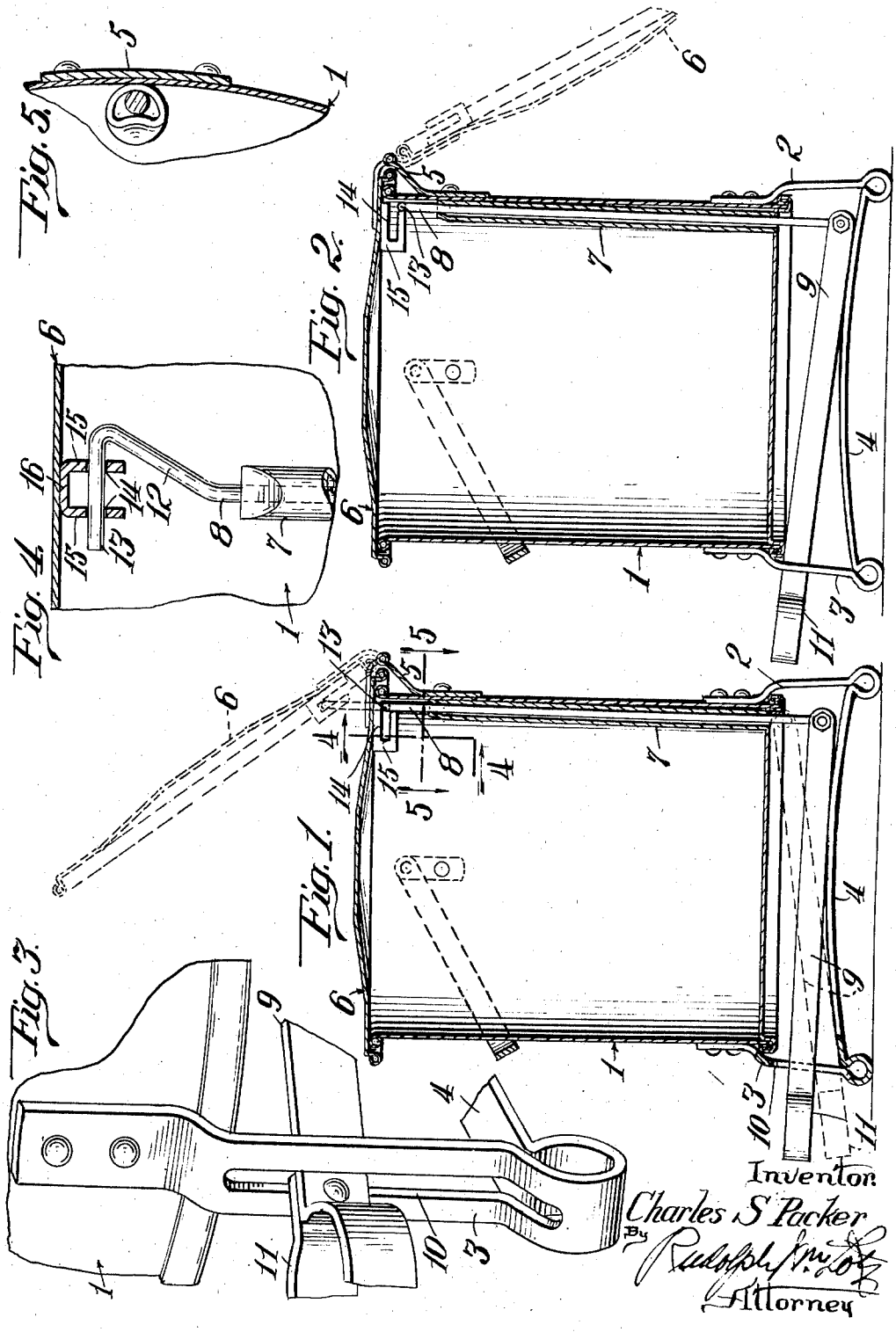
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WASTE CAN

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## WASTE CAN

Charles S. Packer, Chicago, Ill., assignor to Justrite Manufacturing Company, Chicago, Ill., a corporation of Illinois

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3 Claims. (Cl. 220—36)

This invention relates to improvements in receptacles such as waste cans of the type wherein the hinged cover is opened by means of a foot lever and is closed by gravity, or other means opposed to the foot lever mechanism.

The main object of the present invention is to provide a foot-lever opening receptacle which is so constructed that the cover can be operated manually and independently of the foot lever in order that said cover may be disposed in a farther open position than is effected by operation of the foot lever to facilitate emptying of the receptacle and wherein the relative arrangement of the foot lever operating mechanism and the cover is such that the manual closing of the cover, following its last-mentioned position, will automatically re-engage said cover with the foot lever mechanism.

A further object of the invention is to provide a cover opening mechanism wherein the foot lever actuating the cover is fulcrumed between its ends on an arcuate surface so that said lever exerts its highest degree of leverage upon the cover for opening the latter in effecting the initial opening movement of the cover and thereafter the leverage exerted by the lever is gradually decreased and speed of opening movement of the cover is increased.

A further object of the invention is to provide means on the cover engaged with a plunger actuated by the foot lever which is so constructed and arranged as to provide a sliding connection between the plunger and said means or device on the cover, whereby the opening movement of the latter is limited to a position wherein it will close by gravity upon releasing the foot lever, and which will become disengaged from said plunger upon holding the foot lever substantially against movement and then, while so holding said foot lever, permitting opening of the cover manually to a greater extent than is effected by operation of the foot lever to facilitate emptying.

A suitable embodiment of the invention is illustrated in the accompanying drawing, wherein,

Fig. 1 is a central vertical sectional view of a waste can constructed in accordance with the invention.

Fig. 2 is a view similar to Fig. 1 showing the cover in dotted lines as thrown back to the utmost limit of its movement.

Fig. 3 is a fragmentary detail perspective view showing the slotted front leg of the waste can and the foot pedal end portion of the lever projected through said slot.

Fig. 4 is a fragmentary detail vertical sectional view on an enlarged scale taken on the line 4—4 of Fig. 1.

Fig. 5 is a fragmentary detail plan sectional view on an enlarged scale taken on the line 5—5 of Fig. 1.

The waste can, in the instance illustrated, comprises the customary cylindrical body 1 which is supported at an elevation above the floor by means of suitable supporting legs 2 which include the rear leg, indicated by the numeral two, and a diametrically opposed front leg 3 which is connected with the leg 2 by means of a substantially arcuate flat strip 4 of metal having a substantially convex upper face.

The cover 6 is equipped, in vertical alignment with the leg 2, with a suitable hinge 5 which projects outwardly and rearwardly from the rearmost point in the peripheral wall of the can body and to which the rear edge portion of the cover 6 is pivotally secured.

Disposed adjacent the rearmost portion of the peripheral wall of the can and within the latter is a tubular guide 7 through which a vertically reciprocal plunger 8 extends. The latter is pivotally connected at its lower end with the rear end of the foot lever 9. The latter rests between its ends upon the said flat strip 4 and is fulcrumed thereon, so that as shown in Fig. 1 the rear end portion of the lever 9 is normally disposed at a slight elevation above said member 4. The other or foot pedal end portion of the lever 9 projects through a vertical guide slot 10 in the front leg 3 of the can, said lever being equipped, in the instance illustrated, with a loop formation 11 which constitutes the foot pedal.

As shown in Fig. 4, the upper end portion 12 of the plunger 8 is bent to a form simulating the numeral seven, the lower end portion of said end portion 12 extending angularly to the body of the plunger 8 and the arm of said portion 12 extending at substantially a right angle to the lever 9. The upper arm 13 of said portion 12 is normally disposed at the rear of a pair of longitudinal slots 14 formed in the flanges 15 of a channeled member 16 secured to the inner face of the cover 6 immediately adjacent to the rearmost portion of the inner face of the peripheral wall of the can, said flanges being parallel and vertically aligned with the strip 4. The said slots 14 are formed in the said flanges 15 of said member 16, said slots being open at their rear ends and closed at their front ends.

The normal position of the arm 13 is such that, as the cover is raised manually, the lower walls of the slots 14 will engage said arm 13 and cause

the same to engage in said slots 14, thus limiting the opening movement of said cover to the position shown in dotted lines in Fig. 1. If, on the other hand, the pedal end of the lever 9 is depressed, the said arm will bear against the upper walls of the slots 14 at the mouths of said slots and, as said cover moves to the position shown in dotted lines in Fig. 1, said arm 13 will move gradually into the said slots 14 until it reaches the end walls thereof which constitute a stop to limit the opening movement of the cover and the upward movement of the plunger 8 and the corresponding movement of the lever 9.

If and when it is desired to move the cover to the position illustrated in dotted lines in Fig. 2, the operator engages the lower face of the pedal 11 with the toe of his shoe and moves said pedal slightly upwardly so that said lever 9 will be disposed in the position shown in Fig. 2. Then, while holding the lever 9 in said position, the operator may manually move the cover back to any desired open position as, for example, to a full open position, or to the position shown in dotted lines in Fig. 2 for convenience in emptying the can of its contents.

Obviously, as the lever 9 is moved to the position which would correspond to the dotted line position of the cover as shown in Fig. 1, the fulcrum point of support for said foot lever 9 between its ends constituting the arcuate middle portion 17 of the stop 4, the fulcrum of the lever gradually approaches the pedal end of the latter and thus gradually decreases the force which it exerts upon the cover to move the same to its said open position. Likewise, the arm 13 initially engages the cover at a point more nearly adjacent to the axis of its hinged connection with the can body than it does progressively as said arm 13 moves into the slots 14 during the opening movement of the cover.

As said arm 13 moves toward the end walls of the slots 14, its bearing point against the cover moves gradually farther from the axis of the said hinge connection and thus less force is required progressively during the opening movement of said cover to effect its full opening as shown in Fig. 1, than is required to effect initial opening movement of said cover.

The structure is simple, cheap and efficient and is very advantageous in that it provides a means whereby the cover may be operated manually to bring it to a desired position for facilitating emptying the can without in any way imposing any stress upon the operating mechanism.

I claim as my invention:

1. In a waste can equipped with a hinged self-closing cover and a vertically reciprocable rod adapted to swing said cover to open position responsively to upward movement of said rod, an arched arcuate support of relatively long radius disposed substantially diametrically of said can below the bottom wall thereof, a lever connection at one end with the lower end of said rod and having a substantially straight surface normally fulcrumed upon a point in said arch disposed more closely adjacent to the said rod than the remainder of said arch, the said lever being progressively supported upon points in said arch spaced farther than said first-named fulcrum point from said connection during swing of said lever to effect upwardly movement of the said rod, whereby the force applied to the other end of the said lever to effect upward movement of said rod exerts a progressively decreasing degree of leverage on said rod.

2. In a waste can equipped with a self-closing cover and a vertically reciprocable rod adapted to force said cover to open position responsively to movement of said rod in one direction, a lever secured at one end to said rod, a member presenting an arcuate lever supporting portion of long radius between its ends rigid with said can and disposed below the bottom thereof with the said arcuate portion supporting said lever between its ends, said lever being substantially parallel with said support and having a substantially straight edge overlying said arcuate support with a point therein normally engaged with a fulcrum point in said arcuate support disposed most closely adjacent to the connection of said lever with said rod, the swing of said lever in a direction to impart upward movement of said rod causing the fulcrum support of the said lever along said arcuate support to become progressively farther removed from said connection.

3. A receptacle equipped with a hinged self-closing cover, a vertically reciprocable rod operatively associated with said cover to swing the same to open position responsively to upward movement of said rod, guide means associated with said rod to prevent lateral movement thereof, a lever member movable in a vertical plane connected at one end with the lower end of said said rod, a guide for the other end of said lever, a supporting member for said lever member underlying the same and rigidly connected with said receptacle below and spaced from the bottom thereof and disposed substantially diametrically of the same, the opposed surfaces of said members including a substantially arcuate surface portion of relatively long radius between the ends of one of the same and a surface portion between the ends of the other thereof of a contour adapted to cocperate with said arcuate portion to cause the said lever to be progressively fulcrumed upon points farther removed from its said connection with said rod during swing of said lever in a direction to move said rod upwardly.

CHARLES S. PACKER.