Nov. 18, 1924.

1,515,989

W. D. BANES

RECEPTACLE

Filed May 14, 1921

2 Sheets-Sheet 1

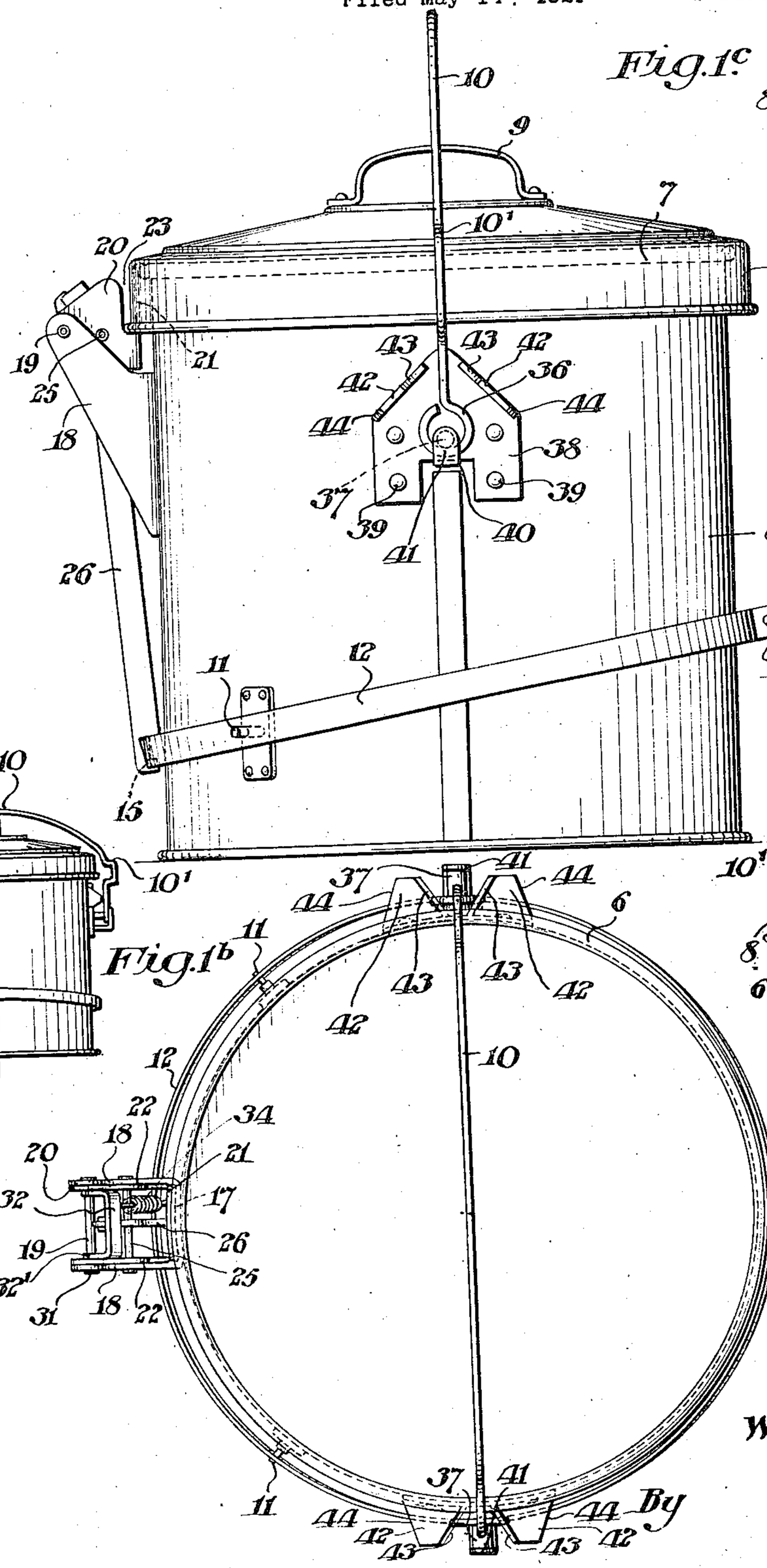

Fig. 1.

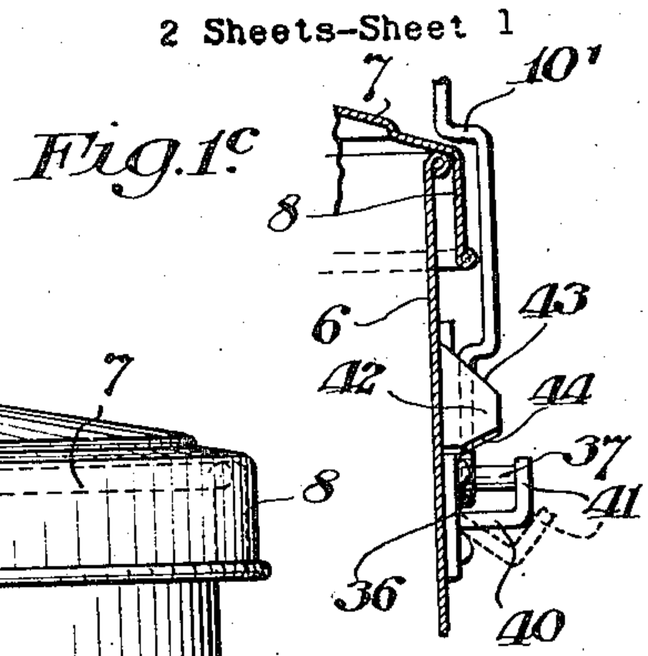

Fig. 1c

Fig. 1a

Fig. 1b

Fig. 2.

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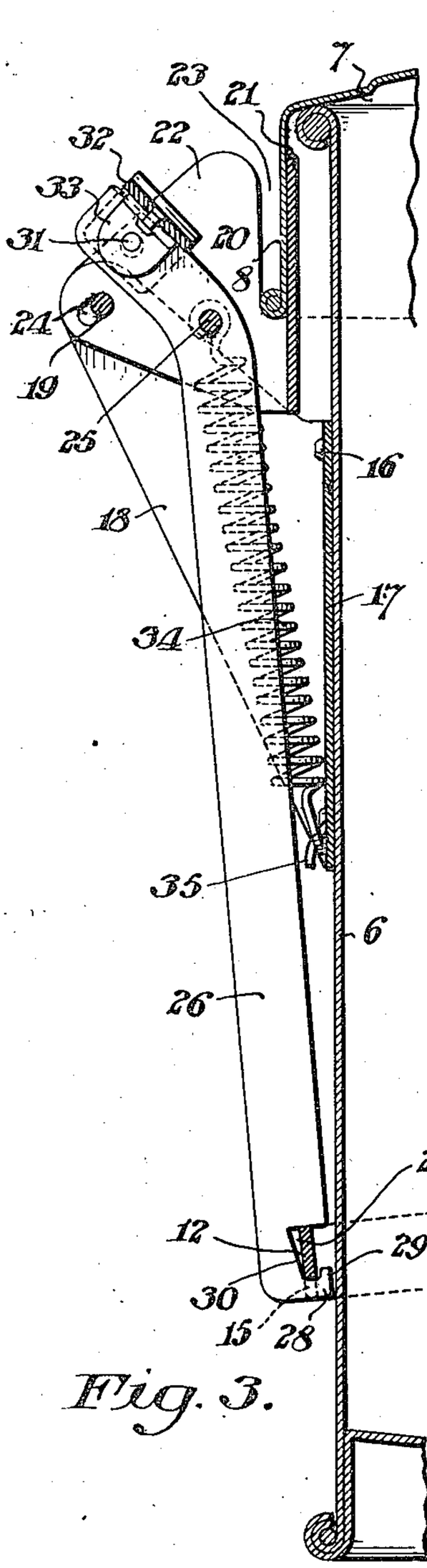

Fig. 3.

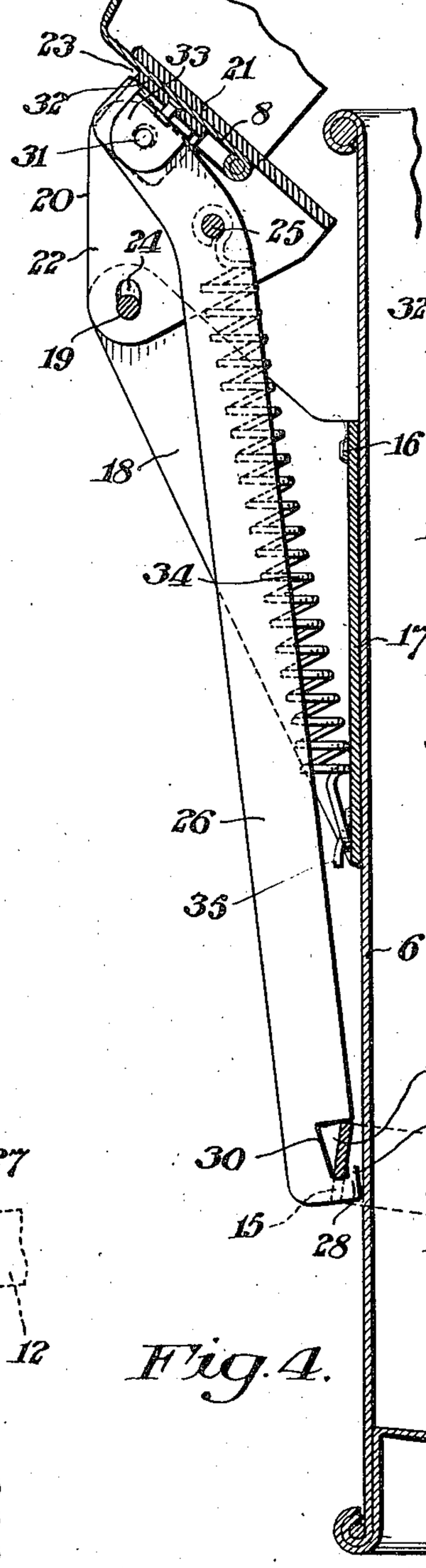

Fig. 4.

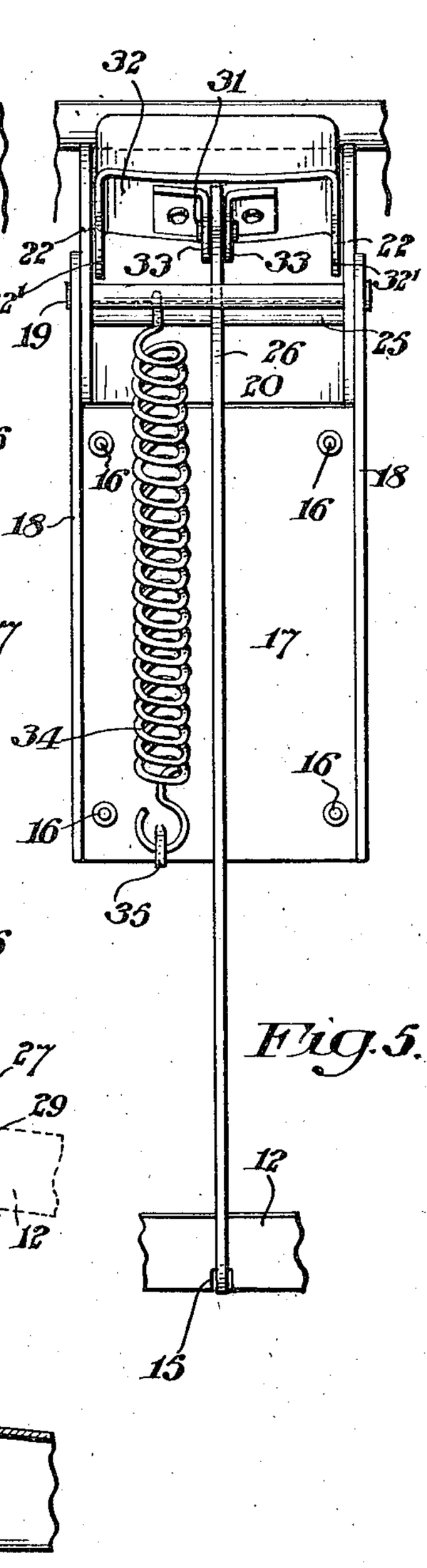

Fig. 5.

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UNITED STATES PATENT OFFICE.

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RECEPTACLE.

Application filed May 14, 1921. Serial No. 469,549.

To all whom it may concern:

Be it known that I, WALTER D. BANES, a citizen of the United States, residing at Germantown, in the county of Philadelphia, State of Pennsylvania, have invented a new and useful Receptacle, of which the following is a specification.

My invention relates to improvements in receptacles. The object is to provide means for actuating and controlling the cover thereof.

The invention comprises self-containing means for actuating the cover and for maintaining the same in the open position by a foot operated pedal.

The invention comprises means whereby the cover may be removed from the receptacle and from the actuating device, and may be replaced upon the receptacle, and in operative relationship with the actuating device, without disturbing any of the parts thereof.

The invention comprises means whereby the cover is clamped by the actuating device in the opening actuation thereof and whereby the opening movement is limited.

The invention comprises means whereby the actuating device permits certain play in its movements to facilitate the automatic shifting of the cover so that it may readily fit upon and be lifted from the top of the receptacle.

The invention comprises improved means whereby the cover is locked in closed position upon the receptacle, and also means whereby the locking device, such as the bail, is moved into and out of locking position without engaging or contacting with the cover.

The invention also comprises improvements in details of construction and method of assembly.

Referring to the drawings, which illustrate merely by way of example suitable means for effecting my invention:—

Fig. 1 is a side elevation of a receptacle equipped with my improved cover actuating and controlling device.

Fig. 1ª is a view on a reduced scale to show the bail in locking position.

Fig. 1ᵇ is a similar partial view showing the bail moved into the disengaging and unlocking position.

Fig. 1ᶜ is a detail in part section and part elevation of a portion of the bail and adjacent parts, showing the bail-controlling means.

Fig. 2 is a top plan view.

Fig. 3 is a fragmentary detail on an enlarged scale in part section and part elevation, showing part of the actuating mechanism.

Fig. 4 is a similar view showing the parts in different position.

Fig. 5 is a fragmentary elevation of the same structure.

Similar numerals refer to similar parts throughout the several views.

In the example shown in Fig. 1, the receptacle 6 is the standard type of sheet iron garbage can. The lid or cover 7 is provided with the substantial downwardly extending flange 8 which extends below and surrounds the top of the receptacle 6. This cover 7 is provided with the usual handle 9 for manual operation. The bail 10 is attached in the usual way to the sides of the receptacle for convenient transportation. This bail 10 is provided with the offset portion 10′, so shaped that when in the elevated position it serves to lock the cover on the receptacle, as shown in Fig. 1ª.

Upon suitable pivots 11, oppositely disposed near the rear and lower part of the receptacle 6, is mounted the annular lever 12, preferably made of a single strip of metal brought together at the front of the receptacle and secured near its two ends, as by the rivet 13; beyond the rivet 13 projects the V-shaped formation 14 which comprises the pedal. At the rear of the receptacle, that is, at the left hand side of the drawing Fig. 1, being opposite to the pedal side of the receptacle, is provided a recess or slot 15 in the lower edge of lever 12.

To the upper wall of the same side of the receptacle is provided or secured, in any suitable way, as for example by the rivets 16, the bracket 17, having the upwardly inclined parallel wings 18. To the upper outer ends of these wings 18 is pivoted, as at 19, the member 20. This member 20 comprises the upwardly extending wall 21 and the two parallel wings 22, having vertical slots or recesses 23 cut in the wings 22 adjacent the wall 21. These slots are provided to receive the flange 8 of cover 7. In the initial position of member 20, the wall 21 is adapted to be parallel with the vertical wall of the receptacle. In this posi-

tion of the parts, the cover 7 may be arbitrarily moved to or from the receptacle 6, the flange 8 freely moving into and out of the slot or recess 23. It will also be noted that the slots or holes 24, in which engage the pivot 19, are sufficiently enlarged or elongated to permit limited play of member 20 on pivot 19 in addition to its purely pivotal movement.

By this arrangement, the first upward movement of the bar 26 is to cause the actuation of member 20, which, due to the arrangement of pivot 19 and slot 24, is upwardly and slightly to the right. This slightly lateral movement of member 20 serves to push the cover 7 forwardly so that the flange 8 will clear the front edge of the receptacle at the commencement of the opening movement of the cover. The relative positions of pivot 19 in slot or hole 24 are shown in Figs. 3 and 4 respectively as the cover is moved from the closed to the open position.

At suitable points between the pivot 19 and the slot 23 are provided openings in wings 22 of member 20 to receive the pin or shaft 25. To this shaft 25 is pivotally connected the vertically extending rod 26, which is recessed at its lower end, as at 27, to receive a portion of the annular lever 12. This rod 26 is provided with a hook shaped formation 28 which engages in the slot 15 of lever 12, and a finally upwardly extending end or lug 29, which is adapted to engage the inner margin of lever 12, so that after the rod 26 has been assembled with lever 12 and then secured by the shaft 25, as shown especially in Figs. 3 and 4, the same is prevented from becoming disengaged from said member 12, and at the same time, due to the flaring shape of the inner wall 30 of recess 27, the rod 26 is permitted a rocking movement with respect to said lever 12.

Beyond and above the shaft or pivot 25, rod 26 inclines or projects outwardly for a short distance, as clearly shown in Figs. 3 and 4. Near the outer free end of rod 26 is pivotally secured, as at 31, the clamping member 32. This clamping member 32 is provided with the lugs 33 which receive the pivot 31 engaging in the rod 26. Member 32 is also provided with wings 32′ at its two ends, at right angles with its general extension. These wings have a loose fit between wings 22 of member 20. The pivotal engagement of member 32 with rod 26 is a loose engagement. The limit of the pivotal movement is due to the engagement of the opposite sides or edges of member 32 with the margin of the rod 26. The rocking or limited universal movement, other than pivotal movement, is secured by spacing the lugs 33 at a slightly greater distance than the thickness of the rod 26 and by having, as above indicated, one or more of the holes receiving the pivot 31 slightly larger in diameter than said pivot, as indicated by dotted line in Figs. 3 and 4. It might also be noted that the surface of the member 32 which faces the rim or flange 8 of cover 7 is curved in an arc corresponding to the curve of said flange 8. The vertical wall 21 of member 20 is also correspondingly curved. A spring 34 is provided between the pin 25 and a hook or other projection 35 connected with the body of the bracket member 17.

As indicated in Figs. 1ª, 1ᵇ and 1ᶜ, the handle or bail 10 is so bent that when in the elevated position the offset portions 10′ overlie the top of cover 7 and prevent its accidental displacement. The bail 10 is provided with the loops 36 which engage the pins 37. These pins 37 project from the plate 38 secured to the receptacle 6 in any suitable way, as for example by means of the rivets 39. The plate 38 is provided with the lug or hook 40, having the end 41 adapted to project over the end of pin 37 to prevent the displacement or disengagement of the bail loop therefrom. In assembling my device the plate 38 is formed and secured to the receptacle with the lug or hook 40 formed and projecting as shown in dotted lines Fig. 1ᶜ, that is with the end 41 spaced away from the end of pin 37. After the loop 36 of bail 10 is passed over the pin 37 the lug 40 is bent into the position shown in solid lines.

Plate 38 is also provided at its upper side with the inclined wings 42. These wings are provided with the oppositely inclined converging margins 43 and 44 adapted to engage the bail as it is moved into and out of the locking position, for the purpose to be described in connection with the operation.

In operation: Figs. 1 and 3 show the mechanism in the initial position with the lid or cover in the closed position upon the receptacle. The flange 8 of the cover projects downwardly into the slots 23 of member 20. The bail is then brought below and free from the cover when the receptacle has been placed in required position. Upon depressing the pedal 14, the opposite end of the lever 12 is elevated, carrying the rod 26 upwardly. This moves the member 20 first forward and then in an upward direction, that is in the counterclockwise direction about the pivot 19. The flange 8 of the lid 7 being engaged in the slots 23, the lid is first given a slight forward motion, that is toward the front of the receptacle, so that the flange will clear the top of the receptacle in moving from and returning to the top thereof. It is then tilted correspondingly and is carried into the position indicated in Fig. 4; meanwhile the said flange 8 is engaged by the clamp-

ing plate or member 32 carried on the pivot 31. In the final open position this clamping plate clamps the rim tightly between said member 32 and the wall 21, as shown in Fig. 4 and since the rod 26 only has a limited upward movement, and since the member 32 has only a limited pivotal movement with respect to said rod 26, it follows that there is a position in which these several members come to a stop with the lid firmly clamped between 32 and 21, and the lid is held in such final open position as long as the lever 14 is kept depressed. It should also be noted that the annular lever 12 is so formed that it has a certain amount of resilience so that a slight movement of the lever is permitted, after the lid has reached the final open position, without danger of breaking or straining the parts. By this method of operating the lid, the hands of the operator are left free to clean and discharge the contents of utensils into the receptacle.

Upon the release of the pedal 14, the spring 34 operates to draw the pin or shaft 25 downwardly, which consequently results in the downward movement of rod 26 and the downward movement of lever 12 to the left of pivots 11. This results in the return of the clamping member 32 and the wall 21 with its adjacent slot, and consequently the cover of the receptacle to initial position.

As before stated, the enlarged dimension of the slots or holes 24 in wings 22, permits an automatic adjustment of the several parts to facilitate the cover finding its seat readily over the receptacle 6 and conversely permits the cover to adjust itself so as readily to lift away from receptacle 6.

The purpose of the wings 42, projecting from plates 38, having the inclined engaging edges 43 and 44, is to engage the bail 10 as it is moved into and out of the locking position, in order to spread the lower extremities of the bail so that the same will clear the sides or flange of the cover 7. For example, starting with the bail 10 in the position shown in Fig. 1 and pulling it over so as to clear the cover, the sides of the bail below the offset portion will first engage the inclined surfaces 43 of wings 42. This causes a spreading of the bail, so that the same will entirely clear the sides of the cover, as indicated in Fig. 1^c. This spreading is maintained until the bail reaches the inclined portion 44, passing which it returns to normal position. The operation is similar in the return movement. It will be noted from an inspection of Fig. 1^c that the pin 37 is of sufficient length, that is the distance from the face of the plate 38 to the end 41 of lug 40, is sufficient to permit the necessary movement of the loops 36 on the ends of the bail 10 to allow of the action described. The spring of the metal of the bail is sufficient to return the same to normal position or contour after passing the wings 42 in either direction.

This operation of the bail is desirable in order to prevent the bail from scraping the cover and thus eventually wearing away the paint or galvanized coating, and thus produce surfaces that would have a tendency to rust. This means also reduces the danger of the bail displacing the cover when raised into the said operative and locking position.

The provision thus described for locking the cover by means of the bail, is especially useful, not only for preventing accidental displacement of the cover, but also for preventing dogs or other prowling animals from dislodging the same.

What I claim is:—

1. In combination with a receptacle, a cover therefor, having a flange adapted to surround the upper portion of the side wall of the receptacle and a cover actuating member pivotally connected to the receptacle on a horizontal axis and provided with a recess for receiving the cover flange to cause its opening and closing movements.

2. In combination with a receptacle, a cover therefor and means pivotally connected to the receptacle for actuating the cover, said actuating means being so formed that the cover may be moved entirely from the receptacle and free from said actuating means and returned to the receptacle and into operative relationship with the actuating means without any adjustment thereof.

3. In combination with a receptacle, a cover therefor and means pivotally connected to the receptacle for actuating the cover, said actuating means being so formed that the cover may be moved entirely from the receptacle and free from said actuating means and returned to the receptacle and into operative relationship with the actuating means without any disarrangement thereof.

4. In combination with a receptacle, a cover therefor and means pivotally connected to the receptacle for actuating the cover, said actuating means having freely disengageable operative relationship with the cover so that the cover may be arbitrarily removed from the receptacle.

5. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element loosely pivoted thereto provided with a recessed portion for receiving the rim or flange of the cover, and an actuating lever.

6. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element loosely pivoted thereto provided with a recessed

portion for receiving the rim or flange of the cover, and an actuating lever, said means arranged and operated to cause a slight preliminary horizontal movement of the cover.

7. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element loosely pivoted thereto provided with a recessed portion for receiving the rim or flange of the cover, and an actuating lever, said means arranged and operated to cause a slight preliminary horizontal movement of the cover prior to the lifting movement.

8. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element pivoted thereto provided with a recessed portion for receiving the rim or flange of the cover, an actuating lever, and means providing play between the projecting formation and the element pivoted thereto for permitting relative movement between cover and receptacle to facilitate the opening and closing of the receptacle.

9. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element pivoted thereto provided with a recessed portion for receiving the rim or flange of the cover, an actuating lever, and means for clamping the cover to the recessed pivoted member when in the final open position.

10. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element pivoted thereto provided with a recessed portion for receiving the rim or flange of the cover, an actuating lever, and means for clamping the cover to the recessed pivoted member when in the final open position, said clamping member being loosely pivoted as and for the purpose specified.

11. In combination with a receptacle, a cover therefor and means for actuating the cover including a formation projecting from the wall of the receptacle, an element pivoted thereto provided with a recessed portion for receiving the rim or flange of the cover, an actuating lever, and means for clamping the cover to the recessed pivoted member when in the final open position, said clamping member having limited pivotal movement and also limited rocking movement transverse the pivotal movement.

WALTER D. BANES.