Feb. 1, 1955 F. POWERS 2,701,112

GARBAGE CAN AND DUMP HOLDER THEREFOR

Filed July 11, 1949 3 Sheets-Sheet 1

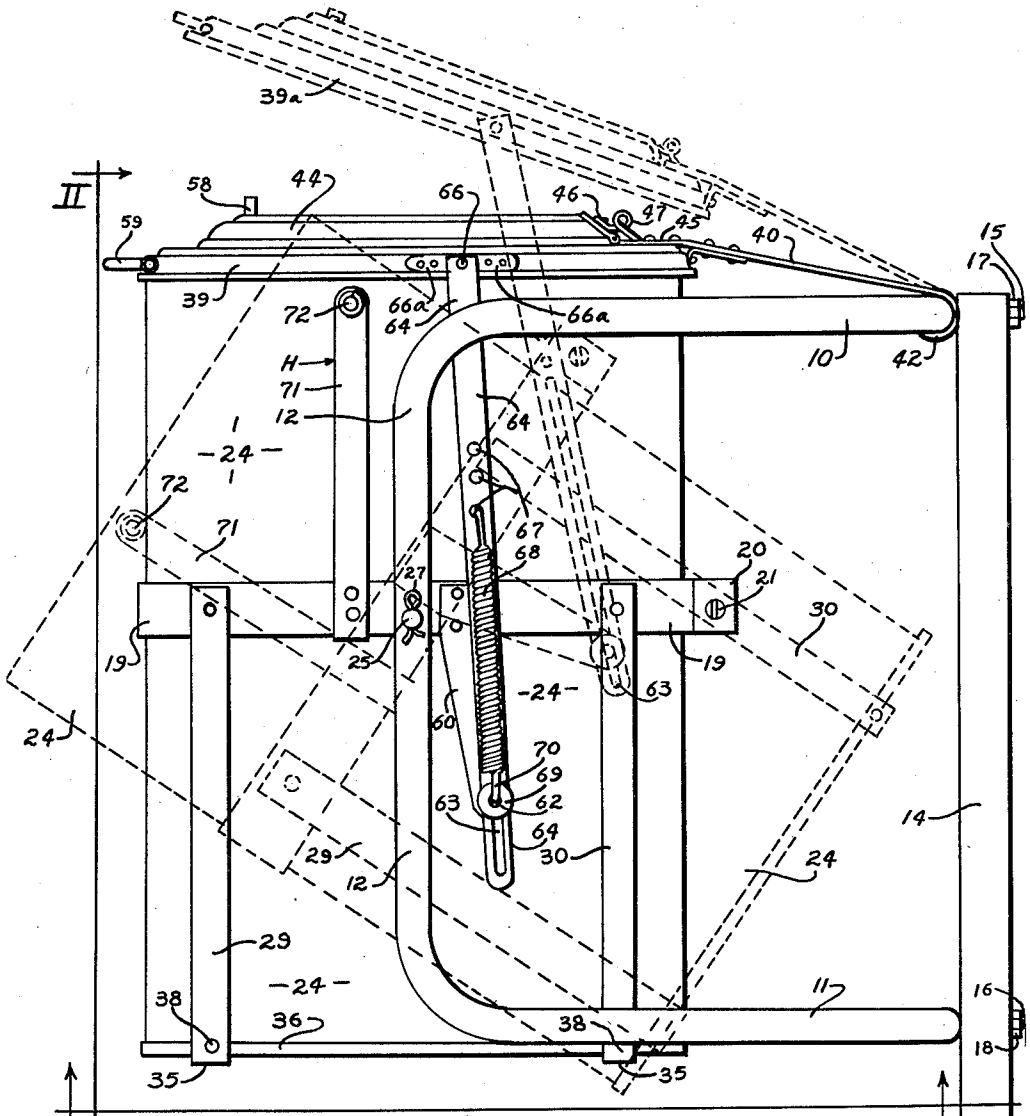


FIG. 1

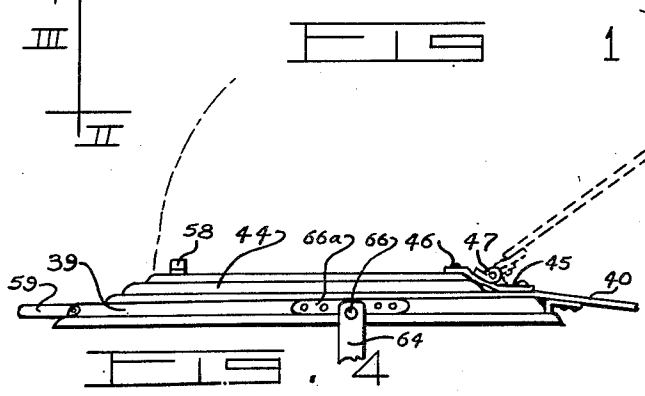


FIG. 4

INVENTOR.
FRANK POWERS,
BY M. Y. Charles
ATTORNEY.

Feb. 1, 1955 F. POWERS 2,701,112

GARBAGE CAN AND DUMP HOLDER THEREFOR

Filed July 11, 1949 3 Sheets-Sheet 2

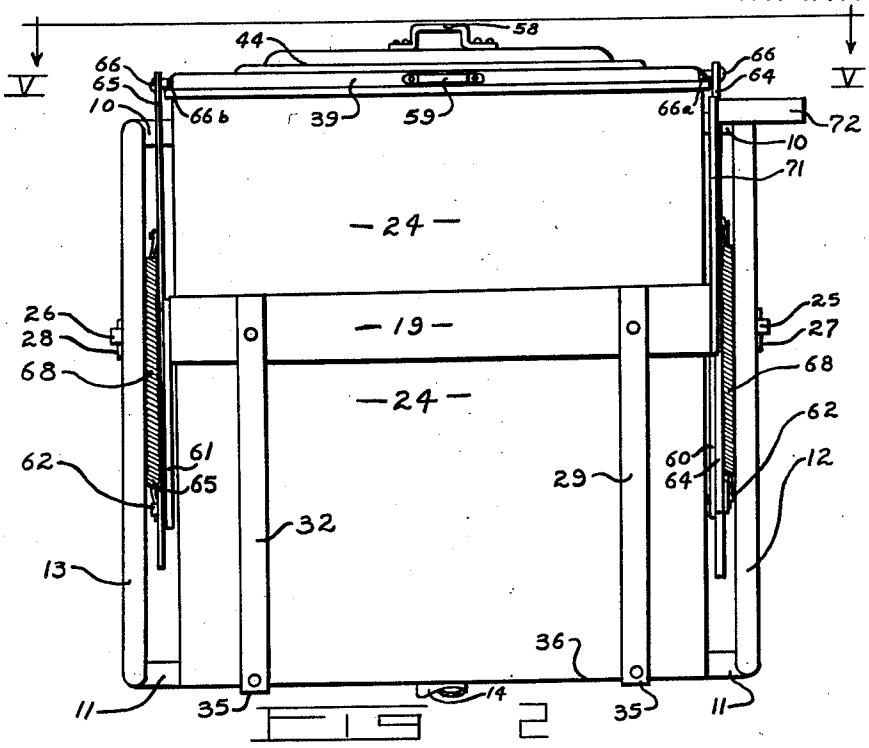


FIG. 2

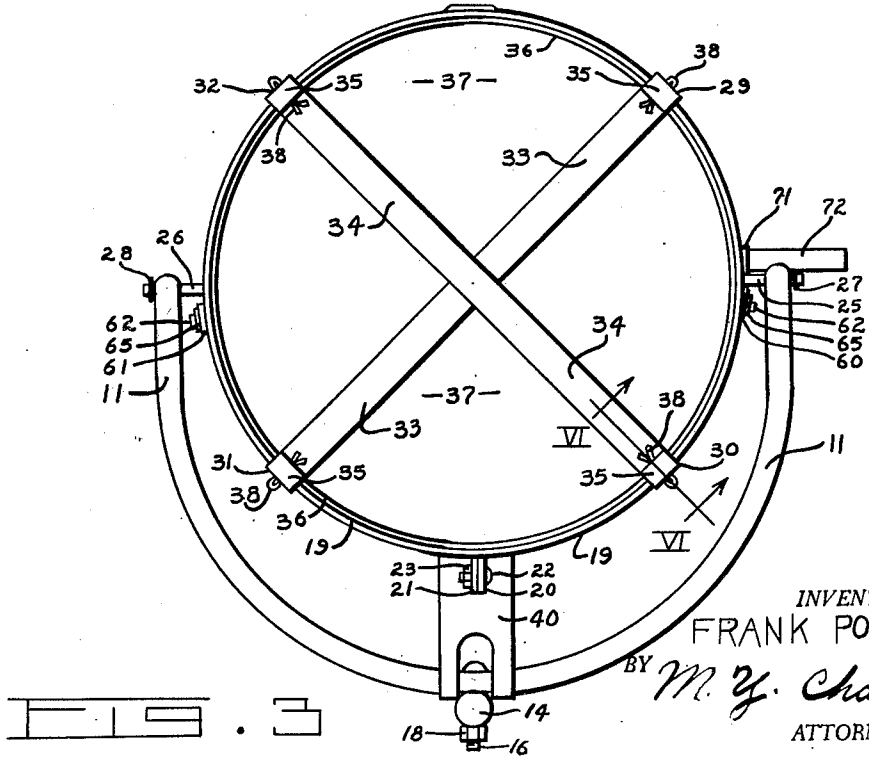


FIG. 3

INVENTOR.
FRANK POWERS,
BY M. Y. Charles
ATTORNEY.

Feb. 1, 1955 F. POWERS 2,701,112

GARBAGE CAN AND DUMP HOLDER THEREFOR

Filed July 11, 1949 3 Sheets-Sheet 3

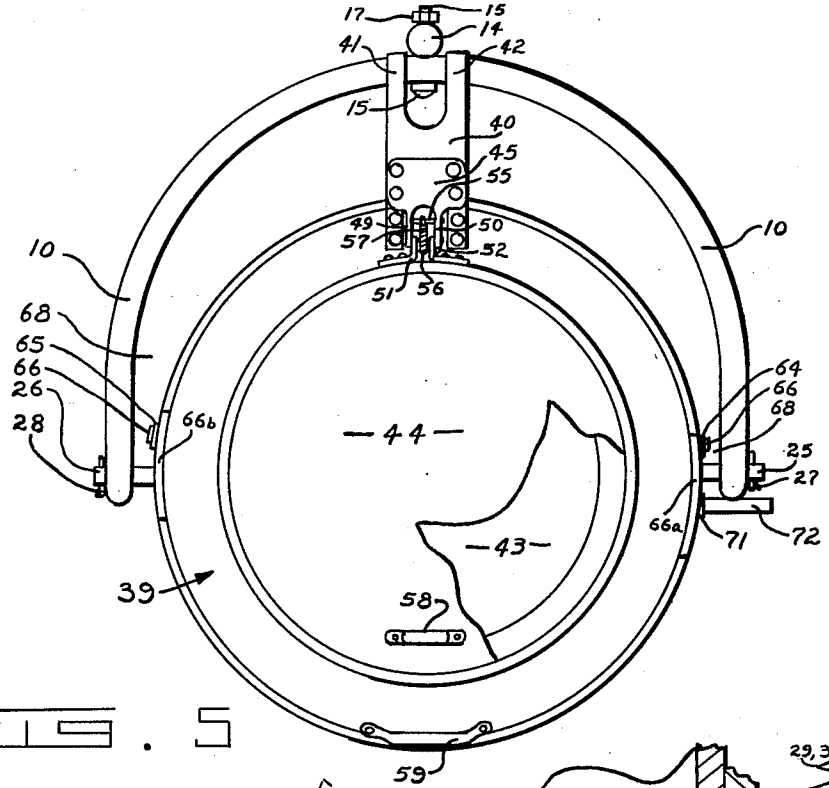


FIG. 5

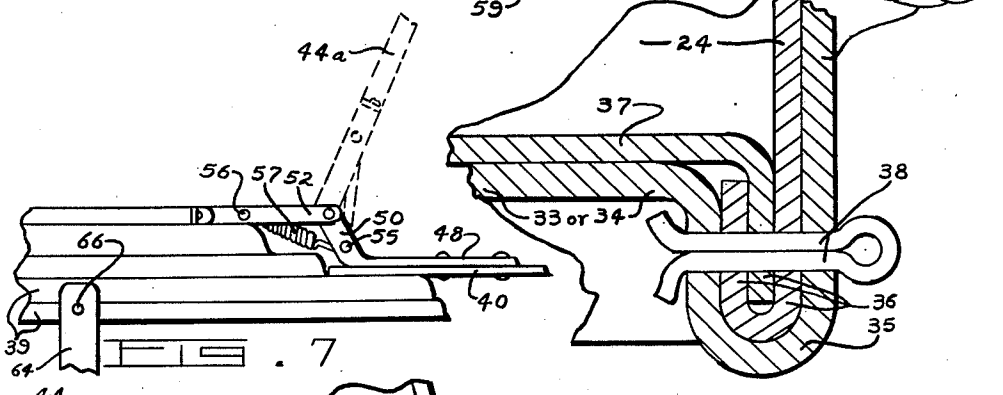


FIG. 7

FIG. 6

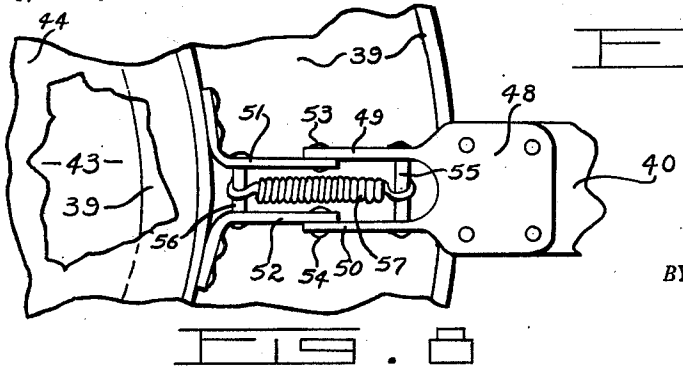


FIG. 8

INVENTOR.
FRANK POWERS,
BY M. Z. Charles
ATTORNEY.

United States Patent Office

2,701,112

Patented Feb. 1, 1955

2,701,112

GARBAGE CAN AND DUMP HOLDER THEREFOR

Frank Powers, Newton, Kans.

Application July 11, 1949, Serial No. 103,991

1 Claim. (Cl. 248—134)

My invention relates to an improvement in garbage cans and dump holders therefor. An object of my invention is to provide a garbage can holder of the kind mentioned that can be solidly attached to any suitable support therefor, such as a fence, a post, the side of a building and the like.

A further object of the invention is to provide a garbage can holder of the kind described that will hold a garbage can in a locked vertical position and yet may be unlocked and turned to invert the can, without dropping the can, to dump its contents.

A still further object of the invention is to provide a device of the kind described that is sturdy, strong, one that in addition to holding the can will reinforce or provide added support for the bottom of the can in addition to the strength of the can bottom itself.

Another object of the invention is to provide a device of the kind mentioned that is neat in appearance, one that is simple, inexpensive, simple and easy to use and operate. These and other objects will be more fully described as this description progresses.

Now referring to the accompanying drawings in which similar numerals of reference designate the same parts throughout the several figures of the drawings:

Fig. 1 is a detail side view of the garbage can and holder therefor, and showing the device in the dump position in dotted lines.

Fig. 2 is a front view of the garbage can holder and garbage can therein, the view being as seen from the line II—II in Fig. 1, and looking in the direction of the arrows.

Fig. 3 is a bottom plan view of the device as shown in Fig. 2, the view being as seen from the line III—III in Fig. 1 and looking in the direction of the arrows.

Fig. 4 is a side view of the garbage can cover, cover ring, and hinge device employed in connecting the cover and cover ring together.

Fig. 5 is a top plan view of the device as shown in Fig. 2.

Fig. 6 is an enlarged detail sectional view through the holder leg portion and showing its connection to the bottom flange of the garbage can, the view being as seen from the line VI—VI in Fig. 3 and looking in the direction of the arrows.

Fig. 7 is a side view of a modified form, and probably the preferred form of hinge employed in connecting the cover and cover ring of the can together.

Fig. 8 is a top plan view of the hinge structure shown in Fig. 7.

In the drawings the device is shown as having a pair of substantially half circle tubular support elements **10** and **11** that are joined together by leg elements **12** and **13** that are integral with the end portions of the half circle portions **10** and **11** and serve to hold the half circle portions **10** and **11** in a spaced apart and registering position, one above the other, thereby forming a supporting frame for the balance of the device.

The supporting frame **10—11—12—13** may be rigidly attached to any suitable supporting element such as the side of a building or a post **14** by passing bolts **15** and **16** through the central portion of each half circle frame member **10** and **11** and through the supporting element or post **14** and nuts **17** and **18** being threaded on the bolts **15** and **16** to rigidly bind and hold the frame **10—11—12—13** on the support **14**.

If desired, the lower end of the support rod or pipe **14** may be threaded and a pipe fitting **14*a*** may be threaded

thereon to receive the upper threaded end of another pipe **14*b*** that may be suitably set in the ground, preferably in a concrete mounting not shown.

The device is provided with a clamp ring **19** that is cut in one place and the cut ends **20** and **21** are turned outwardly in parallelism with each other and a bolt **22** is passed through the ring ends **20** and **21** and a nut **23** is threaded on the bolt **22** to contract the ring **19** to make the ring **19** tightly bind or clamp around the central portion of a garbage can **24** that is positioned within the ring **19**. The clamp ring **19** is provided with a pair of outwardly extending aligned and diametrically positioned pivot pins **25** and **26** that are journalled or revolvably mounted, one in the central portion of each supporting frame leg **12** and **13** and are retained therein by cotter pins **27** and **28** that are passed, one through the outer end of each pivot pins **25** and **26**.

Rigidly attached to the clamp ring **19** is one end of a plurality of can supporting legs **29**, **30**, **31** and **32**. The lower ends of the legs **29** and **31** are joined by a strip of metal **33** that is an integral part of the legs **29** and **31**; and the lower ends of the legs **30** and **32** are joined by a strip of metal **34** that is an integral part of the legs **30** and **32**. At the points where the strips **33** and **34** join the lower ends of their respective leg elements **29**, **30**, **31** and **32** there is a U-shaped formation **35** in which the bottom flange formation **36** of the garbage can **24** is seated and wherefor the bottom **37** of the garbage can **21** rests on the strips **33** and **34** and is therefor reinforced or supported by the strips **33** and **34**. The bottom flange **36** of the can **24** having thus been seated in the U-shaped formation **35**, a cotter pin **38** is passed through the legs of the U **35** and the bottom flange formation **36** of the garbage can **24** as a means of definitely retaining and holding the can **24** in place in the holder frame of the device.

The garbage can **24** is provided with a downwardly flanged cover ring **39** that slidably and snugly fits over and rests on the upper edge of the garbage can **24**.

One end of a hinge leaf **40** is rigidly attached to the cover ring **39** and the other end of the hinge leaf **40** is bifurcated and the legs **41** and **42** thereof are bent around the central portion of the upper half circle frame member **10** to provide a hinge mounting for the cover ring **39**. The cover ring **39** being hingedly mounted as just described and also being positioned on the can as above described provides a lock to prevent tipping of the can **24**. The cover ring **39** has a large opening **43** that is concentrically positioned therein and is tightly covered by a cover plate **44** that rests under spring pressure on top of the cover ring **39** as will later be further described.

Rigidly attached to the hinge leaf **40** is one leaf **45** of a spring tensioned hinge, the second leaf **46** of the spring tensioned hinge is rigidly attached to the cover plate **44**. At **47** is shown a spring that is built into the hinge joint in the usual manner and is tensioned to spread the hinge leaves **45** and **46** so as to hold the cover plate **44** in a closed position over the cover ring opening **43** and resting under spring tension on the cover ring **39**.

In Figures 5, 7 and 8 is shown a modified form of hinge that is probably preferred to that just above described. This hinge comprises a first hinge leaf **48** that is rigidly attached, either welded or riveted, to the main hinge leaf **40**. One end of the hinge leaf **48** is divided into two upwardly sloping spaced apart hinge legs **49** and **50**. One end of two other hinge legs **51** and **52** are hingedly joined to the hinge legs **49** and **50** at the points **53** and **54**. The other ends of the hinge legs **51** and **52** are bent outwardly and are rigidly attached, either welded or riveted, to the cover plate **44** to hold the cover plate **44** in its proper position on the cover ring **39** and over the cover ring opening **43**. The hinge legs **49** and **50** are provided with a pin or rivet **55** that passes therethrough and the hinge legs **51** and **52** are provided with a pin or rivet **56** that passes therethrough. The ends of a helical tension spring **57** are wrapped around or attached to the pins **55** and **56** so that as the cover plate **44** is in its closed position as shown in the full lines in Fig. 7, the spring **57** will provide spring tension to hold the cover plate **44** in its closed position, and if the cover plate **44** be raised to its open position as shown by the

dotted lines 44*a* in Fig. 7, the spring 57 will then function to hold the cover plate 44 in its open position. The cover plate 44 has a handle 58 thereon by which the cover plate 44 may be moved to its opened or closed position. Also the cover ring 39 has a handle 59 thereon by which the cover ring 39 may also be moved, to its opened or closed position.

The clamp ring 19 is provided with a pair of depending legs 60 and 61, the upper ends of which are rigidly attached, welded or riveted, at diametrically opposed points on the clamp ring 19.

On the lower end of each depending leg 60 and 61 is rigidly fixed an outwardly extending pin as shown at 62 that is slidably received in an elongated slot 63 in the lower ends of the link elements 64 and 65. The other ends of the link elements 64 and 65 are pivotally mounted on pins 66 that are rigidly mounted or integrally formed on plates 66*a* and 66*b* that are rigidly attached by welding or rivets to the outside face of the flange of the cover ring 39 in a diametrically disposed position. The links 64 and 65 each have a plurality of holes 67 in the central portion thereof in which one selected hole has one end of a helical tension spring 68 attached to the links 64 and 65. The other ends of the helical tension springs are attached to the pins 62 on the lower ends of the depending leg elements 60 and 61.

Each outwardly extending pin 62 has a washer 69 thereon that rests against the adjacent side of its respective link elements 64 and 65 and a cotter pin 70 is passed through the outer end of the pins 62 as a means of retaining the pins 62 in the slots 63 of the links 64 and 65.

The clamp ring 19 is provided with an upwardly extending dump lever 71, the lower end of which is rigidly attached, either welded or riveted, to the clamp ring 19. The upper end of the dump lever 71 is provided with an outwardly extending handle 72 by which the garbage can and holder may be inverted for dumping purposes.

The operation of the device is as follows: The cover ring 39 fitting on the top of the garbage can 24 locks the can in vertical position so that the can cannot be tipped or dumped. Now if the cover ring 39 be lifted in the direction of the dotted lines 39*a* the links 64 and 65 will be lifted against the tension of the springs 68 whereupon the slots 63 will travel upwardly and leave the pins 62 stand still until the lower ends of the slots 63 strike the pins 62 whereupon the dump handle 72 may be pulled in the direction of the arrow H whereby the garbage can 24 will be tipped to an inverted position for dumping purposes, and simultaneously with this action the pins 62 will move upwardly to the top of the slots 63 and engage and raise the links 64 and 65 and raise the cover ring 39 and cover plate 44 thereon to the elevated position shown by the dotted lines 39*a*. The garbage can, having been thus dumped may be returned to its upright vertical position by moving the dump lever and handle 71—72 in a direction counter to the arrow H, and as the can 24 reaches its normal upright vertical position the cover ring 39 will be resting thereon and will be snapped in position on the top of the garbage can 24 by the tension or pull of the springs 68 whereupon the garbage can 24 will be positively locked against further tipping until again released as above described.

While the device as shown and described is probably the preferred form of the device it is to be understood that such modifications of the device may be employed as lie within the scope of the appended claim without departing from the spirit and intention of the invention. Now having fully shown and described my invention, what I claim is:

A garbage can and dump holder device therefor comprising in combination, a U-shaped main supporting frame, a dump frame having a circular cross section mounted on diametrically opposite pivots within said main supporting frame, said dump frame having two legs depending at points adjacent the pivots, a garbage can mounted within the dump frame, a locking ring fitting over and seated upon the top edge of the garbage can, a hinge having an elongated leaf portion hingedly attaching the ring to the main supporting frame, a cover lid for closing the opening in said locking ring and hingedly attached to said hinge leaf portion whereby the can may be opened and filled independently of the locking ring, a resilient device for retaining the cover lid in both open and closed positions, a pair of link elements, said elements being positioned on opposite sides of the dumping frame and having their upper ends pivotally attached to said locking ring on opposite sides thereof, the lower end of each said link element having a longitudinal slot therein, a pair of pins individually fixed in the lower ends of said depending legs and projecting through the longitudinal slots in said links, a pair of tension springs one associated with each link and leg, the ends of each spring being fixed to its respective link and pin and serving normally to yieldingly retain the locking ring upon the edge of the can thereby preventing the dumping frame and can from tilting, a handle on said locking ring for lifting said locking ring to permit tilting the dump frame and can, the legs, pins and links thereafter cooperating to retain the ring in raised position whereby the can may be swung in the dumping frame to dumping position.

References Cited in the file of this patent

UNITED STATES PATENTS

1,011,513	Spuhl	Dec. 12, 1911
1,141,687	Brunhoff	June 1, 1915
1,292,006	Minter	Jan. 21, 1919
1,799,764	Schellberg	Apr. 7, 1931
1,803,137	Schwalbach	Apr. 28, 1931
1,947,879	Sandberg et al.	Feb. 20, 1934
2,537,363	Minor	Jan. 9, 1951