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REFUSE CONTAINER RACK WITH LID LIFTING AND RETAINING MEANS

Filed Oct. 23, 1961

FIG. 1

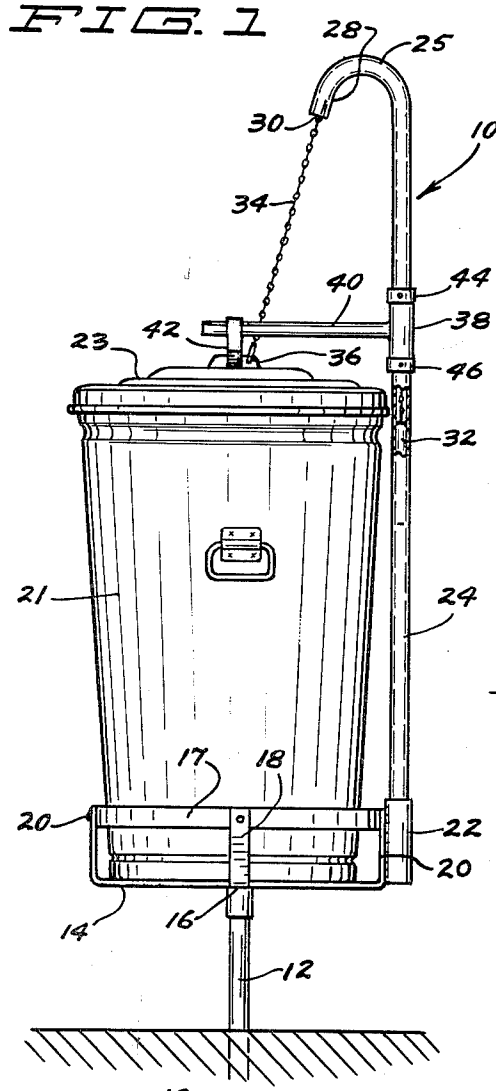


FIG. 2

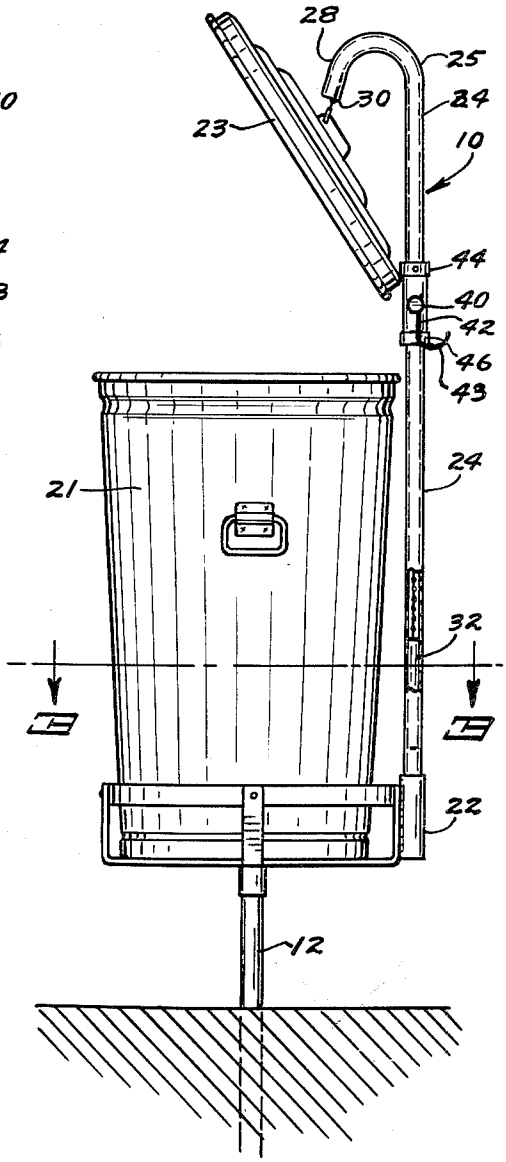
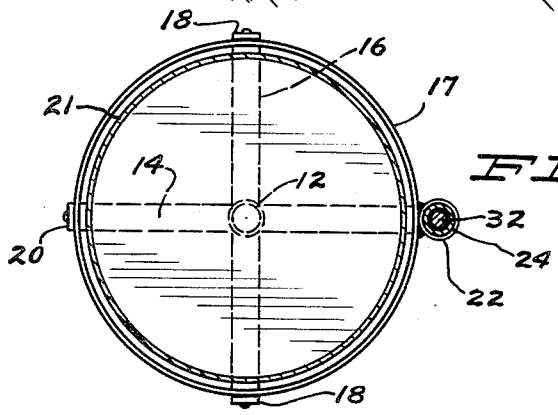


FIG. 3



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REFUSE CONTAINER RACK WITH LID LIFTING AND RETAINING MEANS

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The present invention relates to supports or racks for refuse containers such as trash cans and garbage cans. More particularly this invention relates to a rack or a support for such containers including a lid lifting and retaining means.

It is well known that containers such as trash cans and garbage cans are often overturned by animals or by the wind thus spilling and scattering the contents. A considerable amount of inconvenience and effort is, of course, required to replace the spilled material back in the container. Another inconvenience associated with the use of conventional trash or garbage receptacles results from the fact that one must remove the lid and place it on the ground before transferring the garbage or other trash into the container and after the garbage has been placed in the container, the lid must be picked up from the ground and placed back over the container. Another shortcoming of garbage receptacles now in use is that since the container rests upon the ground, there is no convenient way of cleaning underneath it. As a result, garbage and other trash as well as moisture tends to accumulate around the base of the container. Also occasionally in strong wind, the cover of a conventional trash or garbage receptacle will blow off and either become lost or bent so that is does not fit properly upon the container.

A number of racks have been previously proposed for the general purpose of supporting trash receptacles and the like. Some of these previous supporting racks are relatively complicated in construction and require a relatively large number of parts. Others are relatively heavy and bulky thus making them costly to manufacture and ship to the consumer. Some previously described racks do not provide means for retaining the lid in the raised position while the container is being filled. Others require parts such as gears or springs, which are either expensive or subject to failure over an extended period of time.

In view of these deficiencies of the prior art, it is thus one object of the present invention to provide an improved refuse container rack which will support the container so that it cannot be blown over by the wind or upset by animals.

It is another object of this invention to provide an improved refuse container rack which will allow the area beneath the container to be easily cleaned.

It is still another object of this invention to provide an improved refuse container rack including a means to prevent the container lid from being blown away by the wind or lost.

It is yet another object of this invention to provide an improved trash container rack wherein means are provided to maintain the cover in an elevated position while the container is being filled.

It is still a further object of this invention to provide an improved trash or garbage container rack including a latching means to hold the lid in the closed position and a means to automatically lift the lid off of the container when the latching means is moved to an inoperative position.

It is still a further object of this invention to provide an improved garbage can rack which is rugged in construction, reliable in operation and relatively low in cost.

These and other more detailed and specific objects will be disclosed in the course of the following specification, reference being had to the accompanying drawings, in which—

FIG. 1 is a side elevational view of the invention partially broken away with the lid of the trash container in the closed position.

FIG. 2 is a side elevational view partly broken away showing the lid in an elevated position.

FIG. 3 is a horizontal sectional view taken along line 3—3 of FIG. 2.

Referring now to the drawings, there is shown a trash receptacle or garbage can support rack 10. The rack 10 comprises an elongate base member 12 which during use is partially embedded in the earth in a vertical position. The upper end of the base member 12 is connected by a suitable means as welding to a pair of laterally extending support members 14 and 16. Members 14 and 16 are preferably formed from metal bars and are positioned at right angles to each other and in a horizontal plane when the rack is in use. The members 16 are turned upwardly at their outer ends 18. In a similar manner, the outer ends of the member 14 are turned upwardly at 20. Connected between the upwardly turned ends 20 and 18, is a horizontally disposed support member 17 which is preferably circular in form to correspond in shape with the base of a garbage or refuse container.

As best seen in FIGS. 1 and 2, a refuse container 21 including a lid 23 can be placed upon the support members 14 and 16 and is prevented from moving laterally by the upwardly turned portion 18 and 20 and by the member 17.

Suitably connected to the sides of one of the upwardly turned portions 20 is a bracket member 22 which can be formed from a section of metal tubing or the like. Bracket 22 is preferably aligned parallel to the post 12. Suitably connected at its lower end to the bracket 22 is an elongate upwardly extending tubular frame member 24 which is parallel to the base member or post 12 and positioned vertically when the rack is in position for use. Member 24 is provided with a curved portion 25 near the upper end thereof so that the upper end portion 28 thereof is directed downwardly. The portion 28 has an opening 30 at the end thereof. Extending through the elongate tubular frame member 24 is a flexible connecting means such as a chain 34. The end of the chain 34, within the frame member 24, is connected to a weight 32 loosely fitted within the frame member 24. The other end of the chain 34 extends downwardly from the opening 30 and is connected at its end to the handle of the container lid 23 by suitable connection 36.

Thus, in operation, when the lid 23 is free to move, the weight 32 by exerting tension on the chain 34 acts as a member for biasing the lid upwardly toward the position shown in FIG. 2. The lid will remain thus attached to the container rack 10 in the position of FIG. 2 until it is again placed manually in the position of FIG. 1 on top of container 21.

Pivotally connected to the frame member 24 and adapted to cooperate with the lid 23 is a latch member

40. The latch member 40 preferably comprises a tube extending radially from the frame member 24 and mounted rigidly to a sleeve member 38 which is pivotally mounted on the member 24. The latch member 40 is thus positioned horizontally when the rack is in place for use.

At the free end of the member 40 there can be provided a downwardly projecting cover engaging member 42. Member 42 can be formed from resilient sheet material and is preferably bent upwardly near the lower end thereof at 43.

The sleeve 38 and member 40 are prevented from moving axially on the tubular member 24 by means of collars 44 and 46 which are slidably mounted upon the member 24 on either side of sleeve 38 and can be selectively moved to different positions axially of the member 24 and locked in the desired position on the member 24 by suitable fasteners such as set screws. Thus, when the rack 10 is to accommodate a relatively large container, the collars 44 and 46 can be locked in one position and when the rack is used to support a smaller container, the collars 44 and 46 can be moved downwardly and locked in position at another point on the member 24.

When the rack is in use, the base member 12 is embedded with its lower end in the ground and the support members 14 and 16 are spaced somewhat above the surface of the ground. For this reason, the area beneath the container can be easily cleaned and there is no opportunity for moisture to accumulate around the base of the can which, if present, will hasten the formation of rust and reduce the life of the container.

When the lid 23 is in the closed position, on top of container 21, the lid engaging member 42 will be in contact with the upper surface of the lid 23. In this position, yieldable end portion 43 of member 42 will exert a downward force on the lid 23 to securely retain it in position on top of the container 21.

When the container 21 is to be filled, one simply pivots the latch 40 to the position of FIG. 2. The weight 32 will then drop downwardly within the frame member 24 and by reason of its connection with the lid 23 through chain 34, the lid 23 will move upwardly to the position of FIG. 2. The receptacle 21 can then be filled and the lid 23 will be securely retained on the rack 10 as this is being done. When the refuse has been placed in the receptacle, the cover is again placed thereon and the latch 40 is pivoted to the position of FIG. 1 with the cover engaging member 42 in contact with the upper surface of the lid.

It can thus be seen that apparatus according to the present invention can be manufactured at a relatively low cost since it is simply constructed and requires relatively few parts. The area underneath the container can be cleaned and the lid is always connected to the rack. The latch member 40 cooperates with the weight 32 and connecting chain 34 to provide a means for automatically raising the cover to an open position when the latch is moved to the inoperative position of FIG. 2. When the latch member 40 is in the position of FIG. 1, it both holds the cover in the closed position and also holds the entire receptacle 21 securely on the rack.

It is understood that suitable modifications may be made in the structure as disclosed, provided such modifications come within the spirit and scope of the appended claims. Having now therefore fully illustrated and described my invention, what I claim to be new and desire to protect by Letters Patent is:

1. A rack for trash receptacle having a lid comprising in combination, an elongate base member adapted to be connected at one end to the ground and extend upwardly therefrom, a support member extending laterally from the other end of said base, said support member being adapted to receive the base of said receptacle, an elongate member connected to the support member at one end thereof and extending parallel to the base member, a latch member extending radially from the elongate member near the opposite end thereof and pivotally conected thereto, a weight, a flexible member adapted to be connected to said lid at one end and to the weight at the other end, said flexible member extending over a portion of the elongate member at said opposite end thereof, said latch member being movable between a first position in contact with the upper surface of the lid to hold said lid in position on top of said container and a second position out of contact with said lid whereby the downward force of the weight on the flexible member is adapted to cause the lid to move upwardly to an open position when the latch member is moved to said second position.

2. A rack for a trash receptacle having a lid comprising in combination, support means adapted to be connected at one end thereof to the ground and extend upwardly therefrom, a receptacle support member extending laterally from the support means and adapted to be spaced upwardly from the ground to supporting the base of said receptacle above the surface of the ground, an elongate tubular frame member connected at its lower end to the receptacle support member and extending upwardly therefrom, a curved portion at the upward end of said tubular frame member, the extreme end of said curved portion being directed downwardly and having an opening therein, a weight loosely fitted within said frame member, a flexible member connected at one end to said weight and extending upwardly therefrom through said frame member out through said opening and downwardly therefrom and connected at its other end to said lid, a latch member pivotally connected to said frame member and spaced upwardly from the lower end thereof, said latch member being movable from an inoperative position out of contact with said lid to an operative position with the free end thereof in contact with the upper surface of said lid to hold the lid in place on top of said receptacle, said weight causing the lid to move upwardly when the latch member is moved to said inoperative position.

3. The apparatus of claim 2 wherein a sleeve is pivotally mounted on said tubular member and means are operatively associated with the sleeve for selectively adjusting the axial position of the sleeve upon the tubular member.

4. The apparatus according to claim 2 wherein free end of the latch member is provided with a downwardly extending resilient lid engaging member adapted to exert a continuous downward force on the lid when the latch is moved to the operative position.

5. A rack for a trash receptacle having a lid comprising in combination, an elongate base member adapted to be supported at its lower end from the ground and extend upwardly therefrom, support members extending laterally from the upper end of said base member, said support members being adapted to receive the lower end of said receptacle, the outer ends of said support members having upwardly extending members thereon, an elongate member extending vertically upwardly from the support members and connected to a support member at its lower end, a sleeve pivotally mounted on said elongate member and spaced upwardly from the lower end thereof, a latch member secured rigidly to the sleeve and extending radially therefrom, an adjustably positionable collar mounted over said elongate member on either side of said sleeve member, each such collar being adjustably positionable axially of said elongate member, an upwardly yieldable lid engaging member connected to the free end of said latch member and extending downwardly therefrom, said latch member being movable from an inoperative position to

an operative position with the lower end of said lid engaging member in contact with said lid and the lower end of said lid engaging member exerting a downward force against the lid to hold the lid securely in position, a biasing member connected to the lid and operatively associated with the frame member to exert a continuous upward force of the lid whereby the lid will move upwardly to an open position when the latch is moved to said inoperative position.

References Cited in the file of this patent

UNITED STATES PATENTS

1,279,237	Bourcheix	Sept. 17, 1918
2,505,126	Logan	Apr. 25, 1950
2,690,893	Mokhiber	Oct. 5, 1954
2,726,833	Burgh	Dec. 13, 1955

FOREIGN PATENTS

629,293	Germany	Apr. 27, 1936