This invention relates to a garbage can carriage and more particularly to a garbage can carriage which comprises a wheel supported frame having an upstanding support provided with a moveable hand retaining device at its upper end; said handle device coupled to supporting the lid of a garbage can which rests upon the carriage frame whereby the handle may be used to hold the lid on the can, for the purpose of motivating the carriage and also for removing the lid and retaining it on the upstanding member when the can is removed from the frame of the carriage.

Various portable devices have been used to support garbage cans so that the cans may be transported to and from various locations as desired. It has been recognized that a garbage can carriage is not only used by home owners and other proprietors but is used by the garbage collectors as well. In many instances garbage collectors employ help which is not permanent and for this reason a great variety of garbage can handling methods may be employed. Particular reference is made to the manner in which garbage collector personnel handle garbage cans before and after they empty said cans into the truck. F sometimes such garbage can handling is done with an attitude of indifference whereby the garbage can is left lying on the ground with the lid thrown aside. This creates a disorderly situation and sometimes an unsanitary condition due to the existence of residual garbage or trash in a can after it is thrown upon the ground by the garbage collector personnel.

Accordingly there has been a need for a garbage can carriage which will retain the garbage can lid in proper position for its replacement on the can after garbage is removed from the can and the can is replaced on the carriage. It has been found that garbage can carriages must be mechanically suggestive to the garbage collector personnel in order to induce such personnel properly to place the garbage can back on the carriage and replace the cover.

Further a garbage can carriage must be a light weight device which is readily portable, well balanced and simple to operate in addition to features rendering it readily adaptable to garbage cans of various sizes on the market.

Accordingly, it is an object of the present invention to provide a garbage can carriage having a can supporting frame provided with an upstanding element which supports a handle slidably mounted in a clevis on the upstanding element; said handle serving the dual purpose of supporting a lid of a garbage can and also providing a hand grip for use in manipulating the carriage when laden with the garbage can.

Another object of the invention is to provide a novel clevis mechanism which pivotally and slidably supports a garbage can lid handle on an upstanding member of the frame carrying the garbage can.

Another object of the invention is to provide a novel clevis mechanism pivotally mounted on an upstanding member of a garbage can carriage; said clevis slidably supporting a garbage can lid handle which may be pivoted upwardly to remove the lid from the garbage can and then subsequently said handle may be slidably moved laterally of the axis of the can and pivoted into a vertical position completely to remove the lid from the can.

Another object of the invention is to provide a garbage can carriage having a novel clevis and can lid handle mechanism wherein the clevis is pivoted on a horizontal axis and the handle is slidable therethrough but retained against rotation so that when the handle is slidably moved through the clevis to remove the lid from a garbage can the clevis prevents the handle from rotating and thereby maintains the plane of the lid in proper position for replacement on the can.

Another object of the invention is to provide a garbage can carriage having a novel clevis mechanism coupled to an upstanding member of the carriage frame; said handle coupled to a garbage can lid and slidably mounted through the clevis and over a roller disposed about the pivotal axis of the clevis, whereby, when the lid is raised and moved rearwardly, said lid engages the upstanding member of the frame, whereupon said lid may be rotated, about the axis of the clevis, in a continuous motion to a vertical plane so that it is in such position when lowered, that the roller is disposed between the lid and said handle to maintain juxtaposition of the handle and lid with respect to said upstanding member.

Another object of the invention is to provide a garbage can carriage having a novel collapsible frame and upstanding arm structure whereby the carriage may be shipped in a compact package.

Further objects and advantages of the invention may be apparent from the following specification, appended claims and accompanying drawings in which:

FIG. 1 is a side elevational view of a garbage can carriage in accordance with the present invention showing a garbage can supported thereon and illustrating by dash lines a varying position of the handle member of the invention supporting the garbage can lid when removed from the can.

FIG. 2 is a fragmentary elevational view taken from the line 2—2 of FIG. 1.

FIG. 3 is a plan sectional view taken from the line 3—3 of FIG. 1.

FIG. 4 is an enlarged fragmentary view of a modified form of the present invention showing an upstanding member having clevis mechanism in connection therewith and showing portions broken away and in section to amplify the illustration.

FIG. 5 is a fragmentary elevational view of another modified form of the invention illustrating parts similar to those shown in FIG. 4.

FIG. 6 is a fragmentary side elevational view of the invention showing a further modified form thereof and illustrating by dash lines the upstanding element of the frame disposed in a substantially horizontally reclining position so that the entire carriage may be packaged in a substantially flat box.

FIG. 7 is a plan sectional view taken from the line 7—7 of FIG. 6.

FIG. 8 is a plan view of the garbage can carriage shown in Fig. 6 of the drawings and showing the carriage in folded position.
FIG. 9 is an enlarged fragmentary sectional view taken from the line 9—9 of FIG. 7; and FIG. 10 is a fragmentary sectional view of an additional modified form of the invention and equivalent to the mechanism shown in FIG. 9 of the drawings.

As shown in FIG. 1 of the drawings, the garbage can carrier of the present invention is provided with a frame 20 and this frame 20 also shown in FIG. 3 is formed of a loop of tubing. The loop of tubing is disposed in a substantially triangular plan shape as shown in FIG. 3 of the drawings and an axle 22 extends through the tubing near the front end 24 of the frame. Rotatably mounted on this axle are wheels 26 and 28. These wheels are provided with rubber tires which project beyond the front end 24 of the frame to provide for bumper action of the carriage and to prevent contact of the frame with various objects adjacent to which the carriage may be operated.

The substantially triangular frame 20 is continuous with side rail portions 30 and 32 which are curved upward in a vertical direction at the rearward portion of the frame to form on the upstanding structure. It will be seen that the horizontal portions of the frame side members 30 and 32 support the bottom A of a garbage can B rearwardly of the wheels 26 and 28.

A centering member 34 abridges the side members 30 and 32 and this centering member 34 is fixed in the rail portions 30 and 32 by bolts 40 or other suitable means as desired. This member 34 tends to support a garbage can B so that its center of gravity is disposed centrally between the rail portions 30 and 32 rearwardly of the wheels 26 and 28.

Disposed between the rail portions 30 and 32 as shown in FIGS. 1 and 3 of the drawings is a ground engaging member 36 having a shoe 38 on the lower end thereof. This shoe 38 may be made of rubber or any other suitable material as desired and the ground engaging member 36 is fixed between the rail portions 30 and 32 by bolts 40 or this ground engaging member 36 may be secured to the rail portions 30 and 32 by any other means as desired.

As shown in FIG. 2 the vertically disposed portions of the rail portions 32 are provided with upper ends 42 and 44, respectively, between which a clevis 46 is pivotally mounted on pin 48 which extends into adjacent side walls of said vertically disposed portions. Pivoted mounted on the pin 48 is a roller 50 on which a carriage handle 52 may roll within the confines of the clevis member 46 as will be hereinafter described in detail. The cross sectional view of the carriage handle 52 comprises spaced parallel sides which are disposed between substantially conforming parallel sides of the clevis 46 so that the carriage handle 52 may not be rotated in the clevis 46 about the longitudinal axis of the handle as will be hereinafter described in detail in connection with the functional description of the invention.

As shown in FIG. 1 of the drawings the carriage handle 52 is provided with a grip portion 54 which may be grasped by the operator to motivate the invention. The opposite end of the handle 52 is fixed to a garbage can lid C by bolts 56 and 57 which extend through the handle and which also extend through tubular spacers 58 and 59, respectively. The bolts 56 and 57 are secured on the inner side of the lid C by conventional nuts while the tubular spacers 58 and 59 are disposed between the carriage handle 52 and the lid C adjacent opposite ends of the conventional garbage can lid handle D.

It will be seen that the spacer 59 provides spacing between the carriage handle 52 and the lid C and that the length of this spacer is substantially equal to the diameter of the roller 50 whereby the roller 50 engages between the handle and the lid when the lid and handle are in the broken line position shown in FIG. 1 of the drawings.

It will be understood that garbage cans of varying height may be accommodated by placing the pin 48 in any one of several vertically spaced sets of holes 60 as shown best in FIG. 2 of the drawings. The pin 48 is thus adjusted to suit the elevation of the particular garbage can B while the bolts 40 which extend through the frame rail portions 30 and 32 hold them together and also secure a ground engaging member 36 to the frame all as shown best in FIGS. 3 and 4 of the drawings.

The carriage handle 52 is provided with a projecting pin 53 which prevents the handle from being removed forwardly from the clevis.

In the modification as shown in FIG. 4 of the drawings the frame side rail portions 30 and 32 are secured to an upstanding tube 62 by the bolts 40; the lower end of the tube 62 is provided with a rubber shoe 64 to engage the ground in a similar fashion to the shoe 38 shown in FIG. 1 of the drawings. The upper end of the tube 62 is hollow and receives a U shaped bracket 66 having a plurality of vertically spaced holes 68 through which a bolt 70 is disposed. This bolt 70 extends through the tube 62 and due to the spacing of the holes 68 the bracket 66 may be vertically adjusted as hereinbefore described to accommodate garbage cans having varying elevations.

The bracket 66 is provided with extending ends 72 and 74 through which a shouldered pin 71 extends. This pin 71 also supports the roller 75 and clevis 77 which structure is similar to that shown in FIG. 2 of the drawings. Likewise the carriage handle 52 is similar in construction to that shown in FIGS. 1 and 2 of the drawings.

In the modified structure shown in FIG. 5 of the drawings the bolt 70 extends through the tube 62 and through any one of a plurality of spaced holes 76 in a bearing member 78 contained in the end of the tube 62. This bearing member 78 is provided with an accurate cone slide bearing portion 80 over which the carriage handle 52 may slide. A clevis 81 is pivotally mounted on the bearing member 78 by a bolt 82.

The clevis 81 pivots about the axis of the bolt 82 in a similar fashion to the pivotal action of the clevis 46 about the pin 48 in the species shown in FIG. 2 of the drawings.

In operation the carriage handle 52 is tilted upwardly at its forward end when the lid C is moved from the garbage can B; then the handle is moved longitudinally through the clevis whereupon it rolls upon the roller or slides on the arcuate surface 80 of the bearing member 78 in accordance with the particular structure employed. As the lid C is raised to clear the rim of the can C the clevis 46 pivots about its axis whereupon the carriage handle 52 is moved backwardly and downwardly into the broken line position as shown in FIG. 1 of the drawings. The bearing member 78 is disposed between the handle and lid as hereinbefore described.

When the garbage can B is being transported the grip portion 54 of the carriage handle is utilized to elevate the ground engaging shoe 38 above the ground whereupon the clevis 46 pivots about its axis and whereupon the carriage handle 52 is moved forwardly downwardly and upwardly into the broken line position as shown in FIG. 1 of the drawings.

As shown in FIG. 6 and 7 of the drawings the carriage handle 52 is rotatably formed tubular member 84 having its extremities 86 and 88 disposed adjacent to an upstanding member 90. This member 90 is hinged to the frame on a horizontal axis centrally of a bar 92 which extends into the opposite ends 86 and 88 of the tubular member 84. The bearing member 92 is integrally formed in FIG. 1 and 2 of the drawings.

In the modification as shown in FIGS. 6, 7 and 7 of the drawings the frame 20 is a rectangularly formed tubular member 84 having its extremities 86 and 88 disposed adjacent to an upstanding member 90. This member 90 is hinged to the frame on a horizontal axis centrally of a bar 92 which extends into the opposite ends 86 and 88 of the tubular member 84. The bearing member 92 is integrally formed in FIG. 1 and 2 of the drawings.

Engaging the upstanding tube 90 is a sleeve 98 having a bolt 99 extending therethrough as shown best in FIG. 6.

This bolt 99 also extends through the upstanding member 90 to fix the sleeve 98 in place and to hold an arch
member 100 in position to brace the upstanding member 90. This arch member 100 is pivotally attached to side elements of the tubular frame 84 by means of bolts 104 and 106, respectively.

The arch member 100 is provided with a tab 101 which is pivotally connected to the sleeve 98 by means of a bolt 102.

It will be understood that the arch member 100 thus secured to the upstanding member and the frame retains the tubular extremities 86 and 88 together.

The arch member 100 is located to serve as a centering means for a garbage can on the frame and thus tends to prevent forward and lateral movements of the can relative to the frame. The centering means thus establishes a fixed distance between the can and the upstanding member of the frame so that the lid may move downwardly into position between the can and the upstanding member without interference.

As shown in FIG. 6 of the drawings the bearing member 94 extends downwardly below the frame 20 and is provided with a ground engaging shoe 108. The wheels 26 and 28 are mounted on the tubular member 84 of the frame by means of bolts 108 and 110, respectively.

It will be seen that the upstanding member 90 is pivotal into a horizontal position with the frame 20 so that the upstanding member 90 and the carriage handle 52 together with the garbage can lid, C, may all be collapsed into a flat package for shipping.

As shown in FIG. 10 of the drawings the modified structure of the invention includes structure equivalent to that shown in FIG. 9 wherein opposite ends 86 and 88 the tubular member 84 of the frame 20 extend into a sleeve 112 which is fixed to an upstanding member 90 by a bolt 114. This bolt 114 extends between the ends 86 and 88 and permits pivotal action of the upstanding member 90 relative to the opposite ends 86 and 88 of the frame tube 84.

It will be obvious to those skilled in the art that various modifications of the art may be resorted to in a manner limited only by a just interpretation of the following claims.

1. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said first means disposed to hold said handle in spaced relation to a garbage can lid, and second means at the upper end of said upstanding member disposed to be engaged between said handle and a lid supported thereon when said handle is slidably retracted through said clevis and placed in a substantial vertical position alongside said upstanding member.

2. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said frame having a forward portion supported by said wheels; a rear portion of said frame carrying said upstanding member; and ground engaging means extending downwardly from said frame and supporting it in the vicinity of said upstanding member.

3. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said frame having a forward portion supported by said wheels; a rear portion of said frame carrying said upstanding member; and ground engaging means extending downwardly from said frame and supporting it in the vicinity of said upstanding member.

4. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said first means disposed to hold said handle in spaced relation to a garbage can lid, second means at the upper end of said upstanding member disposed to be engaged between said handle and a lid supported thereon when said handle is slidably retracted through said clevis and placed in a substantial vertical position alongside said upstanding member; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said frame having a forward portion supported by said wheels; a rear portion of said frame carrying said upstanding member; and ground engaging means extending downwardly from said frame and supporting it in the vicinity of said upstanding member.

5. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said frame having a forward portion supported by said wheels; a rear portion of said frame carrying said upstanding member; and ground engaging means extending downwardly from said frame and supporting it in the vicinity of said upstanding member.

6. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said frame having a forward portion supported by said wheels; a rear portion of said frame carrying said upstanding member; and ground engaging means extending downwardly from said frame and supporting it in the vicinity of said upstanding member.

7. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said wheels having rubber tires disposed to project slightly beyond the forward end of said frame.

8. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said wheels having rubber tires disposed to project slightly beyond the forward end of said frame.

9. In a garbage can carriage, the combination of: a frame; wheels supporting said frame; a base element on said frame disposed to support a garbage can thereon; an upstanding member on said frame; a clevis pivotally secured on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said wheels having rubber tires disposed to project slightly beyond the forward end of said frame.
upstanding member on said frame; a clevis pivoted on the upper end of said upstanding member; a handle disposed slidably through said clevis; and first means at one end of said handle for attachment thereof to a garbage can lid; said handle being disposed above said base a distance slightly greater than the elevation of a garbage can, said wheels at the forward end of said frame and disposed to extend thereabove to form a forward stop means for a can when displaced forwardly on said frame; centering means on said frame rearwardly of said wheels to locate said can in spaced relation to said upstanding member.

References Cited in the file of this patent

UNITED STATES PATENTS

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Inventor(s)</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,634,933</td>
<td>Grimsley</td>
<td>Apr. 14, 1953</td>
</tr>
<tr>
<td>2,802,673</td>
<td>Hazlett</td>
<td>Aug. 13, 1957</td>
</tr>
<tr>
<td>2,841,351</td>
<td>Riepen</td>
<td>July 1, 1958</td>
</tr>
<tr>
<td>2,905,423</td>
<td>Smith</td>
<td>Apr. 14, 1959</td>
</tr>
</tbody>
</table>

FOREIGN PATENTS

<table>
<thead>
<tr>
<th>Patent Number</th>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>62,006</td>
<td>France</td>
<td>June 2, 1955</td>
</tr>
<tr>
<td></td>
<td>(1st addition to No. 998,031)</td>
<td></td>
</tr>
<tr>
<td>1,094,470</td>
<td>France</td>
<td>May 20, 1955</td>
</tr>
</tbody>
</table>