

H. M. McCORD.
 HOLDER FOR CARBOYS.
 APPLICATION FILED JUNE 9, 1913.

1,094,669.

Patented Apr. 28, 1914.

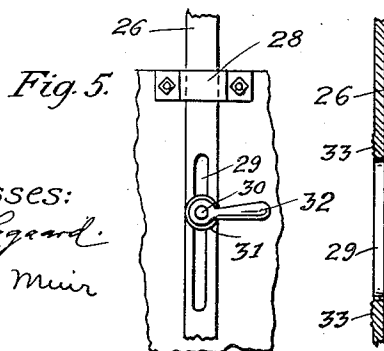
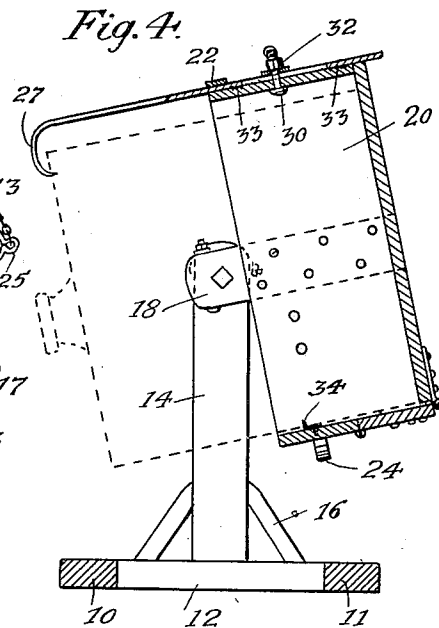
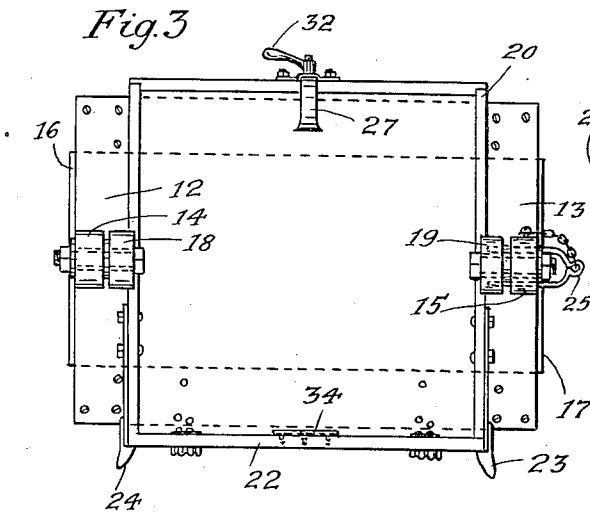
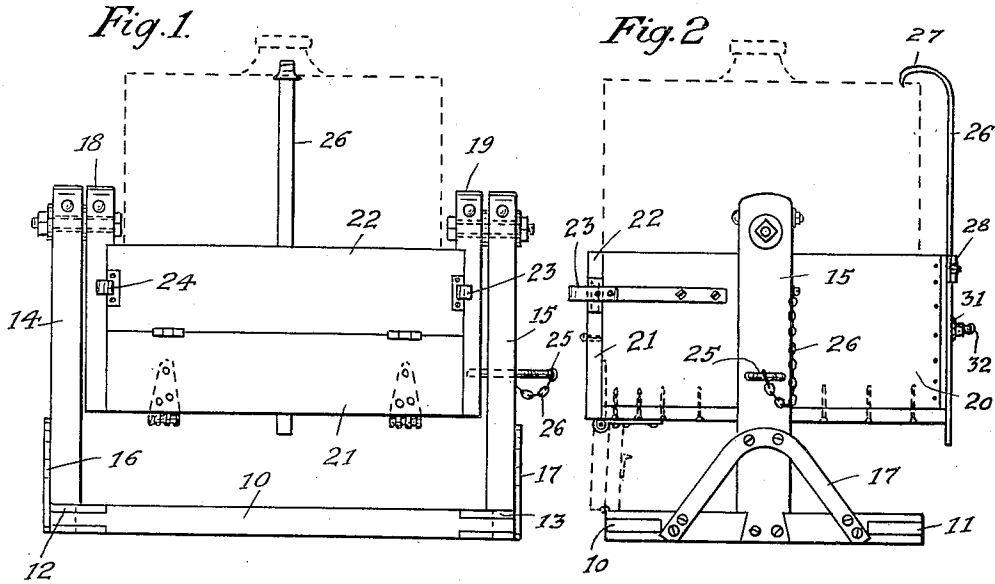


Fig. 6.

Witnesses:
Thos. Legend.
Robert W. Muir

Inventor:
Horace M. McCord.
 By *F. A. Whiteley*
his Attorney.

UNITED STATES PATENT OFFICE.

HORACE M. McCORD, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF FIVE-TWENTIETHS
TO JOSEPH F. McDONOUGH, OF LA CROSSE, WISCONSIN.

HOLDER FOR CARBOYS.

1,094,669.

Specification of Letters Patent.

Patented Apr. 28, 1914.

Application filed June 9, 1913. Serial No. 772,643.

To all whom it may concern:

Be it known that I, HORACE M. McCORD, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Holders for Carboys, of which the following is a specification.

My invention relates to an improvement in carboy holders and has for its object to provide a device which will hold a carboy securely upright when its contents are not needed, and will permit its easy and safe handling when any part of its contents is needed.

Heretofore the handling of carboys containing corrosive acids has been both difficult and dangerous. The weight of the carboy and its awkwardness in handling have made two men necessary in order to handle the same without danger to the men or waste of acid. It is not safe when so handled and many instances of serious injuries received while so emptying the carboys are known. The use of acids has been and is steadily increasing. Many industries in all sections of the country require acids and they generally receive their supply in carboys. The requirements of storage batteries, soda fountains, etc., demand a great deal of acid. This is almost invariably supplied in carboys.

My invention provides a method by which one person can more easily and safely handle a carboy than can two without its aid. By its use a large or small quantity of acid can be removed and the carboy returned to its vertical position and there locked.

A further object of my invention is to provide a carboy holder and tilter that will not depend upon the strength of the carboy itself in suspending it for tilting. Carboys are so heavy when full, and are subjected to such strains in transportation and handling, that to suspend the carboy in a holder which depends for its safety on the frame of the carboy itself is a dangerous thing. The use of such devices has proved very unsatisfactory. My invention provides a strongly built box into which the carboy is inserted and locked. In this way but very slight strain is placed on the frame of the carboy itself, with consequent less liability of its breaking.

A further object of my invention is to

provide means by which the carboy holder is strongly supported when the carboy is being inserted therein. This is accomplished by using the hinged front, which is let down to insert the carboy, as a support resting on the bottom frame piece. In this way the holder is adequately supported when support is greatly needed.

The full objects and advantages of my invention will appear in connection with the detailed description thereof and are particularly pointed out in the claims.

In the drawings, illustrating the application of my invention in one form, Figure 1 is a front elevation of my invention, Fig. 2 is a side elevation, Fig. 3 is a plan view and Fig. 4 is a side elevation showing my invention in tilted position. All these figures show the outline of a carboy and other details dotted in. Figs. 5 and 6 are detail views of the mechanism for holding the carboy in the box.

In the construction of my invention frame pieces 10, 11, 12 and 13 are joined together to form a base upon pieces 12 and 13, on which are mounted uprights 14 and 15 securely fastened thereto and made more secure by braces 16 and 17. Uprights 14 and 15 are of sufficient length so that clearance space is provided to empty the carboy completely. Pivottally attached to stationary uprights 14 and 15 are swinging supports 18 and 19 to which is attached a box 20 built solidly on three sides and the bottom and of a size sufficient to permit a carboy to be placed therein.

To the front side of box 20 are attached door pieces 21 and 22, door piece 21 being hinged to the bottom of box 20 and top piece 22 being hinged to door piece 21. Top piece 22 is constructed so as to fold out and tight against door piece 21, and they are of such length that when both 21 and 22 are folded under box 20 they rest directly on frame piece 10 and serve as a support to the box 20 when the carboy is being inserted. On the sides of box 20, adjacent to top pieces 22, are located latches 23 and 24 which serve to hold the carboy in box 20 when the carboy has been inserted and the door pieces swung up. Catches 23 and 24 are provided with springs so that when the top piece 22 is thrust against them they spring open and then shut over the top piece 22. To prevent oscillation of box 20 except when desired, a

pin 25 is provided fastened to upright 15 by a chain 26. Pin 25 is inserted through holes in upright 15 and when box 20 is upright or in vertical position pin 25 is pushed through holes in upright 15 into holes in swinging support 19, thus securely locking box 20 in vertical position. For the purpose of holding the carboy against the bottom of box 20 when it is tipped to permit the drawing off of acid, a rod 26 is provided having a hook sharpened portion 27 adapted to hook into the top of the carboy. Rod 26 is slidably mounted upon the rear side of box 20 by means of a keeper 28 firmly fastened to the top of box 20 by means of a slot 29 which is provided in rod 26 near its bottom, and has a bolt 30 passing through the rear side of box 20 and through slot 29. Bolt 30 is provided with a washer 31 and a hand nut 32, which permits rod 26 to be adjusted to any height in the range of slot 29 and locked in that position by tightening the nut 32. Roughened or toothed projections 33 are provided on rod 26 to further insure it from slipping while holding the carboy in box 20. A sharpened iron 34 is provided on the inner side of top piece 22 for the purpose of preventing the front of the carboy from slipping up out of the box 20 when the carboy is tilted.

In operation my device is placed where the carboys of acid are handiest for the purpose needed. The iron rod on the rear of the box is raised enough to permit the complete insertion of the carboy. The swinging box is locked by means of the pin and the hinged front part dropped down and turned under the box until it rests on the frame piece therebeneath. In this position the box is strongly supported for the insertion of the carboy filled with acid. As these carboys when filled are very heavy, a support of this kind is necessary to obviate the danger of accidents. The carboy is now inserted into the box, the hinged portion is swung up and locked into position by means of the latches on the sides of the box. When so locked in, the sharpened iron on the inside of the hinged portion enters into the wooden side of the carboy and holds it from slipping. The long iron rod located at the rear of the box is now drawn down until its sharpened curved portion begins to enter the wooden top of the carboy. In this position it is firmly locked and the carboy is now held securely in place in the swinging box. The device is so constructed that the center of gravity of the full carboy is lower than the pivoted points of attachment, so that when tilted and released the carboy will at once assume a vertical position. In pouring from the carboy as held in my device it is only necessary to overcome the resistance present because of this lowered center of gravity, hence the operation is an easy one.

The carboy if released returns at once to the vertical position so that the danger to the operator and the liability of waste of acid are reduced to the minimum.

The advantages of my invention are obvious. By its use an operation requiring two men, great effort and even then entailing danger of accident and of waste of acid, is made an easy operation for one man with danger of accident and of waste eliminated. By it, one man can handle a carboy of acid much surer than can two in the old way. The vast amount of acid that is now handled in commercial industries where unskilled labor is employed makes such a device a necessity in order to avoid accidents which might be very serious and expensive for the employer. It is comparatively inexpensive to manufacture and will supply a widespread need.

I claim:

1. A carboy holder comprising a frame, a pivoted support for the carboy consisting of a bottom platform, side and end walls, one of said walls being hinged to swing clear of the support, and means for holding the carboy on the pivoted support.

2. A carboy holder comprising a frame, a pivoted support for the carboy consisting of a bottom platform, side and end walls, one of said walls being hinged to swing clear of the support, said hinged wall being adapted to hold the support in horizontal position while the carboy is being placed thereon, and means for holding the carboy on the pivoted support.

3. A carboy holder comprising a frame, a pivoted support for the carboy consisting of a bottom platform, side and end walls, one of said walls being hinged to swing clear of the support, said hinged wall being adapted to hold the support in horizontal position while the carboy is being placed thereon and is adapted to swing up and firmly position the carboy within the walls, and means for holding the carboy on the pivoted support.

4. A carboy holder comprising a frame, two standards mounted thereon, a box pivotally attached to the standards and adapted to receive the carboy and support the same independently of the structure of the carboy, a hinged side of said box adapted to support the box in a horizontal position when open to permit insertion of the carboy, and an adjustable rod fastened to the box for holding the carboy therein.

5. A carboy holder comprising a frame, two standards mounted thereon, a box pivotally attached to the standards and adapted to receive the carboy and support the same, a hinged side of said box adapted to support the box in a horizontal position when swung down to permit insertion of the carboy, a rod on the box for holding the carboy

therein, and having a slot, a bolt fastened to the box and passing through the slot, and a hand nut for adjustably positioning the rod.

5 6. A carboy holder comprising a frame, two standards mounted thereon, a box pivotally attached to the standards and adapted to receive the carboy and support the same, a hinged side of said box adapted to support the box in a horizontal position when open
10 to permit insertion of the carboy, an adjustable rod fastened to the box for holding the carboy therein, and corrugations on the rod for holding the rod more firmly positioned in relation to the box.

15 7. A carboy holder comprising a frame, two standards mounted thereon, a box pivotally attached to the standards and adapted to receive the carboy and support the same, a hinged side of said box adapted to support the box in a horizontal position when swung
20 down to permit the insertion of the carboy, latches on the sides adjacent the hinged side to hold said hinged side securely when in closed position, and means for holding the
25 carboy in the box.

8. A carboy holder comprising a frame, two standards mounted thereon, a box pivotally attached to the standards and adapted to receive the carboy and support the same,

two hinged sections forming one wall of said 30 box, said sections being adapted to fold together and support the box by contact with the frame of the holder when the box is positioned to receive the carboy, and a rod fastened to the box and adapted to clamp down 35 on the top of the carboy to hold the carboy in the box.

9. A carboy holder comprising a frame, two standards mounted thereon, a box pivotally attached to the standards and adapted 40 to receive the carboy and support the same, a pin fastened to a standard and adapted to be inserted through said standard and into the structure of said box to hold said box when in horizontal position, a hinged side of 45 said box adapted to support said box in a horizontal position when swung down to permit the insertion of a carboy, a sharp projection mounted on said hinged side to coincide with the carboy when the hinged 50 side is in closed position, and a rod for holding the carboy against the bottom of the box.

In testimony whereof I affix my signature in presence of two witnesses.

HORACE M. McCORD.

Witnesses:

H. A. BOWMAN,

F. A. WHITELEY.