

May 10, 1927.

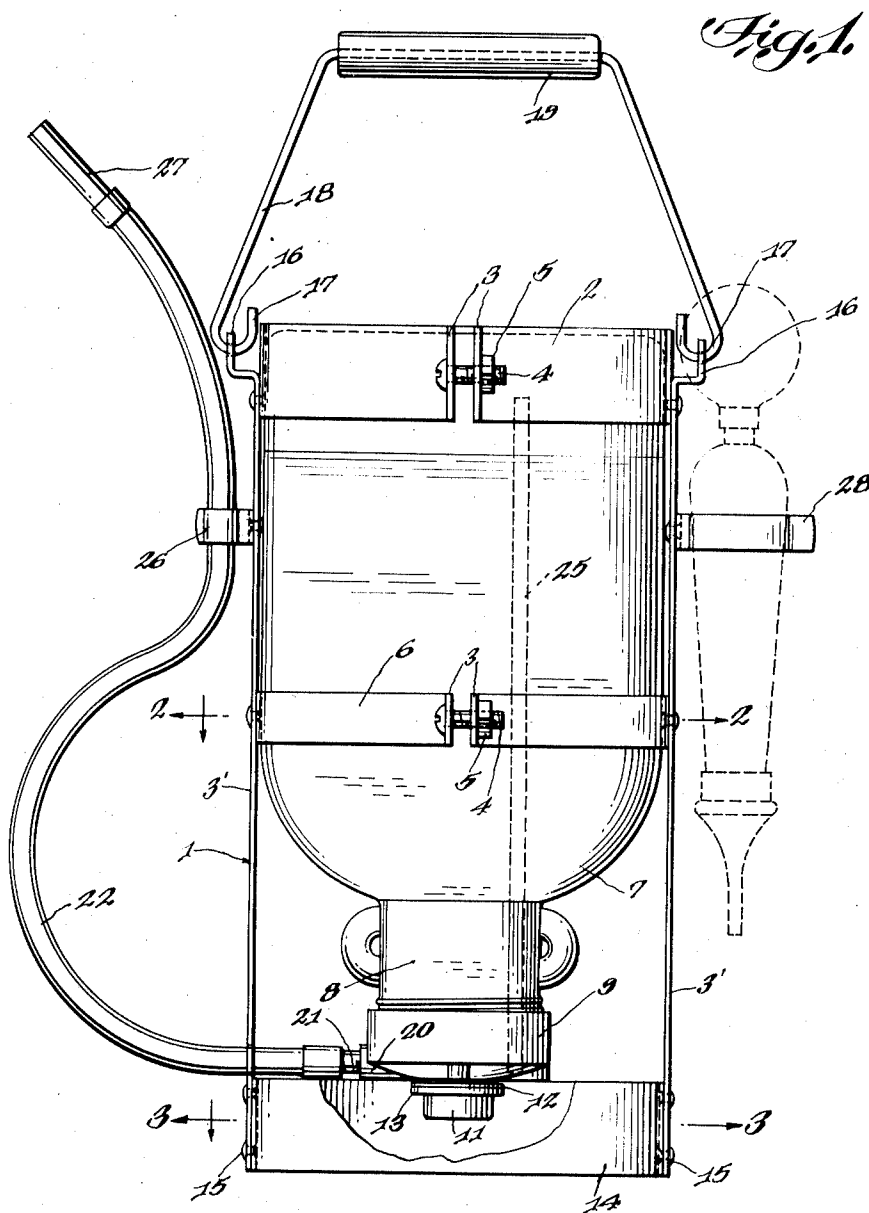
1,628,564

J. TAYLOR

BATTERY FILLER

Filed Dec. 19, 1925

2 Sheets-Sheet 1



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INVENTOR
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2 Sheets-Sheet 2

Fig. 2.

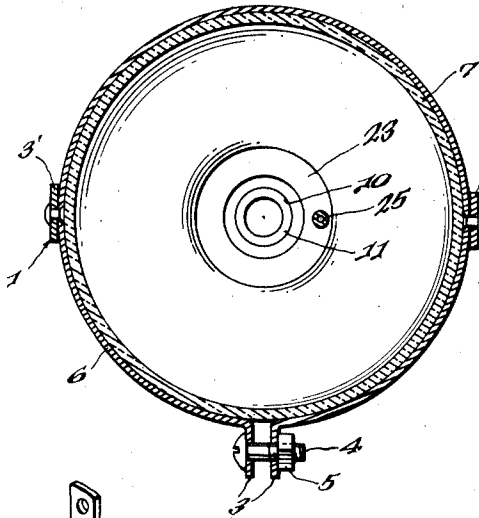


Fig. 3.

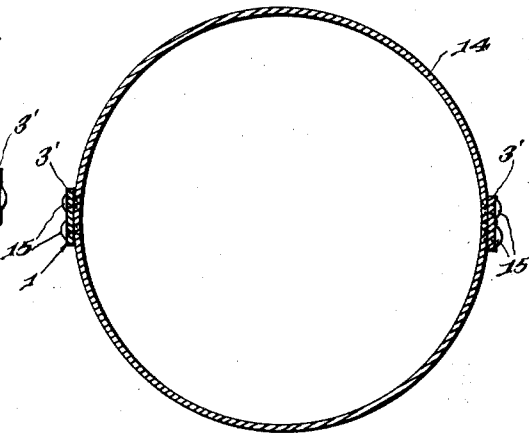


Fig. 5.

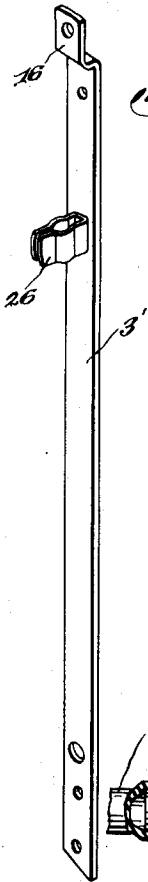


Fig. 7.

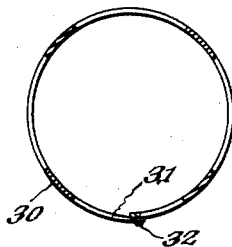


Fig. 6.

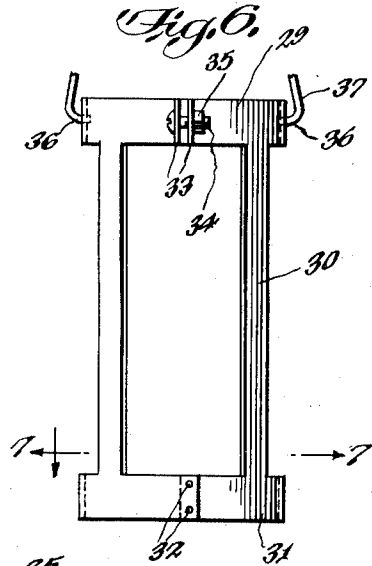
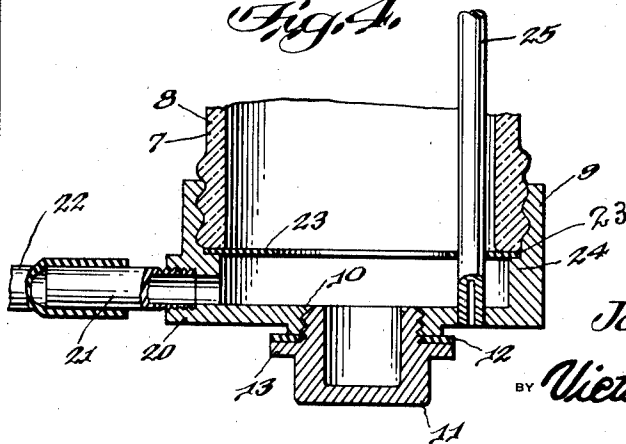


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN TAYLOR, OF CHICAGO, ILLINOIS.

BATTERY FILLER.

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This invention relates to what I term a battery filler to be used in supplying distilled water to storage batteries.

One of the main objects of the invention is to provide a container and a supporting and carrying frame therefor so related that the frame will support the container in an upright position, a flexible tube being connected to the lower end of the container for supplying distilled water therefrom to the cells of a storage battery. A further object is to provide means whereby the container can be quickly and easily refilled without removing the same from the supporting frame. Another object is to provide a device of this character of simple and durable construction, which can be readily produced at small cost. Further objects will appear from the detailed description.

In the drawings:

Fig. 1 is an elevation of the battery filler partly broken away.

Fig. 2 is a section taken substantially on line 2—2 of Fig. 1.

Fig. 3 is a section taken substantially on line 3—3 of Fig. 1.

Fig. 4 is a section through the lower portion of the container and the cap therefor, parts being shown in elevation.

Fig. 5 is a perspective detail view of one of the connecting strips of the supporting frame.

Fig. 6 is an elevation of a modified form of supporting frame.

Fig. 7 is a section taken substantially on line 7—7 of Fig. 6.

The filler includes a supporting frame 1 which is provided at its upper end with a ring 2 having its end portions bent outwardly to provide tabs 3 said tabs having aligned openings which receive a securing screw 4 upon which is threaded a nut 5. Ring 2 is connected by supporting strips 3' to a similar ring 6, these rings being riveted or otherwise suitably secured to the strips. Rings 2 and 6 are secured tightly about a glass bottle or container 7 by means of screws 4 and nuts 5 so as to secure the container in inverted position within the supporting frame 1. This container is provided, at its lower end, with a reduced neck 8

which is exteriorly threaded to receive a closure cap 9 threaded thereon. This cap is provided with a filling opening 10 which is normally closed by a screw plug 11 of known type, a packing gasket 12 being interposed between flange 13 of the plug and the cap. The side strips 3' extend downwardly beyond cap 9 and associated parts and the base ring 14 is rigidly secured by the rivets 15, or in any other suitable or preferred manner, to the lower ends of strips 3', this ring being disposed at right angles to the strips and providing a base which supports the supporting frame 1 in vertical position.

Each strip 3' is provided at its upper end with an off-set ear 16 having an opening for reception of eye 17 at the end of a bail 18 provided with a suitable handle 19. In this manner the container 7 is tightly secured in the supporting structure 1 and the device as a whole may be readily transported and, when set upon a supporting surface, will be supported in vertical position so as to permit ready discharge of the contents of the container.

Cap 9 is provided with a radially projecting element 20 which is suitably bored and threaded to receive the threaded inner end portion of a nipple 21 adapted for reception of a flexible tube 22. A relatively wide packing gasket 23 is confined between a shoulder 24 formed within cap 9 and the lower end of neck 8 of the container. An inlet tube 25 is secured through cap 9 and extends upwardly within the container to within a short distance of the upper end thereof. This tube acts as a vent to permit air to flow into the upper portion of the container above the water thus obtaining a uniform flow or discharge of water from the container through tube 22 and avoiding splashing which is objectionable in filling the cells of storage batteries. When the container 7 has been emptied and it is desired to refill the same, the supporting frame 1, together with the container, is turned into inverted position so as to be supported upon what is normally the upper ring 2. In this connection it should be noted that ears 16 are positioned below the upper edge of ring

2 so that these ears and the bail 18 do not in any way interfere with supporting of the frame 1 and associated parts by ring 2. After the supporting structure and container 7 have been placed in position with neck 8 of the container directed upwardly, plug 11 is removed and a suitable quantity of distilled water is poured into the container through opening 10, after which the plug is replaced and the container and the supporting frame are turned into their normal operative positions. To prevent discharge of water from the container through tube 22 when the device is not in use, I provide a suitable spring clip 26 positioned adjacent the upper end of one of the strips 3. This clip receives the upper portion of tube 22 which extends above the upper end of container 7, and consequently above the water level within the container so as to prevent flow of water from the tube. Preferably, though not necessarily, I provide a suitable nozzle 27 inserted in the outer end of the tube, this nozzle being adapted for insertion through the openings commonly provided in a storage battery for filling the cells thereof. In using the device it is placed on a suitable supporting surface adjacent and above the battery to be filled, after which the nozzle 27 is inserted into the openings of the battery, successively, and the water permitted to flow through the tube 22 into the battery cells. The flow of water through the tube 22 is readily controlled by pressing the tube together, as will be understood. For convenience a spring clip 28 similar to but larger than clip 26 is carried by the other strip 3' and is adapted for reception of a suitable hydrometer, as indicated, the hydrometer being thus supported in position so as to be readily accessible for testing the electrolyte of the battery.

In Figure 6 I have illustrated a modified form of supporting frame. In this form I provide an upper clamping ring 29 which is connected by supporting strips 30 to a lower ring 31, the ends of which are overlapped and secured together by rivets 32 or in any other suitable manner. The rings 29 and 31 and the strips 30 are all formed integrally by cutting or stamping from a piece of sheet metal. This form of supporting frame is, in some respects, preferable to the form illustrated in Figures 1 to 5 in that the lower supporting ring 31 is integrally connected to the strips 30 at right angles thereto so that, in assembling the device there is no difficulty encountered in positioning this lower supporting ring relative to the supporting strips. The upper ring 29 is provided with terminal ears 33 having aligned openings for reception of a screw 34 upon which is secured a nut 35. The upper ring 29 is further provided with two openings disposed diametrically opposite

each other for reception of terminal elements 36 of a bail 37. In this form of supporting frame the container is securely clamped by ring 29 and extends a short distance above this ring.

What I claim is:

1. In a battery filler, a supporting frame, a container secured in said frame, a closure cap secured on the lower end of the container and provided with an outlet member, a flexible tube secured on said outlet member, the cap being provided with a filling opening to one side and independent of said outlet member, and a removable closure plug secured in said opening and effecting a fluid tight closure thereof.

2. In a battery filler, a supporting frame including an upper split clamping ring and a lower supporting ring, strips connecting said rings, a container extending through the clamping ring, means for contracting the clamping ring about the container for securing the same on the supporting frame, a closure cap removably secured on the lower end of the container, the supporting ring extending downwardly beyond said cap, the cap being provided with an outlet member, an air inlet tube secured through the cap and extending upwardly therefrom into the container, the cap being provided with a filling opening, and a closure plug removably secured in said opening and effecting a fluid tight closure therewith.

3. A battery filler comprising a bottle having filling and dispensing openings therein, a reversible supporting frame comprising a pair of spaced rings, one of said rings being attached to the lower end of said bottle and projecting therebeyond whereby the bottle may be supported in filling position and the other of said rings projecting beyond the upper end of the bottle whereby the latter may be supported in dispensing position.

4. A battery filler comprising a bottle having an opening at one end thereof, a frame for supporting said bottle in either filling or dispensing positions, a cap adapted for threaded engagement with the bottle and closing the opening thereof, a portion of said cap projecting beyond the bottle, a dispensing tube leading from one side of the cap and communicating within the projecting portion thereof, said cap having a concentrically arranged filling opening therein, a plug for said filling opening, and a vent tube extending within said bottle and supported by said cap at one side of said filling opening.

5. A portable battery filler comprising an invertible supporting frame, a container supported within said frame, supporting means on the opposed ends of said frame, and means on the container operable with arrangement of said frame in one position

to permit filling of the container and with inverting of the frame, to permit of dispensing of the container contents. therefor and means on the container operable with arrangement of said frame upon one end thereof to permit filling of the container and with inverting of the frame upon its opposite end, to permit of dispensing of the container contents. 10

5 6. A portable battery filler comprising an invertible supporting frame, a container supported within said frame, the opposed ends of said frame projecting beyond the container for providing supporting means

In testimony whereof I affix my signature.
JOHN TAYLOR.