Sept. 22, 1953 W. EBBS ET AL 2,652,849

SIPHON RETAINER

Filed Jan. 25, 1949

Fig. 1.

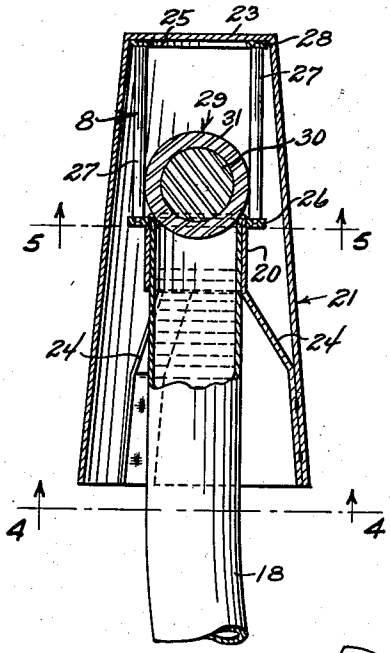



Fig. 2.

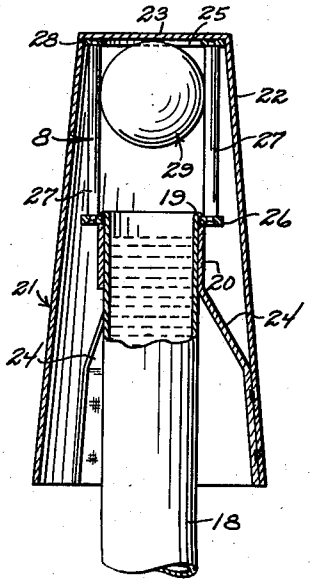



Fig. 3.

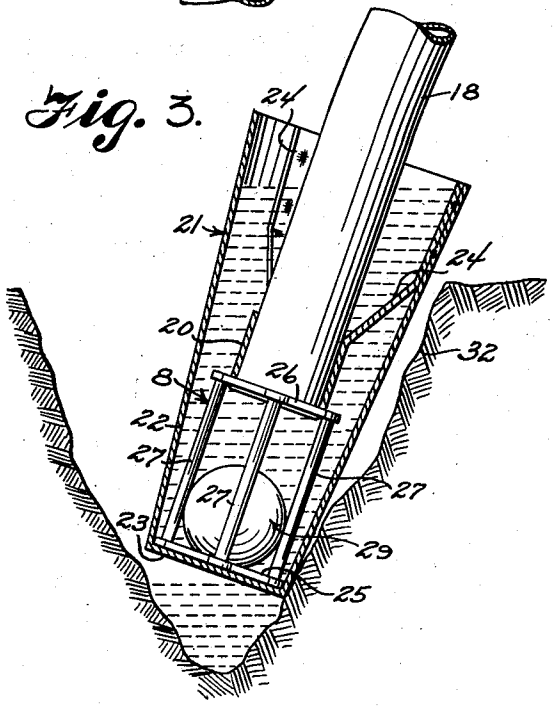



Fig. 4.

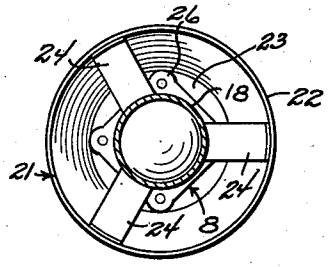
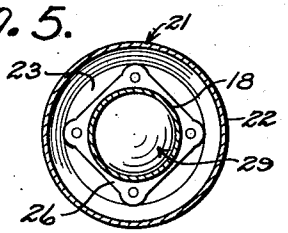



Fig. 5.




INVENTORS
William Ebbs
J. L. Harden
BY Victor J. Evans & Co.

ATTORNEYS

Patented Sept. 22, 1953

2,652,849

# UNITED STATES PATENT OFFICE

2,652,849

## SIPHON RETAINER

William Ebbs and J. L. Harden, Plainview, Tex.

Application January 25, 1949, Serial No. 72,607

3 Claims. (Cl. 137—147)

1

This invention relates to a device for use in siphoning water from a feeder trench to an irrigation trench.

The object of the invention is to provide a device for use in creating a vacuum in an end of a tube whereby water, or other fluid, will be siphoned, or initially started on its path through the tube.

Another object of the invention is to provide a device for attachment to an end of a tube being used for siphoning liquid from a first body of liquid into a second body of liquid, wherein the device will insure that the liquid continues to flow through the tube even though the level of fluid in the second body may fall below the corresponding end of the tube.

A further object of the invention is to provide a siphon retainer which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings forming a part of this application, and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational view of a siphon retainer attached to a tube.

Figure 2 is a view similar to Figure 1, but showing the position of the spherical body moved away from the tube for initiating the flow of water therethrough.

Figure 3 is a view showing the device of the present invention being used for retaining a siphon or vacuum.

Figure 4 is a sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a sectional view taken on the line 5—5 of Figure 1.

In the drawings, there is shown an open ended siphon tube 18 provided with an outwardly flared end 19. Arranged in embracing relation about the tube 18 and secured thereto is a sleeve 20, and arranged in spaced relation about the tube 18 is an open topped cup 21. The cup 21 includes a tapered side wall 22, and a flat end wall 23. A plurality of spaced bent straps 24 each has one end secured to the sleeve 20 and the other end secured, as by welding, to the cup 21. Interposed between the open end of the tube 18 and the end wall 23 is a cage 8. The cage 8 includes a first bracket 25 secured to the end wall 23, and a second bracket 26 spaced therefrom and secured to the sleeve 20. A plurality of spaced parallel bars 27 extend between the brackets 25 and 26 and are secured thereto, as by rivets 28. Loosely mounted in the cage 8 is a spherical body 29 fabricated of a hard rubber core 30 and a soft rubber covering 31.

In using the device of the present invention for initiating the flow of water through the siphon tube, the user grasps the cup 21 and rapidly and continuously shakes the entire unit. This

2

causes the resilient ball or body 29 to move into and out of engagement with the open end of the tube 18 to create a vacuum in the siphon tube and start the flow of fluid therethrough.

From the foregoing, it is apparent that a siphoning device has been provided which is especially suitable for initiating the flow of water on its path through a tube. By rapidly reciprocating the cup, the column of water will be drawn through the tube before the column has a chance to run back into the feeder trench. This suction effect comes about in the same manner if gasoline or any other liquid is sucked from a tank through a hose or line.

We claim:

1. In a siphon retainer, the combination with an open-ended tube, of an annular sleeve embracing said tube and secured thereto, an open-topped cup arranged in spaced relation about said tube and connected to said sleeve, a cage interposed between the bottom of said cup and said sleeve and secured thereto, and a spherical body arranged in said cage and mounted for movement into and out of engagement with the open end of said tube.

2. In a siphon retainer, the combination with an open-ended tube, of an annular sleeve embracing said tube and secured thereto an open-topped cup arranged in spaced relation about said tube and connected to said sleeve, a cage interposed between the bottom of said cup and said sleeve and secured thereto, and a spherical body arranged in said cage and mounted for movement into and out of engagement with the open end of said tube, said spherical body including a spherical solid rubber core, and an outer soft rubber cover.

3. In a siphon retainer, the combination with an open-ended tube, of an annular sleeve embracing said tube and secured thereto, an open-topped cup arranged in spaced relation about said tube and connected to said sleeve, a cage interposed between the bottom of said cup and said sleeve and secured thereto, and a spherical body arranged in said cage and mounted for movement into and out of engagement with the open end of said tube, said cage embodying a first bracket abutting the bottom of said cup and secured to the latter, a second bracket arranged in embracing relation with respect to said sleeve and secured to the latter, and a plurality of spaced, parallel bars extending between said first and second brackets and secured thereto.

WILLIAM EBBS.
J. L. HARDEN.

**References Cited** in the file of this patent

UNITED STATES PATENTS

| Number | Name | Date |
|---|---|---|
| 103,564 | Catlin | May 31, 1870 |
| 1,524,739 | Lester | Feb. 3, 1925 |