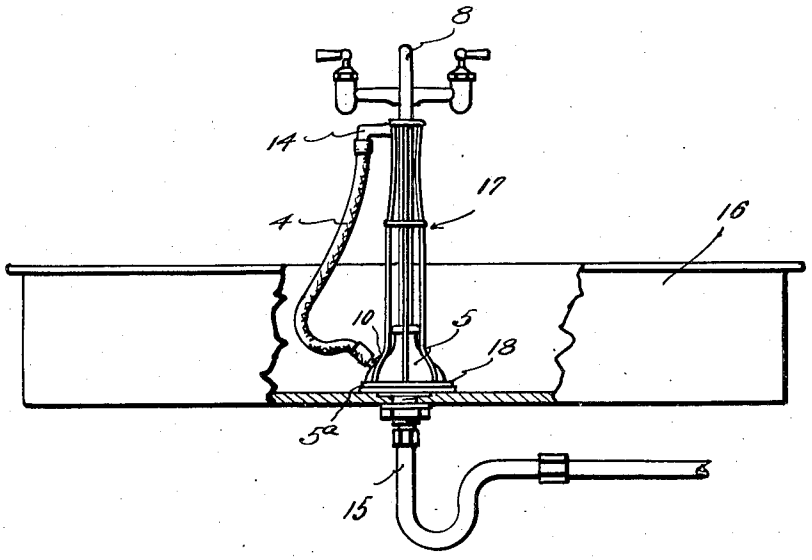
July 4, 1939. J. G. ELMORE 2,164,580

HYDRAULIC FORCE PUMP

Filed Nov. 2, 1938 2 Sheets-Sheet 1

Fig. 1



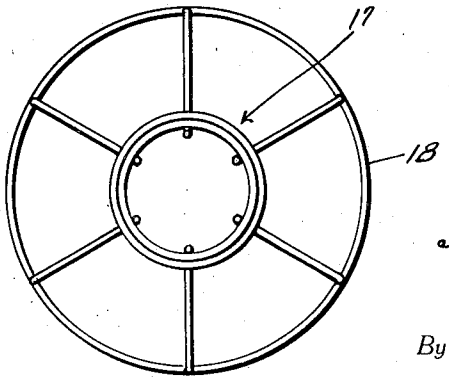


Fig. 2

Inventor

Jasper G. Elmore

By Clarence O'Brien and Hyman Berman

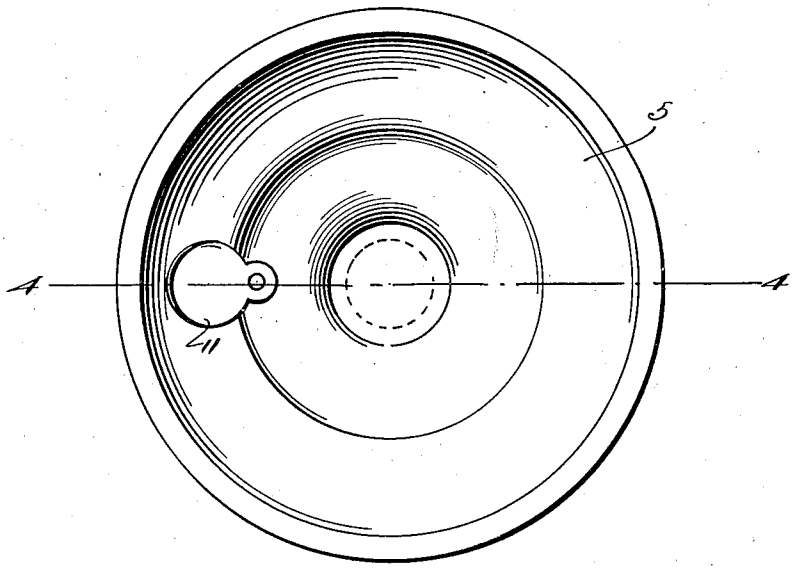
Attorneys

July 4, 1939. J. G. ELMORE 2,164,580

HYDRAULIC FORCE PUMP

Filed Nov. 2, 1938 2 Sheets-Sheet 2

Fig. 3.



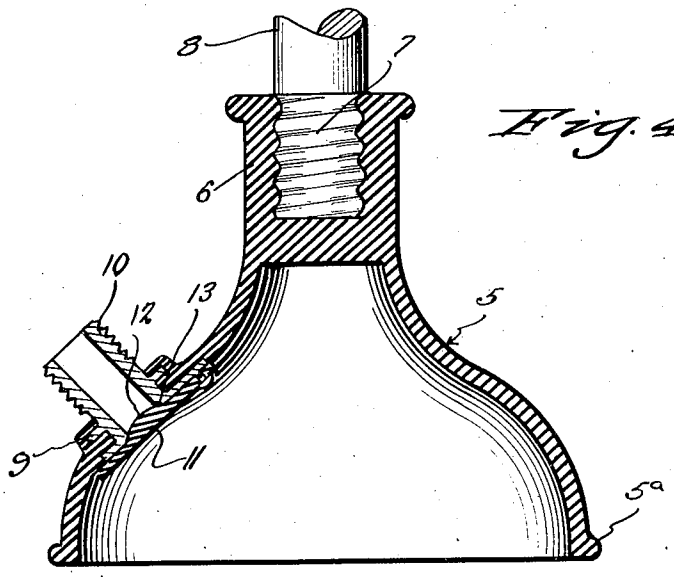


Fig. 4.

Inventor

Jasper G. Elmore

By Clarence O'Brien and Hyman Berman

Attorneys

Patented July 4, 1939 2,164,580

UNITED STATES PATENT OFFICE

2,164,580

HYDRAULIC FORCE PUMP

Jasper G. Elmore, Macon, Ga.

Application November 2, 1938, Serial No. 238,485

1 Claim. (Cl. 4—256)

This invention relates to flushing devices for drains and more particularly to devices of this character especially adapted for use in connection with sinks, basins, tubs, toilets, and the like and which will utilize water pressure, or which may be manipulated for use as a force pump or as a suction pump for forcing a passage through the drain pipe; and the present invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings wherein:—

Figure 1 is an elevational view illustrating the application of the invention.

Figure 2 is a top plan view of a frame forming part of the invention.

Figure 3 is a bottom plan view of the device, and

Figure 4 is a transverse sectional view taken substantially on the line 4—4 of Figure 3.

Referring more in detail to the drawings it will be seen that, in the preferred embodiment thereof, the device comprises an elastic cup 5 having an integral threaded socket 6 which receives the threaded end 7 of a handle 8 of wood or other suitable material.

The cup 5 has molded or otherwise substantially permanently secured to the wall thereof, as indicated generally at 9, a nipple 10 to which one end of a hose 4 may be readily coupled.

For the inner end of the nipple 10 there is provided a check valve 11 that normally acts to close the inner end of the nipple 10.

In the present instance the check valve 11 is in the form of a rubber disk suitably anchored to the wall of the cup 5 or to the inner flange of the nipple 10 and provided with a formation 12 adapted to engage a seat 13 provided therefor at the inner end of the nipple 10. Thus the valve 11 will serve to effectively close the inner end of the nipple and prevent backflow of water through the nipple and the hose 11.

The hose 4, as shown in Figure 1 is also adapted to have an end thereof connected to the water faucet 14 as shown in Figure 1 to the end that water may be supplied from the faucet 14 through the hose 4 into the cup 5 to flush the drain pipe 15 of the sink, basin, or similar fixture shown generally in Figure 1 and indicated by the reference numeral 16.

For maintaining the beaded open end of the cup 5 in contact with the bottom of the sink or fixture 16 with the cup in direct alignment with the drain there is provided a frame 17.

The frame 17 may be of any suitable construction, but as shown is preferably of skeleton form made of wire rods and rings as shown and embodying a substantially cylindrical portion which accommodates the handle 8 and a flared bottom portion which conformably accommodates the cup 5 with the base ring 18 resting on the bead 5a of the cup as shown in Figure 1.

Obviously the weight of the frame 17 will serve to maintain the beaded edge of the cup in flat contact with the bottom of the sink so that the water supplied to the cup 5 from the faucet 14 through the hose 4 will be directed into the drain, and the pressure of the water thus utilized to force a passage through the drain pipe.

Obviously when desired the cup may be operated by grasping the handle 8 thereof in a manner to impart thereto a series of pumping movements for effecting, if desired, by compression of the cup an additional pressure to drive the water therein into the drain; under which conditions the valve 11 serves to prevent the water being forced back through the nipple 10 and the hose 4.

It will also be apparent to those skilled in the art that the device may be used after the manner of a suction pump, or in other words, in the ordinary manner, without water pressure, and in a manner to cause the air within the drain pipe to pulsate and thus assist in the removal of obstructions.

It is thought that a clear understanding of the construction, utility and advantages of an invention of this character will be had without a more detailed description.

Having thus described the invention what is claimed as new is:

In a device of the character described, a handle provided on one end thereof with a cup member formed of elastic material, closed at one end and open at the other, and provided at said open end with an external bead, a nipple mounted on the wall of said cup member and having an end thereof extending through said wall, a flap-valve at the inner end of said nipple for normally closing said end of the nipple, and a skeleton frame embracing said handle and cup, said frame having a substantially cylindrical portion accommodating the handle, and a substantially flared portion accommodating said cup, and said flared portion at the end of the frame resting on said bead.

JASPER G. ELMORE.