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W. F. EGGLESTON
CLEANER FOR DRAIN PIPES

2,229,375

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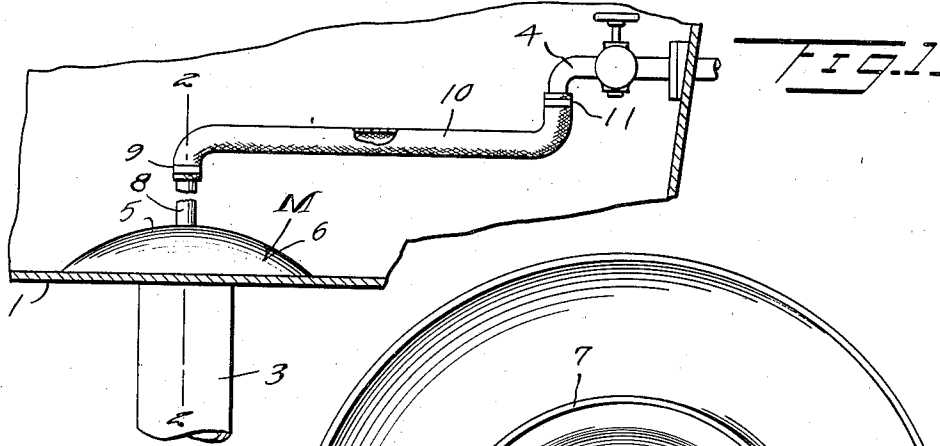


FIG. 1.

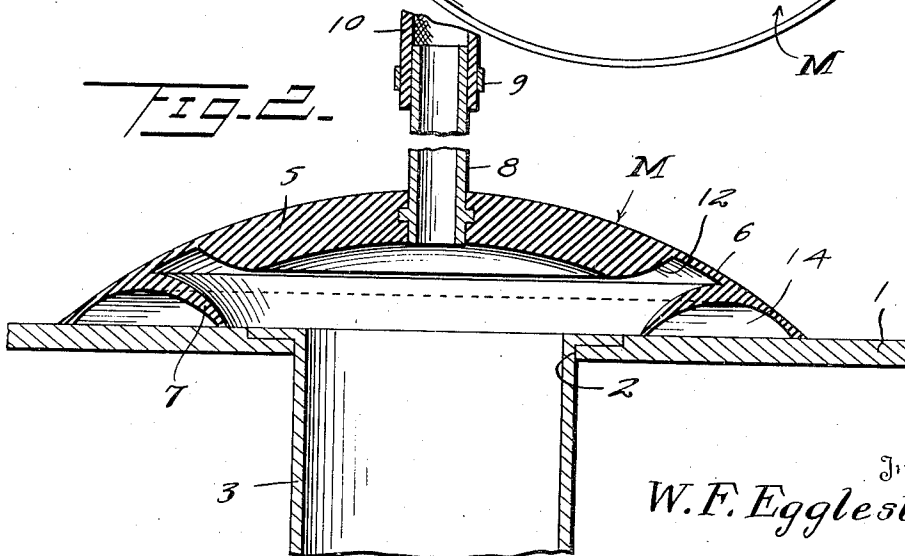
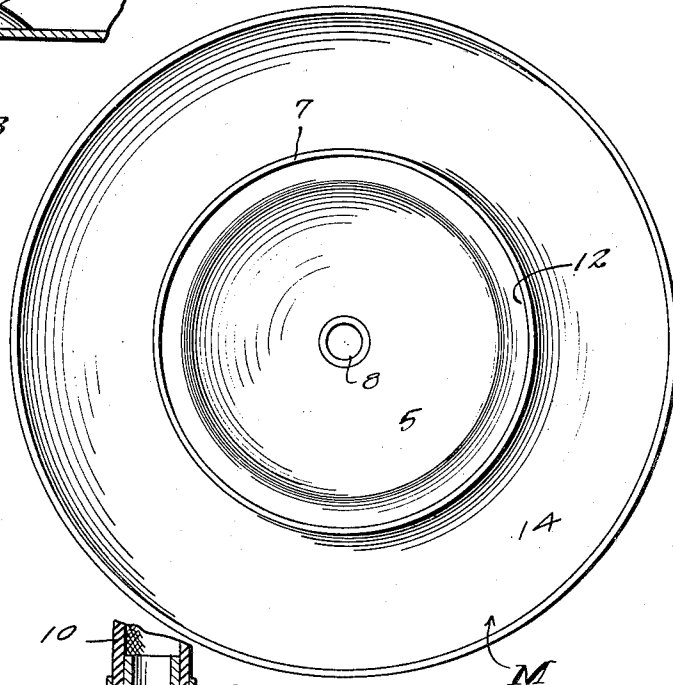


FIG. 2.

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CLEANER FOR DRAIN PIPES

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1 Claim. (Cl. 4—256)

This invention relates to a cleaner for a drain pipe, and it is an object of the invention to provide a device of this kind for flushing partially stopped up drains by water pressure directly from the tap and wherein the device includes a chambered member to be positioned over the drain outlet and wherein said member is provided at its marginal portion with means for maintaining said member in effective working position.

It is also an object of the invention to provide a device of this kind comprising a chambered member for disposal over a drain outlet and wherein the marginal portion of said member is formed to provide a vacuum chamber affording means whereby said member is effectively maintained in working position, said vacuum chamber being so constructed whereby the vacuum is not broken by the force of the water being delivered by the device into the drain to be cleaned and wherein said vacuum chamber is so formed to permit the pressure of such water to bear against a wall of the vacuum chamber to increase the efficiency of the vacuum chamber in maintaining the member in working position.

The invention consists in the details of construction and in the combination and arrangement of the several parts of my improved cleaner for a drain pipe whereby certain important advantages are attained and the device rendered simpler, less expensive and otherwise more convenient and advantageous for use, as will be hereinafter more fully set forth.

The novel features of my invention will hereinafter be definitely claimed.

In order that my invention may be the better understood, I will now proceed to describe the same with reference to the accompanying drawing, wherein:

Figure 1 is a fragmentary view in elevation illustrating a drain cleaning device constructed in accordance with an embodiment of my invention and in working position, the associated portion of a basin or the like being shown in section;

Figure 2 is an enlarged fragmentary sectional view taken substantially on the line 2—2 of Figure 1;

Figure 3 is an enlarged view in bottom plan of the chambered member as herein comprised.

As disclosed in the accompanying drawing, 1 denotes the bottom wall of a basin or kindred receptacle having a discharge opening 2 from which leads a drain pipe 3. Also associated with the basin or receptacle 1 is a tap or service cock

4. The foregoing form no particular part of the present invention and may be of any character preferred.

My improved cleaning device as illustrated in the accompanying drawing comprises a concavo convex member M preferably of rubber.

This member M has the central portion 5 of its wall of a material thickness with said increased thickness disposed inwardly of the chamber afforded by the concavo convex member. The wall of the member M surrounding this thickened portion 5 constitutes a surrounding skirt 6 of a thickness materially less than the thickness of the central portion 5 and, as particularly illustrated in Figure 2, the outer marginal edge of this skirt 6 has direct and close contact with the upper surface of the bottom wall 1 of the receptacle when the member M is in applied or working position. It is also to be noted in Figure 2 that the member M at its open bottom face is of a diameter considerably in excess of the discharge opening 2 so that the inwardly and downwardly disposed internal skirt 7 may also have close contact with the upper surface of the bottom wall 1 in surrounding relation with respect to the discharge opening 2. This skirt 7, as herein disclosed, is integrally formed with the skirt 6 at substantially the center thereof. This skirt 7 coacts with the free marginal portion of the skirt 6 to provide a vacuum chamber and the outer or free marginal edge of the skirt 7 is substantially coplanar with the outer or free marginal edge of the skirt 6.

The member M at the axial center thereof has rigidly secured thereto an outstanding inlet fitting 8 which discharges directly within the chamber of the member M. The outer end portion of this fitting 8 has coupled thereto, as at 9, in any manner preferred an end portion of a flexible hose or conduit 10 which is adapted to be detachably coupled, as at 11 in Figure 1, with the tap or service cock 4.

As illustrated in Figure 1, it is to be noted that the thickened portion 5 of the wall of the member M terminates inwardly of or spaced from the internal skirt 7 resulting in a continuous supplemental chamber 12 at the inner portion of the skirt 7.

In applying the device the member M is first disposed over the discharge opening 2 or the entrance to the drain pipe 3 and pressed down upon the bottom wall 1 of the receptacle to expel air from the vacuum chamber 4 afforded by the outer portion of the skirt 6 and the internal skirt 7.

This action results in the marginal portion of the member M tightly clinging to the upper surface of the bottom 1.

After this application of the member M the flexible hose or conduit 10 is coupled to the tap or service cock 4 and the water flow from said tap or cock opened. A water stream under pressure will be delivered into the pipe 3 centrally of the vacuum chamber 14 and without breaking the vacuum. The pressure of the water as delivered within the pipe 3 serves to eliminate the obstruction within the pipe 3.

The pressure of the water before the obstruction is eliminated will back up into the chamber of the member M and into the annular chamber 12 where such water will bear against the internal skirt 7 and thereby exert additional force to maintain the marginal portion of the member M in close contact with the wall 1 to maintain the vacuum within the chamber 14.

The efficiency of the device as herein disclosed is materially increased by having the member M circular in form and it is to be pointed out that the structure of the member M is such as to result in the elimination of any mechanical means for holding the member in proper working position, and that by having the member M of a relatively large diameter it may be employed with equal facility in connection with drain openings 2 of varying sizes.

From the foregoing description it is thought to be obvious that a cleaner for a drain pipe

constructed in accordance with my invention is particularly well adapted for use by reason of the convenience and facility with which it may be assembled and operated, and it will also be obvious that my invention is susceptible of some change and modification without departing from the principles and spirit thereof and for this reason I do not wish to be understood as limiting myself to the precise arrangement and formation of the several parts herein shown in carrying out my invention in practice except as hereinafter claimed.

I claim:

In a drain pipe flushing device comprising a flexible concavo-convex member having an integrally formed annular internal skirt disposed downwardly, its free marginal edge being in spaced relation to the free marginal edge of the flushing member, thus forming an annular vacuum chamber adapted to hold the flushing member to a surface surrounding a drain pipe, the central part of the flushing member having a relatively thick inwardly disposed portion formed integrally therewith and terminating above and inwardly from the free marginal edge of the skirt, thus forming a confined annular pressure chamber immediately above the vacuum chamber, and a flexible conduit for connection to a service tap and the central part of the flushing member.

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