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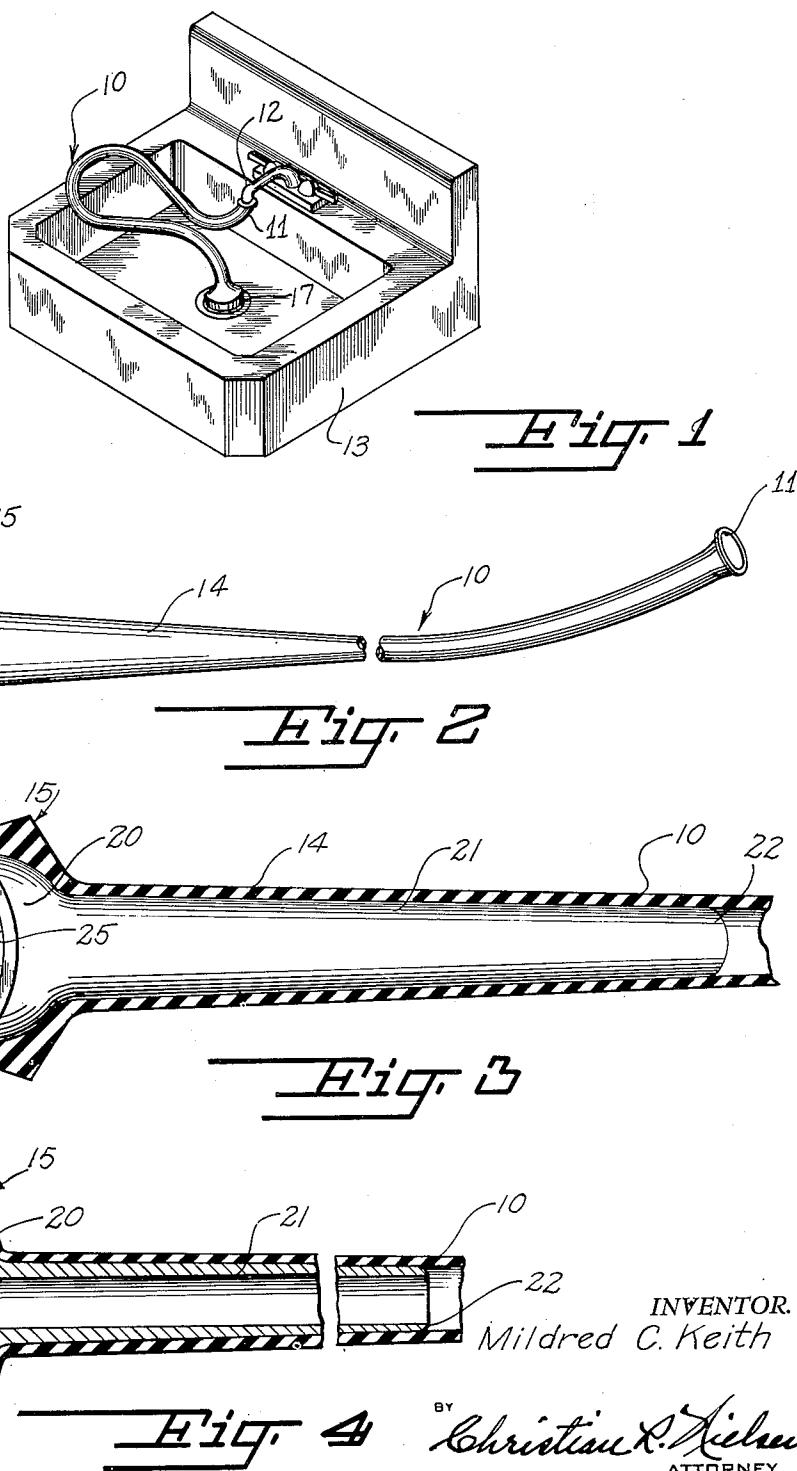
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DRAIN FLUSHER AND CLEANING DEVICE

Filed Feb. 20, 1950

2 SHEETS—SHEET 1



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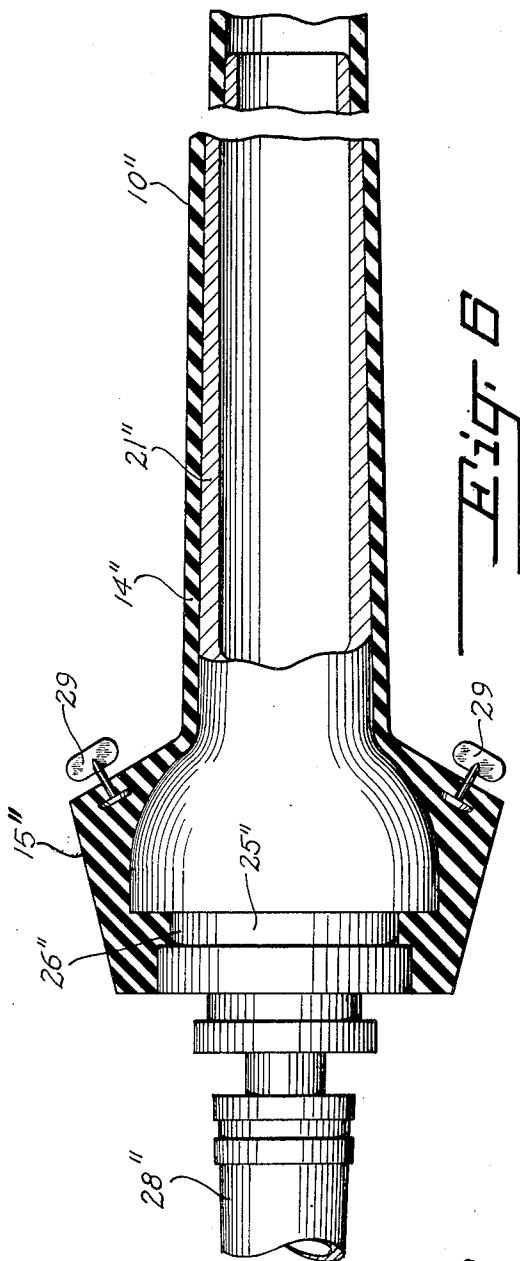
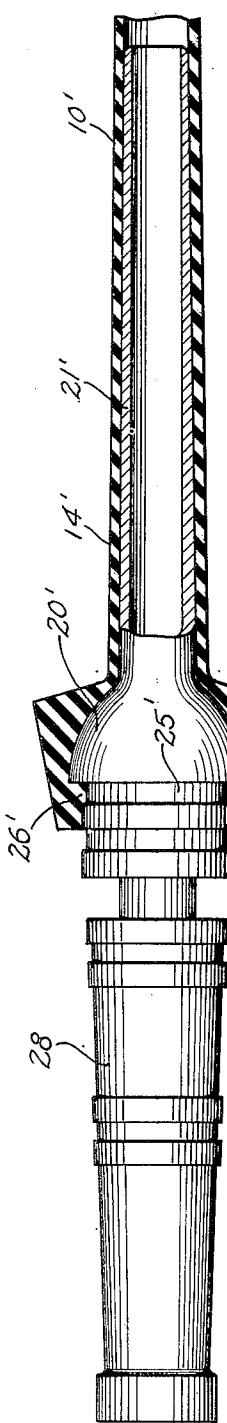
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2 SHEETS—SHEET 2



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## UNITED STATES PATENT OFFICE

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## DRAIN FLUSHER AND CLEANING DEVICE

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1 Claim. (Cl. 4—256)

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This invention relates to an apparatus for flushing drains and which may also be employed for various cleaning purposes.

An object of the invention is the provision of an apparatus for flushing drains in which a rubber hose has one end received by the usual faucet of a sink or other similar instrumentality with the other end specially constructed to fit snugly into the drain opening of the sink, the last mentioned end of the tube being progressively expanded and provided with a hollow head that is received by the drain opening, a tapered metal tube fitted snugly into the expanded end of the rubber tube with the inner open end of the metal tube having the free edge turned in to prevent injury to the associated portion of the rubber tube, the water issuing from the outer end of the metal tube being divided into a plurality of fine streams by a perforated plate, provision being made for attaching a rubber ring to the outer end of the metal tube when the apparatus is used in washing hair, dishes, automobiles or other articles to prevent the metal of the second mentioned cup-shaped member from coming into contact with such articles.

A further object of the invention is the provision of an apparatus for flushing drains of various types in which a rubber hose forms a sealed connection between the spigot and the outer end of a drain passage, one end of the hose being expanded progressively and terminating in a cup-shaped head which fits snugly into the drain passage, a metal cup-shaped member having a hollow depending tapered tube received frictionally by the complementally expanded end of the rubber hose with the metal cup-shaped member nested frictionally within the cup-shaped head and having a portion extending beyond the head and received by the outer end of the drain passage, the cup-shaped member and the head cooperating to seal the expanded end of the hose to the drain passage so that when water is forced through a perforated plate in the cup-shaped member, the pressure of the water will cause flushing of the drain pipe.

This invention is best understood from a consideration of the following detailed description in connection with the accompanying drawings forming part of the specification, nevertheless, it must be borne in mind that the invention is not confined to the disclosure, but is susceptible of such changes and modifications as shall define no material departure from the salient features of the invention as expressed in the appended claim.

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In the drawings:

Figure 1 is a view in perspective of a basin showing my drain flusher applied between a faucet and the open upper end of a drain.

5 Figure 2 is a view in perspective of a specially constructed rubber hose forming the flushing apparatus.

Figure 3 is an enlarged fragmentary sectional view in perspective of the flushing apparatus.

10 Figure 4 is an enlarged longitudinal section of the flushing apparatus showing an attachment for use when washing the hair, dishes or an automobile.

Figure 5 is a longitudinal section of another 15 form of flushing apparatus having provision for attaching thereto the usual sprinkling nozzle, and

Figure 6 is a longitudinal section of a form 20 of the flushing apparatus for use in cleaning sewers or manholes.

Referring more particularly to Figures 1 to 4 inclusive, 10 designates a rubber tubing or hose which has a small expanded end 11 adapted to be forced onto the end of a mixing faucet 12 of a 25 sink or basin 13. The faucet in this case may be swingably mounted and will supply hot or cold water depending upon the selection of a pair of valves. The end 11 of the tube may be applied frictionally to the end of an individual faucet when two are employed.

The other end 14 of the rubber tubing is expanded progressively and terminates in a cup-shaped head 15 having the outer wall tapered as shown at 16. This tapered head fits snugly into the upper open end of the usual drain pipe leading from the sink or basin to the sewer pipe. However, the sink or basin has a discharge opening in the bottom in which is sealed the upper flanged end of a metal pipe forming a receptacle 17 for the usual rubber or metal stopper. The head 15 has a configuration substantially identical with that of the usual rubber stopper so that said head will fit snugly and frictionally in the receptacle.

45 A metal cup-shaped member 20 has a tapered metal tube 21 extending from the inner end thereof and formed integrally therewith. The tapering of the tube 21 is identical with the taper of the expanded portion 14 of the hose 10. The periphery of the inner reduced end 22 of the tube is swaged over to eliminate a sharp end which may cause injury to the hose. The outer end of the cup-shaped member 20 extends beyond the outer periphery of the head 15 so that a portion 50 23 of said member will project into the receptacle

17. A perforated plate 24 is seated and retained within the member 20 inwardly of the portion 23.

The member 20 is formed with a peripheral groove 25 in the exterior surface thereof, inwardly of the portion 23 and the head 15 is formed with an interior annular rib 26 which will seat in the groove 25 when the tube 21 and member 20 are forced into the expanded portion 14 and the head 15 of the hose so that the tube and member will be firmly held in place in the 10 hose.

During operation of the drain flusher just described, the smaller flared end 11 of the hose is attached to a spigot or faucet 12. The head 15 is forced into the receptacle 17 of the sink and the water is turned on with sufficient force to flush the drain. If desired, the head 15 may be used as a stopper.

In Figure 4 there is illustrated an attachment which may be applied readily to the portion 23 of the metal cup-shaped member 20. This attachment is in the form of a thin walled rubber sleeve 27 which is forced over the outer wall of the portion 23. The sleeve 27 is employed when washing the hair, dishes and automobiles, and the attachment may also be used for massaging the scalp and body. The free projecting end of the sleeve is flexible and prevents the metal parts of the device from coming into contact with articles being washed while providing a scrubbing action. The tapered tube 21 fits air and steam tight within the expanded end 15 of the hose 10.

Figure 5 illustrates a form of the device which provides an integral formation of the metal cup-shaped member 20' and a well known form of nozzle 28 as employed in connection with a garden hose. The tapering tube 21' is fitted airtight in the tapering end 14' of the hose 10' and in use, the hose 10' would be of a length to serve the purposes intended, such as a fire hose or for 40 ordinary sprinkling purposes.

In Figure 6 there is shown a more rigid form of apparatus for flushing larger drains, such as sewers and manholes. This form embodies a progressively expanding or tapered tube 21'' as 45 in the previous forms, but of larger proportions, the corresponding parts being identified by dual prime marks. The present form differs over the form shown in Figure 5, in that the head 15'' is provided with headed pins 29 firmly fixed in the 50

top wall of the head and are adapted to be engaged by a suitable tool for withdrawing the head 15'' from a manhole, since the head is tightly wedged into the manhole.

In all of the forms shown and described, it will be noted that the rubber hose and the tapered tube and associated head are secured together in a steam and water tight relation without the use of threaded connections, and it will also be noted that the tubes 21, 21' and 21'' are of such lengths that they may be employed as a handle in manipulating the device.

I claim:

15 A flushing and cleaning apparatus comprising a rubber hose having one end adapted to fit on the spout of a faucet, the other end of the hose being expanded progressively to form a tapered portion, a cup-shaped head connected to the larger end of the tapered portion, said head being 20 formed of rubber and having an interior annular rib, a metal cup-shaped member fitted into the head and having a peripheral groove for receiving said rib, said metal cup-shaped member having a reduced portion projecting beyond the base of 25 the head, a flexible cleaning element mounted upon the exterior surface of the projecting portion of the metal cup-shaped member, and said metal cup-shaped member having a tapered tube disposed within the tapered portion of the hose 30 being of substantial length to provide a rigid handle portion.

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