April 6, 1954 V. SCHAEFER 2,673,986

ATTACHMENT FOR VACUUM CLEANERS

Filed June 24, 1949

Fig. 1.

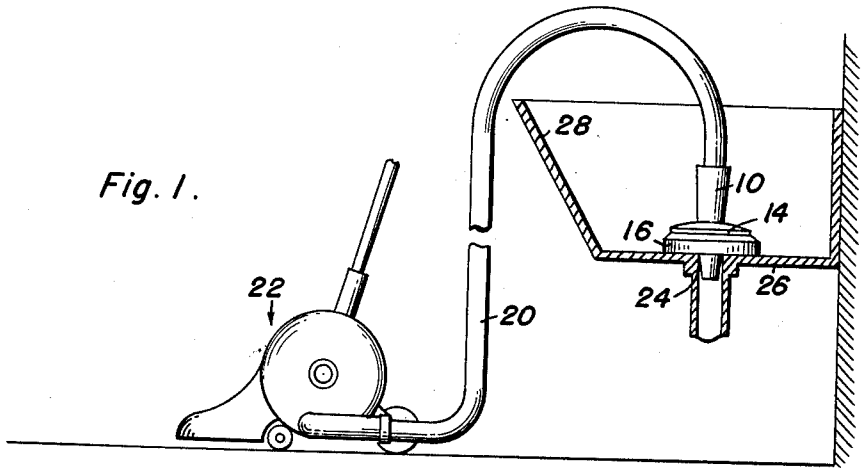


Fig. 2.

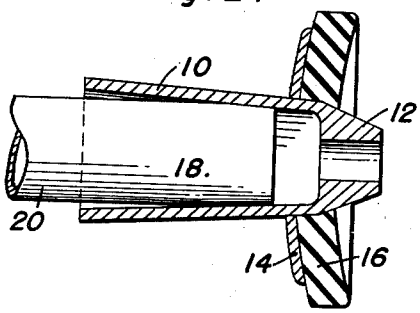


Fig. 3.

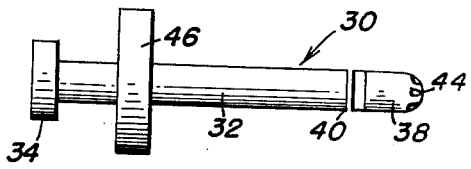


Fig. 4.

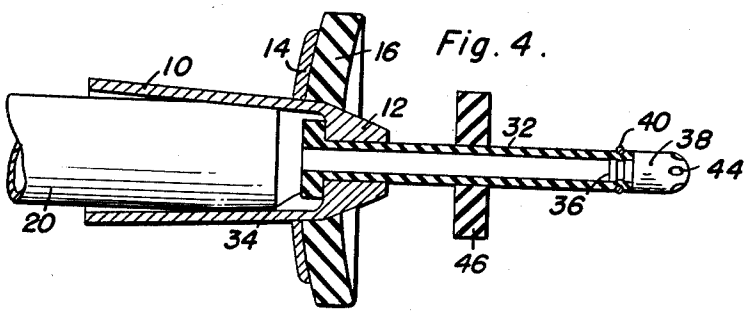
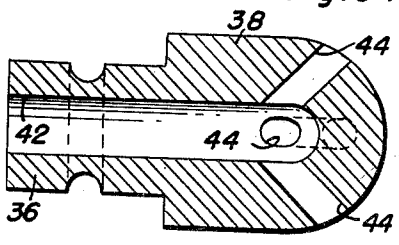


Fig. 5.



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ATTACHMENT FOR VACUUM CLEANERS

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4 Claims. (Cl. 4—255)

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This invention relates to new and useful improvements in drain cleaning devices and the primary object of the present invention is to provide a drain cleaner that is so constructed as to facilitate the same to be utilized with a vacuum cleaner.

Another important object of the present invention is to provide a drain cleaning attachment for the blower hose of a vacuum cleaner for cleaning all kinds of pipes with air, namely, drains which clog up very often.

A further object of the present invention is to provide a drain cleaner including a member that is extended into a drain and a sealing disk carried by the member for closing the opening to the drain so that an air pressure can be impelled through the member for cleaning the drain in a convenient manner.

A still further aim of the present invention is to provide a drain cleaning attachment for the blower end of a vacuum cleaner that is simple and practical in construction, small and compact in structure, neat and attractive in appearance, relatively inexpensive to manufacture, and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a fragmentary side elevational view showing the present invention applied to a drain depending from a sink;

Figure 2 is a longitudinal vertical sectional view of the present drain cleaner applied to one end of a vacuum hose;

Figure 3 is a side elevational view of the conduit that is used when the drain pipes are clogged to a considerable degree;

Figure 4 is a longitudinal vertical sectional view of the present drain cleaner and with the conduit applied to the nipple of the socket member; and

Figure 5 is a longitudinal vertical sectional view of the spray head that is used in conjunction with the present invention.

Referring now to the drawings in detail, wherein, for the purpose of illustration, there is disclosed a preferred embodiment of the present invention, the numeral 10 represents a substantially frusto-conical socket member having a nipple 12 integrally formed with its minor end. A retainer ring 14 embraces and is suitably secured

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to the outer periphery of the member 10 and bears against the convexed face of a concavo-convex sealing disk 16 that is carried by the nipple 12 and the minor end of the socket member 10.

In practical use of the present invention, one end 18 of a hose 20 is fitted in the socket member 10 and the other end of the hose 20 is applied to the blower end of a suitable vacuum cleaner 22.

The tapered nipple 12 is then placed within the drain or inlet end of the pipe 24 and the resilient sealing disk 16 is pressed against the bottom wall 26 of the sink 28. By then starting the vacuum cleaner 22, air will be blown or directed through the hose 20 and into the drain 24.

Should the above construction fail to properly clean the drain, it will be necessary to employ an adapter 30 as shown best in Figures 3 and 4 of the drawings. The adapter 30 includes an elongated flexible tube or conduit 32 having a stop ring or flange 34 at its rear end.

The forward end of the conduit 32 receives the externally grooved shank portion 36 of a spray head 38. A retaining band or ring 40 embracing the outer periphery of the conduit 32 forces a portion of the conduit 32 into the external groove or grooves in the shank portion 36. The spray head 38 is provided with a longitudinally extending blind bore 42 whose forward end communicates with a group of circumferentially spaced forwardly and outwardly inclined delivery passages 44 formed in the spray head 38.

A resilient, preferably sponge rubber, sealing disk 46 is slidably received on the conduit 32 and due to its resilient characteristics is yieldingly retained upon the conduit 32.

In practical use of the adapter 30 and when the socket member 10 and nipple 12 are insufficient to properly clean a clogged drain, the conduit 32 is slipped into the nipple 12 so that the stop 34 bears against the inner face of the nipple 12. The sealing disk 46 is placed at a selected point on the conduit 32 and the spray head 38 is then inserted into the drain pipe with the sealing disk 46 bearing against the bottom wall of the sink or the wall supporting the drain pipe. The vacuum cleaner is then started and the conduit 32 is raised very slowly to loosen and blow the sludge downward because the nozzle holes or delivery passages 44 incline downwardly and forwardly.

In view of the foregoing description taken in conjunction with the accompanying drawings, it is believed that a clear understanding of the device will be quite apparent to those skilled in this

art. A more detailed description is accordingly deemed unnecessary.

It is to be understood, however, that even though there is herein shown and described a preferred embodiment of the invention, the same is susceptible to certain changes fully comprehended by the spirit of the invention as herein described and within the scope of the appended claims.

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

1. In combination with a vacuum cleaner having a hose attached to the blower side of the vacuum cleaner, of a drain cleaner comprising a socket member mounted on the hose and having a nipple at one end, a flexible conduit slidably carried by and movable into and out of the nipple, and a sealing disk mounted on the conduit and a spray head detachably secured to the conduit, said head having a longitudinally extending blind bore therein and a group of delivery passages provided in said spray head and inclining outwardly from the blind bore.

2. An attachment for vacuum cleaners comprising a socket member having an end wall provided with a central aperture, said member including an inner wall tapering toward said end wall to permit the end of a vacuum cleaner hose to be frictionally engaged within said socket member, a resilient tube received in said aperture and having a flange at one end positioned in the socket member and engaging said end wall, a spray nozzle removably secured to the other end of said tube, and a centrally apertured sealing disk frictionally retained on said tube and adapted to seal a drain opening into which the nozzle and tube are inserted.

3. An attachment for vacuum cleaners comprising a socket member having an end wall provided with a central aperture, said member including an inner wall tapering toward said end wall to permit the end of a vacuum cleaner hose to be frictionally engaged within said socket member, a resilient tube received in said aperture and having a flange at one end positioned in the socket member and engaging said end wall, a spray nozzle having a reduced cylindrical shank received in the other end of said tube, said shank having a peripheral groove, a holding ring embracing the end of said tube in which said shank is received and forcing a portion of the tube into the groove, and a rubber disk having a central opening yieldingly receiving the tube.

4. An attachment for vacuum cleaners comprising a socket member having an end wall provided with a central aperture, said member including an inner wall tapering toward said end wall to permit the end of a vacuum cleaner hose to be frictionally engaged within said socket member, a resilient tube received in said aperture and having a flange at one end positioned in the socket member and engaging said end wall, a spray nozzle removably secured to the other end of said tube, and a centrally apertured sealing disk frictionally retained on said tube and adapted to seal a drain opening into which the nozzle and tube are inserted, said nozzle including a central blind bore and a plurality of inclined discharge ports extending from the bore.

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