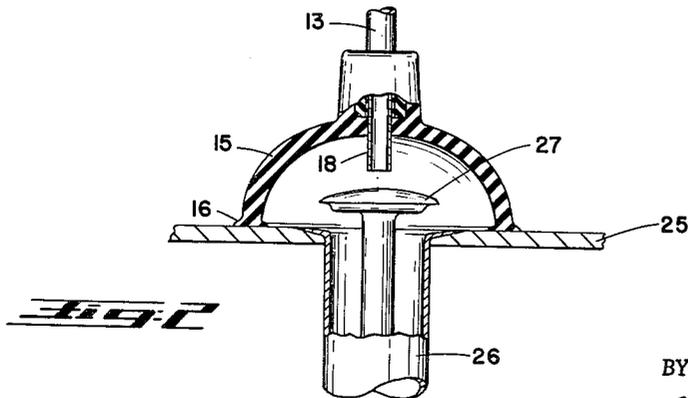
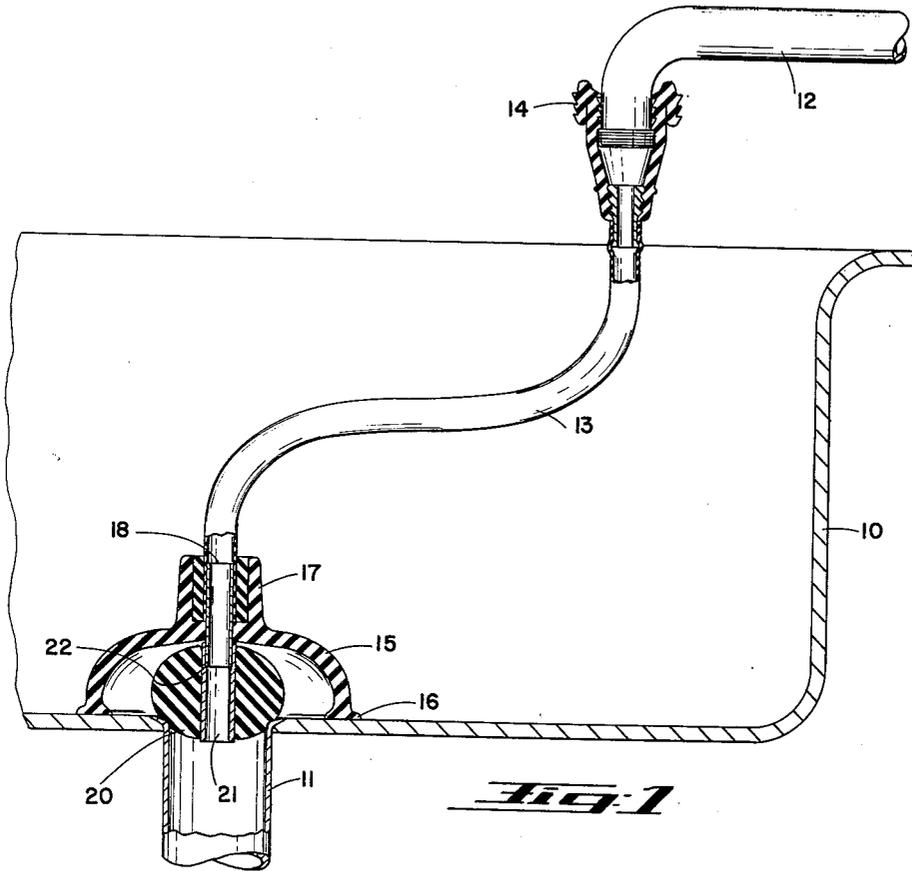


March 6, 1962

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DRAIN FLUSHING DEVICE
Filed March 14, 1960

3,023,428



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3,023,428

DRAIN FLUSHING DEVICE

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Filed Mar. 14, 1960, Ser. No. 14,877
1 Claim. (Cl. 4-256)

This invention relates to a device for applying water pressure to a stopped drain in a sink or wash basin to flush out the drain and relieve the stoppage.

Devices heretofore proposed for this purpose have generally been of two different types. In one type a free end of a water hose is equipped with a plug element adapted to be inserted in or held against the drain opening for the purpose of directing water from a faucet into the drain. In the other type of device, the end of the hose is equipped with a flexible rubber bell having a large open mouth end which may be pressed against the bottom of the basin or sink around the drain opening to confine the stream of water from the hose and direct it into the drain. The plug type of device is the most effective for applying the water pressure at the faucet since the plug is better adapted to make a tight seal in the drain opening but this type of device often cannot be used in sinks or basins containing a strainer or a pop-up type of drain valve. In such cases, the bell device must be used and if a potential purchaser has both kinds of sinks and basins in his house, he is thus required to purchase both types of devices. Although convertible flushing devices have heretofore been proposed, they have not been entirely satisfactory and have not attained commercial success on the market.

The general object of the present invention is, therefore, to provide an improved and practical form of convertible drain flushing device which may be used in sinks and basins equipped with strainers or pop-up drain valves as well as those having open drain openings.

Another object is to provide an improved bell and plug type flushing device which is applicable to all forms of conventional sink and basin drains.

Another object is to provide a convertible device of the type described which is simple and inexpensive to manufacture, convenient to use and effective in operation as well as being sufficiently rugged and durable for the purpose.

In the present device, both the bell and the plug are combined in such a way as to make the device convertible for use on all conventional types of sink and basin drains. The bell is sufficiently flexible that it does not interfere with the use of the plug on open drains whereby the plug may be held in firm sealing engagement with the drain opening in the usual way. On the other hand, the plug is made readily removable whereby it may be detached so as not to interfere with the use of the bell in sinks and basins having strainers or pop-up valves. The form of construction is such that the cost of the convertible device is not appreciably more than either one type of device by itself whereby the user is afforded the convenience and utility of both types of devices for substantially the price of one.

The foregoing and other objects and advantages will become apparent and the invention will be more clearly understood from the following description of the preferred embodiment illustrated on the accompanying drawing but it is to be understood that various changes may be made in the details of construction and that all such modifications within the scope of the appended claim are included in the invention.

In the drawing:

FIGURE 1 is a sectional view showing the present

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drain flushing device applied to an open type of drain; and

FIGURE 2 is a fragmentary sectional view showing the device applied to a drain equipped with a pop-up drain valve.

In FIGURE 1, the sink or basin 10 is equipped with a drain pipe 11 which is open at its upper end. The numeral 12 designates the swing spout of a faucet connected preferably with a source of hot water supply under pressure.

The drain flushing device comprises a rubber hose 13 having a suitable elastic connector 14 on its upper end which may be stretched over and securely anchored on the faucet spout 12. The lower end of hose 13 is equipped with a flexible rubber bell 15 having a rim portion 16 on its large open end adapted to be pressed firmly against the bottom of the sink about the drain opening. The small end 17 of the bell is cemented or otherwise secured and sealed to the exterior surface of hose 13.

Within the hose 13 there is similarly secured and cemented a rigid nipple 18 which projects a short distance into the bell 15. A spherical rubber ball 20 is equipped with a rigid ferrule or sleeve 21 which fits on the nipple 18 as shown. Preferably, the sleeve 21 has a slightly enlarged bore in its upper end forming a shoulder at 22 which seats against the end of nipple 18. Ball 20 is of a size to be substantially contained within the bell 15, the present ball being about half as large in diameter as the bell, but the ball may be somewhat larger or smaller without departing from the principles of the invention.

When it is desired to flush out the drain pipe 11, the device is connected to the hot water faucet, as shown, and the ball 20 is pressed firmly into the drain opening to form a plug seal in the upper end of the drain pipe. Then, when the hot water is turned on at faucet 12, it flows through nipple 18 and sleeve 21 causing the water pressure to be applied to the drain pipe to flush away any obstruction. It will be observed that the bell 15 does not interfere with the use of the ball 20 as a plug, but does, in fact, tend to enhance the seal against the bottom of the sink.

In FIGURE 2, the basin 25 is equipped with a drain pipe 26 having a pop-up drain valve 27 which prevents the use of the ball plug 20. When it is desired to flush a drain of this type, the ball 20 is removed from the nipple 18 and the rim 16 of the bell 15 is pressed firmly against the bottom of the basin around the drain opening. The nipple 18 is short enough to avoid conflict with the valve 27 in its raised position. The hot water from the faucet 12 is thus applied through hose 13 and hollow nipple 18 to the space within bell 15 from which it cannot escape except by way of drain pipe 26. The bell is of sufficient size to surround and enclose the valve and allow for some flattening of the bell when it is pressed against the bottom of the basin without bringing nipple 18 into contact with the valve.

In some sinks, the size of the drain opening or the position of a strainer makes it impossible to apply the ball 20 as shown in FIGURE 1, and in such cases the ball is removed and the bell 15 applied as shown in FIGURE 2. Thus, the present device is convertible to practically all types of sink, basin and laundry tub drains. The bell 15 being flexible does not interfere with the use of ball 20 as a plug seal, and, on the other hand, the ball 20 is readily removable for use of the bell on drains which will not accommodate the ball.

Having now described my invention and in what manner the same may be used, what I claim as new and desire to protect by Letters Patent is:

A convertible drain flushing device for use on open end basin drains and basin drains equipped with pop-up

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valves comprising a flexible hose, means for attaching one end of said hose to a faucet, a flexible resilient bell on the other end of said hose of sufficient size to enclose a pop-up drain valve when the mouth of the bell is pressed against the bottom of a basin around said valve, a tubular nipple connected with said hose and projecting into said bell a short distance insufficient to conflict with said drain valve, and a rubber plug considerably smaller than said bell having a bore therethrough for detachably mounting the plug on said nipple in spaced relation to the sides of said bell.

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