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J. C. GREEN

2,009,398

DEVICE FOR FLUSHING DRAINS

Filed April 10, 1935

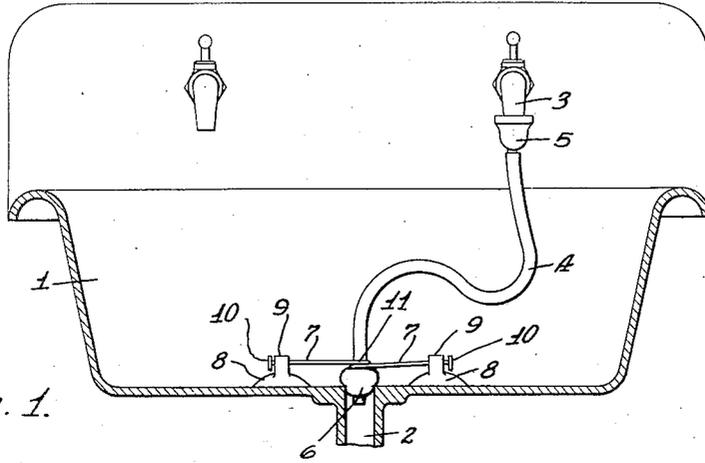


Fig. 1.

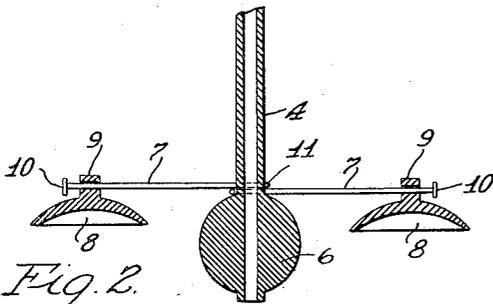


Fig. 2.

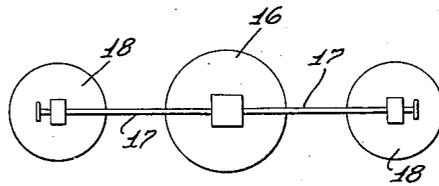


Fig. 5.

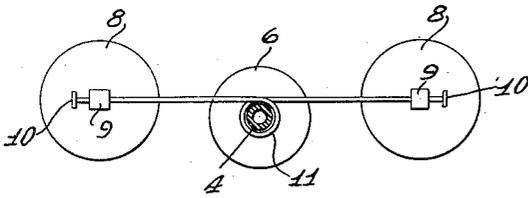


Fig. 3.

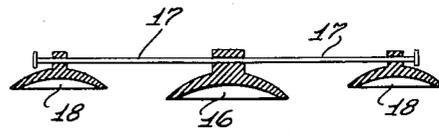


Fig. 6.

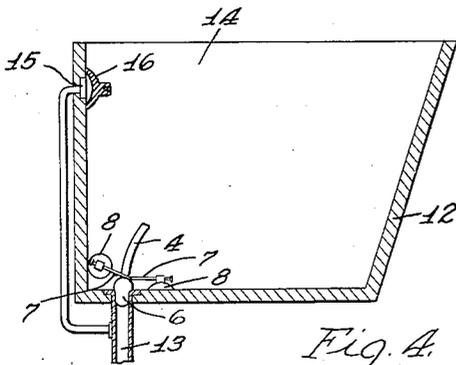


Fig. 4.

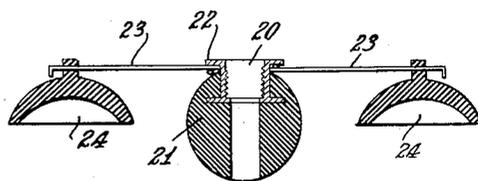


Fig. 7.

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DEVICE FOR FLUSHING DRAINS

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Application April 10, 1935, Serial No. 15,647

6 Claims. (Cl. 4-256)

This invention relates to means for flushing drain pipes of sinks, wash bowls, laundry tubs and the like.

The primary object of the invention is to provide a flexible conduit with means at one end for connecting it to a faucet and a resiliently compressible element at the other end adapted to be inserted into the end of a drain pipe to provide a water tight connection therewith. In order to hold the compressible element in the pipe against the back pressure of the water tending to force it out of the pipe the invention has as a further object to provide a novel arrangement of suction cups which attach themselves to the surface of the sink, wash bowl or laundry tub as the case may be, to oppose the tendency of the compressible element to move out of the end of the drain pipe due to water pressure in the pipe.

In connection with the means for holding the water seal in its proper position with respect to the drain pipe it is another object of the invention to provide a support for the suction cups used for that purpose which adapts the invention for use in connection with various shaped bowls or tubs. The support for the cups comprises resiliently flexible elements to which the cups are movably attached so that under ordinary circumstances the cups may be attached to the bottom of the bowl or tub or they may be attached to the side walls of the tub in cases where the drain pipe is in close proximity to the side walls. The support for the suction cups is also movable with respect to the water seal so that in cases where close quarters prohibit the attachment of the suction cups to adjacent surfaces the holding elements and their support may be moved to an inoperative position and the sealing element may be held in place by manual pressure.

Wash bowls and laundry tubs are quite commonly provided with overflow drains which communicate with the main drain. In such cases it is necessary to seal the overflow drain in order to prevent the water from backing up through the overflow drain instead of flushing the main drain pipe. In this connection the invention aims to provide an overflow drain sealing element with suction cups for the purpose of holding the sealing element in a position sealing the overflow drain during flushing operations with respect to the main drain.

With the above and other ends in view the invention is more fully disclosed with reference to the accompanying drawing, in which—

Figure 1 is a cross section of a sink, illustrating

the invention connecting a faucet to the drain pipe thereof;

Fig. 2 is a fragmentary cross section of the present device;

Fig. 3 is a plan of the holding means;

Fig. 4 is a cross section of a laundry tub with the present overflow seal in a sealing position with respect to the overflow drain;

Fig. 5 is a plan of the overflow seal;

Fig. 6 is a vertical cross section thereof; and

Fig. 7 is a cross section of another form of the invention.

Like characters of reference are employed throughout to designate corresponding parts.

In Figure 1 the numeral 1 designates a sink having the usual drain pipe 2. Above the sink is illustrated a faucet 3 which is adapted to be connected to a water main for supplying water under pressure thereto. A flexible conduit 4 is provided with a fitting 5 for attaching the end of the conduit 4 to the faucet 3. Inasmuch as fittings such as shown at 5 are well known in this art the same has not been illustrated in detail here.

On the other end of the conduit 4 is provided a resiliently compressible ball, preferably formed of soft rubber so that it may be inserted, by compressing the same, into the end of the drain pipe 2 as illustrated in Figure 1. In order to hold the ball 6 in the pipe 2 against the pressure of water tending to displace it therefrom during flushing operation the invention provides a pair of radially extending arms 7 with suction cups 8. The arms 7 are formed of a single element, preferably heavy spring wire, looped around the conduit 4 as at 11 so as to bear against the ball 6 when the suction cups are forced manually into engagement with the surface of the sink as shown in Figure 1. In order to secure the cups to the arms 7 the cups are provided with apertured lugs 9 through which the respective arms 7 extend and the latter are provided with heads 10 to retain the cups on the arms.

Due to the looseness of the loop 11 with respect to the conduit 4 the arms 7 may be freely moved when the cups 8 are out of engagement with the sink surface and in the event that the side walls of the sink preclude the placing of the cups in contact with either the bottom or the side walls the arms may be slipped up the conduit 4 and the ball 6 held in place by manual pressure.

In Fig. 4 there is illustrated a laundry tub 12 with the ball 6 inserted in the drain pipe 13 thereof. In this particular case one of the suction

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5 cups 8 is illustrated as being attached to the bottom of the sink while the other is shown as being attached to the end wall 14. This figure further illustrates an overflow drain 15 with a sealing element 16 in a position covering the same. Projecting radially from the sealing element 16 are arms 17 and suction cups 18 are loosely mounted on the arms to engage the side wall of the tub to hold the sealing member in place.

10 In Fig. 7 there is illustrated a form of the invention suitable for flushing basement drains and the like. In this form a fitting 20 is imbedded in a soft rubber ball 21, the fitting being internally threaded to receive the end of a garden hose. Retained on the ball by a flange 22 on the fitting 20 are radially extending arms 23 supporting suction cups 24. In use, the ball 21 is placed against the end of the drain pipe or forced into the end thereof and the suction cups 24 are forced into engagement with the floor surface around the drain pipe to hold the ball in engagement with the pipe.

25 Although specific embodiments of the invention are shown and described it will be understood that various changes may be made within the scope of the appended claims without departing from the spirit of the invention, and such changes are contemplated.

What I claim is:

30 1. A device of the character described for use in combination with a sink having a drain pipe and a faucet, said device comprising a flexible conduit, means for connecting one end of said conduit to said faucet, means for connecting the

other end of said conduit to said drain pipe, arms radiating from said last named means, and suction cups mounted on said arms.

2. A device of the character described for use in combination with a sink having a drain pipe and a faucet, said device comprising a flexible conduit, means for connecting one end of said conduit to said faucet, means for connecting the other end of said conduit to said drain pipe, flexible arms loosely connected with said last named means, and suction cups on said arms. 5

3. A device of the character described for use in combination with a sink having and drain pipe and a faucet, said device comprising a flexible conduit, means for connecting one end of said conduit to said faucet, means for connecting the other end of said conduit to said drain pipe, flexible arms engaging said last named means, and suction cups loosely mounted on said arms. 15

4. In a device of the character described, a sealing element, arms extending radially with respect to said element, and suction cups on said arms. 20

5. In a device of the character described, a sealing element, flexible arms connected with said sealing element, suction cups, and means for attaching said cups to said arms to facilitate movement of the cups with respect thereto. 25

6. In a device of the character described, a flexible conduit having a ball shaped enlargement on the end thereof, arms having a part loosely encircling said conduit and engaging said enlargement, and suction cups mounted on said arms. 30

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