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DEVICE FOR CLEANING OUT THE OVERFLOW PASSAGES OF WASHBASINS

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Fig. 1.

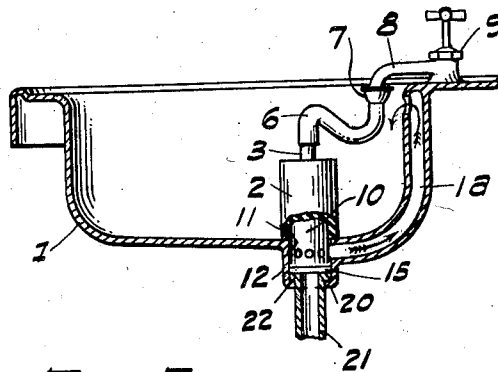


Fig. 2.

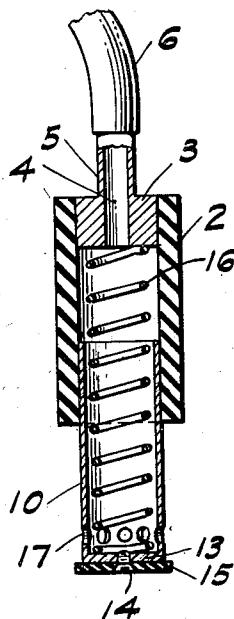


Fig. 3.

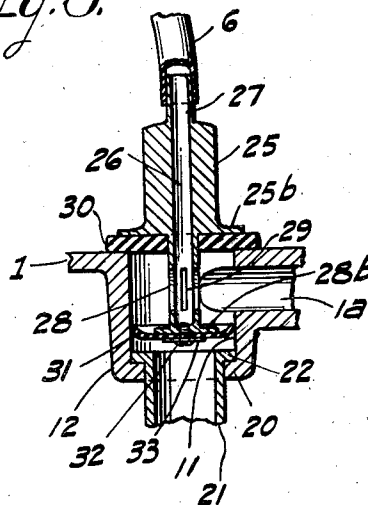
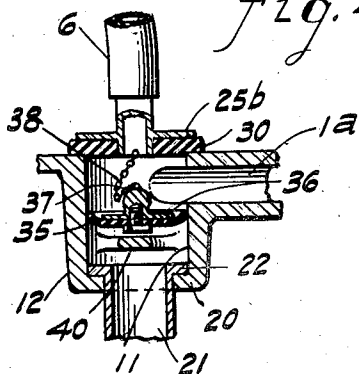


Fig. 4.



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DEVICE FOR CLEANING OUT THE OVERFLOW PASSAGES OF WASHBASINS

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9 Claims. (Cl. 4—256)

This invention relates to a device for cleaning out the overflow passages of wash basins.

An object of the invention is to provide a simplified contrivance of the above character which may be readily connected with the supply faucet of wash basins to conduct water therefrom under pressure to the lower end of the overflow passage, thereby to cleanse said passage and free it from any obstructing materials which may have accumulated therein.

Other objects, advantages and features of invention may hereinafter appear.

Referring to the accompanying drawing, which illustrates what are at present deemed to be preferred embodiments of the invention,

Fig. 1 is a view partly in side elevation and partly in vertical section showing the device positioned for cleaning out the overflow passage of a conventional toilet wash basin.

Fig. 2 is a vertical mid-section of the device shown separately.

Fig. 3 is a vertical mid-section of a modification shown in the operative position and including in the view the adjacent part of the basin.

Fig. 4 is a vertical mid-section of still another modification shown in the operative position and including in the view the adjacent part of the basin.

Referring in detail to Figs. 1 and 2 of the drawing, where the device is shown in readiness to flush out the overflow passage 1a of a basin 1, said device comprises a rubber cylinder 2 having a plug 3 fitted into its upper end in a fluid tight manner. Said plug has thru it an intake passage 4 in communication with a nipple 5 that projects centrally from said plug and is preferably integral therewith. Over said nipple 5 is tightly fitted one end portion of a short supply hose 6 the opposite end of said hose having a head or expanded part 7 to make a liquid tight connection with the spout 8 of the faucet 9.

The lower end portion of the rubber cylinder 2 fits closely but slidably around a short metal tube 10 the external diameter of which must be less than the diameter of the outlet passage 11 of the sump or basin outlet extension 12. The lower end of said tube 10 is closed at 13 and has attached to it, by any suitable means such as a screw 14, a gasket 15 the diameter of which is desirably somewhat greater than the diameter of said tube. Within said tube a compression spring 16 acts between the closure element 5 and plug 3 in order normally to maintain said tube extended from the rubber part 2 substantially

as shown in Fig. 3. The lower portion of tube 10 is provided with lateral outlet openings 17.

The basin extension 12 has a bottom outlet opening surrounded by an inwardly directed annular lip 20 which surrounds a conventional drain pipe 21, said drain pipe having at its upper end an outwardly directed peripheral flange 22 fitted within the lower portion of the passage 11.

In operation, after the hose 6 has been connected with the spout 8, the lower end of the tube 10 is placed within the basin extension 12 and gasket 15 is seated upon the flanged upper end of the drain pipe 21. The lower end of the rubber sleeve 2 is then forcibly contacted with the bottom of the basin 1 around the mouth of the outlet passage 11, this being done against the opposition of spring 16 thereby causing additional pressure of gasket 15 against the upper end of drain pipe 21. While the parts are being maintained in this position the faucet 9 is opened thus supplying water under pressure to the lower end of the overflow passage 1a and therefrom to the basin as indicated by the arrows in Fig. 1. Any sediment which may have accumulated within the overflow passage 1a is thus ejected therefrom into the basin and will be discharged therefrom after the device has been withdrawn from its outlet.

Owing to the fact that the rubber sleeve 2 has a very thick wall its lower end may be relied upon to form an effective seal around the mouth portion of the drain passage 11, when applied thereto as shown in Fig. 1. Hence the internal diameter of said sleeve may be considerably less than the diameter of said passage and also the tube 10 may have a rather loose fit within the sleeve without detracting from efficiency of operation. This construction insures efficient action of spring 16 and, coupled with the fact that the diameter of the washer 15 is greater than the diameter of the tube 10, adapts a single appliance constructed according to the principles of the invention for use in different basins wherein the sizes of the outlets differ considerably.

In Fig. 3 is shown a modification wherein the rubber part 2 is supplanted by a tubular metal body 25 which is somewhat bell shaped in cross section and which has therethru an axial passage 26 which communicates with an upper tubular extension 27 and with a lower tubular extension 28, the latter extension having longitudinally extending outlet slots 29.

Under the base portion 25b of the part 25 is placed a rubber gasket 30 which is centrally apertured to fit around the tubular extension 28.

Said gasket has a sufficient diameter to form a liquid tight closure within the passage 11 of the basin outlet extension 12. The lower end of the tubular part 28 is transversely closed below its outlets 29 and is peripherally flanged at 28b. It has attached thereto a diametrically compressible gasket 31 which may be secured in place by a screw 32 and washer 33. The tubular part 28 forms a rigid spacing means between the gaskets 30 and 31, and when the device is in its operative position the operator, while pressing down upon the gasket 30, will rely upon the peripheral contact of the lower gasket 31 with the sides of the passage 11 below the overflow passage 1a to compel liquid supplied under pressure to the passage 26 to enter and flush out the overflow passage 1a.

In Fig. 4 is shown a modification wherein a lower gasket 35 is shown mounted upon a disc 36 having a central knob or fingerhold 37. A chain 38 connects said gasket carrying member with the part carrying the gasket 30. In its function the latter gasket carrying member may be said to be extensible with relation to the upper gasket carrying member because the chain permits these members to be positioned various distances apart during operation. The tubular downward extension 28 is omitted in this form, but the parts shown above the basin outlet passage 11 are constructed and lettered the same as in Fig. 3. The guard spider 40 is shown in this view. It is omitted in the other views for clearness of illustration.

In the embodiment shown in Fig. 3, during operation there is a balanced liquid pressure between the two gaskets and therefore the device, after being placed in the proper position for use, will remain in such position during the flow thereof of liquid under pressure, with little or no attention from the operator.

In the use of all the embodiments of the invention, any obstructing material which is forced out of the overflow passage into the basin, if it is of a character likely to obstruct the drain pipe, may be skimmed off, or otherwise removed from the water in the basin while the sleeve 2 is still functioning as a closure of the basin's outlet. Or, if the ejected sediment be of a character which tends to adhere to the sides of the basin, it may be scraped off and removed therefrom after the water forced thru the overflow passage has been allowed to flow out thru the drain pipe.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of what is claimed. In the claims, the term "basin" refers to the type of basin illustrated in the drawing.

I claim:

1. A device of the kind described comprising closure means insertable within the outlet passage of a basin below its overflow passage entirely closing said outlet passage, a member having a liquid supply passage therethru, there being outlets from said passage leading laterally from said member, said member having a compressible portion around said liquid supply passage and overlying the mouth of said outlet passage connecting said member in a liquid tight manner with said basin outlet passage, and conduit means connecting the liquid supply passage of said member with the spout of a faucet.

2. In a device of the kind described, a member having a liquid supply passage therethru, said member having an extension into which said passage extends, there being outlets from said pas-

sage leading laterally from said extension, a closure means mounted upon the end portion of said extension to close the outlet passage of a basin below its overflow passage, said member having around the inner portion of said extension compressible means to close the mouth portion of the basin outlet passage at the same time that it is closed below its overflow passage as aforesaid, and conduit means adapted to connect said liquid supply passage of said member with the spout of a faucet to force liquid upwardly thru said overflow passage.

3. In a device of the kind described, a tubular member having a body portion and an axial diametrically contracted extension at one end of said body portion, there being a liquid supply passage which leads thru said body portion and into said extension, there being in said extension lateral outlet openings from said passage, said extension being adapted to enter the upper portion of a basin outlet passage to a point below its overflow passage and said body having compressible means at its lower end to seal the upper end of said basin outlet passage while the adjacent end of the body portion thereof is in a sealing relation to the upper end of said outlet passage.

4. In a device of the kind described, a tubular member having a body portion and an axial diametrically contracted extension at one end of said body portion in a fixed relation thereto, the end of said extension farthest from said body portion being closed and having a gasket mounted thereon, said gasket being adapted to seal the drainage passage of a basin below its overflow passage while the lower end of said body portion is in a sealing relation to the upper end of said drainage passage, and there being a liquid supply passage leading thru said body portion and its said extension to supply water under pressure to the overflow passage.

5. In a device of the kind described, a metal member having at one end an extension to connect with a liquid supply conduit and at its opposite end a diametrically contracted tubular extension which projects axially therefrom, a gasket overlying the end portion of said member adjacent to said tubular extension, said gasket having an apertured portion which fits around said tubular extension, and an outer gasket mounted upon the outer end portion of said tubular extension, said outer gasket being adapted to close the outlet passage of a basin below its overflow passage while the first recited gasket is in a sealing relation to said outlet passage above its union with said overflow passage, there being a liquid supply passage leading through said member and its said extensions and opening out laterally between said gaskets to provide exit for a liquid stream to flush out said overflow passage.

6. In a device of the kind described, an outer tubular member having a liquid supply passage therethru, said member having a compressible portion around the delivery end of said passage to adapt it for making a liquid tight connection with the outlet passage of a basin, an inner tubular member extensibly fitted within said outer tubular member and providing a continuation of the passage therethru, the outer end of said inner tubular member being transversely closed and having lateral outlets adjacent to its closed part, and a gasket of greater diameter than its said closed part and attached thereto, said gasket being adapted to close the outlet passage of the basin below its overflow passage while the afore-

said compressible portion of the outer tubular member is positioned to close the outlet passage of the basin above the lower end of its overflow passage, thus providing for the admission of liquid under pressure to the lower end of said overflow passage to flush sediment therein upwardly into the basin.

5 7. In a device of the kind described a member having a liquid supply passage therethru, said member having a compressible portion around the delivery end of said passage to adapt it for being connected in a liquid tight manner with the upper end of a basin outlet passage, conduit means to connect the liquid supply passage of said member with the spout of a faucet, a closure element insertable within the outlet passage of a basin below its overflow passage, and a flexible connection whereby said closure element is connected with the member having thru it the liquid supply passage.

10 8. In a device of the kind described, an outer tubular member having a liquid supply passage therethru, said member having a compressible portion around the delivery end of said passage to adapt it for making a liquid tight connection with the outlet passage of a basin, an inner tubular member extensibly fitted within said outer tubular member and providing a continuation of the passage therethru, the outer end of said inner

tubular member being transversely closed and having lateral outlets adjacent to its closed part, a gasket of greater diameter than its said closed part and attached thereto, said gasket being adapted to close the outlet passage of the basin below its overflow passage while the aforesaid compressible portion of the outer tubular member is positioned to close the outlet passage of the basin above the lower end of its overflow passage, thus providing for the admission of liquid under pressure to the lower end of said overflow passage to flush sediment therein upwardly into the basin, and a compression spring within said outer and inner tubular members to automatically and yieldably extend said inner tubular member a distance greater than that required in operation.

15 9. In a device of the kind described, a member including two closure means, one of said closure means entirely closing the outlet passage of a basin above its overflow passage, and the other of said two closure means entirely closing said outlet passage below said overflow passage, said member having a liquid supply passage whose intake is located above one of said two closures, and there being other openings opening laterally from said member between the said two closures, and conduit means connecting the first recited opening with the spout of a faucet.

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