

Nov. 12, 1968

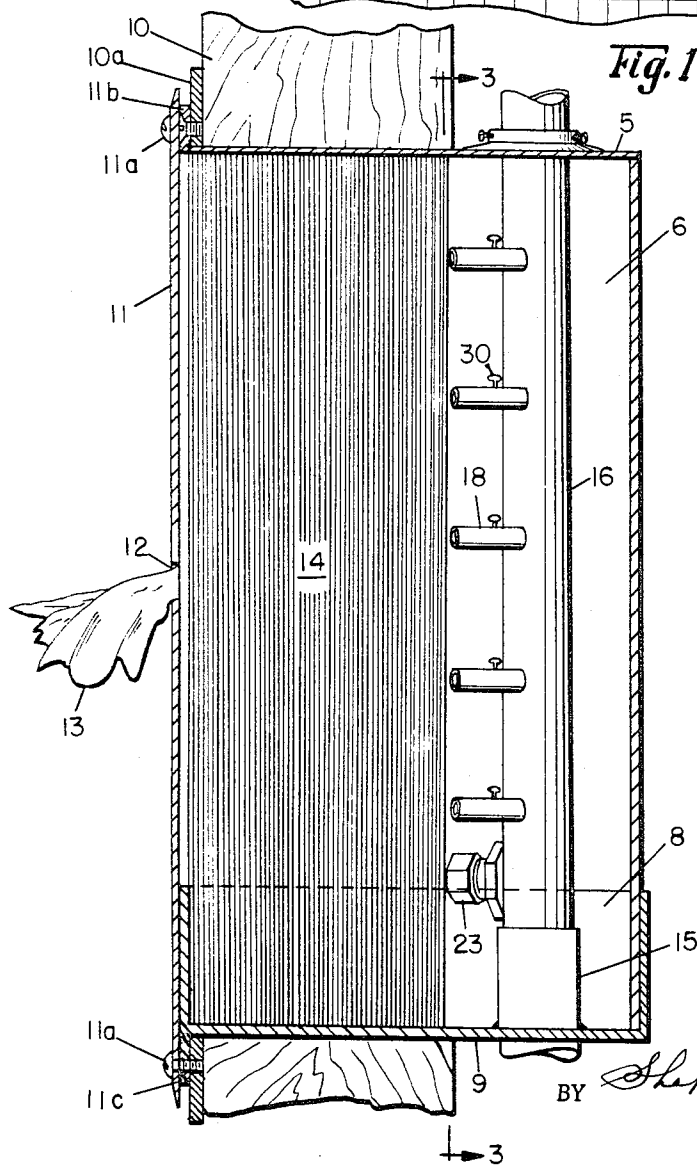
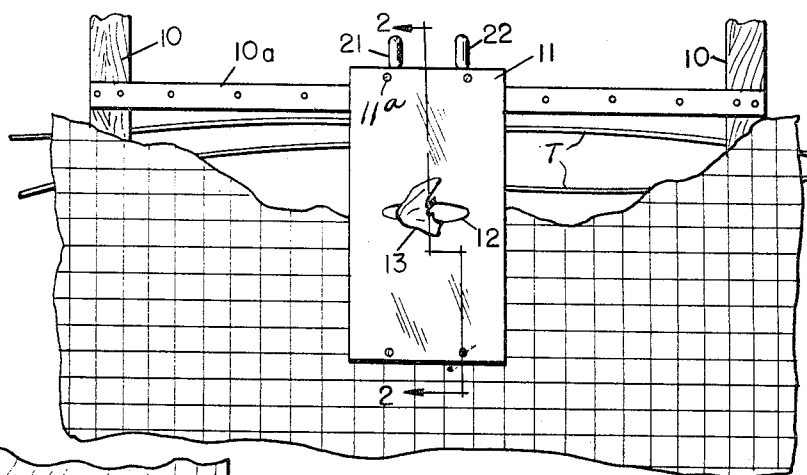
J. A. FRICK

3,410,302

WATER DISTRIBUTION BOX

Filed Sept. 20, 1963

2 Sheets-Sheet 1



INVENTOR
JAMES A. FRICK

BY

Shepherd Banght

ATTORNEYS

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J. A. FRICK

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2 Sheets-Sheet 2

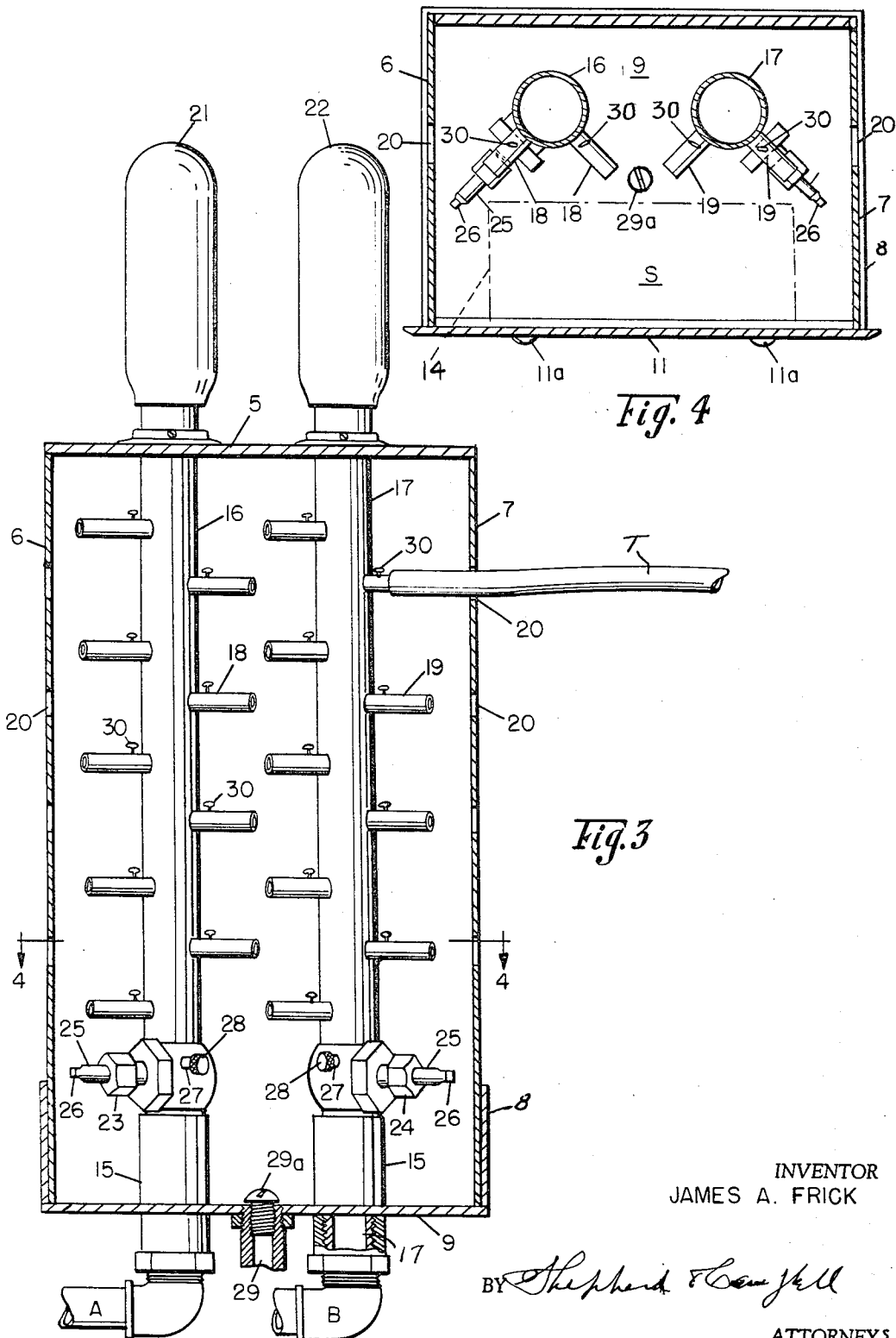


Fig. 4

Fig. 3

INVENTOR
JAMES A. FRICK

BY *Shepherd & Conwell*

ATTORNEYS

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3,410,302

WATER DISTRIBUTION BOX
James A. Frick, 501 W. De Young St.,
Marion, Ill. 62959
Filed Sept. 20, 1963, Ser. No. 310,305
5 Claims. (Cl. 137-312)

This invention relates to a water distribution box adapted to be recessed within the wall of a building and containing hot and cold water supply standpipes, from which the now almost universally used soft copper pipes may be led to the hot and cold water outlets of the various plumbing fixtures of the building.

The primary object of the invention is to provide such an assemblage of plumbing elements as will so simplify the connecting of a hot and cold water supply to the plumbing fixtures, such as lavatories, bathtubs, sinks, hot water tanks and the like, that the over-all time required to connect all of these elements will be so greatly reduced that large economies may be effected. A further object of the invention is to utilize a box of the nature described as a holder for facial tissues, such as the well-known Kleenex, said box having a cover plate through which the facial tissues may be pulled from a pack of such tissues, said pack of tissues being so disposed with relation to the pipes within the box that if leakage from the said pipes and their connections should occur, the dampened condition of the tissues would serve as an indicator of the existence of such leakage.

The manner in which the described results are achieved and other incidental advantages of my proposed construction will be best understood after a consideration of the accompanying drawings, in which:

FIG. 1 is a front elevation of the box, showing it supported between the studs of a building and with its cover plate provided with an opening through which facial tissues may be withdrawn;

FIG. 2 is a vertical, sectional view on line 2-2 of FIG. 1;

FIG. 3 is a vertical, sectional view upon line 3-3 of FIG. 2 with the facial tissues omitted;

FIG. 4 is a horizontal, sectional view upon line 4-4 of FIG. 3.

The water distribution box of this invention may vary in its dimensions and in its method of construction. In the form chosen for purposes of illustration, it comprises a top wall 5, side walls 6 and 7 and a pan-like lower section 8 having a bottom 9. These boxes are usually installed in the walls of buildings under construction and preferably during the early construction period.

As shown in FIG. 1, they may lie between the studs 10 of a building and in the form shown, a cover plate 11 is accessible from the interior of the room of the building in which the box is installed. In FIG. 1, the cover plate 11 is shown as having an opening 12 through which the facial tissues 13 may be pulled, in the usual way, from a pack 14 of such tissues, as illustrated in FIG. 2. Upstanding sleeves 15, carried by the box bottom 9, provide entry for the relatively large diameter hot and cold water supply standpipes 16 and 17. A plurality of outlet nipples 18 and 19 project from the standpipes at convenient angles to permit the sweating thereon of lengths of soft copper pipes or tubes T which are carried outwardly through openings 20 formed in the side walls of the box, and directly to the fixtures to be served, such as sinks, lavatories, bathtubs and the like.

The standpipes constitute reservoirs of such capacity that an even flow to the served fixtures will be maintained even though several faucets at the fixtures might be opened at one time. The upper portions of the standpipes are closed by air chambers 21 and 22, which air

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chambers may, if desired, project through the top of the box. The standpipes are provided at their lower portions with shutoff valves 23 and 24. The stems 25 of these valves may project obliquely toward the sides of the box and are provided at their outer ends with angular portions 26 to which a hand wheel, wrench or other operating element may be applied for the purpose of turning the stems to open or close the valves. These valves may, if desired, be of the conventional stop and waste form so that when the valves are closed to shut off the entry of water into the standpipes, any remaining water in the standpipes or the air chambers may be drained out, and air may be permitted to enter for the purpose of recharging the air chambers with air, if they become waterlogged.

To indicate that the valves 23 and 24 may be of the stop and waste variety, I have indicated the outlet nipples 27. These are normally closed by caps 28, but if, with the valves 23 and 24 closed, the caps 28 are removed, the standpipes will be drained and the air chambers recharged with air. A drain connection 29 is provided at the bottom of the box, which serves to discharge any water which may accumulate in the pan-like lower section 8 of the box, whether when the standpipes are drained to recharge the air chambers with air or from leakage from any of the connections within the box.

By directing the valve stems 25 outwardly toward the box sides, as described, the space within the box in front of the standpipes is left unobstructed for the reception of the pack of cleaning tissues 14, and which tissues serve as described to indicate when water has accumulated in the pan-like lower portion 8 of the box. It will be understood that when it is intended to drain the standpipes, as described, the cover plate 11 will first be removed to permit the removal of the pack of facial tissues, the latter being replaced after the draining operation has been completed, and the pan-like lower portion of the box wiped dry.

The hot and cold water supply herein described is adapted for use in homes, apartments, motels or commercial buildings, and the soft copper tubing is run through the walls in the early stages of the building construction. Since these copper pipes are readily bendable, it is not necessary to install conventional connections such as T's, couplings and the like in their length. Consequently the danger of leaks developing inside the walls after the building is completed is completely eliminated. It has been found that the copper piping without any fittings can be run from the box to the hot and cold water outlets of the fixtures of a normal home in an hour. Installation by other methods, such as when separate connections are run from hot and cold water supply lines to the fixtures of a normal home would consume from 12 to 24 hours of valuable and expensive construction time. Since other craftsmen must often wait upon completion of this plumbing work, this invention saves at least a day or two for one house and many more days for apartments and commercial buildings.

Further, the described arrangement renders the air chambers common to many different runs of piping. Thus it is not necessary to provide a number of air chambers for the prevention of water hammer in the several installed lines. The common shutoff valves for the supply standpipes makes it easy to repair defective faucets, or to install washers or the like when that becomes necessary.

Further, the described arrangement makes it possible to drain the supply to an entire system easily and without mess.

A further advantage resides in the fact that if a concealed copper water line should ultimately give trouble by filling with minerals or by nails being driven into it,

such defective line may be readily replaced by attaching a new soft copper line to the old one and drawing the new line into place as the old one is pulled out.

The drain pipe 29 leading from the bottom of the box may be attached to a sewer line and a screw 29^a may be screwed into the mouth of the drain. This prevents any possible entry of sewer gases into the box and also guards against the entry of any foreign matter, such as pieces of the facial tissue, for example, into the drain.

Any suitable way of securing the cover plate in position may be employed, such, for example, as screws 11^a which engage vertical flanges 11^b and 11^c formed upon the top and bottom, respectively, of the box.

Since the use of soft, easily bendable copper tubing is conventional practice, attachment of such tubing to all of the nipples 18 and 19 has not been illustrated. It suffices to say that in practice a copper line will lead from one of the nipples of the cold water standpipe to the cold water connection of a fixture to be served, such as bathtubs, lavatories and the like, and another soft copper tubing will lead from one of the nipples of the hot water standpipe to the hot water faucet of the same fixture.

The box itself is disposed between the studs 10 and supported by a cross bar 10^a which extends between said studs. The two hot and cold water standpipes provided with air chambers and of such large diameter as to constitute reservoirs of water and the group of nipples of much smaller size leading from the standpipes and of a nature to have the receiving ends of bendable copper tubing sweated thereon, constitutes the essential feature of the invention, irrespective of how said standpipes may be mounted. The main hot and cold water supply lines A and B are connected to the lower ends of the standpipes. While I have described the nipples of the standpipes and the tubing T as being of a nature to have the tubing sweated to the nipples, I recognize that plastic tubing may be substituted for the copper tubing and cemented upon the nipples, and I may employ plastic tubing in this relation while retaining the other advantages recited. The several nipples of the standpipe may be valved if desired and thus any line may be shut off without disturbing the others. To indicate that this can be done I have indicated stop cocks 30 in the nipples.

It is to be understood that the invention is not limited to the exact form illustrated, but that it includes within its purview whatever changes fairly fall within either the terms or the spirit of the appended claims.

I claim:

1. A water distribution assemblage comprising a box-like containing element dimensioned to be received in a building wall having therein a pair of hot and cold water standpipes of such capacity as to constitute reservoirs of hot and cold water, and a group of relatively small nipples projecting laterally from each of the standpipes, which nipples are

adapted for the sweating thereon of conventional bendable, soft copper tubing and air chamber forming portions at the upper ends of said standpipes.

2. In combination with the structure of claim 1, shut-off valves disposed adjacent the lower ends of the standpipes.

3. In combination with the structure of claim 1, shut-off valves disposed adjacent the lower ends of the standpipes, said shut-off valves being of the stop and waste type of valve.

4. A water distribution box dimensioned to be recessed in a building wall, which box has an open front, a cover plate for said open front of the box and hot and cold water standpipes in said box, a group of relatively small nipples projecting laterally from each of the standpipes, which nipples are adaptable for the sweating thereon of conventional, bendable, soft copper tubing, said standpipes being disposed far enough toward the rear of the box to leave a space between the standpipes and said cover plate sufficient to receive a conventional pack of facial tissues, said cover plate having an opening therethrough, through which facial tissues may be successively withdrawn from said pack.

5. A water distribution box dimensioned to be recessed in a building wall, which box has an open front, a cover plate for said open front of the box and hot and cold water standpipes in said box, a group of relatively small nipples projecting laterally from each of the standpipes, which nipples are adaptable for the sweating thereon of conventional, bendable, soft copper tubing, said standpipes being disposed far enough toward the rear of the box to leave a space between the standpipes and said cover plate sufficient to receive a conventional pack of facial tissues, said cover plate having an opening therethrough, through which facial tissues may be successively withdrawn from said pack, said water distribution box comprising a pan-like bottom portion, within which said pack of facial tissues rests, a drain leading from the bottom of the pan-like bottom portion and a closure means for the mouth of said drain.

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WILLIAM F. O'DEA, *Primary Examiner.*

R. GERARD, *Assistant Examiner.*