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VALVE-ACTUATING MECHANISM

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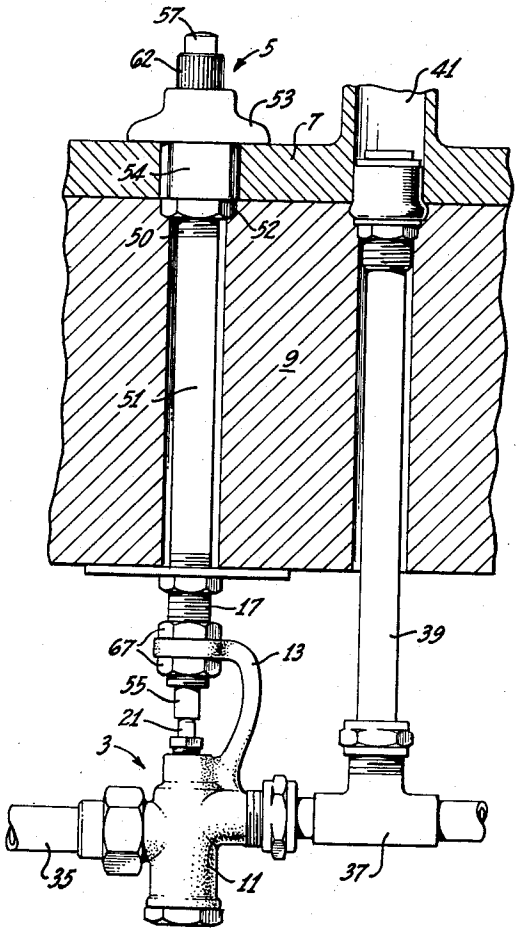


Fig. 1

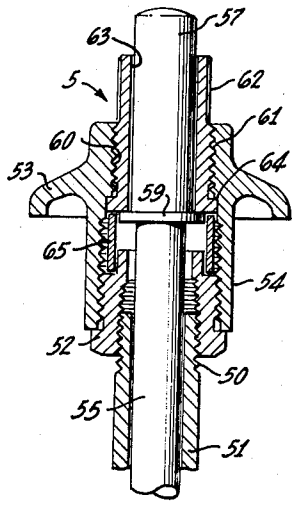


Fig. 2

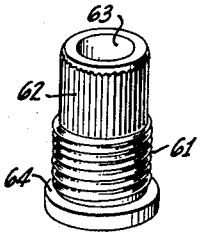


Fig. 3

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VALVE-ACTUATING MECHANISM

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1 Claim. (Cl. 137—360)

This invention relates to a valve-actuating mechanism and more particularly relates to an improvement over the valve-actuating means shown in my Patent 2,959,186.

In Patent 2,959,186, there is disclosed a valve mechanism suitable for use in penal, mental and similar institutions which is completely tamper-proof and which can be adjusted from the rear so that an inmate may be allowed more or less water by adjusting the mechanism, which adjustment can be made without entering the cell. In the structure shown in my above-mentioned patent, the valve could be opened only by pressing on a button and it was necessary to maintain pressure on the button at all times when it was desired to have a flow of water. This is inconvenient for the user, particularly with a mixer-type faucet where one wishes to mix hot and cold water for use in washing.

In accordance with the present invention, an improved valve-actuating structure is provided wherein the push button may be used as before, or wherein a handle can be turned so that the flow of water will be maintained until the handle is returned to its former position. Further, in accordance with the present invention, means are provided whereby the turning feature can be eliminated temporarily or permanently, for instance as punishment in the case of an inmate who wastes water.

In the drawings forming a part of this application:

FIGURE 1 is a plan sectional view through a wall and a portion of a basin showing a valve and valve-actuating structure in place.

FIGURE 2 is an enlarged sectional view of the valve-actuating structure of the present invention.

FIGURE 3 is a perspective view of a portion of the valve-actuating structure.

Referring now to the drawings by reference characters, a valve body has been generally designated 3, while the valve-actuating structure has been generally designated 5. The valve-actuating structure is shown mounted on a basin 7 which in turn is mounted on a wall 9.

The valve itself is amply described in the above-identified patent, and suffice it to say that the valve comprises a housing 11 mounted by a curved arm 13 to a threaded member 17 by means of the nuts 67. A valve stem 21 extends from the valve, and as the valve stem 21 is depressed, water can flow from the line 35 through the fitting 37 and pipe 39 into the basin outlet 41. Normally, two such valves would be used, as is shown in the above-identified patent, but only one is illustrated.

The valve operated mechanism proper comprises a tube 51 with a first threaded end 17 and a second threaded end 50 to which is threaded a bushing 52. The bushing 52 is threaded to a flange 53 which has square shoulders 54 thereon which pass through a square opening in the basin wall 7. Passing through the tube 51 is a rod 55, one end of which is in contact with the valve stem 21 and the other end of which is provided with a shoulder 59 and an enlarged end 57 which serves as a push button. The structure thus far described is substantially the same

as has heretofore been described in my Patent 2,959,186. It is obvious that by pushing on the button 57 the valve may be actuated.

According to the present invention, the flange 53 is provided with internal threads 60 which mate with corresponding threads 61 on the knob assembly. The knob assembly has a knurled end 62 and has a hole 63 of such size that the push button 57 slips freely therein. The knob assembly also has a shoulder 64 which abuts on the flange 53 as is shown so that it cannot be completely unscrewed, the other side of said shoulder abuting with shoulder 59 on the push rod 55. Thus, the valve can be actuated in two ways, namely by pushing the button 57 as previously described, or by turning the knurled portion 62 so that the flange 64 depresses the flange 59, again actuating the valve and holding the valve open until the knob is turned in the opposite direction. If it is desired to temporarily or permanently shut off the stay-open feature of the valve, for instance as a punishment of an inmate who has been wasting water, a small sleeve 65 may be placed inside the valve actuator as is shown, which sleeve will prevent turning the valve so that the water cannot be left on, but which will not prevent one from pushing the button 57 so that water will still be available.

It is believed apparent from the foregoing that I have provided a simple and tamper-proof valve-actuating mechanism and one which can be operated as a push button valve or one which can be actuated as a turning valve which will stay on until it is turned off.

I claim:

In combination with a push-rod operated valve, said valve being located behind a wall, a valve operating mechanism comprising in combination:

(*a*) a wall flange mounted in the wall;

(*b*) said wall flange having an internally threaded opening on the side of the wall opposite the valve;

(*c*) said flange having a larger opening on the side facing the valve whereby a shoulder is formed between the larger opening and the threaded opening;

(*d*) a knob assembly having a knurled outer portion, an externally threaded intermediate portion and a flanged inner portion, said flange forming a flat rear surface;

(*e*) the threaded portion of the knob turning freely in the threads of the wall flange;

(*f*) the flange on the knob engaging the shoulder of the wall flange whereby the knob portion cannot pass through the wall flange;

(*g*) a hole in the center of the knob assembly;

(*h*) a push-rod extending through and beyond the knob assembly, said push-rod having an outer end adapted to be depressed by finger pressure and an inner end in contact with the valve, said push-rod having a flange thereon adapted to engage the flat rear surface of the knob assembly whereby the valve can be actuated either by finger pressure on the push-rod, or by turning the knob assembly causing the flat rear surface of the knob assembly to push against the flange on the push-rod.

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