March 10, 1925. 1,529,529

R. A. WOJAHN

VALVE

Filed Jan. 20, 1923

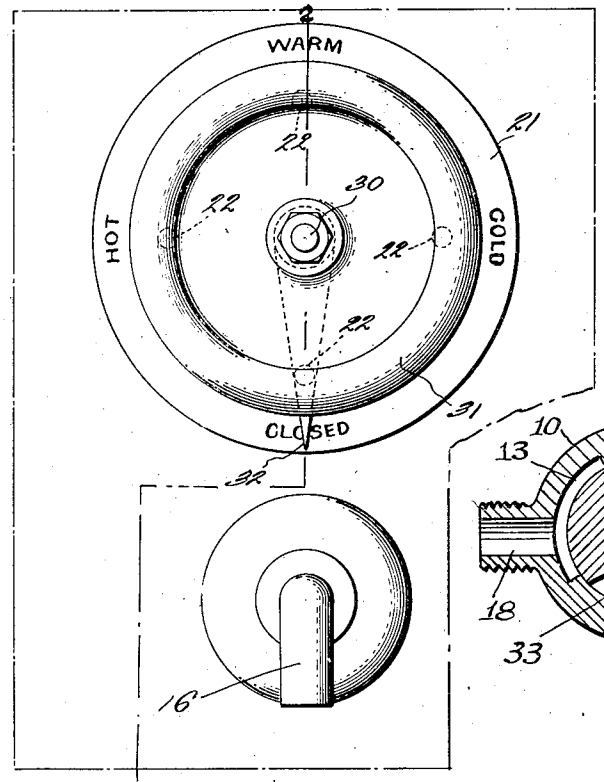


Fig. 1.

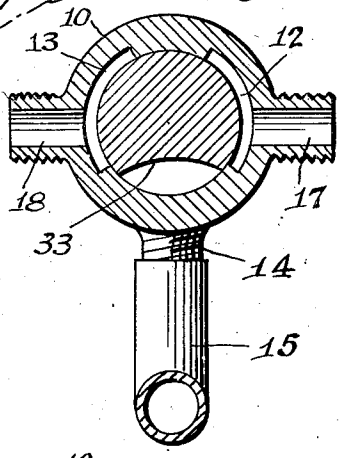


Fig. 3.

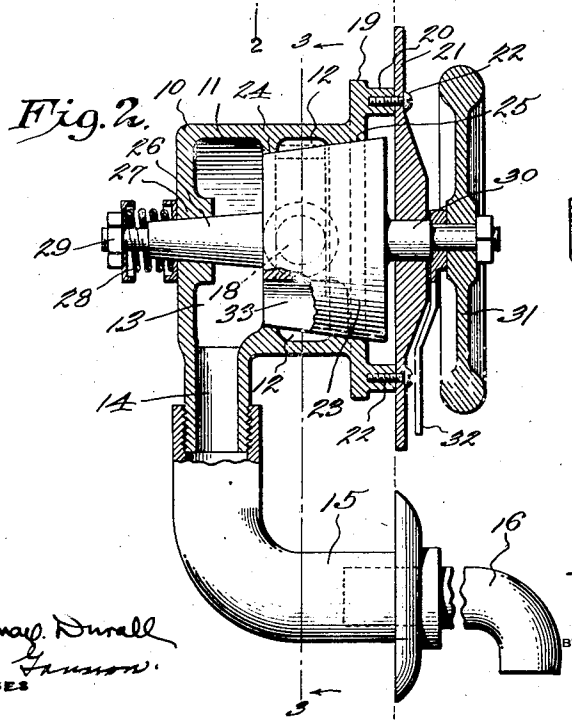


Fig. 2.

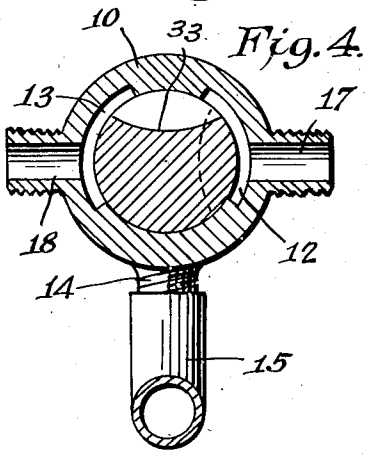


Fig. 4.

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UNITED STATES PATENT OFFICE.

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VALVE.

Application filed January 20, 1923. Serial No. 614,047.

To all whom it may concern:

Be it known that I, RUDOLPH A. WOJAHN, a citizen of the United States, residing at Rockford, in the county of Winnebago and State of Illinois, have invented new and useful Improvements in Valves, of which the following is a specification.

This invention relates to improvements in valves of the combination type, which includes a plurality of inlets and a common discharge or outlet, the invention being especially designed for dispensing hot or cold water and for simultaneously admitting and discharging both hot and cold water.

To this end, the invention aims to provide a valve which embodies a casing of novel construction, including a plurality of inlets and a single outlet, together with means for regulating the outlet and both inlets, so that either hot or cold water may be dispensed, or the temperature of the water nicely regulated by admitting both hot and cold water in proper quantities through the operation of a single operating means.

With the above and other objects in view, the invention further includes the following novel features and details of construction, to be hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claim.

In the drawings:—

Figure 1 is a front elevation of a valve constructed in accordance with the invention.

Figure 2 is a section on the line 2—2 of Figure 1.

Figure 3 is a section on the line 3—3 of Figure 2, showing the valve in closed position.

Figure 4 is a view similar to Figure 3 but showing the valve arranged to discharge both hot and cold water, while the position of the valve for discharging cold water only is shown by dotted lines.

Referring to the drawings in detail, wherein like characters of reference denote corresponding parts, the reference character 10 indicates a valve casing which is divided by a partition 11 into an inlet chamber 12 and an outlet or discharge chamber 13, the latter being provided with an outlet 14 which may be connected by means of a pipe 15 with a discharge spout 16, or with a dispensing or distributing pipe of any character.

The inlet chamber 12 is provided with a plurality of inlets, which may receive liquids of different character, the said inlets being indicated at 17 and 18. The inlet 17 may be connected with a suitable source of cold water supply, while the inlet 18 may be connected with a source of supply for hot water, both the inlet 17 and 18 communicating with the inlet chamber 12.

The valve casing 10 is provided with a flange 19 from which extend legs 20 to provide means for attaching the valve in place. These legs are connected to a face plate or dial 21 by means of fastening devices 22.

Located within the valve casing is a frustro conical or tapered valve member 23, which operates within valve seats 24 and 25, the former being formed within the partition 11, while the latter is formed in the opposite or outer wall of the inlet chamber 12. The valve member 23 includes a tapered stem 26 which operates within a bearing 27 provided in the casing 10 and which extends through the casing and is surrounded by a coiled spring 28 whose tension is regulated by a nut 29 mounted upon the outer end of the valve stem 26. By adjusting the nut 29, the valve member 23 may be drawn inward upon its seats 24 and 25 so as to properly seat the valve and take up wear.

The valve member 23 is also provided with a stem 30 which extends through the face plate 21 and which has secured thereon an operating wheel or handle 31. Also secured upon the stem 30 is a pointer 32 which is adapted to co-operate with indicia provided upon the face plate to indicate the position of the valve member 23. Thus, when the pointer 32 is opposite the word "Cold," the valve will be arranged to discharge cold water and when the said pointer is opposite the word "Hot," the hot water will be discharged and when opposite the word "Warm," both hot and cold water will be admitted to the inlet chamber and discharged through the discharge chamber.

To accomplish this, the valve member 23 is provided with a recess 33 which is so shaped as to provide communication between the inlet 17 and outlet 14, between the inlet 18 and outlet 14, between both the inlets 17 and 18 and outlet 14, or to entirely cut off communication between either or both of these inlets and the outlet. By this means, the valve member may be positioned to discharge either hot or cold water, or it may be so positioned as to admit and discharge equal quantities of hot and cold

water simultaneously or arranged so as to decrease the supply of cold water and correspondingly increase the supply of hot water and vice versa, so that the temperature of the water may be accurately regulated through the operation of the wheel 31.

The invention is susceptible of various changes in its form, proportions and minor details of construction and the right is herein reserved to make such changes as properly fall within the scope of the appended claim.

Having described the invention what is claimed is:—

A valve embodying a casing, a partition dividing the casing into inlet and discharge chambers respectively, valve seats formed in the partition, a frusto-conical valve member operating within said seats, spaced inlet openings provided in opposite sides of said casing in the inlet chamber, a downwardly extending outlet provided in the discharge member, a concaved recess provided in the valve member, a tapered stem extending from the valve member through a bearing in said casing, means for adjusting said valve on the outer end of said stem, a stem connected to the valve member in opposed relation to said tapered stem with means thereon for operating same.

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