A. E. SHACKLEFORD AND G. A. FRANKLIN.

VALVE.

APPLICATION FILED AUG. 12, 1918.

1,350,040. Patented Aug. 17, 1920.

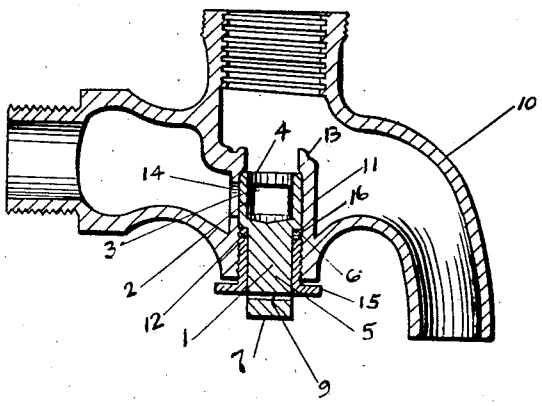


FIG. 1.

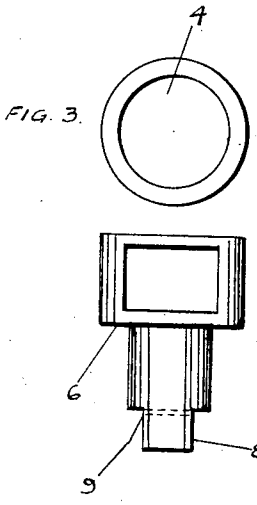


FIG. 3.

FIG. 2

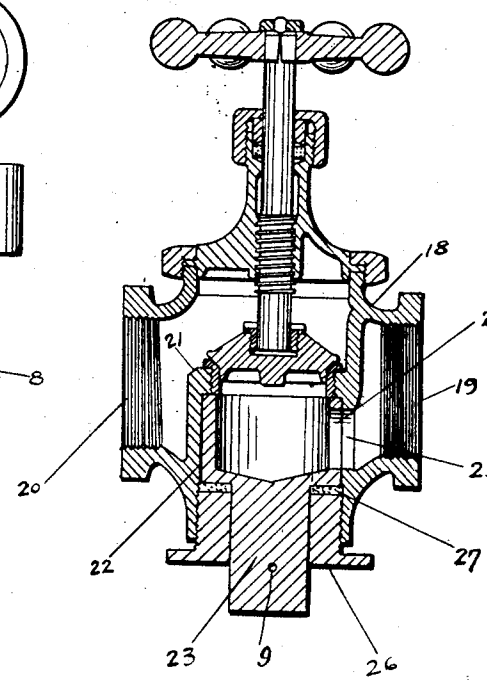


FIG. 6.

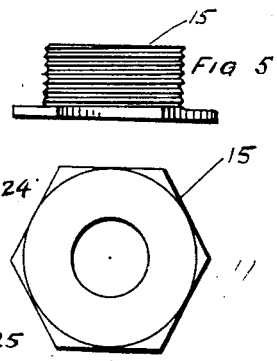


FIG 5

FIG. 4.

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VALVE.

1,350,040. Specification of Letters Patent. Patented Aug. 17, 1920.

Application filed August 12, 1918. Serial No. 249,508.

To all whom it may concern:

Be it known that we, ALFRED EDWARD SHACKLEFORD and GUSTAVE ARTHUR FRANKLIN, subjects of the King of Great Britain, and residents of 219 13th street S. W. and 316 8th avenue N. E., respectively, both of the city of Calgary, in the Province of Alberta, in the Dominion of Canada, have invented certain new and useful Improvements in Valves, of which the following is the specification.

The invention relates to improvements in valves as described in the present specification and illustrated in the accompanying drawings that form part of the same.

The invention consists essentially in the novel means employed for cutting out the source of supply during repair operations.

The objects of the invention are to furnish a valve or faucet used in controlling the flow of fluids that may be reached for the purpose of reseating, regrinding, repacking, or replacing parts without interference from the flowing fluid, which may enter the valve casing, to effect this at a minimum cost, and generally to provide a simple, cheap and convenient faucet or valve, whereby the cut out for the flow is local to each device.

In the drawing Figure 1 is a vertical sectional view of a faucet containing this invention.

Fig. 2 is a detail of the cut out plug in elevation.

Fig. 3 is a detail of the cut out plug showing an end view.

Fig. 4 is a detail of the gland nut showing an end view.

Fig. 5 is an elevation of the gland nut.

Fig. 6 is a vertical sectional view of a steam valve containing this invention.

Like numerals of reference indicate corresponding parts in each figure.

Referring to the drawings, the numeral 1 indicates the cut-out plug, which contains at the upper end the chamber 2 having the inlet opening 3 in the side wall thereof and the outlet opening 4 through the top.

The body 5 is reduced in size in relation to the wall of the chamber 2 forming the shoulder 6, both body and chamber being of cylindrical shape.

The lower end 7 is further reduced and has the flat sides 8 and the key hole 9 therethrough.

The casing 10 is shown in Fig. 1 in the form of a faucet and within said casing the annular wall 11 extends upwardly from the lower opening 12 and terminates in the valve seat 13, said wall having the inlet opening 14 adapted to register with the inlet opening 3. The cylindrical chamber within the annular wall 11 is closed in slightly by a tapering wall adapted to form on the inside a shoulder or stop for limiting the movement of the cupped end of the plug 1.

The cut-out plug 1 is inserted into the faucet 10 through the opening 12 and at its upper end abuts the lower end of the seat 13 and is adapted to turn within the annular wall 11, the lower key end 7 projecting beyond the casing 10, so that said plug may be turned by the insertion of a key in the hole 9.

The gland nut 15 is screw-threaded into the opening 12 and at its upper end engages the packing 16 against the shoulder 6, said nut having the hexagon or other shaped head 17 for convenience in applying a wrench as customary.

In Fig. 6 the casing 18 is formed with inlet 19 and outlet 20 as usual in steam or radiator valves and within this casing the annular wall 21 projects upwardly from the lower opening 22, and a similar plug 23 to that already described turns within said annular wall to bring the openings 24 and 25 into alinement. This plug 23 is locked in position by the nut 26 and the valve casing at said lower opening is maintained tight by the packing 27.

Briefly the operation of this invention is as follows:—

In ordinary practice the fluid enters the valve casing and flows through the opening in the annular wall and the opening in the cut-out plug to the valve, which when moving from its seat permits the said fluid to pass from the outlet.

Presuming for some good reason, such as the regrinding of a valve or seat or other repairs, that it is necessary to shut off the fluid inlet, then the cut-out plug is turned which moves the inlet opening out of register with the inlet opening of the annular wall, consequently the passage is blocked, and no liquid can flow to the valve until the cut-out plug is again brought to register with the inlet opening in the annular wall.

Various changes may be made in this in-

vention in regard to the details of construction without departing from the spirit thereof, so long as they are within the scope of the claims for novelty following.

What we claim is:—

1. A fluid valve of the class described, comprising the casing formed with a plug opening from the lower end of perfect cylindrical shape and leading up to the under side of the upper valve seat and threaded at the lower end, a cut out plug of perfect cylindrical shape in its upper portion and lower reduced portion and turning in said upper portion and a gland nut encircling the lower cylindrical portion of said plug and screw-threaded into the lower threaded end of said cylindrical opening.

2. A fluid valve, in which a cut-out plug is formed in three integral sections, a cylindrical shaped middle bearing section, a bottom key section and a cylindrical upper cup section having a straight wall vertically, a full dimension upper outlet and a side port of rectangular shape, a casing having a perfect cylindrical and vertical chamber formed therewithin a port corresponding to said side port, said cylindrical chamber being closed in slightly by a tapering wall, adapted to form on the inside a shoulder as a limiting stop for the cupped end of said plug and on the outside a narrow valve seat, a valve on said seat and an operating stem therefrom, and a gland nut screw-threaded into said vertical chamber and locking said cut-out plug in position.

Signed at the city of Calgary, Alta., Canada, this 15th day of July, 1918.

ALFRED EDWARD SHACKLEFORD.
GUSTAVE ARTHUR FRANKLIN.