

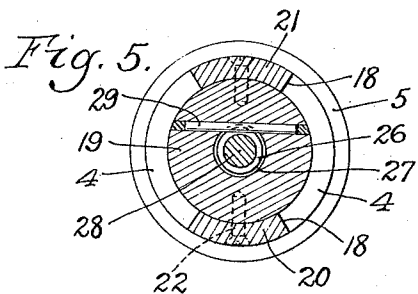
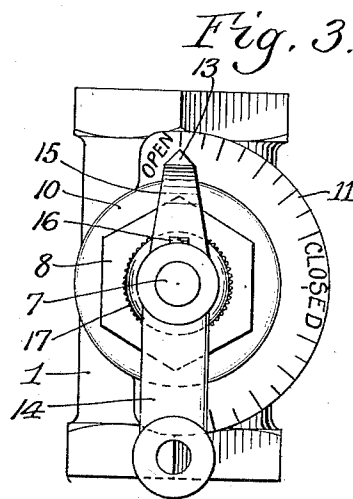
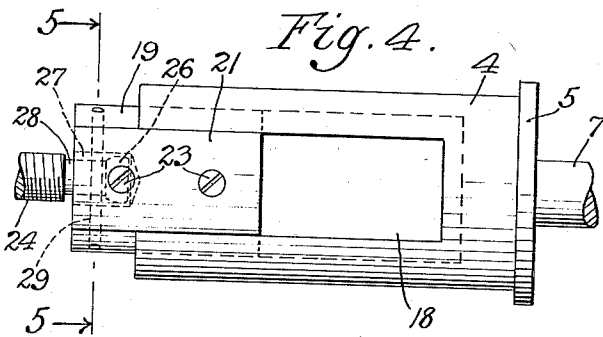
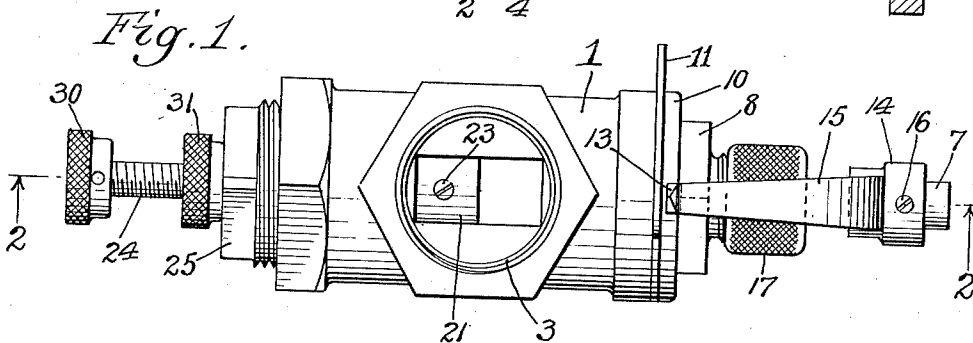
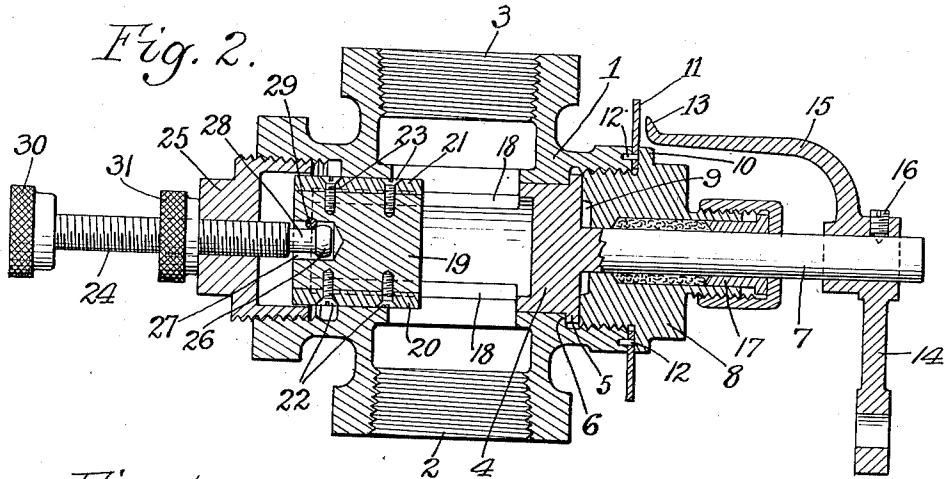
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VALVE

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2,237,784

VALVE

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4 Claims. (Cl. 277—64)

This invention relates to valves and has for its object to provide a new and improved device of this description. The invention has as a further object to provide a valve which may be easily and quickly adjusted to adjust the amount of material passing through the valve. The invention has as a further object to provide an adjustable valve with the main valve stem and the adjusting stem in alignment. The invention has other objects which are more particularly pointed out in the accompanying description.

Referring now to the drawing, Fig. 1 is a view of one form of valve embodying the invention;

Fig. 2 is a sectional view taken on line 2—2 of Fig. 1;

Fig. 3 is a plan view of the valve illustrated in Fig. 1;

Fig. 4 is a view of the valve member and adjusting member separate from the valve casing; and

Fig. 5 is a sectional view taken on line 5—5 of Fig. 4.

Like numerals refer to like parts throughout the several figures.

Referring now to the drawing, wherein I have illustrated one form of valve embodying the invention, the valve is provided with a casing 1 having an inlet 2 and an outlet 3, the inlet and outlet being threaded so that the valve may be connected in a pipe of any desired kind, through which the material is passing. The casing is hollow and mounted within the casing is a cylindrical hollow valve member 4. This valve member has an annular projecting part 5 which rests on a shoulder 6 formed in the valve casing and which limits the inward movement of the valve member 4, but permits such valve member to be rotated. The valve member 4 has a valve stem 7 connected therewith, the valve stem being preferably integral with the valve member. A screwthreaded plug 8 surrounds the valve stem 7 and is inserted in the threaded opening in the valve casing. This plug has its inner end in proximity to the top of the valve member 4 and is provided with a recess 9 which extends around the valve stem so as to leave a space between the plug and the valve member. The plug 8 is provided with the annular projecting member 10 which projects outwardly over the edge of the valve casing. There is a plate 11 surrounding the portion of the plug below the annular projecting member 10 and which rests upon the upper edge of the casing and is held

in place by the annular projecting member 10. This plate is held against rotation by pins 12.

This plate is an indicating device. It has on it the word "Open" and the word "Closed," or some similar designation, and there is a pointer 13 connected with the valve stem 7 and which moves with the valve stem. The pointer 13 is preferably connected with the handle 14 by means of the bent portion 15, the handle and pointer being attached to the valve stem in any desired manner, as by the set screw 16. There is a packing gland 17 associated with the plug 8 through which the valve stem passes.

The valve member 4 is hollow and is open at one end and is provided with the slots 18 extending through the wall thereof so as to provide an opening through the valve when it is in its open position, which opening connects the inlet and the outlet of the casing.

Some means is provided for varying the size of these openings so as to vary the size of the open path through the valve member and the casing independent of the opening or closing movement of the valve member. As herein shown there is an adjusting device 19 which moves back and forth in the hollow of the valve and which has projecting parts 20 and 21 which fit into the openings 18 so as to close those parts of the openings in which they are located. The projecting parts 20 and 21 may be integral with the central part or may be separate therefrom and attached thereto by fastening devices 22, 23. Some means is provided for moving the adjusting device back and forth to increase or decrease the open portions of the openings 18. As herein shown this is accomplished by means of a controlling member 24, which as shown is a threaded member extending through the plug 25 and working in threads in said plug, the plug 25 acting to close the lower end of the valve casing 1. The controlling member is rotatably connected with the adjusting device 19 in any desired manner. As herein shown, it has a head or enlarged end 26 which is received in an opening 27 in the adjusting device. There is a reduced portion 28. A pin 29 extends through the adjusting device in proximity to the reduced portion 28 so that a part thereof projects past the head 26. This permits the controlling member 24 to be rotated but holds it attached to the adjusting device 19 so that when the control member 24 is rotated, the adjusting device 19 will be moved along the valve member 4 to reduce or enlarge the openings 18. The control member 24 is preferably provided with a knurled

thumb piece 30 which may be grasped to rotate the control member to move the adjusting device. There is also preferably a lock nut 31 which can be moved into contact with the plug 25 when the proper adjustment is secured, so as to hold the parts in position.

I claim:

1. A valve comprising a casing having a passageway therethrough, a rotatable hollow valve member in said casing open at the end and having longitudinal slots through the sides thereof which communicate with the hollow of said valve member, the hollow and the slots forming a passageway through the valve member, a stem connected with said valve member projecting through one end of the casing, by means of which the valve member is controlled, a solid adjusting device slidably mounted in said hollow valve member, and having projecting parts thereon which project laterally therefrom into the longitudinal slots in the valve member which close the portions of said slots into which they are received and which also act to hold the sliding adjusting device against rotation when the valve member is stationary and a controlling member connected with said adjusting device for moving it longitudinally of the valve member, said controlling member projecting through the opposite end of said casing.

2. A valve comprising a casing having a passageway therethrough, a rotatable cylindrical hollow valve member in said casing, closed at one end and open at the other end and having slots in its opposed walls, an adjustable cylindrical sliding member in the open end of said valve member, which closes said open end and which is provided with projections which extend into said slots, a stem connected with the closed end of said hollow valve member, by means of which the hollow valve member and the adjustable cylindrical sliding member are rotated to bring said slots in and out of register with the passageway through said casing.

3. A valve comprising a casing having a passageway therethrough, a rotatable cylindrical hollow valve member in said casing closed at one

end and open at the other end and having slots in its opposed walls, an adjustable cylindrical sliding member in the open end of said valve member, which closes said open end and which is provided with projections which extend into said slots, a stem connected with the closed end of said hollow valve member, by means of which the hollow valve member and the adjustable cylindrical sliding member are rotated to bring said slots in and out of register with the passageway through said casing and an adjusting device for said adjustable cylindrical sliding member, separate from said valve member, in alignment with said valve stem and which projects from said casing.

4. A valve comprising a casing having a passageway therethrough, a hollow threaded boss forming a part of said casing and projecting from each side thereof, a rotatable hollow valve member in said casing open at one end and closed at the other end and having a laterally projecting part at the closed end, a shoulder on said casing engaged by said laterally projecting part, a plug connected with the casing and engaging said laterally projecting part, the plug and casing holding the valve member against longitudinal movement but leaving it free to rotate, a valve stem projecting through said plug, said hollow valve member having opposed longitudinal slots in the wall thereof which communicate with the hollow of the valve member, a cylindrical adjusting device located in the hollow of said valve member and closing the open end thereof and having laterally projecting parts which project into said slots and which move in said slots, the walls of the slots acting as guides therefor, said projecting parts connecting the cylindrical adjusting end closing device with the valve member so that it rotates therewith, a plug at the other end of said casing, a screw passing through said plug and rotatably engaging said cylindrical adjusting device so as to move it with relation to said valve member to vary the size of the open portions of said slots, said screw and valve stem being in alignment.

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