No. 848,951. PATENTED APR. 2, 1907.

J. J. AEPPLI-STOCKER.

COCK.

APPLICATION FILED SEPT. 2, 1905.

Fig. 1

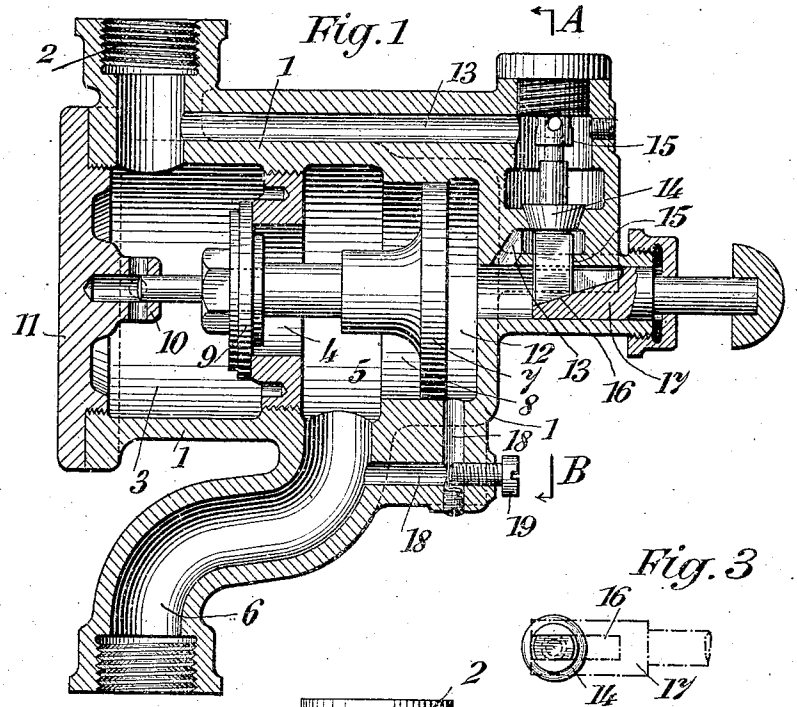



Fig. 3



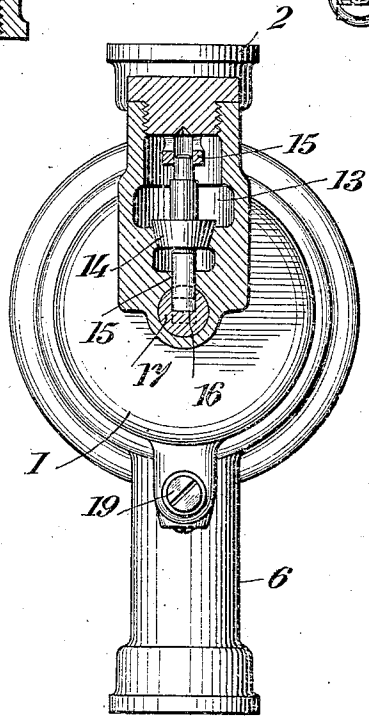




Fig. 2

Witnesses:

H. L. Amer.

B. Dommers

Inventor:

Johann Jakob Aeppli-Stocker.

by Henry Orth & Co. atty.

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# UNITED STATES PATENT OFFICE.

JOHANN JAKOB AEPPLI-STOCKER, OF ZURICH, SWITZERLAND, ASSIGNOR TO THE FIRM OF "SANITAS" AKTIENGESELLSCHAFT FÜR SANITÄRE & HEIZUNGS-ANLAGEN, OF ZURICH, SWITZERLAND.

## COCK.

No. 848,951. Specification of Letters Patent. Patented April 2, 1907.

Application filed September 2, 1905. Serial No. 276,807.

*To all whom it may concern:*

Be it known that I, JOHANN JAKOB AEPPLI-STOCKER, a citizen of the Republic of Switzerland, residing at Zurich, Switzerland, have invented new and useful Improvements in Cocks, of which the following is a specification.

The present invention relates to an improved cock for passage of liquids in which a valve connected with a piston-head controls the passage of the liquid. This cock is provided with a regulator-valve operating in a passage connecting the water or the like inlet with a chamber above the piston-head and operated by means of a sliding wedge for the purpose of admitting water into the chamber behind the piston upon pushing in of the wedge-slide and consequent lifting of the regulator-valve, when the piston will be moved rearwardly and the main inlet-valve correspondingly opened. Upon the wedge-slide being released the parts resume their initial—*i. e.*, closed—position, means being provided to regulate the velocity of the closing operation.

In order to make the invention more readily understood, I will now describe it with reference to the accompanying drawings, in which—

Figure 1 represents a vertical section through my improved cock. Fig. 2 is a plan view of Fig. 1 with a sectional view on line A B. Fig. 3 is a detail part.

In the casing 1 there is provided a chamber 3, communicating at one end with the water-inlet 2 and at the other end, by means of the valve-seat passage 4, with the chamber 5, into which latter opens the outlet 6. A piston-head snugly fits the bore 8 and carries near the end of its stem the main valve-plate 9. The stem end is guided in a socket 10 of the casing-cover 11. The chamber 12 above the piston-head communicates, by means of a passage 13, with the inlet 2, and there is provided in this passage a governor-valve 14, guided at either end in sockets 15. The one beveled-off end bears against the slanting surface 16 of the cylindrical sliding member 17, which latter is provided with a convenient head and operates in a bore of the casing. A passage 18 interconnects the chamber 12 with the outlet 6, and a set-screw 19 serves to regulate the cross-section of this passage 18. Thus it will be seen that the groove cut by forming the beveled or wedge face 16, that is engaged by the lower beveled end of the valve-stem, prevents the cylindrical member 17 from rotating.

The operation of the described parts is as follows: Upon water entering the chamber 3 and passage 13 through the inlet 2 the valves 9 and 14 will be closed. If now the wedge-slide 17 is pushed inwardly, it will cause the valve 14 to open, and water can enter the chamber 12. Since the surface area of the valve 9 is smaller than that of piston 7, the latter will be depressed and the valve 9 opened, so that now water can enter through passage 4 and run off through outlet 6. Upon the wedge-slide being released valve 9, by the pressure acting on it, will close and further passage of water is cut off. The piston 7 moves correspondingly and presses the water ahead of it through the channel 18 into the outlet 6. The wedge-slide 17 and the governor-valve 14 resume their initial position of rest. By operating the set-screw 19 one way or the other the cross-section of the passage 18 can be altered to regulate the velocity of the flow of water through it.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed, I declare that what I claim is—

In a cock, the combination with a casing having an inlet and main valve and piston-chambers therein; of a valve-seat having a passage therethrough between the two chambers, a main valve and piston in the respective chambers rigidly connected, a by-pass between the inlet and piston chambers to admit fluid behind the piston, an auxiliary valve operating at an angle to the main valve and controlling said by-pass, the lower end of which is beveled, an outlet from the piston-chamber in front of the piston therein, a passage connecting the piston-chamber in rear of the piston with the outlet, and a cylindrical sliding member having a bevel-faced groove cut therein engaged and non-rotata-

bly held by the lower end of the stem of the auxiliary valve, whereby when the sliding member is operated said auxiliary valve is lifted to open the by-pass to admit fluid behind the piston to open the main valve connected to the piston, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANN JAKOB AEPPLI-STOCKER.

Witnesses:

JACOB BALTEMPERGER-DÜRR,

A. LIEBERKNECHT.