No. 613,041. Patented Oct. 25, 1898.

G. B. KAMERER.

VALVE OR FAUCET.

(Application filed Feb. 24, 1898.)

(No Model.)

Fig. 1.

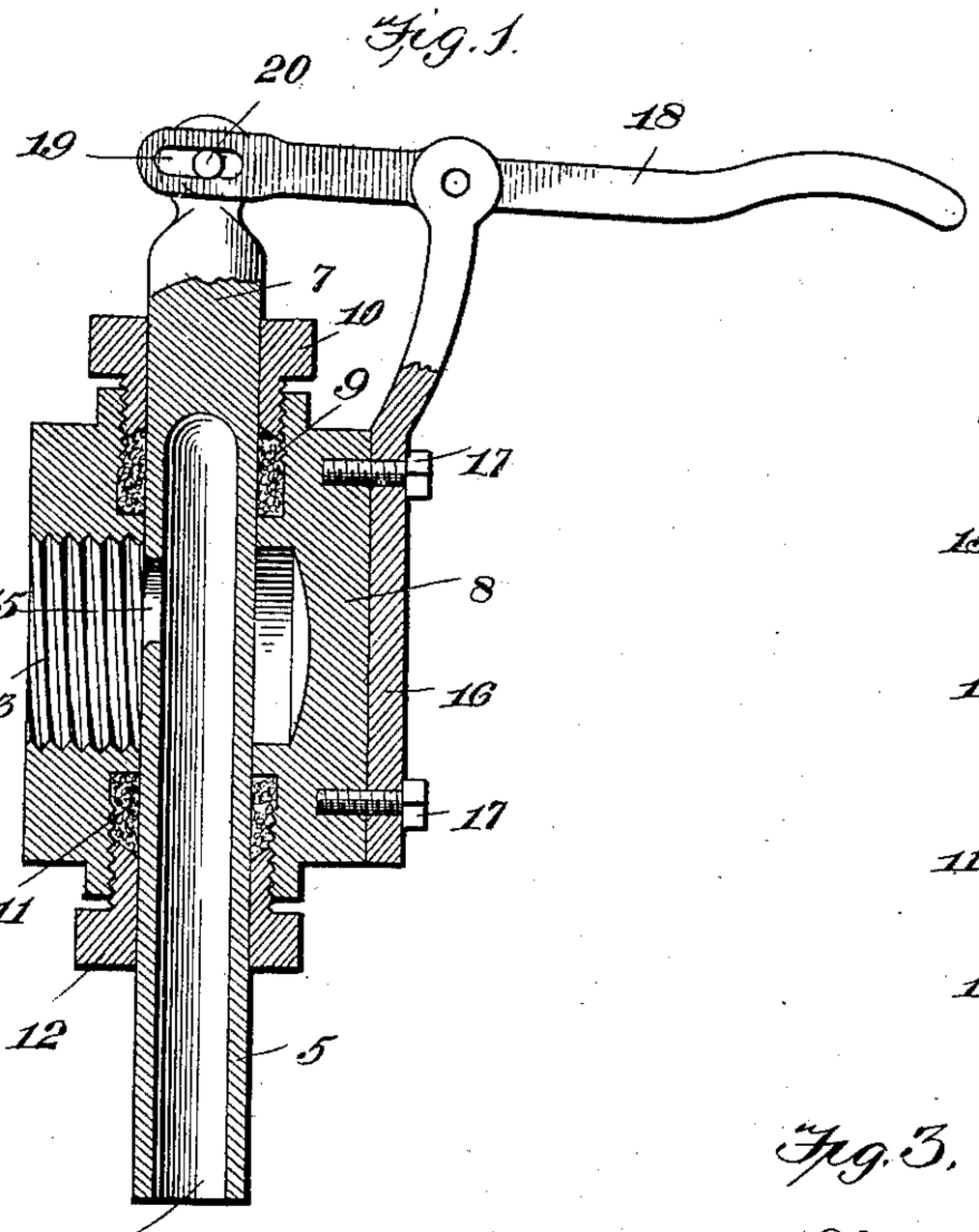


Fig. 2.

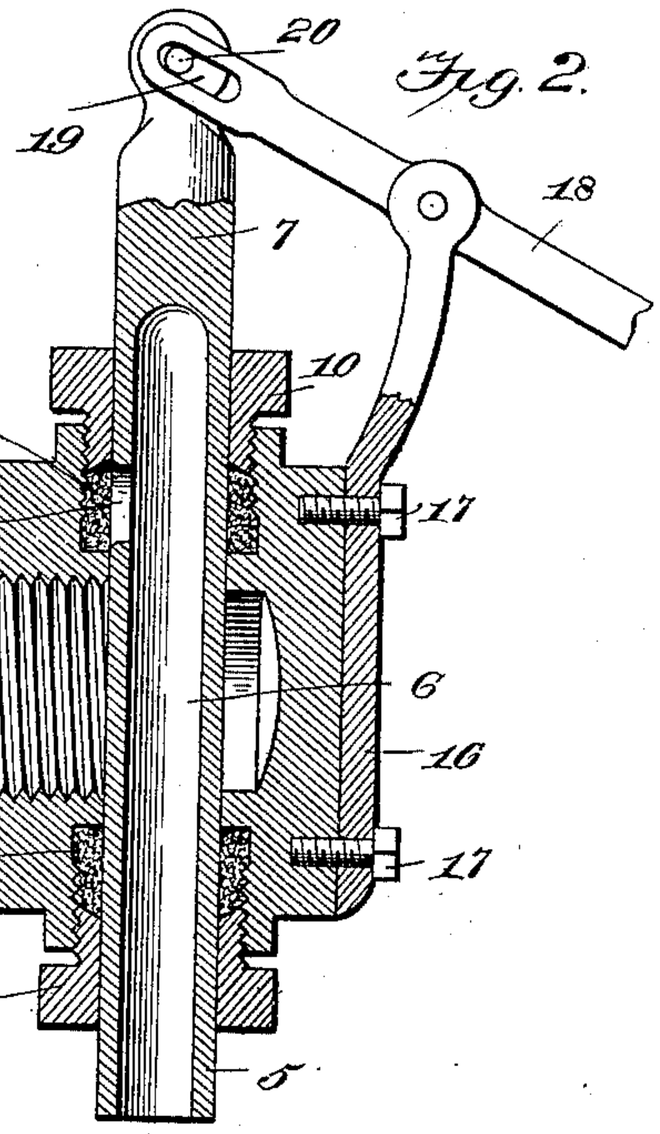
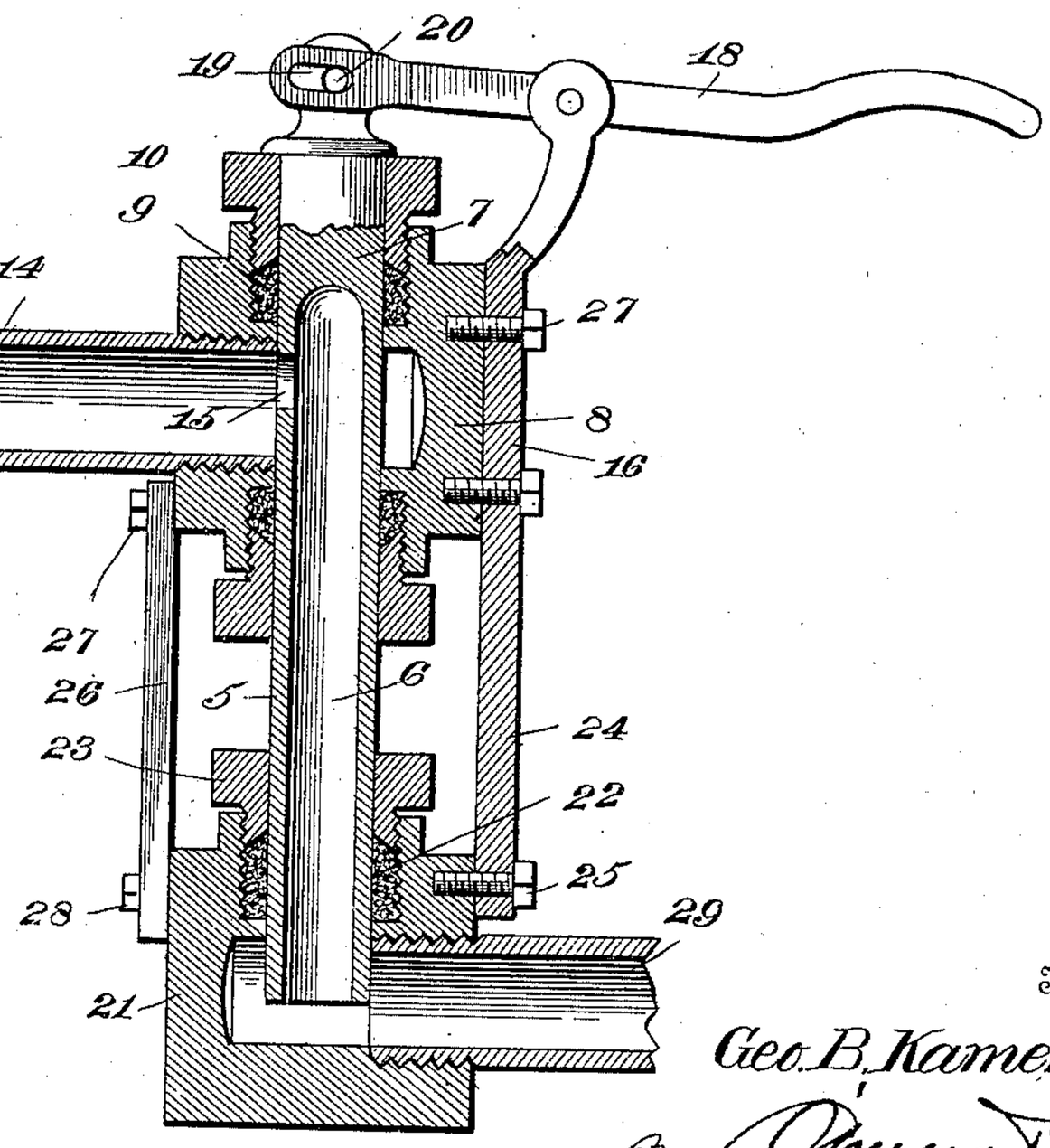


Fig. 3.



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UNITED STATES PATENT OFFICE.

GEORGE B. KAMERER, OF WEST NEWTON, PENNSYLVANIA.

VALVE OR FAUCET.

SPECIFICATION forming part of Letters Patent No. 613,041, dated October 25, 1898.

Application filed February 24, 1898. Serial No. 671,528. (No model.)

To all whom it may concern:

Be it known that I, GEORGE B. KAMERER, a citizen of the United States, residing at West Newton, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Valve or Faucet, of which the following is a specification.

My invention relates to valves or faucets for the passage or discharge of liquid, and more especially to certain improvements whereby a valve is provided without the use of the ordinary valve-seat.

The object of my invention is to generally improve the construction and operation of valves of this class; and with this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the appended claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I will now proceed to describe its construction and operation, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical sectional view through a valve constructed in accordance with my invention, with the parts in position to permit of the passage of a liquid. Fig. 2 is a similar view of the valve closed. Fig. 3 is a view similar to Fig. 1, the construction being slightly modified to adapt the valve for use with liquids under high pressure.

Like numerals of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by numerals, 5 indicates a metallic tube or pipe, the bore 6 of which extends from its lower nearly to its upper end 7, which is closed.

8 indicates a block of any suitable metal, which is longitudinally bored to receive the metallic tube or pipe 5 and which is provided at its upper end with a stuffing-box consisting of a packing-ring 9 and a gland 10 and at its lower end with a similar stuffing-box consisting of a packing-ring 11 and a gland 12. In one side of the block 8 is formed a threaded opening 13, in which to connect a pipe, as at 14 in Fig. 3, and in one side of the metallic tube 5 an opening 15 is provided.

16 indicates a bracket secured to one side of the block 8 by means of bolts or screws 17. In the upper end of this bracket is pivoted a hand-lever 18, which is provided with a slot 19 in its inner end, which receives a pin 20, secured in the upper closed end of the metallic tube 5.

By means of the construction described the metallic tube 5 may be lowered into position, as shown in Fig. 1, to permit of the passage of liquid through the threaded opening 13 of the block 8 and the opening 15 of the tube into and through the longitudinal bore 6 of the tube, to be discharged at its lower end, or the tube may be raised into the position shown in Fig. 2, in which the opening 15 is closed and the passage of the liquid prevented.

In the construction shown in Fig. 3, which, as before stated, is intended to be used in connection with the water-supply under pressure, the same parts are provided as hereinbefore described and illustrated in Figs. 1 and 2, to which is added a second metallic block 21, provided with an opening in its top to admit the lower end of the tube 5, which opening is provided with a stuffing-box consisting of a packing-ring 22 and a gland 23, the bracket 16 being extended beyond the lower end of the block 8, as shown at 24, and secured to the block 21 by means of a bolt 25. This extension 24 of the bracket 16, together with a plate 26, secured at its upper end by a bolt 27 to the block 8 and at its lower end by a bolt 28 to the block 21, serves to securely hold the blocks 8 and 21 in correct relative positions. The block 21 is also provided with a threaded opening on the opposite side from the threaded opening in the block 8, a pipe 29 being threaded into said opening, whereby when the various parts of the valve mechanism are in the positions shown in Fig. 3, the metallic tube being in its lowermost position, the liquid may pass through the pipe 14, the opening 15 in the tube 5, the central bore 6 of the tube 5, and the pipe 29. When, however, it is desired to stop the flow of the liquid, the hand-lever 18 may be depressed, bringing the parts of the valve mechanism into the positions shown in Fig. 2, the metal-

lic tube 5 being raised, so that the opening 15 in the side thereof is closed.

The advantages attending the use of my invention will be readily understood from the foregoing description. By its use all metallic seats for valves are rendered unnecessary, thus obviating the difficulty and trouble arising from leaky valves due to the wearing out of the seat of the valve itself.

With my invention all leakage is prevented by means of the stuffing-boxes, the glands of which may be turned up to expand the packing-rings and prevent leakage by any one sufficiently skilled to manipulate a wrench. No rubber or leather washers on the valve-seats are at all necessary, the packing-rings taking the place of such devices, and, not being exposed to the action of the liquids being drawn through the valves, the packing-rings will last much longer than the usual rubber or leather washers used to make tight valve-seats.

While I have illustrated and described the best means now known to me for carrying out my invention, I do not wish to be understood as restricting myself to the exact details of construction shown, but hold that such slight changes as might suggest themselves to the ordinary mechanic would properly fall within the limit and scope of my invention.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination in a valve, of a metallic block, provided with a longitudinal opening from end to end and a lateral opening communicating therewith, in which the end of a pipe may be coupled, a vertical, longitudinally-movable metallic tube, open at the bottom and closed at the top, fitted in the longitudinal bore of said block and provided with a side opening communicating between its longitudinal bore and the lateral opening in the block, stuffing-boxes around the metallic tube, at each end of the block, a second metallic block, below the first, rigidly secured thereto and provided with a vertical opening partially through it, in line with the metallic tube, to receive the lower end thereof, said block being provided also with a stuffing-box around the tube and with a discharge-opening in one side thereof, in communication with its vertical opening, substantially as described.

2. The combination in a valve, of two metallic blocks, one provided with a central opening entirely through it and a lateral opening communicating therewith to receive a pipe, and the other provided with a vertical opening partially through it and a lateral opening communicating therewith to receive a pipe, a metallic plate connecting the two blocks on one side and a bracket connecting the two blocks on the other side and projecting above the upper block, a longitudinally-movable metallic tube or pipe, open at its lower end and closed at its upper end, fitted in the longitudinal bores of the two blocks, having a side opening communicating with its longitudinal bore and adapted to be brought into communication with the lateral pipe of the upper block, the lower end of the metallic tube opening in the interior of the lower block, stuffing-boxes around the metallic tube at the top and bottom of the upper block and the top of the lower block, a hand-lever pivoted in the upper end of the bracket and provided with a longitudinal slot in its inner end, and a pin projecting from the upper closed end of the metallic tube into said elongated slot, substantially as described.

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