E. BURHORN.

BY-PASS.

APPLICATION FILED SEPT. 16, 1907.

900,479. **Patented Oct. 6, 1908.**

2 SHEETS—SHEET 1.

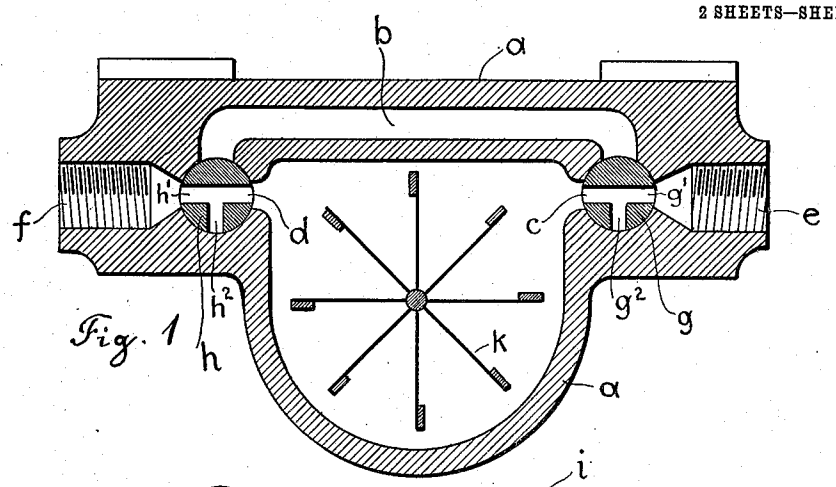

Fig. 1

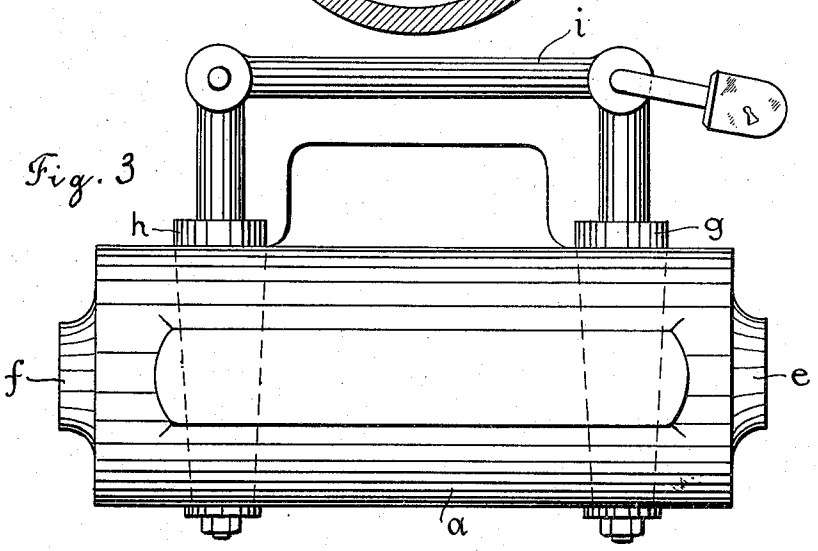

Fig. 3

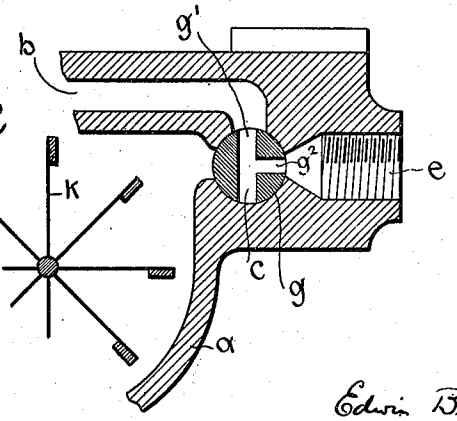

Fig. 2

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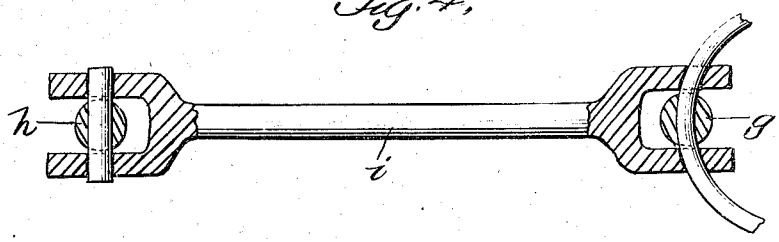
2 SHEETS—SHEET 2.

Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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BY-PASS.

No. 900,479. Specification of Letters Patent. Patented Oct. 6, 1908.

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To all whom it may concern:

Be it known that I, EDWIN BURHORN, a citizen of the United States, and a resident of Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in By-Passes, of which the following is a specification.

My invention relates to improvements in a by-pass for use in connection with a water meter or similar device, and the object of my invention is to provide a simple and effective means for turning the water or other liquid around the meter or similar device so that the device may be inspected or repaired without shutting off the supply. I accomplish this object by the device illustrated in the accompanying drawings in which

Figure 1 is a sectional view of my device with the valve turned to permit the water to pass through the meter. Fig. 2 is a sectional view showing the valve turned so that the water will flow through the by-pass. Fig. 3 is a plan view of the device. Fig. 4, is a detail view partly in section illustrating the manner of connecting the locking bar with the valve stems.

Similar letters refer to similar parts throughout the several views.

In the case a of a meter k or similar device, I provide a passage b from end to end and which passage terminates at its ends in the valve seats c and d respectively. The main supply pipe seat e also opens into the valve seat c at one end of the by-pass b and the main discharge pipe seat f is also connected with the valve seat d at the opposite end of the by-pass b.

Valves g and h are seated in the valve seats c and d respectively. I have shown valves of the conical type but other forms of valve may be used as desired. These valves are each provided with a lateral aperture g' and h' respectively so that when the valves are in the position shown in Fig. 1 apertures g' and h' will form a connecting passage between the meter k or other device and the main supply pipe e and discharge pipe f'. When the valves are in this position, as shown in Fig. 1, the water will pass through the meter k. I provide also in each of the valves lateral apertures g^2 and h^2 respectively branching from the passages g' and h' respectively in such position that the rotation of the respective valves will cause them to register with the ends of the passage b. I also provide means such as the bar i upon the valves for locking them in position. The bar i has apertured ears at each end, one pair of such ears straddling the stem of the valve h and being held in such relation by a transverse pin passing through the upper end of said ears and the other pair of ears straddling the stem of the valve g and being held by a padlock, the shackle of which passes through said stem and said ears.

My device being assembled as above described, the valves g and h may be turned to the position shown in Fig. 1, so that the lateral apertures in the valve g will register with the supply pipe e and the meter k at one side and the lateral aperture h' in the valve h will register with the meter k and the discharge pipe f. In this position the water will pass through the meter. When it is desired to disconnect the meter for repairs or examination the valves g and h are turned to the position shown in Fig. 2 so that the main aperture g' in the valve g registers with its end of the passage b in the case a while the lateral aperture g^2 registers with the supply pipe e and the valve h is suitably turned so that its main aperture h' registers with its end of the passage b in the case a while the lateral aperture h^2 registers with the discharge pipe f. In this position of the valves the water will pass through the valves g and h and the passage b and will not go through the meter k, leaving the meter k free and idle.

Having thus described my invention, what I claim is—

1. In a device of the character described, the combination of a casing for a water meter, with a passage therein opening into the supply and discharge mains, valves at the ends of said passage whereby the water may be turned into the meter or diverted therefrom through the said passage, and means for locking the valves against movement, substantially as shown and described.

2. In combination, a casing composed of a main portion and a by-pass passage which has its ends terminating at points adjacent said main portion of the casing, said by-pass passage being independent of said main portion of the casing, a valve seat at each end of said by-pass passage, communicating with said main portion of the casing, and manually operable valves in said valve seats constructed in one position thereof to allow of the passage of fluid through the main portion

of the casing, and in another position thereof, to allow of the passage of the fluid through said by-pass passage.

3. In combination, a casing composed of a main portion and a by-pass passage which extends around one side of said main portion and is independent of the latter and has its ends terminating adjacent the ends of said main portion, a valve seat at the termination of each end of said by-pass passage communicating with said passage and with said main portion, and a manually operable turning plug, in each valve seat, each plug having a main aperture therein to allow of the flow of liquid through said main portion in one position of the plugs and a branch aperture to allow of the flow of the liquid through said valves and through said by-pass passage in another position of said valves.

Signed at New York in the county of New York and State of New York, this 30th day of August A. D. 1907.

EDWIN BURHORN.

Witnesses:

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JUSTIN S. GALLAND.