

No. 607,732.

Patented July 19, 1898.

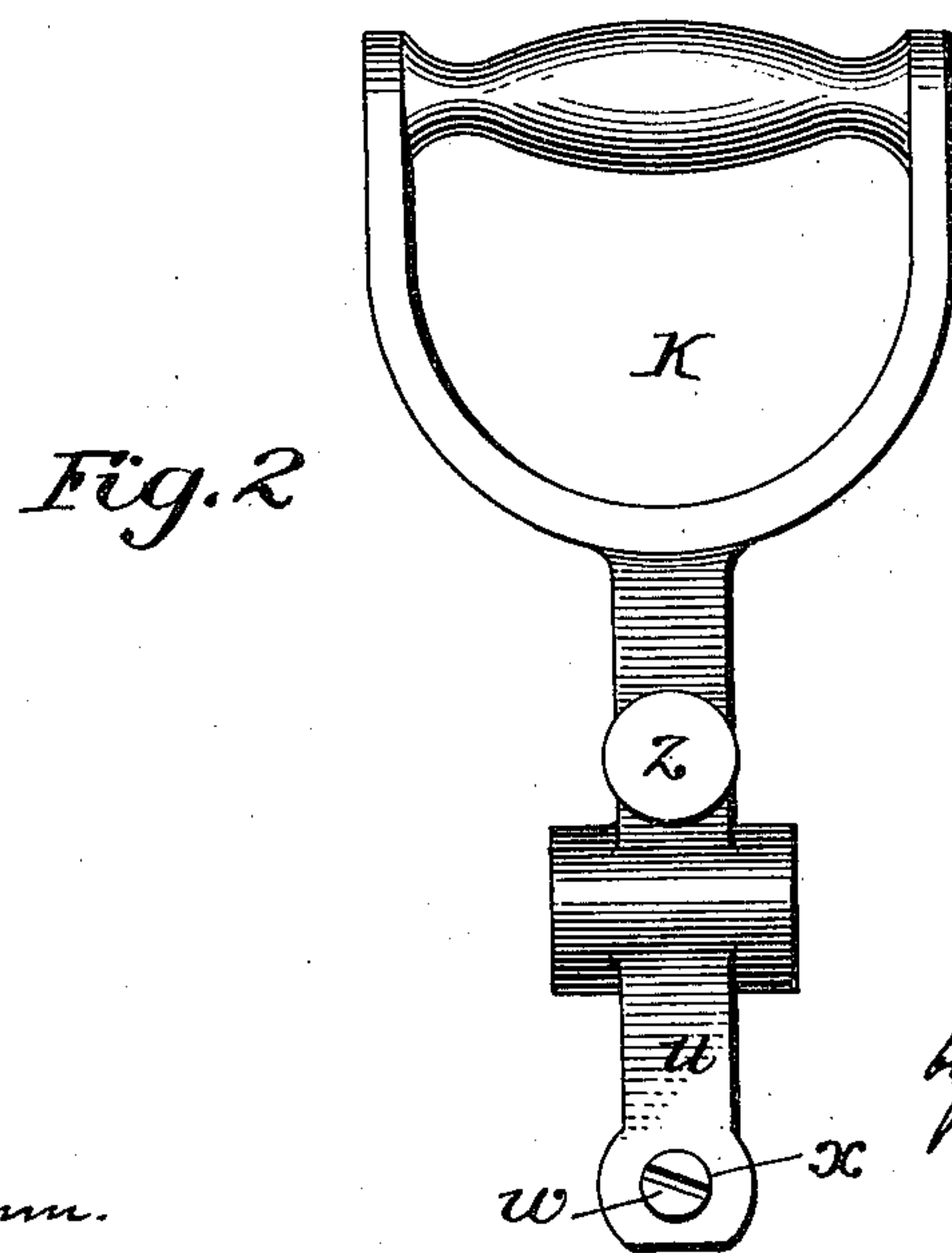
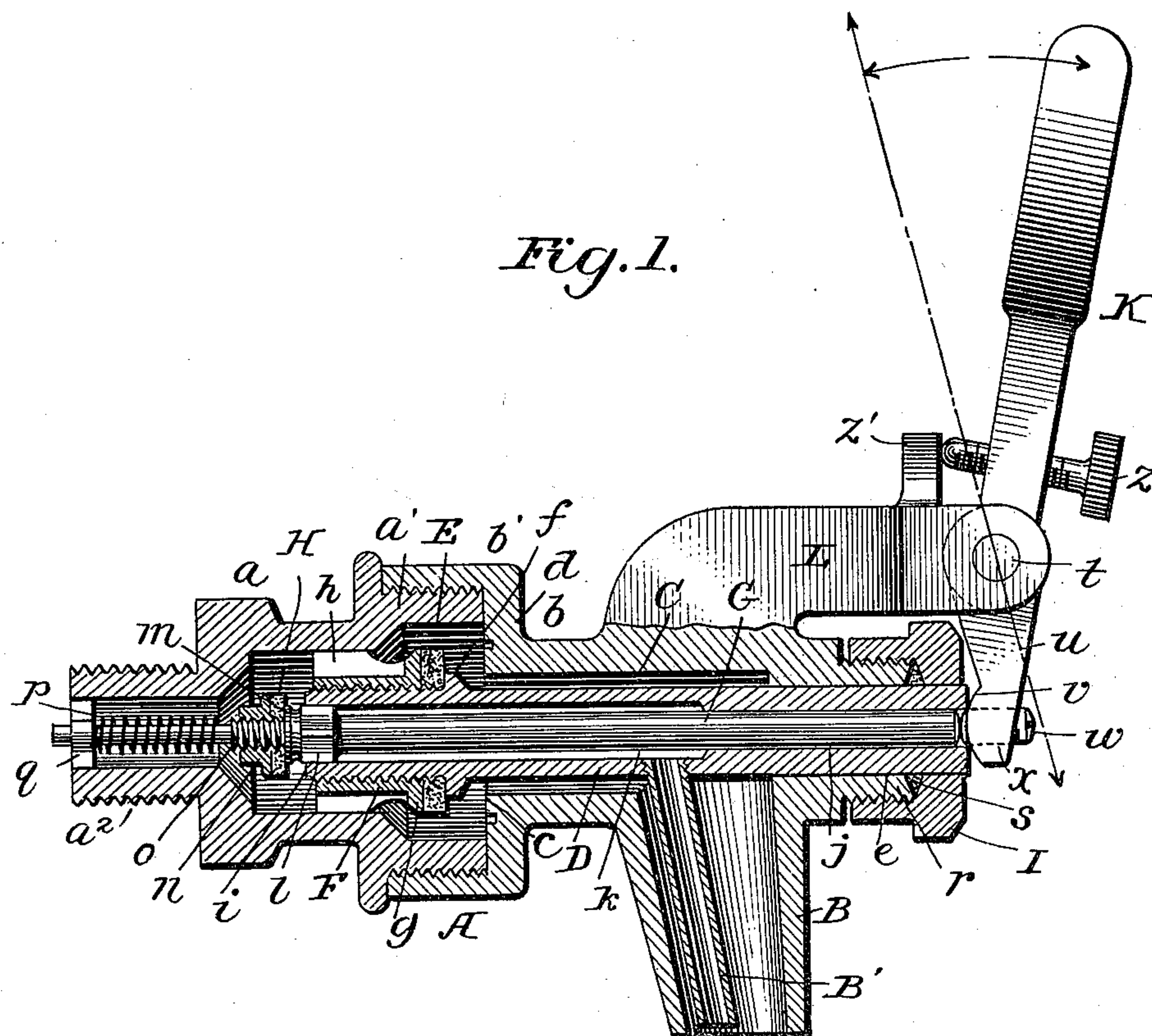
F. BURGER & H. M. WILLIAMS.

SELF CLOSING FAUCET.

(Application filed July 23, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses

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2 Sheets—Sheet 2.

Fig. 3.

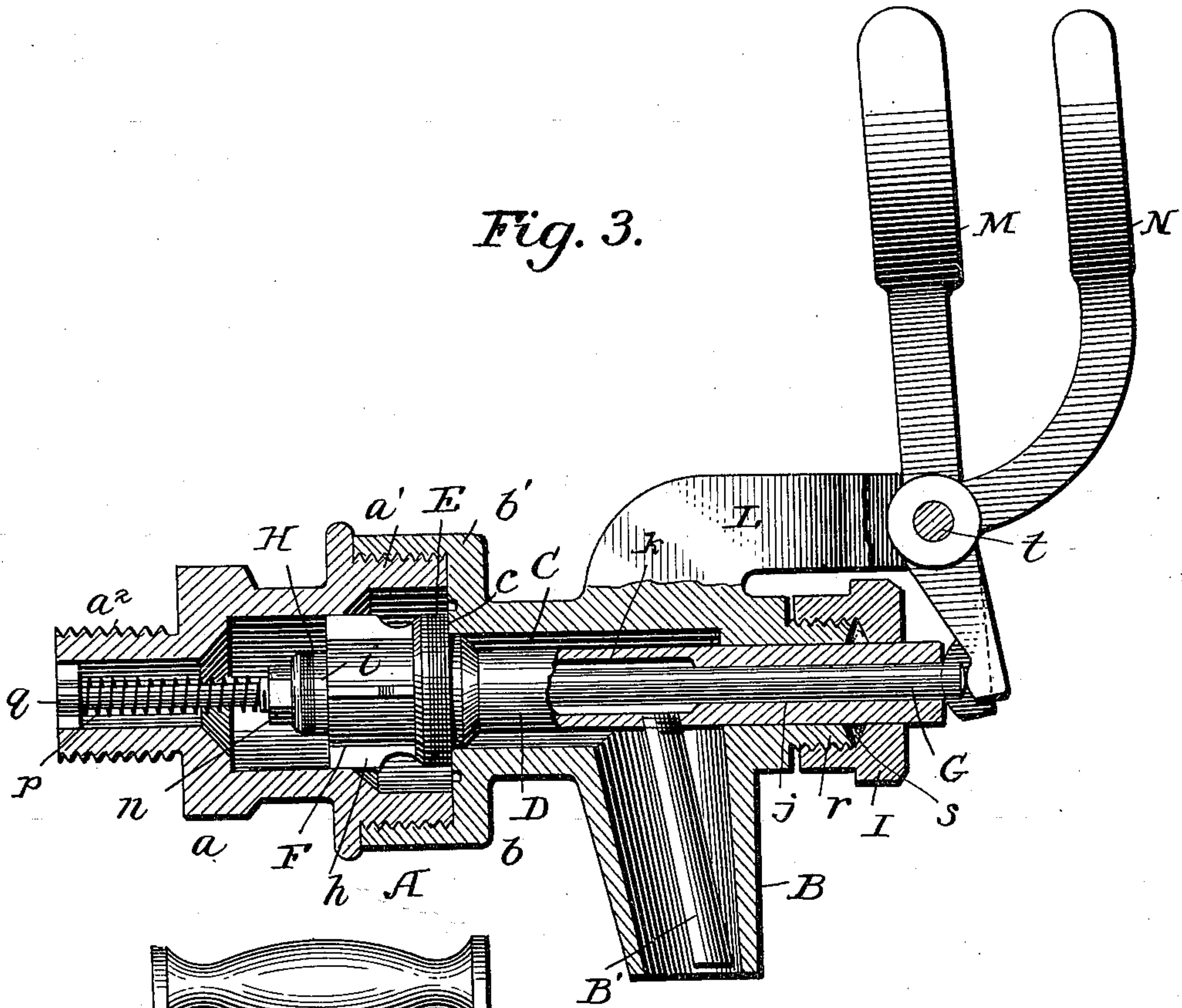
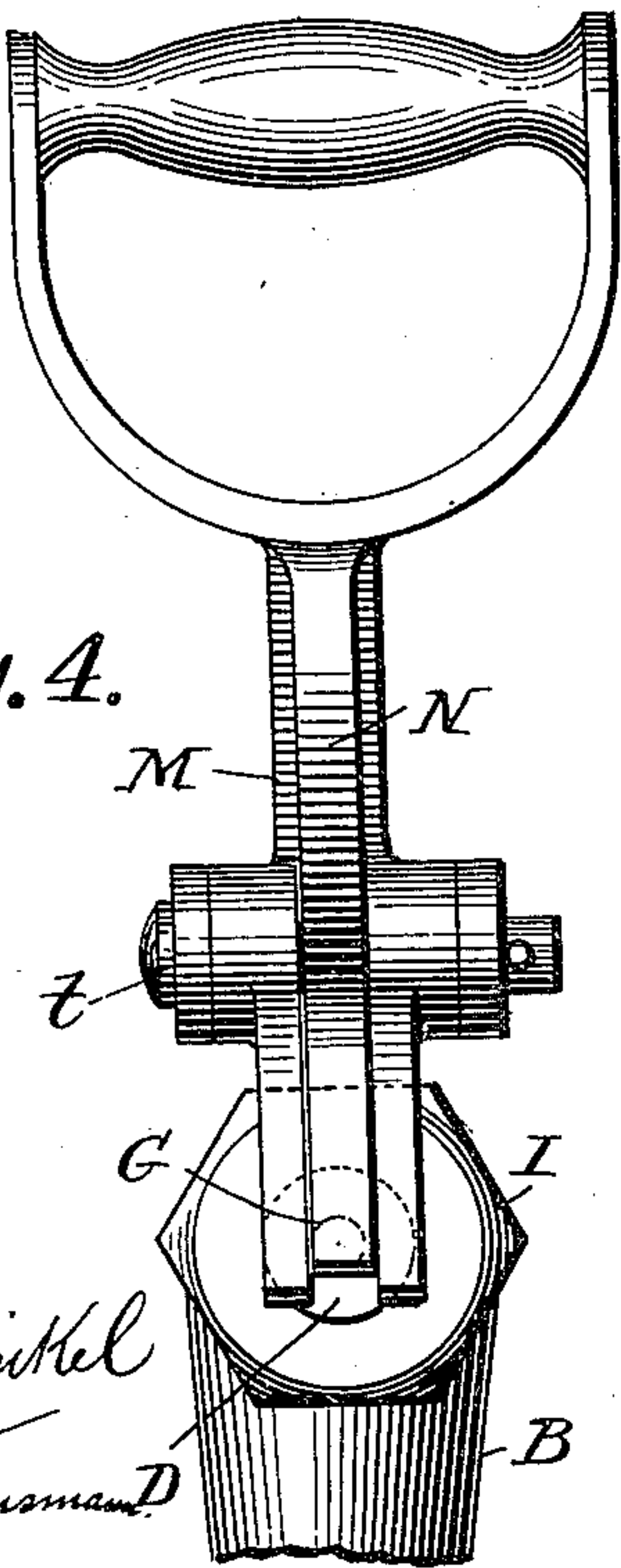
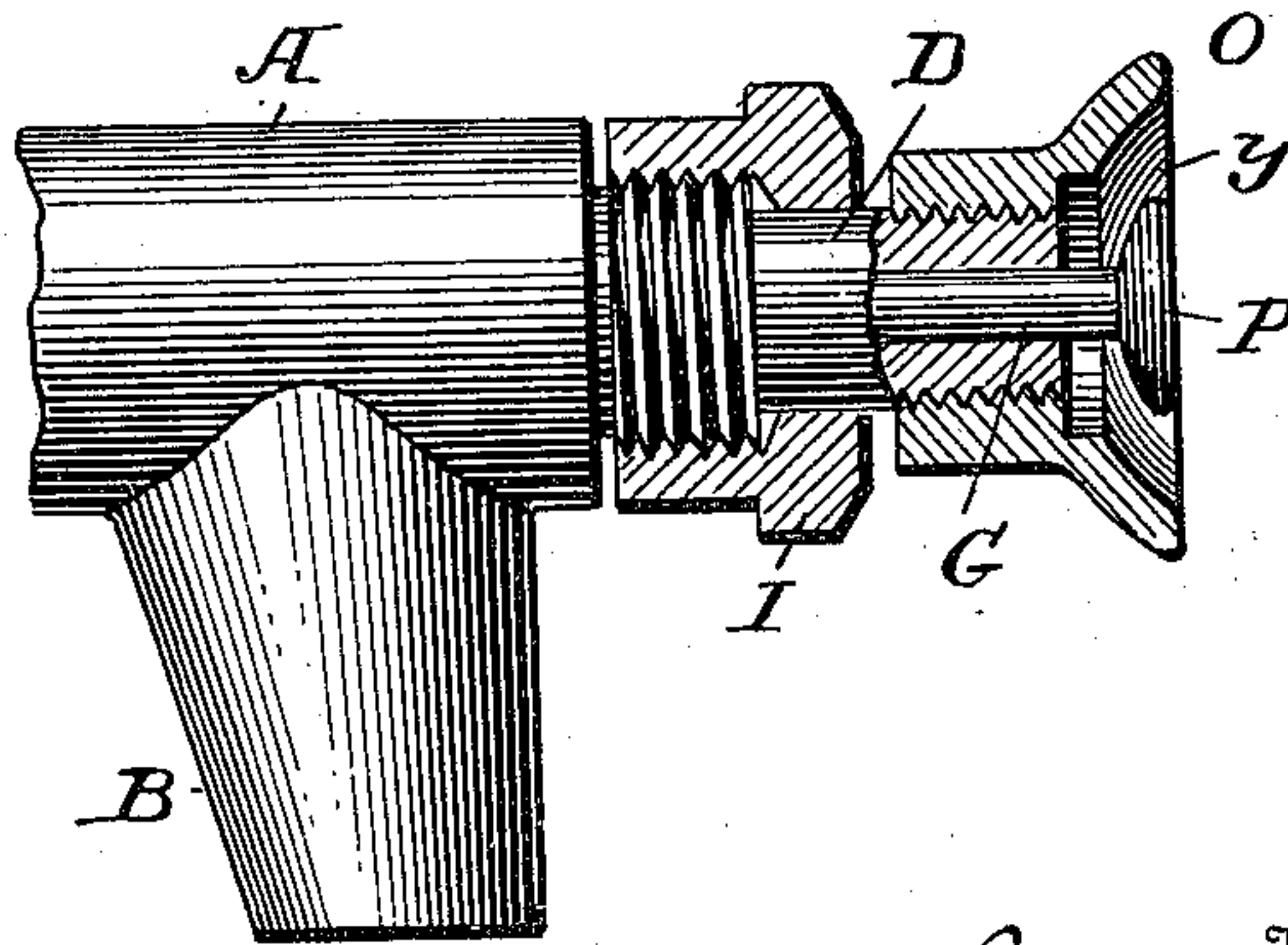


Fig. 4.



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Fig. 5.



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UNITED STATES PATENT OFFICE.

FRANZ BURGER AND HENRY M. WILLIAMS, OF FORT WAYNE, INDIANA;
SAID BURGER ASSIGNOR OF ONE-HALF TO SAID WILLIAMS.

SELF-CLOSING FAUCET.

SPECIFICATION forming part of Letters Patent No. 607,732, dated July 19, 1898.

Application filed July 23, 1897. Serial No. 645,716. (No model.)

To all whom it may concern:

Be it known that we, FRANZ BURGER and HENRY M. WILLIAMS, citizens of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Self-Closing Faucets, of which the following is a specification.

This invention relates to improvements in self-closing faucets, and more particularly to that class in which there are separate discharge-passages of different sizes controlled by separate valves so arranged that the passages may be opened independently or together to obtain either a small stream of liquid under the full pressure of the source of supply or a larger stream under comparatively low pressure, as desired, the invention being specially serviceable in connection with soda-water fountains, although equally applicable for other purposes, and is therefore not to be limited to any particular use.

The object of the invention is to generally improve and simplify the construction and operation of faucets of this kind and to render them less liable to get out of order; and to these ends the invention consists in the construction and arrangement of parts, substantially as hereinafter more particularly set forth, and illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal central section of a faucet embodying our invention with the valves open. Fig. 2 is a front view of the operating-handle detached. Fig. 3 is a longitudinal central section of the faucet with the valves closed and showing a somewhat different means for operating the valves. Fig. 4 is an end view of Fig. 3; and Fig. 5 is a side view, partly in section, showing still another form of operating means for the valves.

Referring to the drawings, A designates the casing or body of the faucet, which may be of any suitable construction, but which as preferred and shown consists of two sections *a b*, the adjacent ends *a' b'* thereof being enlarged and provided, respectively, with exterior and interior screw-threads for detachably securing the sections together. The inner end *a²* of the section *a* is reduced in size and screw-threaded to adapt the faucet for con-

nection with the liquid-receptacle or other source of supply, as usual, while the section *b* is provided at or near its outer end with a discharge-nozzle B, extending at an angle therefrom and communicating with the main passage C through the body of the faucet.

D is a tubular valve-stem provided near its inner end with a valve E, adapted to close against a seat *c*, formed on an offset portion or shoulder *d* of the section *b* of the faucet-body, while the other end of the stem projects through and is guided in an opening *e* in the end wall of said section. The valve E may be secured on the stem D in any convenient way; but as shown it is clamped between an annular shoulder *f* and the flanged end *g* of the thimble F, screwed onto the stem and having radial ribs *h*, bearing against the adjacent inner wall of the section *a* of the body and serving to guide the inner end of the stem in its reciprocations.

A second valve-stem G is disposed concentrically within the stem D and is provided with a valve H, adapted to a seat *i*, formed on the adjacent end of the stem D. The interior opening in the stem D is preferably of two different diameters, the smaller portion *j* fitting closely upon and serving as a guide for the outer end of the stem G, while the larger portion of said opening constitutes a passage *k*, surrounding the stem G and leading from the inner end of the stem D to and communicating with a relatively small discharge-nozzle B', detachably united to the stem D and arranged within the nozzle B, as shown. The inner end of the stem G is suitably guided within the passage *k*, as by radial lugs *l*, and the valve H is preferably secured on its stem by being confined between a shoulder *m* thereon and one or more nuts *n*, screwing onto the threaded end *o*. A spiral spring *p* is preferably interposed between the end of the stem G and a support *q* and tends to maintain the valves against their seats, although, if desired, the spring may be dispensed with and the pressure of the liquid against the valves be relied on to hold them normally closed.

A stuffing-box is formed round the outer projecting end of the valve-stem D by an annular screw-cap I, screwing onto a threaded

collar *r* of the faucet-body, an interposed packing-ring *s* insuring against leakage.

Different means for operating the valves may be employed. Thus in Fig. 1 a spade-handle *K* (shown detached in Fig. 2) is pivoted by a pin *t* in the forked end of an arm *L*, supported on the faucet-body. The lower end *u* of the handle is provided with a convex bearing-face *v*, in position to engage the outer end of the valve-stem *D*, while a screw-plug *w*, adjustable in an opening *x* in the handle, bears on the end of the valve-stem *G*, which in the closed position of the valves projects slightly beyond the end of the stem *D*, as clearly seen in Fig. 1. By the adjustment of the plug *w* the extent of movement of the stem *G* with respect to the stem *D* may be determined, and if at any time it is desired to open the valve *E* only the plug may be entirely removed or so far withdrawn as to permit the end of stem *G* to enter the opening *x* and the handle to act directly on the stem *D*.

A thumb-screw *z*, working in a threaded opening in the handle *K*, may be adjusted to bear against a lug *z'* on the arm *L*, and thus hold the handle in position to maintain one or both the valves open when a constant flow through the faucet is desired.

In Figs. 3 and 4 two handles *M N* are employed, one for each valve, the handles being pivoted at *t* to the arm *L*. The lower end of the handle *M* is forked and engages only the stem *D*, and the lower end of the handle *N* is located between the arms of the fork and engages the stem *G*, the upper portion of the handle *N* being bent outwardly, as shown, for convenience of manipulation.

In Fig. 5 a disk *O* with a countersunk outer face *y* is screwed onto the threaded end of the valve-stem *D*, while a button *P* is mounted on the end of the valve-stem *G*, the disk and button serving as a convenient means for opening the valves. By adjusting the disk on the stem *D* the independent movement of the stem *G* may be controlled, or, if desired, be entirely prevented, so that the two stems will move together, as will be understood.

The operation of the improved faucet is apparent. When a small stream of liquid under the maximum pressure is desired, the valve *H* is lifted from its seat in the manner already indicated, and the liquid then flows through the passage *k* in the stem *D* and out through the discharge-nozzle *B'*. To obtain a larger stream at a somewhat reduced pressure, the valve *E* is unseated, when a free flow is permitted through the main passage

C and thence out through the relatively large discharge-nozzle *B*. By opening both valves, as shown in Fig. 1, two distinct streams are obtained.

Without limiting ourselves to the precise construction shown, we claim—

1. The combination in a faucet having separate passages therethrough, of a discharge-nozzle for each passage, valves and sliding stems therefor arranged one within the other, and means for operating the valves in succession by a movement in one direction, substantially as described.

2. The combination in a faucet having passages therethrough of different sizes, of a discharge-nozzle for each passage, valves and sliding stems therefor, and a pivoted operating-handle arranged to open the valves in succession by a movement in one direction, substantially as described.

3. The combination in a faucet having passages therethrough of different sizes, of a discharge-nozzle for each passage, valves and concentrically-arranged sliding stems therefor, a pivoted operating-handle arranged to open the valves successively by a movement in one direction, and means on the handle for maintaining it in position after adjustment, substantially as described.

4. The combination in a faucet having separate passages therethrough, of valves, concentrically-arranged stems for the valves, a pivoted handle for operating the valves, and an adjustable plug in the handle in line with one of the stems, substantially as described.

5. The combination in a faucet having separate passages therethrough, of valves, concentrically-arranged stems for the valves, an arm on the casing, a handle pivoted to the arm, a screw-plug in the handle in line with one of the stems, and a thumb-screw on the handle in position to engage said arm, substantially as described.

6. The combination in a faucet having two discharge-passages, of valves therefor, concentrically-arranged stems for the valves, a forked arm on the casing having a lug, a spade-handle pivoted to the arm, and a thumb-screw carried by the handle in line with said lug, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

FRANZ BURGER.

HENRY M. WILLIAMS.

Witnesses:

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