

No. 886,360.

PATENTED MAY 5, 1908.

L. W. EGGLESTON.
WATER COCK.

APPLICATION FILED MAR. 22, 1907.

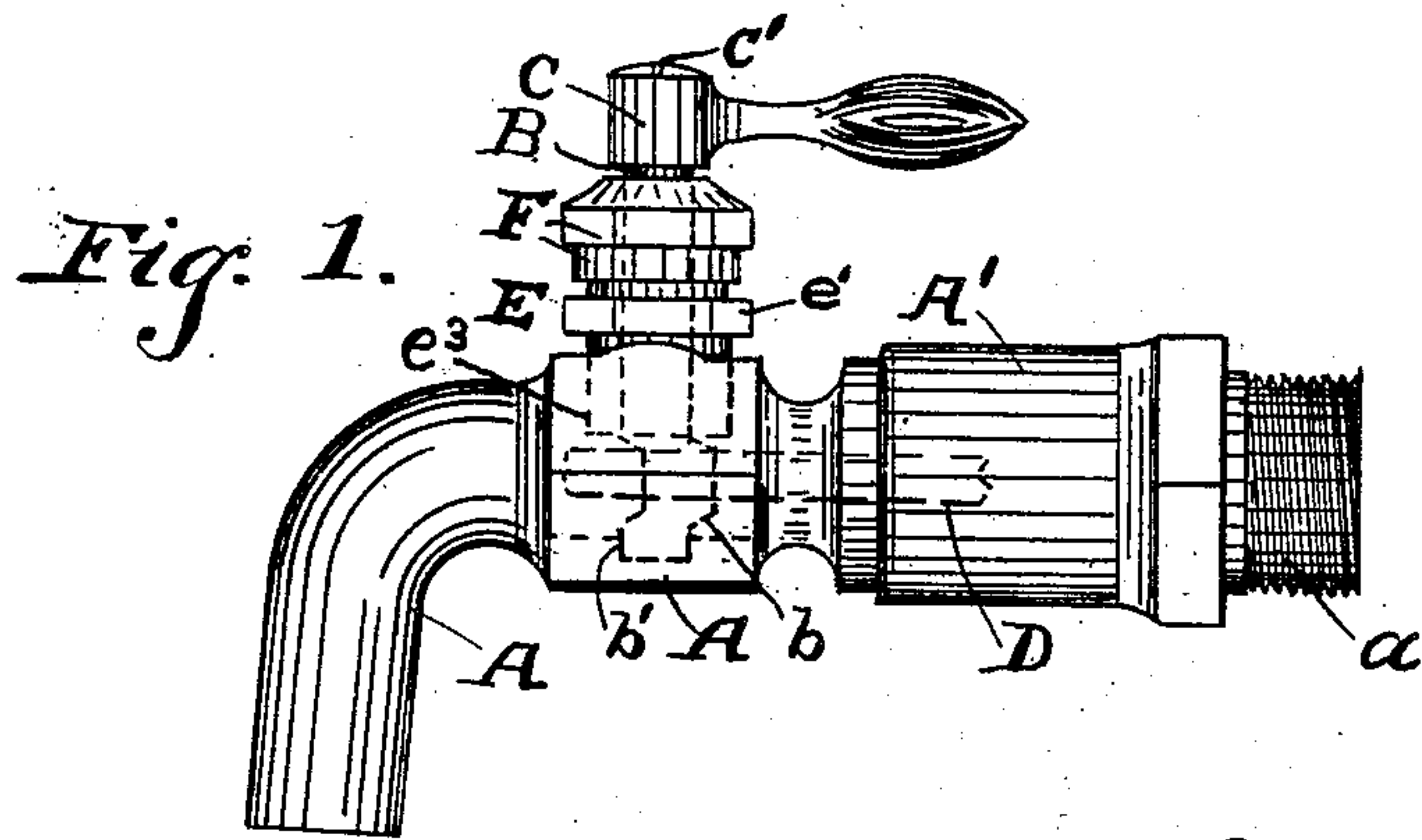


Fig. 2.

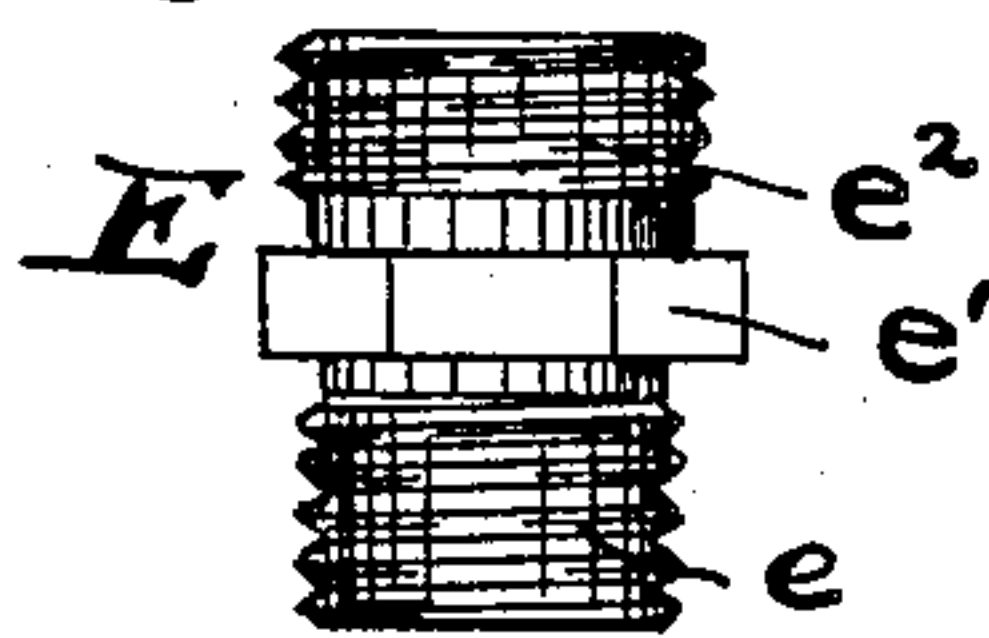


Fig. 3.

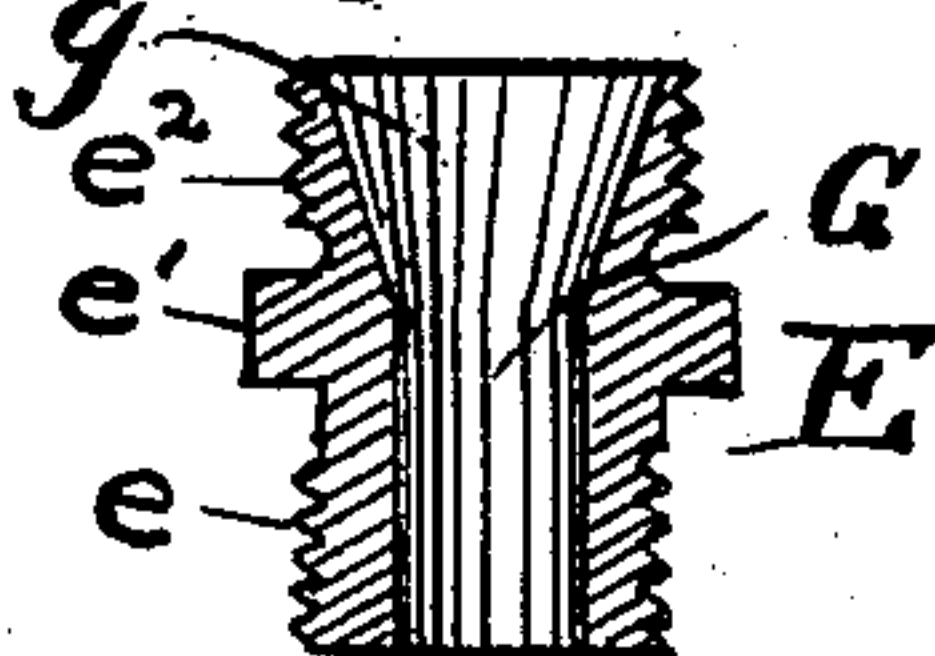


Fig. 4.

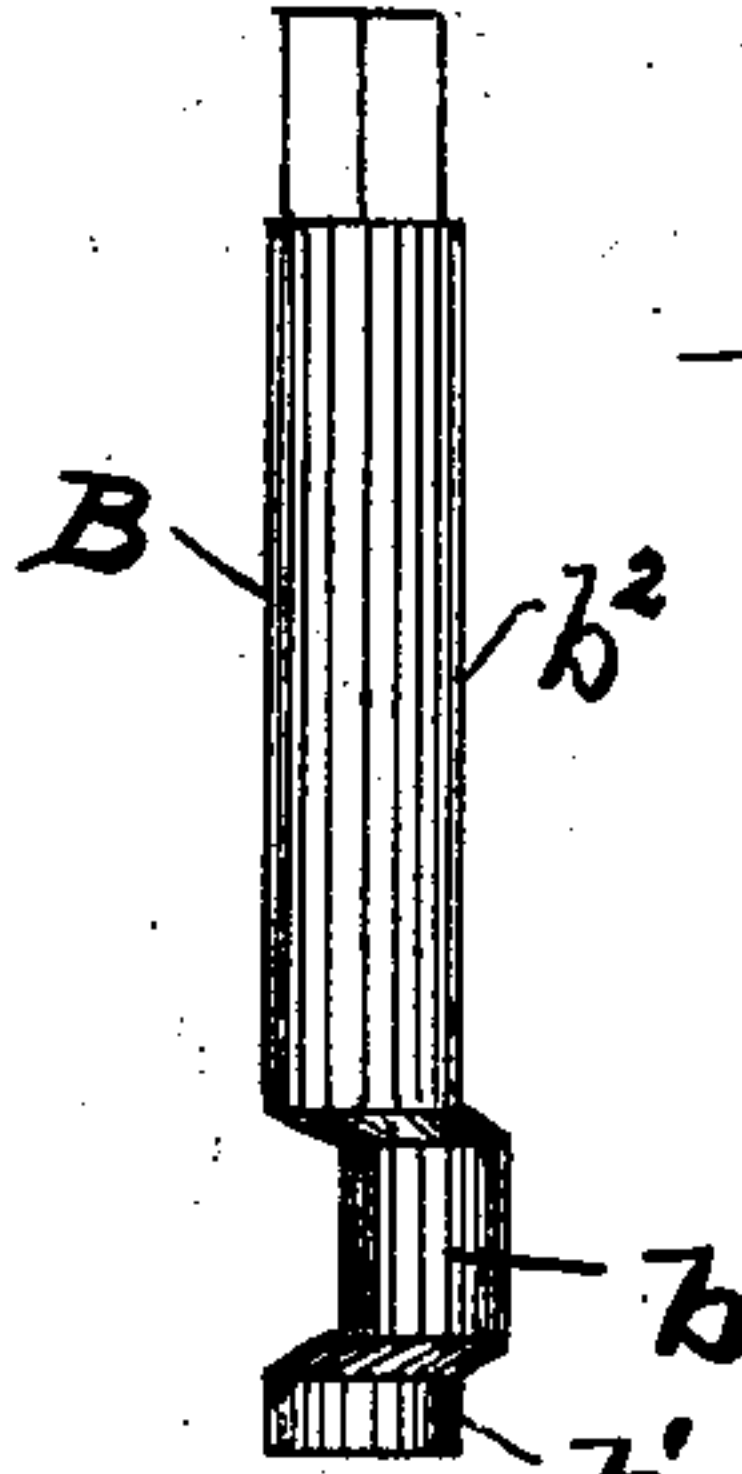


Fig. 5.



Fig. 6.

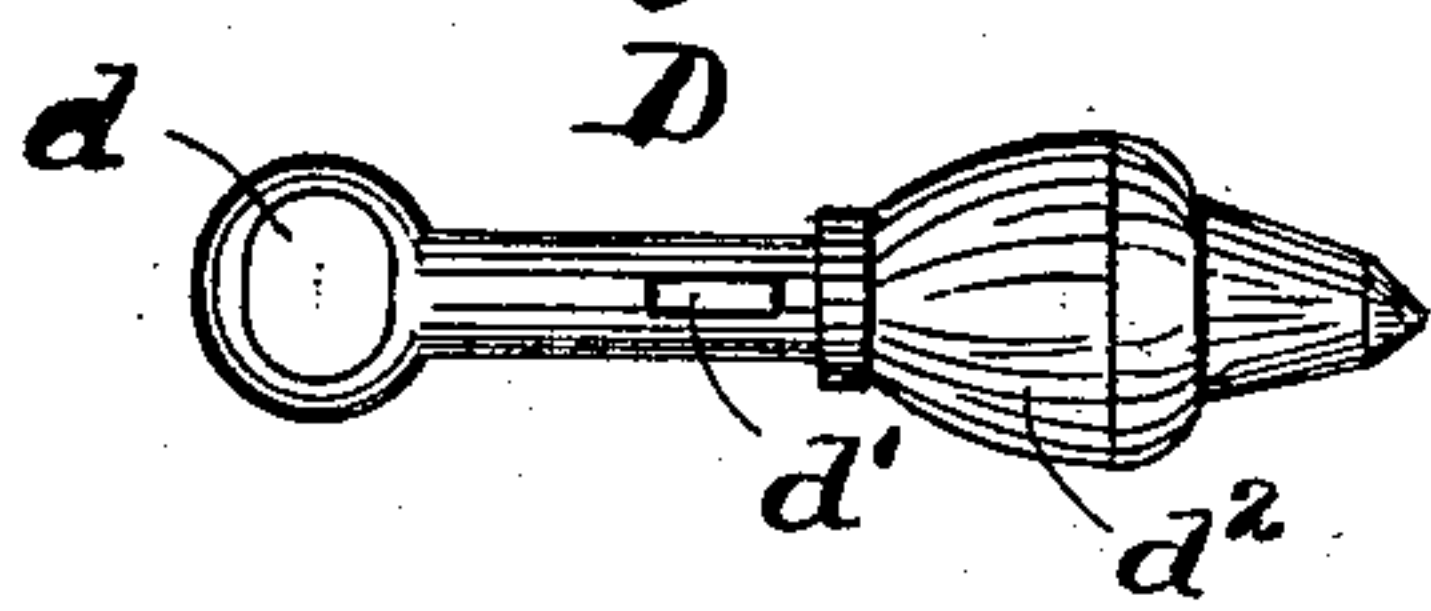


Fig. 7.

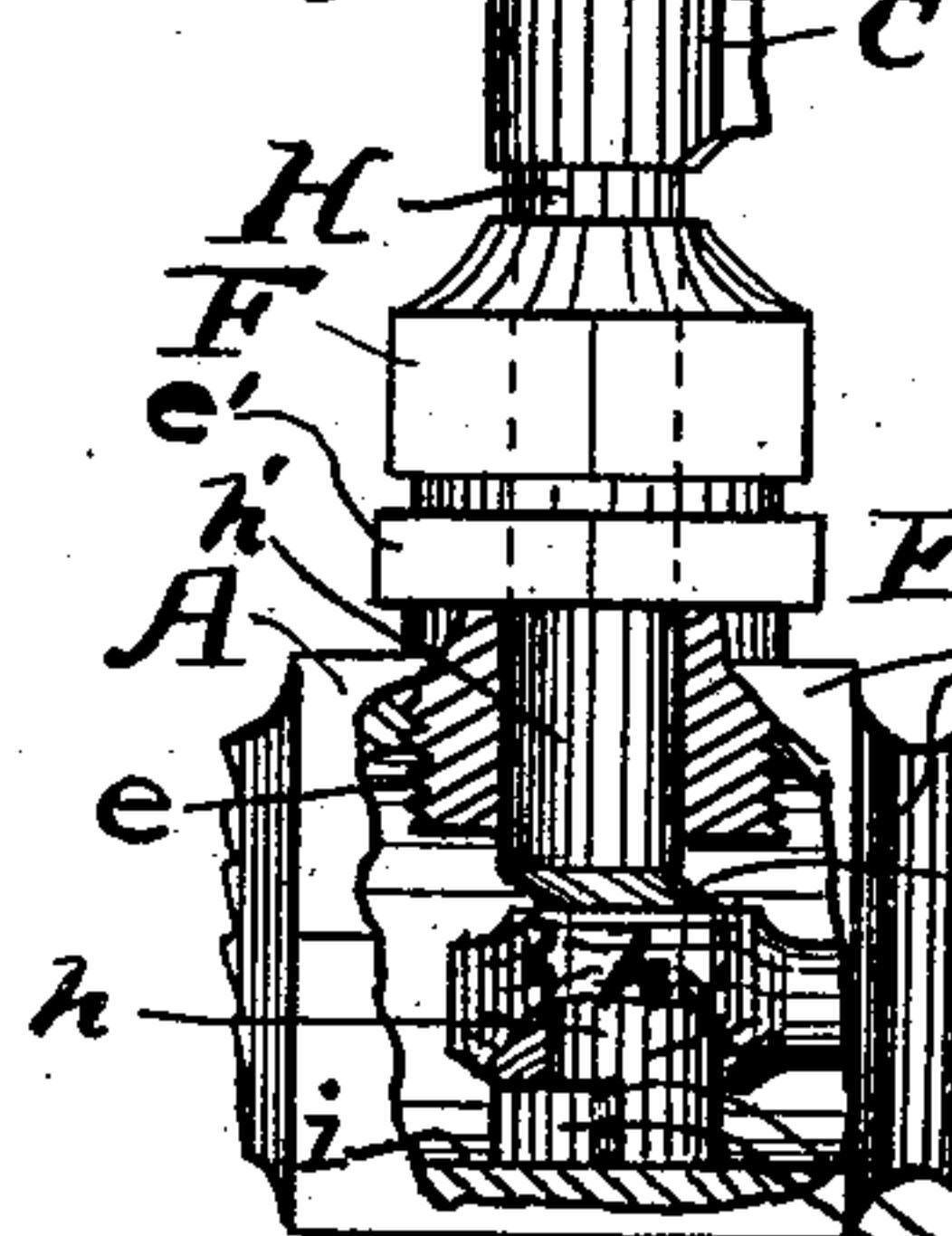


Fig. 8.

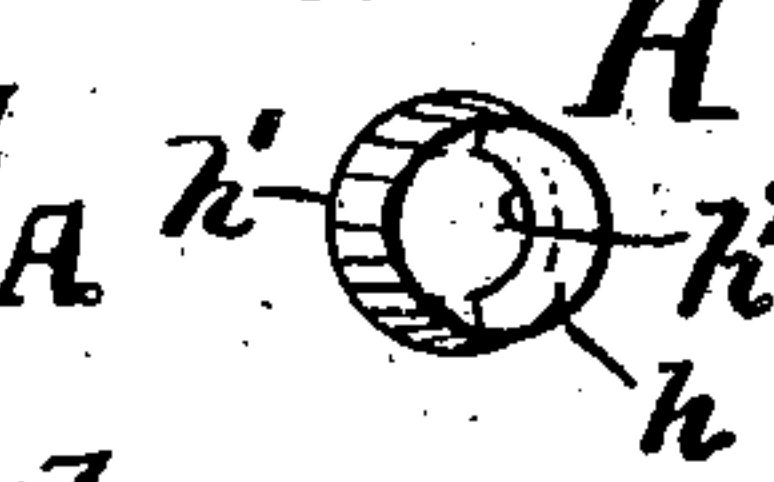
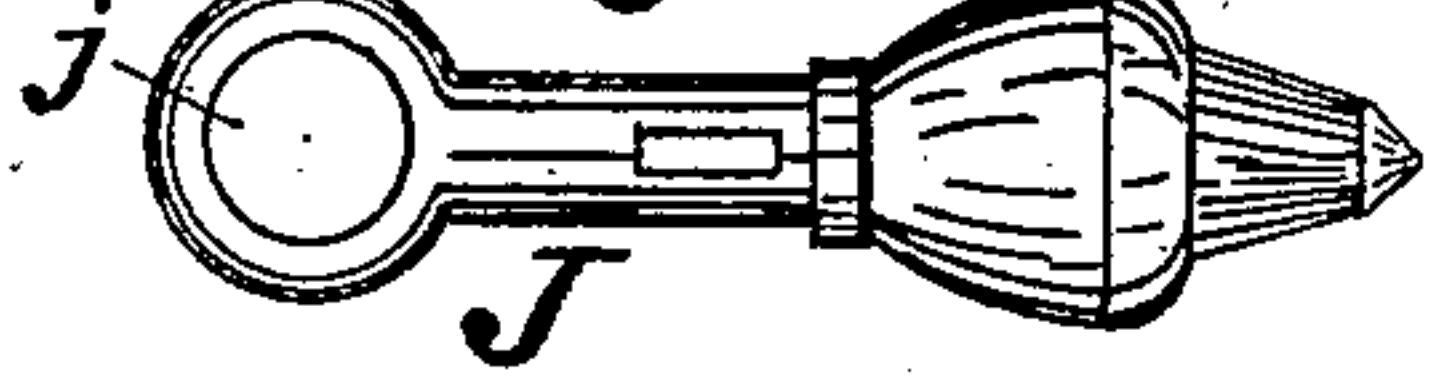


Fig. 9.



Witnesses:

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UNITED STATES PATENT OFFICE.

LEWIS WATSON EGGLESTON, OF APPLETON, WISCONSIN.

WATER-COCK.

No. 886,360.

Specification of Letters Patent.

Patented May 5, 1908.

Application filed March 22, 1907. Serial No. 363,843.

To all whom it may concern:

Be it known that I, LEWIS WATSON EGGLESTON, a citizen of the United States, and a resident of Appleton, in the county of Outagamie, in the State of Wisconsin, have invented certain new and useful Improvements in Water-Cocks, of which the following, when taken in connection with the drawing accompanying and forming a part hereof, is a full and complete description sufficient to enable those skilled in the art to which it pertains to understand, make, and use the same.

The object of this invention is to provide a water cock, particularly of the kind known as the Fuller bib, which will be simple in construction and not liable to wear the packing or the parts thereof in contact with the packing or adjacent thereto.

A further object of the invention is to obtain a water cock whereof the wearing surfaces will be immersed in or adjacent to the water flowing through the cock (when the cock is open) whereby the surfaces subjected to wear will be lubricated by the liquid flowing therethrough.

I have illustrated a Fuller bib embodying this invention in the drawing hereinbefore referred to in which

Figure 1 is a side elevation of a Fuller bib, with parts particularly embodying this invention, indicated by broken lines. Fig. 2 is an elevation of a part of a water cock embodying this invention. Fig. 3 is a vertical section of a part forming an element of a water cock embodying the invention, such part being shown in elevation in Fig. 2. Fig. 4 is an elevation of the stem of the water cock embodying this invention. Fig. 5 is a bottom end view of the stem of the water cock embodying this invention. Fig. 6 is an elevation of the longitudinally movable plug of the water cock. Fig. 7 is a side elevation of a portion of a water cock embodying this invention showing a modification in the construction thereof. Fig. 8 is a bottom end view of the stem of the water cock embodying this invention in the modified construction illustrated in Fig. 7. And Fig. 9 is the ordinary longitudinally movable plug of a Fuller bib forming a part of the modified construction illustrated in Fig. 7.

A reference letter applied to designate a given part is used to indicate such part throughout the several figures of the drawing wherever the same appears.

A is the shell and nozzle of a Fuller bib and

A' is a connection attached at one end to the shell A and at the other end attachable, by means of screw threads *a* to any suitable pipe or pipe fitting.

B is the rotatably mounted stem of the water cock provided with a square upper end on which the handle C is fitted and secured in place by the screw C'. The lower end of the stem B is provided with the crank *b*. Part *b'* of stem B is concentric with the upper part *b*² of such stem.

D is the longitudinally movable plug of the device which is actuated by the stem B when handle C is turned to open and close the cock.

d, Fig. 6, is an aperture at one end of the longitudinally movable plug D in which aperture the crank *b* of stem B is placed when the several parts of the device are assembled in operative position. The aperture *d* is oval in the construction illustrated in Figs. 1 to 6, both inclusive, where the stem B has the end *b'* concentric with part *b*². The part *b'* fits in a corresponding recess in the floor of the passage way through the shell A, see Fig. 1. *d'* is a guide on the stem of plug D, and *d*² is the head of such plug.

E is a combined stem guide and packing receptacle firmly secured in shell A by means of screw threads *e*. *e'* is the portion of the part *e* over which a wrench may be fitted to turn it into place.

*e*², *e*³, are screw threads at the upper end of part E and F is a stuffing box cap on stem B provided with internal screw threads corresponding with and fitting over the screw threads *e*².

The stem B rotatably fits the part G of the hole through the combined stem guide and packing receptacle E and the packing to the stem is placed in the flaring portion *g* of such hole.

As will be observed by reference to Fig. 1 of the drawing the above described construction provides supporting walls for the stem B adjacent to the crank *b* both above and below the engagement of such crank with the stem of the longitudinally movable plug D. The supporting wall to the portion of the stem B adjacent to and above the crank *b* thereof is obtained by the extension of the stem guide portion of the combined stem guide and packing receptacle E below the part *e'* thereof and into the chamber or passage way of the shell A as is well illustrated by dotted lines (*e*³) in Fig. 1 of the drawing.

In the illustration of the modification contained in Figs. 7, 8 and 9, the ordinary stem of a water cock of this kind may be used, as H, (Fig. 7), provided with the ordinary crank h , and further provided with the circular recess h^2 (Fig. 8), at the lower end thereof, concentric with part k' of such stem. In this modification the shell A is provided with the pin I extending up from the floor i of the passage way through the shell. Pin I is concentric with part h' of the stem H, and extends into the circular recess h^2 at the lower end of such stem. The pin I thus forms a supporting axle around which the stem H turns when the device is operated. In this construction the ordinary longitudinally movable plug (J, Fig. 9), is used, such plug having the circular hole or aperture j at one end of the stem thereof, in which the crank h of the stem H is fitted.

The variation in construction between plugs D and J, (see Figs. 6 and 9), is simply in the difference in cross section of apertures d and j .

The guide and bearing afforded by the part G of the hole G, g , through part E, in both the constructions illustrated in the drawing, is so near to the crank of the stem rotatably mounted therein that considerable use of the device may be had without appreciable wear of such stem and guide (or of the packing to the stem), even when the part b' of stem B and recess h^2 of stem H, (with the corresponding constructions of the floor of the passage way through the shell A), are omitted.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. The combination of a shell provided with a passage way therethrough, a longitudinally movable plug in the passage way, a stem provided with a crank to engage with the plug, a bearing to the stem on the floor of the passage way and a combined stem bearing and packing receptacle removably mounted on the shell, such stem bearing and packing receptacle depending below the roof of such passage way, such packing receptacle located above the bearing, and an adjustable cap removably mounted on the packing receptacle; substantially as described.

2. The combination of a shell provided with a passage way therethrough, a longitu-

dinally movable plug in the passage way, a stem provided with a crank to engage with the plug, and provided with a recess at the lower end of such crank, a bearing to the stem on the floor of the passage way, such bearing consisting of a non-rotatable pin fitting in the recess in the crank and around which pin such crank turns, and a bearing to the stem depending below the roof of such passage way; substantially as described.

3. In a water cock, the combination of a shell provided with a passage way therethrough and with a screw threaded aperture at right angles to such passage way, a longitudinally movable plug in the shell, a stem rotatably mounted in the shell and provided with a crank to engage with the longitudinally movable plug, a combined stem bearing and packing receptacle provided at its ends with external screw threads, the threads at one end arranged to fit the threads in the aperture in the shell and such combined stem bearing and packing receptacle arranged relative to the shell to extend in the passage way through the shell to near the crank of the stem, and a bearing to the lower end of the stem located in the passage way, substantially as described.

4. In a water cock, the combination of a shell provided with a passage way therethrough and with a screw threaded aperture at right angles to such passage way, a longitudinally movable plug in the shell, a stem rotatably mounted in the shell and provided with a crank to engage with the longitudinally movable plug, a cap on the stem, and a combined stem bearing and packing receptacle provided at one end with external screw threads arranged to fit the threads in the aperture in the shell, at the other end provided with external screw threads arranged to fit corresponding threads in the cap, and with an intermediate portion provided with straight sides, such combined stem bearing and packing receptacle arranged relative to the shell to extend in the passage way through the shell to near the crank of the stem; substantially as described.

Signed at Chicago, Ill., March 20, 1907.

LEWIS WATSON EGGLESTON.

In the presence of—

CHARLES TURNER BROWN,
CORA A. ADAMS.