

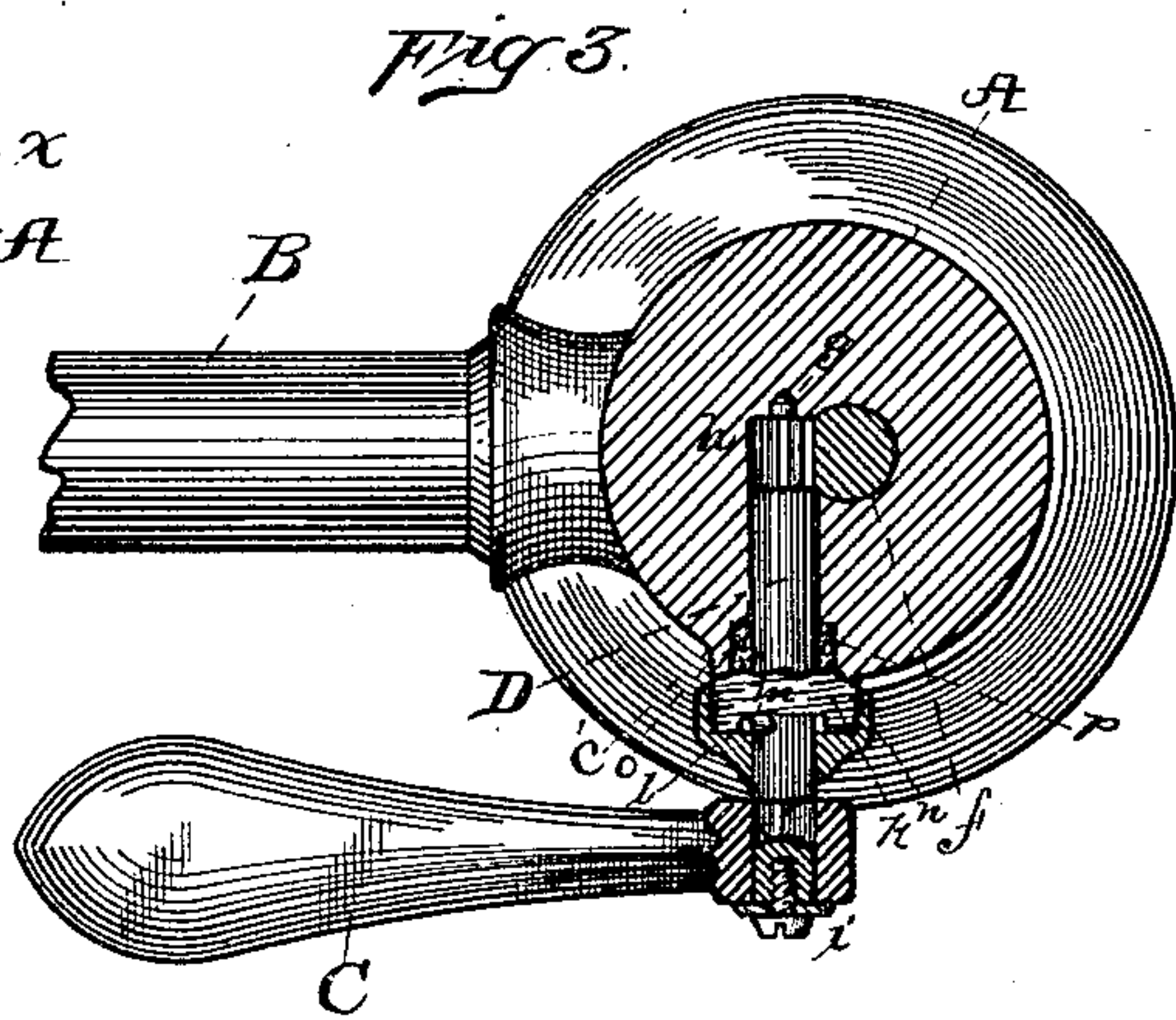
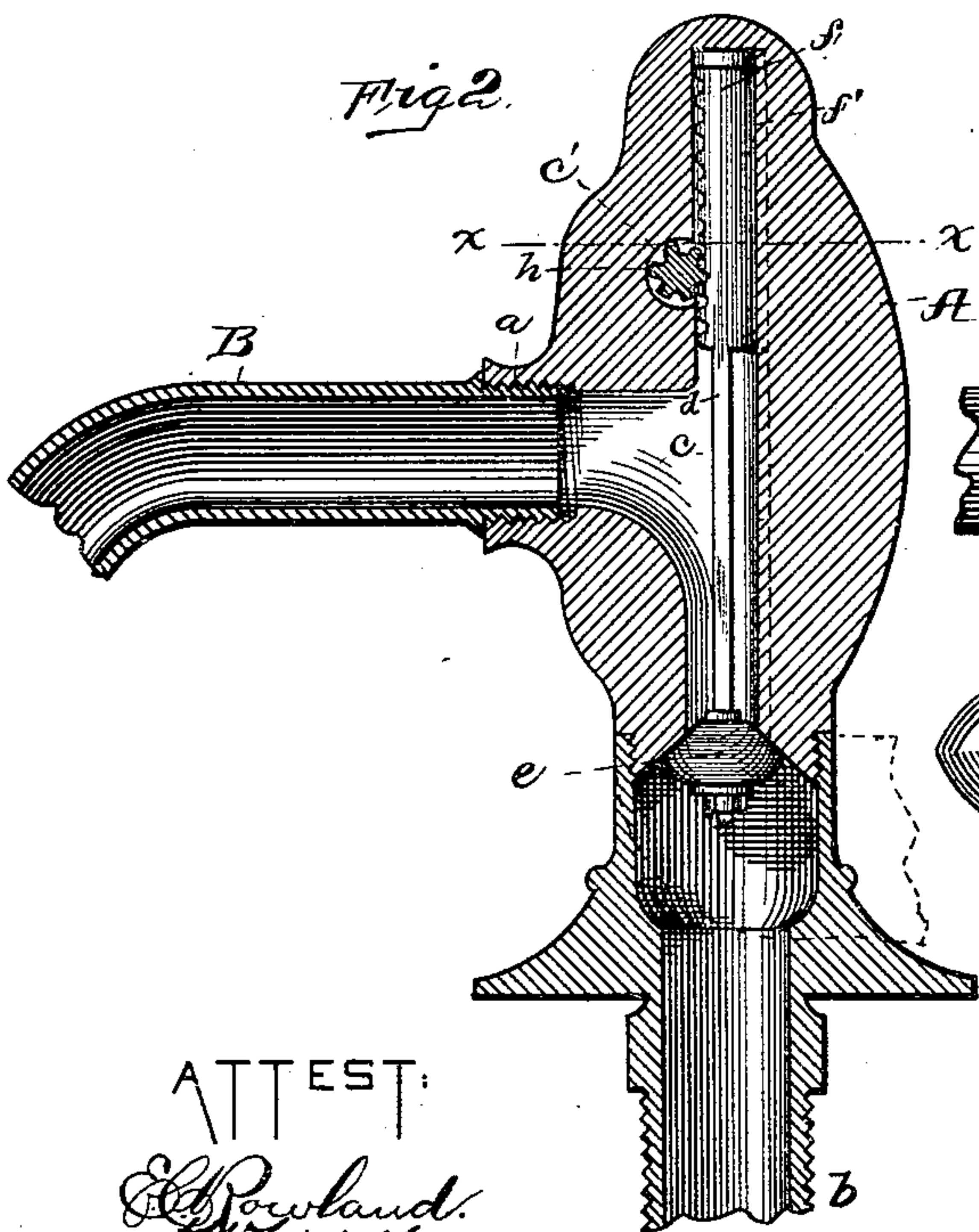
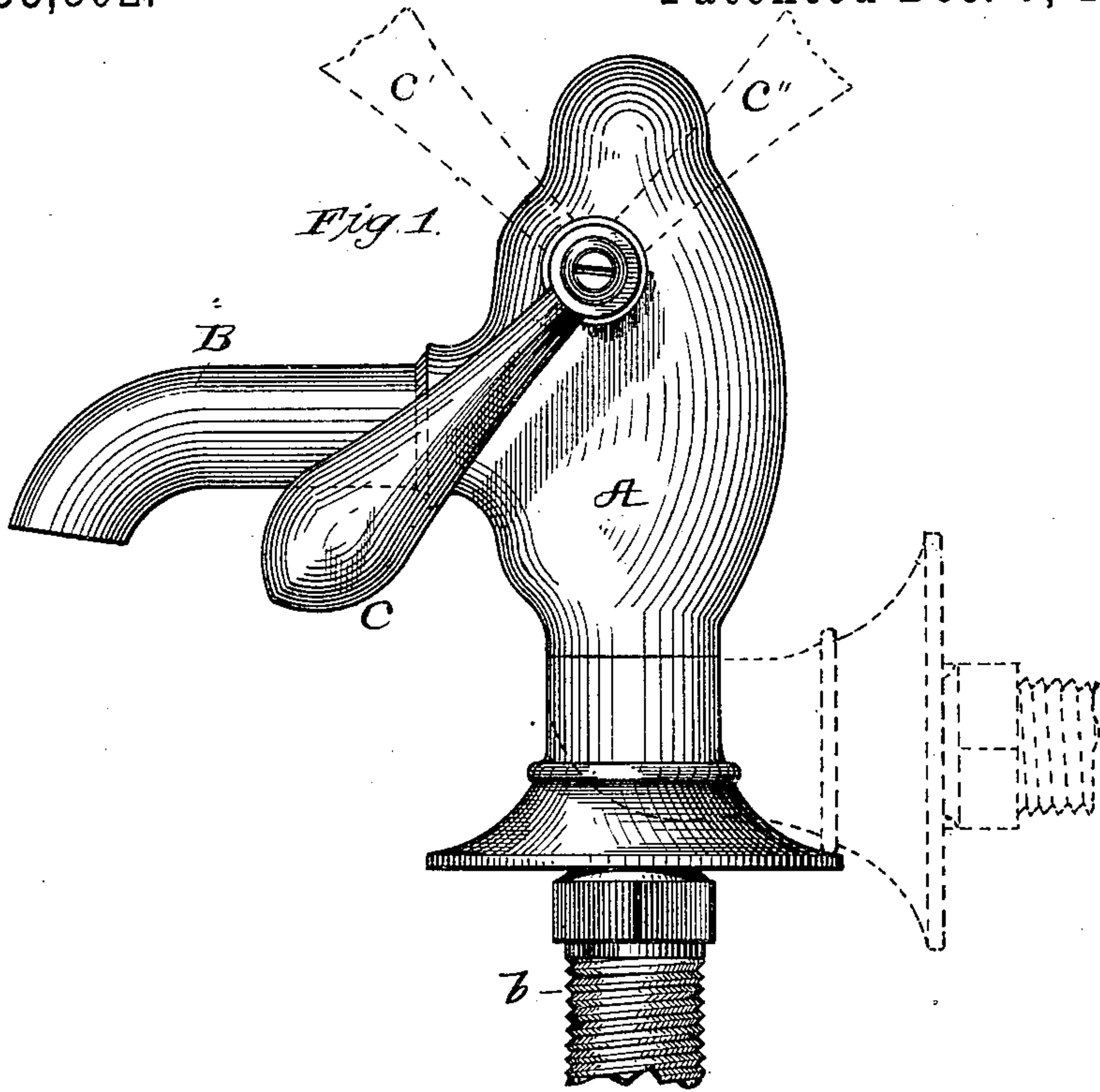
(No Model.)

C. J. MORTIMER.

STOP COCK.

No. 353,802.

Patented Dec. 7, 1886.



ATTEST:

E. B. Rowland.
Atty. in Genl.

INVENTOR:

Charles J. Mortimer
By *Wm. L. Lacey*
attest

UNITED STATES PATENT OFFICE.

CHARLES J. MORTIMER, OF NEW YORK, N. Y.

STOP-COCK.

SPECIFICATION forming part of Letters Patent No. 353,802, dated December 7, 1886.

Application filed March 17, 1886. Serial No. 195,611. (No model.)

To all whom it may concern:

Be it known that I, CHARLES J. MORTIMER, of New York, in the county of New York and State of New York, have invented a certain new and useful Improvement in Stop-Cocks, of which the following is a specification.

The object of my invention is to produce a stop-cock that may be employed either as a self-closing cock or as a hand-cock, and which is not only an improvement upon the former kind as heretofore in use, but also has the further novel feature—the combination of these two kinds in one device.

Heretofore the self-closing action of stop-cocks has been produced by the use of a spring-actuated valve set in the body of the faucet, and which is operated by vertical pressure on a button or lever, which depresses the spring and opens the water-way. When the pressure is withdrawn, the flow ceases, the spring causing the valve to reclose the mouth of the supply-pipe. Should the tension of this spring decrease from use, or for any other reason should the spring fail to act well, the valve will only partially close the mouth of the supply-pipe, and a constant and wasteful flow of liquid will result. By my invention, however, this difficulty is overcome by substituting for the spring a simple contrivance, to be presently explained, which accomplishes the desired result, and is more satisfactory and not as likely to get out of order or to become as readily or at all ineffectual.

In the annexed drawings, forming a part hereof, Figure 1 is a view in elevation of my faucet; Fig. 2, a vertical section of the same, and Fig. 3 a longitudinal section through line *x x* of Fig. 2.

A is the body of the faucet, B the spout, and C the handle. Spout B is joined to body A at *a*, and the faucet is connected with the supply-pipe at *b*. There is an opening, *c*, through body A, which is made continuous with the spout and supply-pipe. In opening *c* is the valve rod or shaft *d*, to the lower end of which is attached the valve or stopper *e*, of rubber, leather, or other suitable material, closing upwardly and in the direction of the water-pressure upon its valve-seat, as shown.

The upper end of shaft *d* terminates in a rack, *f*, which sets in a recess, *f'*, in the upper part

of body A, Fig. 2. Through the side of body A, above the spout and at right angles to rack *f*, is another opening, *c'*, which meets with opening *c*, and through which passes a rod, D, the inner end of which sets in a bearing, *g*. Near its inner end rod D terminates in a pinion, *h*, the teeth of which engage with the notches of rack *f*, as shown in Fig. 2.

At the place where rod D enters body A is a screw-threaded projection, *k*, having a slot or groove, *l*, into or through which passes a pin, *m*, on rod D, which pin moves from side to side in such slot by the turning of rod D. Over projection *k*, pin *m*, and slot *l* is screwed a cap, *n*, which prevents rod D, by fitting closely against pin *m*, from coming out of its inner bearing, *g*, but does not interfere with its free lateral movement.

To prevent the liquid from working its way up to and out of opening *c'*, a suitable water-tight packing, *o*, is placed around rod D in a recess, *p*, in body A, just inside projection *k*, Fig. 3.

The outer end of rod D, protruding through body A and projection *k*, is made in the form of a square, over which fits the handle C, Fig. 3, which is kept thereon by a small screw, *i*.

Handle C is heavy or weighted, and is made preferably of solid metal.

The operation of these parts is as follows: In Fig. 1 is shown the position of handle C when stopper *e* is closing the opening to body A and when a flow of water or other liquid is not desired. By moving handle C upward, and thus turning rod D till stopped by pin *m* in slot *l*, stopper *e* is forced from its seat downwardly against the water-pressure, the teeth of pinion *h* turning into the notches of rack *f*, forcing the shaft *d* and stopper *e* downward, and permitting a free flow of water or other liquid from the supply-pipe. When the desired amount of liquid is obtained, the hold on handle C is released, and it then falls by its own weight, turning rod D, pinion *h*, and rack *f* back to their original positions, the valve *e* being returned to its seat, cutting off the further flow of water. This movement of valve is assisted by the water-pressure, and hence the weight of handle need not be excessive to make the action certain. It will thus be seen that the self-closing action of the faucet is produced by the falling

of handle C, carrying the stopper up against its seat and reclosing the opening from the supply-pipe.

By taking handle C off and changing its position on square end of rod D one-quarter of a circle to the position shown by dotted lines at C' in Fig. 1 a hand-cock is obtained. When handle C is at C', the stopper *e* is closing the opening from the supply-pipe. Moving it to the position shown by dotted lines at C'' in Fig. 1, rod D is turned and stopper *e* is forced from its seat, as before, by the turning of pinion *h* in rack *f*. In this case the weighted handle prevents the water-pressure acting on the valve from reclosing the mouth of opening *e*, and when the desired amount of liquid is obtained handle C is turned back by hand from C'' to C' and the flow ceases, as will be understood.

Fig. 1 of the drawings represents in full lines a faucet for use in basins, and the portion shown in dotted lines illustrates the modification necessary for use in sinks, &c.

What I claim is—

1. A stop-cock wherein are combined with the body and outlet and inlet pipes thereof a valve and a weighted handle connected with said valve and opening and closing the cock

by its movement, such weighted handle being adjustably connected with the valve-operating parts, whereby the handle can be adjusted to work wholly on one side of the center, so as to return the valve automatically to its seat, or the handle can be adjusted to work back and forth over the center, so as to hold by its weight the valve in either an open or closed position, substantially as set forth.

2. A stop-cock wherein are combined with the body and outlet and inlet pipes thereof a valve, a rack connected with said valve, a pinion engaging said rack, and a weighted handle secured adjustably to the spindle of said pinion, whereby the handle can be adjusted to work wholly on one side of the center, so as to return the valve automatically to its seat, or the handle can be adjusted to work back and forth over the center, so as to hold by its weight the valve in either an open or closed position, substantially as set forth.

This specification signed and witnessed this 15th day of March, 1886.

CHAS. J. MORTIMER.

Witnesses:

A. W. KIDDLE,
E. C. ROWLAND.