

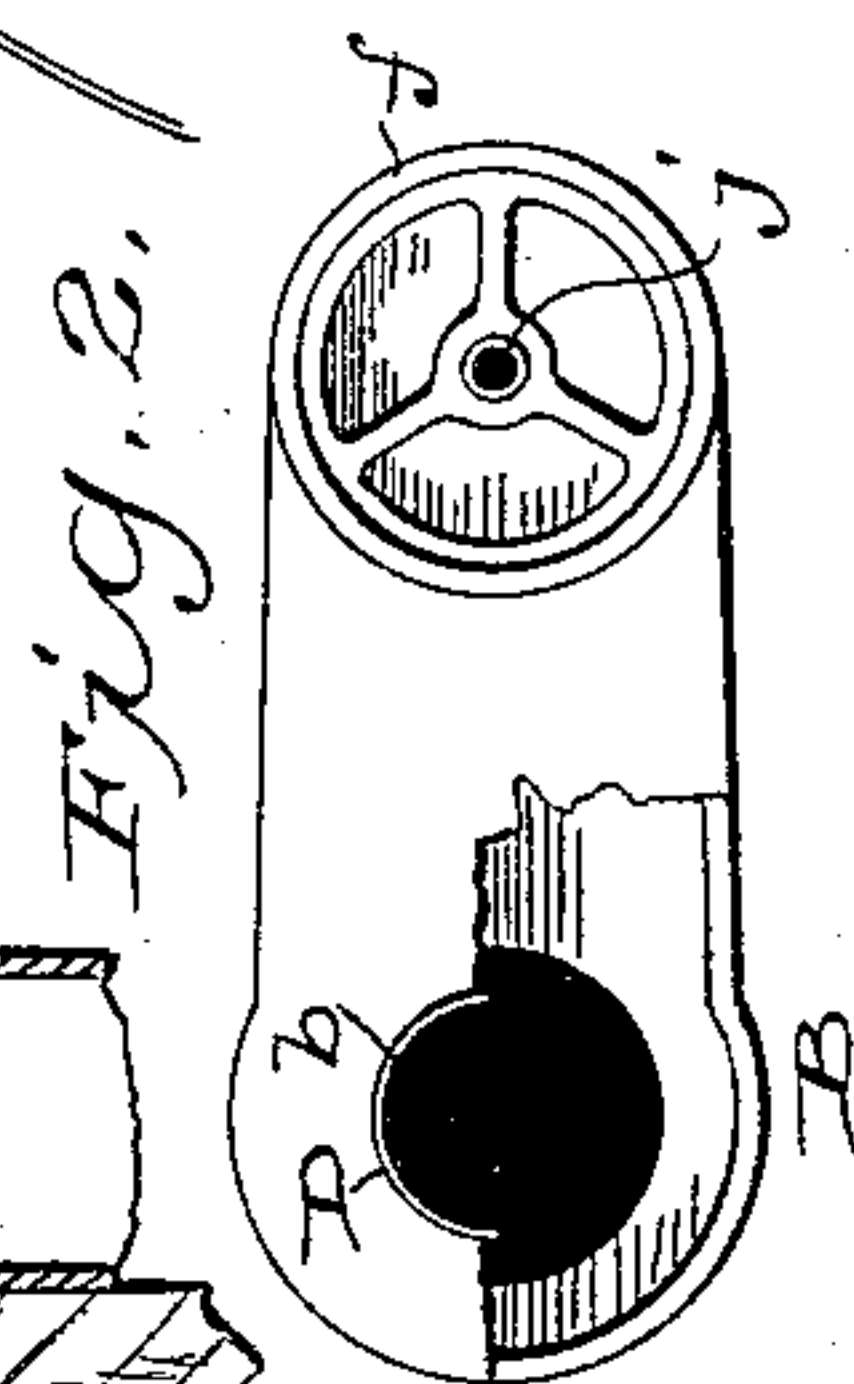
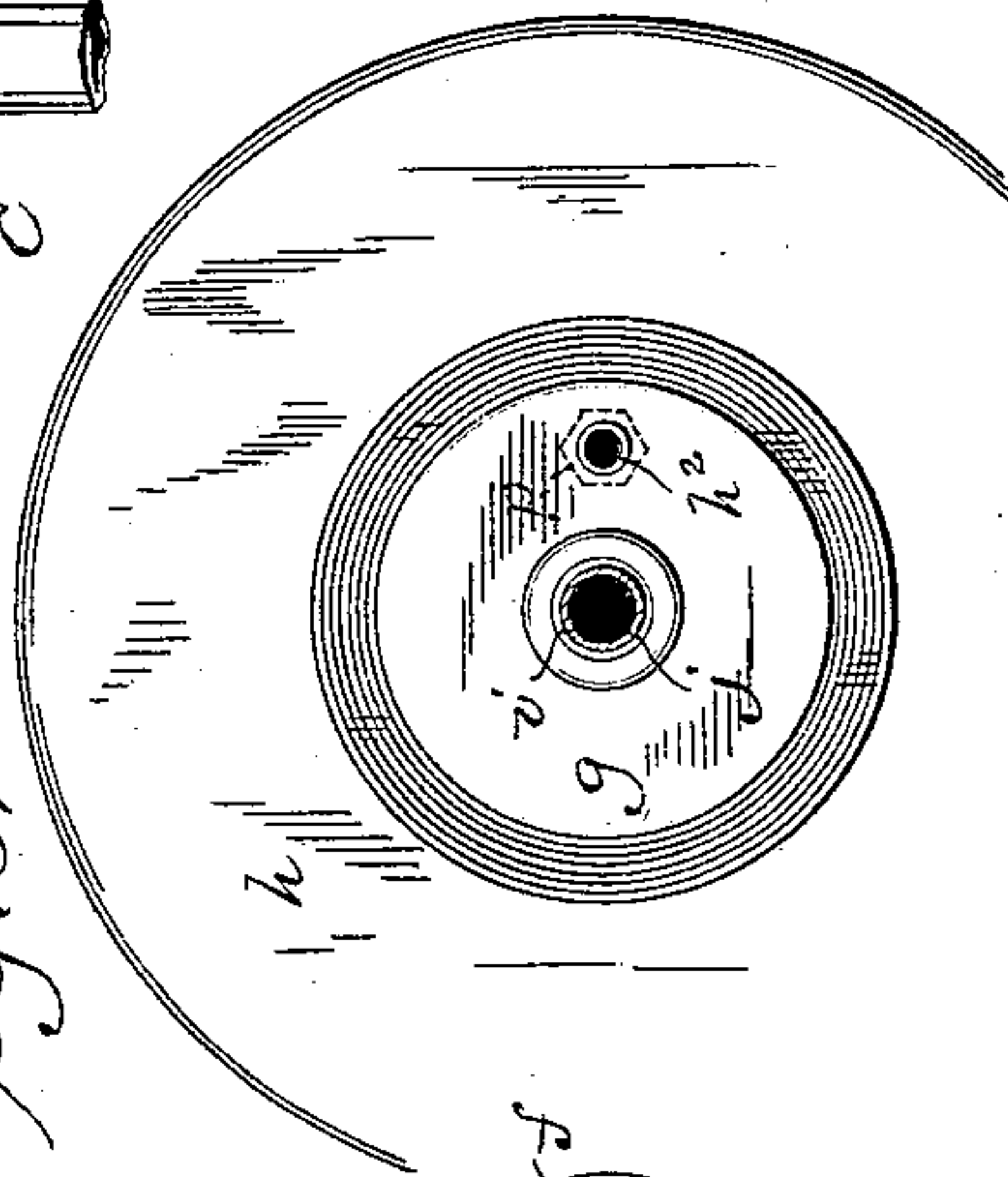
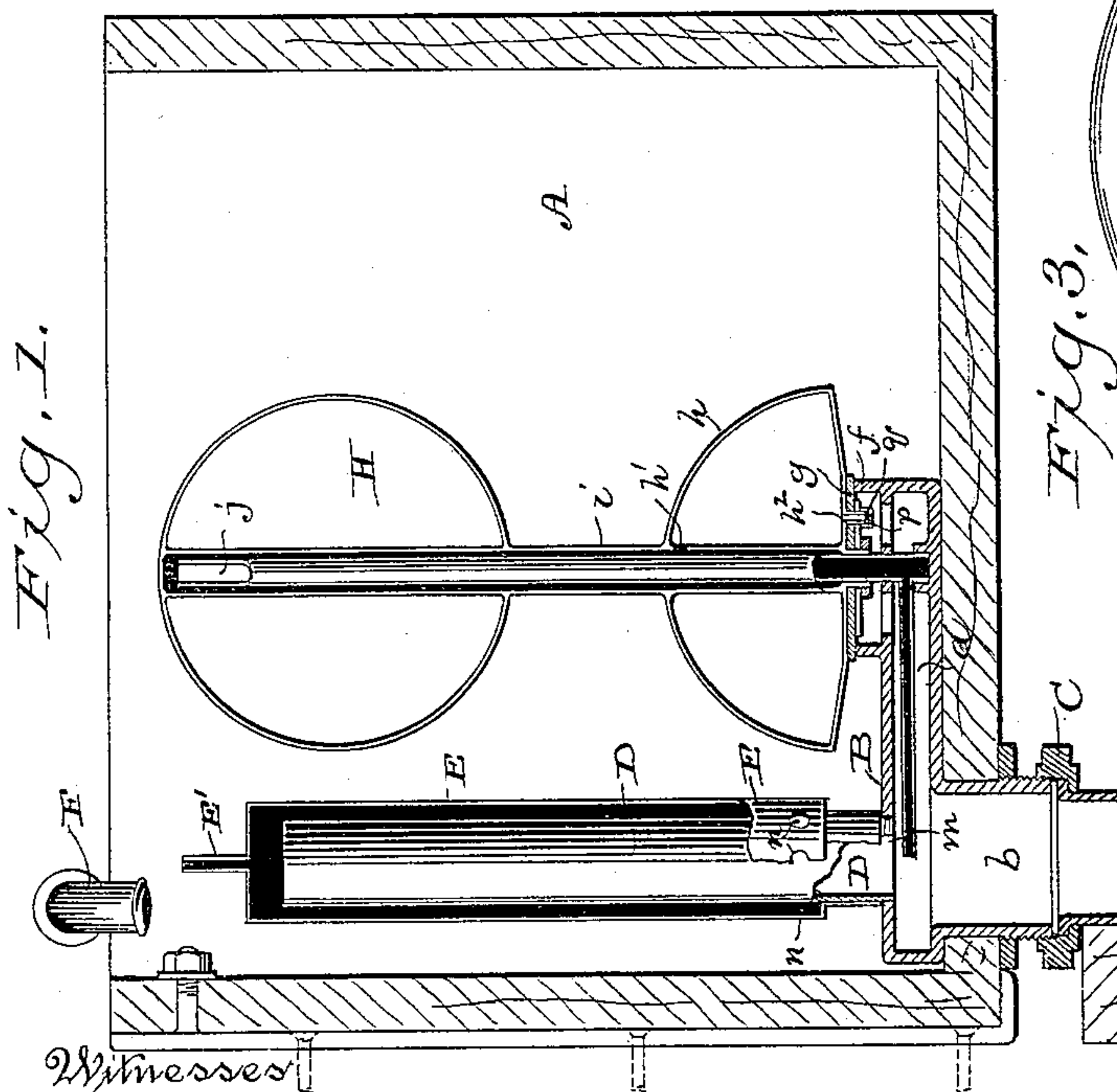
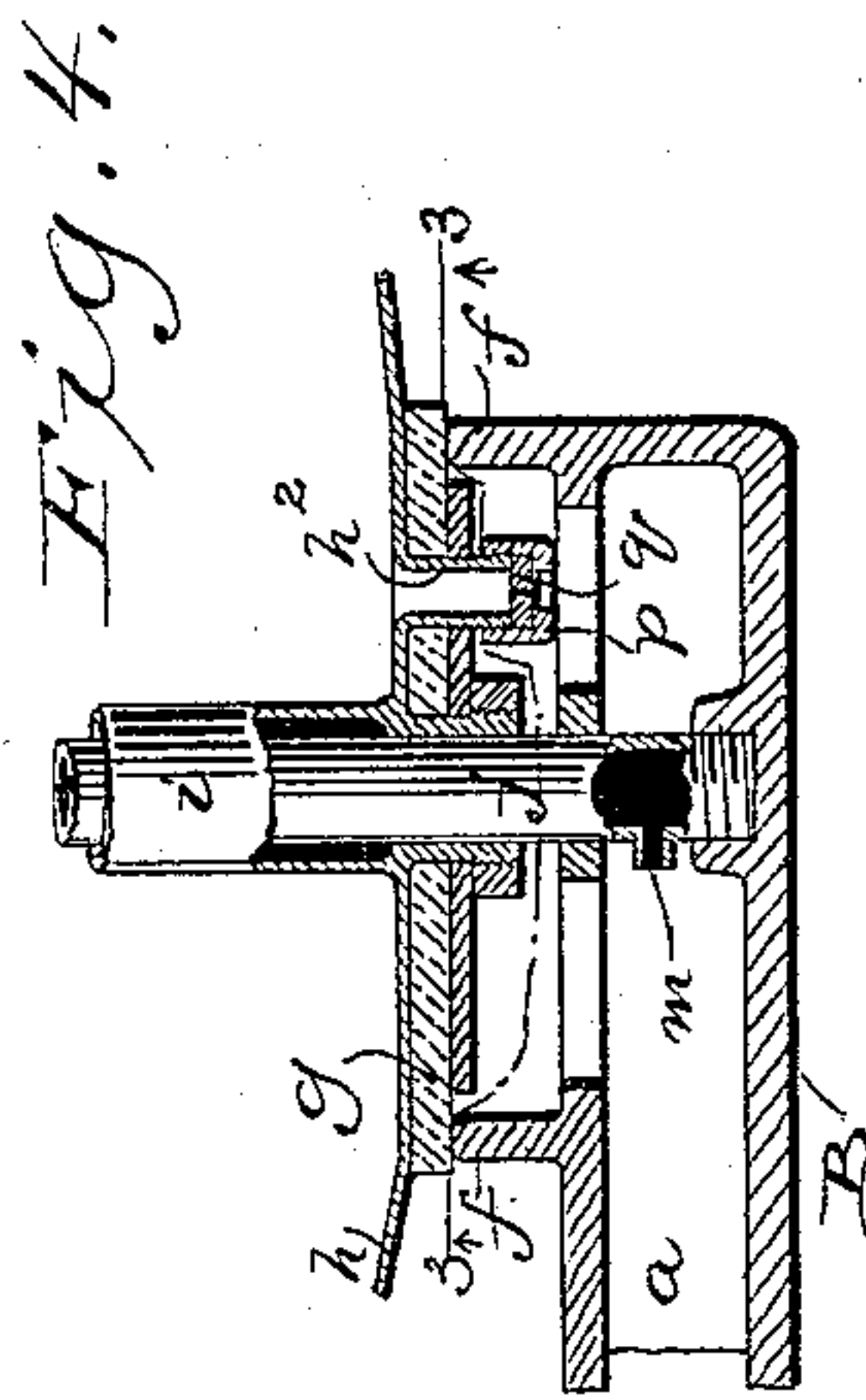
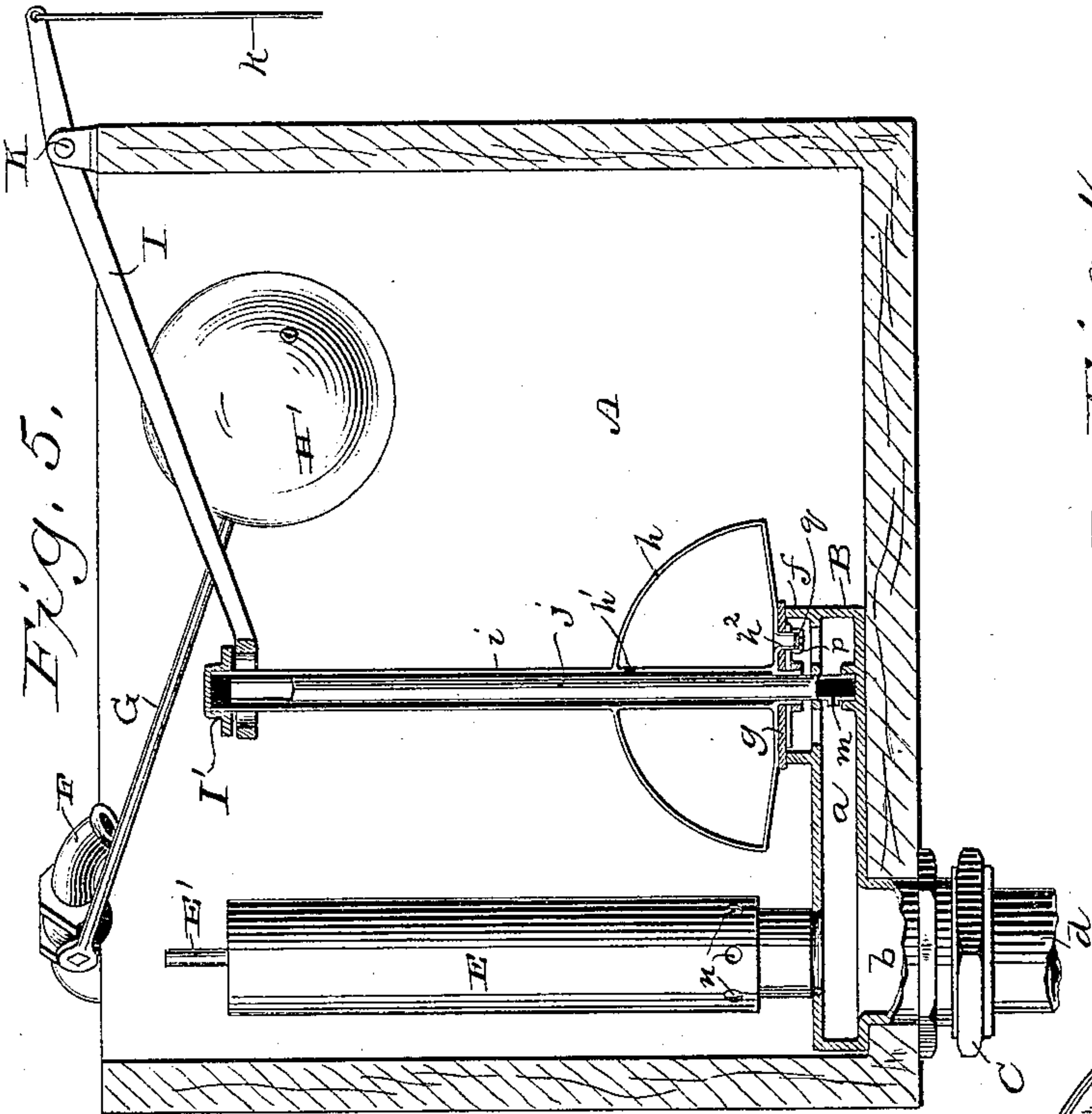
(No Model.)

P. F. BRITT.

FLUSHING DEVICE FOR WATER CLOSETS, &c.

No. 449,728.

Patented Apr. 7, 1891.



Witnesses
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UNITED STATES PATENT OFFICE.

PATRICK F. BRITT, OF MILWAUKEE, WISCONSIN.

FLUSHING DEVICE FOR WATER-CLOSETS, &c.

SPECIFICATION forming part of Letters Patent No. 449,728, dated April 7, 1891.

Application filed September 3, 1888. Serial No. 284,391. (No model.)

To all whom it may concern:

Be it known that I, PATRICK F. BRITT, of Milwaukee, in the county of Milwaukee and in the State of Wisconsin, have invented certain new and useful Improvements in Flushing Devices for Water-Closets, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to water-closet-flushing cisterns, and will be fully described hereinafter.

In the drawings, Figure 1 is a partly-broken vertical central section of one form of my device. Fig. 2 is a partly broken away plan view of a joint that forms part of my device. Fig. 3 is a section on line 3 3, Fig. 4. Fig. 4 is a detail section of the lower portion of the float-valve, and Fig. 5 is a vertical central section of another form of my device.

A is a tank or cistern, which is provided with a joint B, having a flat portion *a*, which lies on the bottom of the cistern, and tubular portion *b*, that projects down through an opening in the bottom of the cistern, and is screw-threaded to receive a screw-coupling C, that connects it with the closet supply-pipe *d*. The inner end of joint B opens up into the cistern through a valve-seat *f*, and *g* is a valve that is attached to the under side of a hollow weight *h*, that is formed about a hollow stem *i*, that extends up above it and loosely incloses and is guided by a hollow standard *j*. Inside the weight *h* the stem *i* is perforated at *h'* to allow the air to escape from the weight into the space between said stem *i* and standard *j* as water is let into said space, from whence the air passes up to the upper end of said standard *j* and then down through it and out of a passage or tube *m* in its lower end, through the joint B and up through tubes D and E to the open air through a teat E'. Above the weight *h* a float H may be secured about the stem *i*, so that when the water rises above a certain height in the tank it will lift the float and with it the weight *h* and its valve *g*, and when the water begins to flow beneath the valve it will float weight *h* and permit it to sink gradually to close the valve when the tank has become nearly empty.

In the device shown in Fig. 5 I dispense with the float H and substitute a lever I, one end of which loosely engages a cap I' on the

upper end of the stem *i*, while its other end carries a cord or chain *k*, that leads to the closet. The lever I is pivoted to a wall of the tank at K, and when the cord or chain *k* is drawn on, the stem *i* and weight *h* are lifted to open the valve, after which they gradually settle as the water subsides.

A tube *h*² leads from the interior of weight *h* down into the valve-chamber, and is closed by a washer *q* and cap *p*, when desired; but when a quickly-acting valve is needed this cap is removed and the water is allowed to flow into the weight, expelling the air through the opening *h'* into the space between the tubes *i* and standard *j* and out into the open air, as before described.

The cock F, that supplies the tank in Fig. 5, is opened and closed automatically by a float H', that is connected with it by an arm G in such a way that when the water in the tank subsides the float in falling with it opens the cock, which is closed again as the water rises and lifts the float H'. The cock F in Fig. 1 may also be opened and closed in the same way.

A tube D is screwed into the joint B near its end opposite the valve-seat *f*, and is inclosed by the tube E, which latter is reduced at its lower end so as to clasp the tube D closely at this point, while above this the tube E is very much larger than tube D, so that a space is left between the two, which space communicates with the water in the tank by perforations *n* and with the open air by a teat E'.

Should water flow into the tank faster than it can get out through the valve-seat *f*, the proper level will be maintained by the escape of the water through openings *n* into tube E and thence over into tube D and out through pipe *d*, the rapidity of the outflow being limited by the reduced area of the opening in teat E' for the admission of air. The tube E also prevents gurgling.

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

1. The combination of a tank having an inlet and outlet, a hollow weight provided with a valve for the tank-outlet, a passage through the weight and valve, a hollow stem closed at its upper end inclosed by said weight and

having openings communicating with the latter, a hollow standard arranged within the stem and communicating with said tank-outlet, the diameters of said stem and standard
5 being such that a space is left between the two, and suitable means for elevating the aforesaid weight, substantially as set forth.

2. The combination, with the tank, float, stem, and hollow weight, of a guide for the
10 stem, a valve operated by the float and weight, a joint having an opening controlled by the valve, and two overflow-tubes, one fitted to said joint within the other, the outer tube communicating with the tank near its bottom
15 and with the inner tube and the outer air near its top, substantially as described.

3. The combination of a tank, a joint arranged therein and having a coupling branch extended through the same, an opening in the
20 joint, a hollow weight provided with a valve for said opening, a passage through the weight and valve, a hollow stem closed at its upper end inclosed by the weight and having openings communicating with the latter, a
25 hollow standard arranged within the stem and communicating with the joint, the diameters of said stem and standard being such that a space is left between the two, an upwardly-

extended tube fitted to said joint, a perforated tube of greater diameter than the first 30 arranged to surround the same and having a closed upper end provided with an air-passage, and suitable means for lifting the weighted valve, substantially as set forth.

4. The combination of a tank provided with 35 an outlet, an automatically-actuated cock arranged to discharge into the tank, a hollow weight provided with a valve for the tank-outlet, a passage through the weight and valve, a hollow stem closed at its upper end inclosed 40 by said weight and having openings communicating with the latter, a hollow standard arranged within the stem and communicating with said tank-outlet, the diameters of said stem and standard being such that a space is 45 left between the two, and suitable means for elevating the aforesaid weight, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in 50 the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

PATRICK F. BRITT.

Witnesses:

H. G. UNDERWOOD,
WILLIAM KLUG.