

(No Model.)

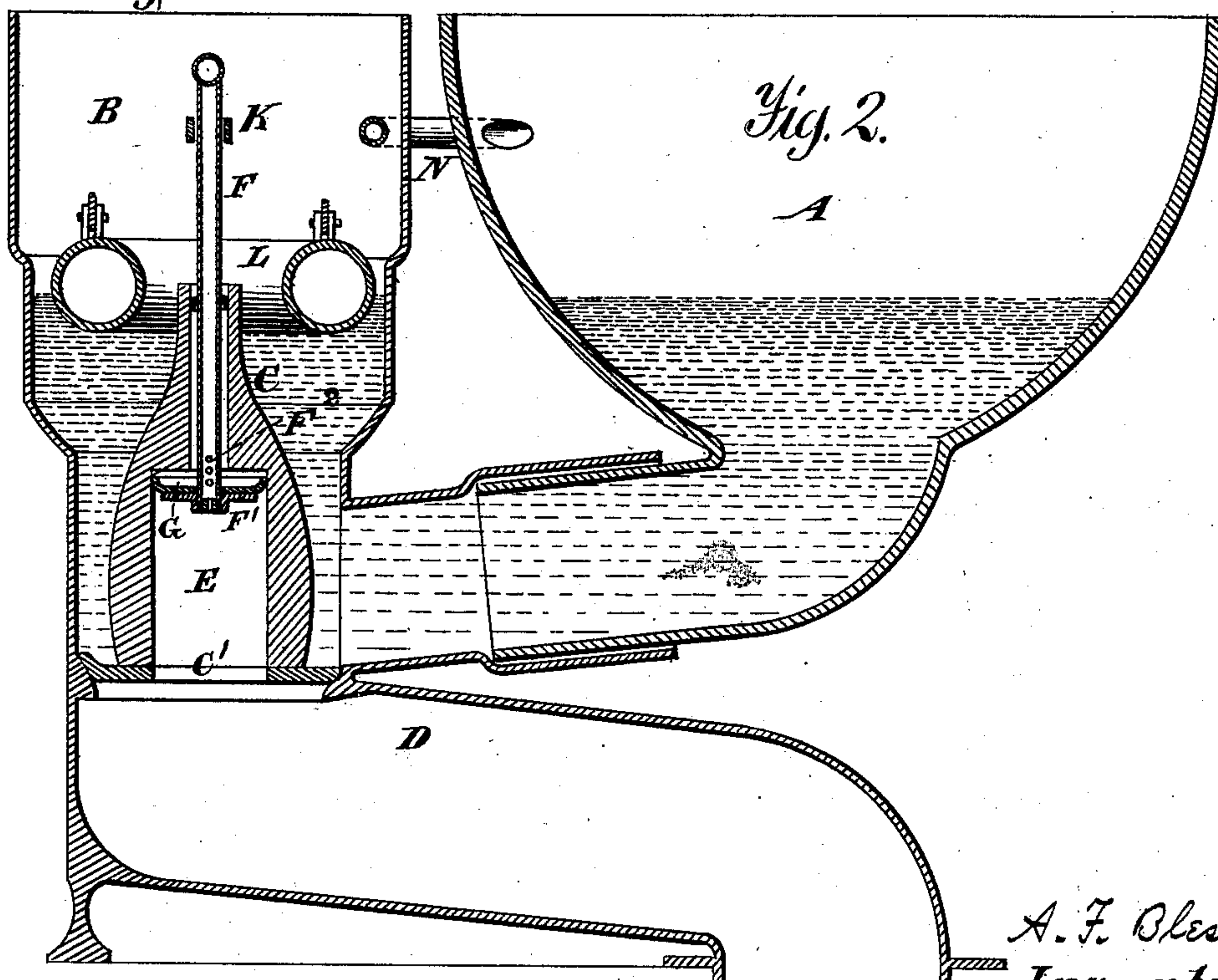
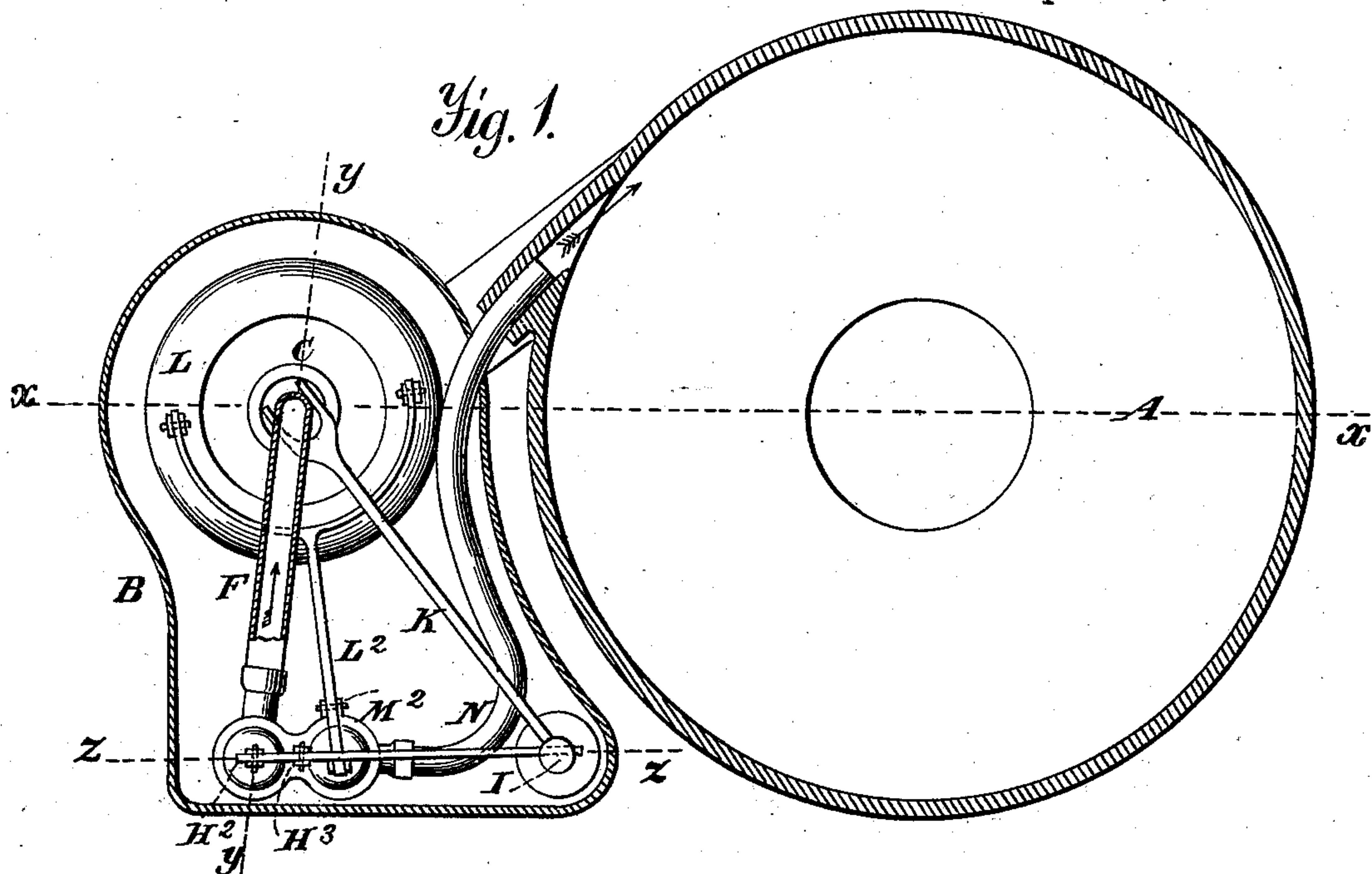
2 Sheets—Sheet 1.

A. F. BLESCH

WATER CLOSET.

No. 256,541.

Patented Apr. 18, 1882.



Witnesses.  
A. Ruppert.  
J. G. Mason

A. F. Blesch.  
Inventor:  
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attly-

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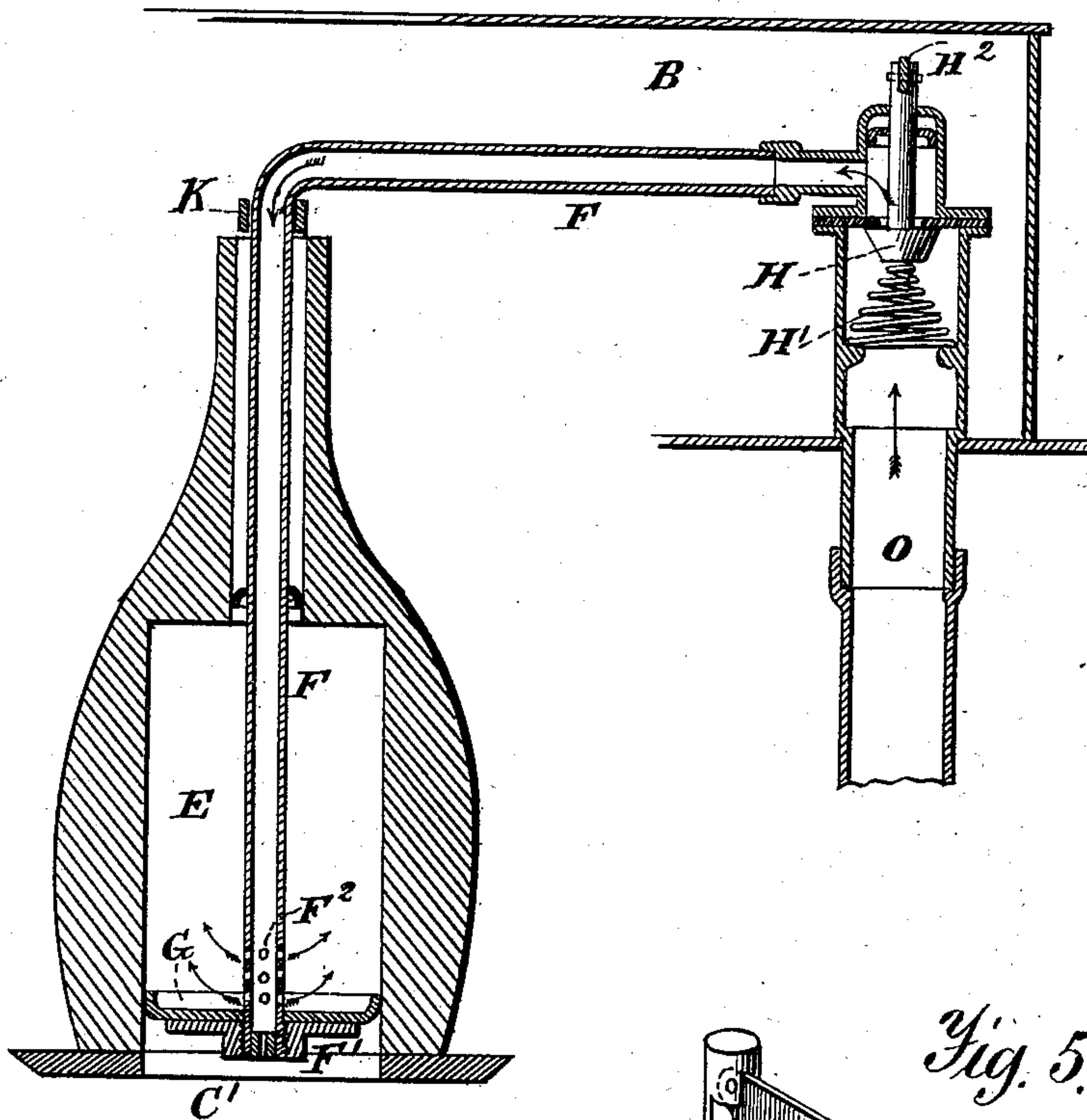
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WATER CLOSET.

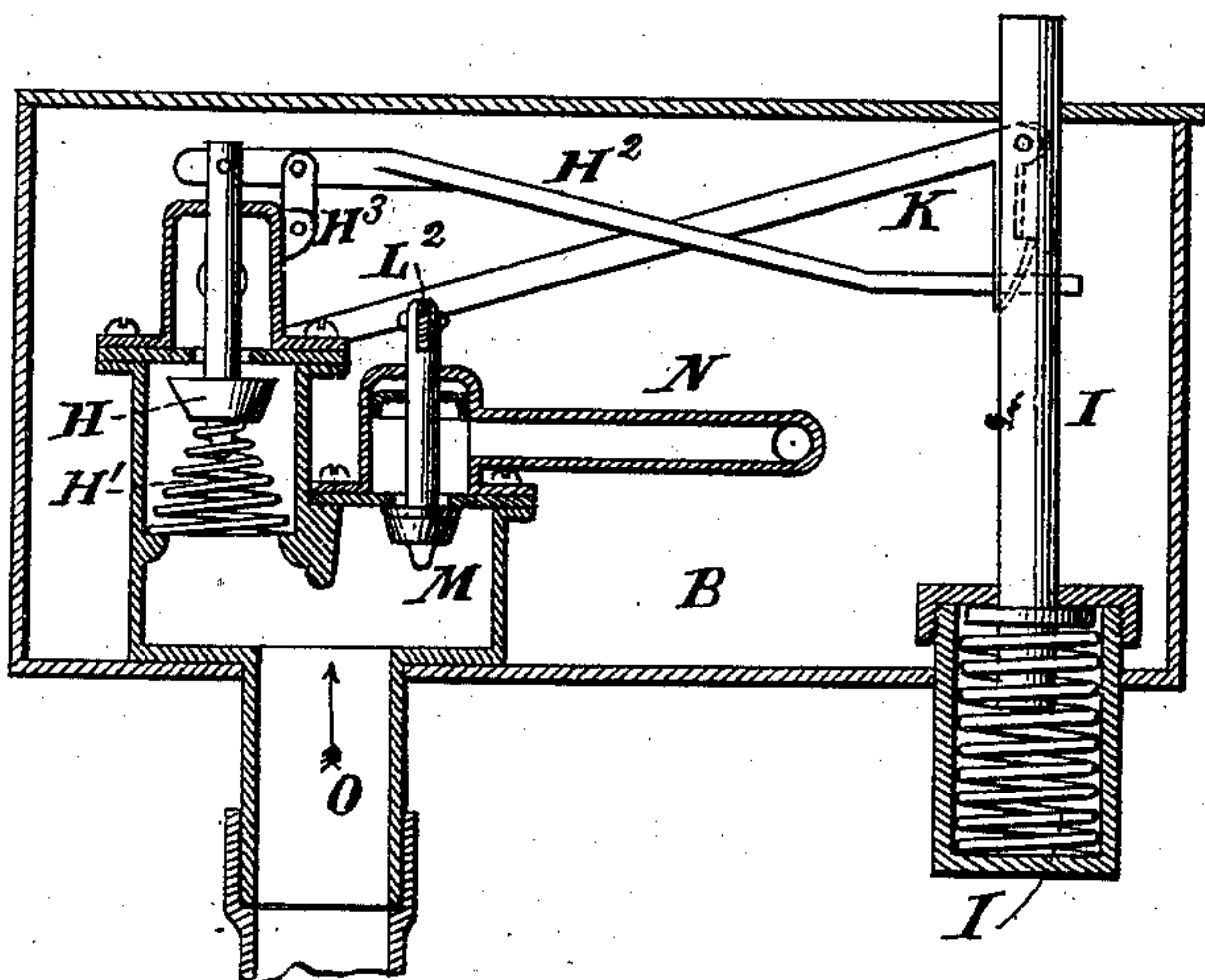
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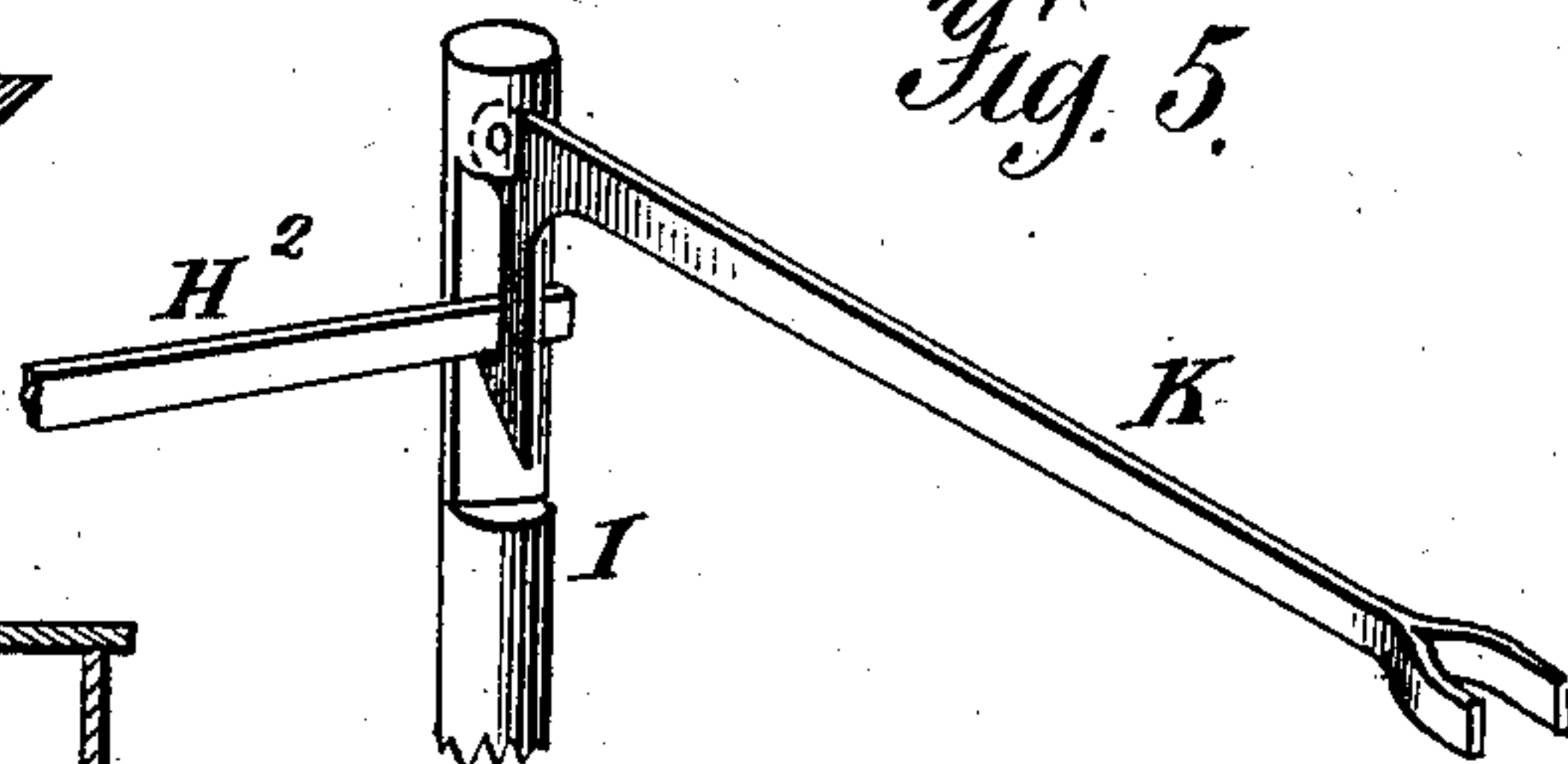
*Fig. 3.*



*Fig. 4.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

AUGUST F. BLESCH, OF COLUMBUS, OHIO.

## WATER-CLOSET.

SPECIFICATION forming part of Letters Patent No. 256,541, dated April 18, 1882.

Application filed August 26, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, AUGUST F. BLESCH, of Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Water-Closets, of which the following is a specification.

My invention relates to that class of water-closets in which the valves are operated by the rise and fall of the seat, and is an improvement in the water-closet described in Letters Patent No. 238,836, issued to me on the 15th day of March, A. D. 1881; and my improvements consist in the substitution of an automatic plunger for the piston-cylinder, with pet-cock, chains, and pulleys described in the above-named patent; and also in generally simplifying the apparatus, making the parts much more simple and less liable to get out of repair; and also in reducing the space required for the various working parts. The principles involved are similar in both cases, inasmuch as in both cases all the valves remain closed, their normal condition, while the seat is pressed down, and are only opened when the pressure is removed, the discharging and flushing process being both done automatically.

In the annexed drawings, making a part of this specification, Figure 1 is a plan view. Fig. 2 is a vertical section. Fig. 3 is a vertical section showing the plunger and plunger-valve, the plunger being raised. Fig. 4 is a vertical section. Fig. 5 is a perspective view, showing the forked rod and pawl which controls the flushing-valve lever.

The same letters are used in all the figures in the indication of identical parts.

In Fig. 2 the parts are all shown in their normal condition, the basin A and chamber B being both partly filled with water to the same level, it being confined by the plunger C, resting on the valve-seat C' in the discharge-pipe D. The plunger C is shaped as shown, the lower part forming the cylinder E, and when in its normal condition rests upon the valve-seat C' in the discharge-pipe D. The upper part of the plunger is made so as to admit the supply-pipe F, which is closed at its lower end by a cap, F', which has a small opening in it. Immediately above the cap F' is placed a cup-leather, G, which is securely attached to the supply-pipe F and fits into the cylinder E.

At a distance the length of the plunger above the lower cup-leather is placed another cup-leather, which prevents the water from escaping into the chamber B. Near the lower extremity of the supply-pipe there is a series of holes, F<sup>2</sup>, which permit the water in the supply-pipe to escape into the cylinder above the lower cup-leather, and as both the supply-pipe and cup-leather are stationary, the force of the water lifts the plunger from its seat and opens the escape-pipe.

The plunger-valve H at the other end of the supply-pipe is an ordinary valve, which is held normally against its seat by the spiral spring H', which rests upon lugs formed for the purpose on the side of the valve-casing. The valve is operated by the lever H<sup>2</sup>, which has its fulcrum in an arm, H<sup>3</sup>, attached to the valve-casing, between the valve-stem H<sup>4</sup> and the seat-spindle I.

K is a forked rod, extending from the seat-spindle (to which it is pivoted) to the supply-pipe, which is embraced by the fork of the rod loosely, so that the rod may be moved up or down, but cannot be moved horizontally. The rod K is shaped as distinctly shown in Fig. 2.

The seat-spindle I is a vertical sliding rod, on the upper end of which the seat rests, the lower end being supported upon a spiral spring, I', which, when the pressure is removed, forces the rod up again into its normal position. The free end of the plunger-lever H<sup>2</sup> engages a notch, I<sup>2</sup>, in the pawl K' when the seat-spindle is forced down. When the pressure on the seat is removed and the rod I is raised by the spring the notch engaging the lever carries it up, thus opening the plunger-valve H, and allows the water to enter the supply-pipe F. The lever, thus carried up, is held until the water, entering through the supply-pipe, enters the cylinder E above the cup-leather, and forces the plunger up until it engages the forked end of the rod K and raises it, it swinging on the seat-spindle by its pivot. When it is thus swung the pawl is disengaged from the lever H<sup>2</sup>, which drops down again, the valve being forced against its seat by the spiral spring, thus cutting off the water from the supply-pipe. When the water is thus cut off the plunger will drop slowly to its normal position,



the water in the cylinder E escaping slowly through the small opening in the cap F'.

L is a float placed in the chamber B, which rises and falls with the water in said chamber.

5 The float is connected by lugs and a pivot with a lever, L<sup>2</sup>, which actuates the flushing-valve M. The fulcrum of the lever L<sup>2</sup> is on an arm, M<sup>2</sup>, attached to the valve-casing, the stem of the valve M being attached to the lever at a  
10 point between the fulcrum and the float, so that so long as the water in the chamber remains at its normal height the valve is kept closed, the valve being held up against its seat. When the water in the chamber is allowed to escape  
15 the float falling with it lowers the end of the lever L<sup>2</sup> and forces the valve away from its seat, allowing the water to flow through the valve into the flushing-pipe N, and thus flush the basin. The valve is held open until the water in the  
20 chamber is again raised to its normal height, when the valve will be again closed by the rising of the float.

O is the inlet-pipe, through which the water to supply the supply-pipe and flushing-pipe  
25 enters.

The operation of the mechanism is as follows: In its normal condition the basin and chamber are partly filled with water, it being confined by the plunger resting on its seat, thus closing the discharge-pipe, the flushing-  
30 valve M and the plunger-valve H both also being closed. When pressure is put upon the seat, forcing the seat-spindle down, no change is made in any of the parts, except that the  
35 plunger-valve lever is engaged by the notch in the pawl attached to the seat-spindle, so that when the pressure on the seat is removed and the spring I' forces the spindle up the notch in the pawl carries the lever up with  
40 it, opening the plunger-valve and allowing the water from the inlet-pipe O to enter the supply-pipe, and through it the cylinder E, forcing the plunger up from its seat, thus opening the discharge-pipe and allowing the water in both  
45 the basin and chamber to escape. As the water in the chamber is lowered the float will fall, and it being connected by a lever with the flushing-valve, the valve will be forced open and the water from the inlet-pipe allowed  
50 to flow through the tangential flushing-pipe into the basin and flush it. The flow of water

from the inlet-pipe through the supply-pipe will continue until the plunger has been sufficiently raised to engage the forked end of the rod K and force it up, causing it to swing  
55 upon the pivot on the seat-spindle, and by this motion disengage the plunger-valve lever and allow the valve to be forced against its seat by the action of the spring H'. When the plunger-valve is thus closed and the water  
60 prevented from entering the supply-pipe the plunger will gradually sink into its seat, the water in the supply-pipe and cylinder slowly escaping through the small hole in the cap at the end of the supply-pipe. The flushing-valve  
65 continuing open, the water continues to flow through the flushing-pipe into the basin until the plunger, again resting upon its seat, closes the discharge-pipe and allows the basin and chamber to be again partially filled with water,  
70 the float through the medium of lever drawing the flushing-valve against its seat and closing it.

What I claim as my invention, and desire to secure by Letters Patent, is—

75 1. In a water-closet, in combination with the flushing-valve M, a lever and float, L, a chamber, B, inclosing the float and connected with the discharge-pipe, and a plunger, C, automatically operated so as to settle slowly on  
80 its seat, and so cause a gradual rise of water in the chamber, and consequently slow movement of the valve M in closing, substantially as set forth.

2. In combination with the discharge-pipe  
85 of a water-closet, an automatic plunger formed substantially as set forth, and the perforated water-induction pipe F, serving as a guide for the plunger, and fitted with cup-leathers above and below the perforations, substantially as  
90 set forth.

3. In combination with the automatic plunger C, the supply-pipe F and plunger-valve H, substantially as set forth.

4. In combination with the automatic plun-  
95 ger C, plunger-valve H, and lever H<sup>2</sup>, the forked and pivoted rod K, pawl K', and seat-spindle I, all arranged substantially as set forth.

AUGUST F. BLESCH.

Witnesses:

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