

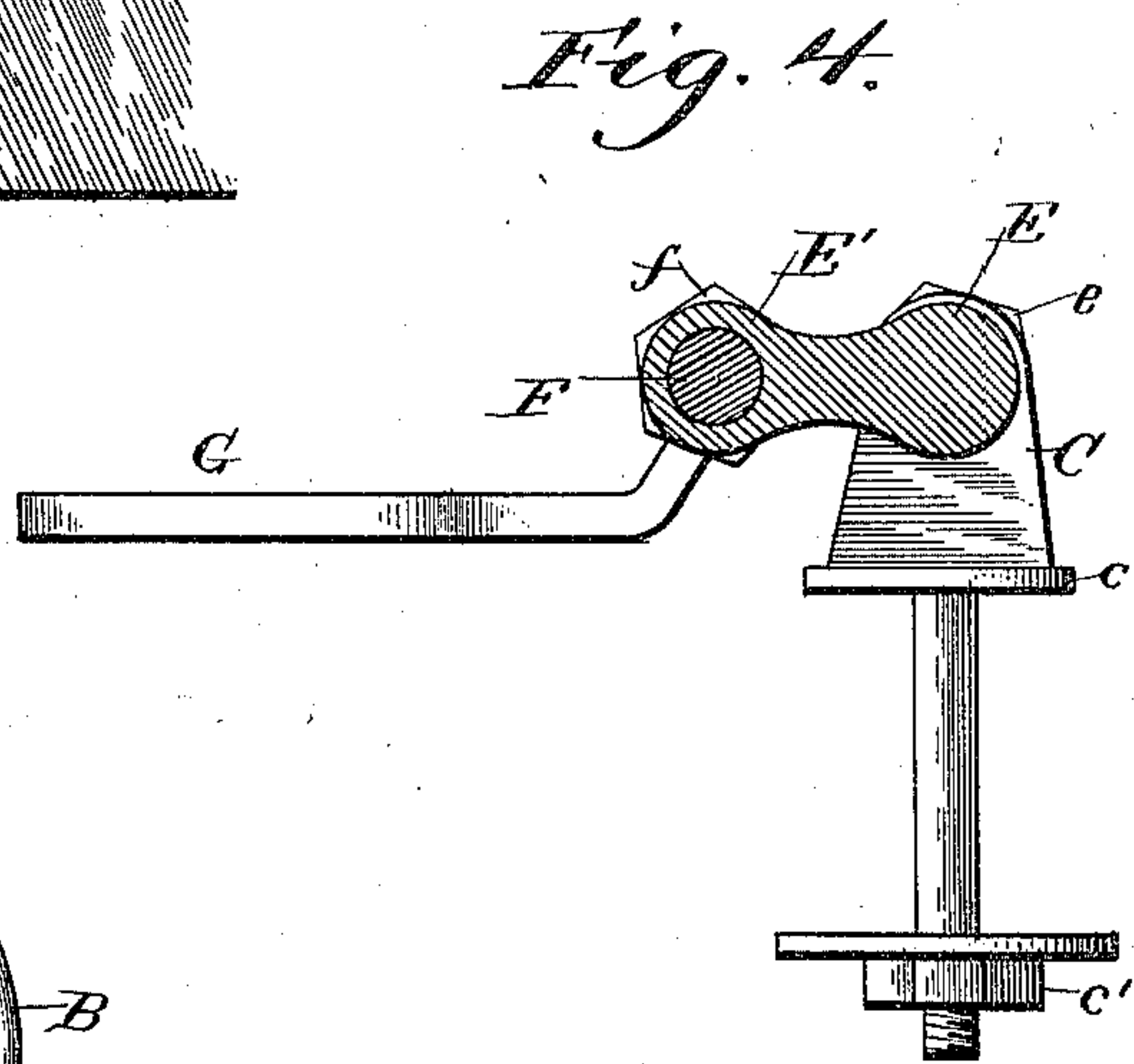
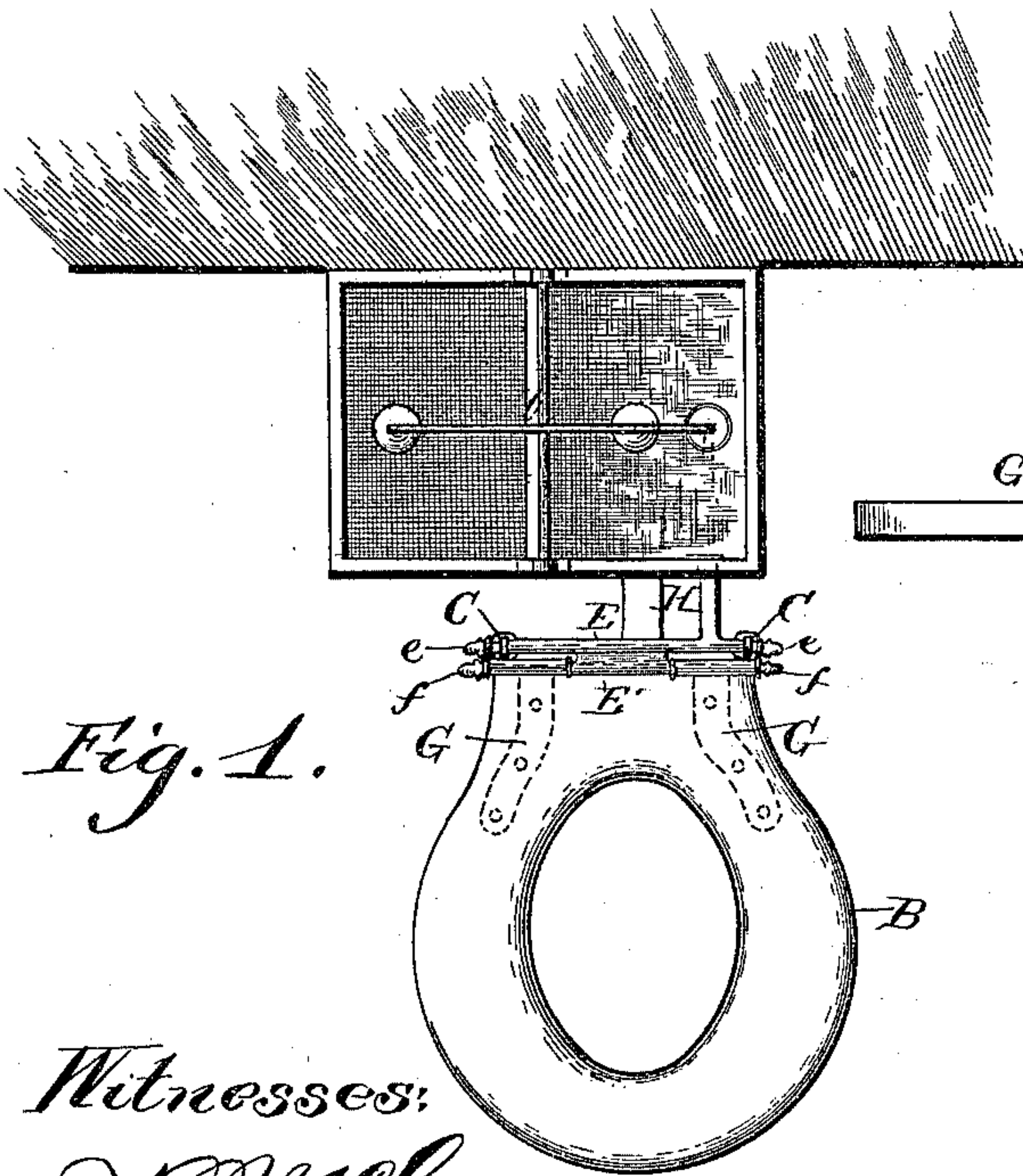
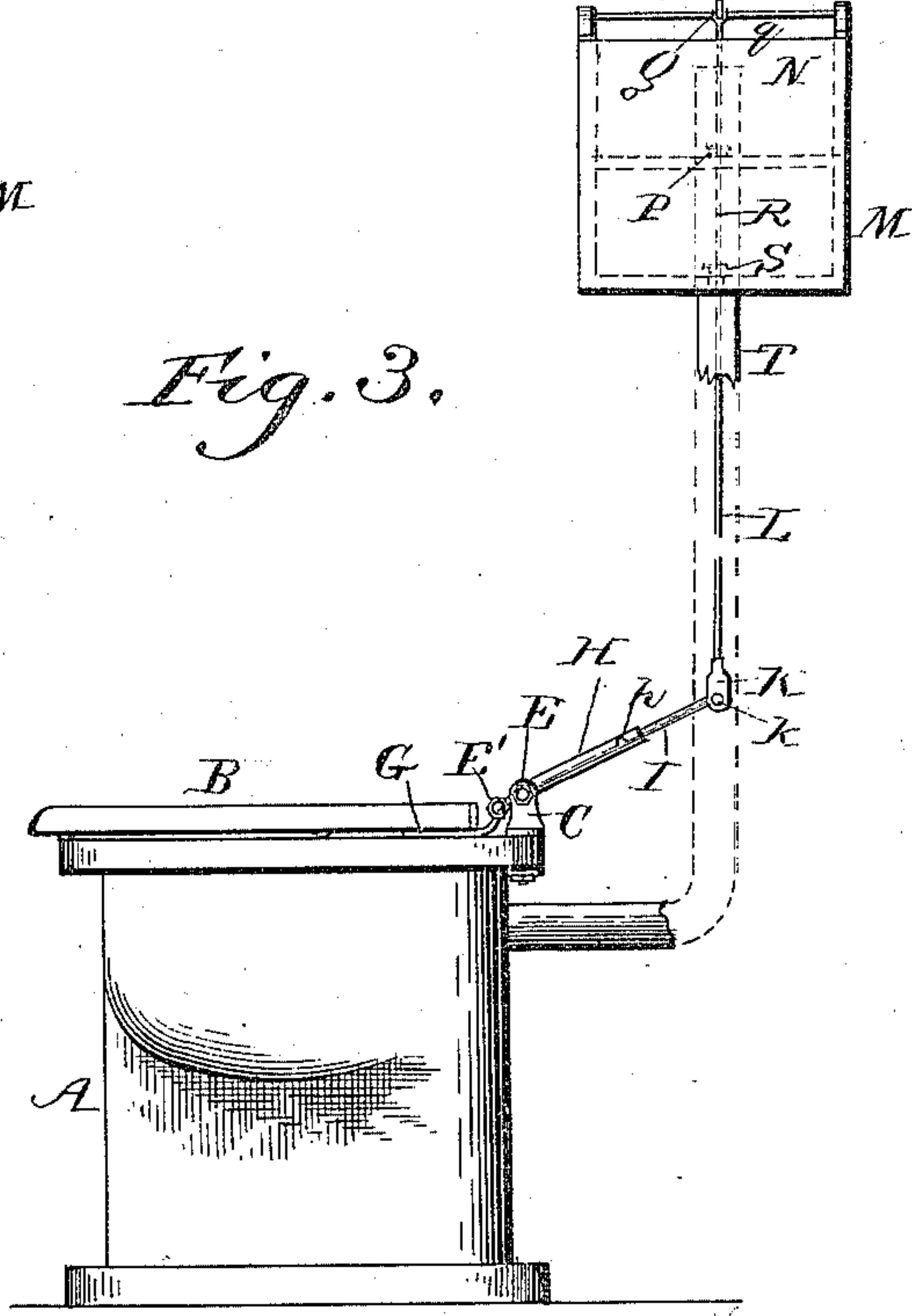
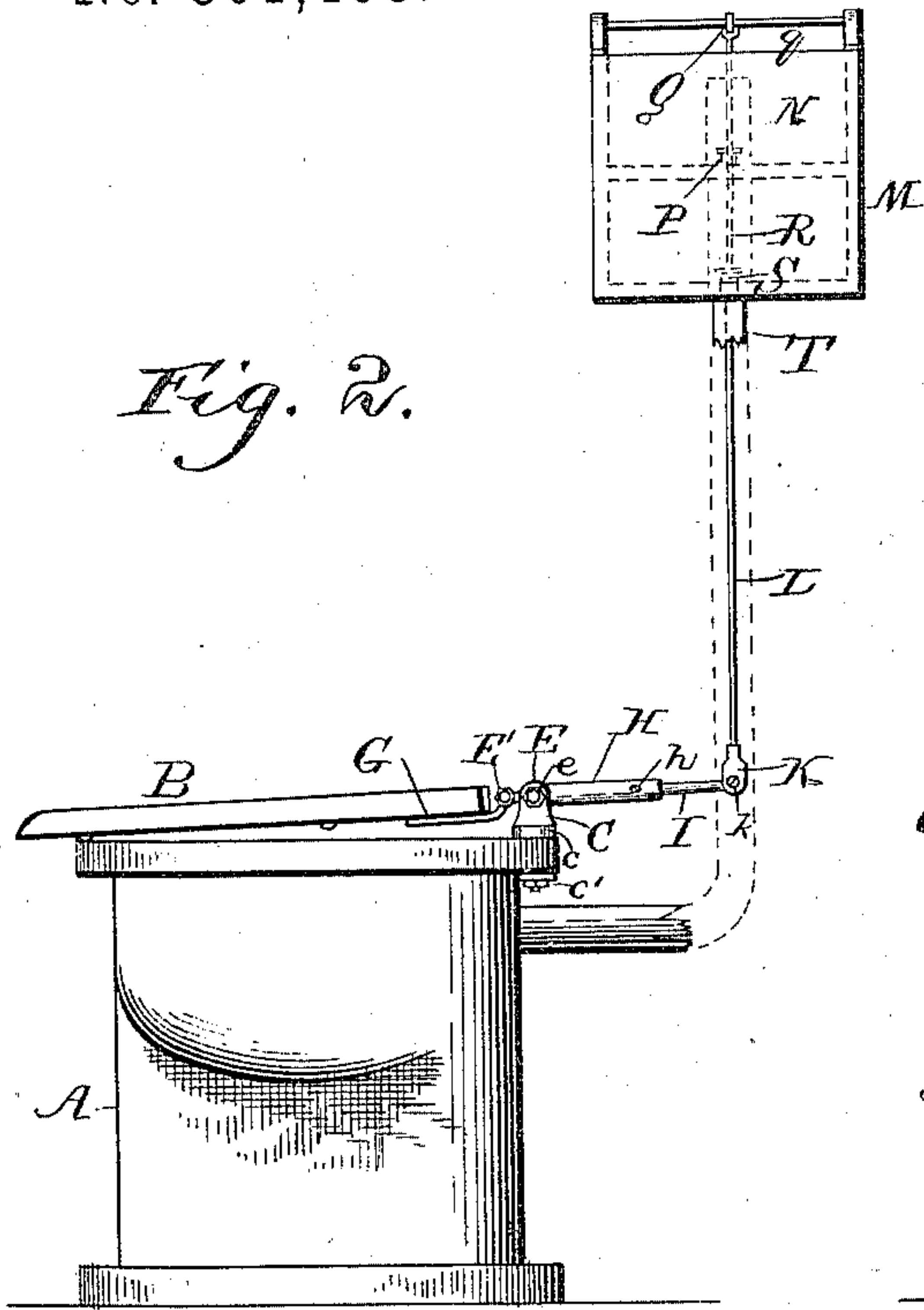
(No Model.)

2 Sheets—Sheet 1.

J. M. YOUNG.
HINGE.

No. 561,468.

Patented June 2, 1896.



Witnesses:

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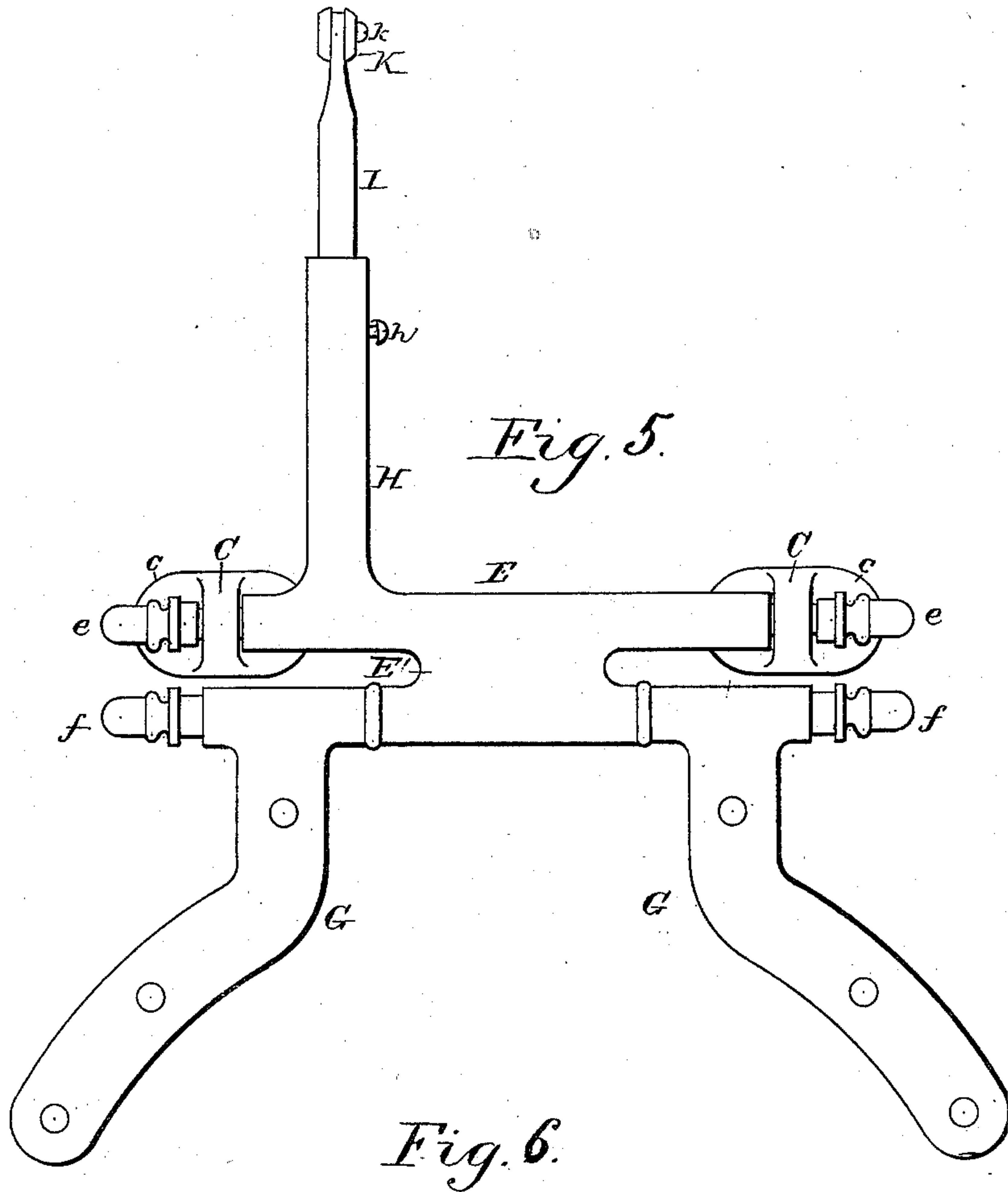
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

JAMES M. YOUNG, OF ALLEGHENY, PENNSYLVANIA.

HINGE.

SPECIFICATION forming part of Letters Patent No. 561,468, dated June 2, 1896.

Application filed March 23, 1895. Serial No. 542,938. (No model.)

To all whom it may concern:

Be it known that I, JAMES M. YOUNG, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Hinges; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to hinges, and relates in particular to the hinges of water-closets, and has for its object the provision of novel means for operating the flushing device of the closet through the movement of one of the hinge members.

My invention consists in the novel construction, combination, and arrangement of parts hereinafter described. In carrying my invention into effect I provide a hinge adapted to be secured to the water-closet bowl and to the seat of the closet and having a horizontally-extending arm to which is attached a rod or chain leading to the valve or valves in the service-box, the arrangement being such that in its normal position the seat is raised slightly at the rear, so that when the seat is depressed the horizontal arm extending from the hinge will be raised and operate the valve mechanism in the service-box, the normal position of the parts being resumed when the pressure on the seat is relieved.

In the accompanying drawings, Figure 1 is a top view of a water-closet provided with my improved seat-hinge; Fig. 2, a side elevation of the same with the seat in its normal position; Fig. 3, a similar view with the seat depressed; Fig. 4, a transverse sectional view, and Fig. 5 a plan view, of the hinge; and Fig. 6, a sectional view of the tank.

A designates the bowl of the closet, and B the hinged seat thereof. The hinge is mounted upon standards C C, which pass through holes in lugs projecting rearwardly from the bowl A. These standards have flanges c c, which rest upon top of the lugs and are secured in position by nuts c' c', screwing onto the screw-threaded lower ends of the standards C C. The hinge, which is pivotally supported by the standards C C, is a double

hinge, being pivoted as aforesaid in standards C C, and also pivotally attached to the seat.

The main body of the hinge consists of the cylindrical portion E, which has reduced ends that are journaled in the standards C C, and have screw-threaded ends upon which are screwed nuts e e. The cylindrical body E of the hinge is formed with a wing E' on one side, which is bored to receive a pintle F, that passes through the curved arms G G, which are screwed to the bottom of the seat B. The pintle F is held in position by nuts ff screwing upon its ends. The body E of the hinge is also formed with a rearwardly-extending hollow arm H, in which is fitted a rod I, that is adjustable in the arm, being held in any desired position by a set-screw h. The outer end of the arm I is flattened and embraced by the arms of a forked head K. A screw k passes through a hole in the end of the arm I and through holes in the forked head K, and serves to pivotally connect the head and the rod. A vertical rod L screws into the head K and extends upward to and is connected with the operating mechanism of the service box and tank.

The tank which supplies the closet with water is arranged above the closet, and consists of an exterior box or tank M and interior box or tank N. A ball-cock O, which is operated by a float o and float-lever o', is arranged within the inner tank or service-box, and a valve P is arranged over an opening that leads from the inner tank or service-box to the main tank. This valve P is attached by a rod p to a lever Q, which is pivoted at q, and which is attached at one end to the vertical rod L and at the other end to a chain R, which carries at its lower end a valve S, that fits into the upper end of the flushing-pipe T, which leads from the main tank to the water-closet bowl A.

The valve P in the service-box is weighted, and when the seat is relieved from pressure the weight of this valve pulls down the pivoted lever Q, and the rod L being pressed down the rearwardly-extending arm H of the hinge is depressed and the wing on the other side of the hinge elevated, thus raising the seat. In its normal position the seat is slightly raised at the back, and in this position the

valve P in the service-box or inner tank is closed while the valve S is open, thus allowing the water from the main tank to flow down the flushing-pipe and flush the closet. When the seat is depressed, the rearwardly-extending arm H is elevated, pushing up the vertical rod L and raising the end of the lever Q. This movement of the lever Q closes the valve S in the main tank and opens the valve P in the service-box, thus allowing the water from the latter to flow into the main tank, where it remains until the seat is relieved from pressure and it is discharged through the flushing-pipe, as before described.

The pivotal attachment of the seat to the lateral wing of the hinge not only provides for the slight movement necessary when the seat is depressed and relieved from pressure, as before described, but also permits of the seat being turned up to a vertical position when desired.

Having described my invention, I claim—

1. A hinge for water-closets comprising a horizontally-pivoted main portion, a lateral extension, arms hinged to said extension and adapted to be attached to a seat, and a lateral arm adapted to be attached to the valve-operating mechanism of the closet, substantially as described.

2. A seat-hinge for water-closets comprising a horizontal body portion, standards adapted to pivotally secure said body portion to the bowl, a lateral extension of said body portion, an arm or arms hinged to said lateral extension and adapted for attachment to a seat, and a laterally-extending arm, substantially as described.

3. In a hinge for water-closets, the combination of a horizontally-pivoted hinged member, a lateral projection extending therefrom

and provided with seat-arms pivotally secured solely to said projection and constructed and adapted to be rigidly secured to a seat, and an arm extending from the hinge member and adapted to operate the valve mechanism of a closet, substantially as described.

4. In a seat-hinge for water-closets, the combination with the horizontally-pivoted body portion E, lateral arm H, and wing E', of the arms G, G, pivotally attached solely to said wing and adapted for attachment to a seat, substantially as described.

5. The combination with a seat depressible at the rear of a compound hinge having a laterally-extending arm, a horizontal pintle and a lateral wing pivotally attached to the rear of the depressible seat, substantially as described.

6. In a seat-hinge for water-closets, the combination with a horizontal pivoted hinge member, a lateral wing projecting therefrom, arms pivoted to said wing and rigidly attached to a seat, of mechanism connecting said hinge with flushing devices, substantially as described.

7. In a seat-hinge for water-closets, the combination of a hinge member horizontally journaled on fixed bearings, mechanism connecting said member to flushing devices, with an arm or arms rigidly secured to the seat and pivotally attached to said hinge member out of alinement with its attachment to the fixed bearings, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES M. YOUNG.

Witnesses:

WM. K. GRAY,

W. LEE GARDNER.