

No. 713,978.

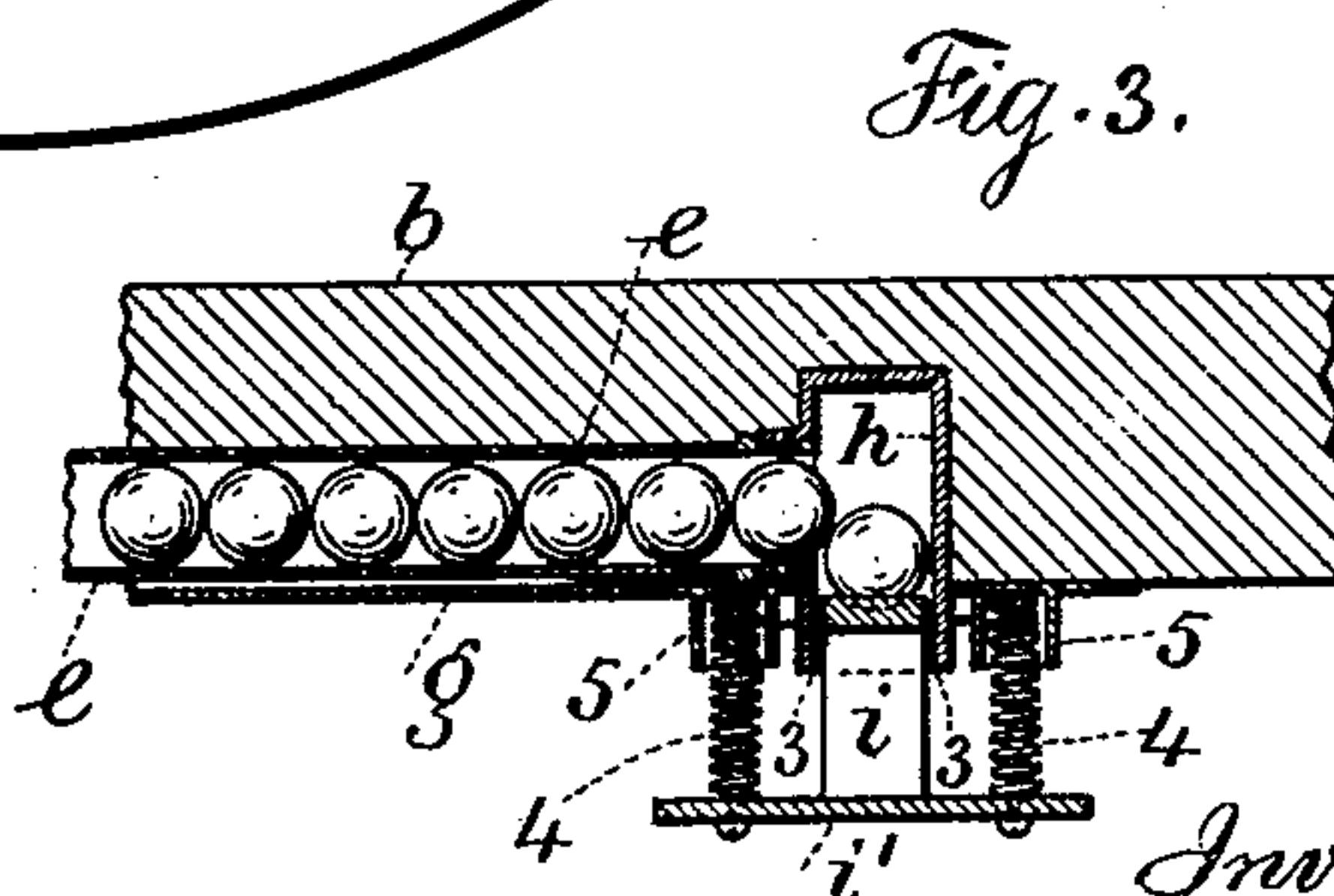
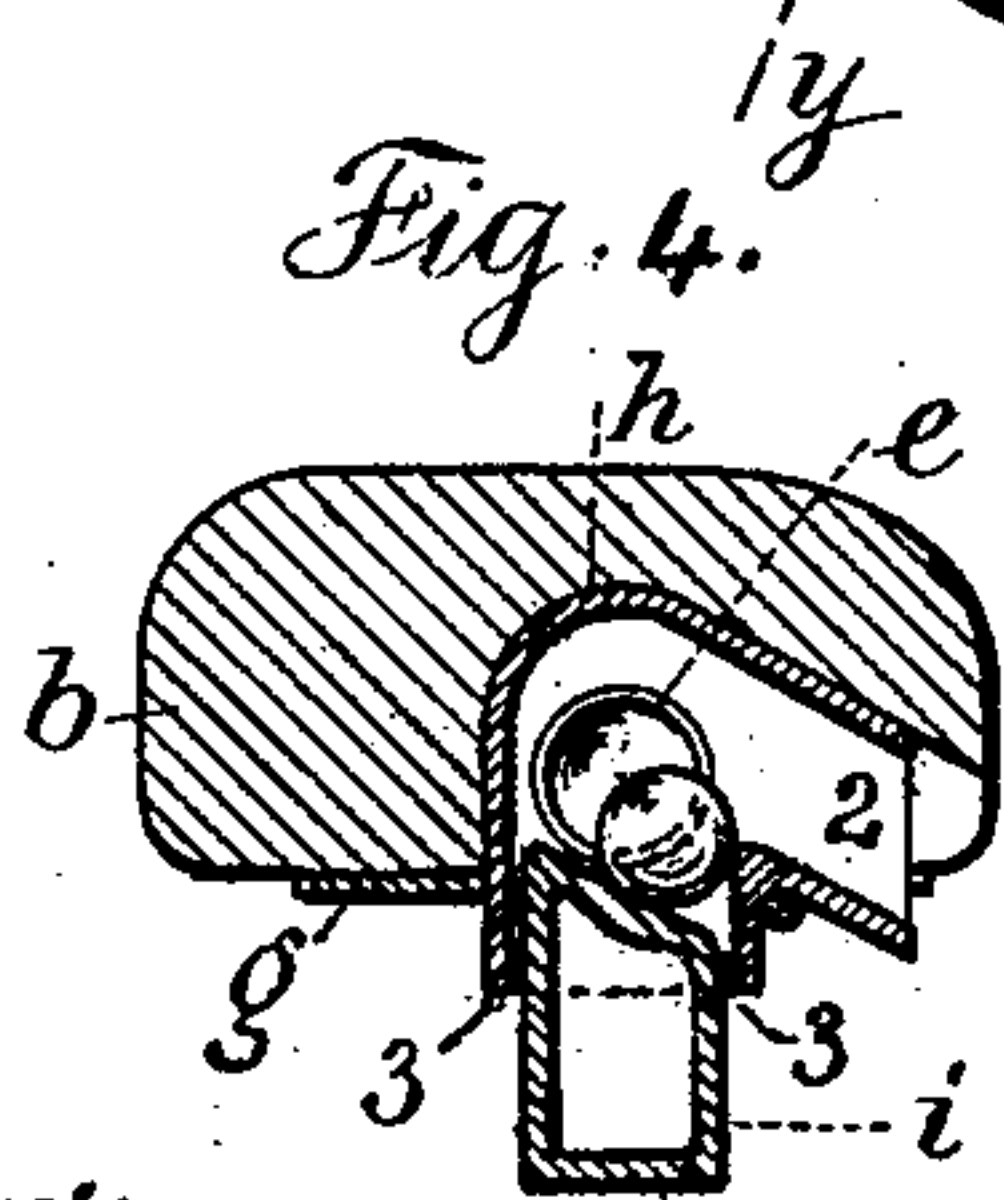
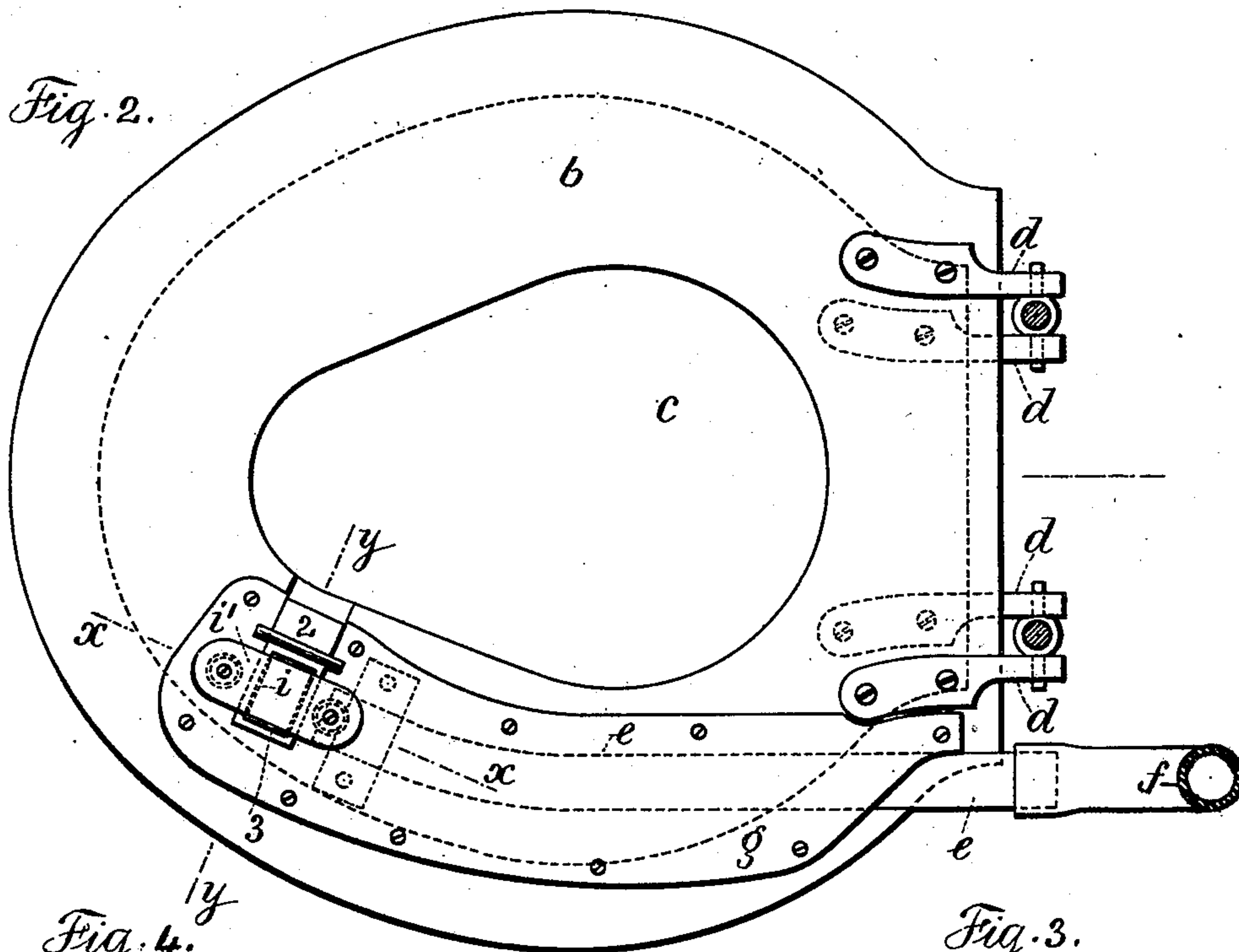
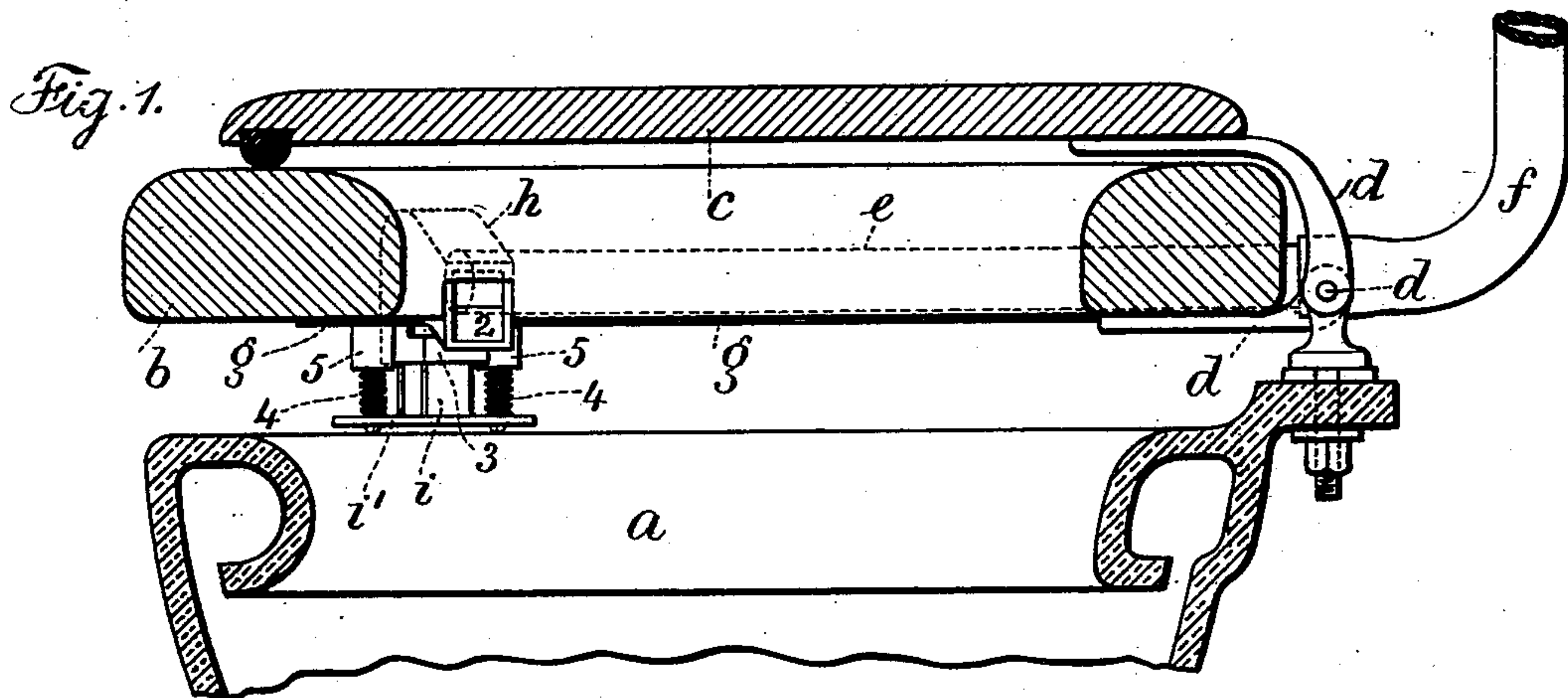
Patented Nov. 18, 1902.

G. S. GALLAGHER.

APPARATUS FOR APPLYING DISINFECTANTS TO WATER CLOSETS.

(Application filed Dec. 17, 1901.)

(No Model.)



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UNITED STATES PATENT OFFICE.

GEORGE S. GALLAGHER, OF NEW YORK, N. Y.

APPARATUS FOR APPLYING DISINFECTANTS TO WATER-CLOSETS.

SPECIFICATION forming part of Letters Patent No. 713,978, dated November 18, 1902.

Application filed December 17, 1901. Serial No. 86,201. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. GALLAGHER, a citizen of the United States, residing at the borough of Manhattan, in the city, county, and State of New York, have invented an Improvement in Apparatus for Applying Disinfectants to Water-Closets, of which the following is a specification.

My invention relates to devices employed in connection with the bowl of a water-closet for containing and delivering a disinfectant therein.

In carrying out my invention the disinfectant is preferably employed in the form of spheres or balls delivered one at a time progressively with the vertical movements imparted to the seat of the closet in use. I form on the under side of the wooden seat a cavity in which is placed a tube, and a flexible tubular connection extends therefrom to a source of supply. The end of the tube opposite to the flexible connection is provided with a case having two orifices, one extending at a downward inclination and the other opening vertically. A plunger operates in the vertical orifice, and the same is spring-actuated and held. A plate is advantageously connected to the seat and covers the tube and the groove or opening in the under side of the seat, so as to present an acceptable appearance. The base of the plunger rests upon the upper surface of the bowl of the closet—that is, upon the flushing-rim—and the springs are between the base of the plunger and the plate upon the under surface of the seat, so that the seat is supported in a normal position of elevation above the bowl of the closet. The spheres or balls of disinfectant fill the tube, and there is one of said balls or spheres in the case supported upon the upper end of the plunger, normally resting in the case and serving to prevent the spheres in the tube discharging automatically.

In the drawings, Figure 1 is a vertical section and partial elevation representing my improvement. Fig. 2 is an inverted plan of the closet-seat. Fig. 3 is a vertical longitudinal section at the line *xx* of Fig. 2, and Fig. 4 is a vertical cross-section at the line *yy* of Fig. 2.

a represents the upper portion or flushing-rim of a porcelain water-closet bowl of usual

construction. *b* represents the seat, and *c* the cover, said seat and cover being connected to the bowl by a hinge *d*. These parts may be of any usual or well-known form. In the under surface of the seat *b* and at one side I form a groove or channel, into which is placed a tube *e*. At one end of the tube a flexible connection *f* extends to a source of supply of the disinfectant.

At the end of the groove in the seat a short transverse groove is provided to the inner edge of the seat, and in this a case *h* is placed, the same being secured at the other end of the tube *e*, the case being preferably provided with an interiorly-threaded hub to screw upon the end of the tube. A plate *g*, secured to the under surface of the seat, covers the tube and extends around the case, and said plate is provided at points upon opposite sides of the case with cup-seats *5*.

The case *h* is provided with a lateral discharge-orifice 2 of downward inclination and with a vertical opening or orifice 3, the two connecting with the interior of the case. A plunger *i* is made with a base *i'*. This plunger has an inclined inner face and is partially within the vertical opening 3. Springs 4 are at one end received within the cup-seats *5*, and these ends of the springs are advantageously soldered in the bases of the cups. The opposite ends of the springs 4 advantageously surround and are secured to short hubs or blocks fastened to the plunger-base, and in this way the plunger-base and springs are secured to the plate *g*, so that they normally maintain their position.

From Figs. 3 and 4 it will be noticed that the tube *e* is shown as filled with the globes or spheres of disinfecting material and that one of these globes is in the case *h* resting against a part of the case and upon the inclined upper end of the plunger. The presence of one globe of material in the case acts as a stop to hold back the globes of material in the tube.

In the operation of the device the weight of the person occupying the seat forces the plunger up into the case, raising the globe of disinfectant, and delivering the same over the edge of the case, as shown in Fig. 4, so that the globe rolls down and out of the inclined discharge-orifice 2 into the bowl of the closet,

and the presence of the plunger in the case prevents a movement of the other spheres in the tube, so that they are held back. When the pressure is relieved by the person rising from the seat, the springs 4 raise the seat and move the plunger downward, thus releasing the spheres of disinfectant, so that one rolls out of the tube into the case into the position, Fig. 4, holding the others back, and returning the parts to a normal position preparatory to repeating the operation.

I claim as my invention—

1. The combination with the hinged seat of a water-closet, of a receptacle for disinfectant connected thereto, a case forming a continuation of the receptacle and having a discharge-orifice, and devices coacting with the said case and brought into operation by the movement of the seat for progressively delivering disinfectant into the bowl of the closet, substantially as set forth.

2. The combination with the hinged seat of a water-closet having a groove or channel formed in the under surface at one side, of a tube received in said channel, a connection therefrom to a source of supply for the disinfectant, a case connected at the other end of the said tube having a vertical opening, and an inclined discharge-orifice and spring-actuated devices adapted normally to support the seat above the bowl of the closet, and acting automatically with the depression of the seat to discharge disinfectant into the bowl of the closet, substantially as set forth.

3. The combination with the hinged seat of a water-closet having a groove or channel formed in the under surface at one side, of a tube received in said channel, a connection therefrom to a source of supply for the disinfectant, a case connected at the other end of the said tube having a vertical opening and an inclined discharge-orifice, and spring-actuated devices adapted normally to support the seat above the bowl of the closet and acting automatically with the depression of the

seat to discharge disinfectant into the bowl of the closet, and a plate secured to the under surface of the seat covering the groove or channel in the seat and the tube and extending around the case, substantially as set forth.

4. The combination with the hinged seat of a water-closet having a groove or channel formed in the under surface at one side, of a tube received in said channel, a connection therefrom to a source of supply for the disinfectant, a case connected at the other end of the said tube having a vertical opening and an inclined discharge-orifice, a plunger received in the vertical opening in the case and having an inclined upper surface, a base for the plunger, and springs at either side of the case and between the base of the plunger and the seat of the closet, substantially as set forth.

5. The combination with the hinged seat of a water-closet having a groove or channel formed in the under surface at one side, of a tube received in said channel, a connection therefrom to a source of supply for the disinfectant, a case connected at the other end of the said tube having a vertical opening and an inclined discharge-orifice, a plunger received in the vertical opening in the case and having an inclined upper surface, a base for the plunger, and springs at either side of the case and between the base of the plunger and the seat of the closet, and a plate of metal secured to the under surface of the closet-seat covering the groove or channel therein and the said tube, and extending around the said case and having cup-seats receiving the bases of the said springs and to which the said springs are secured, substantially as set forth.

Signed by me this 13th day of December, 1901.

G. S. GALLAGHER.

Witnesses:

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