

No. 652,267.

Patented June 26, 1900.

J. G. HICKS.
SMOKING AUTOMATON.
(Application filed Jan. 31, 1898.)

(No Model.)

3 Sheets—Sheet 1.



Witnesses:
Edw. C. Chylford,
Lester S. Allen

Inventor:
John G. Hicks.
By G. B. Coupland & Co.
Attorneys

J. G. HICKS.
SMOKING AUTOMATON.

(Application filed Jan. 31, 1898.)

(No Model.)

3 Sheets—Sheet 2.

Fig. 3.

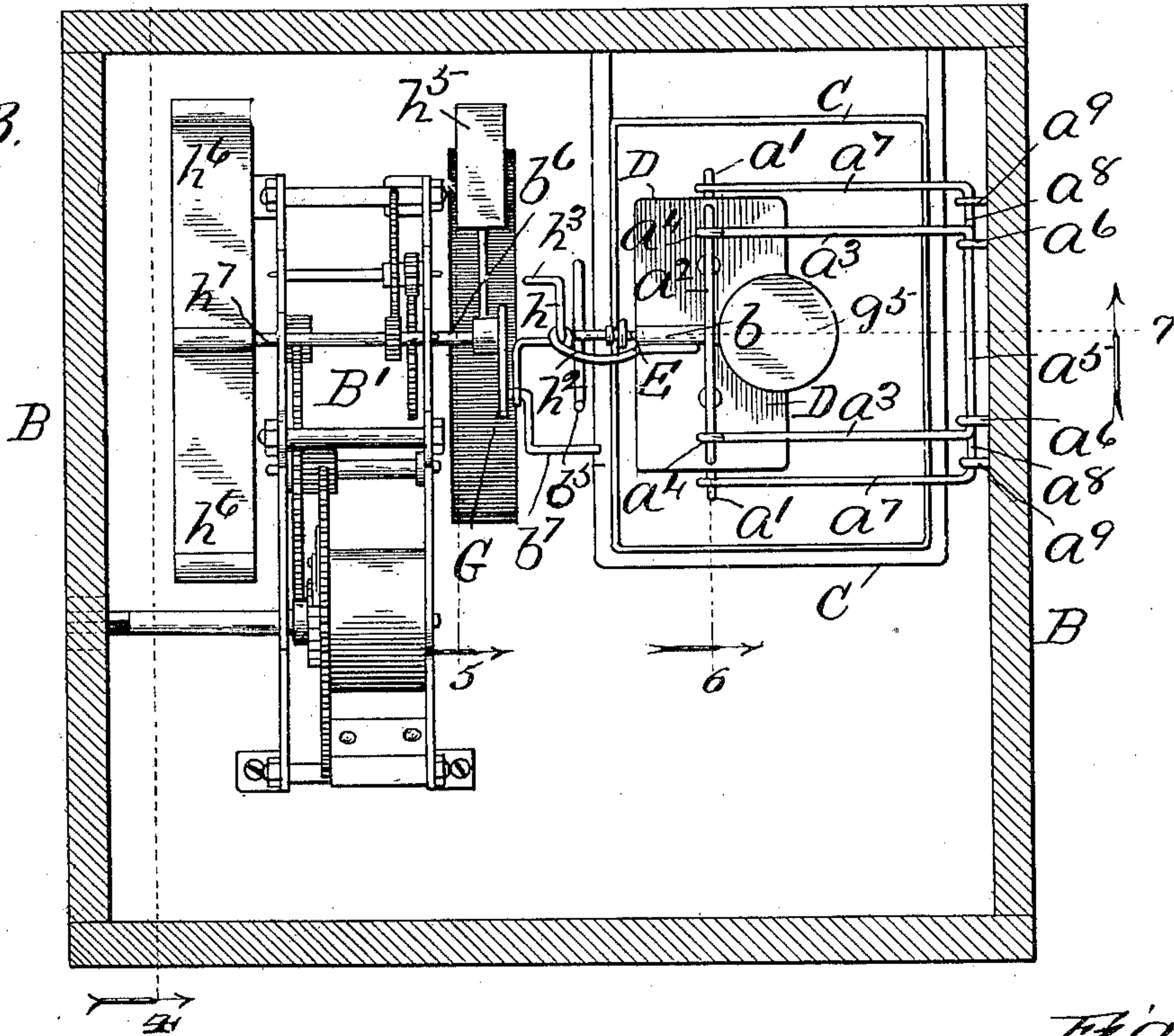
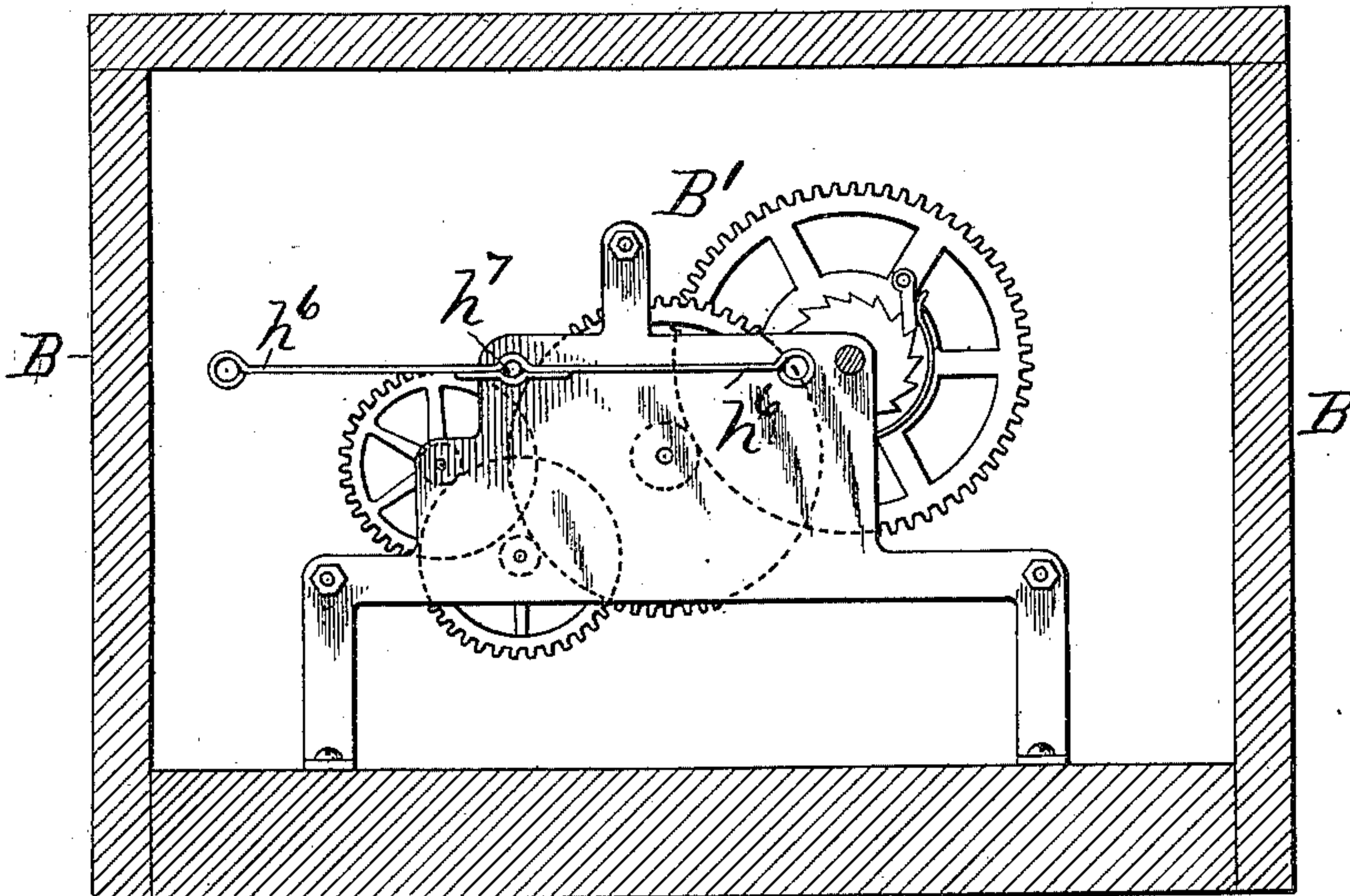


Fig. 4.



Witnesses:
E. S. Gaylord,
J. S. Allen

Inventor:
John G. Hicks
By L. B. Coupland & Co.
Attys.

J. G. HICKS.
SMOKING AUTOMATON.
(Application filed Jan. 31, 1898.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 5.

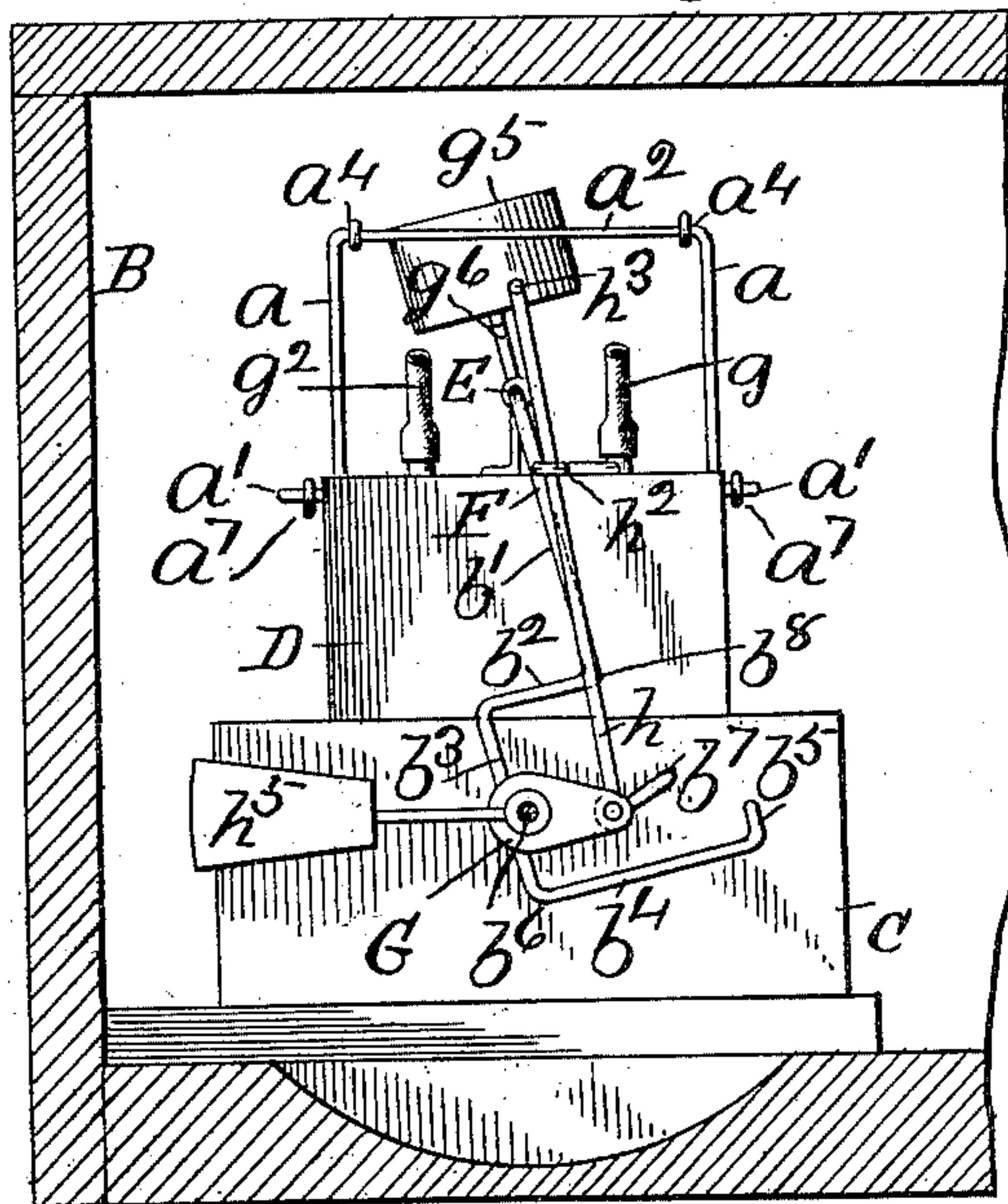


Fig. 6.

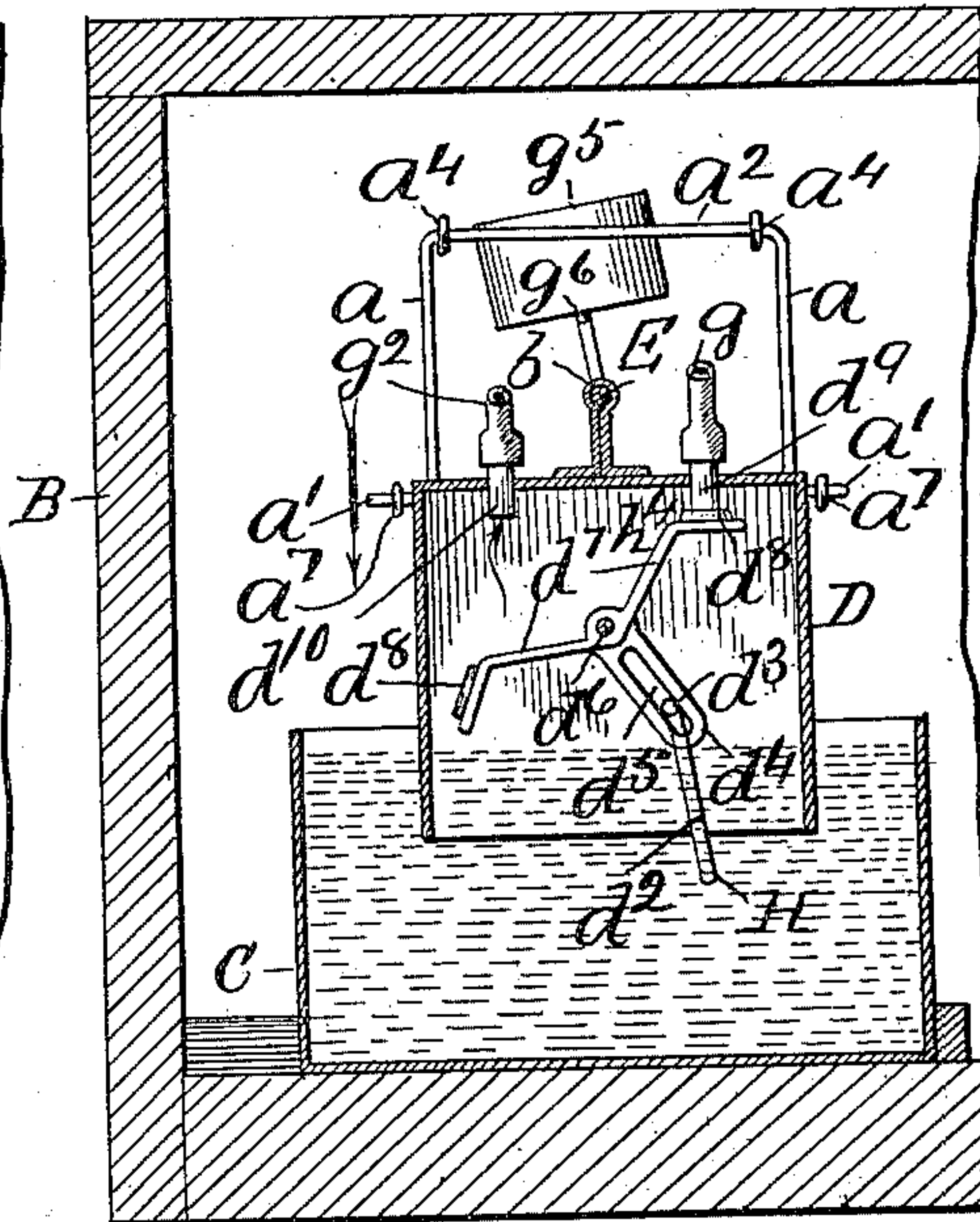


Fig. 7.

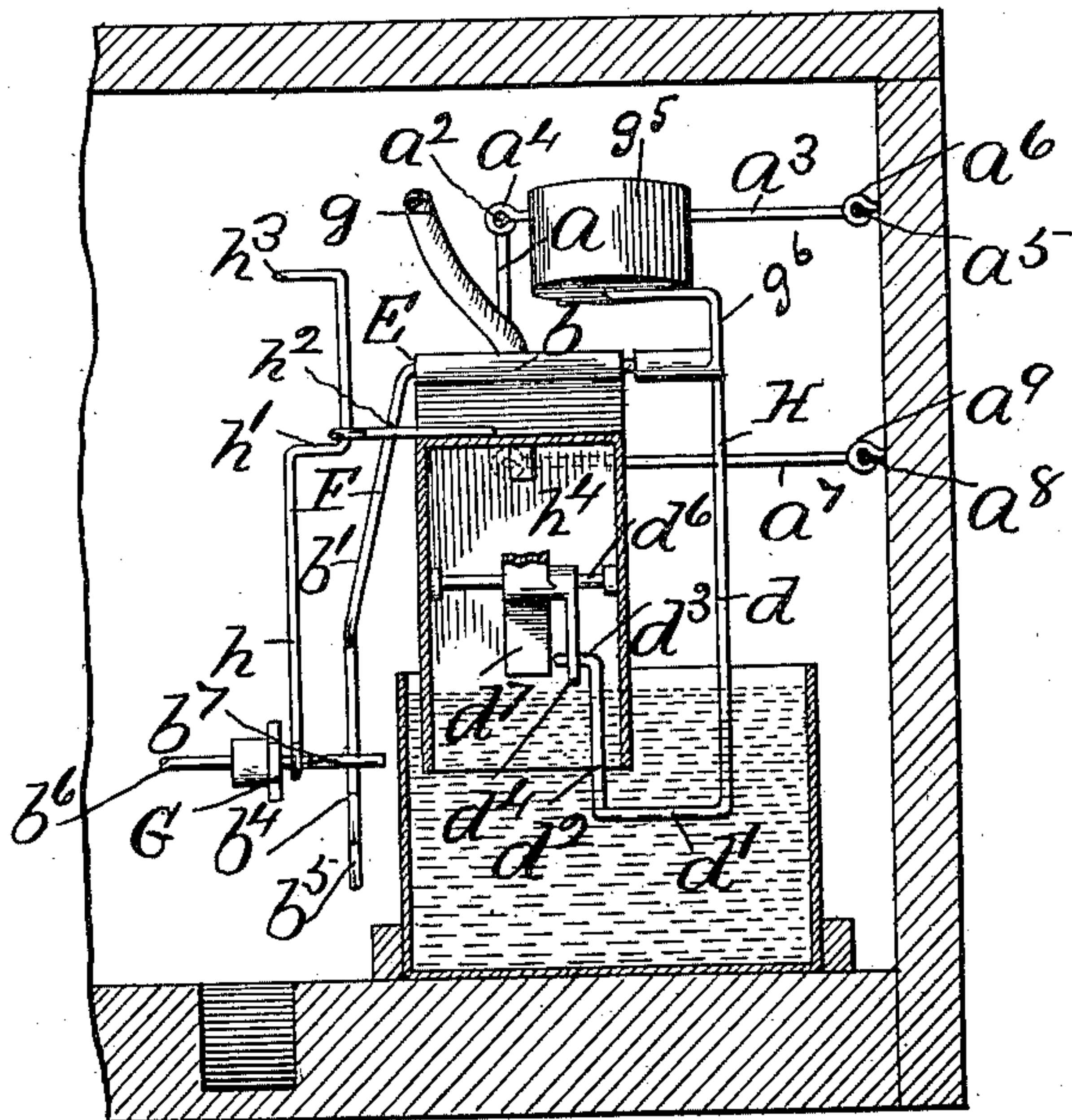
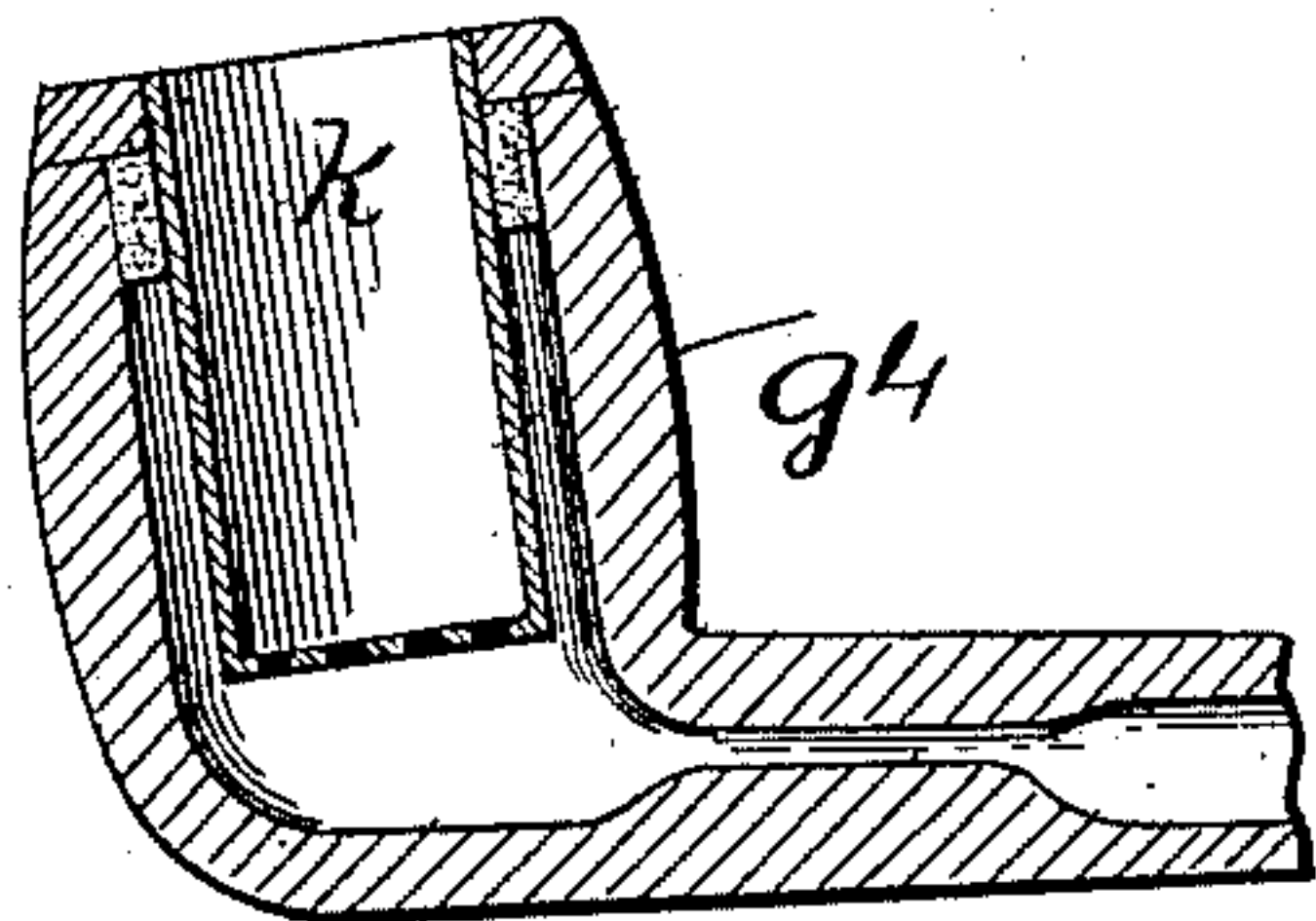


Fig. 8.



Witnesses:
E. S. Chylord,
L. B. Coupland

Inventor:
John G. Hicks.
By L. B. Coupland & Co.
Attys.

UNITED STATES PATENT OFFICE.

JOHN G. HICKS, OF CHICAGO, ILLINOIS.

SMOKING-AUTOMATON.

SPECIFICATION forming part of Letters Patent No. 652,267, dated June 26, 1900.

Application filed January 31, 1898. Serial No. 668,561. (No model.)

To all whom it may concern:

Be it known that I, JOHN G. HICKS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Smoking-Automatons; 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.

This invention relates to improvements in that class of automaton images or character figures that are more especially used as a show-window attraction and for advertising purposes generally. Heretofore it has been impossible to successfully produce an automaton smoker, for the reason that the smoke-passages were soon closed by the nicotin and the device rendered useless in a very few hours.

The object, therefore, of this invention is not only to improve the operating mechanism, but also to dispose of the nicotin, so that it will not close up the smoke tubes or passages, and thereby render the device inoperative.

In the drawings, Figure 1 represents a character figure embodying the improved features; Fig. 2, a horizontal section on line 2, Fig. 1, looking in the direction indicated by the arrow. Fig. 3 is a plan of the clockwork and other operating mechanism, the inclosing case being shown in horizontal section. Fig. 4 is an elevation of the outer side of the clockwork, the inclosing case being shown in vertical section on line 4, Fig. 3. Fig. 5 is a vertical section on line 5, Fig. 3, showing an elevation of the smoking mechanism on that side adjacent to the clockwork. Fig. 6 is a vertical section on line 6, Fig. 3. Fig. 7 is a vertical section on line 7, Fig. 3, taken at right angles with reference to Fig. 6; and Fig. 8, a broken-away section of the pipe-bowl used.

A represents a figure or image, which may be of any characteristic type; B, a case or box inclosing the clockwork and other mechanism and forming a base on which the smoking-figure is mounted, and B' the clockwork driving mechanism. The clockwork actuating the smoking mechanism is of the usual character, and a detailed description will therefore be omitted.

A stationary open tank or vessel C, containing a body of water or other liquid, is secured to the inside bottom of the inclosing case. A smaller inverted tank D, open on the bottom, is movably suspended above the tank C and is adapted to have an up-and-down reciprocating movement therein, the lower open end being always submerged in the liquid contents, as shown in Fig. 6, which is its highest position.

The lower part of the companion standards *a a* are fixed in the top of the tank D opposite each other, the horizontal terminal ends *a' a'* projecting through the sides of the tank, as shown in Figs. 5 and 6. The upper ends of these standards are connected by a cross-bar *a²*. The inner ends of the companion horizontal rods *a³ a³* have a looped connection with the connecting cross-bar *a²* of the companion standards, as at *a⁴*. The outer ends of rods *a³* are connected by a rod *a⁵*, running through eyebolts *a⁶ a⁶*, inserted in the sides of the case. The inner ends of the horizontal companion rods *a⁷ a⁷* are looped on the horizontal ends *a'* of the standards *a*, the opposite ends being connected by a rod *a⁸*, running through eyebolts *a⁹ a⁹*, as shown more particularly in Fig. 3. This arrangement forms a suspending hinge-support for the tank D and provides for the necessary up-and-down movement of the same. A rock-shaft E runs across the top of the tank D and is journaled in a supporting-bearing *b*. An integral extension F turns downwardly from the end of this rock-shaft on the side that the clockwork is located. This extension or rod consists of the vertical part *b'*, then bent around to form the horizontal part *b²*, then bent at right angles again to form the part *b³*, then bent again to form the part *b⁴*, and finally terminating in the upturned end *b⁵*, as shown in Fig. 5. The inner end of an elongated crank G is rigidly mounted on the adjacent end of the clockwork-arbor *b⁶*. The lower end of an angular shifting-arm *b⁷* is loosely inserted in the outer end of the crank G, which, as it rotates, imparts a longitudinal or up-and-down movement to the shifting-arm and once in each revolution of the crank G brings the disengaged end of the shifting-arm in contact with the shoulder *b⁸* on the upturned end *b⁵* of the rock-shaft

extension F in alternately moving the same to its two positions. The opposite end of the rock-shaft E is provided with the downward integral extension H. This extension or rod consists of the vertical part d^1 , the horizontal part d^2 , then turned up at right angles to form the vertical part d^3 , and then terminating in the right-angled horizontal end d^4 , inserted loosely in a crank-arm d^5 , provided with a slot d^6 for its reception, as shown in Figs. 6 and 7. This crank-arm is mounted on a rock-shaft d^7 , having its respective ends provided with suitable bearings on the interior sides of the movable tank D. A valve-plate d^8 is also mounted on this rock-shaft and has the flat cushion-valves d^9 seated on the respective outer ends thereof. The ends of this valve-plate are bent at such an angle as to bring them alternately squarely against the lower ends of the inlet-tube d^{10} and outlet-tube d^{11} , inserted through the top of the tank D and fixed therein. The lower end of a rubber or other flexible tube g connects with the inlet-tube d^9 , Fig. 6. The tube g extends up through the legs and body of the figure and has the upper end connected with the mouthpiece g^1 , held between the lips of the smoking-figure, as shown in Figs. 1 and 2. The lower end of the flexible tube g^2 connects with the outlet-tube d^{11} and extends up through the legs and body and connects with a tube g^3 , inserted between the lips and through which the smoke is expelled. A smoking-pipe g^4 is inserted in the mouth and used merely for illustration, as the device will smoke a cigar or cigarette with the same facility.

A counterweight g^5 is mounted on the upper end of a bent rod g^6 , the lower end of which is rigidly secured to rock-shaft E and serves to hold said rock-shaft and connecting parts operated thereby in either of the two positions to which they are capable of being moved, thus insuring a tight closing and positive action of the valves controlling the smoke-passages.

The lower end of a connecting-rod h has a looped engagement with the shifting-arm b^7 and is provided near the upper end with a shoulder bend h^1 and then passes up through the eye end of an arm h^2 , secured to the top of the tank D, and terminates in the right-angled end h^3 . As the revolving shifting-arm b^7 passes the lower center the shoulder bend h^1 of the connecting-rod h bears against the under side and projecting end of the arm h^2 and imparts the required upward movement to the tank D. The weight of the tank D will ordinarily be sufficient to cause it to gravitate to its lowermost position after the shifting-arm has passed its upper center; but the contact of the upper hood end h^3 of the connecting-rod h will impart the required downward movement. That portion of the movable tank not submerged provides a chamber h^4 , that is filled with smoke during the operation of smoking. The area of the smoke-chamber is

contracted on the down movement, which affords sufficient pressure to expel a puff of smoke before the outlet-valve closes. On the up movement the area increases and the pressure so diminishes that a suction is created, which draws on the pipe or cigar when the inlet-valve opens. The flexible smoke-tubes will be of sufficient length to allow for the change of position of the movable tank. The tank arrangement not only draws in and expels the smoke in imitation of the natural operation, but also disposes of the nicotin. The larger percentage of the nicotin will be deposited on the companion valves, which are alternately submerged and washed off in the water, thus always keeping the valve-surfaces clean and preventing the smoke-passages from being closed. The volume of smoke in the tank being also more or less acted upon by the body of water in the stationary tank, which is constantly agitated by the action of the movable tank, but little nicotin is left in the smoke to clog the passages.

A counterweight h^5 is mounted on the clockwork-arbor b^6 and serves to regulate the movement of the connecting mechanism and guards against the attainment of too high a speed.

A fan-wheel h^6 is mounted on an arbor h^7 of the clockwork and serves to assist in regulating the speed of the same in obtaining a uniform motion, which is very necessary in a device of this character.

The operation is as follows: As shown in Fig. 2, the valve controlling the inlet smoke-passage is closed and the companion valve in its lowermost open position to be submerged and washed off as the movable tank descends. The movable tank is also shown in its uppermost position and about ready to begin its downward movement, and when a certain point is reached and about the time the up or return movement begins the companion valves change position and the outlet-passage is closed and the inlet or suction passage opened and its valve in turn submerged and washed off, which alternate action and up-and-down movement of the movable tank is effected by the mechanism and connection described.

The pipe shown in Fig. 8 is provided with a removable tobacco-holder k , which seats inside of the pipe-bowl proper and may be conveniently taken out for the purpose of cleaning and refilling the same without the necessity of having to take the pipe out of the mouth of the smoker each time.

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

1. In a smoking-automaton, an inclosing case, a stationary tank, inclosed thereby and containing a liquid, an inverted tank, open at the lower end and suspended over the stationary tank and adapted to have an up-and-down limited movement therein, the smoke-passages, communicating with the interior of the movable tank and through which the

smoke is drawn in and expelled, the companion valves, alternately opening and closing said passages, said valves being submerged and washed in the same order, the clockwork, and means for operatively connecting the clockwork and the smoking device, substantially as described.

2. The combination with a stationary tank and its inclosing case, of a movable inverted tank, the companion standards mounted thereon and connected at their upper ends by a cross-bar and the lower ends turned at right angles, the companion horizontal rods $a^3 a^3$ and the companion horizontal rods $a^7 a^7$, forming a hinged connection and support between said movable tank and inclosing case, and means for imparting an up-and-down movement to the movable tank, substantially as described.

3. The combination with a stationary tank, containing a liquid, of a movable tank, supported over the same and having an up-and-down movement therein, a rock-shaft, journaled on the top of the movable tank, said rock-shaft being provided with downward integral extensions F and H, the crank G, the clockwork, the angular shifting-arm b^7 , having one end inserted in said crank; the opposite end being adapted to have contact with the lower part of the extension F of said rock-shaft, and shift the same from one position to the other, the extension H, running down from the opposite end of said rock-shaft

is turned upwardly into the movable tank, the slotted crank-arm, with which said extension engages, the rock-shaft on which said crank-arm is mounted, the valve-plate, also mounted thereon, the valves, mounted on the respective ends of said plate, and the smoke inlet and outlet tubes, opening into said movable tank, which said valves are adapted to alternately open and close, substantially as described.

4. In a smoking-automaton, the combination with a stationary tank, containing a liquid, of a movable tank, having an up-and-down movement in said liquid, the smoke inlet and outlet connections, opening into said movable tank, the companion valves, adapted to control said smoke connections and be alternately submerged and washed in the liquid contents of the stationary tank, and means for actuating said valves, substantially as described.

5. The combination with the movable tank, of the connecting-rod h , provided with a shoulder bend h' , of the shifting-arm b^7 , to which the lower end of said rod is attached; the crank, carrying the shifting-arm, the clockwork, the arm h^2 , secured to the top of said tank, and with which the connecting-rod engages, substantially as described.

JOHN G. HICKS.

Witnesses:

L. M. FREEMAN,
L. B. COUPLAND.