

C. S. POWERS.
Electro Vapor-Bath.
No. 198,152. Patented Dec. 11, 1877.

Fig. 1.

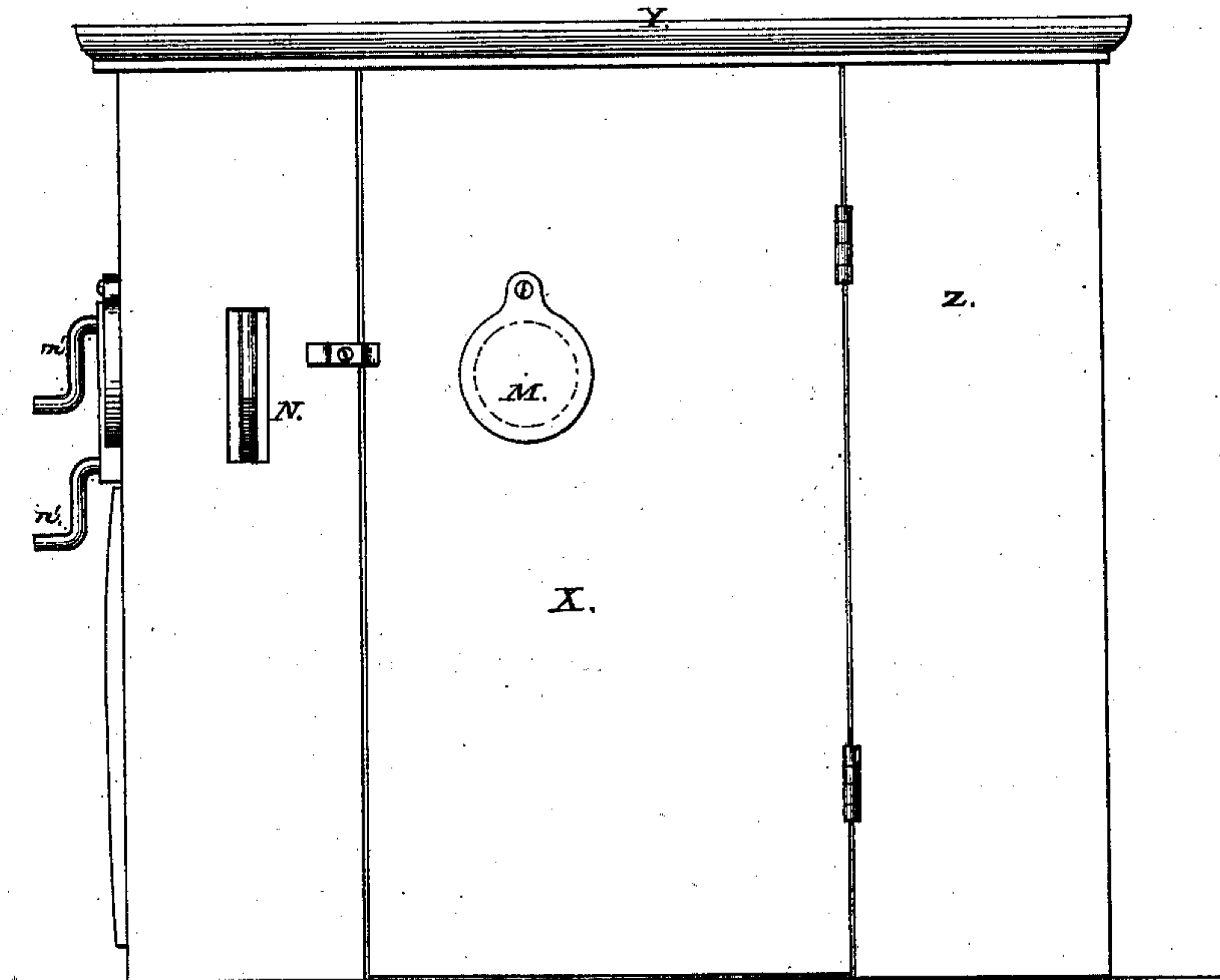
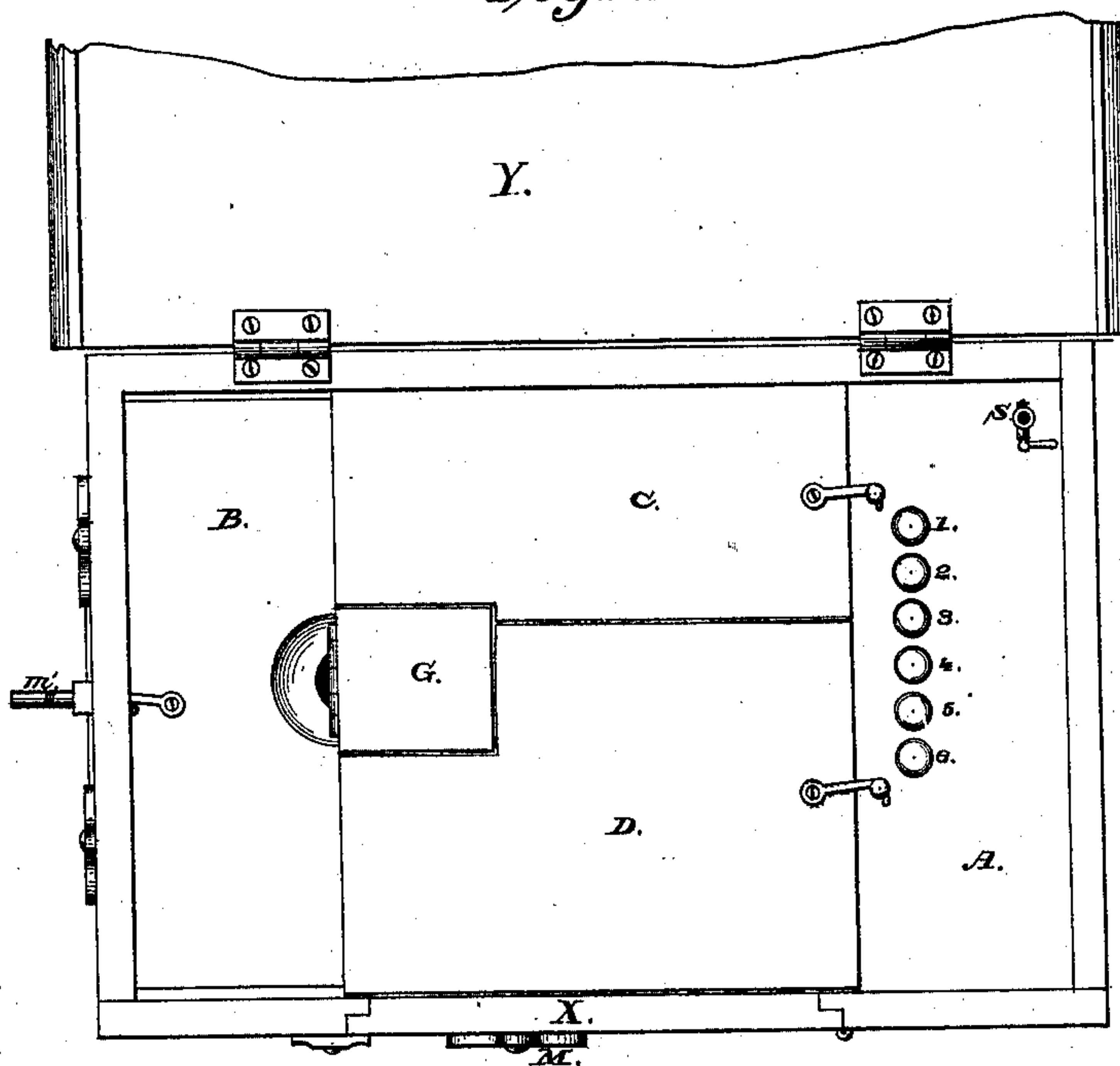
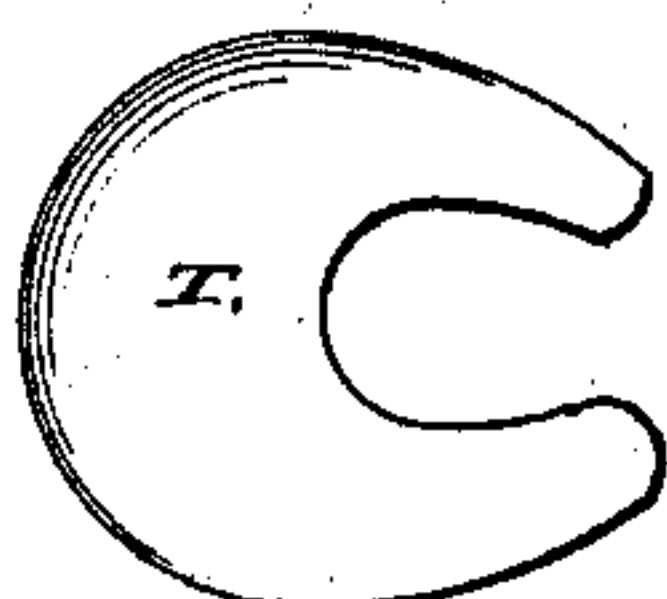


Fig. 2.



Attest:

A. Scott
C. E. Quady



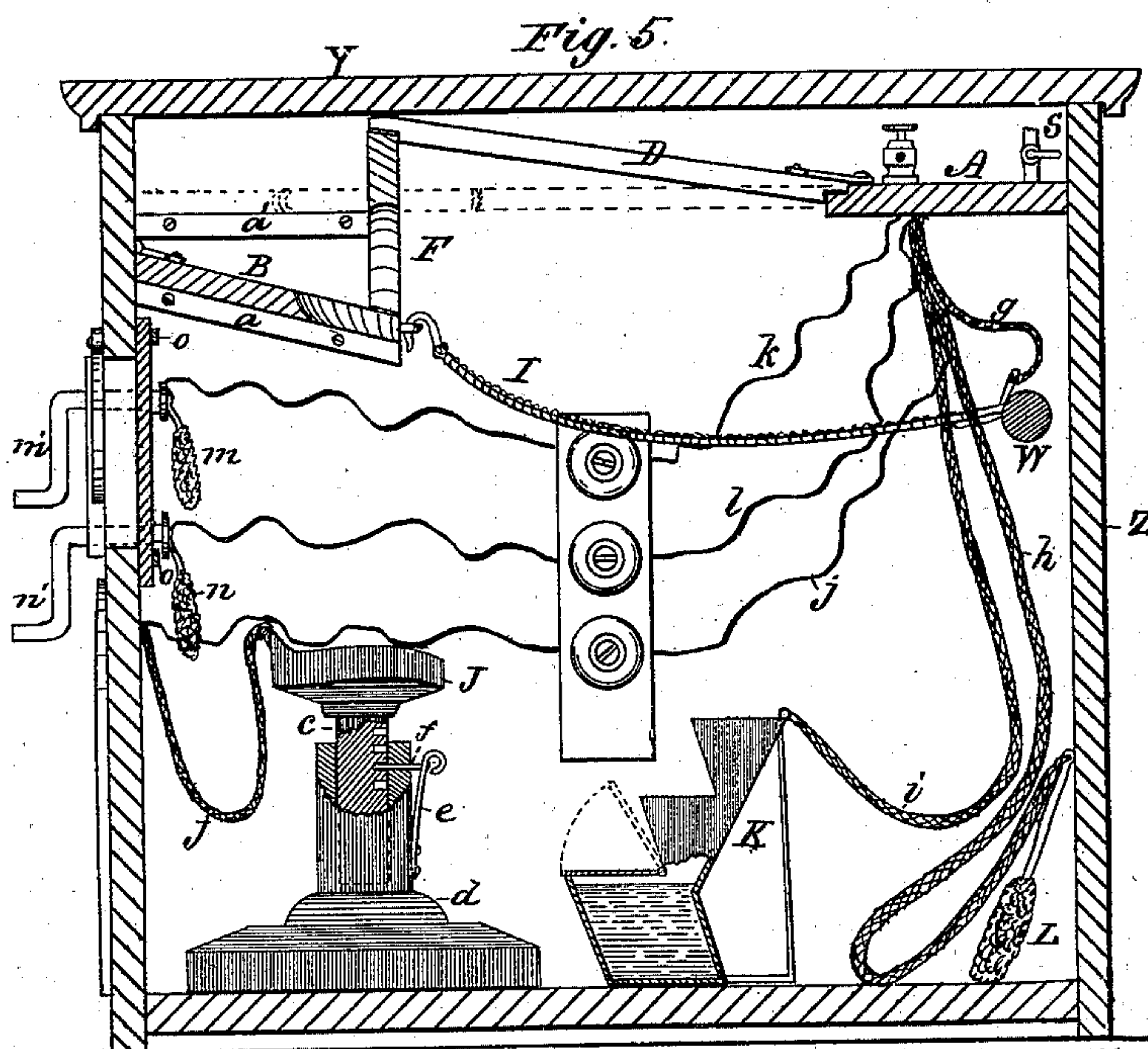
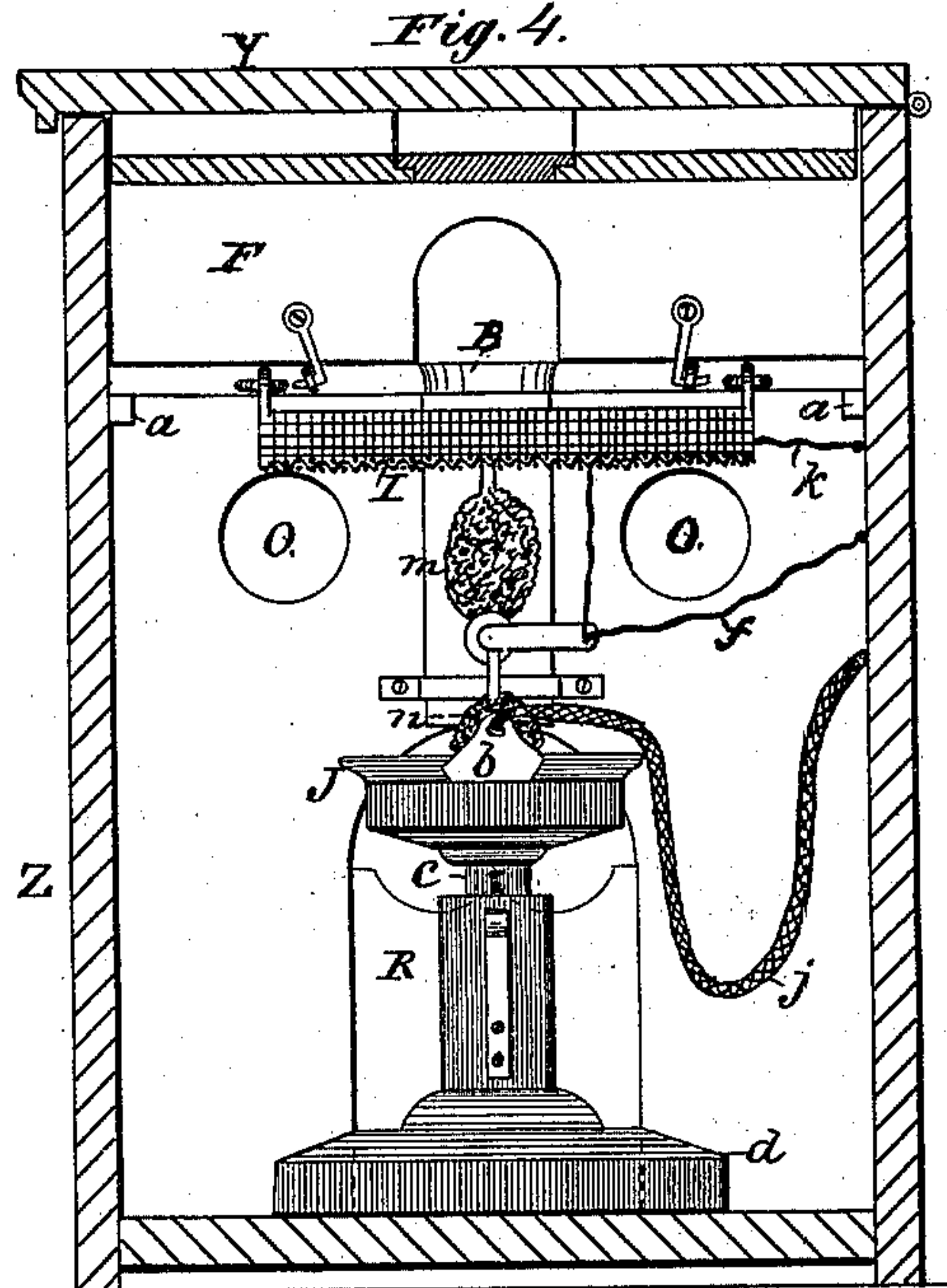
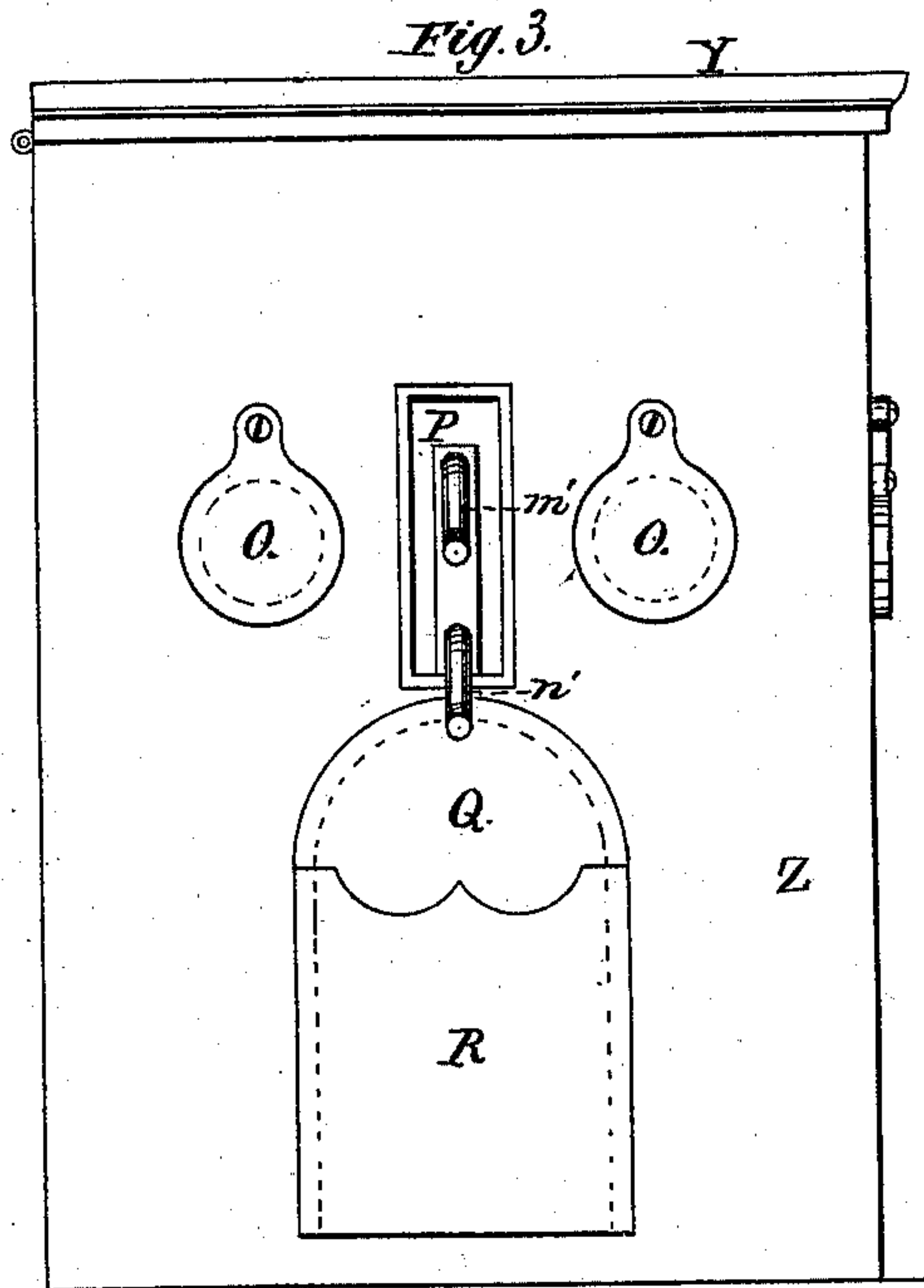
Inventor:

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WITNESSES:

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UNITED STATES PATENT OFFICE.

CALVIN S. POWERS, OF FOUNTAIN, MINNESOTA.

IMPROVEMENT IN ELECTRO-VAPOR BATHS.

Specification forming part of Letters Patent No. **198,152**, dated December 11, 1877; application filed August 24, 1877.

To all whom it may concern:

Be it known that I, CALVIN S. POWERS, of Fountain, in the county of Fillmore and State of Minnesota, have invented a new and Improved Electro-Vapor Bath; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side elevation from the front or entering side; Fig. 2, a plan view with the cover raised; Fig. 3, an outside end view; Fig. 4, an inside end view with the case in vertical section; Fig. 5, a vertical longitudinal section.

The object of my invention is to provide an improved electro-vapor bath, designed for the application of the electric current to the human system for the cure of diseases.

The improvements consist in the means for accommodating the patient, and applying the current either in reclining or sitting posture to the various parts of the body, as hereinafter more fully described.

In the drawing, Z represents an inclosed case or cabinet, which is provided with a hinged lid or cover, Y, which shuts in the top of the case, a door, X, through which the patient gains access to the interior, and a thermometer, N, for indicating the temperature within. In the upper portion of the case is arranged the reclining-bath, which is constructed as follows: A head-support, B, is fixed in cleats *a a* in the sides of the case, and to the inner edges of the same are hooked the front ends of a wire hammock, I, the foot of which is attached to a supporting-bar, W. To the edges of the head-support B, and the sides of the case is also removably fitted a vertical board, F, which at its junction with the head-support is cut out, to admit the passage of the head and receive the neck of the patient lying upon the hammock.

The space above the patient's head is open for access of fresh air, but above his body the case is closed by boards C and D, which rest in slightly inclined position, with their front and higher ends upon the edge of the vertical board F, and with their rear ends upon a permanent shelf, A. Instead of having the patient recline upon the hammock with his head

upon the support B, he may occupy a sitting posture with his head projecting through an opening closed by the hinged door G in the top boards C D of the case. Each of these several parts B F C D are removably held in place by hooks, or other suitable fastenings, and when the hammock is not in use they are to be partially removed and partially changed in location to make room for the sitting-bath. In changing the reclining-bath to a sitting-bath the head-support B and board F are removed with cover C and D. B is then placed upon the upper cleats *a' a'*, F and G dispensed with, and the cover C and D supported and arranged upon the permanent shelf A and edge of B, while the opening which was formerly closed by G is adapted to receive the head of the patient, as shown in dotted lines in Fig. 5.

The support for the patient in the sitting-bath consists of a seat, J, wholly or partially covered with a sheet-metal electrode, *b*, and mounted upon a standard, *c*, which moves vertically in a hollow socket of a base, *d*. The seat is thus made vertically adjustable for different patients, (which is necessitated by reason of the fixed position of the head,) and is held to its adjustment by a spring, *e*, carrying a locking-bolt, *f*, which latter is forced by the spring into one of a series of recesses in the standard *c* of the seat. The said seat is detached from the cabinet and movable therein, as is also the foot-rest K. This latter consists of a series of steps having metal conducting-surfaces, the bottom step of which is formed into a receptacle for water or a medicated liquid, into which the feet may be placed. The foot-rest is graduated with steps to adapt it to the adjustment of the seat.

In applying the current the battery (not shown) is placed upon the stationary shelf A, and is attached to such of the connections 1 2 3 4 5 6 as may be necessary. These connections have attached, respectively, the wires *g h i j k l*, which operate in conjunction as follows: Connection 6 and wire *g* transmit the current to the hammock, and connection 5 and wire *h* conduct the current to an electrode, L, terminating in a sponge, with which the patient treats himself when lying upon the hammock or sitting upon the seat. Con-

nection 4 and wire *i* lead to the foot-rest K, and connection 3 and wire *j* lead to the electrode upon the seat J. Connection 2 and wire *k*, and connection 1 and wire *l* lead, respectively, to a special set of electrodes, *m* and *n*, either one of which may operate in connection with the electrode on seat J, or any other electrode. These special electrodes are in the nature of arms, terminating in sponges, and rotated from the outside of the case by cranks *m'* *n'*. The upper one of these sponges applies, with a rotary motion, the current to the neck, shoulders, and upper portion of the back above the kidneys, while the lower one treats the kidneys, the lower portion of the back, and hips. Both these electrodes are made vertically adjustable by their arrangement in a sliding bearing, P, which is guided in keepers *o*, and is flanged upon the inside of the cabinet, so that in its adjustment the slot in the case is not uncovered, and the vapor is, consequently, not allowed to escape.

Instead of two of these revolving electrodes, one, by an increased adjustment, may be made to perform the function of both.

O O are openings, closed by pivoted doors, through which the patient may insert his arms to be treated; and R is a removable door, through which the lamp may be inserted which generates the steam. The upper portion of the door R, (designated by the letter Q,) is cut or sectioned in such a manner as to correspond to the seat and thighs, so as to receive the lower extremities when they are to be treated. M is an opening in the door X, closed by a pivoted cover, which opening is designed to admit the hand of the physician when treating the patient on the hammock or seat. T is a semicircular cushion, upon which the patient's head may rest, or which may be placed about his neck and under his chin, when the patient is in sitting-bath, to prevent the vapor from escaping through the opening for the head. S represents a small pipe or tube, with stop-cock, which conducts the steam or medicated vapor outdoors or

into a waste-room. It is also used for changing the air in the bath and lowering the temperature.

With respect to the feature of the wire hammock, I would state that, although I have shown and described it as made of wire, I do not confine myself to the same, as one made of canvas or cloth will do.

When I use a wire hammock, I paint the same, so as to render it a non-conductor, the current being directed through the body of the patient from an electrode in his or the practitioner's hand, to another electrode placed at the feet or other suitable position.

A modification which I sometimes make in the head-support B is to cut the hole for the head entirely in the same, opening at the edge just enough to permit the neck to be inserted laterally. This construction dispenses with the hinged cover G and the necessity of cutting out the covers C and D.

Having thus described my invention, what I claim as new is—

1. The combination with the case or cabinet Z, having permanent shelf A, of the removable head-support B, hammock I, vertical board F, having door G, and the cover C and D, made removable, substantially as and for the purpose described.

2. The foot-rest K, made in the form of steps, with conducting-surfaces, and having the lower step formed into a receptacle for fluids, for the purpose described.

3. The revolving electrodes *m* and *n*, arranged in a sliding and flanged bearing, P, and combined with the slotted case Z, for the purpose described.

4. The case Z, having door R, with section Q, formed to fit the lower extremities, and having also openings O O for the arms, provided with pivoted covers, for the purpose described.

CALVIN S. POWERS.

Witnesses:

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JOHN HALVERSON.