

D. S. Forney,

Water Closet,

N^o 58,400.

Patented Oct. 2, 1866.

Fig. 1.

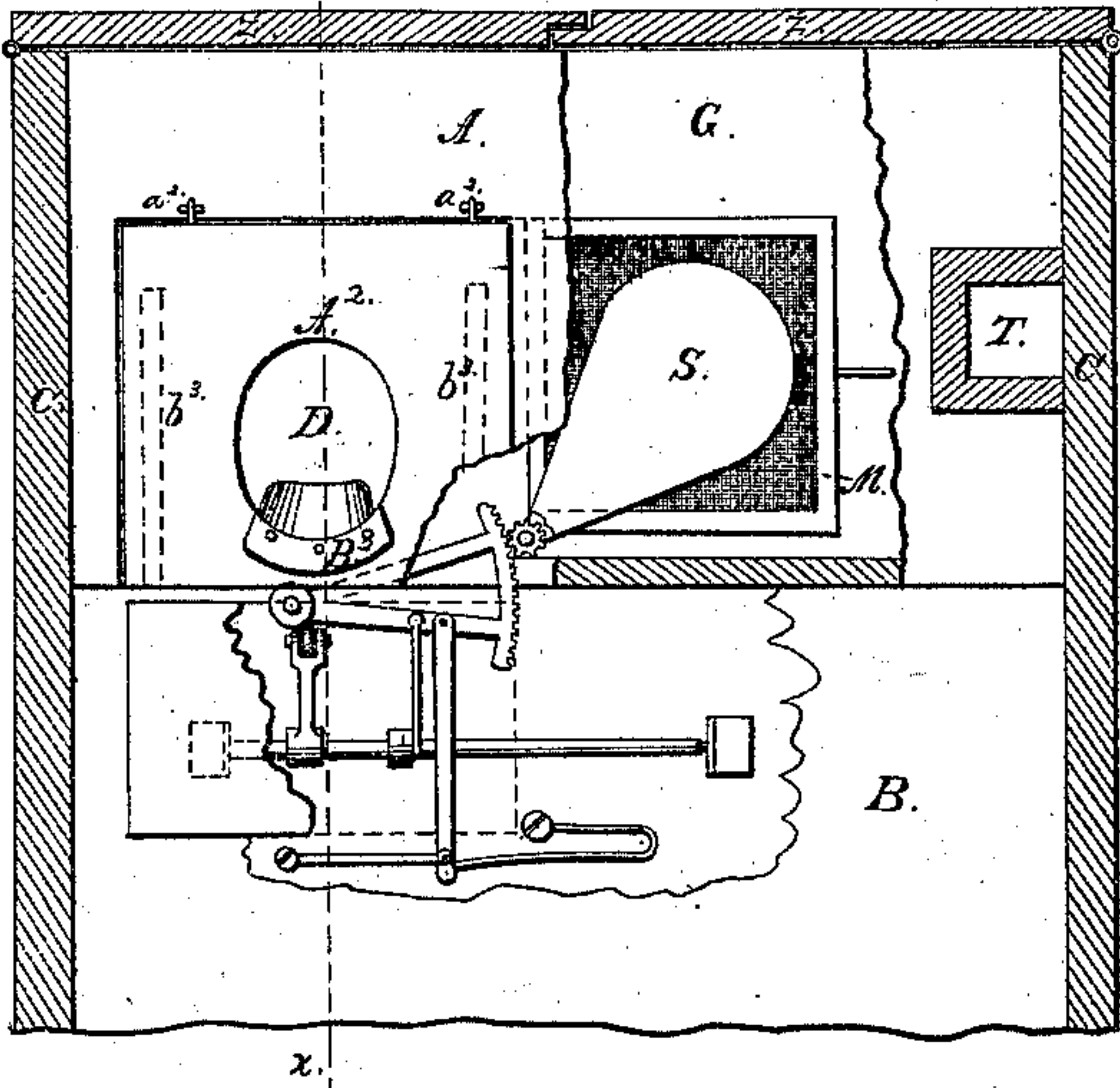


Fig. 2.

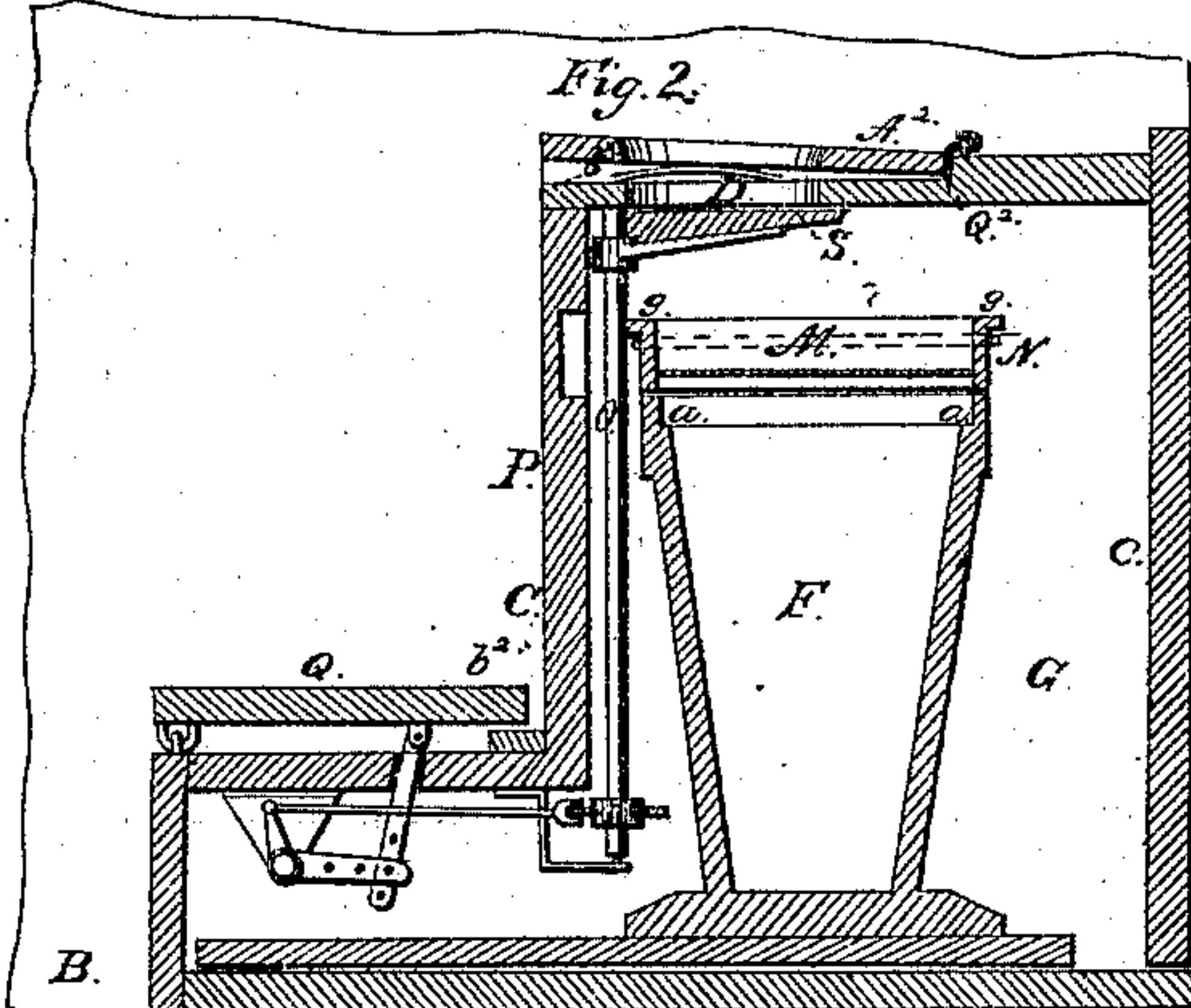


Fig. 4.

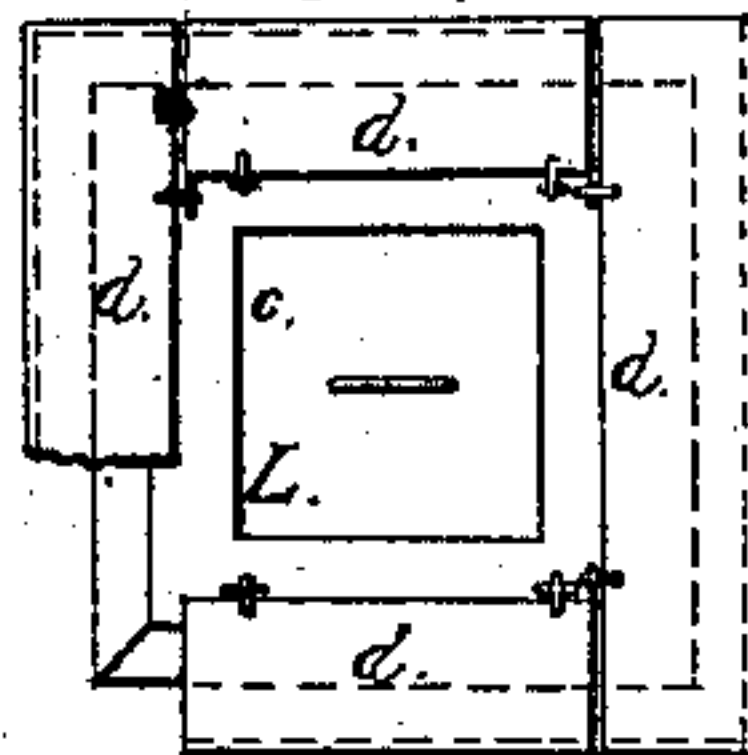
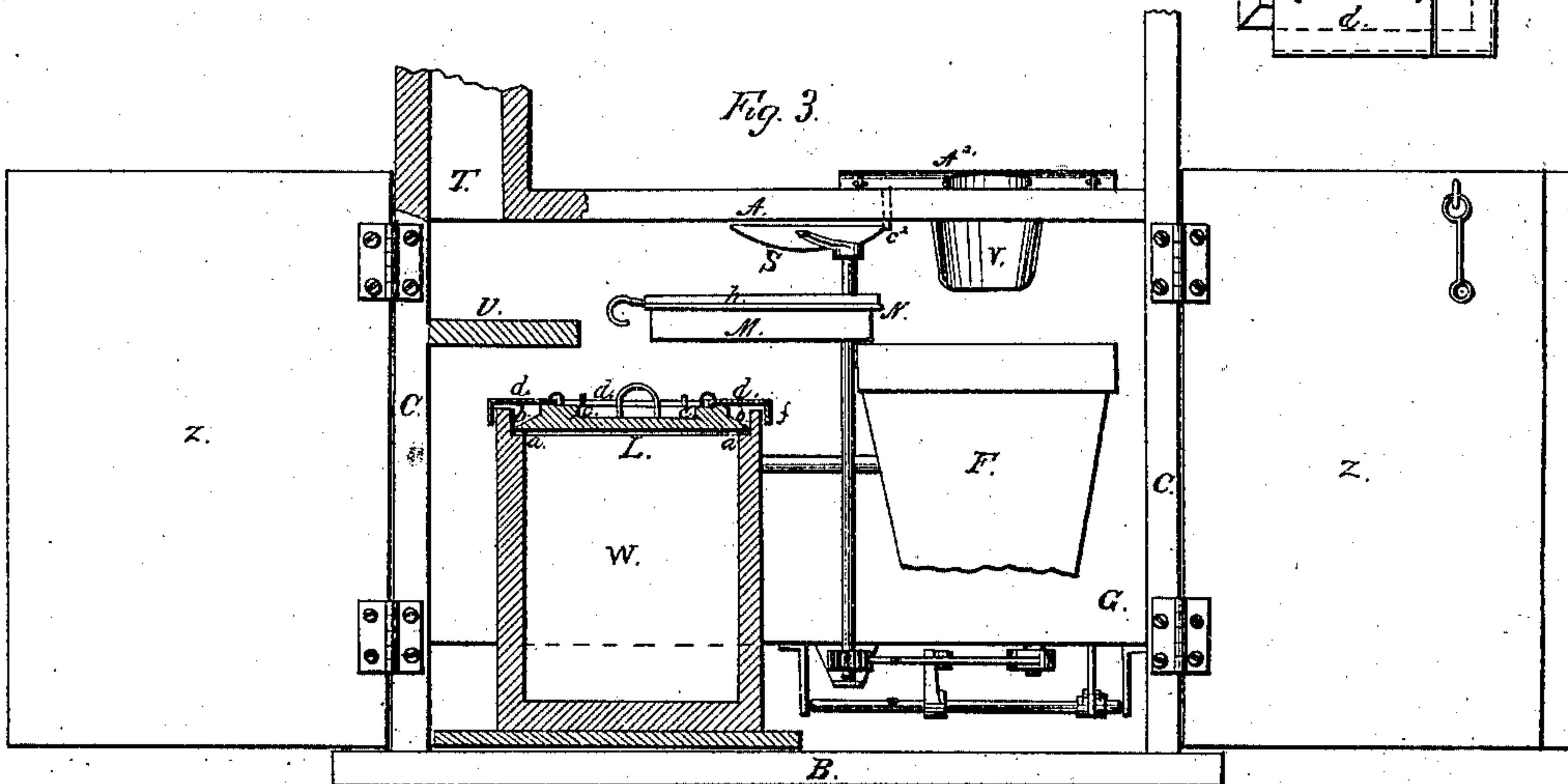


Fig. 3.



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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN PRIVIES.

Specification forming part of Letters Patent No. 58,400, dated October 2, 1866.

To all whom it may concern:

Be it known that I, D. S. FORNEY, of Wytheville, in the county of Wythe and State of Virginia, have invented new and useful Improvements in Privies; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

The nature of my invention is extremely simple. The privy is built upon the surface of the ground, with no vault or sewer-pipe, the occupant of the privy-seat discharging through it and depositing in a receptacle below susceptible of being removed and of convenient size therefor. As the person rises from the seat, by then closing its lid the receptacle below is also simultaneously closed therewith (the two opening and closing together) with a lid made in the form of a box and filled with an absorbent but not disinfecting agent, which lid is to tightly fit the top of the receptacle, so as to prevent the escape of any obnoxious odors therefrom, but has its bottom made of wire-netting, or with perforations, so as to permit, however, the passage of the odors and gases from the contents of the receptacle to the absorbent. Within this excrement-receptacle I intend to place a sufficient quantity of any suitable material which will act as an antiseptic, which antiseptic I deem the best to have in the form of a liquid, so that as the solid portions of the deposits become immersed in it all exhalations from the excrement are prevented.

When the excrement-receptacle is to be removed, so as to be emptied of its contents, I use an extra cover or lid for it, (the other one being connected with the stationary portions of the privy,) so constructed and formed that, when placed upon said receptacle, no escape of gases therefrom can possibly occur.

Having thus in general terms stated the nature of the present invention, I will now proceed to describe the peculiar construction and arrangement of the privy which I employ therefor in detail, reference being had to the accompanying plate of drawings, in which—

Figure 1 is a horizontal section, taken through

the privy in a plane above the seat, with portions of the seat broken away, so as to more clearly show the parts below; Fig. 2, a vertical section, taken in the plane of the line *x x*, Fig. 1; Fig. 3, an elevation from the rear of the parts of the privy below the seat, showing excrement-receptacle and other parts.

Similar letters of reference indicate like parts.

A in the drawings represents the seat portion of the privy, which is to be of suitable height from the floor B; C C, the sides of the privy-box; D, the hole in privy-seat A, through which the excrement from the person occupying such seat passes into the receptacle or box F, placed below and in the chamber G of the privy. This receptacle is to be lined upon its inside with zinc, or in any other suitable manner rendered impervious, and, furthermore, is to be made of such a size and shape that it can be easily removed and emptied of its contents when full, or before, if so desired, a duplicate one being provided, so that when one is removed to be emptied, or for any purpose, the other one can be used. This receptacle F is made smaller at its bottom than at its top, the object of which is to enable a comparatively small quantity of any suitable antiseptic material or substance to be used in it, which I prefer to have in a liquid form, and yet at the same time have sufficient depth for the immersion of the solid portions of the excrement therein, and thus prevent any and all exhalations from arising from the same.

L is a cover (see Figs. 4 and 5) for the open end of receptacle F, to be used when the receptacle is removed from the privy to be emptied. This cover is made to fit inside of the open end, resting upon a shoulder, *a*, thereof, the cover being made thin at its edges, but increasing in thickness toward its central portion, *c*, where it is in line, or nearly so, with the top edges of the receptacle, thereby forming a space or recess, *b*, entirely around it, between the inner edges of the top of the receptacle and the horizontal plane of the central portion, *c*, of the cover L, which space is closed by a series of lids, *d d*, one for each side of the cover, to which they are hinged, these lids tightly closing by their flanged edges *f f* over the top edges of the recep-

tacle. By this means the crevices or openings between the receiver and its cover, the only avenues of escape for the gases from the receptacle when the cover is placed on it, can be effectually closed, and if the space or recess *b* then inclosed by the lids *d* is filled with any suitable absorbent, it is obvious that the transportation of the receptacle is attended with no disagreeable odors.

This cover *L*, when the receptacle *F* is in place under the seat of the privy for the reception of the excrement discharged through its opening by any person occupying it, is not used, but in its place is substituted a lid, *M*, made in the form of a box, resting upon the top edges of the receptacle, and suspended by its flange *g* upon each of its two sides, *h h*, in a horizontal frame, *N*, attached to a vertical shaft, *O*, hung in suitable bearings at each end upon the inside of the front board or piece, *P*, of the privy-seat. With this shaft *O*, through a suitable arrangement of intermediate mechanical devices, is so connected the foot-rest *Q* of the privy-seat, which rest is hinged at its outer edge to the floor *B* of the privy, that by bearing down or depressing the inner edge, *b*², of the said foot-rest the receptacle-lid *M* will be swung away from the top of the receptacle, thus opening it to the reception of the excrement falling through the seat, when, releasing such pressure upon the foot-rest, the lid will instantly swing back to its place over the receptacle and tightly close it.

An arrangement of parts for actuating the receptacle, as above explained, is shown in the drawings accompanying this application; but as I do not intend to lay claim to any portion of the same, I have not deemed it necessary to herein particularly describe it, it being only essential for the perfect working of my improved privy that the cover to the excrement-receptacle shall be removed from it when the privy is used, but instantly replaced upon it when the person rises from the seat; and it is obvious that if this lid is so hung and arranged as to be operated automatically it can by no possibility fail to be opened and closed at the proper times, the importance of which will become prominent and evident from the description that follows.

The bottom of this box cover or lid *M* is to be made of wire gauze or netting, or in any other similar open manner, and in its box portion is to be placed any suitable absorbent material or substance of a sufficient quantity to absorb all gases and odors passing through its perforated bottom from the receptacle when the said cover is over its top.

S is a cover for the privy-seat opening, placed, in the present instance, upon its under side, but it may be upon its upper side, if so desired, which cover is fixed to the said vertical shaft *O*, and in common with the receptacle-lid *M*, it swinging away from and under the seat-opening in conjunction and simultaneously with the receptacle-lid *M* when the said shaft is operated by the depression of the foot-rest, as before ex-

plained, thus opening and closing the seat at the proper times.

T is a spout or tube, which communicates at its lower end with the space or chamber *G* under the privy-seat, and is to extend upward through the upper portion of the privy into the open air.

U is a shelf placed just below the opening of the spout into the privy-chamber, on which it is intended to place a liberal quantity of any suitable absorbent for the obnoxious gases and disagreeable odors, if any should escape by any possibility from the excrement-receptacle, so that they will be all absorbed, and thus the pollution of the atmosphere surrounding the privy prevented.

V is a deflector, fastened to the under side of the privy-seat at the front portion of its opening, the object of which is to prevent the soiling of any parts of the privy or "cloaca" by forming a conductor for the excrement as discharged by the person into the receptacle provided for it.

To prevent the receptacle from becoming filled to such an extent as to overflow, an additional reservoir, *W*, may be used, the interior of which is to be lined in a similar manner to that explained for the receptacle *F*, also closed at its open end by a cover of substantially the same construction as the cover hereinbefore referred to, this receptacle *W* being connected to the principal receptacle by a pipe, or in any other suitable manner that will permit the excrement to flow from the receptacle to the other when it has reached a certain and the desired height therein, and thus prevent its overflow, as is obvious.

The receptacle-chamber of the cloaca or privy I intend to make double walled, with a chamber-space between them filled with any suitable non-conductor of cold, so as to prevent the freezing of the excrementitious deposits in the receptacle therefor, doors *Z Z*, however, being provided, through which the excrement-receptacles can be removed and replaced at pleasure.

*A*² is a supplementary seat, hinged, by its back edge, *a*², to the principal and main seat; *b*³ *b*³, two bent springs upon the under side of the seat *A*², resting upon the top of the main seat; *c*², a pin projecting from the under side of hinged seat *A*², passing through the main privy-seat, which pin, when the lid to the seat-opening is swung from under the same, holds it in such position so long as the seat is occupied, whether the pressure upon the foot-rest is relieved or not, the seat-lid coming to a stop against it, as plainly shown in Fig. 3 of the drawings, said pin, however, being released as the person rises from the seat by the action of the bent springs *b*³ *b*³.

For perfect cleanliness the front edge of the supplementary-seat opening I intend to cover with a metallic rim, *B*², passing below the point of contact between it and the main seat, thus protecting the space between the two.

From the above description of my improve-

ments in privies, it is plainly to be seen that the economy of the excrementitious deposits is secured, and in the most perfect and complete manner, while at the same time the poisoning of the atmosphere with the vapors and gases arising from such deposits is entirely obviated, the importance of both of which results are self-evident to all.

It may be here remarked that with my improved privy all excrement, whether solid or liquid, deposited in the receptacle provided for it are there, by using a proper antiseptic in such receptacle, held unchanged until ready for removal, nothing being lost by decomposition; and, furthermore, all odors arising from fresh excremental deposits in the receptacle for them must pass through an absorbent material before escaping therefrom. Immediate relief from the fresh odors of the excrement-deposits is also obtained through the operation of the antiseptic, the descending excrement, as it becomes immersed, having a new surface or antiseptic coating, as it were, imparted to it, thus stopping all further exhalations from it, the absorbent material completing the work of the antiseptic; but in the event that the immersion of the excrement in the antiseptic does not thoroughly arrest the exhalations or odors arising from it while the seat is occupied by a person, the passage of such vapors from the receptacle-chamber to the external air, then up through the spout of the privy, the absorbent material placed just below its open end communicating with the receptacle-chamber, will complete the work. By means

of this privy-spout having a quantity of any suitable absorbent material so situated with regard to it that all odors from the privy must come in contact with such material before escaping to the external air, it is plain to be seen that both the seat and excrement-receptacle might be left open without any escape of odor into the upper chamber of the privy to any appreciable extent.

I claim as new and desire to secure by Letters Patent—

1. The portable receptacle F for excrementitious deposits, in combination with the box W, connected by a pipe or tube to the receptacle F, and provided with the cover L and lids *d d*, the whole being constructed, arranged, and operated as described.

2. A swinging cover, M, or its equivalent, so arranged upon the excrement-receptacle that it can be either swung away from or over its mouth by means substantially as and for the purpose specified.

3. The box cover or lid M, having its bottom perforated or made of wire-netting, for the purpose specified.

4. The swinging cover or lid S for the seat-opening of the privy, operated as described, whether arranged to swing in conjunction with the cover of the excrement-receptacle or not.

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Witnesses:

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