No. 119,610. Patented Oct. 3, 1871.

Chester D. Holmes.

Impts in Earth Closets.

Witnesses.

John H. Mills

Edwd. Griffith.

Chester D. Holmes.

by his Attorney.

Frederick Curtis.

Fig. 3.

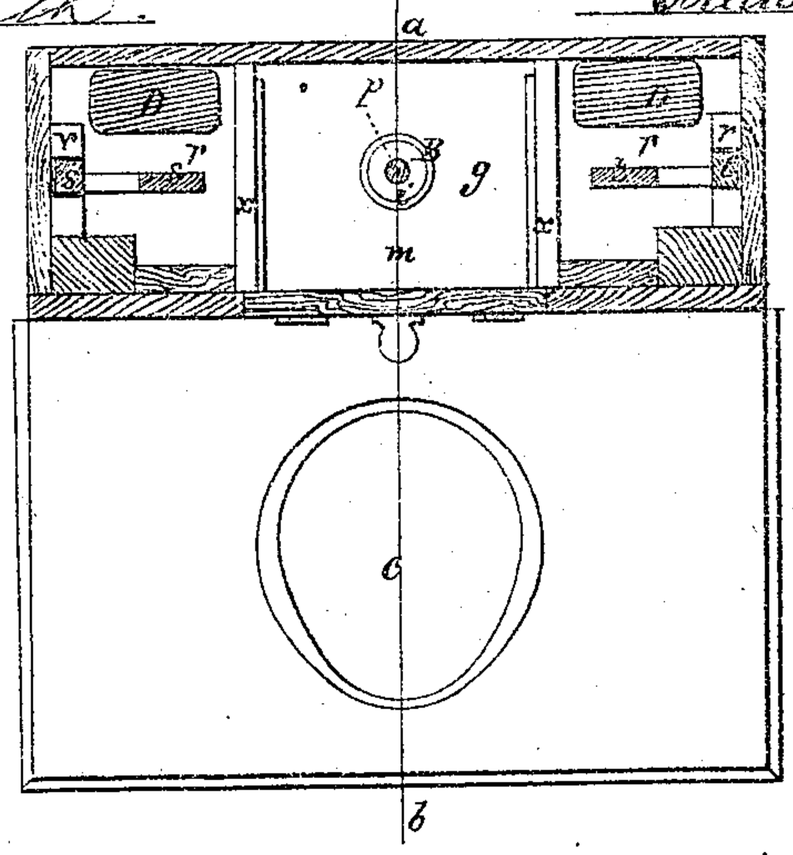


Fig. 1.

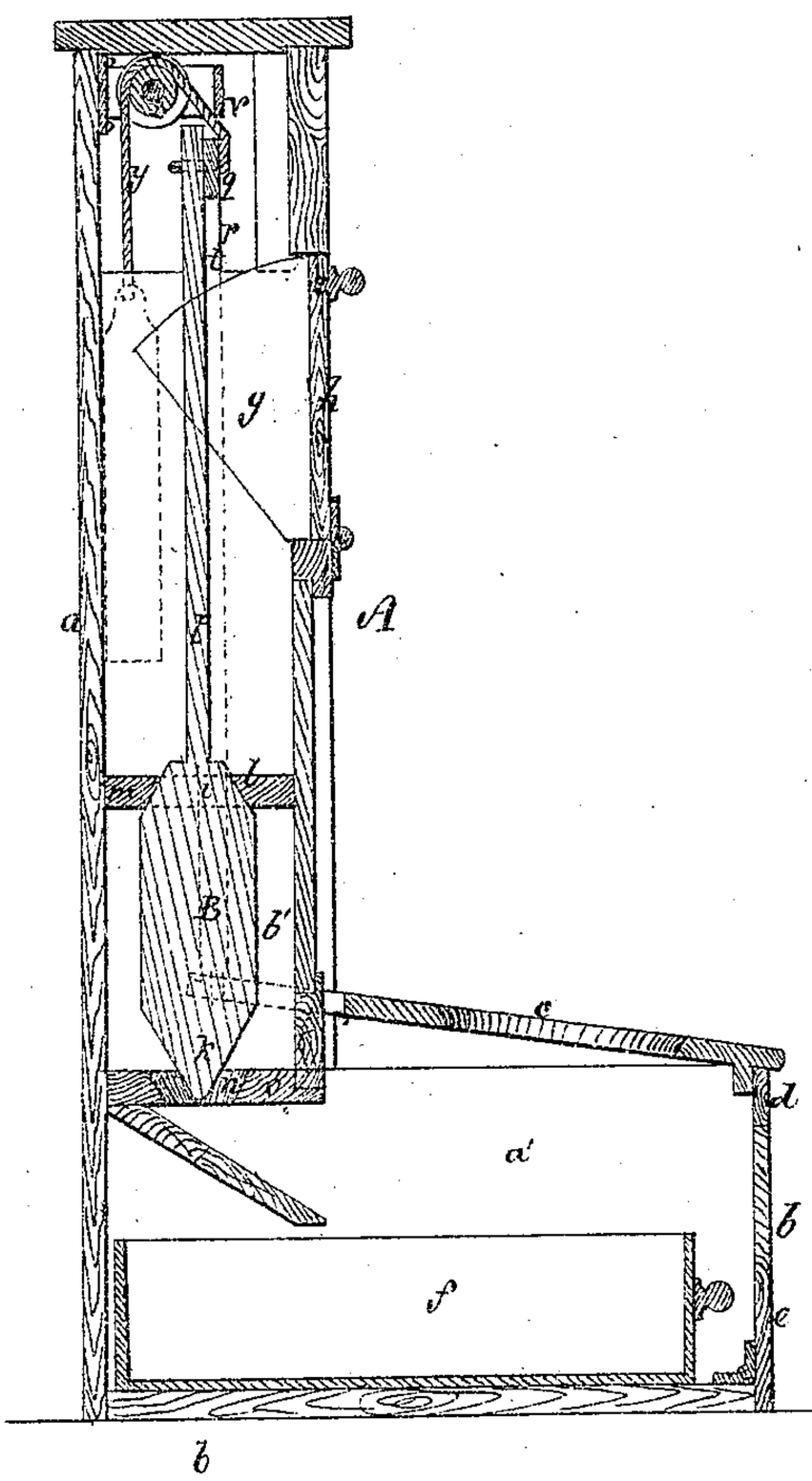
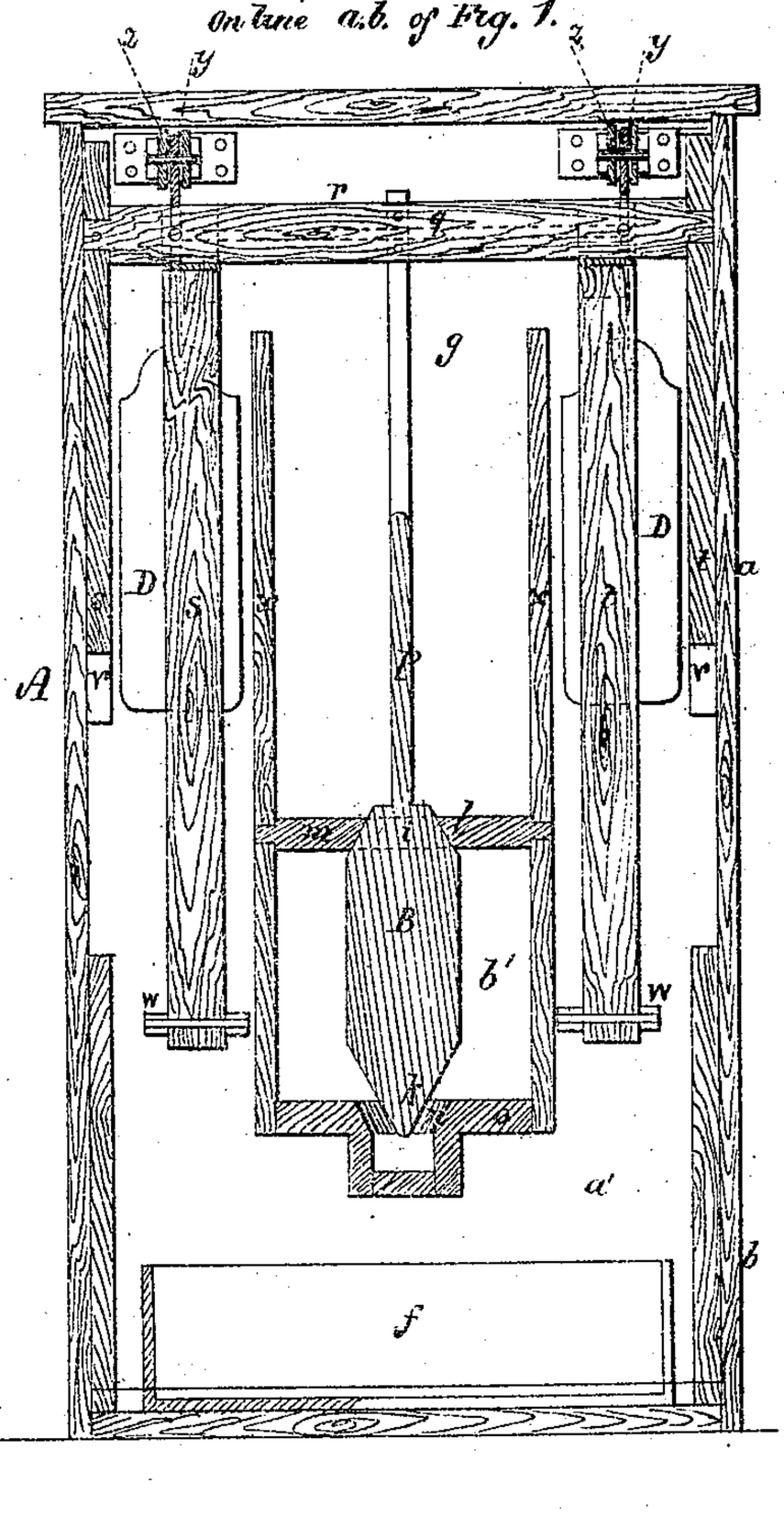


Fig. 2.

on line a.b. of Fig. 1.



119,610

UNITED STATES PATENT OFFICE.

CHESTER D. HOLMES, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN EARTH-CLOSETS.

Specification forming part of Letters Patent No. 119,610, dated October 3, 1871; antedated September 23, 1871.

To all whom it may concern:

Be it known that I, CHESTER D. HOLMES, of Boston, in the county of Suffolk and State of Massachusetts, have made an invention of certain new and useful Improvements in Earth-Closets; and do hereby declare the following to be a full, clear, and exact description thereof, due reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a vertical and transverse, Fig. 2 a vertical and longitudinal, and Fig. 3 a horizontal section of an earth-closet containing my improvements.

The accompanying drawing represents at A a hollow closet or structure, whose exterior is a counterpart of a book-case or secretary, the upright portion thereof being denoted by *a* and the horizontal portion thereof by *b*, the cover of the latter, which is in this instance the seat of the closet, being shown at *c* as hinged to the upper front wall *d* of the structure, a door-way, *e*, being provided in such wall, through which a pan, *f*, may be introduced into the lower part of the closet for receiving the deodorized excrement. The structure A is divided at its longest or vertical plane substantially into three compartments—an upper one, *g*, which is the tank for receiving the primary supply of dry and powdered earth, which is dumped into it through a door, *h*, applied to its front wall; a lower one, *a'*, which serves to receive the excrement and earth; and a central and intervening chamber, *b'*, which measures the earth to be delivered from the upper and supply-tank to the lower and receiving-compartment. B in the accompanying drawing represents a duplex valve, situated centrally of the structure, and being an upright cylindrical block, whose ends are frusto-conical or tapering and shown at *i* and *k*, respectively, the upper one *i* of which operates in connection with a valve-port, *l*, formed in a horizontal partition, *m*, which separates the upper and central compartments of the closet, while the lower portion *k* of such valve in turn operates in connection with a second valve-port, *n*, formed in a second horizontal partition or shelf, which divides the measuring-chamber and the receiving-inclosure *a'* below it, the length of the valve with respect to these two ports being such that while one port is open the other is closed. The valve-stem is represented at *p* as rising perpendicularly to near the top of the structure, where it is united to a cross-head, *q*, which constitutes the upper part and brace of an open frame or carriage, *r*, whereof the side posts are shown at *s* and *t* as sliding in suitable ways or guides *v v* applied to opposite end walls of the structure, and by which the vertical slidings of the carriage are guided. The rear edge of the closet-seat *c* is pivoted to the lower extremity of each side post *s* or *t* of the carriage *r*, as shown at *w*, the said seat rising rearward at an easy slope above the end walls of the lower compartment *a'*. D D represent two weights of like size as disposed within two vertical inclosures, one at each side of the structure, these inclosures being produced by two upright partitions, *x x*, which subdivide the upper portion of the structure, and which constitute the end boundaries of the measuring-chamber and tank *g*. Each weight is connected with the next adjacent upper end of each post *s* or *t* by a rod, *y*, which passes about a sheave, *z*, pivoted to the extreme upper part of the closet, the weights D D serving to greatly overbalance the weight of the seat *c* and elevate the rear edge of the same, the gravity of the weights, however, being somewhat less than that of the lightest person who may have occasion to sit upon the seat. Various devices may be adopted other than the weight and carriage hereinbefore explained for elevating the seat *c*. The latter may be hinged or connected to the lower compartment at its rear edge in place of its front edge, as I do not confine myself to these details.

The operation of the above embodiment of parts is as follows: Presupposing that a supply of dry and powdered earth has been dumped into the tank *g*, a person sitting upon the seat *c* depresses the same, and by this act opens the upper port *l* and closes the lower one *n*, which permits earth to drop into and fill the measuring chamber *b'*. Rising from the seat, the occupant relieves the latter from his weight and the weights D D instantly elevate the valve B, by this act closing the upper port and shutting off further supply of earth to the measuring-chamber, and simultaneously therewith opening the lower port and permitting the deposition of the earth within the chamber upon the excrement left by the sitter within the pan *f*, this earth being properly thrown upon such excrement by the aid of an in-

clined chute, c', which constitutes a continuation of the lower valve-port n.

One advantage of my invention, as hereinbefore premised, consists in the fact that, as with each movement of the seat a given and uniform amount of earth is first measured and then deposited upon the excrement, a great economy in the consumption of earth ensues. Second, owing to the nature of the valve, in combination with the general construction of the closet, the earth is deposited exactly upon the excrement, and no more is used than is absolutely necessary.

I claim—

In general combination, the three compartments, g, a', and b' of the structure, the valve B with its ports l and n, and the seat c operated by the carriage and weights, under the arrangement and for operation as herein specified.

CHESTER D. HOLMES.

Witnesses:

FRED. CURTIS,

EDW. GRIFFITH.