

# B. Ferris, Earth Closet.

No. 113411.

Patented Apr. 4. 1871.

Fig. 1.

Fig. 3.

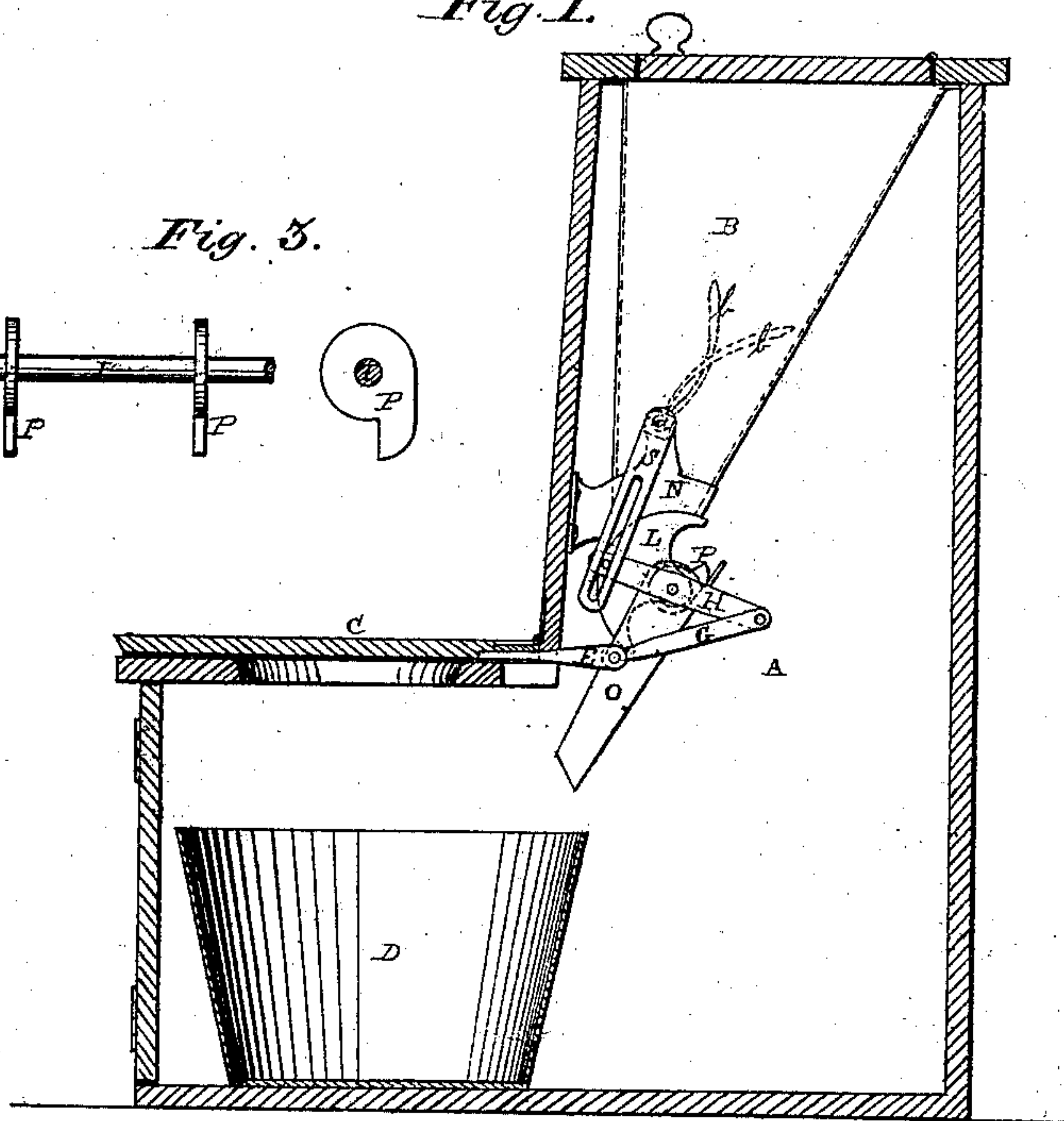
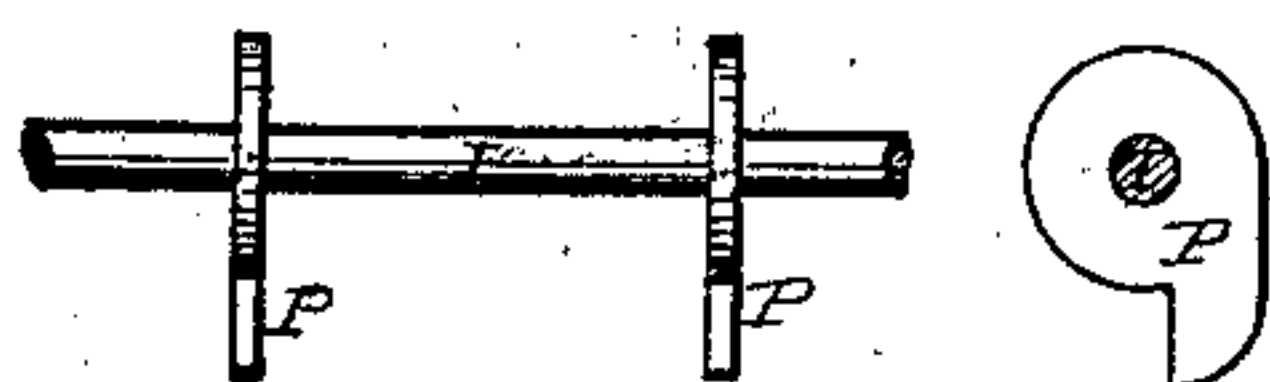
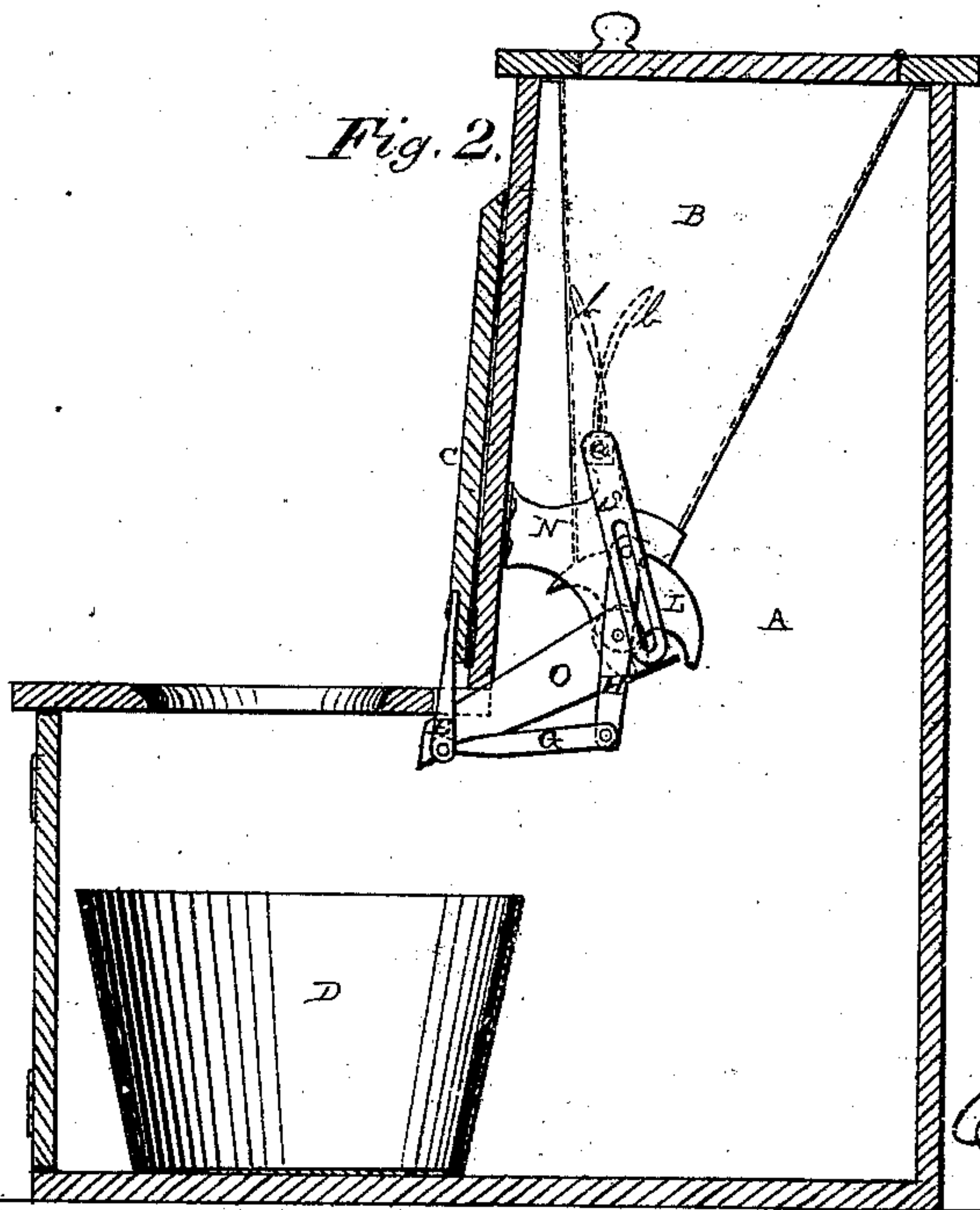


Fig. 2.



Witnesses:  
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# United States Patent Office.

BENJAMIN FERRIS, OF WILMINGTON, DELAWARE.

Letters Patent No. 113,411, dated April 4, 1871.

## IMPROVEMENT IN EARTH-CLOSETS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, BENJAMIN FERRIS, of Wilmington, Delaware, have invented certain new and useful Improvements in Earth-Closets, of which the following is a specification.

The nature of my invention consists in the construction of an earth-closet, in which the devices are few and simple and yet effective, as will hereafter be more fully set forth.

Figure 1 is a vertical section of my closet, showing the lid and relative arrangement of the devices when it is closed.

Figure 2 is a similar view, showing the lid raised.

Figure 3 shows the cams by which the chute is operated.

A represents the frame;  
B, the hopper;  
C, the lid; and  
D, the pail.

Secured to the lid is a lever, E, which has pivoted to its inner end an intermediate lever, G, so as to connect the seat C with the centrally-hinged lever H on the end of the shaft I.

The bottom part N of the hopper B is made of metal, cast in one piece, and is secured firmly to the frame A, and forms the journals or support for the shaft I.

To this shaft is secured the feeder L, which is made to move partly back and forth so as to assume the relative positions shown in the drawing, as the lid is raised or lowered.

Each time that the lid is raised the lever E is changed from a horizontal to a perpendicular position, drawing down the intermediate lever G, and this, acting on the centrally-hinged lever H, turns the shaft I partly around, so as to move the pocket of the feeder under the hopper, where it is immediately filled with earth.

As the lid is closed these operations are reversed, and the feeder is turned forward, as shown in fig. 1, so as to empty the earth into the pail D.

Hinged loosely to the shaft I is the chute O, which

receives the earth as it falls from the feeder and conducts it to the pail.

Secured to the shaft I are two or more cams P, which, as the shaft turns partly around, act upon the upper end of the chute O and change it from an almost vertical to nearly horizontal position.

When the lid is raised, it is thrown into the position shown in fig. 2 while the feeder is receiving its supply of earth.

Almost as soon as the lid begins to close, the chute, as it is released from the action of the cams, begins to fall, and as it falls it spreads the earth over the entire bottom of the pail.

Extending along the bottom of the hopper B is a shaft, a, to which is secured a number of curved double-edged cutting-blades, b, which, as they move back and forth, keep the earth constantly stirred, so as to prevent it from clogging.

Secured to one end of the shaft a is a slotted lever, S, which is moved back and forth by the action of the centrally-hinged lever H, and as it moves back and forth it operates the stirrer-shaft a.

I am aware of the devices shown in the application of James Megratten, filed February 28, 1871. I do not claim any such arrangement; but

What I do claim, and desire to secure by Letters Patent, is—

1. The shaft I, provided with the cams P, for operating the chute O, substantially as closed.

2. The stirrer-shaft a, provided with the curved cutting-blades b, in combination with the slotted crank or lever S, centrally-pivoted lever H, levers E G, and lid C, when combined to operate as set forth.

3. The lid C, levers E G H S, stirrer a b, the feeder L, shaft I, provided with the cams P, so as to operate the chute O; when all are arranged and combined to operate substantially as specified.

In testimony that I claim the foregoing as my own I hereby affix my signature.

Witnesses: BENJAMIN FERRIS.

F. A. LEHMANN,  
EDWD. FERRIS.