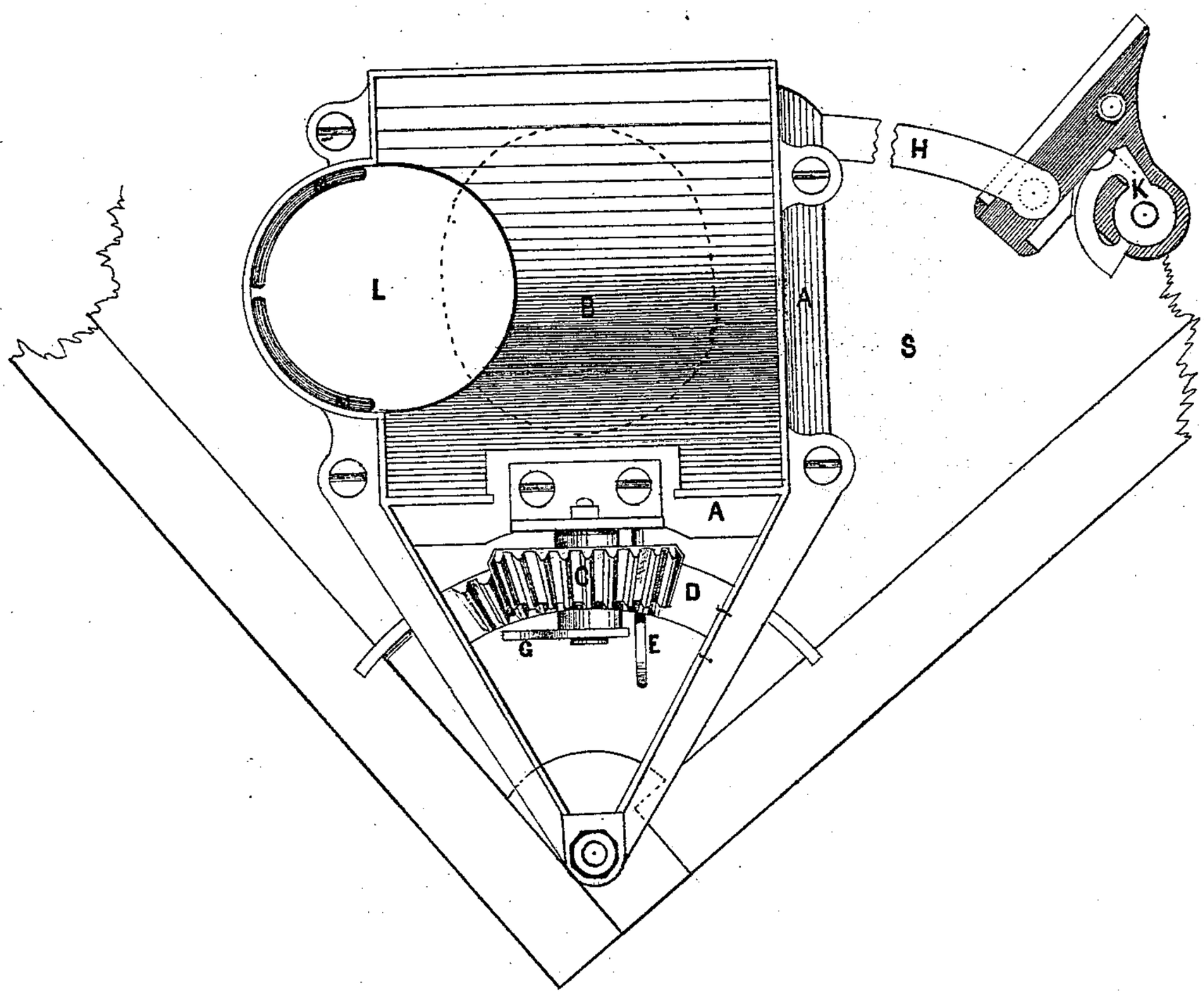
3 Sheets--Sheet 1.

GEORGE W. ROBERTS & J. H. GRAHAM.

Improvement in Earth-Closets.

No. 126,155. Patented April 30, 1872.

FIG. 1.



WITNESSES.

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J Grantland

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Geo: W. Roberts.

John H. Graham

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FIG. 2.

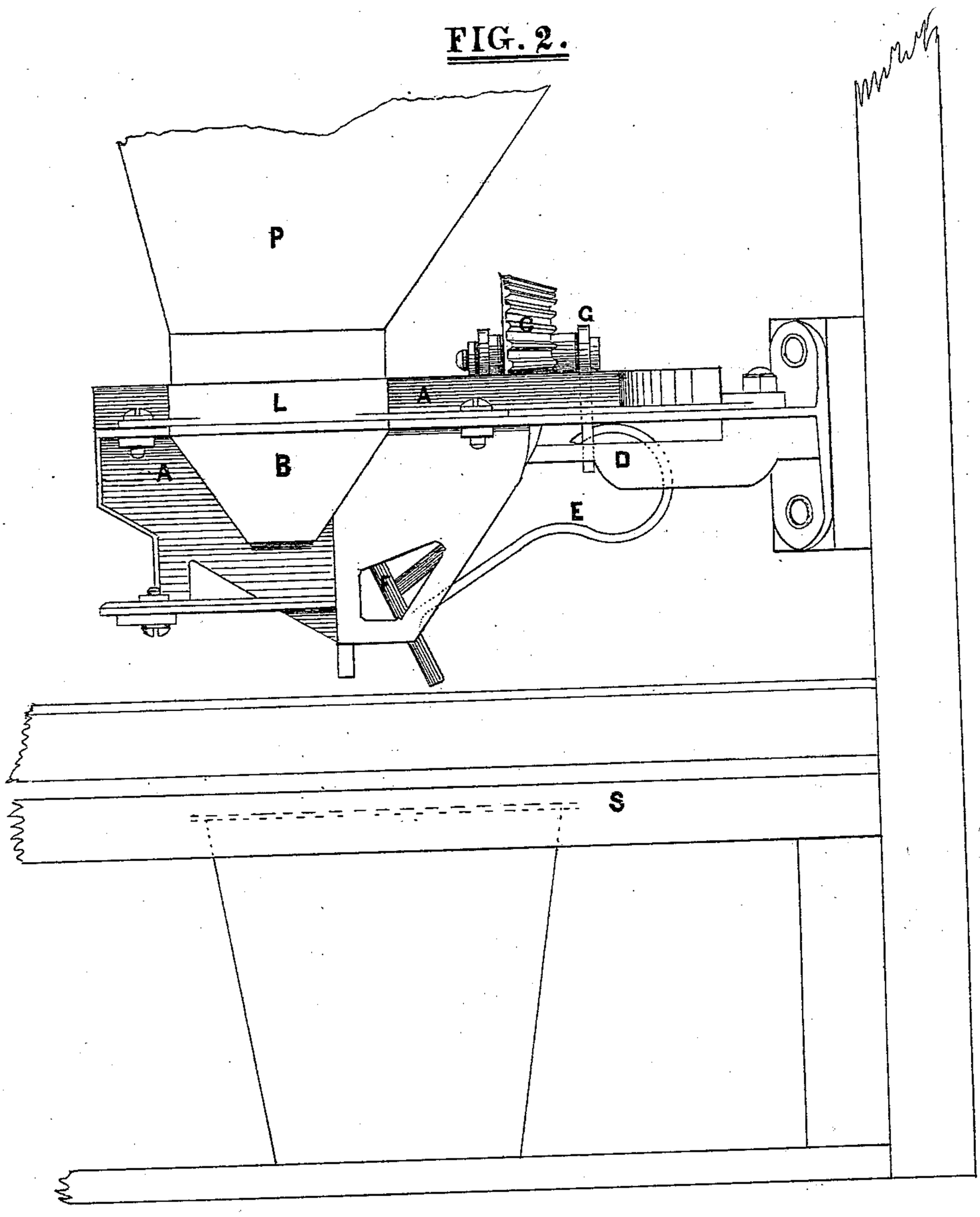

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FIG. 3.

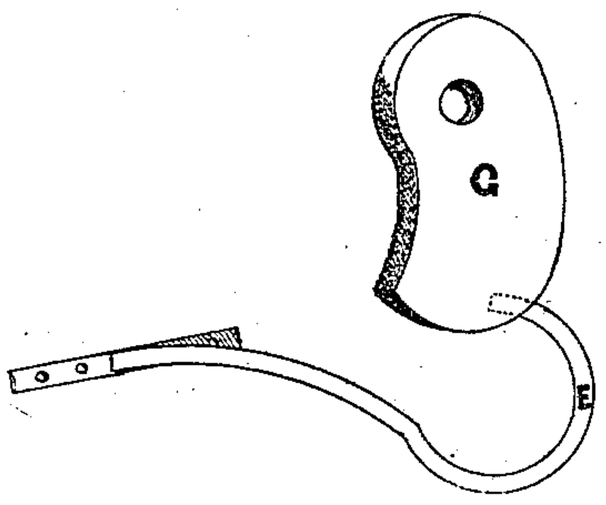


FIG. 4.

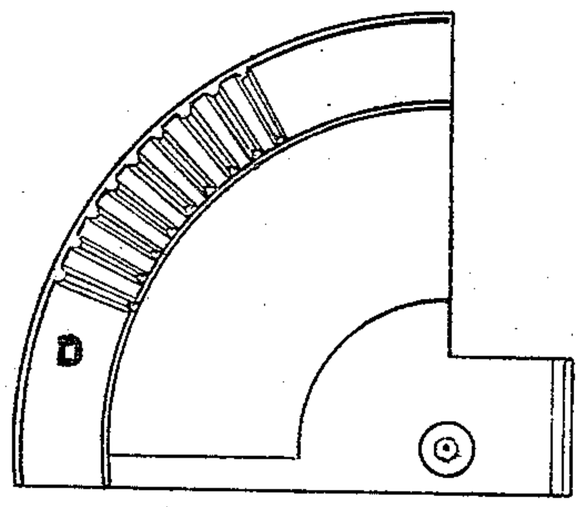


FIG. 5.

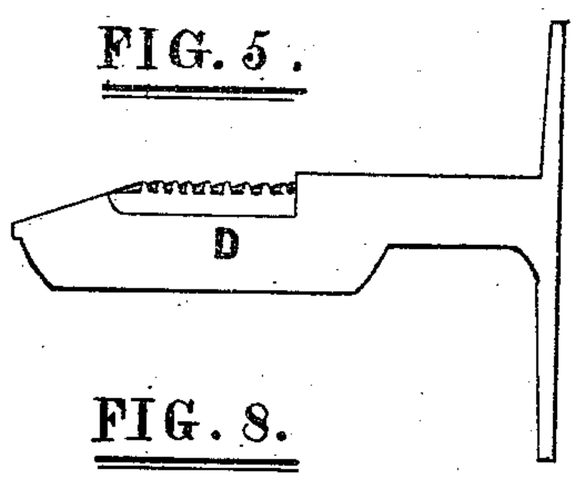


FIG. 6.

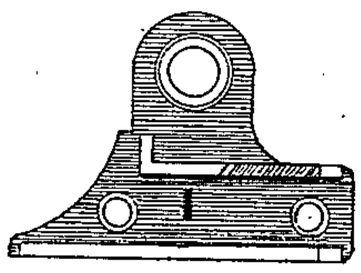


FIG. 7.

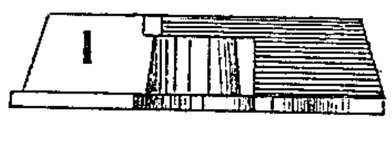


FIG. 8.

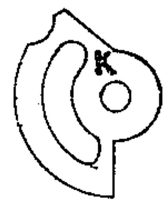


FIG. 9.

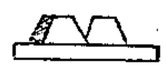
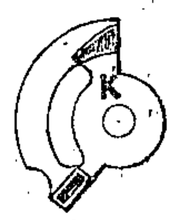


FIG. 10.



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126,155

UNITED STATES PATENT OFFICE.

GEORGE W. ROBERTS AND JOHN H. GRAHAM, OF WILMINGTON, DELAWARE.

IMPROVEMENT IN EARTH-CLOSETS.

Specification forming part of Letters Patent No. 126,155, dated April 30, 1872; antedated April 10, 1872.

SPECIFICATION.

We, GEORGE W. ROBERTS and JOHN H. GRAHAM, of the city of Wilmington, in the county of New Castle and State of Delaware, have invented certain Improvements upon the improved Earth-Closet for which Letters Patent of the United States of America No. 109,667 were issued to us, bearing date the 29th day of November, 1870, of which the following is a specification:

Nature and Object of the Invention.

Our invention relates to the combination of a pivoted or hinged seat with a segment, reciprocating beveled cog-wheel, lever, cam, and lever in such a manner that by moving the seat outward or inward its lateral motion may set in operation the machinery which feeds the earth into the vessel used to receive the excrement.

Description of Accompanying Drawing.

Figure 1 is a plan of a machine embodying our invention. Fig. 2 is a view of the same, showing that end or side which is at the left hand of Fig. 1. Fig. 3 is a view of the cam and curved lever by the reciprocating action of which the hopper is operated. Fig. 4 is a plan of the segment upon which the beveled cog-wheel revolves. Fig. 5 is a view of the same, showing that side of the segment which appears at the lower part of Fig. 4. Fig. 6 is a plan of the cam-holder and lever-guide. Fig. 7 is a side view of the same. Fig. 8 is a plan of the upper face of the cam; Fig. 9, a side view; and Fig. 10, a view of its lower or under face.

General Description.

A is the frame of the machine. B is the hopper, into which the earth descends from the funnel immovably fixed above it in the stand or closet. C is the beveled cog-wheel. D is the reciprocating segment. E is a curved arm, attached to the valve F of the hopper B, which, by means of the eccentric G, opens and closes the valve F by the working of the reciprocating cog-wheel C and segment D, which are set in operation by the opening out or shutting in of the seat. H is the arm attached to the frame A, and works in the way I and against the cam K, which, in the operation of the machine, brings the hopper B to its proper place for feeding the earth into the vessel below. L is a seat or cut-off, which is brought directly under the funnel whenever the closet is shut or opened. The apertures or slots *m* are to prevent clogging of earth around the mouth of funnel so as to insure perfect working in the machine.

To illustrate more particularly, we will suppose the closet about to be used. The seat (upon which the way I and cam K is set) is swung out, and in doing this the arm H is put in motion, traverses the way I, driving against the cam K, and frees itself from the seat, leaving the hopper B filled and stationary, while the seat passes out from under it against the wall. Having been used it is swung in again, the arm H making a retrograde movement returns to its place in the way on the corner of the seat. In passing back the valve M is opened and the earth in the hopper descends into the vessel beneath; the cut-off having been brought immediately under the mouth of the stationary funnel. It is only in the act of opening that the hopper is filled, and emptied in that of closing.

We do not, broadly, claim the use of a movable seat; nor do we claim in themselves the segment and beveled cog-wheel; nor would we limit ourselves to a beveled cog-wheel, as we find a segment of one would answer, if preferred.

We claim as our invention—

1. The combination of the arm H with the way I and cam K, substantially as and for the purpose hereinbefore set forth.

2. The combination, with the arm H, way I, and cam K, of the seat S, substantially as and for the purpose hereinbefore mentioned.

3. The combination of the beveled cog-wheel C with the reciprocating segment D, hooked arm E, and eccentric G, substantially as and for the purposes above described.

4. The combination, with the beveled cog-

wheel C, reciprocating segment D, hooked arm E, and eccentric G, of the frame A, hopper B, cut-off L, and valve M, substantially as and for the purposes above set forth.

5. The combination of the seat S and its way I and cam K with the arm H, beveled cog-wheel C, segment D, hooked arm E, eccentric G, frame A, hopper B, valve M, cut-off L, and feed-funnel P, substantially as and for the purposes hereinbefore mentioned and described.

GEO. W. ROBERTS.
JOHN H. GRAHAM.

Witnesses:
SAMUEL C. MCINTIRE,
J. GRANTLAND.