

(8.) H. SHERMAN.

No. 122,784.

Earth Closets.

Patented Jan. 16, 1872.

Fig. 1.

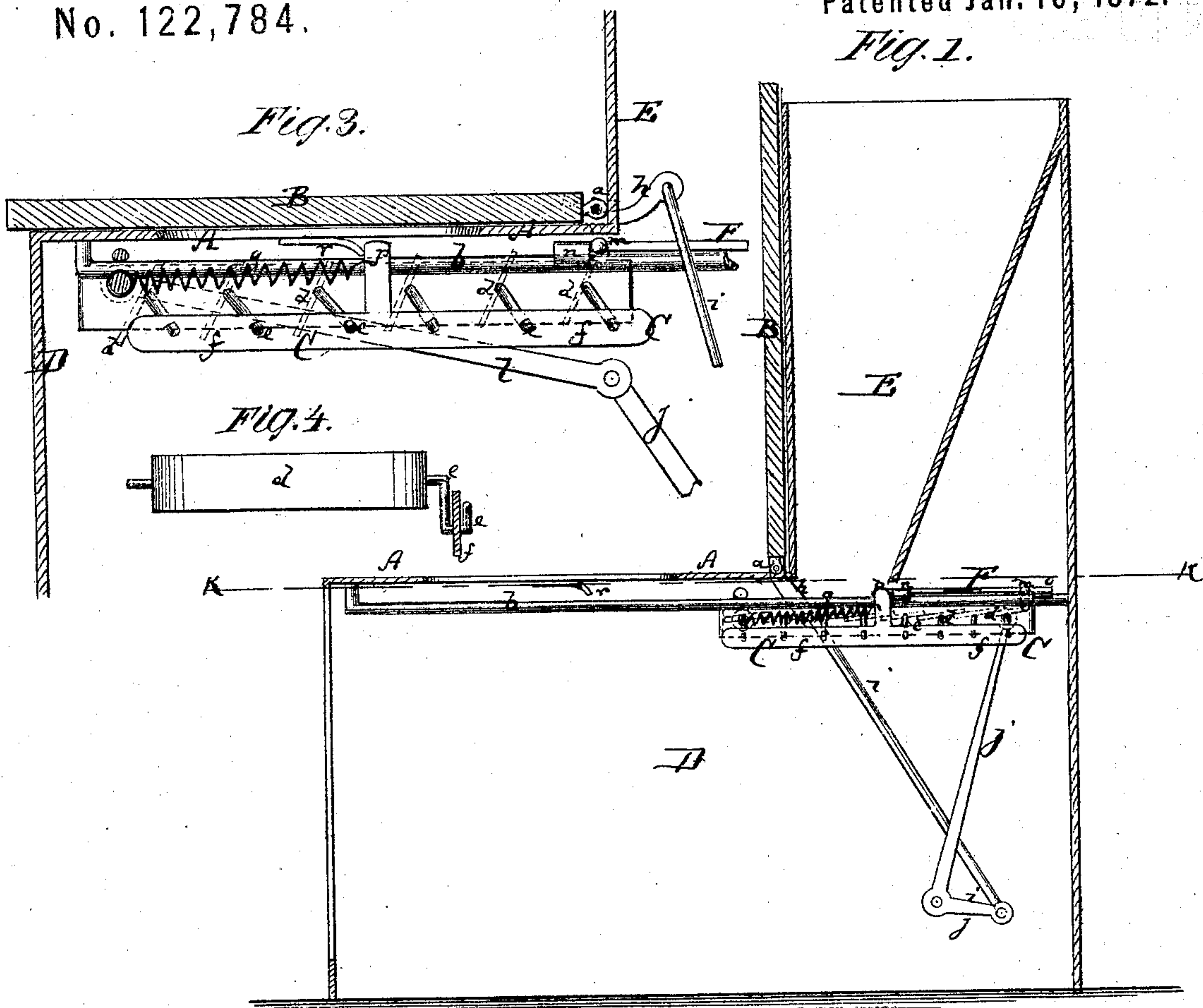


Fig. 3.

Fig. 4.

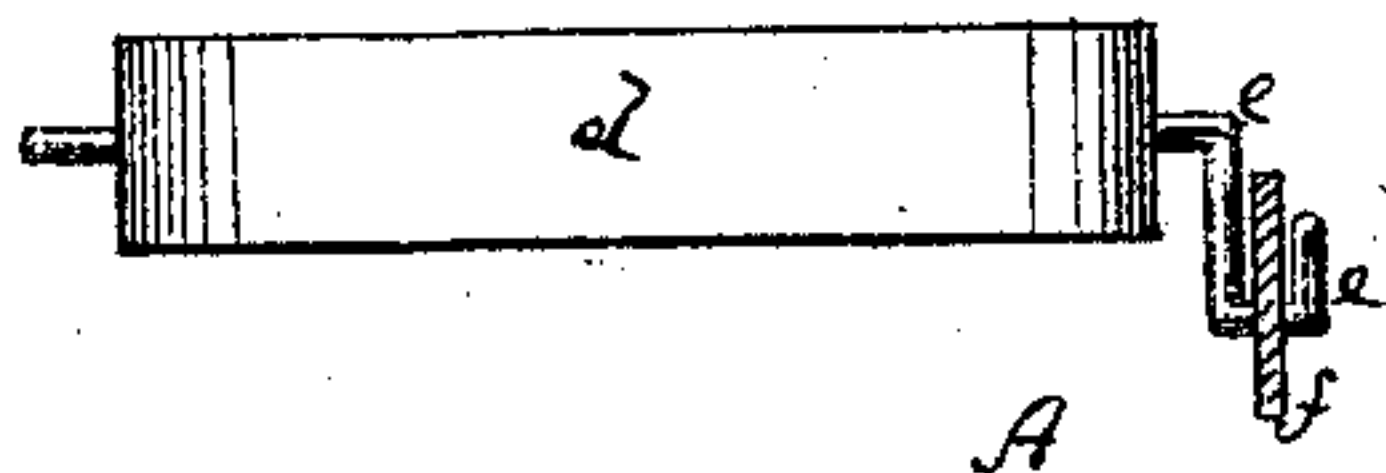
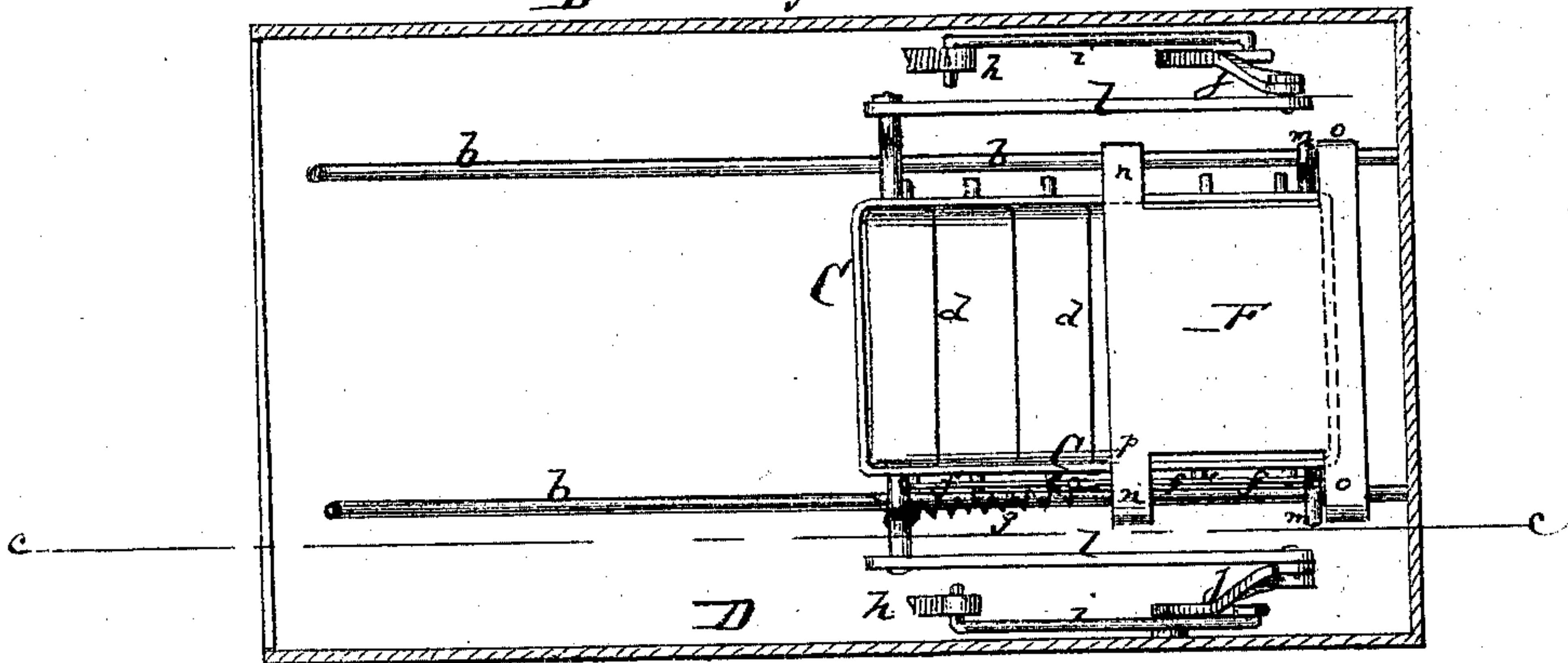


Fig. 2.



Witnesses:

John Becker.  
Francis, McCord.

Inventor:

H. Sherman.

PER

Munnell  
Attorneys.



# UNITED STATES PATENT OFFICE.

HAMILTON SHERMAN, OF WAVERLY, PENNSYLVANIA.

## IMPROVEMENT IN EARTH-CLOSETS.

Specification forming part of Letters Patent No. 122,784, dated January 16, 1872.

Specification describing a certain Improved Earth-Closet, invented by HAMILTON SHERMAN, of Waverly, in the county of Luzerne and State of Pennsylvania.

Figure 1 represents a vertical longitudinal section of my improved earth-closet, the line *c c*, Fig. 2, indicating the plane of section. Fig. 2 is a horizontal section of the same on the line *k k*, Fig. 1. Fig. 3 is a detail longitudinal section, on an enlarged scale, of the same on the same scale as Fig. 1. Fig. 4 is a detail face view of one of the slats in the sliding earth-carrier.

Similar letters of reference indicate corresponding parts.

My invention relates to that class of earth-closets wherein the soil is transferred forward and dropped at every raising of the cover by a carrier having an opening and closing bottom; and consists in the improvements hereinafter fully described and pointed out in the claims.

A in the drawing represents the seat of the closet. B is the lid for the same, hinged at *a* to the seat or supporting-frame. From rails *b b*, affixed under the seat, is suspended a sliding carrier, C, which is a rectangular frame containing within it a series of transverse slats, *d d*. Cranks *e*, at the ends of slat-pivots, are connected with each other on the side of the frame C by a rod, F. A spring, *g*, acting on the rod *f*, tends to draw it forward, and thereby swing the slats into horizontal positions so that they overlap each other and form a closed bottom to the carrier, as indicated in Fig. 1. An arm, *h*, which projects from the hinged end of the lid through the seat, is, by a rod, *i*, connected with the short arm of a bell-crank, *j*, pivoted within the case or frame D of the closet. The long arm of the bell-crank is, by a rod, *l*, connected with the front end of the carrier-frame C. This connection of the lid with the carrier may be on one side or duplicated on both sides of the carrier. E is the hopper, containing a supply of earth to be distributed. It is secured upon the frame D directly back of the seat A. F is a slide or cut-off suspended from the same rails *b* on which the carrier is hung. This slide is intended to close the bottom of the hopper when the carrier is drawn forward. It is moved backward and forward by the carrier, from which a spur, *m*, comes alternately against arms *n* and *o* of the cut-off.

The operation is as follows: On raising the lid the bell-crank will be swung so as to move the carrier backward under the hopper. In doing so the spur *m* strikes the projection O of the cut-off and moves it backward clear of the hopper, while the carrier will be under the hopper, as in Figs. 1 and 2. The earth will consequently fall into the carrier. On putting down the lid the carrier is moved forward under the seat, the spur *m* taking hold of the arm *n* of the cut-off and drawing it under the hopper to close the same at the bottom. When the carrier has nearly completed its forward movement a projection, *p*, on rod *f*, strikes a catch, *r*, on the under side of the seat, and thereby causes the slats to swing on their pivots into a vertical position, indicated in Fig. 3, and distribute the earth. The lever connection between carrier and lid is such that the latter will be held open by the levers and not have the tendency to drop shut of its own weight.

I am aware that grate-bar-slides with hinged metallic flaps underneath, closed by entering a narrow channel as the cover is raised and opened, successively, by their own gravity, is not new. My object is to improve the construction of these slides and also the mode of operating them.

Having thus described all that is necessary to a full understanding of my invention, what I esteem to be new, and desire to secure by Letters Patent, is—

1. A series of slats, *d*, pivoted on crankshafts, combined, as described, with projection *r* on seat and with rod *f*, having projection *p* and spring *g*, so that the slats will be opened and closed, as set forth.

2. The train of connecting mechanism between the lid and carrier, consisting of bell-crank *j*, rod *i*, and projecting arm *h*, arranged as described, so that the lid will be held open by said lever.

3. A carrier, C, having spurs *m m* sliding on rails *b b*, combined, as described, with a sliding hopper-bottom, F, having projections *n o*, so that said carrier will alternately move out and in under said bottom F, and also shall slide it forward and backward at the times and in the manner described.

HAMILTON SHERMAN.

Witnesses:

D. E. SNYDER,  
CHAS. L. WHAITE.

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