R. W. RIDDLE.

Earth-Closet.

No. 219,767. Patented Sept. 16, 1879.

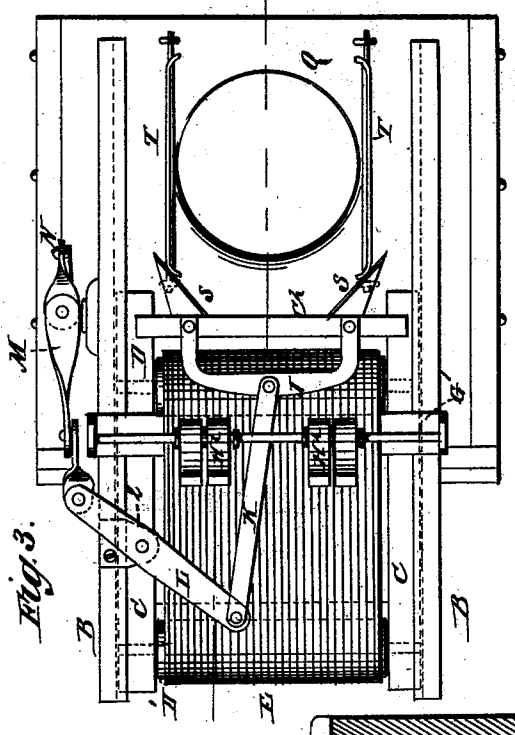


Fig. 3.

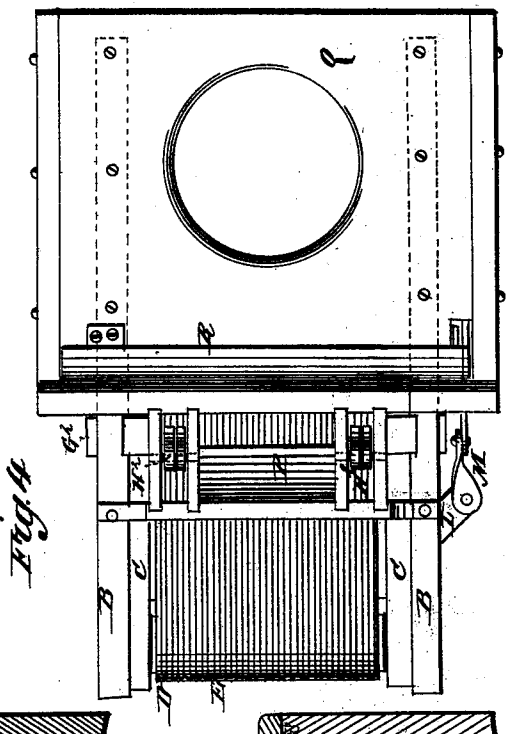


Fig. 4.

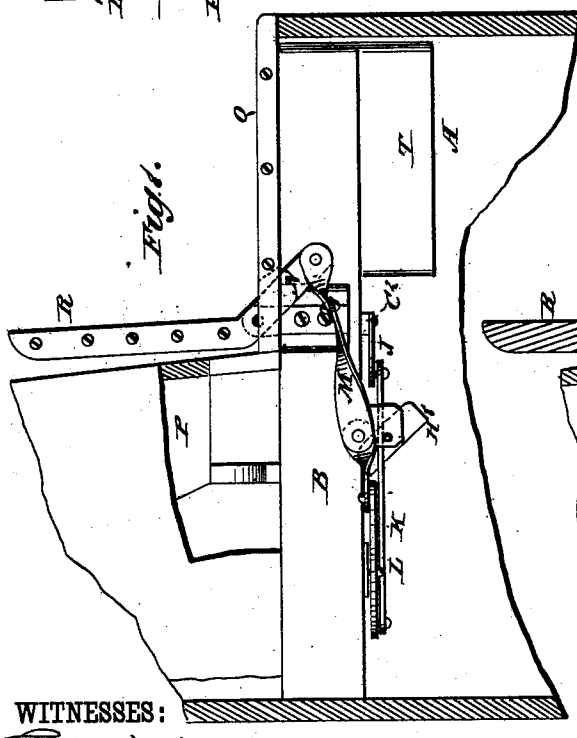


Fig. 1.

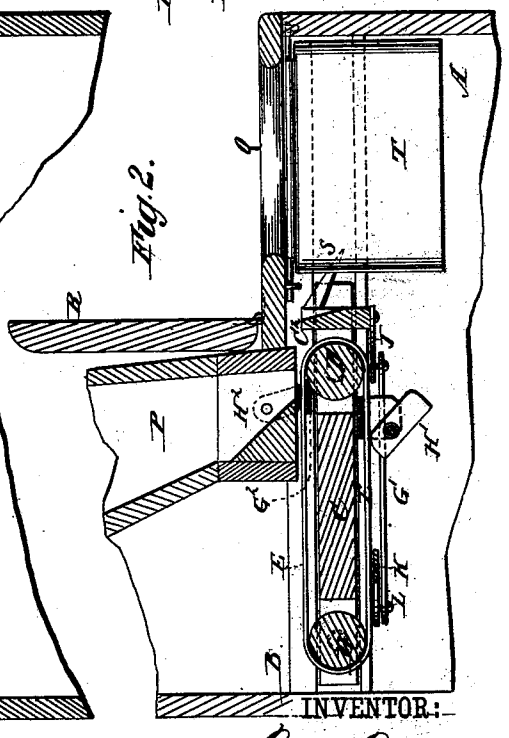


Fig. 2.

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UNITED STATES PATENT OFFICE.

RICHARD W. RIDDLE, OF MINNEAPOLIS, MINNESOTA.

IMPROVEMENT IN EARTH-CLOSETS.

Specification forming part of Letters Patent No. **219,767**, dated September 16, 1879; application filed January 28, 1879.

To all whom it may concern:

Be it known that I, RICHARD W. RIDDLE, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Earth-Closets, of which the following is a specification.

My invention relates to certain improvements on the earth-closet for which Letters Patent No. 203,943 were granted to me under date of May 21, 1878.

The invention consists essentially in a novel construction and arrangement of devices for operating the earth-carrying apron by the raising and lowering of the lid of the seat, whereby economy of space is secured, and the apparatus is adapted to be used either in connection with a stationary closet or a vault out of doors, or with a portable closet or commode used in the house.

The accompanying drawings illustrate the manner of carrying out the invention.

Figure 1 is a side view of an apparatus embodying my improvements, being shown as applied to a box or commode and in position for immediate use. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is a view looking upward; and Fig. 4 a top view.

Similar letters of reference indicate corresponding parts.

A represents a commode, box, or casing, of any suitable description, or a portion of a vault or closet, with the apparatus applied thereto. B B represent horizontal ways or guides, in which the apron-carrying frame works. C represents the apron-carrying frame provided with two rollers, D D, and an apron, E. G^1 G^2 are stationary bars, having their ends attached to the ways B B, and lying, respectively, above the lower portion and below the upper portion of the apron E, and H^1 H^2 are cams which bear against the apron opposite the bars G^1 G^2 respectively. These parts are similar in their construction, arrangement, and operation to the similar parts shown in my patent of May 21, 1878, aforesaid.

For operating the apron-frame I employ the following devices: To the guard C^2 of the apron-frame is attached a clevis, J, to which is pivoted one end of a connecting link or bar, K, the other end of which is pivoted to one end of a lever, L, which has its fulcrum on a plate, *l*, attached to one of the ways B. The clevis J, link or bar K, and lever L all work in a horizontal plane. The other end of the lever L is connected by a link or bar, M, to an arm, N, which projects from the seat lid or cover R. Said arm may be the continuation of a strip or bar of metal, attached to the edge of the lid or cover, and may also form part of one of the hinges.

When the lid or cover R is raised, the arm N and link M draw one end of the lever L forward and the other end backward, so as to move the apron and its frame back from under the seat, and when the lid or cover is lowered a reverse movement of the apron takes place.

The dry earth is deposited in the same manner as described in my former patent aforesaid, the earth being received on the apron E from a hopper, P, of any suitable construction.

By thus arranging the parts in a horizontal plane, economy of space is secured, and the apparatus, when folded, occupies less space than when the parts work in a vertical plane, as in my former patent. Moreover, the apparatus is rendered more easily portable, and may be readily applied to an out-door vault or closet, or to an indoor commode, box, or casing.

In order to prevent the escape of dust or odor from the vault, commode, or other space beneath the seat, I employ a swinging door, which may be in one or more parts, as may be preferred. As here shown, it is made in two parts, T T, each of which is hinged to the under side of the seat Q, so as to swing downward out of the way, or upward to cover the opening in the seat.

For closing the doors T or swinging them upward I employ two devices, each of which consists of a two-sided inclined plane, or the junction of two inclined planes, side by side, terminating in a point, and somewhat resembling the half of a spear-head. These inclined planes S S are carried by the guard C^2 of the apron-frame, with their points extending toward the front of the apparatus.

When the seat-lid R is raised, and the apron-

frame moves back from under the seat Q, the doors T drop of their own weight, and swing down out of the way.

When the seat-lid is lowered, and the apron-frame moves forward, the points of the inclined planes S pass under the doors T, and raise them until they lie closely against the under side of the seat, in which position they are held by the guard C^2, and thus cover the opening in the seat.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with the seat-lid and the apron-frame, of the clevis J, link or bar K, lever L, link or bar M, and arm N, arranged and operating substantially as herein described.

2. The inclined planes S, carried by the apron-frame, in combination with the door or doors T, substantially as and for the purpose herein described.

RICHARD W. RIDDLE.

Witnesses:
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J. W. MATHEWS.