W. LOW.

Earth-Auger.

No. 167,456. Patented Sept. 7, 1875.

Fig. 1.

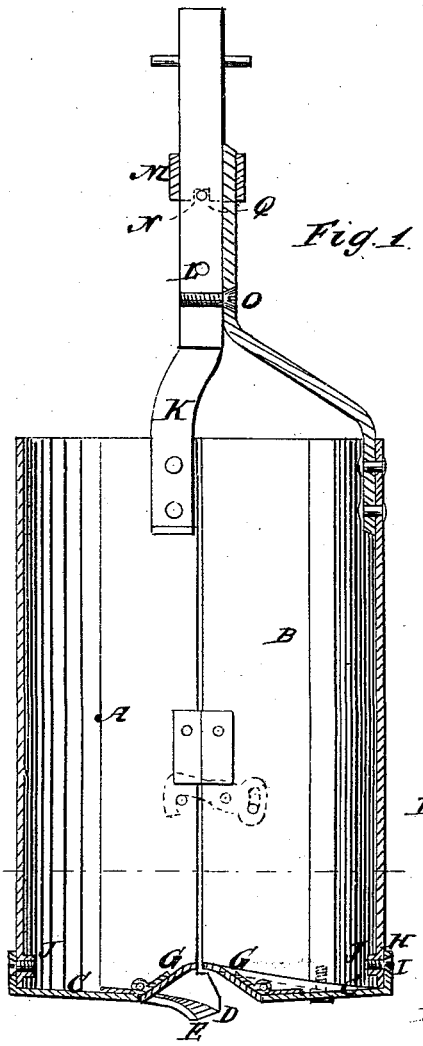



Fig. 2.

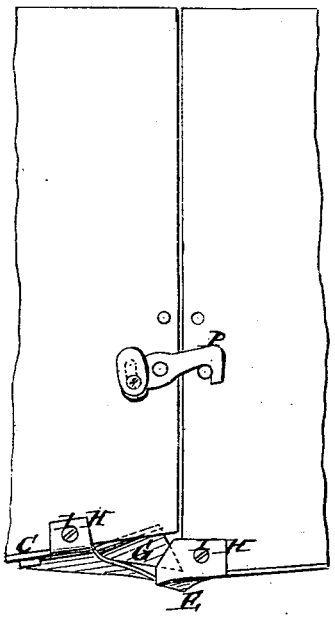



Fig. 3.

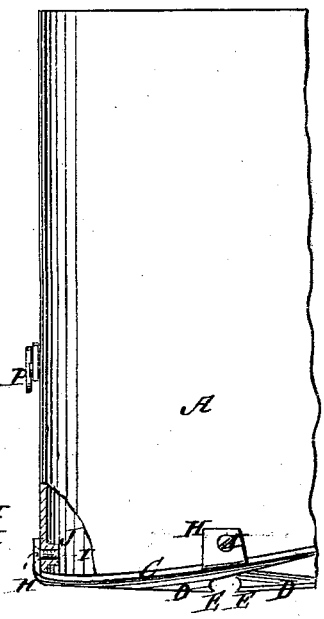
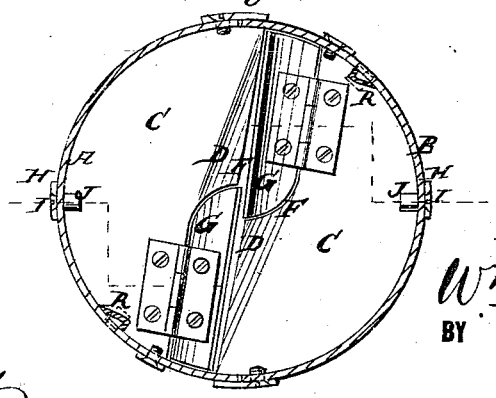



Fig. 4.




WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM LOW, OF WEBSTER, MICHIGAN.

## IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **167,456**, dated September 7, 1875; application filed July 17, 1875.

*To all whom it may concern:*

Be it known that I, WILLIAM LOW, of Webster, in the county of Washtenaw and State of Michigan, have invented a new and Improved Earth-Auger, of which the following is a specification:

The invention will first be described in connection with drawing, and then pointed out in the claims.

Figure 1 is a sectional elevation of my improved earth-auger, taken on the line *x x* of Fig. 4. Fig. 2 is a side elevation of a portion of it. Fig. 3 is partly a side elevation and partly a section, and Fig. 4 is a horizontal section, taken on the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A and B are the two parts of the cylinder, each having its part C of the bottom, on which is a boring-bit, D, which is curved or molded downward, and formed with a point, E, by cutting out the opposite portion of the bottom, as represented by the curved lines F, to make the throats, said points being well adapted for entering the ground easily by reason of this form, and the bottoms are spirally molded, as shown in Figs. 1, 2, and 3, for clearance. The points of the augers are located as far apart as the width of the throats, to allow stones to pass through, and by bending down gradually from heel to point they form a center which draws the auger into the earth like a screw. The valves G are hinged to the bottom at the front of the throats, so that they allow the earth to pass into the auger freely, and they drop down and close the throats readily when the auger is lifted. The bottoms are fastened on by the clips H bending up the outside of the cylinder, and secured by the screws I, which screw into little bosses J projecting from the inner wall of the auger. By this connection the bottom of one part of the auger can be readily taken off in case the auger encounters a stone too large to enter the throat. The part A of the auger is attached to the shaft by the strong bars K, bolt L, pin N, and the sliding band M, and the part B is attached by a similar bar, K, a screw, O, and the band M, and it is connected to part A by the hooks P. This part can be readily taken off by sliding up the band M above the top of bar K, taking out the screw O, and disconnecting the hooks P, and part A can be used without it, the band being replaced on the remaining bars, so that its notches Q drop down on the pin N. R represents the air-passages, for letting air under the bottom of the auger, to prevent a vacuum. They are located inside of the cylinder, and constructed with the advancing side so inclined that it throws off the earth, and avoids the clogging that would occur with a round tube.

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

1. The cutting-bits D having a point formed by the curve F from the inner end to the wall of the throat, and curved downward from the junction with the bottom to the point, substantially as specified.

2. Two pointed cutting-bits, D, arranged at opposite sides of the center with space between for the passage of stones, in combination with the bottoms G, spirally molded for clearance, substantially as specified.

3. The combination of the valves G, having inner ends curved to correspond with curves F of the throats with the bottoms C and cutters D, substantially as specified.

WILLIAM LOW.

Witnesses:

E. M. STILES,

F. M. SMITH.