G. B. FRANKLIN.

EARTH-AUGER.

No. 186,821. Patented Jan. 30, 1877.

Figure 2.

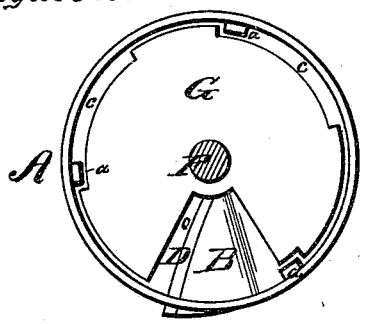



Figure 3.

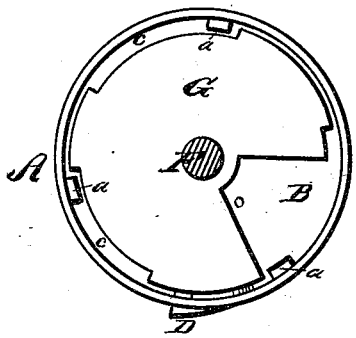



Figure 1.

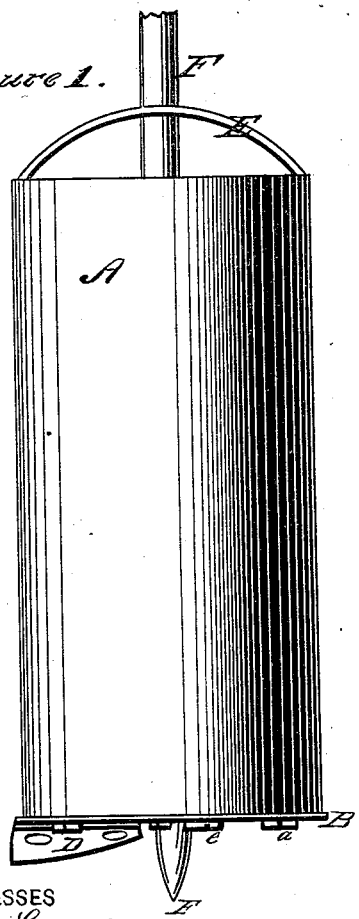
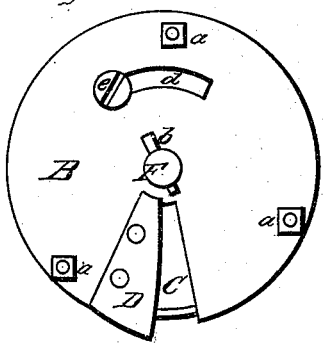



Figure 4.




WITNESSES

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# UNITED STATES PATENT OFFICE.

GERMAN B. FRANKLIN, OF JACKSON, MINNESOTA.

## IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **186,821**, dated January 30, 1877; application filed November 18, 1876.

*To all whom it may concern:*

Be it known that I, GERMAN B. FRANKLIN, of Jackson, in the county of Jackson and State of Minnesota, have invented a new and valuable Improvement in Earth-Augers; and I hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation of my earth-auger, and Figs. 2 and 3 are horizontal sectional views thereof. Fig. 4 is a bottom-plan view of the same.

This invention has relation to earth-augers especially adapted for boring through sand, quicksand, or gravel; and the novelty consists in the devices by which the valve in the bottom of the auger-cylinder is opened and closed, enabling the operator, when the cylinder becomes sufficiently filled with sand or gravel, to remove the same to the surface of the ground with great facility, all as hereinafter more fully described and shown.

In the annexed drawings, the letter A designates a tube or cylinder, made of iron or steel, having stationary bottom B, attached thereto by means of bolts *a*. The bottom is provided upon one side with a triangular opening, C, through which the sand or gravel passes up into the cylinder. Upon one side of the opening C the bottom B is bent down to form a lip or seat, to which is fastened, by means of screws or rivets, the cutter D, made of steel, and sharpened to an edge upon the burr or cutting side. At the top, upon opposite sides of cylinder A, is fastened the semicircular brace E, having a circular opening at its center, through which shaft F passes. This shaft passes down through the center of the cylinder, and through the bottom B, and immediately below the bottom is sharpened to a point, which centers and holds the auger in position while boring. It is held in position by a pin, *b*, which passes through it just below the bottom B.

Within the drum, and on the bottom B, rests the cut-off plate G, securely fastened to shaft F in such a manner as to be revolved by it. This plate G is provided with an opening, *o*, corresponding in shape and size with the opening C, and with semicircular slots *c*, through which pass the bolts *a*. The upper parts of bolts *a* serve the function of stops for the cut-off plate G. A semicircular slot, *d*, is made through the bottom B, through which passes a screw, *e*, which serves to hold the cut-off plate G in position, and to prevent its being pushed in. To the upper end of shaft F the power may be applied in any suitable manner.

The valve at the bottom of the auger is kept open by turning the shaft from left to right in boring.

When the cylinder is sufficiently filled, the valve is closed by reversing the motion or turning the shaft backward. The cylinder may then be lifted, with its contents, from the bore, and emptied at pleasure.

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

1. The cylinder A, having the bottom B, provided with the opening C, stop-bolts *a*, curved slot *d*, and cutter D, in combination with the cut-off plate G, provided with the opening *o*, circumferential recesses *c*, and stop-pin *e*, substantially as and for the purpose set forth.

2. The shaft F, having its lower end pointed, and extending below the cylinder A, the bottom B of which is constructed as above described, in combination with the cut-off plate G, provided with circumferential recesses *c*, and stop-pin *e*, substantially as described, and for the purpose set forth.

GERMAN B. FRANKLIN.

Witnesses:

G. K. TIFFANY,

A. H. STRONG.