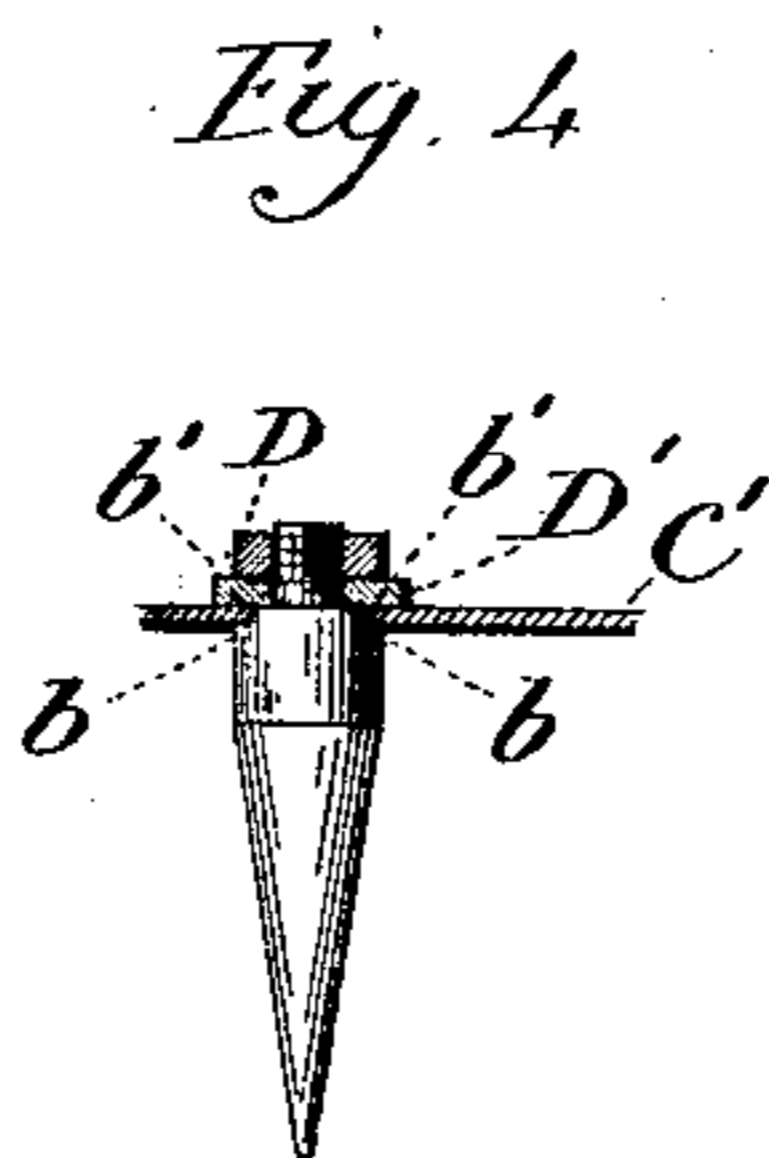
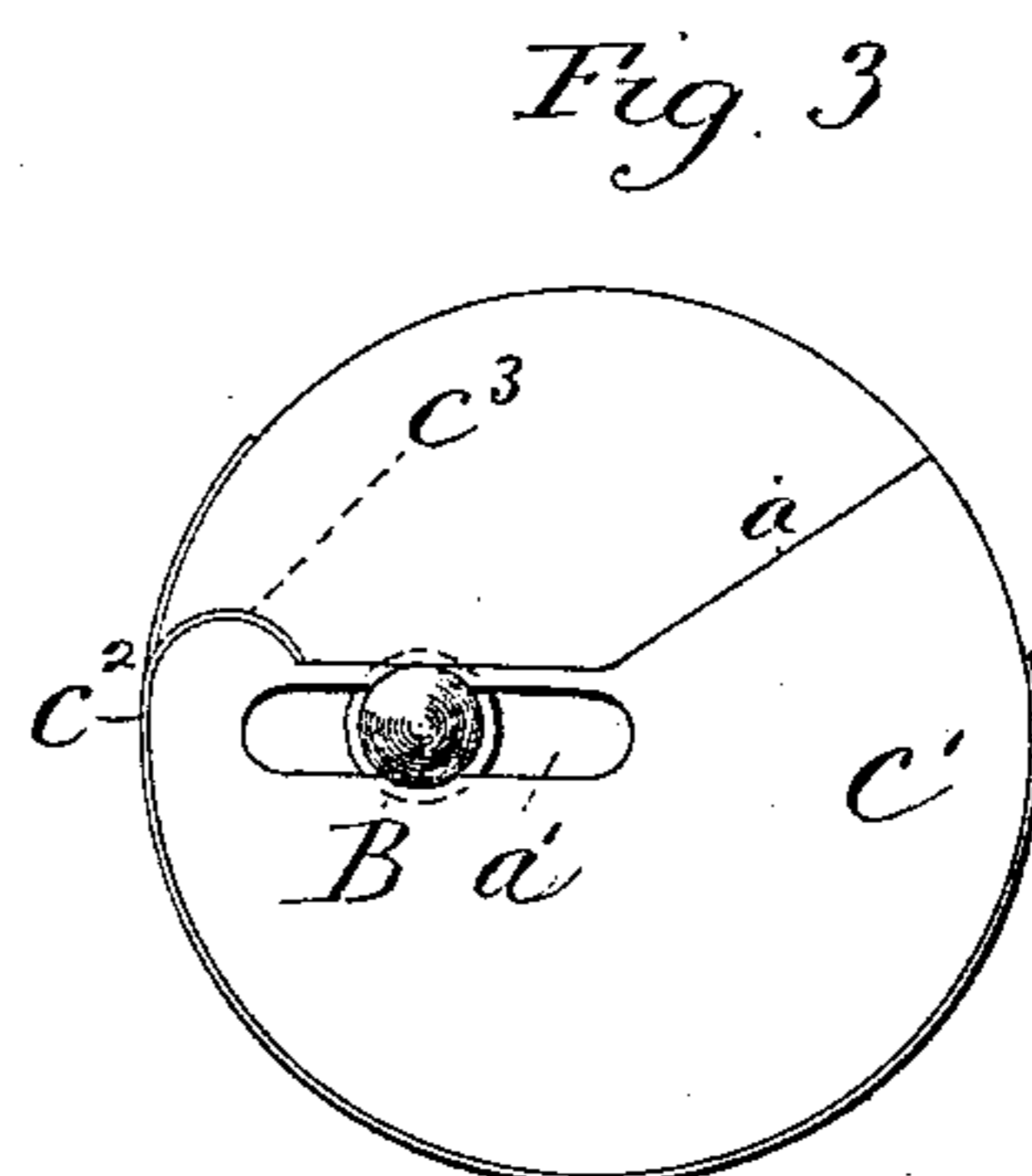
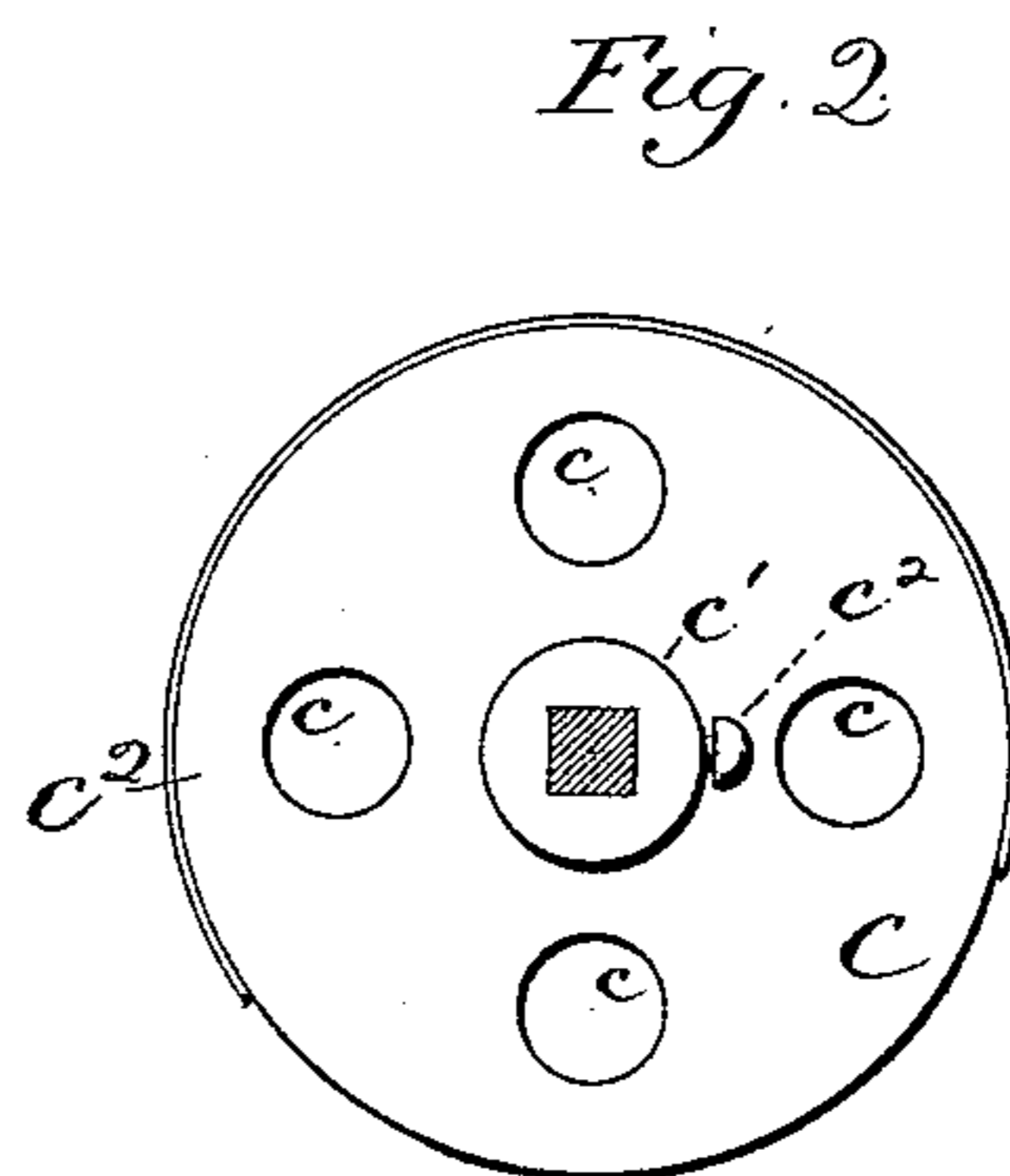
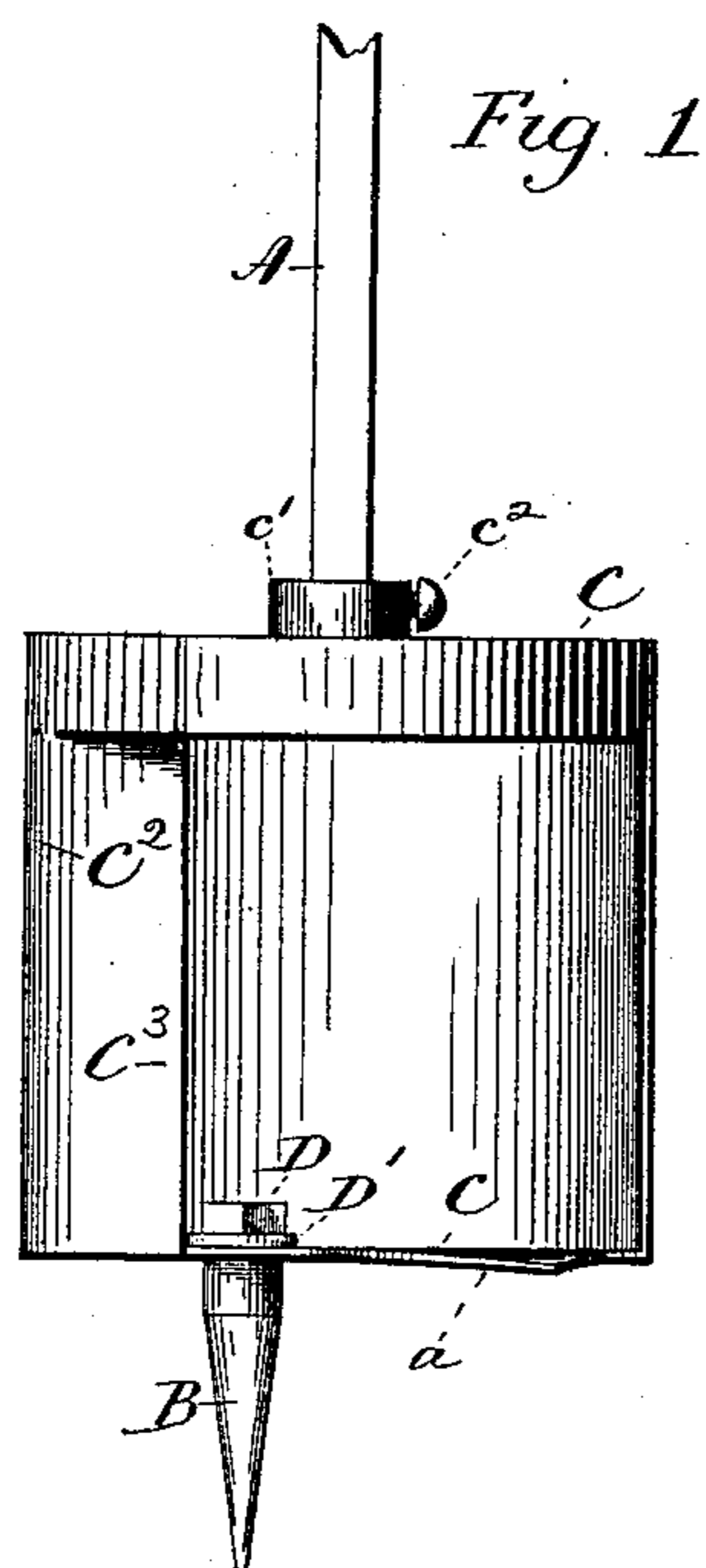


(No Model.)

F. W. BROCKSIEPER.
EARTH AUGER.

No. 481,345.

Patented Aug. 23, 1892.



Witnesses
J. H. Shumway
Lillian D. Kelby.

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UNITED STATES PATENT OFFICE.

FREDRICK W. BROCKSIEPER, OF NEW HAVEN, CONNECTICUT.

EARTH-AUGER.

SPECIFICATION forming part of Letters Patent No. 481,345, dated August 23, 1892.

Application filed January 18, 1892. Serial No. 418,430. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK W. BROCKSIEPER, of New Haven, in the county of New Haven and State of Connecticut, have invented a new Improvement in Earth-Augers; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a view in front elevation of an earth-auger constructed in accordance with my invention; Fig. 2, a plan view thereof; Fig. 3, a similar reverse view; Fig. 4, a broken sectional view of the device through the centering-point.

My invention relates to an improvement in earth-augers, the object being to provide an article adapted to be made in large sizes, to store the earth removed, and to make a cavity permitting it to be withdrawn and emptied when filled without opposition from suction.

With these ends in view my invention consists in an auger having certain details of construction and combinations of parts, as will be hereinafter described, and pointed out in the claims.

My improved auger is composed of a shank A, an adjustable centering-point B, and a substantially cylindrical earth-chamber having a circular upper end or head C, a broken lower end C', struck on the same circle with the upper end or head aforesaid, and a shell C², joining the said head. As herein shown, the upper end or head of the earth-chamber is formed of a flanged casting having four openings *c* and an upwardly-projecting central hub *c'*, constructed with a square opening to receive the lower end of the square shank A, and furnished with a set-screw *c*², which engages with the said shank to couple it with the head, which virtually closes the upper end of said chamber. As herein shown, also, the lower end of the chamber is struck on the same circle with the said upper end or head and broken away on one edge, which is bent downwardly to form the curved lip *a*, which is sharpened and which in the rotation of the auger loosens the earth and elevates it into the earth-chamber. The said lower end C' is also furnished with a radial slot *a'*, extending

from its center outward and receiving the centering-point B, which is adjustable within the limits of the said slot for varying the size of the hole to be made by the tool, the said curved edge *a* being adapted in length and in conformation to cut up to or substantially up to the said centering-point in any adjustment thereof. This centering-point has its upper end constructed to form two shoulders *b b*, which abut against the lower face of the end C' on the opposite sides of the said slot, with two square faces *b' b'*, which enter the said slot and engage with the opposite walls thereof and with a threaded shank *b*², which passes through the slot to receive the nut D and the washer D'. It will be clear that by loosening the nut the point may be moved in the slot toward or away from the center of the tool. As herein shown, and preferably, the said lower end of the device is brazed to the lower edge of the shell C², which is represented as being of heavy sheet metal and lapped over and secured to the flange of the head A. This shell does not form a cylinder, but is open on one side to form a discharge-opening, that one of its edges which is in the rear of the lip *a* when the device is being rotated being bent inwardly, as at C³, for forming an abutment against which the earth is packed, whereby the capacity of the chamber is increased and the earth made more coherent, so that it is better held within the chamber until the same is emptied.

Earth-augers constructed in accordance with my invention may be made very large in size, so as to hold a quantity of earth or other material to be removed by them. In operating them they are rotated until quite full, after which they are withdrawn and emptied, and then replaced in the bore which they have formed. By setting the centering-point eccentric to the shank the bore is made larger than the diameter of the instrument and suctional opposition to the operation and withdrawal of the same avoided.

If desired, the device might be cast in one piece, and I would therefore have it understood that I do not limit myself to the exact construction herein shown and described, but hold myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In an earth-auger, the combination, with
5 the shank thereof, of a substantially cylindrical earth-chamber having a discharge-opening in its side and having its upper end, to which its shank is attached, closed and its lower end constructed with a downwardly-
10 projecting lip, and an adjustable centering-point mounted in the said lower end of the chamber, substantially as described.

2. In an earth-auger, the combination, with the shank thereof, of a substantially cylindrical
15 drical earth-chamber having its lower end

broken away on one edge, a portion of which is bent downward to form a lip and having its shell made with a discharge-opening, the rear edge of the said shell with reference to the rotation of the device in use being bent in- 20 wardly to form a packing-abutment, and a centering-point mounted in the lower end of the earth-chamber, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscrib- 25 ing witnesses.

FREDRICK W. BROCKSIEPER.

Witnesses:

FRED. C. EARLE,

LILLIAN D. KELSEY.