

(No Model.)

W. BRUNNER.

EARTH AUGER.

No. 256,457.

Patented Apr. 18, 1882.

Fig. 1

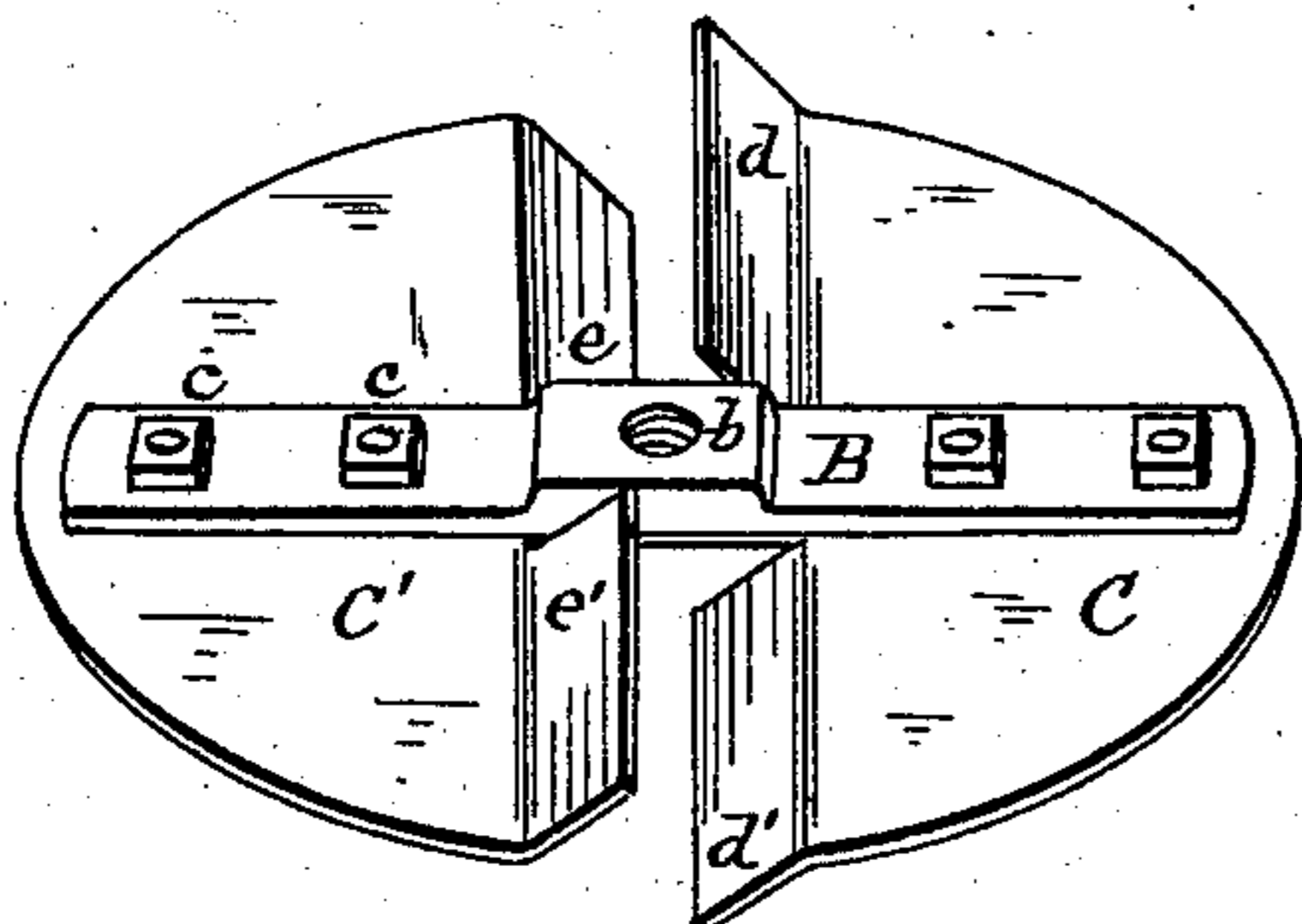


Fig. 3.

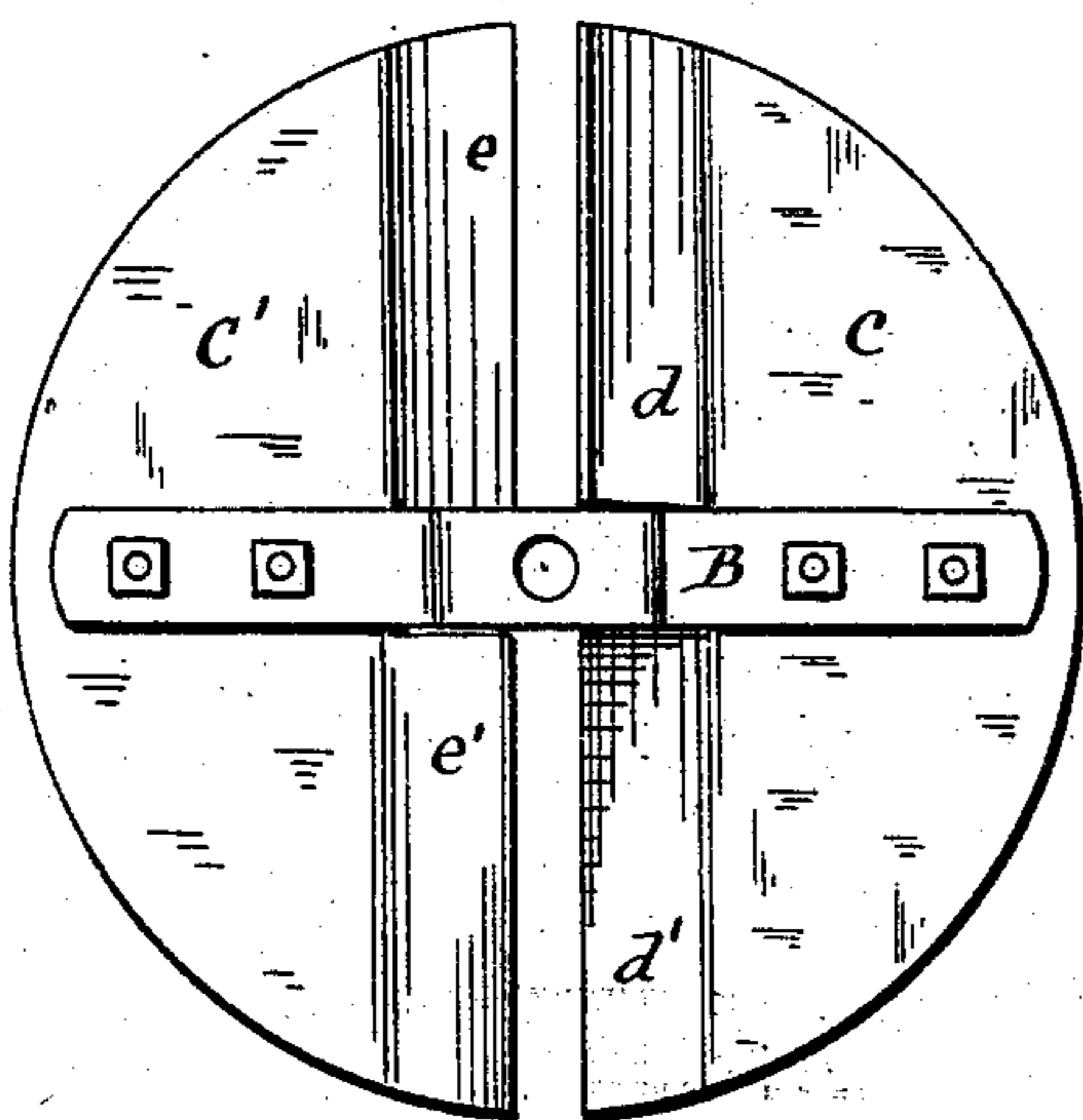
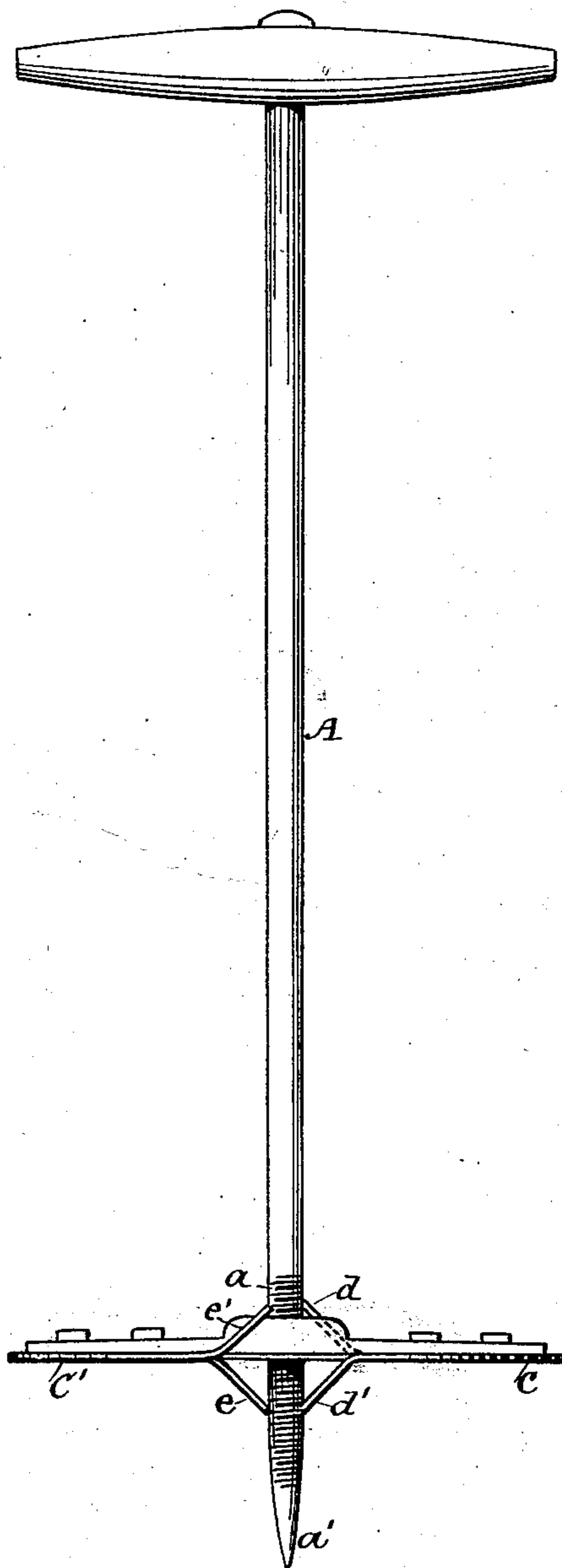


Fig. 2



Witnesses:
E. B. Stocking
Geo. H. Hunt

Inventor;
William Brunner
H. H. H.

UNITED STATES PATENT OFFICE.

WILLIAM BRUNNER, OF NORTH LEWISBURG, OHIO.

EARTH-AUGER.

SPECIFICATION forming part of Letters Patent No. 256,457, dated April 18, 1882.

Application filed January 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BRUNNER, a citizen of the United States of America, residing at North Lewisburg, in the county of Cham-
5 paign and State of Ohio, have invented certain new and useful Improvements in Earth-Augers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in
10 the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

15 My invention relates to that class of earth-augers which comprise a screw-threaded handle and a cross-bar adapted to receive the handle and support the plates and blades of the auger; and my invention consists in the combination of elements hereinafter more fully described, and specifically set forth in the claim.

Figure 1 is a perspective of the cross-bar and plates constructed in accordance with my invention, and Fig. 2 is a front or side elevation
25 of the complete auger. Fig. 3 is a top view of the cross-bar and plates.

Like letters of reference indicate like parts in all the figures.

30 A represents the handle, screw-threaded at *a* to adapt it for attachment to the bar B, the aperture *b* in which is also screw-threaded, and thus adapted to receive the pointed end *a'* of handle A, and by means of the screw-threads to be securely attached thereto.

35 To the bar B, by rivets or bolts *c c*, are secured two plates, C C', each of which is a little more than a half-disk or semicircular in outline, the excess or portion beyond the diametrical line being at the center removed in order
40 that the remaining portions thereof may be bent upward at one side of said center to form a blade, *d*, and downward at the other side of said center to form a blade, *d'*. The inner ends of the blades which incline upward abut against
45 the sides of the cross-bar, thus rendering its attachment thereto more firm against displacement during its operation in boring in the earth. In other words, the liability to twist

upon the bar is prevented by the screws, and these are greatly assisted by said abutment of
50 the blades against the bar. In like manner blades *e e'* of plate C' are formed. The opposite blades of each plate are disposed in upward and downward directions relatively to
55 each other, but parallel throughout their lengths, and are disposed in parallel diametric lines, and are separated, so that there is an open space extending entirely across the auger, and
60 neither blade overlaps the opposite blade, as clearly shown in the drawings, and thus is constructed and arranged what may be termed a
"double-bitted and reversible-bladed auger,"
for in operation it is capable of being used with
either of the blades *d'* and *e* at the bottom or
65 the blades *d* and *e'*, the direction of movement being from left to right, as is usual in this class
of implements, whereby when one set of blades becomes dull the user has simply to unscrew
70 the handle and turn over the plates and bar without removing the plates from the bar, and screw the handle into the bar again, when the
sharp blades are at the bottom and the dull
blades are at the top, where, if affected at all,
it is in the direction of sharpening them by
75 constant action of the earth thereon, and so they are fitted for use at the bottom again.
Each blade also is of such shape that it may be reversed independently of the other and of
the bar.

I do not broadly claim a reversible auger; 80
but

What I claim as new, and wish to secure by Letters Patent, is—

In an earth-auger, the combination of the screw-threaded and pointed handle A, the bar
85 B, and the plates C C', the blades of which are disposed in slanted parallel lines, with the inner ends of those inclined upward abutting against the bar, substantially as shown and described.

90 In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM BRUNNER.

Witnesses:

H. G. PARTRIDGE,
A. D. PALMER.