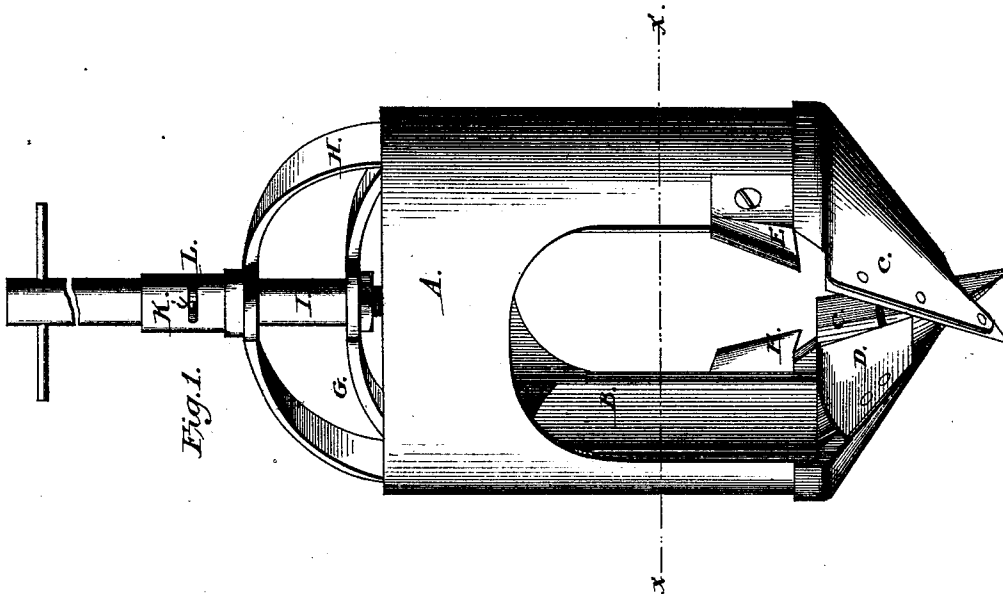
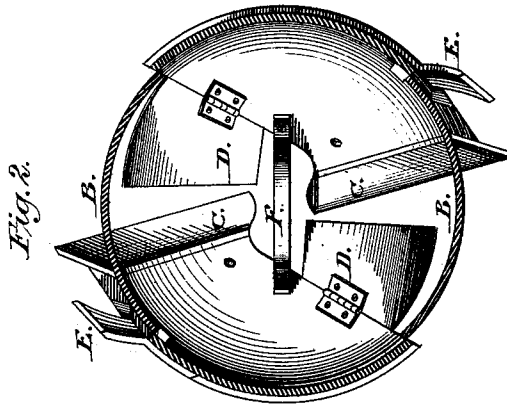


J. CAMPBELL.

EARTH-AUGER.

No. 174,945.

Patented March 21, 1876.



Attest:

R. H. Ellwell.
V. H. Middleton

Inventor:

Jay Campbell.

UNITED STATES PATENT OFFICE

JAY CAMPBELL, OF DOOR CREEK, WISCONSIN.

IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. 174,945, dated March 21, 1876; application filed February 7, 1876.

To all whom it may concern :

Be it known that I, JAY CAMPBELL, of Door Creek, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Earth Augers or Borers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The nature of my invention is primarily to construct an earth auger or borer, used for the purpose of boring holes for posts, of great strength and power, and at the same time of easy operation; and consists of a metallic cylinder of the size most usually required. Openings are formed, of uniform size, on opposite sides of such cylinder, the upper portion of which is arched, and entirely open at the bottom. Secured to the lower portion of such cylinder are two strong metallic plates, of a somewhat conical shape, and secured to wider and downward-projecting sides thereof are the cutting-edges, that deflect at an angle of about forty-five degrees, forming the points that enter the ground, and upon which the weight of the whole auger or borer rests. To the opposite ends of these plates are secured two hinged valves, that yield to the pressure of the earth upon them when the borer or auger is in operation, and when the same is withdrawn partially or wholly drop down, and retain the earth within the auger or borer. An arched brace connects the two metallic plates, and limits the upward movement of the hinged valves, above referred to. An inner shield of metal, conforming in shape substantially to the openings in the cylinder, is composed of two parts, connected together by means of an arched brace at the top, and there secured to the handle of the auger or borer, and is operated by such handle being turned in one or the opposite direction. Thus air can be admitted through such openings while the process of boring is going on,

and when the same are closed the shields filling the space thus open in the cylinder retain the earth within it when the borer is withdrawn. The cylinder at its upper end is also secured to the handle of the auger or borer by an arched brace. The handle passes through a metallic socket, in which a slot is cut, and a lug formed upon such handle fitting such socket limits the movement of the inner shield to the right or left.

As it frequently happens that a post-hole requires to be enlarged, I have made provision for the attachment of adjustable cutters, secured to the cylinder above, and resting upon, the flange of the metallic plates, forming the bottom of the cylinder, by means of screws or other suitable devices.

In the drawings, Figure 1 is a plan view, and Fig. 2 is a top cross-section in line *xx*, Fig. 1.

A is the outer metallic cylinder, containing the arched openings, as seen in Fig. 1. B are inner shields of metal, similar in character to that of the cylinder, and conforming in shape to such openings. Such shields are connected together at their tops by means of the arched iron brace G, which is secured to the handle I, as seen in Fig. 1. C C are strong metallic plates, secured to the bottom part of the cylinder A, that are supplied with cutting-edges, the prolonged points of which cross each other, as shown. D are the hinged valves, moved upward by the pressure of the earth when the auger or borer is operated, their upward movement being limited by the arched brace F. E are cutters, secured to the outer side of the cylinder A, to enlarge the area of the whole, when required. H is an arched iron brace, secured to the upper end of the cylinder A, and also to the handle I. K is a socket, within which the handle I revolves, containing the slot L, and into which a lug, *i*, is adjusted, to limit the movement of the shields B, secured to the handle I.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the cylinder A, plates

C C, shields B B, and handle I, constructed and arranged in the manner and for the purpose herein described.

2. The adjustable cutters E E, in combination with the cylinder A, in the manner and for the purpose herein described.

3. The socket K, in combination with the brace H, handle I, slot L, and lug i, in the manner and for the purpose herein described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JAY CAMPBELL.

Witnesses:

S. RASMUSSEN,

W. T. POTTER, Jr.