

D. Ring,
Earth Auger,
No 47,172. Patented Apr. 4, 1865.

Fig 1.

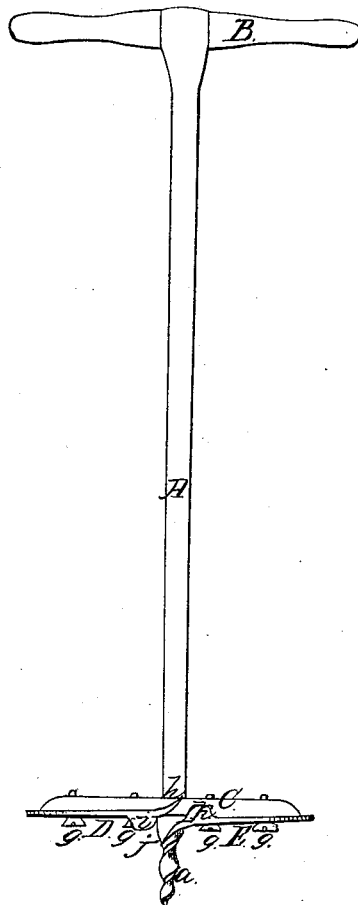
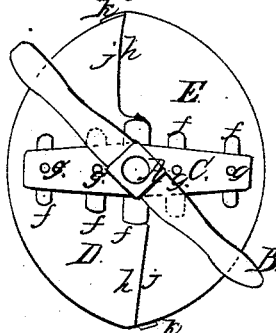


Fig 2.



Witnesses;
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UNITED STATES PATENT OFFICE.

DAVID RING, OF DAMARISCOTTA, MAINE.

GROUND-AUGER.

Specification forming part of Letters Patent No. 47,172, dated April 4, 1865; antedated March 26, 1865.

To all whom it may concern:

Be it known that I, DAVID RING, of Damariscotta, in the county of Lincoln and State of Maine, have invented a new and useful Extension Post-Hole Borer; and I do 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 accompanying drawings, forming a part of this specification, in which—

Figure 1 is a side elevation, and Fig. 2 a top view.

Like parts are indicated by the same letters in both drawings.

The nature of my invention consists, first, in constructing the cutting and lifting apparatus of a post-hole borer of two semicircular disks, D E, of sheet-iron or steel, one-half of the straight edge of each disk being provided with an inclined cutter, *h*, pointing upward, and the other half with a similar cutter, *j*, pointing downward, so that while the one cutter, *j*, is boring, the other, *h*, will be sharpened by the action of the earth under which it revolves, and thus made ready to be turned top-side down and used whenever the under cutter becomes blunted by boring; and, second, in rendering the borer expansible, so as to bore holes of different diameters by means of oblong slots *f* in the disks, through which the confining screws *g* are passed into the cutter-head C at the bottom of the shaft A.

To enable others skilled in the art to make and use my invention, I will now proceed to describe its construction and operation.

A is the shaft or shank of round iron, about four and a half feet long and five-eighths of an inch in diameter, the upper end of which is provided with a handle, B, as shown in the drawings.

C is a wrought or cast iron cutter-head, through the center of which is screwed the lower end of the shaft A to a shoulder on the same.

D and E are the lifting-cutters, made of sheet iron or steel, each cutter being, as represented in Fig. 1, nearly a semi-circle, and provided with oblong slots, *f*, through which are passed the screws *g* into the cutter-head

C, by means of which said cutters are readily confined, and in any desired position, according to the required diameter of the hole to be bored.

h and *j* are the inclined cutting-edges of the disks, the edge *h* being on the upper side of the disk on one side of the shaft A, and the edge *j* being on the under side of the disk, on the opposite side of the shaft, so that when the one edge is boring the other is being sharpened by the action of the earth under which it revolves.

i and *k* are spurs or vertical cutters, which cut into the ground in advance of the under cutters, *j*, and form the periphery of the hole.

a is a screw or spiral, formed on the lower extremity of the shaft, and serves as a guide to the cutters.

The machine is worked in the same manner as a common auger, the cutters D E entering into the ground until the weight of the earth above them is as great as the operator cares to lift at once, and then withdrawn, raising the superincumbent earth upon them, which is cast aside, as from a hoe or shovel; and this operation is repeated until the post-hole is bored to the depth required. In soil that is free from stones a man with my machine can bore out post-holes from three to five times faster than he can dig them in the usual manner.

The machine is very simple, cheap, and sharpens itself by use. By adjusting the disks D and E, it is also evident that holes of different diameters can be bored by the same machine.

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

1. The disks D and E, provided with the top and bottom cutters, *h* and *j*, substantially as set forth, and for the purpose described.

2. Rendering the borer expansible by means of the oblong slots *f*, substantially as described.

DAVID RING.

Witnesses:

N. AMES.

GEO. R. CLARKE.