

O. H. POLLEY.
Earth-Auger.

No. 202,864.

Patented April 23, 1878.

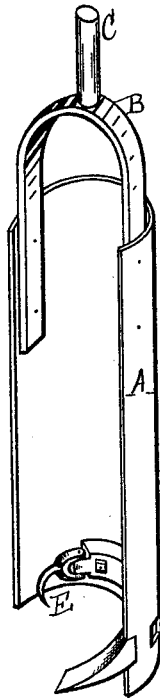


Fig. 1.

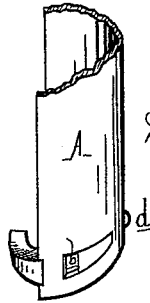


Fig. 2.

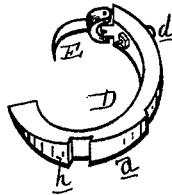


Fig. 3.

Attest:
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UNITED STATES PATENT OFFICE.

ORSON H. POLLEY, OF PLYMOUTH, MICHIGAN.

IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **202,864**, dated April 23, 1878; application filed October 23, 1877.

To all whom it may concern:

Be it known that I, ORSON H. POLLEY, of Plymouth, in the county of Wayne and State of Michigan, have invented a new and useful Improvement in Earth-Augers; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, and being a part of this specification.

Figure 1 is a perspective view of the concaved front of my improved auger. Fig. 2 is a like view of the reverse side. Fig. 3 is a like view of the cutter detached.

Like letters refer to like parts in each figure.

The nature of my invention relates to certain new and useful improvements in earth-augers, by means of which the cutter is easily removed and replaced by another, when desired; also, to a device, in combination with the cutter, by means of which the core may be broken or cut off, and which will form a rest for the bottom of the core, so that the same may be lifted out of the bore; and the invention consists in the construction, arrangement, and combination of the various devices for accomplishing the desired ends, substantially as hereinafter described.

In the annexed drawings, A represents the cylindrical portion of the device, surmounted by a fixed yoke, B, to which the rod C, by means of which the auger is rotated, is secured. D is a curvilinear bit or cutter, provided with a dovetail triangular-shaped flange, *a*, which is inserted into the similarly-shaped slot *b* in the case, to which the bit is secured by the bolt *d*. To the inner end of this bit or cutter is hinged the hook E. The bit is also provided with a projection, *h*, which fits into the recess shown in the edge of the cylinder.

In earth-boring it frequently becomes neces-

sary to change the bit or cutter, either because it becomes dulled, because different strata of soil require a different cutter, or from other causes.

It will readily be seen that this is easily done by removing the bolt *d* and disengaging the bit from its dovetail engagement with the cylinder.

In the operation of earth-augers composed of a cylinder and bit or cutter alone, in heavy or clay soils, a core is formed.

When the bit is provided with the hinged hook, and it is desired to remove the core, a reverse motion of the auger will cause the hook to enter the core, assist in breaking or cutting it off at the bottom, and form a rest, upon which the core will rest when the auger is withdrawn.

The downward curve of the point of the bit causes it, as the auger is rotated, to draw downward, or advance in its work, thereby rendering pressure at the top unnecessary.

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

1. In an earth-auger, a curvilinear bit or cutter, D, attached to the cylinder by a dovetail triangular-shaped flange, *a*, inserted in a similarly-shaped slot, *b*, in the cylinder, and by a bolt, *d*, passing through the said cylinder and cutter, substantially as described and shown.

2. In combination with the cutter D, the hook E, constructed to operate substantially as and for the purpose set forth.

3. In an earth-auger, the combination of the cylinder A, cutter D, and hook E, constructed and arranged to operate substantially as specified.

ORSON H. POLLEY.

Witnesses:

O. J. PUNCHES,
C. C. KINGSBURY.