

**E. H. CLARK.**  
**Earth-Augers.**

No. 143,963.

Patented Oct. 28, 1873.

Fig. 1

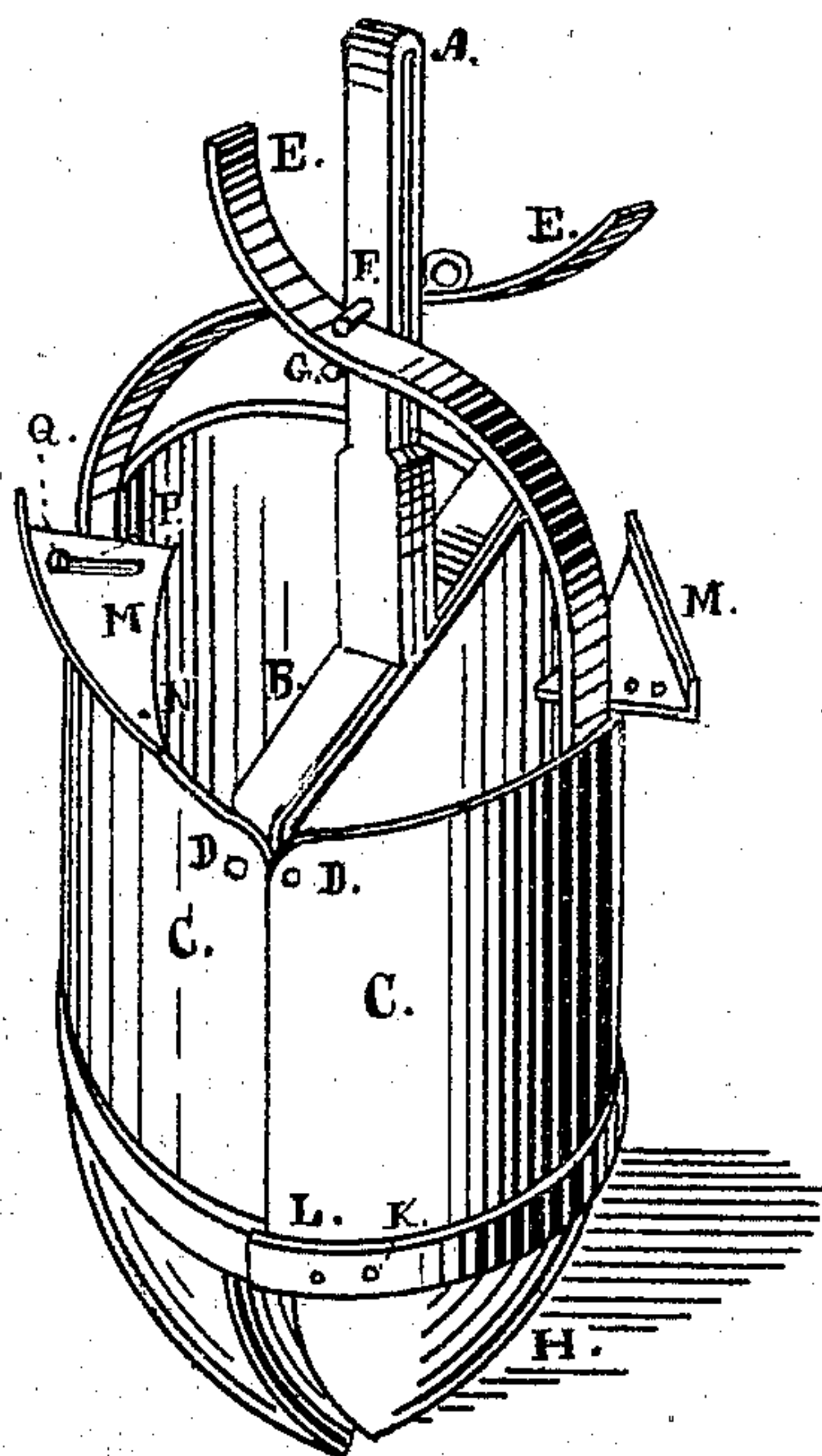


Fig. 2.

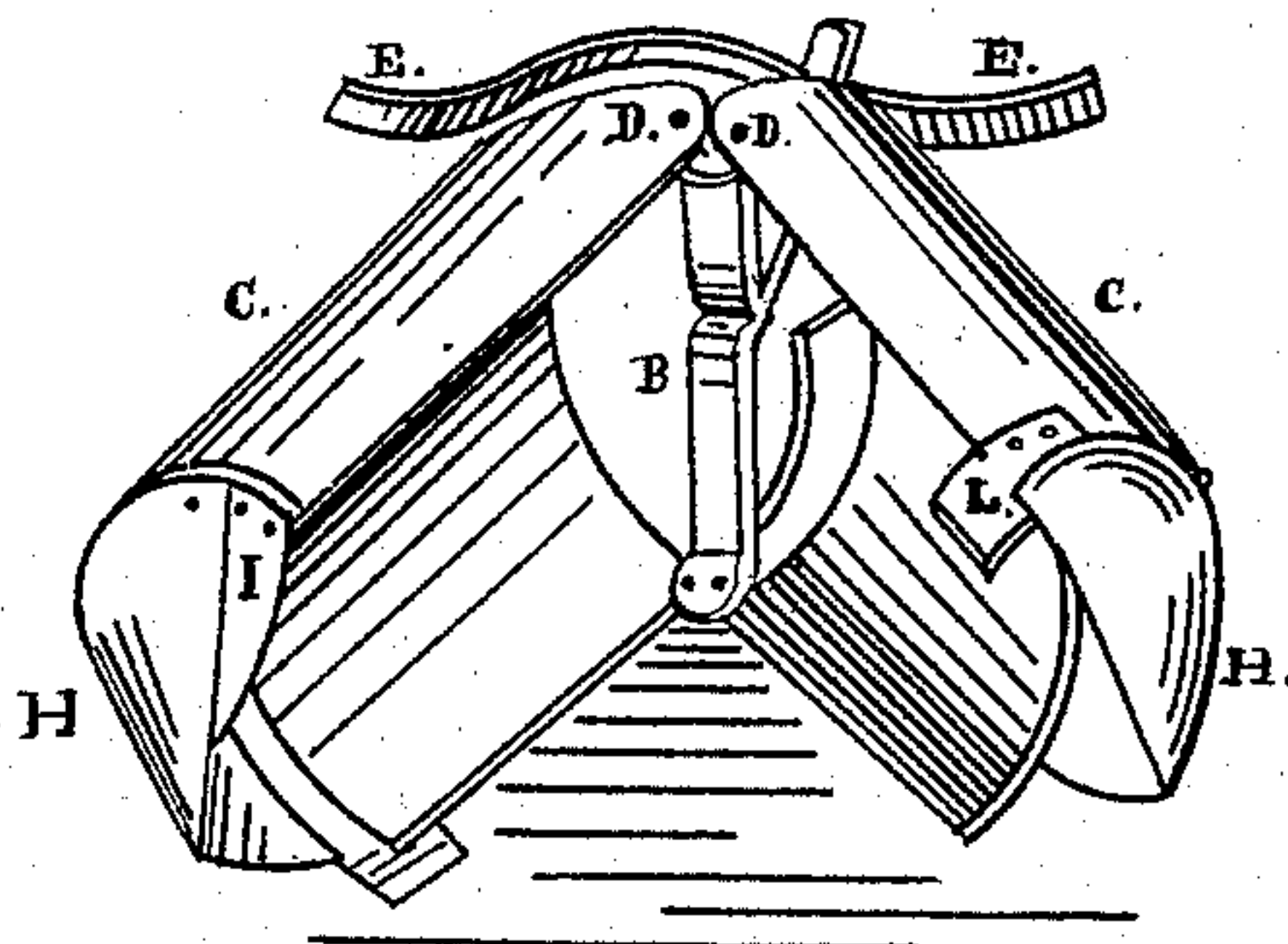
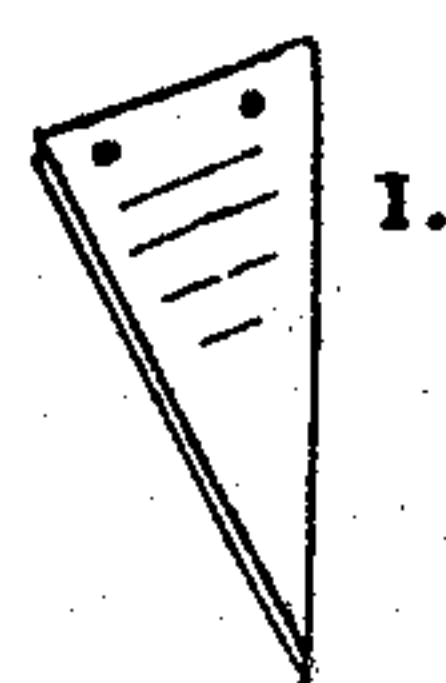


Fig. 3.



Witnesses.

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Inventor.

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*By W. H. Smith*  
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# UNITED STATES PATENT OFFICE.

ERASTUS H. CLARK, OF APPLETON, WISCONSIN.

## IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **143,963**, dated October 28, 1873; application filed August 1, 1873.

*To all whom it may concern:*

Be it known that I, ERASTUS H. CLARK, of Appleton, in the county of Outagamie, in the State of Wisconsin, have invented certain Improvements in Earth-Augers, of which the following is a specification:

The object of my invention is to rapidly bore holes in the earth by a newly-constructed earth-auger, which is made with movable cutting-knives attached to the body of the auger, so as to be taken off and replaced when necessary; and the auger is arranged so as to have the earth which is displaced fall into the inside, and to be opened for the discharge of the same.

Figure 1 is a perspective view of my invention. Fig. 2 is a view of the auger open, and Fig. 3 is a view of the closing-piece to close the opening between the knives.

A is the upright shaft, secured at its lower end to the cross-bar B, to which is attached at each end of it the cylinder or body of the auger C C, in two parts, bolted to the cross-bar B by bolts D D, forming a hinge or joint, so that the operator, by removing the key G, can open the body of the auger and discharge the dirt. There are two other bolts, D D, on the opposite side of the auger. E E are bail pieces, attached to the body of the auger, and crooked so as to pass across the shaft A and under pin F. G is a key, placed in shaft A and under bail pieces E E, to hold the auger together. H H are the cutting-knives, fastened to the body C of the auger, one on each side, constituting the bottom of the auger, and set so that as the auger is revolved they will cut the earth and fill the same. I is a piece of metal to fill up the space

between the knives H, which is left open between the edge of one knife and the back of the other, so as to bore and hold sand. When boring clay or gravel these pieces are not needed; but when boring sand, if they are not on when the auger is raised the sand would run out. K are bolts, by which the knives L L are secured to the sides of the auger. These knives L L are for the purpose of enlarging the hole, so that the auger can be moved up and down in it. M M are the rimming-knives, attached to the upper edge of the body of the auger by means of bolts N, which serve as pivots for the knives to move out and in. These knives have slots or oblong holes, P, in them, allowing them to be moved out and in, as desired, and secured in place by bolts Q. These knives secure the enlargement of the hole beyond the size of the auger.

I claim as my invention—

1. The peculiar construction of the rimming-knives M M and the mode of attaching them to the auger by means of bolts N N serving as pivots for the knives to turn on, and an oblong slot in the knife, through which a bolt, Q, passes to admit of setting the knife out or in.

2. Bail pieces E E, in combination with shaft A and pin F and key G, substantially as described.

3. Cylinders C C, hinged to bar B, in combination with knives H H, substantially as described.

ERASTUS H. CLARK.

Witnesses:

S. P. MING,  
H. L. PEASE.