G. G. COLLINS.

Earth-Augers.

No. 153,807. Patented Aug. 4, 1874.

Fig. 1.

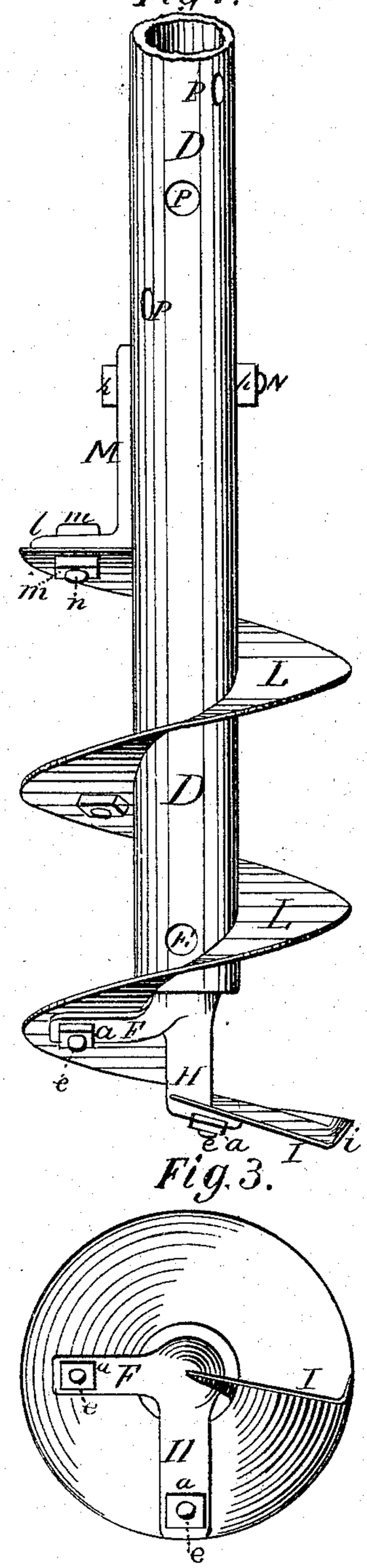

Fig. 2.

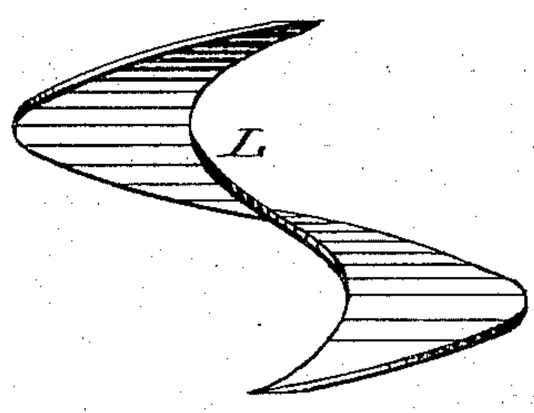

Fig. 3.

Witnesses:

D. R. Cowl

R. S. Miller

Inventor:

George G. Collins

by his atty's.

Cox & Cox

UNITED STATES PATENT OFFICE.

GEORGE G. COLLINS, OF PHILO, ILLINOIS, ASSIGNOR OF ONE-HALF HIS RIGHT TO OLIVER WOOD, OF SAME PLACE.

IMPROVEMENT IN EARTH-AUGERS.

Specification forming part of Letters Patent No. **153,807**, dated August 4, 1874; application filed April 29, 1874.

To all whom it may concern:

Be it known that I, GEORGE G. COLLINS, of Philo, Champaign county, Illinois, have invented certain new and useful Improvements in Earth-Augers, of which the following is a description, reference being had to the accompanying drawings.

The invention relates to a means of securing the plates of an earth-auger to its shaft; and consists in a hanger, which secures the plates to a shaft having at its lower extremity an armature, to which is fastened the bit of an auger, the spiral portion whereof encircles the shaft, and is extensible, by means of the plates and hanger above mentioned.

The object of the invention is to provide a convenient means of securing the plates forming the extension of an earth-auger to its shaft.

Figure 1 is an elevation of a device embodying the elements of the invention. Fig. 2 is a bottom view of the same. Fig. 3 is a detached view of one of the plates L.

D is a shaft, in the present instance tubular, and provided, near its lower end, with the aperture E, to permit the efflux of water or liquid matter, and at its lower extremity with the arms F H, which project in different planes at right angles to each other, and to the axis of the shaft, being united at their bases to a vertical piece which enters and is secured within the shaft below the aperture. The bit I is formed of a plate of metal curving downward and sharpened on its lower edge, which has the vertical lateral flange *i*. It extends upward, curving about the extended axis of the shaft D, and is bolted to the extremities of the arms F H. The remainder of the auger is formed of circular plates L, from the center of which is removed a circular section in diameter slightly exceeding the external diameter of the shaft. The plate is then severed on one side, one end being drawn up, the other forced down, giving the plate the spiral form shown at Fig. 3. The plate L is placed about the shaft D, and secured to the bit I by the nuts *a* and bolts *e*. Another plate is similarly added above the last, and thus the length of the auger increased, as may be desired, the uppermost plate being attached to the shaft by the hanger M, secured thereto by the bolt N passing through the shaft, and secured by the nuts *h* on each side, the holes P to receive the bolts N being placed spirally around the shaft, and also affording an escape for the air as the auger descends. The lower portion of the hanger M is provided with the flange *l*, to which is secured, by nuts *m* and a bolt, *n*, the upper edge of the uppermost of the plates L. The hanger M is removed and secured in a higher position as each plate is added in extending the auger.

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

The combination of the plates L and hanger M, substantially as set forth.

In testimony that I claim the foregoing improvements in earth-augers, as above described, I have hereunto set my hand and seal this 22d day of April, 1874.

GEORGE G. COLLINS. [L. S.]

Witnesses:

BYRON MCGONIGLE,

SOLOMON CARTER.