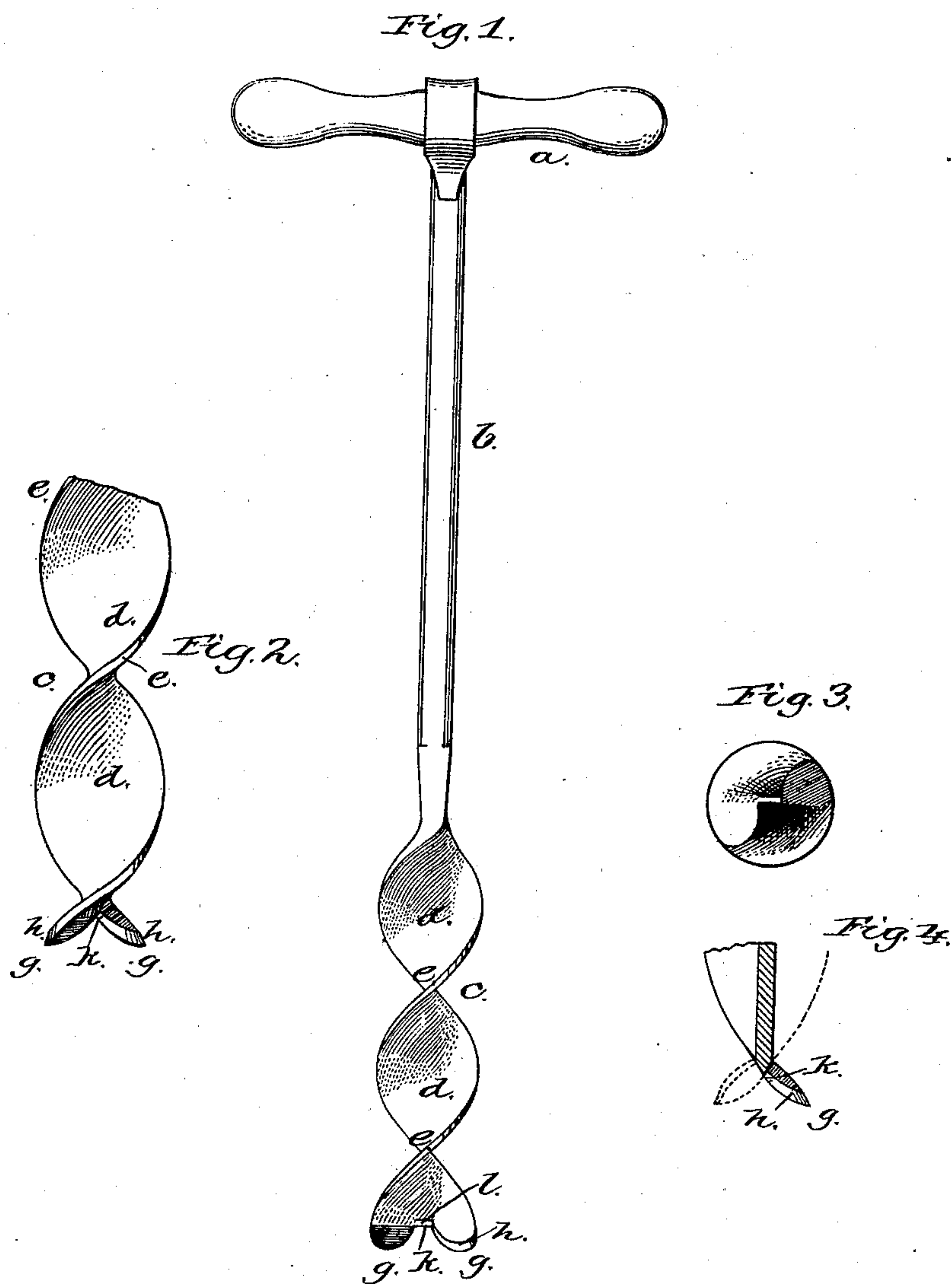


(No Model.)

J. N. RAINEY.  
SLATE OR EARTH AUGER.

No. 264,196.

Patented Sept. 12, 1882.



WITNESSES

*Villette Anderson*  
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# UNITED STATES PATENT OFFICE.

JEREMIAH N. RAINEY, OF IRONTON, OHIO.

## SLATE OR EARTH AUGER.

SPECIFICATION forming part of Letters Patent No. 264,196, dated September 12, 1882.

Application filed November 19, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, J. N. RAINEY, a citizen of the United States, and a resident of Ironton, in the county of Lawrence and State of Ohio, have invented a new and valuable Improvement in Slate or Earth Augers; 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 annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side elevation. Fig. 2 is an enlarged view. Fig. 3 is a bottom view, and Fig. 4 is a detail sectional view.

This invention has relation to augers for boring slate or hard earth; and it consists in the construction and novel arrangement, at the end of a double flanged and twisted blade, of a forked bit having lateral circularly-curved convex branches continuous with the flanges of the blade, and separated by a central notch or depression formed with a cutting-edge, as hereinafter set forth, and especially pointed out in the claim appended.

In the accompanying drawings, the letter *a* represents the cross-handle of the auger, and *b* its stem, which is spread at its lower portion to form the double-flanged twisted blade *c*, having the lateral spiral grooves *d* for conveying out the material which is cut and loosened up by the bit.

Each flange, *e*, of the blade extends downward in an oblique spiral direction, and terminates in a convex circularly-rounded end, *g*, which is sufficiently beveled on its upper side around the margin to form a strong cutting-edge, as indicated at *h*. This bit end *g*

of each flange, it will be observed, has the same direction of inclination that the flange has from above downward, and is radially arranged transversely. These circularly-rounded bit ends *g* form the lateral branches of the bit, and they are separated by a deep notch, *k*, centrally arranged and of sufficient width to form a horizontal cutting-edge, *l*, which is directed downward.

This auger is designed to operate with facility in slaty or hard and rocky soils. Its rounded branch bits are strong and not easily broken. It has no centering-point to be broken off, but in its operation is centered automatically by the work, which keeps the central notch in position, said notch gradually wearing down by means of its edge the central rise of the work.

An auger having a forked bit is not new, and is not broadly claimed hereinafter.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

The auger described, having the twisted double-flanged blade *c*, terminating in the forked bit, having lateral circularly-curved convex branches *g*, continuous with and having the oblique direction of said flanges, and the central separating-notch, *k*, between said branches, having a downward-cutting edge, *l*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JEREMIAH N. RAINEY.

Witnesses:

W. D. RICHMUN,  
LANDAU MASSIE.