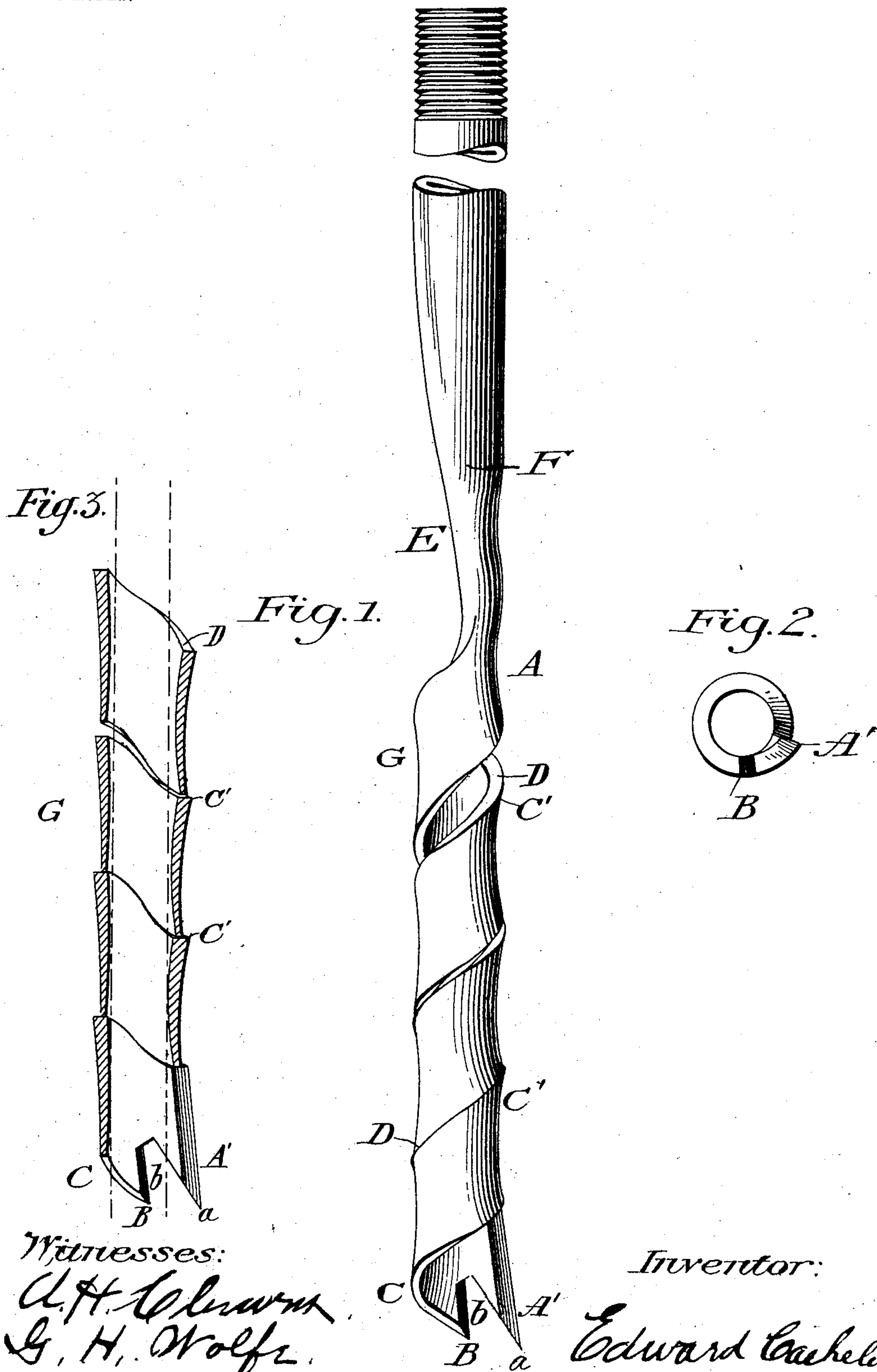


No. 774,933.

PATENTED NOV. 15, 1904.

E. CACHELIN.
AUGER OR DRILL FOR BORING ROCK, &c.
APPLICATION FILED AUG. 22, 1902.

NO MODEL.



Witnesses:
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G. H. Wolf

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UNITED STATES PATENT OFFICE.

EDWARD CACHELIN, OF SPEARFISH, SOUTH DAKOTA.

AUGER OR DRILL FOR BORING ROCK, &c.

SPECIFICATION forming part of Letters Patent No. 774,933, dated November 15, 1904.

Application filed August 22, 1902. Serial No. 120,698. (No model.)

To all whom it may concern:

Be it known that I, EDWARD CACHELIN, a citizen of the United States, residing at Spearfish, county of Lawrence, and State of South Dakota, have invented certain useful Improvements in Augers or Drills for Boring Rock, &c., of which the following is a specification.

My invention relates to improvements in augers or drills for boring rocks, &c., and has for its object a device simple in construction, durable in character, and efficient in operation, and one which can be easily and readily repaired when necessary; and for these purposes it consists of the combination and arrangement of parts hereinafter set forth and claimed.

In the drawings accompanying this specification and made a part hereof, Figure 1 is a side view of an auger or drill embodying my invention, and Fig. 2 is a bottom view of the same. Fig. 3 represents a longitudinal section of the coil portion thereof.

Similar letters indicate like parts of the several figures.

In the drawings, A designates the body of the device, consisting of a shank and a coiled portion, preferably formed of a piece of tool-steel coiled as shown, thereby forming lower and upper edges C and D, respectively. The upper edge D is of greater thickness than the lower edge C, causing the former to project outwardly, forming a rib C' on the outside of the auger, thereby aiding in the feeding and also in preventing a binding of the coils by stiffening the said edge, and thus permitting more readily the escape of the borings or pulp.

The point-tooth A', which projects outward and downward from a recessed lower end of the coil, is formed by beveling or sharpening the inner face of the cut-away or recessed lower end of the coil, and the drag-tooth B is formed by making the notch a on the lower edge C adjacent to the tooth A' and beveling or sharpening the inner face of the wall b of said notch. Owing to the distance of the drag-tooth from the point-tooth, there is a free escape of the same from the borings cut by the point-tooth.

The bore of the coil at the toothed end is

slightly smaller than at its end G, where it is connected with or joins the shank, so that there is ample room for the borings or pulp to pass out, and thus prevent choking of the bore of the coil. The diameter of the coil may be of any suitable size as desired for work. The shank E is welded or otherwise suitably connected to a tubular pipe F, having a screw-thread thereon or otherwise suitably adapted to connect with a drill-stock or an operating-shafting.

It will be seen that a device as thus constructed is simple in character while efficient in operation.

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

1. An auger or drill having a shank with a coiled lower end, the upper edge of the coil being of greater thickness than its lower, forming thereby an outer rib on said coil, substantially as and for the purpose set forth.

2. An auger or drill having a coiled lower end provided with the point-tooth A', and a drag-tooth B, in rear of said point-tooth, the upper edge of said coil having an outer rib thereon, said parts being arranged and combined substantially as described.

3. An auger or drill consisting of a piece of metal having a shank with a coiled portion provided at its lower end with a point-tooth and a drag-tooth; the bore of said coil being of less diameter at the tooth end than at the shank end, said parts being arranged and combined substantially as described.

4. An auger or drill, consisting of a piece of metal having a shank with a coiled end and a tubular portion connected to said shank, said coiled end having a rib thereon and provided with a point-tooth and a drag-tooth, each of said teeth having cutting edges and the bore of the coil being less at the tooth end than at its shank end, said parts being combined substantially as described.

In witness whereof I hereunto set my hand in the presence of two subscribing witnesses.

EDWARD CACHELIN.

Witnesses:

R. F. CRAWFORD,
JOHN CASHNER.