(No Model.)

W. L. PARMELEE.

AUGER.

No. 260,497. Patented July 4, 1882.

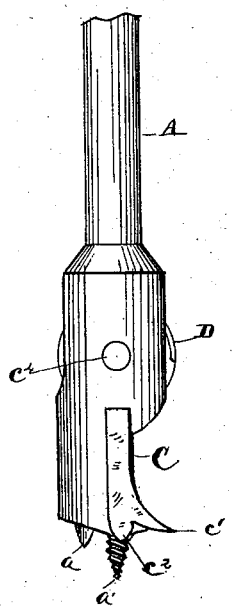

Fig. 2.

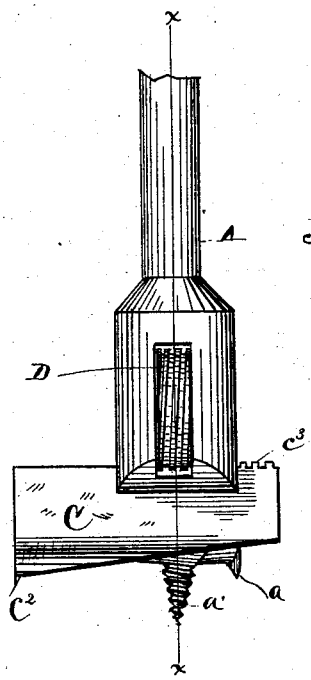

Fig. 1.

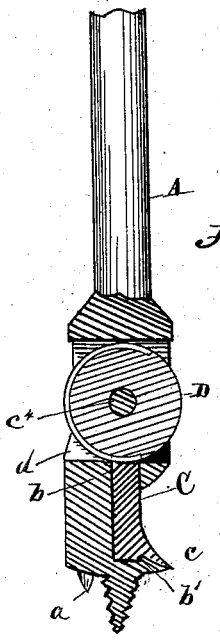

Fig. 3.

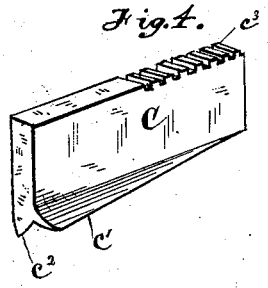

Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM L. PARMELEE, OF ANSONIA, CONNECTICUT, ASSIGNOR TO THE DERBY BIT COMPANY, OF SAME PLACE.

AUGER.

SPECIFICATION forming part of Letters Patent No. 260,497, dated July 4, 1882.

Application filed April 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. PARMELEE, a citizen of the United States, residing at Ansonia, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Expansion-Bits, of which the following is a specification, reference being had therein to the accompanying drawings, and in which—

Figure 1 is a side view of my improved auger. Fig. 2 is a similar view thereof, viewing the extensible bit from the front end. Fig. 3 is a sectional view taken on the line *x x* of Fig. 1, and Fig. 4 is a detailed perspective view of the extensible bit.

This invention has relation to an improvement in augers, having for its object to effect the ready adjustment of the extensible bit to gage the size of the cutting of the hole to be bored; and it consists of an extensible bit adapted to slide in a slot in the lower end of the bit-shank, and having a rack or series of teeth on its upper edge and a screw-threaded wheel or worm engaging with the rack of the said bit, substantially as hereinafter more fully set forth and claimed.

To carry into practice my invention I employ an auger-shank, A, having the usual form of lip or stationary bit, *a*, and screw-point *a'*. In the lower end of this shank is a slot, *b*, arranged directly above the point *a'* and lip *a*. This slot is open at one side, as well as at its ends, and the shank has a flange, *b'*, projecting beyond the bottom and open side of the slot and inclined in the direction of the transverse axis of the shank, and also beveled at right angles to its inclination, as seen in Figs. 1 and 2.

C is the extensible bit, rectangular in its general form and fitted to slide in the slot *b*. It has projecting from its straight base *c* a lateral tapering beveled cutter, *c'*, also inclined in a similar manner as the flange *b'*, upon which it rests, forming, with a downward-projecting lip, c^2, thereon, the cutting-surface of the extensible bit, as seen in Figs. 3 and 4. This construction and arrangement enable the extensible cutter or bit to unite with the stationary lip and cutting-edge at the other end of the bit to effect the boring of a hole in the material. The upper edge of this bit or blade has a rack or teeth, c^3, with which engage the broad screw-threads of the worm or pinion D. This pinion or worm is hung so as to revolve within a second slot, *d*, in the bit-shank A upon a pin or axis, c^4, and is capable of ready operation by forcibly moving the forefinger or thumb against or in contact with the edge or periphery of the pinion. By this means the bit C can be moved so as to gage the size of the cutting of the hole to be bored.

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

1. In an auger, the sliding bit having a rack or toothed surface and a lateral tapering inclined cutting-surface, in combination with the worm or screw-threaded pinion arranged in the bit-shank, substantially as and for the purpose set forth.

2. In an auger, the sliding bit having a rack or toothed surface and a cutting-edge, in combination with the worm or screw-threaded pinion arranged in the bit-shank, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM L. PARMELEE.

Witnesses:

VENENUE MUNGER,

DANA BARTHOLOMEW.