

Newton, Smith & Sanford,

Wood Auger.

N^o 5036.

Patented Mar. 27, 1847.

Fig: 2.



Fig: 1.



Witnesses:

L. B. Smith & Sanford

Inventor:

Alfred Newton

UNITED STATES PATENT OFFICE.

ALFRED NEWTON, LUCIUS B. SMITH, AND ELIAS SANFORD, OF MERIDEN, CONNECTICUT.

AUGER.

Specification of Letters Patent No. 5,036, dated March 27, 1847.

To all whom it may concern:

Be it known that we, ALFRED NEWTON, LUCIUS B. SMITH, and ELIAS SANFORD, all of the town of Meriden, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Single and Double Twist Augers, which improvement consists in what we term "a graduated twist," and is effected by so constructing the auger as to produce a uniformly decreasing length of twist with a correspondingly gradual tapering of the cavity of the auger from the shank to the lower or cutting extremity.

Any person skilled in the art of making augers can form the graduated double twist, with tongs and hammers in the ordinary mode of twisting double twist augers, by exercising due care and attention. A better method is to have the dies in what auger manufacturers call "crimp jaws," so constructed as to conform in size, graduated length of twist and taper of the cavity, to the proposed auger. The auger having been first twisted by the common method with tongs and other tools to about the shortness of a medium in the proposed twist, is while hot put into the crimps, which are then brought suddenly together by the usual process, the auger being at the same time turned partially around backward and forward; the twist is thus made of a gradually increasing length with a correspondingly gradual enlarging cavity from the lower or cutting end to the other extremity of the twist, as is represented in Fig. 1 of the drawing hereto annexed and making part hereof.

To form single twist augers with our im-

provement (see Fig. 2) that part of the rod which is to form the twist should before being twisted be drawn with a gradual taper from the part which is to form the shank, to that which is to form the lower or cutting end. The auger may then be twisted in the usual way, by having the mold upon which it is formed or twisted made to conform in size, graduated length of twist and taper of the cavity to the proposed auger. The mold is a machine well known to all makers of single twist augers.

The superiority of augers made with our improvement aforesaid consists in that the clogging of the chips or core in the twist while in the process of boring is effectually prevented, thereby materially diminishing the friction; and also in that the shortness of the twist at the lower end gives a better opportunity to finish the cutting lips so that they may bore smooth and even, than when the auger is made in the ordinary way with a slack or open twist.

What we claim as our improvement and invention and desire to secure by Letters-Patent is—

The making or constructing double or single twist augers with a gradually increasing length of twist and consequent gradual enlargement of cavity from the lower or cutting end to the other extremity of the twist.

ALFRED NEWTON.
LUCIUS B. SMITH.
ELIAS SANFORD.

Witnesses:

NATHANIEL C. SANFORD,
BONAJUH ANDREWS.