(No Model.)

W. W. BRIGG.

AUGER AND GIMLET.

No. 270,200. Patented Jan. 9, 1883.

Fig. 1.

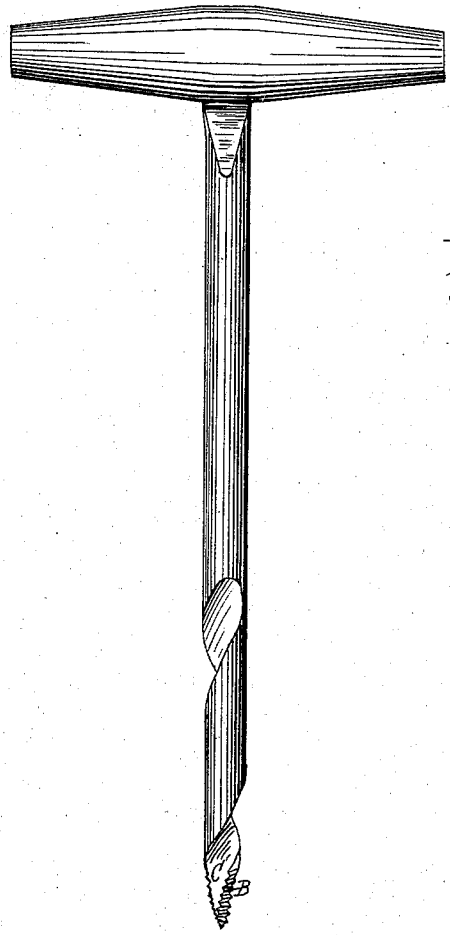


Fig. 2.



Fig. 3.

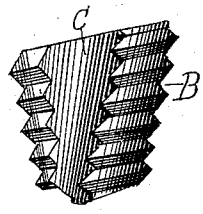
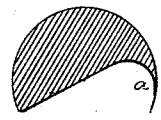


Fig. 4.



Witnesses
J. W. Reynolds, Jr.
E. M. Fowler.

Inventor
Wm. W. Brigg.
per T. J. W. Robertson
Attorney.

N. PETERS, Photo Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM W. BRIGG, OF WASHINGTON, DISTRICT OF COLUMBIA.

AUGER AND GIMLET.

SPECIFICATION forming part of Letters Patent No. 270,200, dated January 9, 1883.

Application filed September 29, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM W. BRIGG, a citizen of the United States of America, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Gimlets and Augers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an improvement in gimlets, augers, bits, and similar wood-boring tools whose shanks are provided with channels, which will keep clear the channel or groove in the screw-point and enable such tools to be more readily used in hard wood without splitting it; and the invention consists in a gimlet, auger, bit, or similar tool having the peculiar point hereinafter more fully described and claimed.

In the accompanying drawings, Figure 1 represents an elevation of a gimlet constructed according to my improvement; Fig. 2, a similar view of the lower part of an auger; Fig. 3, a detail representing an enlarged view of a portion of the point, and Fig. 4 a section of the point enlarged.

I make the shank of my gimlet, with the channel A, in any approved manner or shape; but instead of leaving the screw-point B with the ordinary continuous thread I make a groove or grooves, C, from the top of the screw-point and communicating with the shank-channel down to or nearly to the extreme end of the screw. The form of this groove is more clearly shown in Figs. 3 and 4, and more particularly in Fig. 4, where it will be seen that the edge of the groove is "undercut" at *a*, so as to present very sharp cutting-edges to the wood. Where there are two channels in the shank, as in augers, I prefer to make two grooves down the screw-point opening from the opposite channels in the shank; but where there is but one channel, as in the gimlet shown in the drawings, I make but one groove across the thread of the point. By the use of this groove, especially when undercut, as shown, it is clear that the ends of the threads cut their way into the wood, each of the ends of the threads at the cutting-edge removing the particles of wood in its path, and thus instead of the thread of the screw-point forcing the grain of the wood apart, as in the ordinary gimlet, (thus tending to split the wood,) the thread of my point cuts a female thread in the wood, and owing to the upper end of the groove terminating in the channel of the shank the particles of wood passing into the groove find their way into the channel in the shank. By making the edge of the groove undercut on one side only, as shown in Fig. 4, I leave the face of the groove on the other side full, (where the cutting-edge is not needed,) whereby greater strength is obtained than if both sides of the groove had undercut or cutting edges.

I make no claim here to the groove running in a spiral direction across the thread of the point, as I intend to make a separate application for this feature of my invention.

I am aware that the old-fashioned pod-gimlet has had its pod extended downward in a straight line through the screw-point; but this does not accomplish the same object as my invention, for while it is true the chips will gather into a straight pod-extension, yet as the extension is perpendicular there is nothing to cause the chips to pass out of the extension-channel into the shank-channel, as in my improved gimlet or auger.

I am also aware that an ice-auger was patented June 10, 1873, in which the shank-channel was continued downward beyond the shank proper; but there was no threaded or screw point on this auger.

I do not claim broadly a tool having one edge undercut and the other full, as I am aware that this feature is old.

What I claim as new is—

A gimlet, auger, or similar tool having a spiral shank-channel, A, and a screw-point, B, provided with a groove, C, forming an extension of said channel in substantially the same direction downward and across the thread of the point B, and having one edge undercut and the other full, substantially as and for the purpose set forth.

In testimony whereof I affix my signature, in presence of two witnesses, this 28th day of September, 1882.

WILLIAM W. BRIGG.

Witnesses:
T. J. W. ROBERTSON,
CHARLES P. WEBSTER.