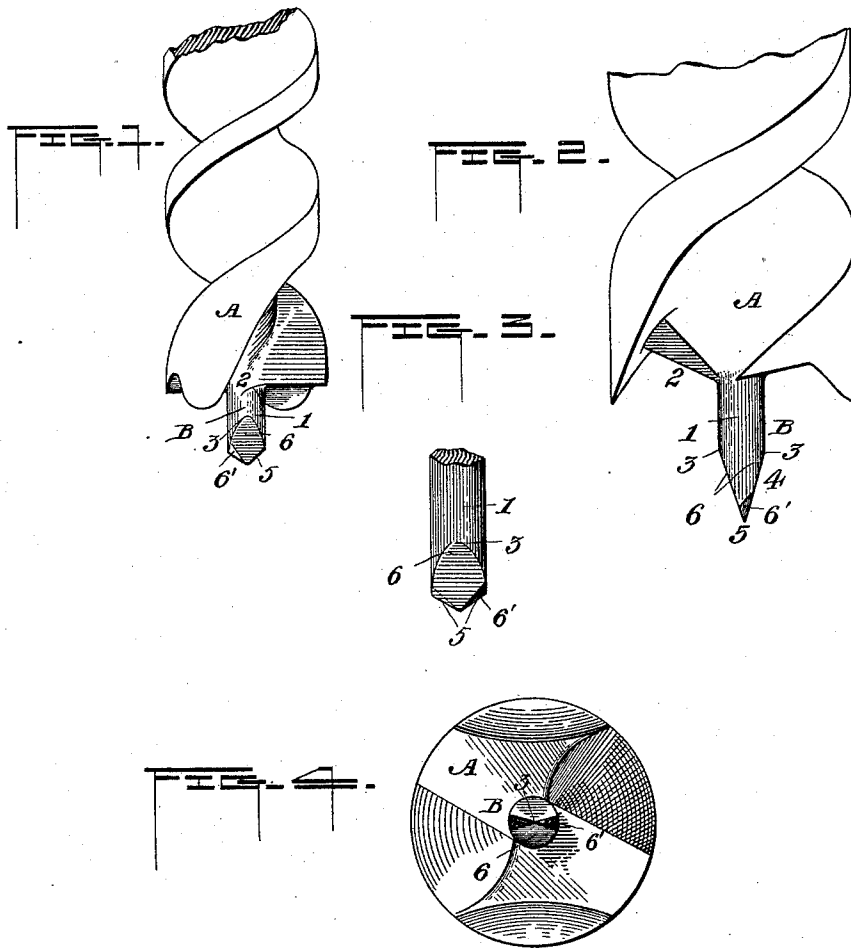


(No Model.)

H. LOFTIE.  
WOOD AUGER.

No. 421,293.

Patented Feb. 11, 1890.



Witnesses

*T. A. Corner, Jr.*  
*E. R. Corner.*

Inventor

*Henry Loftie*  
by  
*Benj. G. Cowl*  
Attorney

# UNITED STATES PATENT OFFICE.

HENRY LOFTIE, OF SYRACUSE, NEW YORK.

## WOOD-AUGER.

SPECIFICATION forming part of Letters Patent No. 421,293, dated February 11, 1890.

Application filed January 14, 1889. Renewed January 22, 1890. Serial No. 337,672. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY LOFTIE, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Wood-Augers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

15 This invention relates to wood-augers.

Heretofore it has been customary to construct wood-augers with inverted-cone-shaped entering or centering points with or without screw-threads.

20 It has been found in practice that where an auger having either of the above-named entering points has been employed for boring thin, hard, or brittle wood, cracking and splitting of the same frequently follows from the fact that as the entering point increases in width from its tip to base it acts as a wedge and forces the fibers of the wood apart in entering instead of cutting its way to the cutting-lips. Moreover, where veneered wood is to be bored, it often happens that the veneering is broken loose from its backing by following the pitch of the threads on the entering point, which threads in a certain sense act as a lever, thereby marring the veneering for a space larger in circumference than the size of the auger. Moreover where the screw-threaded or gimlet-pointed auger has been used for any great length of time, and the threads have become worn, it is rendered practically useless for boring hard or end wood, for the reason that the screw fails to take a sufficient hold on the grain of the wood to cause the auger to follow without applying great pressure thereto.

45 It is the object of the present invention to overcome these obstacles by constructing an auger having an entering point of such configuration that it may be used for drilling any kind of wood without the least fear of cracking or splitting the same, and which  
50 may with readiness and ease be kept in con-

dition for doing good and effective work at but a small expense of time or trouble.

To these ends the invention consists in a wood-auger having a solid cylindrical entering point the body portion of which is the same diameter in cross-section throughout its entire length; furthermore, in a wood-auger having a solid cylindrical entering point the body portion of which is the same diameter in cross-section throughout its entire length and beveled at its lower end; furthermore, in a wood-auger having a solid cylindrical entering point the body portion of which is the same diameter in cross-section throughout its entire length and beveled at its lower end, said beveled portion having an angular point; furthermore, in a wood-auger having a solid cylindrical entering point the body portion of which is the same diameter in cross-section throughout its entire length and beveled at its lower end, said beveled portion having an angular point and inclined cutting-edges; and, finally, in the various novel details of construction, as will be hereinafter fully described in the specification, illustrated in the drawings, and particularly pointed out in the claims.

In the accompanying drawings, forming part of this specification, and in which like letters and figures of reference indicate corresponding parts, I have illustrated one form of device embodying the essential features of my invention, although the same may be carried into effect in other ways without in the least departing from the spirit thereof, and in these drawings Figure 1 is a perspective view of a portion of an auger provided with my peculiar entering point. Fig. 2 is a side elevation showing particularly the beveled end of the entering point, and Fig. 3 is a similar view showing the angular point, and Fig. 4 is an end view.

Referring to the drawings, A designates an auger, which may be of any construction, but by preference one of that class known as "twist-augers" is shown.

B designates the entering point, which is composed of two parts, the solid cylindrical body portion 1, which extends from the base 2 of the auger to the point 3, and which, as will be seen, is of the same diameter in cross-section throughout its entire length, and the

end portion 4, which extends from the point 3 to the angular portion 5, which forms the entering point proper. From the point 3 the metal of the end portion is reduced to form a wedge-shaped end, as shown at 6, and this reduced or wedge-shaped portion may be made abrupt or gradual, as desired, but for obvious reasons the latter is preferred. The point of the end is ground to form an angle, as shown at 5, and the sides of this angle are further ground to form cutting-edges 6', which will allow said point to enter the hardest wood without the danger of cracking or splitting the same. If desired, the point may be left square or awl-pointed; but the angular point is preferred.

From the foregoing description, taken in connection with the drawings, the advantages of this form of entering point over those in ordinary use will readily be appreciated.

It will be seen that an auger entering point so constructed will cut through the fibers of the wood in the same manner as a brad-awl, and will not split the veneer in the least; furthermore, that by making the entering point in the shape described it will be entirely within the range of an ordinary mechanic's ability to keep the entering point in the best condition for doing good and effective work.

Having thus fully described my invention,

what I claim as new, and desire to secure by Letters Patent, is—

1. A wood-auger having a solid cylindrical entering point the body portion of which is of the same diameter in cross-section throughout its entire length, substantially as described.

2. A wood-auger having a solid cylindrical entering point the body portion of which is of the same diameter in cross-section throughout its entire length and beveled on its lower end, substantially as described.

3. A wood-auger having a solid cylindrical entering point the body portion of which is of the same diameter in cross-section throughout its entire length and beveled on its lower end, said beveled portion having an angular point, substantially as described.

4. A wood-auger having a solid cylindrical entering point the body portion of which is of the same diameter in cross-section throughout its entire length and beveled at its lower end, said beveled portion having an angular point and inclined cutting-edges, substantially as described.

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

HENRY LOFTIE.

Witnesses:

GEO. D. CHAPIN,  
M. W. MULLIN.