

Bauman & Witherell,

Hollow Auger.

No. 111,167.

Patented Jan. 24, 1871.

Fig. 1.

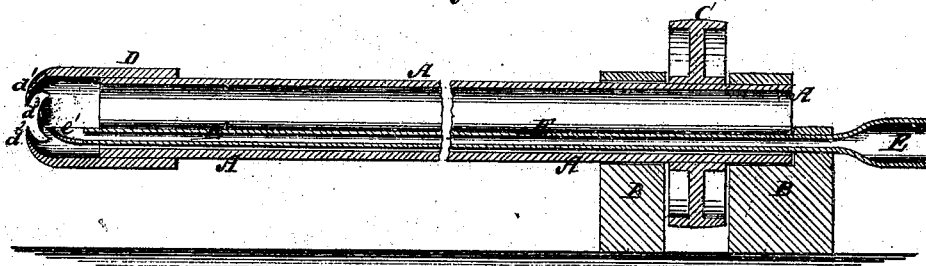


Fig. 2.



Witnesses:

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AARON BAUMAN AND ORIN O. WITHERELL, OF TOLEDO, OHIO.

Letters Patent No. 111,167, dated January 24, 1871.

IMPROVEMENT IN HOLLOW AUGERS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, AARON BAUMAN and ORIN O. WITHERELL, of Toledo, in the county of Lucas and State of Ohio, have invented a new and useful Improvement in Hollow Augers; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is a longitudinal section of our improved hollow auger.

Figure 2 is a front end view of the same.

Similar letters of reference indicate corresponding parts.

Our invention has for its object to furnish an improved hollow auger, which shall be simple and inexpensive in construction, not liable to get out of order, and which shall require less power to operate it than the hollow augers constructed in the ordinary manner.

And it consists in the construction and combination of various parts of the machine, as hereinafter more fully described.

A is the hollow cylinder, which revolves in bearings B, and which is revolved by power applied to the pulley C, attached to said cylinder.

To the forward end of the cylinder A is attached a cutter-head, D, which is provided with three bits or cutters d^1 d^2 d^3 , the two foremost ones, d^1 d^2 , of which cut the wood away, leaving a central core, which serves as a guide to the auger to keep it in line and prevent it from following the grain of the wood. After the core has served its purpose as a guide, the third bit d^3 , following the other two, cuts the core away, so that it may not obstruct the chips or cuttings in their passage from the cylinder.

The operation of the cutters is assisted, and the chips or cuttings are blown from the cylinder A by steam, which is discharged in the forward end of the

cylinder A, to act upon the wood being cut, and soften it so that the auger may cut faster and leave a smoother hole, and at the same time the steam blows the chips or cuttings from the cylinder, and thus prevents it from becoming clogged.

The steam is introduced through the half-round or concavo-convex pipe E, which passes along the lower side of the interior of the cylinder A, and is held stationary while the said cylinder revolves; the edge of the said pipe E, from its peculiar shape, thus clearing off the chips from the sides of the said cylinder while allowing a large space for the escape of said chips.

Upon the forward end of the pipe E is formed a point, e , which, from its position just in the rear of the bits d^1 d^2 d^3 , stirs up the chips and prevents them from clogging the auger. The chips are thus kept light and free, so that they may readily pass from the cylinder.

Having thus described our invention,

We claim as new and desire to secure by Letters Patent—

1. The arrangement, upon a rotary stock D, of the front bits d^1 d^2 , and rear bit d^3 , as and for the purpose specified.

2. The arrangement, with respect to the tools, and near the internal surface of the revolving hollow shaft, of the separate and independent steam-pipe E, to discharge the chips in the manner described.

3. As an improvement in pipes for injecting steam into a hollow auger-shaft, the arrangement on the end thereof, and with respect to the tools, of the point e , to stir up the chips and prevent them from clogging the auger.

AARON BAUMAN,
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Witnesses:

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