O. W. Townsend,

Auger & Reamer.

No. 111,990. Patented Feb. 21, 1871.

Fig. 1.

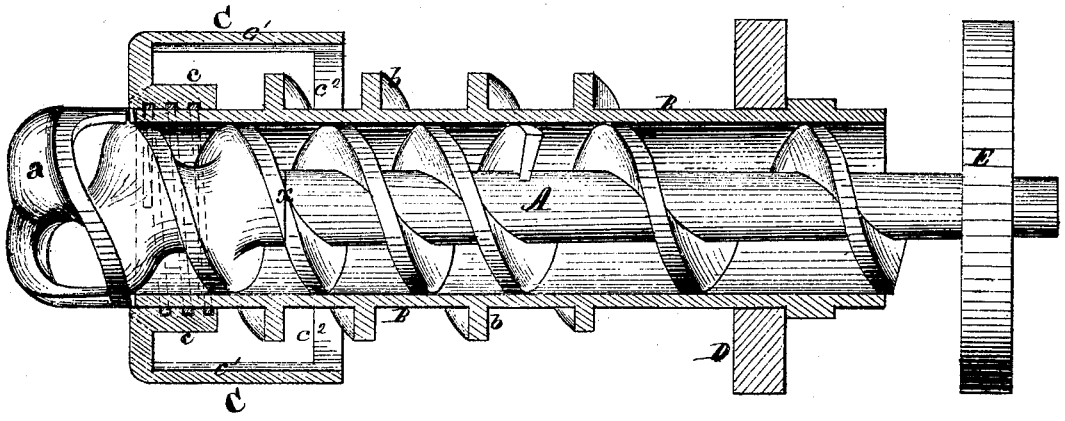
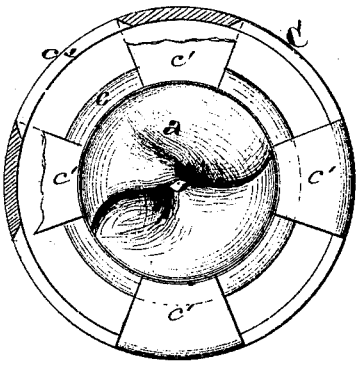


Fig. 2.



Witnesses.
A. Ruppert
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OWEN W. TOWNSEND, OF FOND DU LAC, WISCONSIN, ASSIGNOR TO HIMSELF AND GEORGE O. TROWBRIDGE, OF SAME PLACE.

Letters Patent No. 111,990, dated February 21, 1871.

IMPROVEMENT IN COMBINED AUGERS AND REAMERS.

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

To all whom it may concern:

Be it known that I, OWEN W. TOWNSEND, of Fond du Lac, in the county of Fond du Lac and State of Wisconsin, have invented a certain new and useful Improvement in Combined Auger and Reamer; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part thereof, and in which—

Figure 1 represents a view of my invention, in which the hollow cylinder and reamer are drawn in section, exhibiting the auger inside of said cylinder; and

Figure 2 represents a top view of the same, with a portion of two of the cutters or knives of the reamer broken away.

This invention relates to a combined auger and reamer, and consists of an ordinary auger, fitting within a hollow cylinder, having a thread upon its exterior surface, which thread runs in a contrary direction to that of the thread of the auger, in combination with a removable reamer, all of which will be more particularly set forth in the description thereof, which is as follows.

Similar letters indicate corresponding parts in the several figures.

In the accompanying drawing—

A represents an ordinary auger, which is constructed with a female-screw, commencing at the point indicated by the line *x* drawn on the upper part of said auger.

Within this screw is fitted the screw-end of bit *a*.

B is a hollow cylinder, which is constructed or provided on its periphery or exterior surface with the thread *b*, passing spirally around it, and within which revolves and fits the auger A. The thread of the cylinder is made to run in a direction opposite or contrary to that of the thread of the auger. The cylinder is the same size in diameter as the bit *a*, in order to prevent the said bit from entering the said cylinder, and to form a bearing for the inner end of the bit *a*.

C designates the reamer, which consists of a ring, *c*, cut with a female-screw, fitting over a screw-thread on the outer end of the cylinder B, and the knives c^1 c^1, which are attached to or formed with the ring *c*, at the ends of their vertical portions, and connected to or formed with the ring c^2 at the ends of their horizontal portions.

D and E are disks or drums, attached respectively to the outer ends of the cylinder and auger, and around which belts are designed to be passed for communicating motion to the auger and reamer, the said belts being connected with and receiving motion from some appropriate motor.

The reamer can be constructed of various sizes, as desired.

Having thus described my invention,

What I claim, and desire to secure by Letters Patent, is—

The auger A, provided with the cutting-bit *a*, having its exterior diameter coincident with the inner edges of the knives c^1 of the reamer C, and in combination therewith, substantially as and for the purpose specified.

In testimony that I claim the foregoing as my invention I have hereunto set my hand this 18th day of November, 1870, in presence of two subscribing witnesses.

OWEN W. TOWNSEND.

Witnesses:

O. P. BOWE,

C. B. MARTIN.