

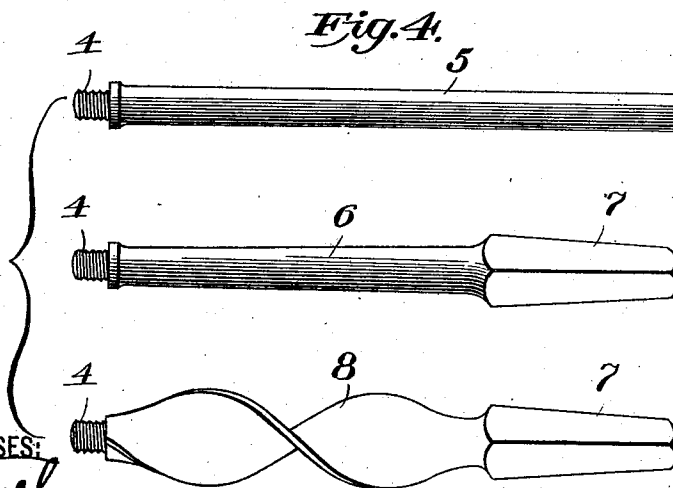
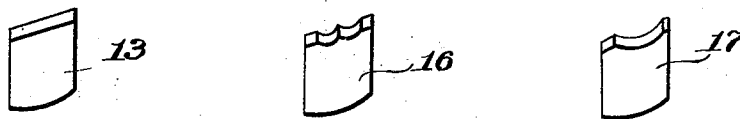
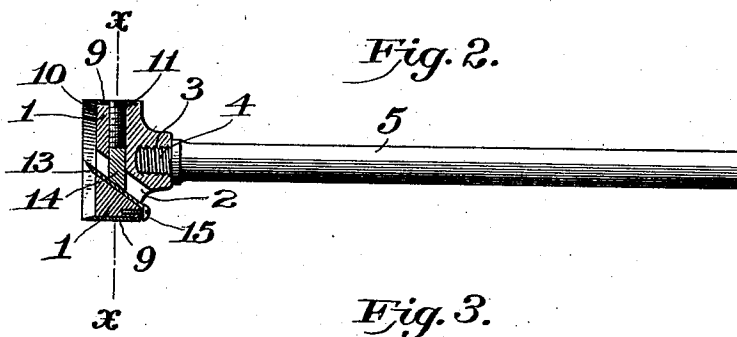
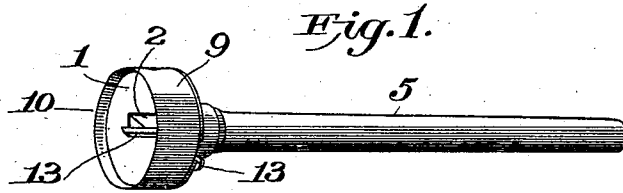
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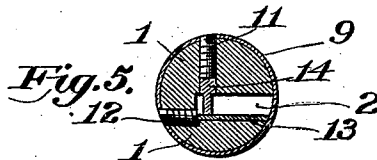
A. L. ADAMS.
AUGER BIT.

No. 503,225.

Patented Aug. 15, 1893.



WITNESSES:
H. Finch.
A. J. Tanner.



INVENTOR
A. L. Adams
BY *T. W. Smith Jr.*
ATTORNEY

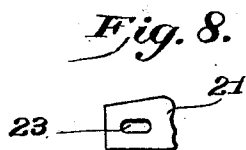
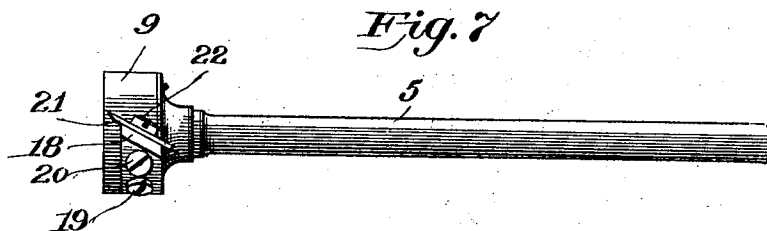
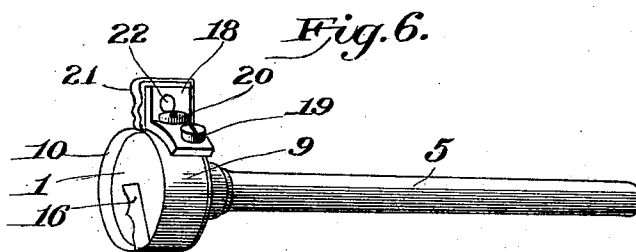
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2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

ABE L. ADAMS, OF BRIDGEPORT, CONNECTICUT.

AUGER-BIT.

SPECIFICATION forming part of Letters Patent No. 503,225, dated August 15, 1893.

Application filed March 29, 1893. Serial No. 468,095. (No model.) Patented in Canada April 22, 1893, No. 42,740.

To all whom it may concern:

Be it known that I, ABE L. ADAMS, a citizen of the United States, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Auger-Bits, (for which I obtained Letters Patent of the Dominion of Canada, dated April 22, 1893, No. 42,740;) and I do hereby 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.

My invention relates to auger bits, and has for its object to improve on the construction shown and described in my pending application, Serial No. 452,157, filed November 16, 1892.

The main objects of my present invention are, to improve the manner of securing the removable cutters within the head and the addition of an auxiliary cutter outside the head.

In the accompanying drawings—Figure 1, is a perspective of my improved auger; Fig. 2, a longitudinal section thereof; Fig. 3, perspectives showing several styles of cutter blades; Fig. 4, elevations of several kinds of shanks; Fig. 5, a section at line *x-x* of Fig. 2; Fig. 6, a perspective showing my improved auxiliary cutter secured outside the head of the auger; Fig. 7, an elevation of the construction shown in Fig. 6; and Fig. 8, a detail elevation of the auxiliary cutter.

Similar numbers denote like parts in the several figures of the drawings.

1 is the head of the bit recessed at 2 to accommodate the cutter knife and for the purpose of leading out the chips. The rear of the head has a screw threaded socket 3 within which the threaded end 4 of the shank 5 is driven, whereby such head and shank are secured together. Referring to Fig. 4, the shank 5 is the same as that shown in Fig. 2, and is for use in a lathe. The shank 6 has a squared end 7 and is for use in an ordinary bit stock, while the shank 8 has also the squared end 7 but is spirally twisted in order to afford means for more readily drawing the chips from the head to prevent clogging.

9 is the scoring ring having a continuous chisel cutting edge 10 and secured around the head by screws 11, 12, in such manner that

said edge extends beyond the plane of the head.

13 is the cutter knife which is inserted in the head through the recess 2 and is held securely in position by a pin 14 which slides and is guided within the head in front of the screw 11 and is driven by the latter firmly against said knife.

In Fig. 2, I have shown the back of the knife confined by the head of a screw 15 which latter is driven within the head, and while this would prevent any back thrust of the knife, I consider that the use of this screw is precautionary rather than essential, since constant use of my improvement has demonstrated that the screw 11 and pin 14 will hold the knife securely.

To remove the knife, the screw 11 is backed thereby relaxing the pin 14.

Referring to Fig. 3, the knife 13 is like the knife shown in Fig. 1, while the knives 16, 17, have different contours to their cutting edges in order to form corresponding contours cutting out ornamental roses or mortises.

Referring to Figs. 6 and 7, 18 is a cutter box secured to the outside of the ring 9 by screws 19, 20; and 21 is a cutter-knife fastened to said box by a screw 22, the latter passing through an elongated slot 23 in the knife for the purpose of affording adjustment of the same. This cutter 21 extends close to the ring and is an auxiliary device whereby the cutting area of the bit is increased.

I do not claim broadly herein the head having a scoring-ring detachably secured thereto and having a continuous chisel-edged cutting-edge, such forming the subject of the broad claim in my pending application, Serial No. 452,157.

I claim—

1. In an auger-bit, the combination with the shank, of the head having a slot or recess extending at an angle to the shank, a continuous chisel-edged scoring-ring on the head, and a cutter knife detachably secured within the recess.

2. The combination of the head having an open recess for the leading away of the chips, the continuous chisel edged scoring ring secured around said recess, the removable cutter knife within said recess, the pin adapted to slide and to be guided within the head, and

the screw driven into said head against the pin whereby the latter is forced firmly against the knife, substantially as shown and described.

- 5 3. In an auger bit comprising a shank a head and a continuous chisel-edged scoring ring therearound which head is recessed for the purpose of leading away the chips, a cutter knife detachably secured within such recessed part of the head and capable of adjustment therein substantially as shown and set forth.

4. The combination of the head, the scoring ring secured around said head, the cutter knife within the head, and the auxiliary cutter knife secured to the outside of said ring in close proximity to the edge thereof, substantially as set forth. 15

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

ABE L. ADAMS.

Witnesses:

A. J. TANNER,
F. W. SMITH, Jr.