

(No Model.)

B. FORSTNER.

AUGER.

No. 336,709.

Patented Feb. 23, 1886.

Fig. 1

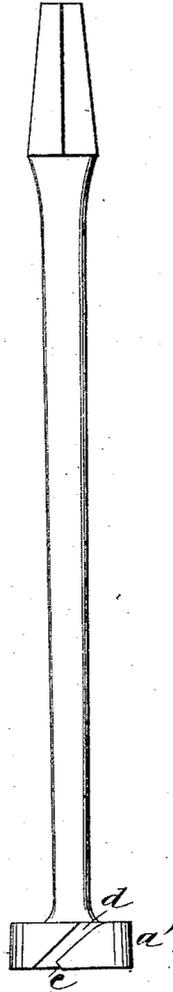


Fig. 2

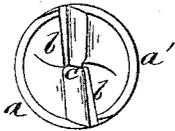
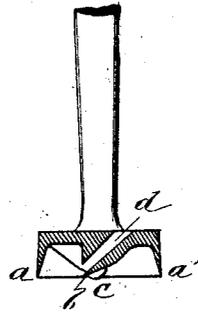


Fig. 3



WITNESSES:

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UNITED STATES PATENT OFFICE.

BENJAMIN FORSTNER, OF SALEM, OREGON, ASSIGNOR OF ONE-HALF TO
JAMES WALTON, OF SAME PLACE.

AUGER.

SPECIFICATION forming part of Letters Patent No. 336,709, dated February 23, 1886.

Application filed November 17, 1885. Serial No. 183,031. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN FORSTNER, a citizen of the United States, residing at Salem, in the county of Marion and State of Oregon, have invented an Improvement in Augers, of which the following is a specification.

My present invention is an improvement on an auger for which Letters Patent of the United States No. 155,148, were granted to me September 22, 1874.

The object of my invention is to increase the efficiency of the auger and to diminish the cost of manufacture.

Figure 1 is a side elevation of my improved auger. Fig. 2 is a plan view. Fig. 3 is a sectional elevation.

Similar letters of reference indicate corresponding parts in the different figures of the drawings.

In augers of this class heretofore in use the peripheral cutting-edge has been a complete circle, and the oppositely-arranged cutting-lips, which extend from the center of the auger to the peripheral cutting-edge, have formed at their junction with the cutting-edge enlargements, which interfered with the free working of the auger, and the peripheral cutting-edge required considerable pressure to force it into the wood being bored. To remedy these defects I have formed the peripheral cutting-edge on the circumference of a slotted disk, the edge being formed in two parts, *a a'*, which begin at one of the slots of the disk and terminate at the other slot. Adjoining the extremity of each curved cutting-edge thus formed there is a cutting-lip, *b*, which extends toward the center of the auger, and the two cutting-lips *b* are inclined slightly to the radii of the disk, and are connected by a central cutting-point, *c*. The slots *d*, which separate the cutters, are inclined in opposite directions, and at an angle suitable for forming the cutting-lips *b*. The cutting-lips *b* are sunk below the face of the auger, thus producing at the ends of each peripheral cutting-section a cut-

ting-edge, *e*, which facilitates the entrance of the peripheral cutter into the wood being bored.

The slots *d* permit of readily sharpening the cutting-lips *b*, and furnish a ready escape for the chips produced by the cutters.

When my improved bit is revolved under pressure in contact with wood, the cutting-edges *a a'* determine the size of the hole, and cut the wood around the periphery of the hole with a drawing cut, so that the chips which are afterward separated from the wood by the cutters *b*, being already separated at the periphery of the hole, will be removed without tearing or roughening the inner surface of the wood.

In the manufacture of my improved auger the slots *b* are formed by milling, thus facilitating the manufacture and lessening the expense which necessarily attended the manufacture of the bit made under my former patent.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an auger, a circular peripheral cutting-edge formed of two parts, *a a'*, each provided with a cutting-edge, *e*, inclined slots *d*, formed in opposite sides of the cutter, cutting-lips *b*, formed along the inclined slots, and a central cutting-point, *c*, joining the cutting-lips *b*, substantially as herein specified.

2. As an improved article of manufacture, an auger formed of a shank carrying a slotted disk having on the circumference thereof peripheral cutters *a a'*, provided with cutting-edges *e*, inclined cutters *b*, formed along the sides of the slots of the disk, and the cutting-point *c*, joining the cutters *b*, substantially as herein specified.

BENJAMIN FORSTNER.

Witnesses:

SETH R. HAMMER.

FRANK KELLOGG