

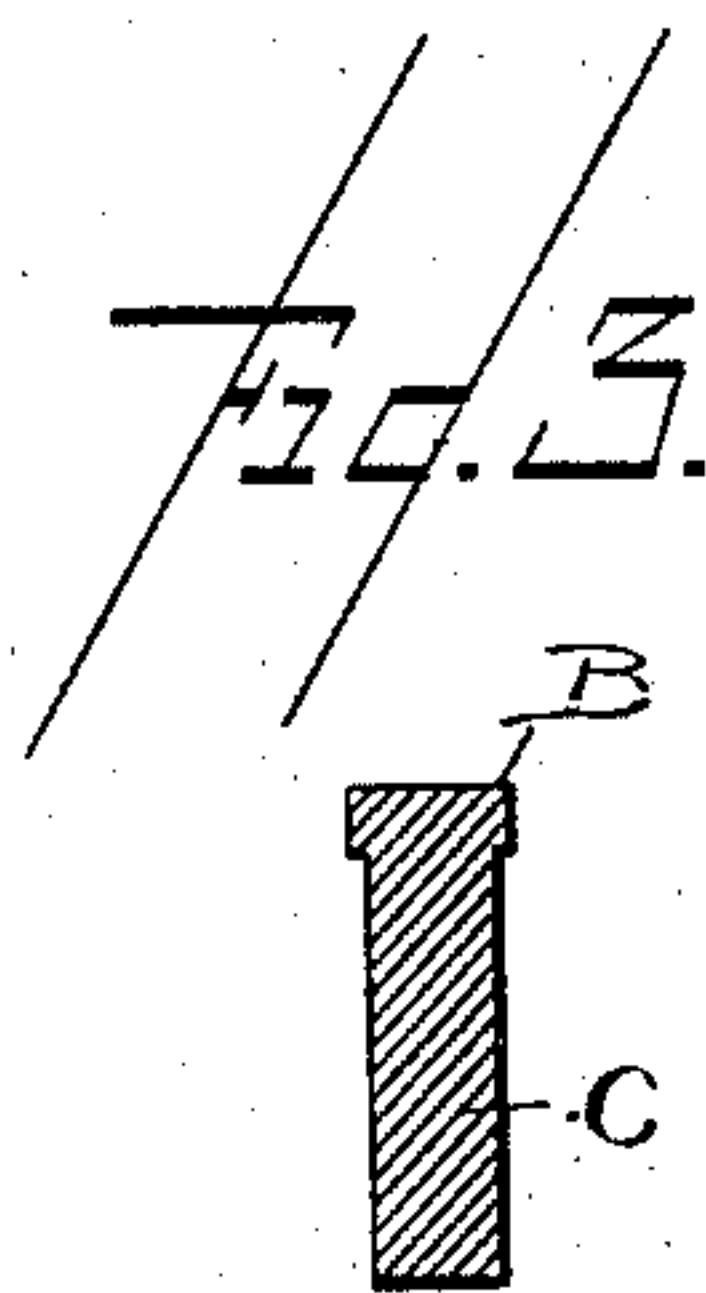
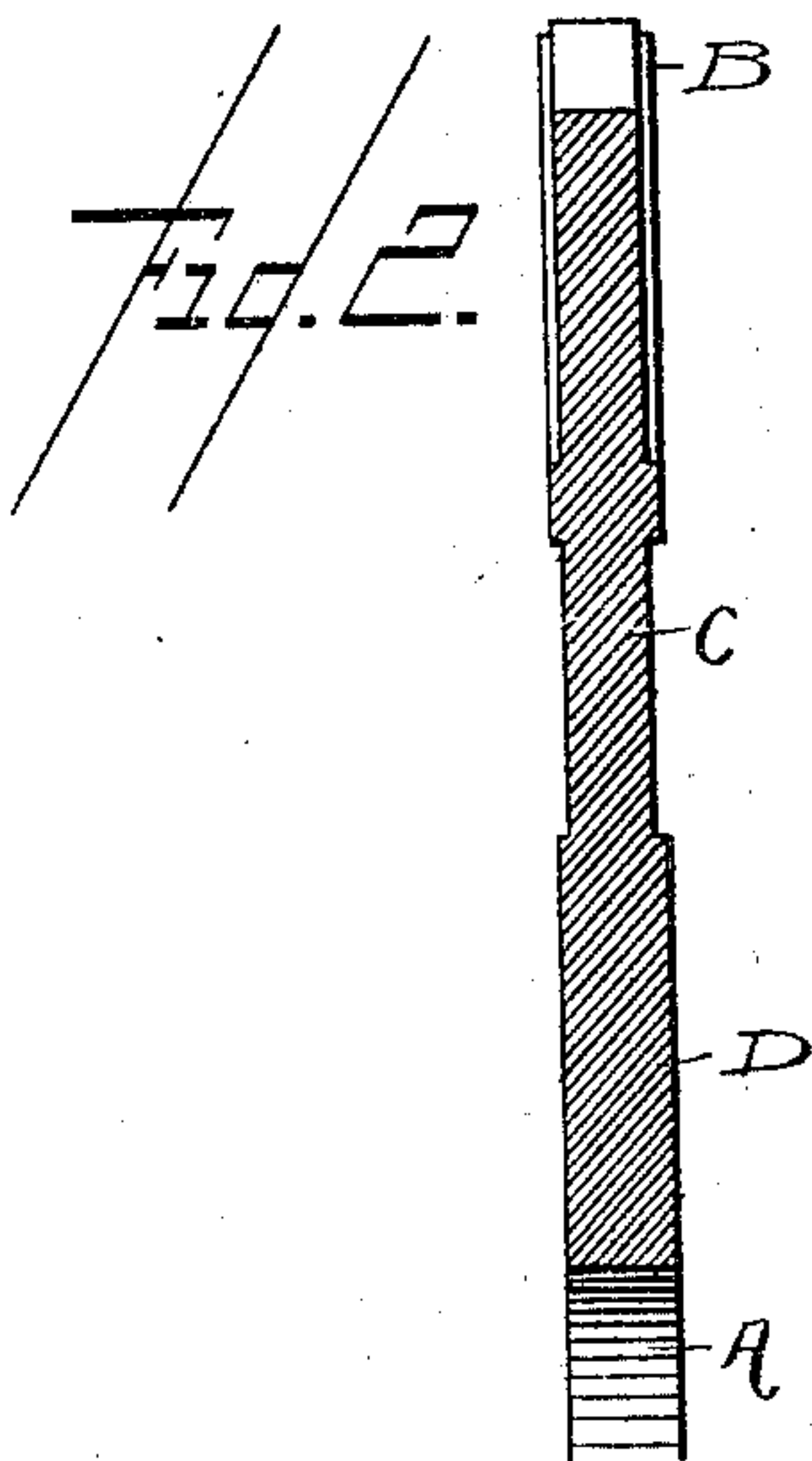
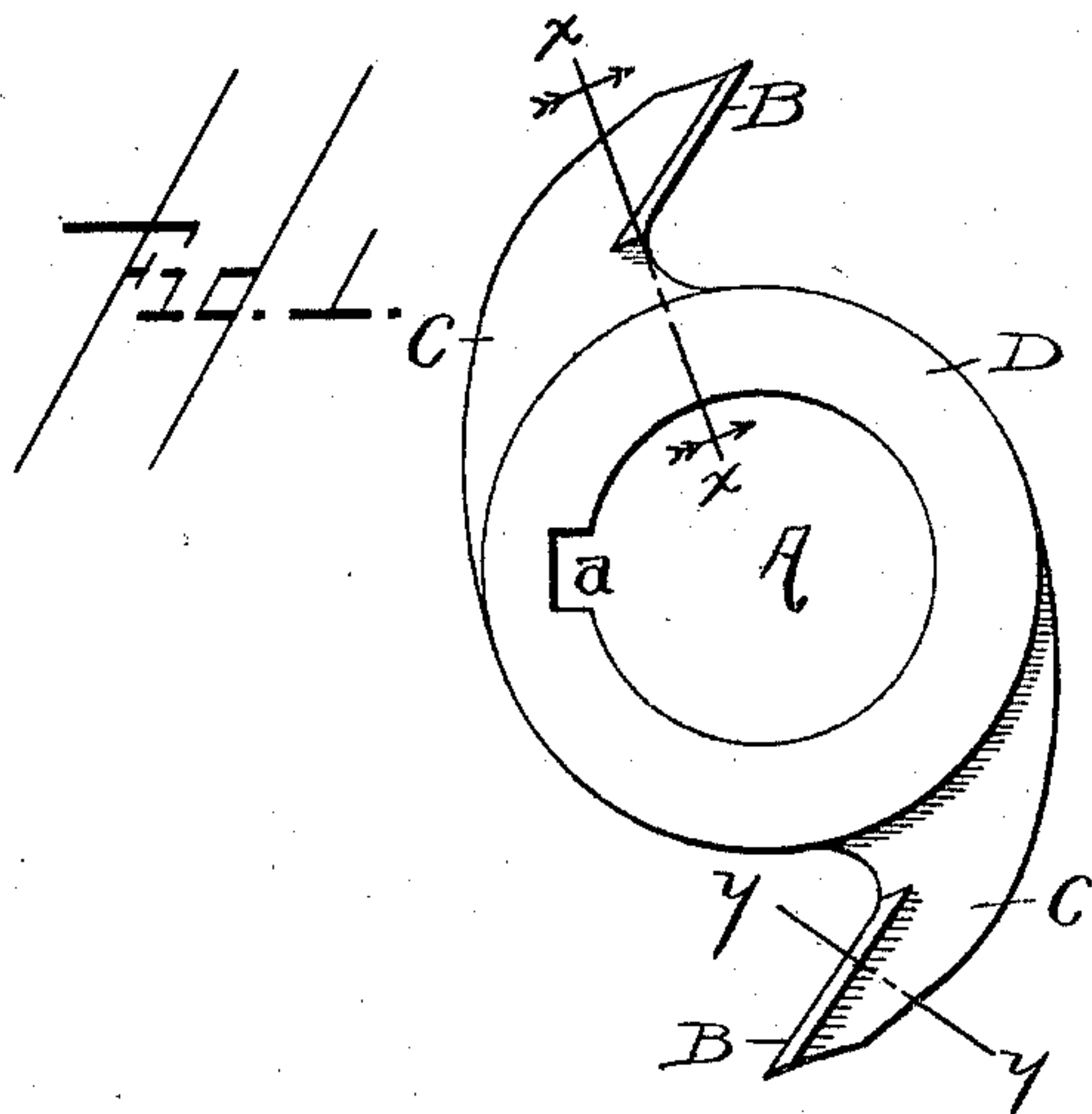
No. 612,526.

Patented Oct. 18, 1898.

H. W. MORGAN.  
ROTARY CUTTER.

(Application filed Mar. 10, 1898.)

(No Model.)



Witnesses.

Chas. F. Logan.  
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# UNITED STATES PATENT OFFICE.

HENRY W. MORGAN, OF ROCHESTER, NEW YORK.

## ROTARY CUTTER.

SPECIFICATION forming part of Letters Patent No. 612,526, dated October 18, 1898.

Application filed March 10, 1898. Serial No. 673,412. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY W. MORGAN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Rotary Cutters; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the reference-letters marked thereon.

My present invention has for its object to provide an improved cutter particularly adapted for use on machines for forming the tongues and grooves on the ends of boards used in making lock-corner boxes, which cutters are to be securely clamped upon a shaft passing through them; and the invention consists in improvements in the construction of such cutters whereby there is no liability of binding in the slots, but a sufficient clearance is always insured, all as will be hereinafter fully described, and the novel features pointed out in the claims at the end of this specification.

In the drawings, Figure 1 is a side elevation of one of my improved cutter-blades; Fig. 2, a sectional view on the line *xx* of Fig. 1, looking in the direction of the arrow; Fig. 3, a sectional view on the line *yy* of Fig. 1. Similar reference-letters indicate similar parts.

The cutter-blade which I have shown as embodying my invention consists of a single plate of steel having the central aperture A, provided with a keyway *a* at one side for locking it to the shaft upon which it is mounted. The teeth of the cutter, two being shown in the present instance, embody the forward cutting edges B, preferably arranged tangentially of the central opening and slightly thicker than the portion C of the plate back of and at the heel of said edges, as shown particularly in Figs. 2 and 3, so that the teeth cannot bind in the boards being cut and will be self-clearing, offering very little side friction during their passage through the material. The central or shaft aperture of the cutter is surrounded by a boss D, of substantially the width of the edges B of the teeth, which al-

lows the clearance at the heel of the tooth and also forms a bearing for the spacing-collar or washers ordinarily employed between cutters of this character.

The manner of forming these cutters is to form plates of the thickness of the edge B and boss D to the general shape required—that is, with the central aperture and one, two, or more teeth—and then to turn or grind down the portion C of the plate on both sides, so as to leave only the boss and the edges B of the original thickness. The portion C of the tooth affords a rigid backing for the cutting edges B and at the same time will not interfere with its proper operation.

These cutters are simple and cheap in construction and I find are very serviceable in operation, and while I prefer to employ two oppositely-arranged teeth, as shown, it is obvious that only one tooth could be employed, if desired.

I claim as my invention—

1. A rotary cutter-blade composed of the single plate having the aperture, the boss surrounding it and the tooth having the forward cutting edge B of substantially the thickness of the plate extending outwardly and tangentially of the aperture and the narrower portion C, in rear of the edge, substantially as described.

2. A rotary cutter-blade composed of the single plate having the aperture, and the tooth provided with the wide cutting edge B, extending outwardly and tangentially of the aperture and reduced in thickness on both sides in rear of said edge and at the inner end thereof, substantially as described.

3. A rotary cutting-blade composed of a single plate having the central aperture and two diametrically oppositely arranged teeth, each provided with the outwardly-extending and tangential cutting edges B, and reduced in thickness on both sides in rear of said edges and at the inner end thereof, substantially as described.

HENRY W. MORGAN.

Witnesses:

F. F. CHURCH,  
G. A. RODA.