

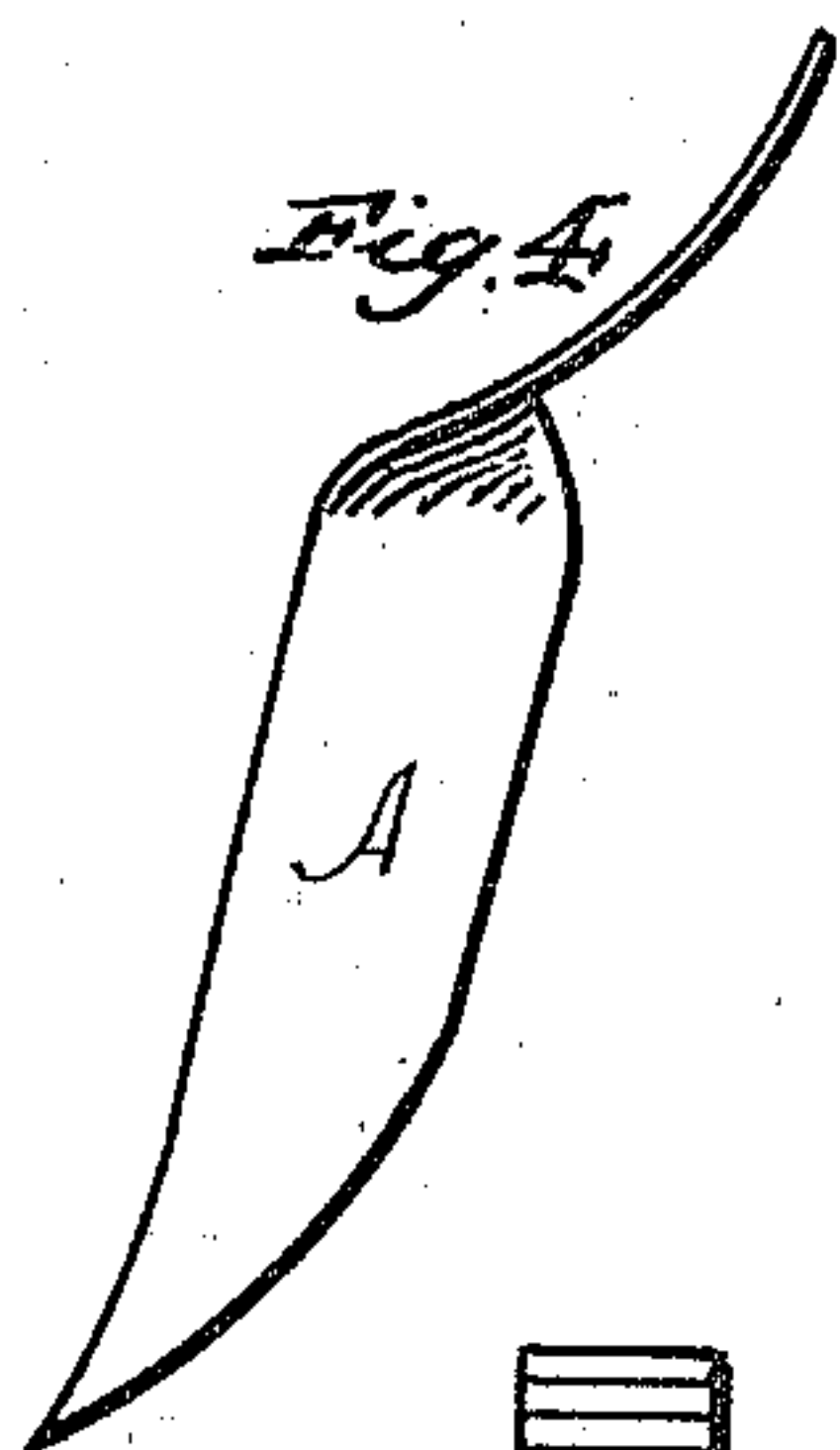
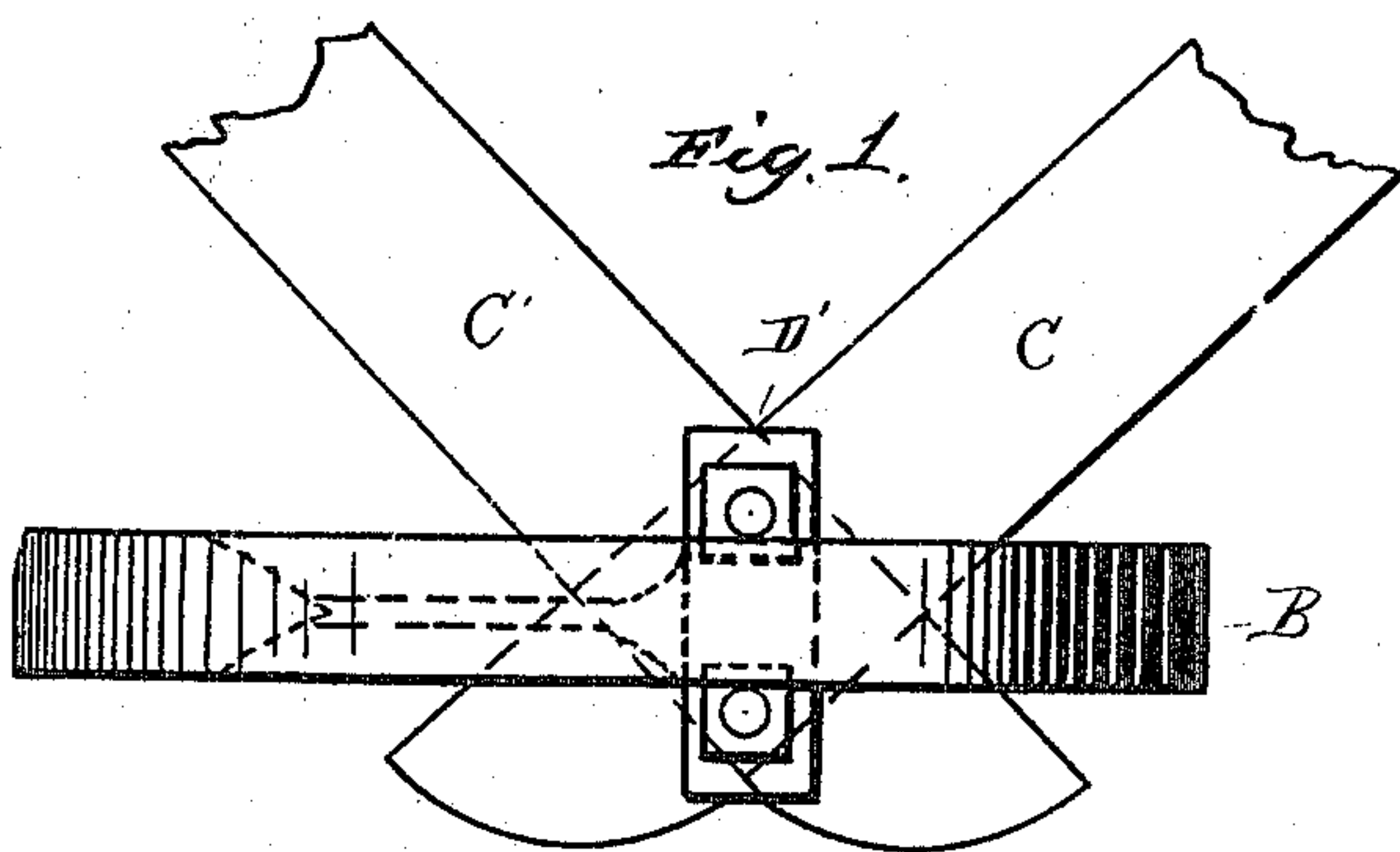
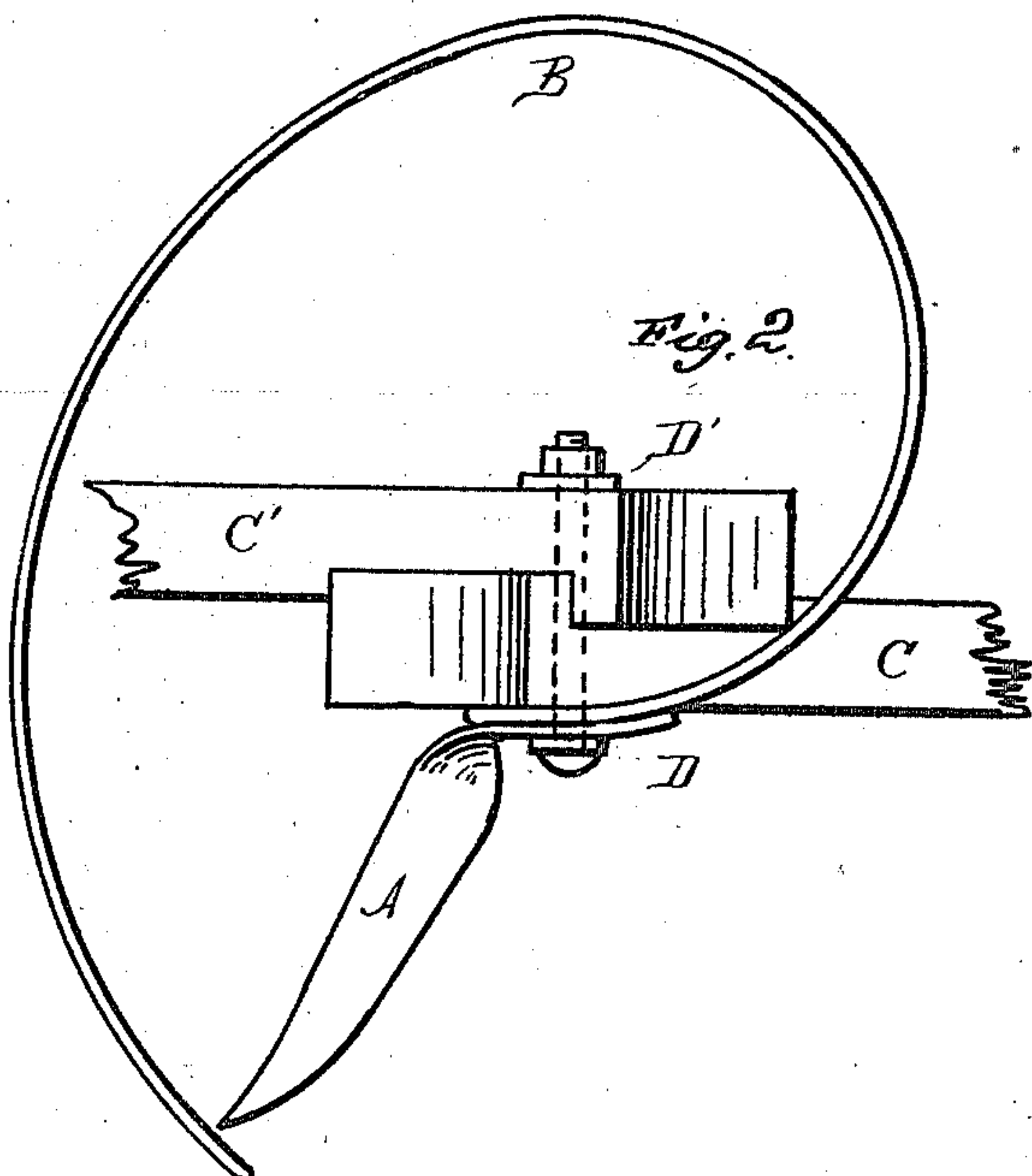
(No Model.)

I. LEMON.

HARROW.

No. 295,124.

Patented Mar. 11, 1884.



Witnesses  
James J. Sheehy  
Charles L. Corns

Inventor  
Isaac Lemon,  
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# UNITED STATES PATENT OFFICE.

ISAAC LEMON, OF NEBRASKA CITY, NEBRASKA, ASSIGNOR OF ONE-HALF  
TO WILLIAM NELSON, OF SAME PLACE.

## HARROW.

SPECIFICATION forming part of Letters Patent No. 295,124, dated March 11, 1884.

Application filed August 25, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC LEMON, a citizen of the United States, residing at Nebraska City, in the county of Otoe and State of Nebraska, have invented certain new and useful Improvements in Harrows, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to improvements in harrows, and is more especially adapted to that class known as "spring-tooth" harrows.

The novelty consists in the peculiar construction and arrangement, in combination with a spring-tooth, of a twisted cutting-blade provided with a right-angular arm adapted to be secured to the under side of the tooth and beam, as will be hereinafter more fully set forth and claimed.

The object of my invention is to provide, in a spring-tooth harrow, a cheap and simple means whereby trash, weeds, and the like may be removed from and in advance of the teeth.

Figure 1 of the drawings is a representation of a plan of a part of a pair of beams and harrow-tooth, showing the clearing-blade in dotted lines. Fig. 2 is a side view of the same. Figs. 3 and 4 are views of the clearing-blade.

Referring to the drawings by letters, C' indicates the longitudinal and C the transverse beams of a harrow, which are mortised and secured together in the ordinary manner.

B indicates a spring-tooth of the ordinary construction, and A a cutting or clearing blade, which is preferably formed of steel, but may be made of any suitable metal. This cutter has a sufficient length of its upper portion twisted as shown, with its edges on a line with the sides of the cutting-blade, and then bent at right angles to the edges of the blade, to form a broad bearing for the cutter when in opera-

tion. It will be observed that I do not make the clearing-blade integral with the tooth of the harrow, and therefore, should a cutter become broken or destroyed, it will not be necessary, in order to replace it, to provide a new tooth, as the old cutter can be removed and a new one inserted.

In constructing the harrow, the vertical bolts are passed through perforations in the beams, or through perforations in the plates D and D' on the upper and lower surfaces of the beams, as shown in Fig. 2 of the drawings. The tooth and bent arm of the clearing-blade are then inserted between the plate D and the beam C, when nuts are applied to the bolts, as shown, and the tooth and blade firmly secured to the harrow-frame.

I am aware that a twisted and bent cutter is not new, and also that a cutter made integral with a spring-tooth twisted and bent to travel in advance of the tooth is not new, and therefore do not claim such, broadly.

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

In a spring-tooth harrow, the combination, with the spring-tooth B, of the cutter A, having its cutting-edge presented vertically in the direction of the line of draft, its upper end twisted and bent horizontally at right angles to the cutting-edge, and adapted to travel directly in advance of the tooth, with the said bent arm of the cutter removably secured to the under side of the tooth, substantially as described, and for the purposes specified.

ISAAC LEMON.

Witnesses:

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