

(No Model.)

W. D. ORCUTT.

ROTARY CUTTER.

No. 311,201.

Patented Jan. 27, 1885.

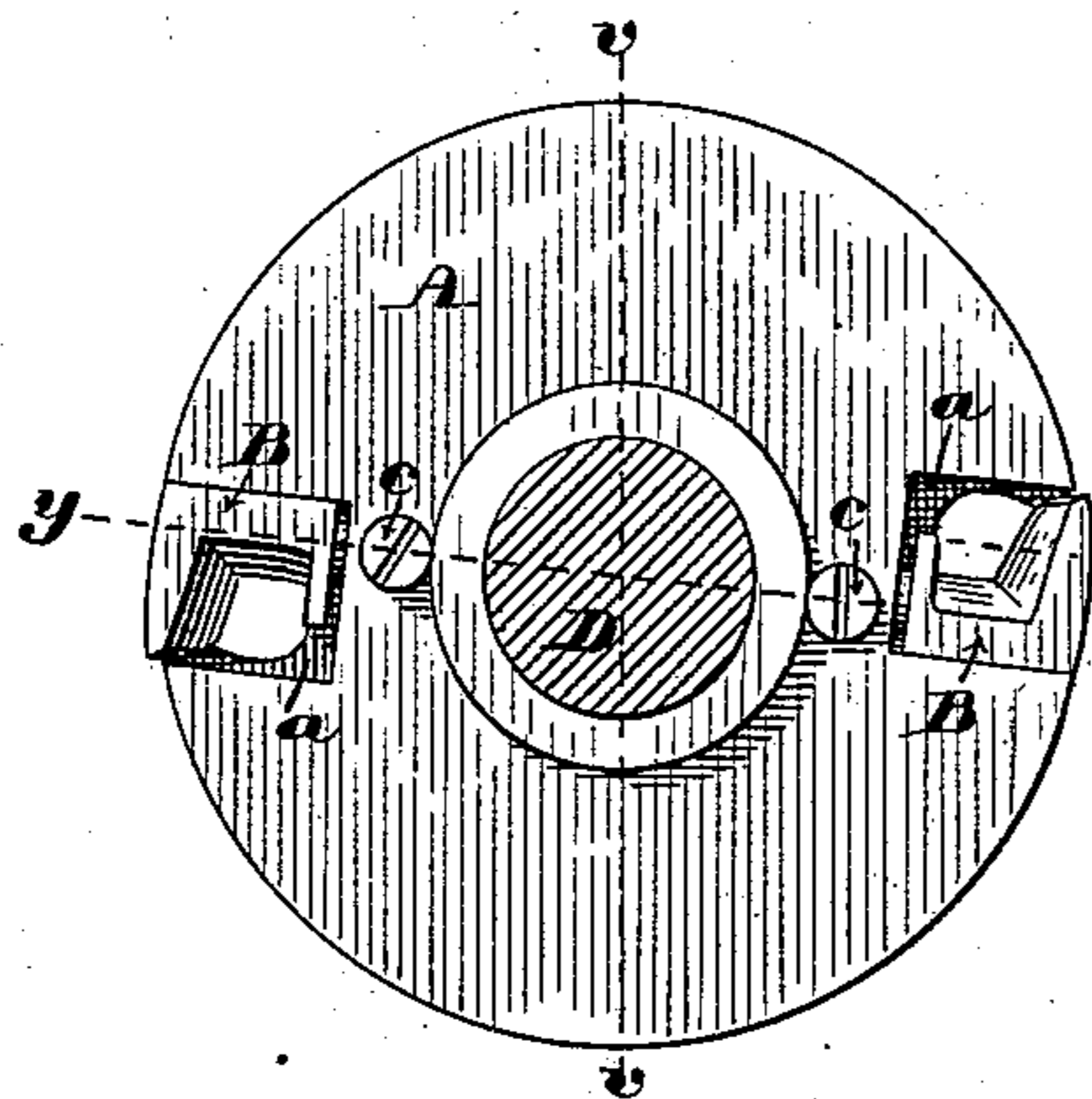


Fig. 2.

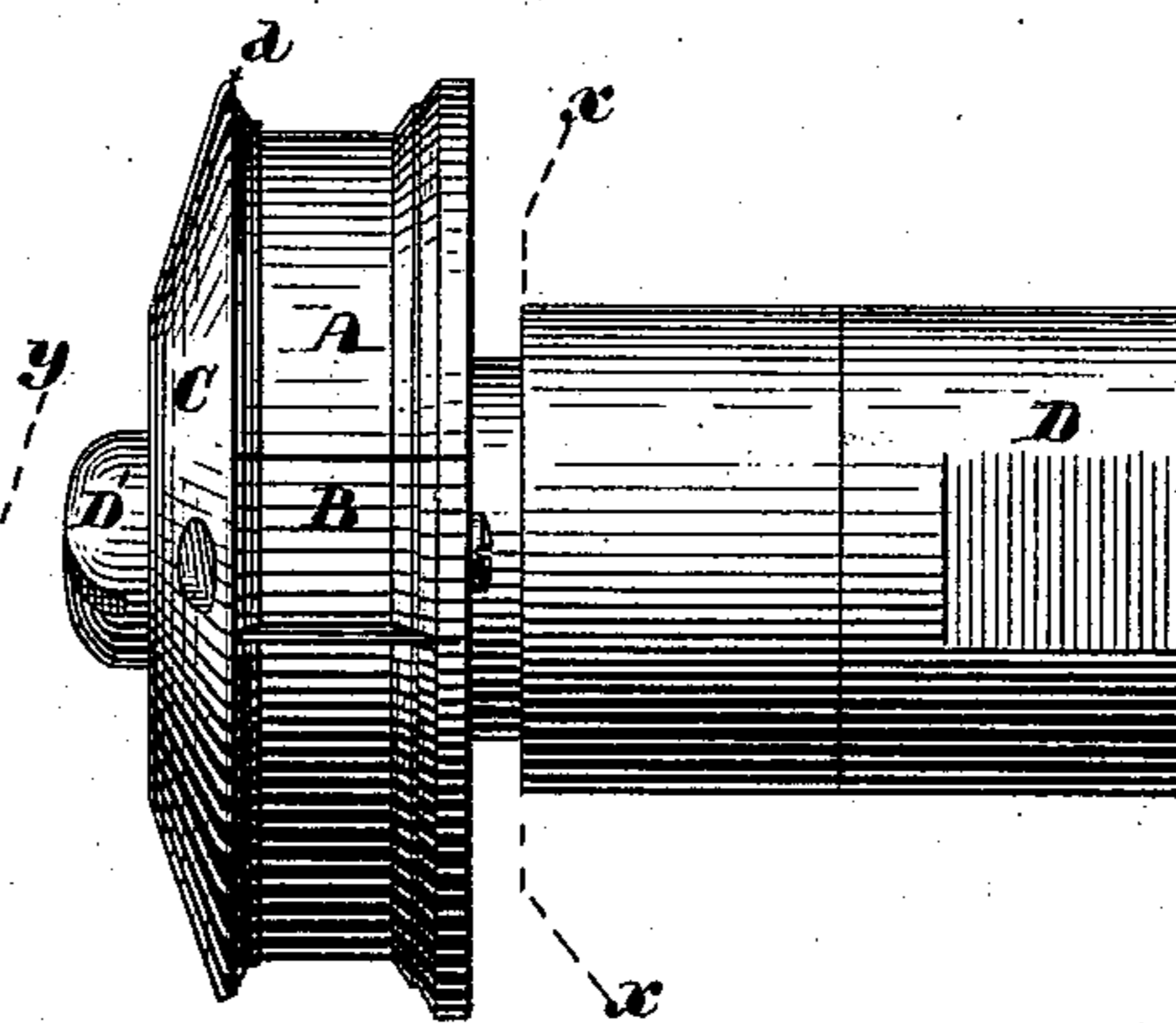


Fig. 1.

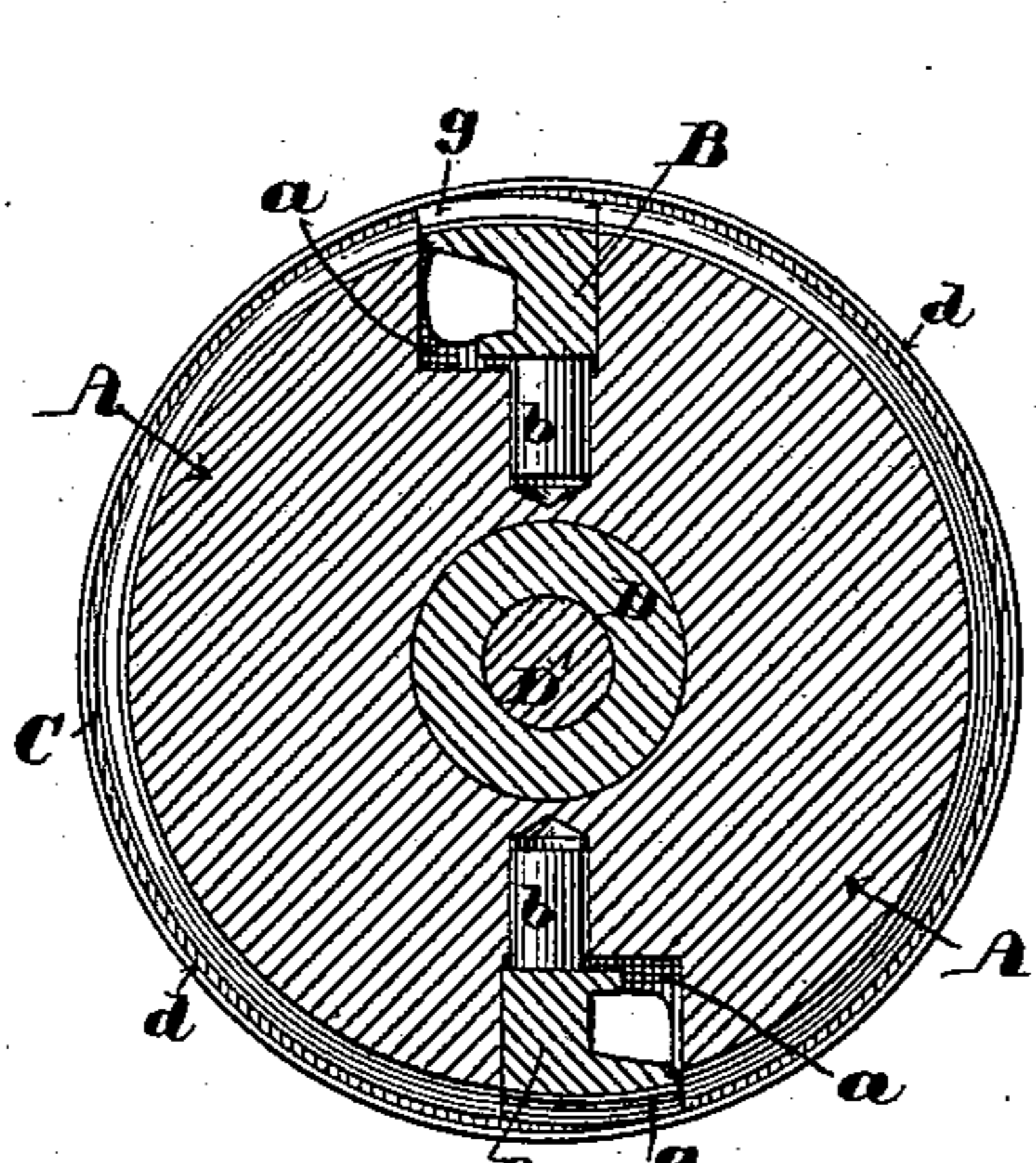


Fig. 4.

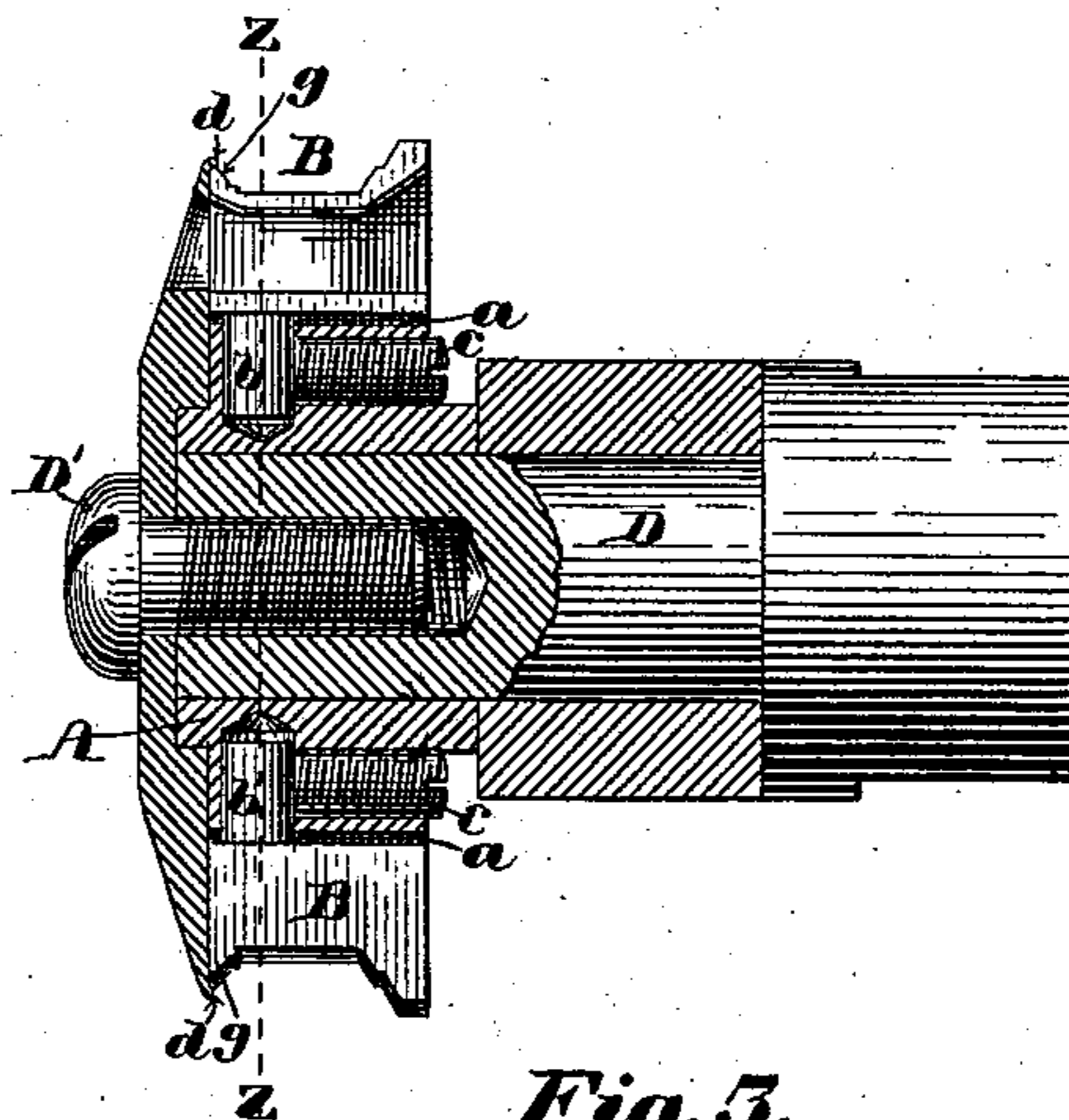


Fig. 3.

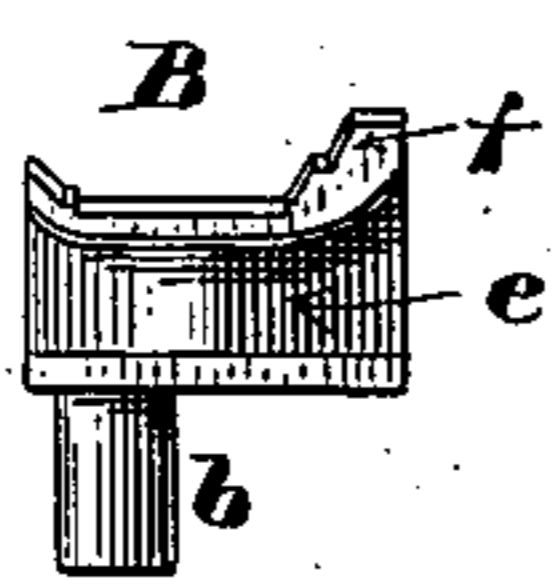


Fig. 6.

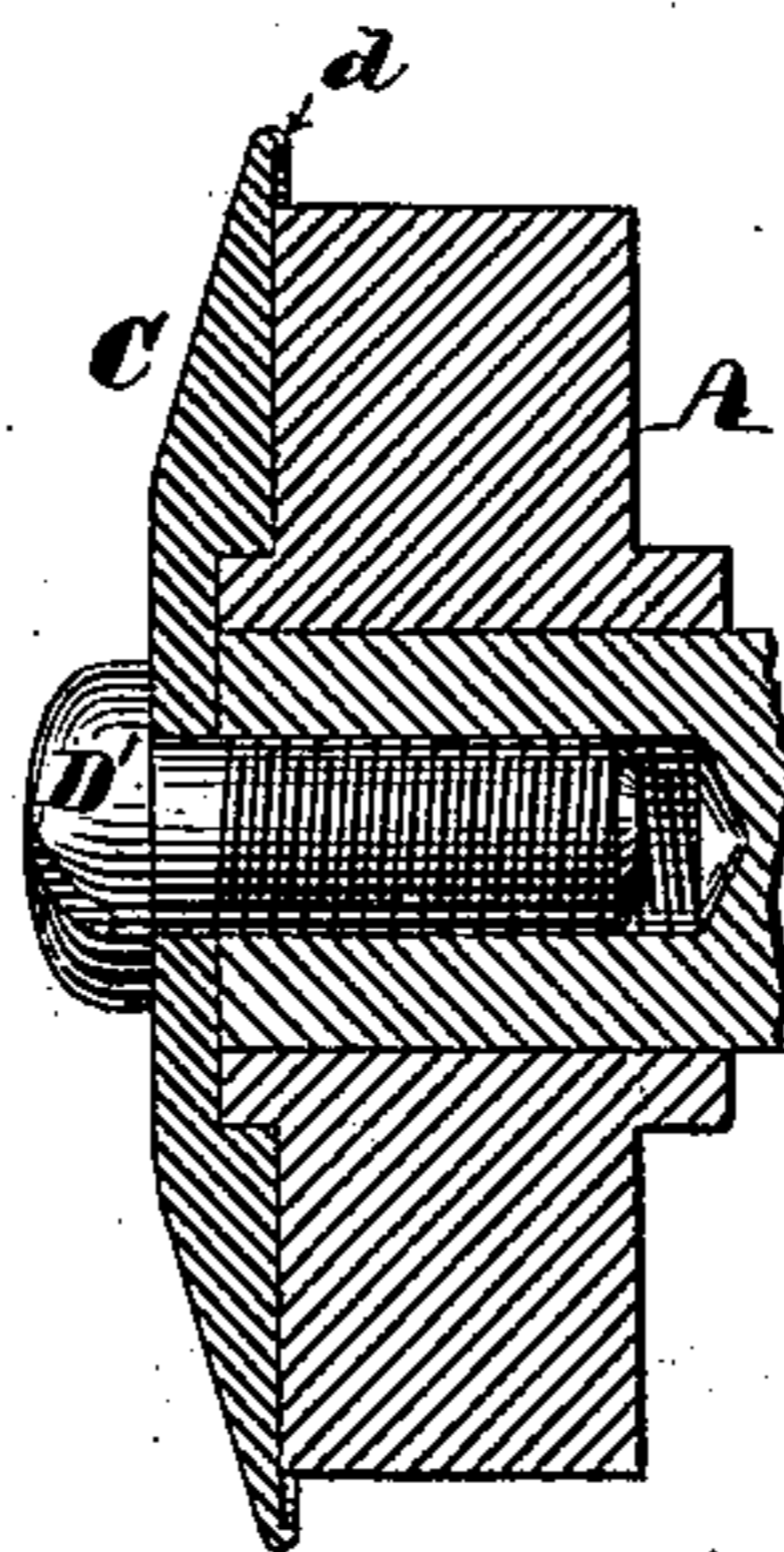


Fig. 5.

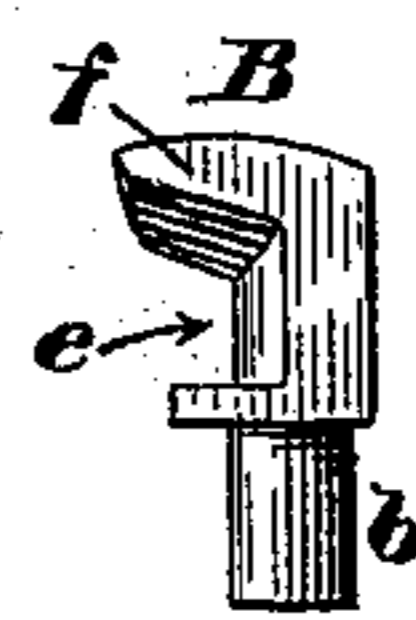


Fig. 7.

Witnesses:

Walter E. Lombard.
E. E. Hutchinson.

Inventor:

William D. Orcutt,
by N. E. Lombard
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM D. ORCUTT, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO JAMES H. BUSELL, OF SAME PLACE.

ROTARY CUTTER.

SPECIFICATION forming part of Letters Patent No. 311,201, dated January 27, 1885.

Application filed February 8, 1884. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM D. ORCUTT, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Rotary Cutters, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to rotary cutters for trimming the edges of boot and shoe soles; and it consists of a circular head provided with one or more radial slots cut longitudinally through its periphery parallel to its axis, in combination with one or more cutter-blades mounted in said slot or slots, and having their outer ends molded to a shape the counterpart of the desired shape to be given to the sole-edge, and each provided with a throat and a circumferentially-projecting blade, and arranged and adapted to be adjusted radially of said head, and to be sharpened by grinding it in a plane slightly inclined to a plane cut radially through the axis of said head.

It further consists in the combination of one or more cutting-blades having molded outer surface or surfaces, and adapted to be sharpened by grinding a surface or surfaces at right angles, or nearly so, to said molded surface or surfaces, and a cutter-head provided with one or more radial slots cut longitudinally through the same to receive said blades, and a rand-guard having an annular lip to serve as a gage for setting said cutters.

Figure 1 of the drawings is an elevation of my improved cutter. Fig. 2 is a sectional elevation, the cutting-plane being on line *xx* on Fig. 1. Fig. 3 is a longitudinal section on line *yy* on Fig. 2, but showing the cutter-blades in elevation. Fig. 4 is a section on line *zz* on Fig. 3. Fig. 5 is a longitudinal section on line *vv* on Fig. 2, showing a modified form of the cutter-head. Figs. 6 and 7 are respectively a front and a side elevation of the cutter-blade.

A is the cutter head, which may have a plain cylindrical periphery, as indicated in Fig. 5; or it may have its periphery molded to the counterpart of the desired shape to be given to the sole-edge, as shown in Fig. 1, and has cut through its periphery one or more slots, *a*, the sides of which are parallel to each other and to the plane cutting radially through the axis of

revolution of said head. In the bottom of said slot or slots is drilled a cylindrical socket extending radially toward the center of the head to receive the shank *b* of the cutter B, as shown in Fig. 4, said cutter being secured therein by means of the set-screw *c*, as shown in Figs. 2 and 3.

C is the rand-guard disk, secured to the end of the shaft D by the screw D', and having its outer edge made quite thin and provided with the inwardly-projecting annular lip *d*, to serve as a gage for setting the cutter or cutters B, as shown in Fig. 3. The cutter B is of a peculiar shape, its outer end being molded to a counterpart of the shape to be given to the sole-edge, and having a width in the direction of the circumference of the head about equal to the width of the slot *a*, and provided at its inner end with the cylindrical shank *b*, by which it is mounted in the socket formed for the purpose in the bottom of the slot *a*. The body of the cutter-tool B has a portion of its front side cut away, as at *e*, Figs. 6 and 7, so as to form the overhanging blade *f* and a throat for the escape of the chips. The blade *f* is sharpened by grinding its front end in a plane slightly inclined to a radial line drawn through the center of the cutter-head, and may be used until the blade *f* is all worn away to the back or bottom of the throat *e*.

The cutter-head illustrated is provided with two slots and two cutter-blades; but one only may be used; or, if desired, a greater number may be used without affecting the principles of my invention; but whatever number of cutting-blades are used it is very important that those portions of the periphery of the cutter-head which are between said cutters should be concentric with the axis of revolution of said head, so as to bear upon the edge of the sole during the operation of trimming, which prevents the cutter taking too rank a hold of the sole, and at the same time said concentric surface or surfaces act to rub and set the edge to a certain degree, thus leaving the edge in a better condition when the sole is trimmed than can be the case when a cutter is used having a large number of cutters alternating with grooves or slots which present no bearing-surface to the sole-edge. The outer ends of the cutters B are made slightly eccentric to the periphery of the

cutter-head to give the desired clearance, in the usual manner, and the forward or cutting edge of the cutter-blade is adjusted to a distance beyond the periphery of the cutter-head equal to the desired thickness of chip to be taken from the sole-edge at each revolution, said adjustment being determined or limited by the outer corner of the rand-cutting lip *g* coming in contact with the annular lip *d* of the rand-guard C, as shown in Figs. 3 and 4.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination of a circular cutter-head provided with one or more radial slots cut longitudinally through its periphery parallel to its axis, and one or more cutters mounted and adjustable radially in said slots, and having their outer ends molded to the counterpart of the desired shape to be given to the sole-edge, and each provided with the throat *e* and the cir-

cumferentially-projecting blade *f*, whereby it is adapted to be sharpened by grinding its front radial or nearly-radial face, substantially as described.

2. The cutter A, provided with one or more slots, *a*, one or more cutter-blades, B, fitted to and arranged to be adjusted radially in said slots, and the rand-guard C, provided with the annular lip *d*, all arranged and adapted to operate substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 6th day of February, A. D. 1884.

WM. D. ORCUTT.

Witnesses:

N. C. LOMBARD.

WALTER E. LOMBARD.