

No. 691,939.

Patented Jan. 28, 1902.

H. A. HANNUM.

RECTARY CUTTER.

(Application filed Mar. 27, 1901.)

2 Sheets—Sheet 1.

(No Model.)

Fig. 1

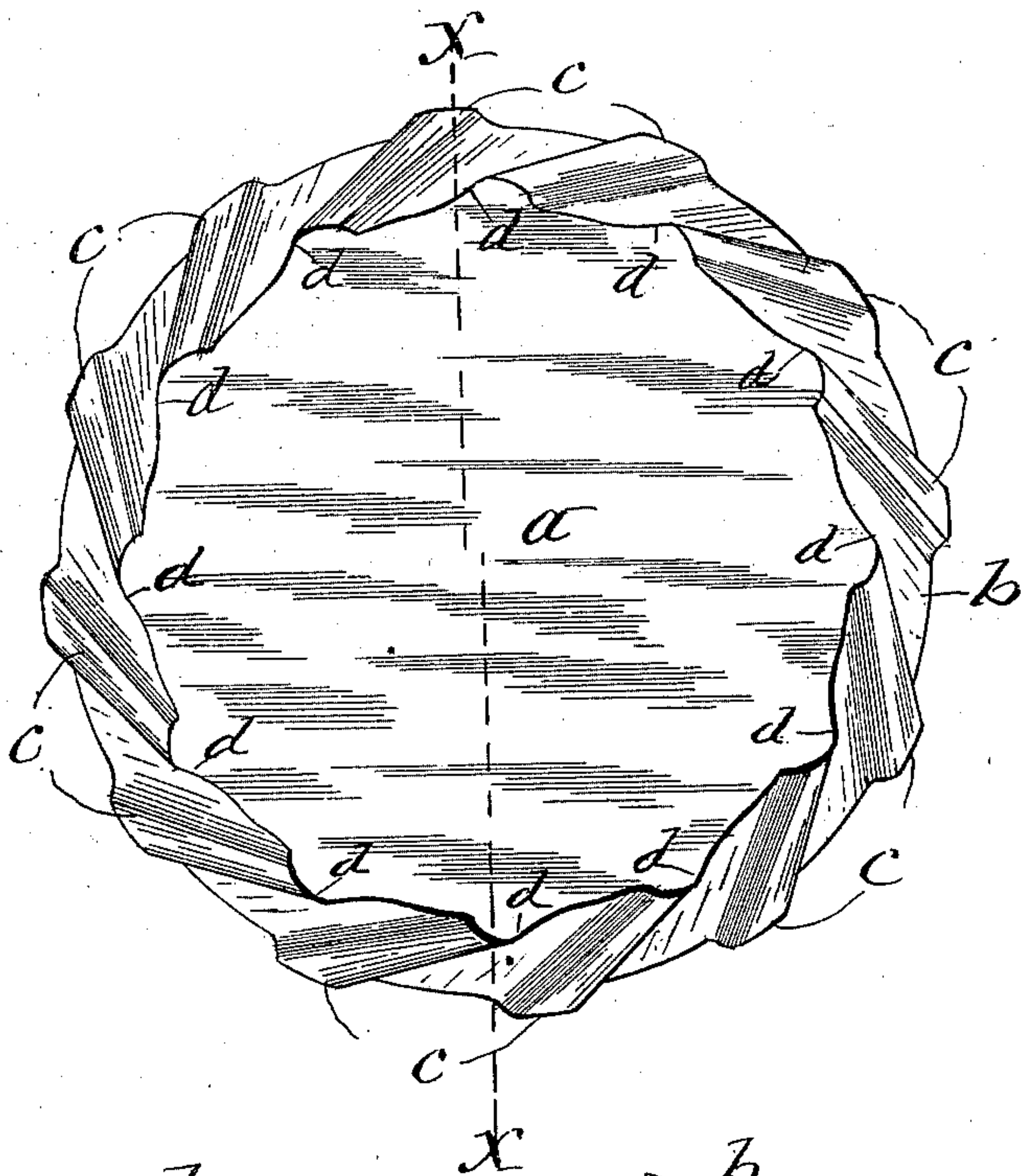


Fig. 2

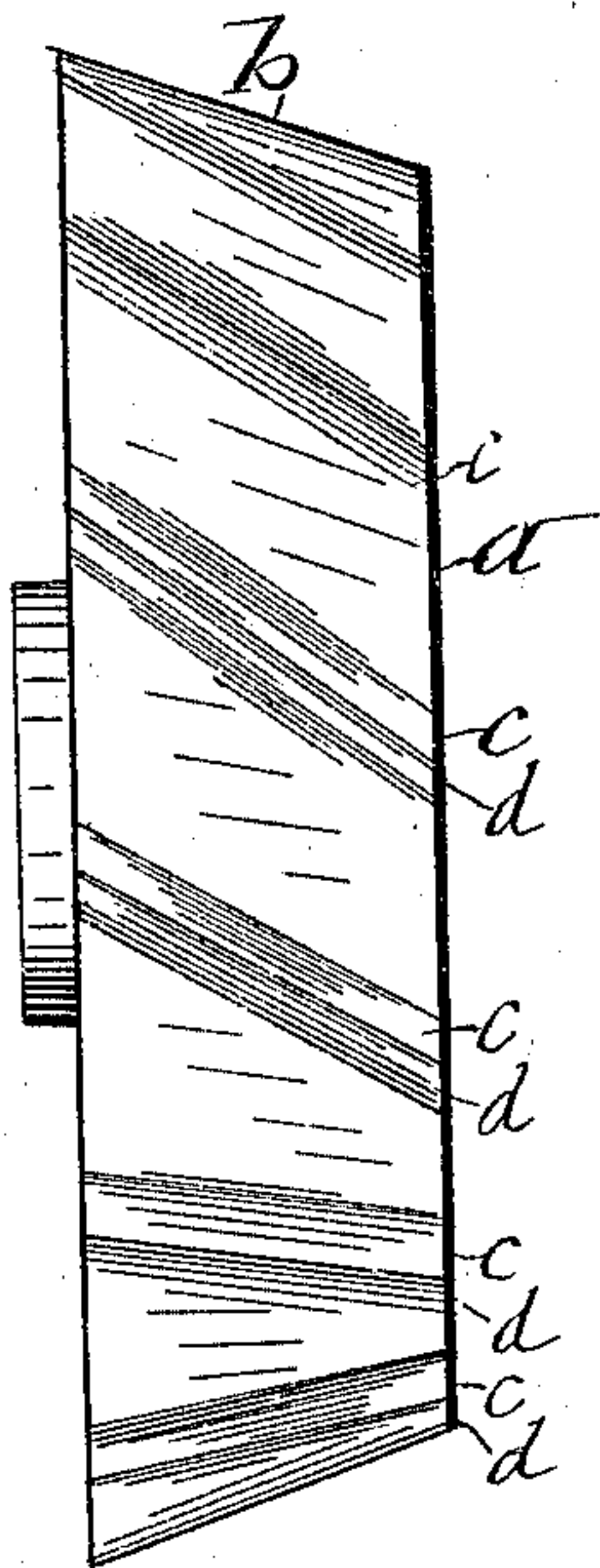
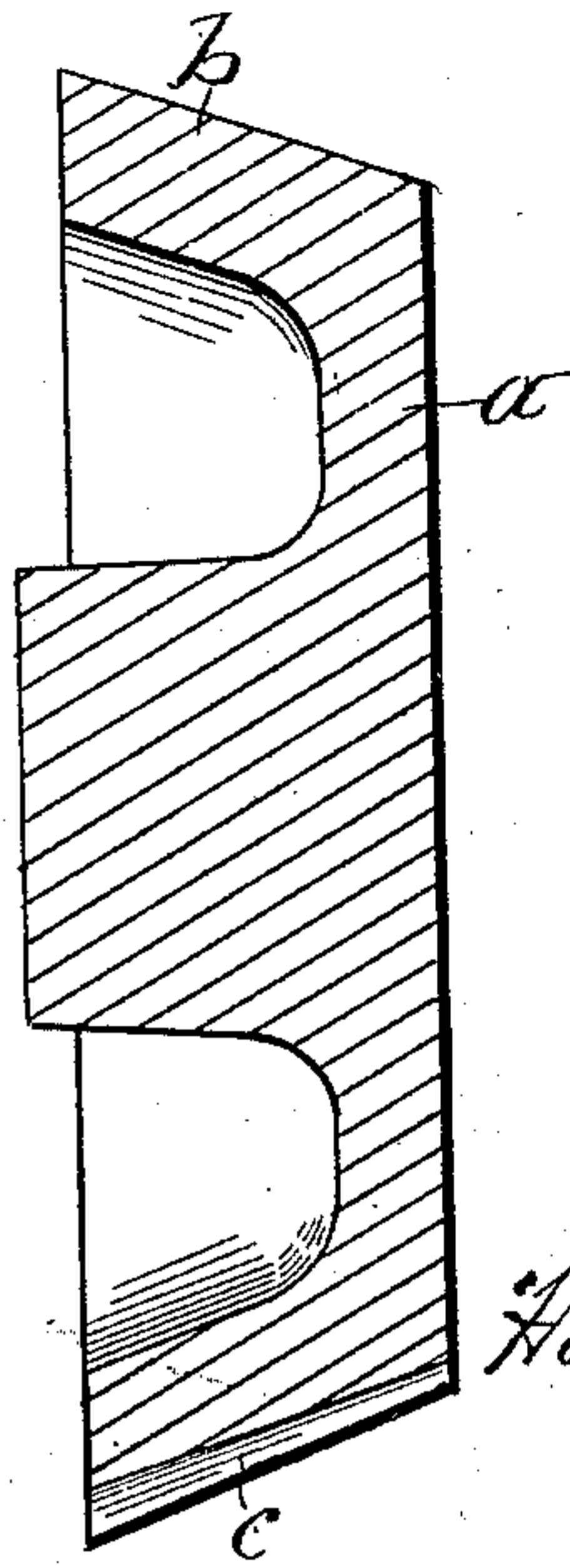


Fig. 3



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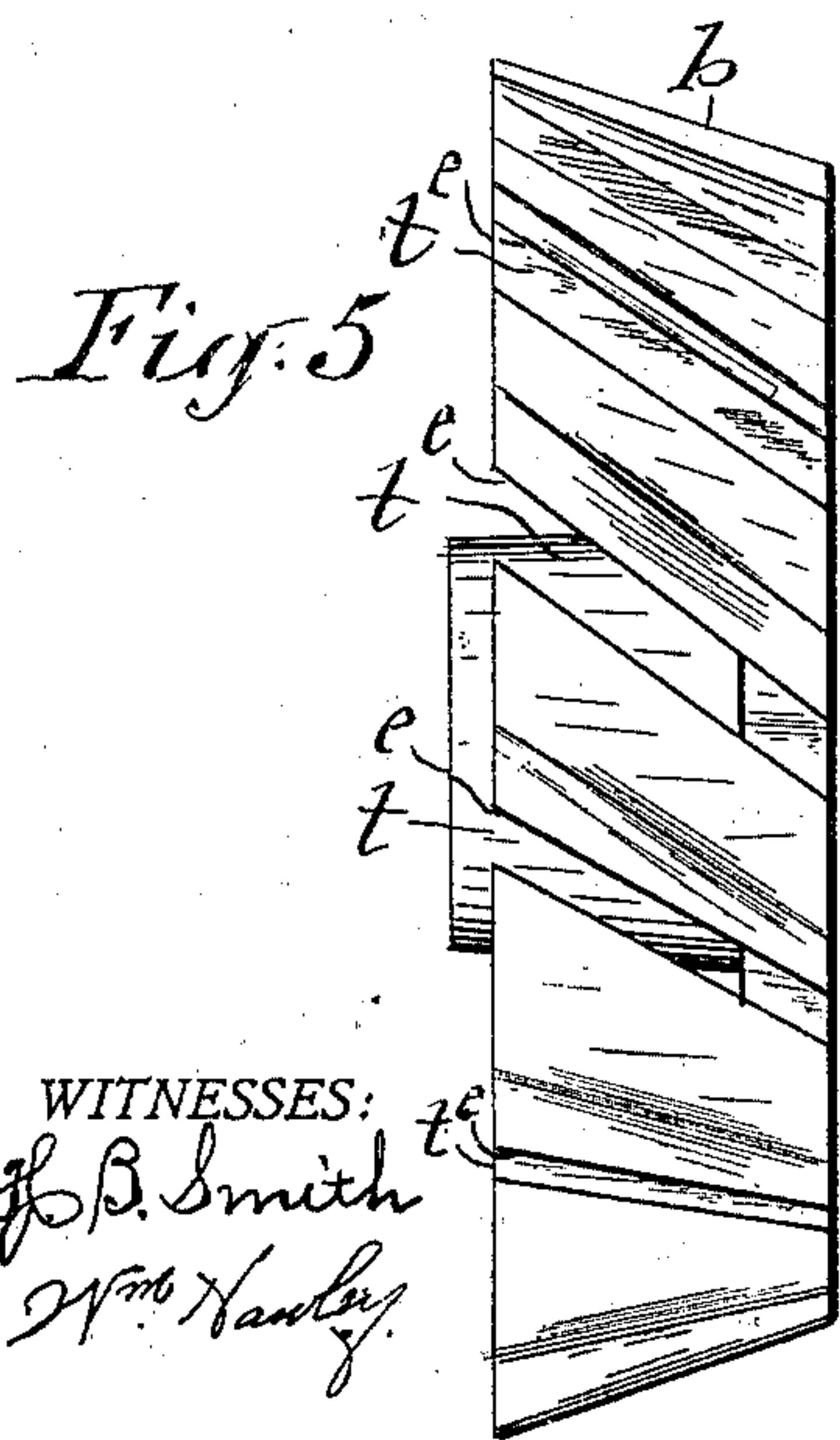
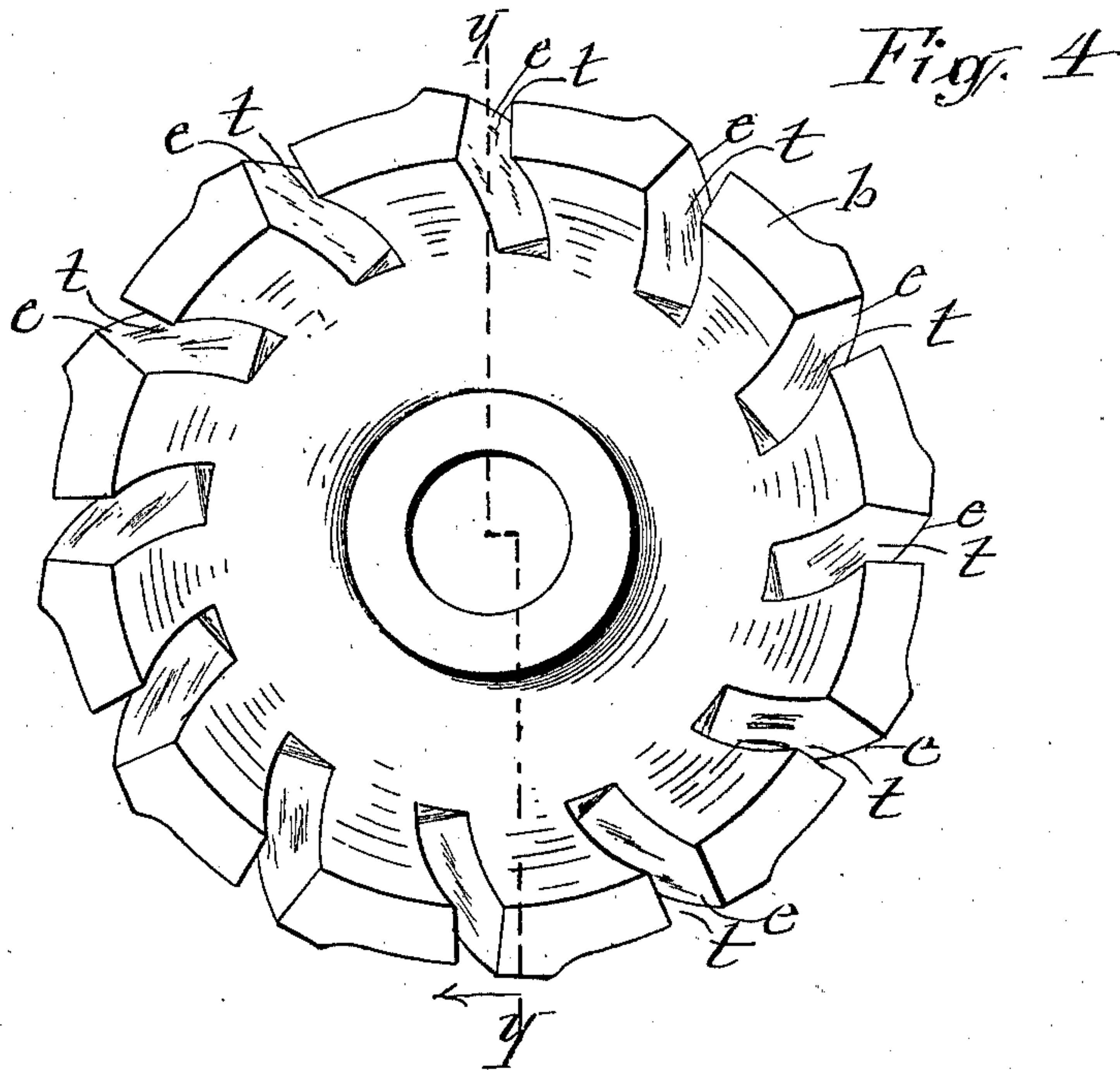
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H. A. HANNUM.
ROTARY CUTTER.

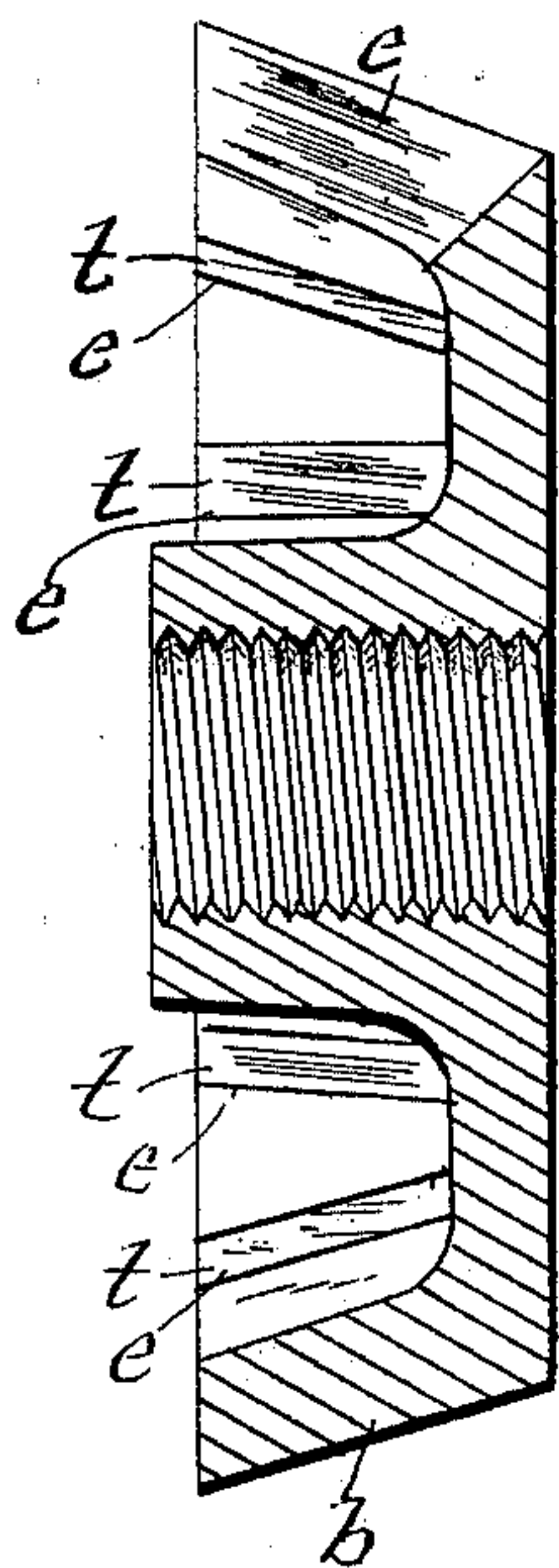
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

HENRY ANSEL HANNUM, OF CAZENOVIA, NEW YORK.

ROTARY CUTTER.

SPECIFICATION forming part of Letters Patent No. 691,939, dated January 28, 1902.

Application filed March 27, 1901. Serial No. 53,043. (No model.)

To all whom it may concern:

Be it known that I, HENRY ANSEL HANNUM, a citizen of the United States, and a resident of Cazenovia, in the county of Madison, in the State of New York, have invented new and useful Improvements in Rotary Cutters, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to the class of rotary cutters which are designed for operating on very hard substances, more particularly the species of cutter employed in the comminuting-machine shown in my Letters Patent No. 11,298, (reissue,) dated January 3, 1893. In the operation of said machine in cutting up green bones I have found it exceedingly difficult to provide the cutter-head with knife-blades capable of withstanding the strain of cutting up the bones as specified in said patent. To overcome said difficulty, I have devised an improved construction of a rotary cutter having the knives formed integral therewith and of superior stability and durability to perform the aforesaid function.

In the annexed drawings, Figure 1 is a face view of one side of the blank from which the cutter is formed. Fig. 2 is an edge view of said blank. Fig. 3 is a transverse section on line X X in Fig. 1. Fig. 4 is a face view of the opposite side of the cutter formed from said blank. Fig. 5 is an edge view of said cutter, and Fig. 6 is a transverse section on line Y Y in Fig. 4.

My improved cutter is constructed of a drop-forged wheel *a*, of highly-carbonized or fine-grade steel, and formed with a peripheral rim *b*, projecting from one side thereof and beveled to one side of the wheel, as shown in Figs. 1, 2, and 3 of the drawings. The outer face of said rim is formed with corresponding diagonal smooth ribs *c c*, distributed around said face, and with sloping faces *d d* on corresponding sides of the ribs for the purpose hereinafter explained.

In manufacturing the cutter the wheel *a* is to be presented with the sloping faces *d d* in succession to a suitable milling-tool while

holding the blank in a position to cause said tool to cut at said faces corresponding diagonal slots *t* through the rim *b* and through the greater peripheral edge of the wheel and at acute angles to the portions of the rim adjacent to one side of each rib *c*, and thus form along said side of the rib a cutting edge *e*, integral with the rim. The aforesaid faces *d d* are essential to allow the milling-tool to properly attack the blank at the beginning of the operation of cutting the slots *t*.

To provide the cutter with suitable throats for the escape of the cuttings during the operation of said cutter, I apply the milling-tool twice at different angles at each slot *t*, so as to flare the slot from the outer to the inner peripheries of the rim *b*.

After the cutter is formed in the manner hereinbefore described it is to be tempered to impart to the cutting edges the requisite hardness and rigidity.

What I claim as my invention is—

1. As an improved article of manufacture, an annular cutter consisting of a drop-forged wheel of steel formed with a peripheral rim beveled to one side of the wheel and having on the exterior of said rim correspondingly disposed diagonal ribs and sloping faces on corresponding sides of said ribs, and slots extending transversely through the rim at said sloping faces and through the greater peripheral edge thereof to form cutting edges directly on said sloping faces as set forth.

2. The improved cutter consisting of a drop-forged wheel of steel formed with a peripheral rim beveled to one side of the wheel and having on the exterior of said rim corresponding diagonal ribs and sloping faces on corresponding sides of said ribs, and slots milled through the rim at said sloping faces and extending through the greater periphery of the rim and at acute angles to the portions of the rim adjacent to one side of each rib to form integral cutting edges thereat as set forth and shown.

HENRY ANSEL HANNUM. [L. S.]

Witnesses:

J. J. LAASS,
WM. HAWLEY.