

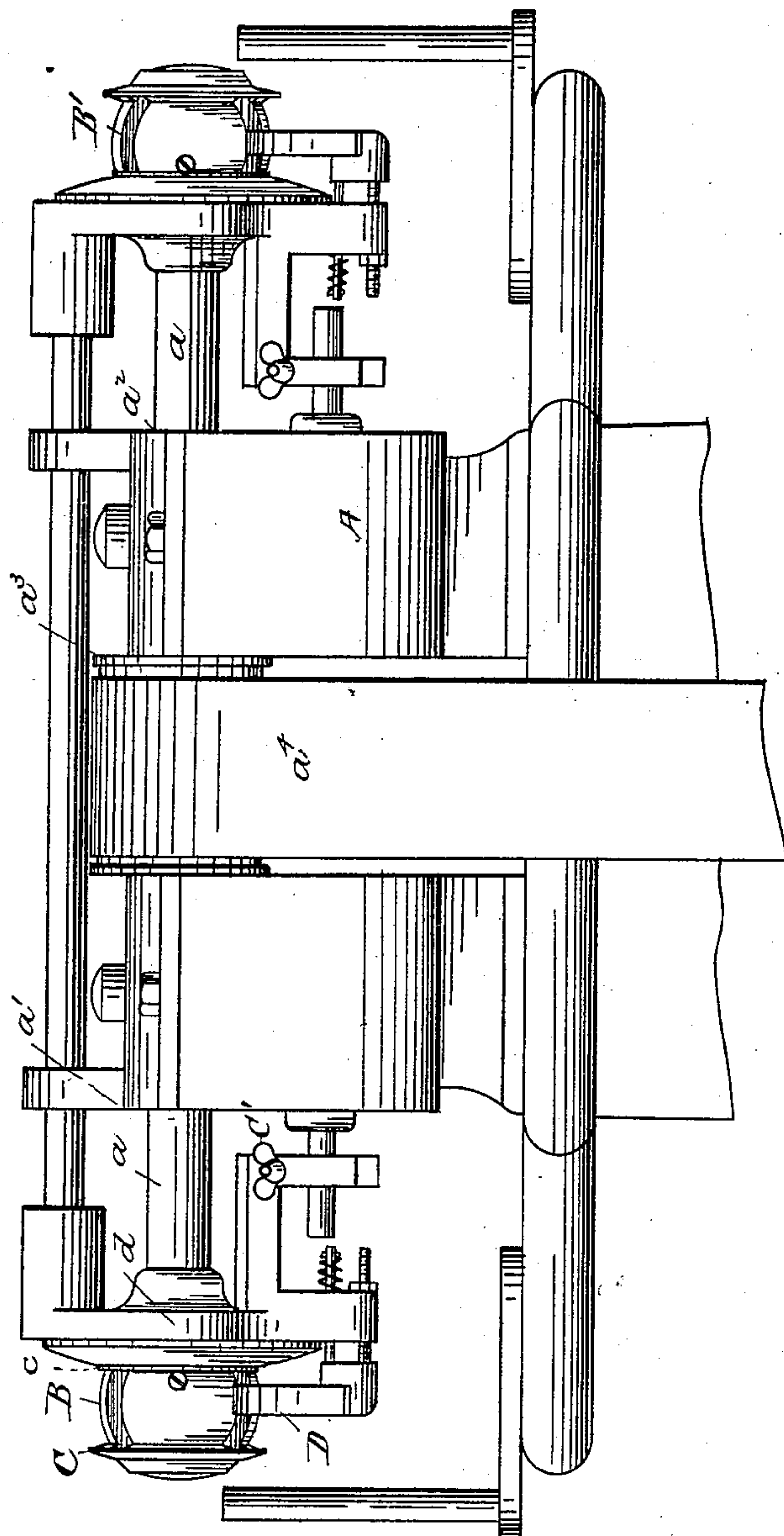
(No Model.)

3 Sheets—Sheet 1.

C. H. TRASK.  
SOLE AND HEEL TRIMMER.

No. 407,263.

Patented July 16, 1889.



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WITNESSES.

J. M. Doan.  
E. P. Hale.

INVENTOR.

Chas. H. French  
by his atty -  
Clarke & Raymond

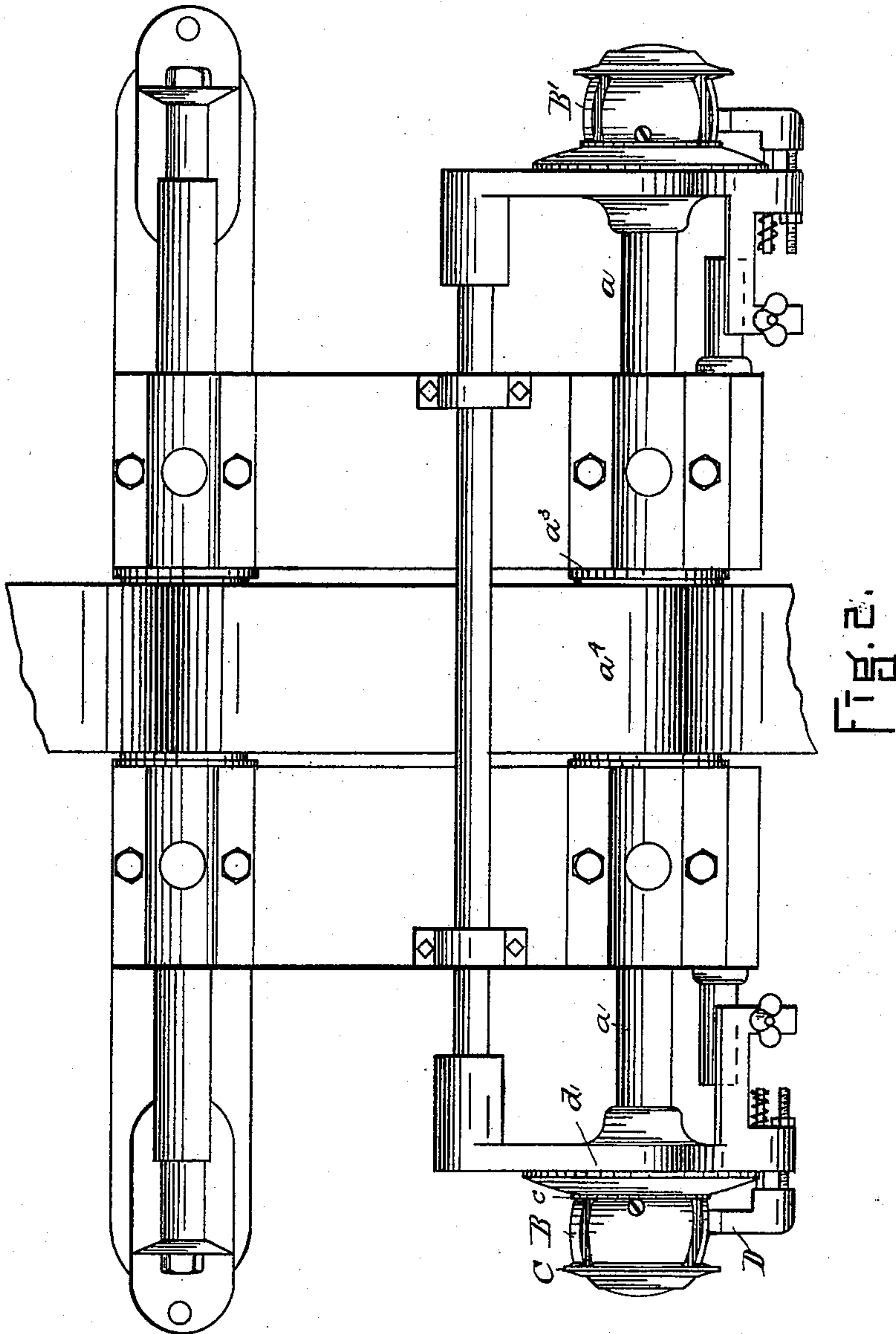
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(No Model.)

3 Sheets—Sheet 3.

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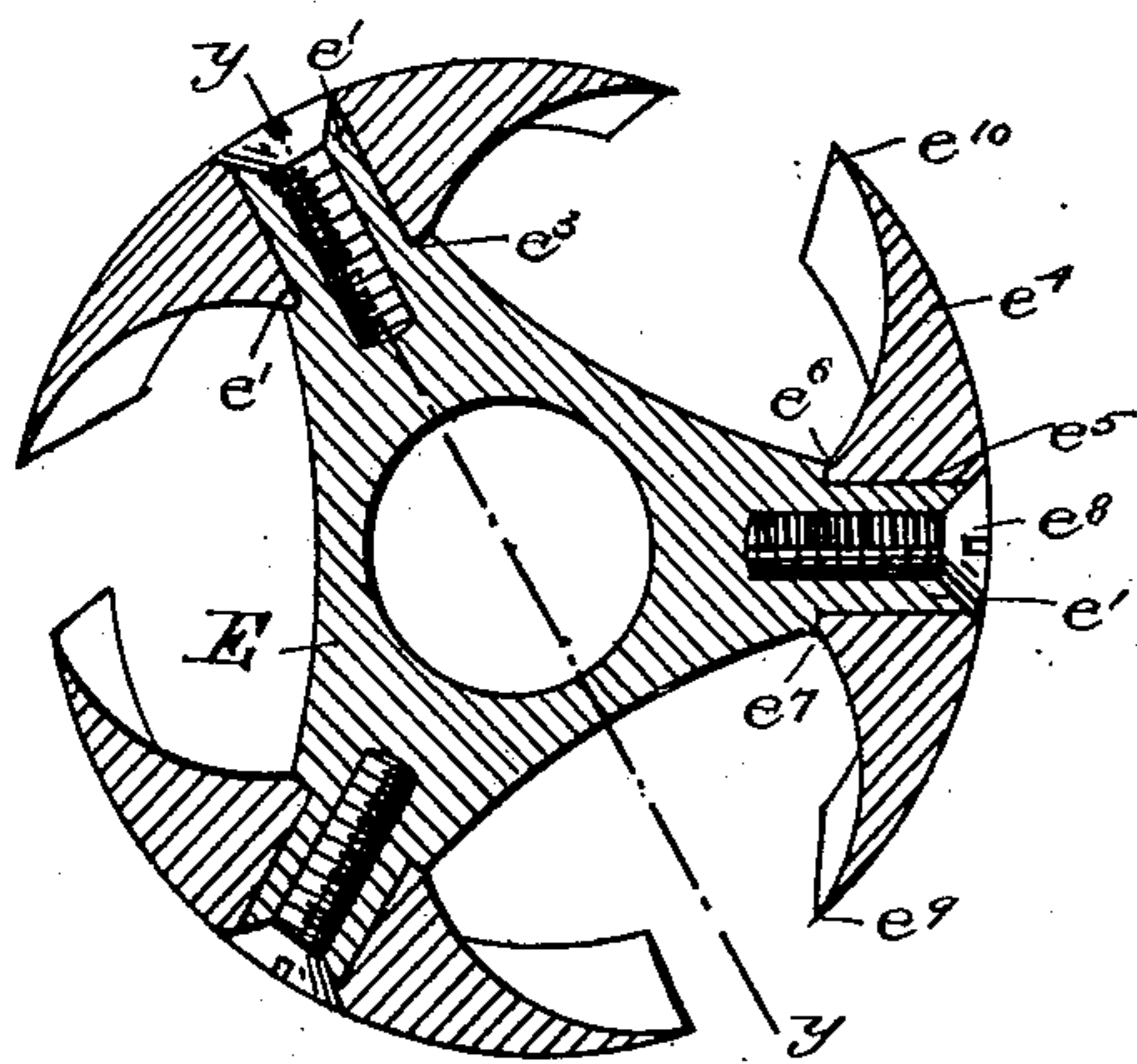


Fig. 4.

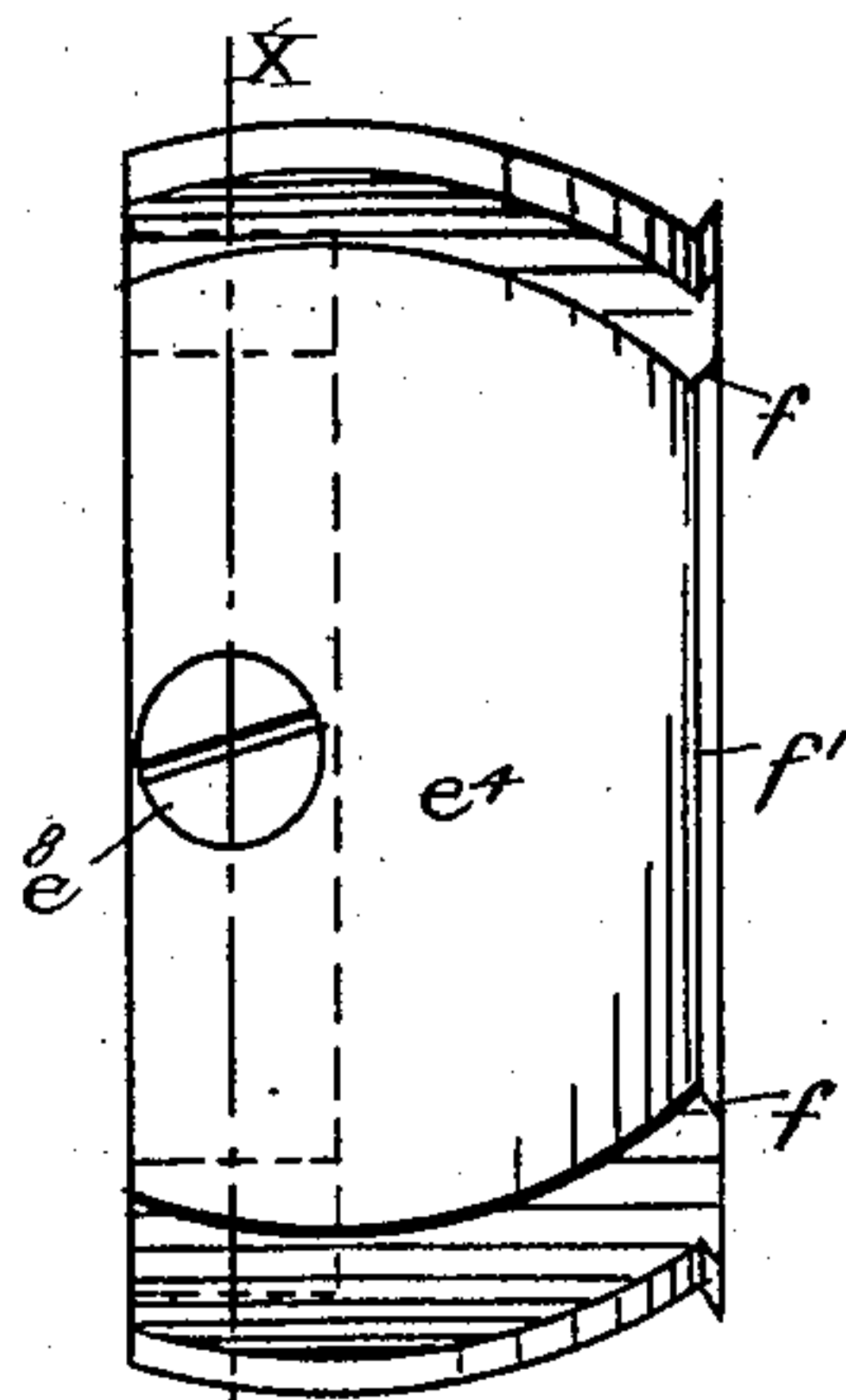


Fig. 5.

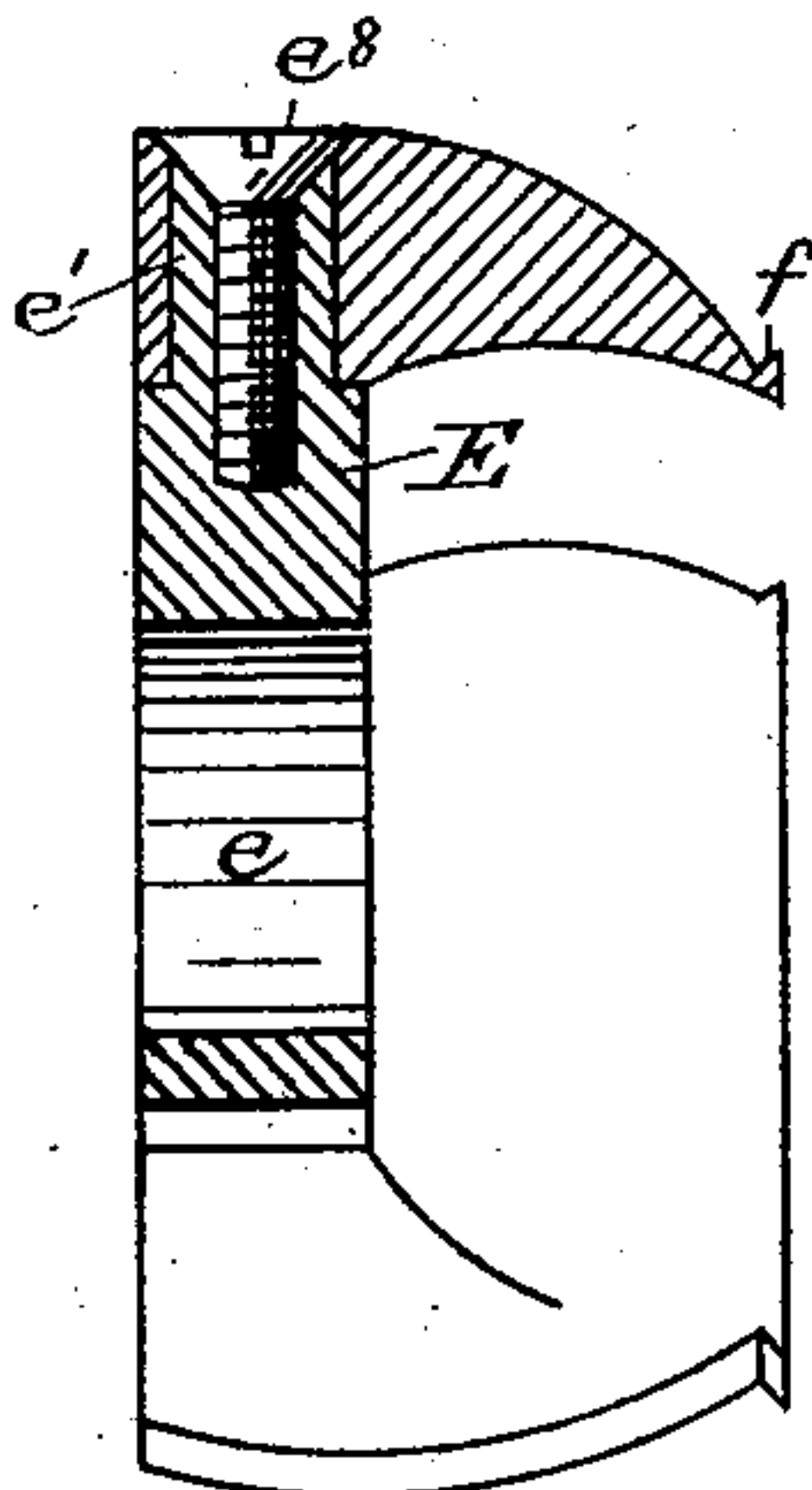


Fig. 6.

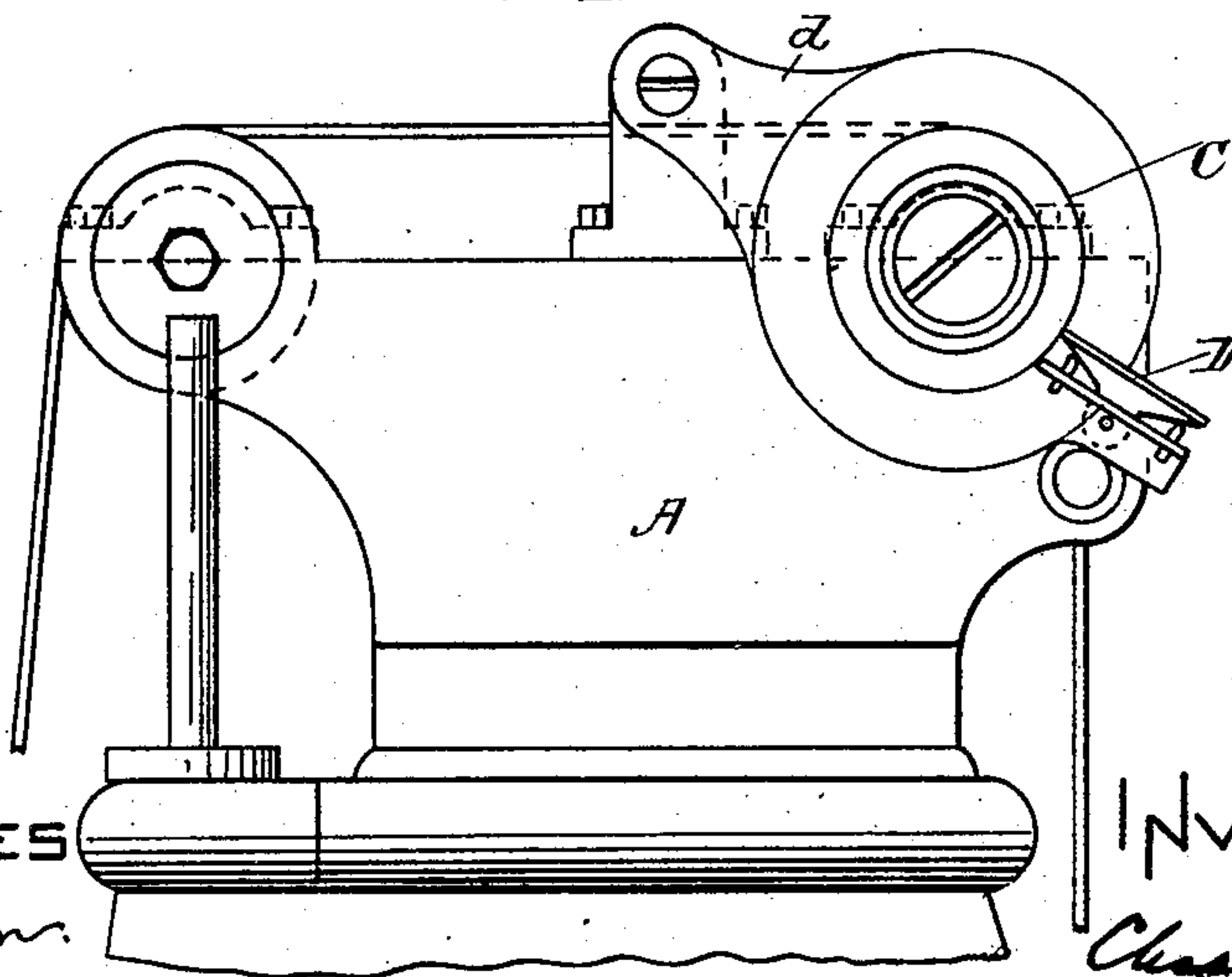


Fig. 7.

WITNESSES

J. W. Dolan.

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# UNITED STATES PATENT OFFICE.

CHARLES H. TRASK, OF LYNN, MASSACHUSETTS, ASSIGNOR TO THE DUPLEX  
SHOE TRIMMER COMPANY, OF PORTLAND, MAINE.

## SOLE AND HEEL TRIMMER.

SPECIFICATION forming part of Letters Patent No. 407,263, dated July 16, 1889.

Application filed June 8, 1887. Serial No. 240,598. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES H. TRASK, of  
Lynn, in the county of Essex and State of  
Massachusetts, a citizen of the United States,  
5 have invented a new and useful Improvement  
in Rotary Cutters for Heel-Trimming Ma-  
chines, of which the following is a full, clear,  
and exact description, reference being had to  
the accompanying drawings, forming part of  
10 this specification, in explaining its nature.

The invention relates to a rotary trimming-  
machine similar to that described in my Pat-  
ent No. 357,738, and comprises various details  
of organization which are hereinafter fully  
15 specified.

In the drawings, Figure 1 represents a du-  
plex heel-trimming machine provided with  
trimmers having reversible-shell blades or  
knives. Fig. 2 is a view in end elevation  
20 thereof. Fig. 3 is a view in elevation of the  
front, to the left of the end represented in  
Fig. 2. Fig. 4 is a vertical section of the  
trimmer, taken upon the line  $x x$  of Fig. 5.  
Fig. 5 is a view in end elevation of the trim-  
25 mer. Fig. 6 is a section upon the line  $y y$  of  
Fig. 4.

Referring to the drawings, A represents the  
head of the machine.  $a$  represents a shaft  
having suitable bearings in the head, and ar-  
30 ranged to extend from the front  $a'$  to provide  
a support for the right trimmer B, and from  
the opposite front  $a''$  to provide a support for  
the left trimmer B'. The shaft  $a$  also has a  
pulley  $a^3$ , over which the operating-belt  $a^4$   
35 passes. Each trimmer has a rand-guide C and  
a top-lift rest and guide  $c$ , which are adapted  
to be moved laterally in relation to the trim-  
mer, and are controlled in their relation to  
the surface of the trimmer by an adjustable  
40 screw C'. These parts, together with the heel-  
rest D, are carried by the support  $d$ . These  
parts and their operation are fully described  
in my Patents Nos. 357,742 and 357,738, and  
need not be further described here.

Each of the trimmers comprises a block E,  
45 having the shaft-hole  $e$  and the studs or posts  
 $e'$ , extending from the shoulders  $e^2 e^3$ . These  
studs receive and hold the shell blades or  
knives  $e^4$ , each shell-blade having a hole  $e^5$ ,  
50 of a size to fit the stud or post, and the shoul-

ders  $e^6 e^7$ , which are adapted to come in con-  
tact with the shoulders  $e^2 e^3$  of the holding-  
block E. Each blade or knife is locked to  
the post by the screws  $e^8$ , each of which screws  
into a screw-hole formed in the stud or post, 55  
and the head of which enters into a counter-  
sink in the end of the post and in the blade  
or knife, a portion of the head thereby over-  
lapping or extending upon the outer surface  
of the blade or knife about the post or stud. 60  
(See Figs. 4 and 5.)

Each blade or knife  $e^4$  has the cutting-edges  
 $e^9 e^{10}$ , (see Fig. 4,) and the blade is of any de-  
sired curvature or shape, and is of any de-  
sired length suitable for a single trimmer as 65  
distinguished from a duplex trimmer, as de-  
scribed and claimed in my application filed  
February 12, 1887, Serial No. 227,355.

The trimmer is adapted to be used in a du-  
plex machine or a machine adapted to use the 70  
duplex trimmer by making the blades or  
knives reversible upon the block E and pro-  
viding each blade with two cutting-edges, and  
also by so attaching them to their holding  
block or support that each edge will be brought 75  
into proper position for cutting. For in-  
stance, when the trimmer is used as a right  
trimmer, the blades or knives project from  
one side of the holding-blocks, as represented  
in Fig. 5. This brings the cutting-edges  $e^{10}$  80  
into proper or operative position.

When the trimmer is used as a left trim-  
mer, the blades are turned upon their studs,  
so as to project from the holding-block in a  
direction opposite from that in which they 85  
extend when serving as a right cutter, and  
this will bring the cutting-edges  $e^9$  into opera-  
tive position.

In order that the cutting-edges of the knives  
or blades may bear the relation to the center 90  
of the trimmer ordinarily obtained by back-  
ing off the outer surface of the blades or  
knives, I have made the shoulders  $e^7$  of each  
holding stud or post  $e'$  nearer the center of  
the trimmer than the shoulder  $e^6$ , and have 95  
made the post very slightly inclined from a  
radius drawn from the center of the block E.  
This has the effect of bringing each edge of  
the knife or blade when in a trimming posi-  
tion a little farther removed from the center 100



of the trimmers than the other or inoperative edge, and each blade or knife is substantially backed off from this cutting position of its edge to the other or inoperative edge of the blade because of this slightly-eccentric position which the blade occupies. Of course this cutting position remains substantially constant, being varied only by the reduction of the length of the blades from sharpening, and is in one case—that is, when the trimmer is used as a right trimmer—upon one side of the block E and when used as a left trimmer upon the other side, and is in the first place occupied by the cutting-edge  $e^{10}$ , and in the second case by the cutting-edge  $e^9$ . These blades may be made either in dies or by drop-forging, or they may be made as steel castings, or in any other desired way, and they may be formed or provided with the rand-trimmer  $f$ , formed integral with the blades.

In Figs. 5 and 6 I have represented each blade as having an extension or projection  $f'$  at its outer edge to form the rand-cutters  $f$  at each end.

In use, when used as a right trimmer, the trimmer is mounted upon the right end of the shaft  $a$ , as represented in Fig. 1, B being the right trimmer. To use the same trimmer as a left trimmer, or upon the left end of the shaft  $a$ , the blades or knives  $e$  are turned upon their supports, so as to extend from the other side of their holding-block C to the position represented in Fig. 1, and the trimmer then becomes a left trimmer B'.

In my patent, No. 357,743, dated February 15, 1887, I have shown and described an organization embracing a rotary shaft having at one end a duplex heel-trimmer and at the other end of the shaft a duplex heel-trimmer. Each of these trimmers has a right cutting-section and a left cutting-section—that is, the trimmers are interchangeable upon the ends of the shaft. In my present invention I have shown an organization which embraces the use of a rotary shaft and a single right trimmer at the right end of the shaft and a single left trimmer at the left end of the shaft, and these trimmers are not interchangeable and have but one trimming-section, the single right heel-trimmer being adapted for use only at the right end of the shaft and the single left heel-trimmer being operative only upon the end of the shaft; and I therefore consider that the organization described in my said patent does not fully embrace or cover the organization herein specified.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. A rotary trimmer or cutter for a heel-trimming machine, having a blade or knife support and reversible shell blades or knives carried thereby, which are provided with two cutting-edges, each of which is adapted to be used in turn either for right cutting or for left cutting, substantially as described.

2. The combination of a block or support E for a rotary sole-edge trimmer or cutter with the shell blades or knives  $e^4$ , shaped substantially as specified, each of which has a cutting-edge  $e^9$  and a cutting-edge  $e^{10}$ , attached to the said block or support in a manner, substantially as described, to permit them to be swung or moved thereon to bring each cutting-edge of the said knives or blades into operative position either for right or left trimming, substantially as described.

3. The combination of the block E, having the posts or studs  $e'$  and the shaft-hole  $e$ , the blades  $e^4$ , having the cutting-edges  $e^9$   $e^{10}$ , and the locking-screws  $e^8$ , substantially as described.

4. The combination of the block E, having the shaft-hole  $e$ , the posts  $e'$ , and the shoulders  $e^2$   $e^3$ , the posts and shoulders being arranged in relation to the center of the block as specified, with the shell blades or knives  $e^4$ , having the cutting-edges  $e^9$   $e^{10}$ , and the fastening-screws  $e^8$ , substantially as described.

5. A rotary trimmer for a sole or heel edge trimming machine, having reversible blades provided with two cutting-edges eccentrically secured to a holding-block, whereby the blades when occupying one position thereon present one trimming-edge, while the other trimming-edge is within the circle described by the operative trimming-edge, whereby upon the turning of the blades upon their supports the inoperative cutting-edge is brought into operative position and the first-named cutting-edge moved to a position within the circle which it formerly described, as and for the purposes specified.

6. A rotary trimmer for a heel and sole edge trimming machine, having a block E and a series of reversible blades  $e^4$  secured thereto, one or more of which has the rand-trimmer  $f$  integral with it or them, substantially as described.

7. The shell blade or knife  $e^4$ , having the hole  $e^5$ , the shoulders  $e^6$   $e^7$ , and the cutting-edges  $e^9$   $e^{10}$ , substantially as described.

8. A shell blade or knife having the hole  $e^5$ , the shoulders  $e^6$   $e^7$ , and cutting-edges  $e^9$   $e^{10}$ , the extension  $f'$  upon one edge having the cutting-edges  $f$ , as and for the purposes described.

9. The combination, in a heel-trimming machine, of a shaft  $a$ , a right trimmer B, comprising a block or support E, and the reversible blades  $e^4$ , arranged to extend outwardly therefrom and supported at one end of the shaft  $a$ , the left trimmer B', comprising the block E and reversible blades  $e^4$ , which extend outwardly from it, and is supported upon the opposite end of the shaft  $a$ , a rand-guide C, top-lift rest and guide  $c$ , and a heel-rest D for each cutter, as and for the purposes described.

CHARLES H. TRASK.

In presence of—

F. F. RAYMOND, 2d,  
J. M. DOLAN.