

No. 673,318.

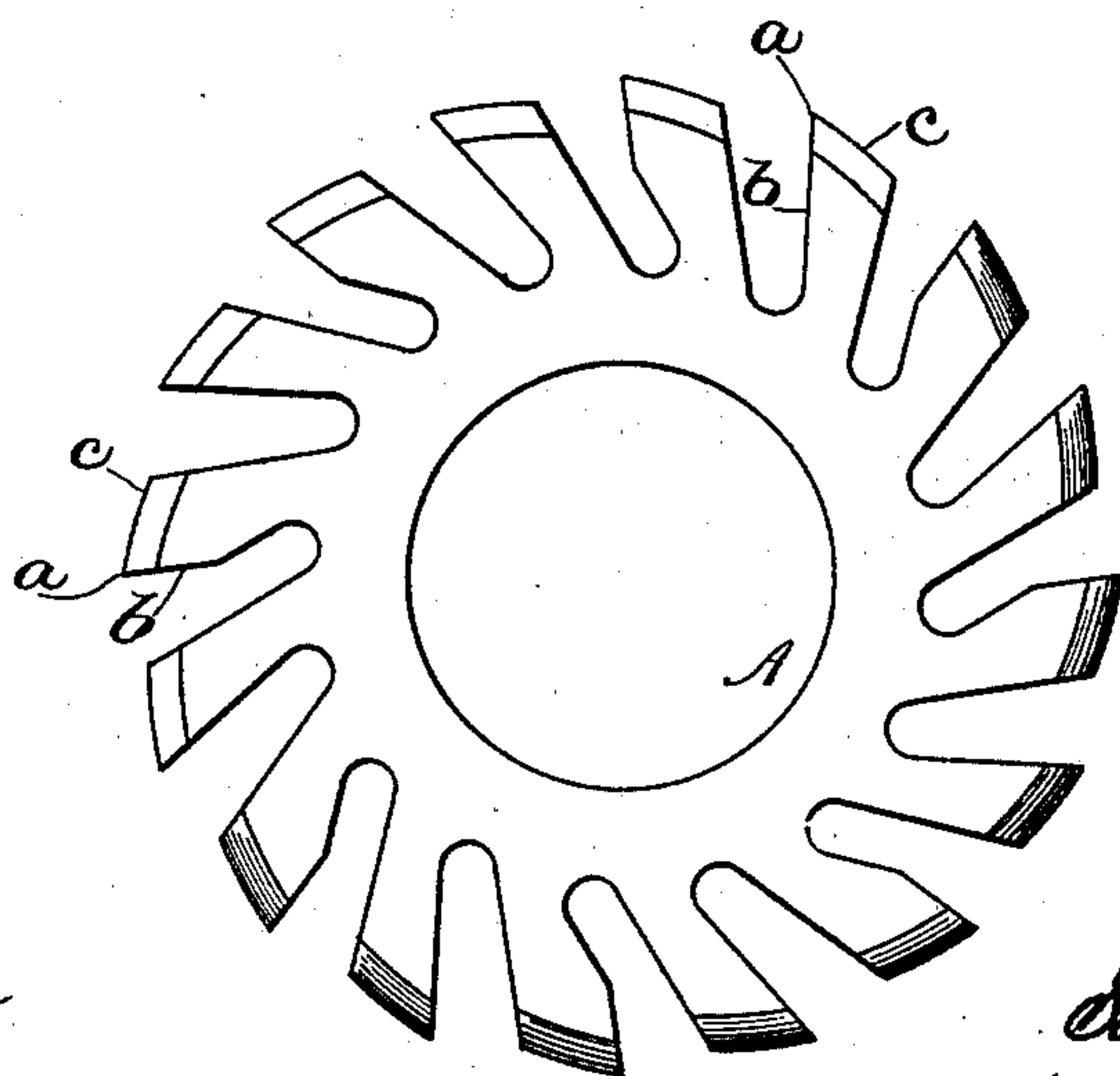
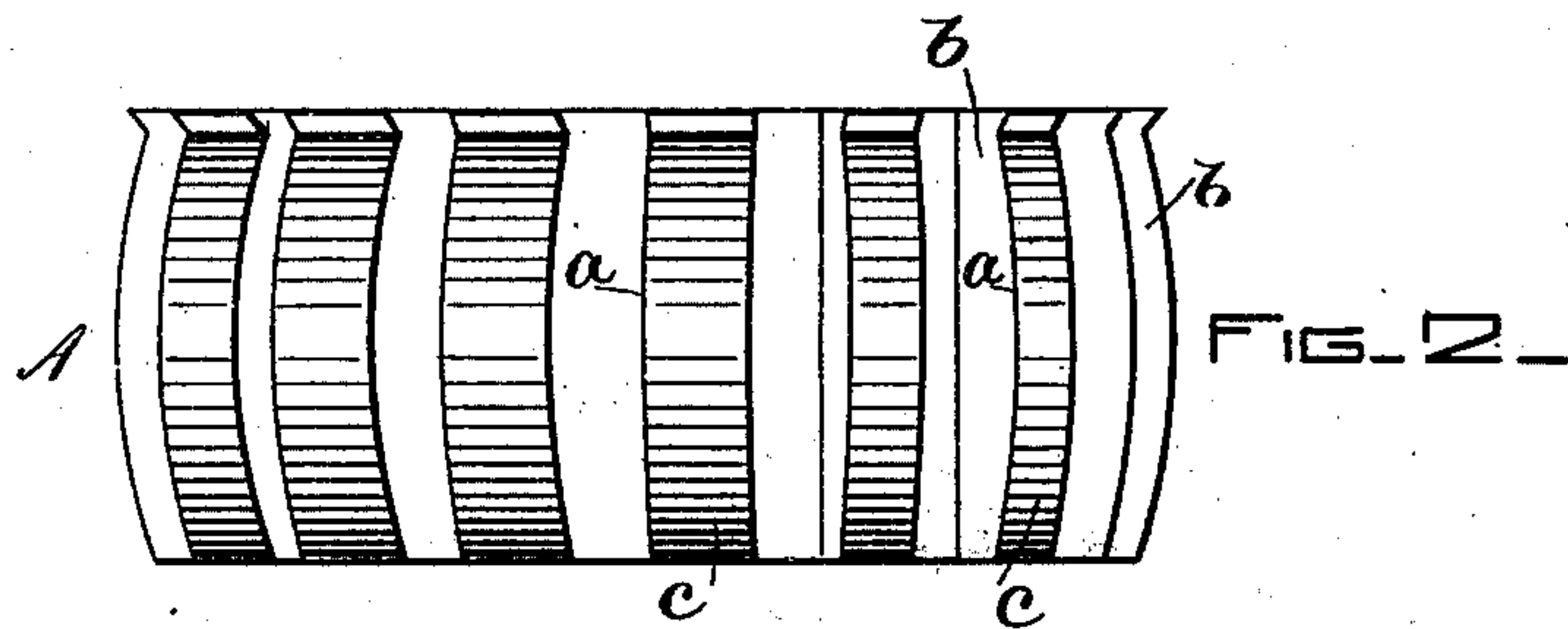
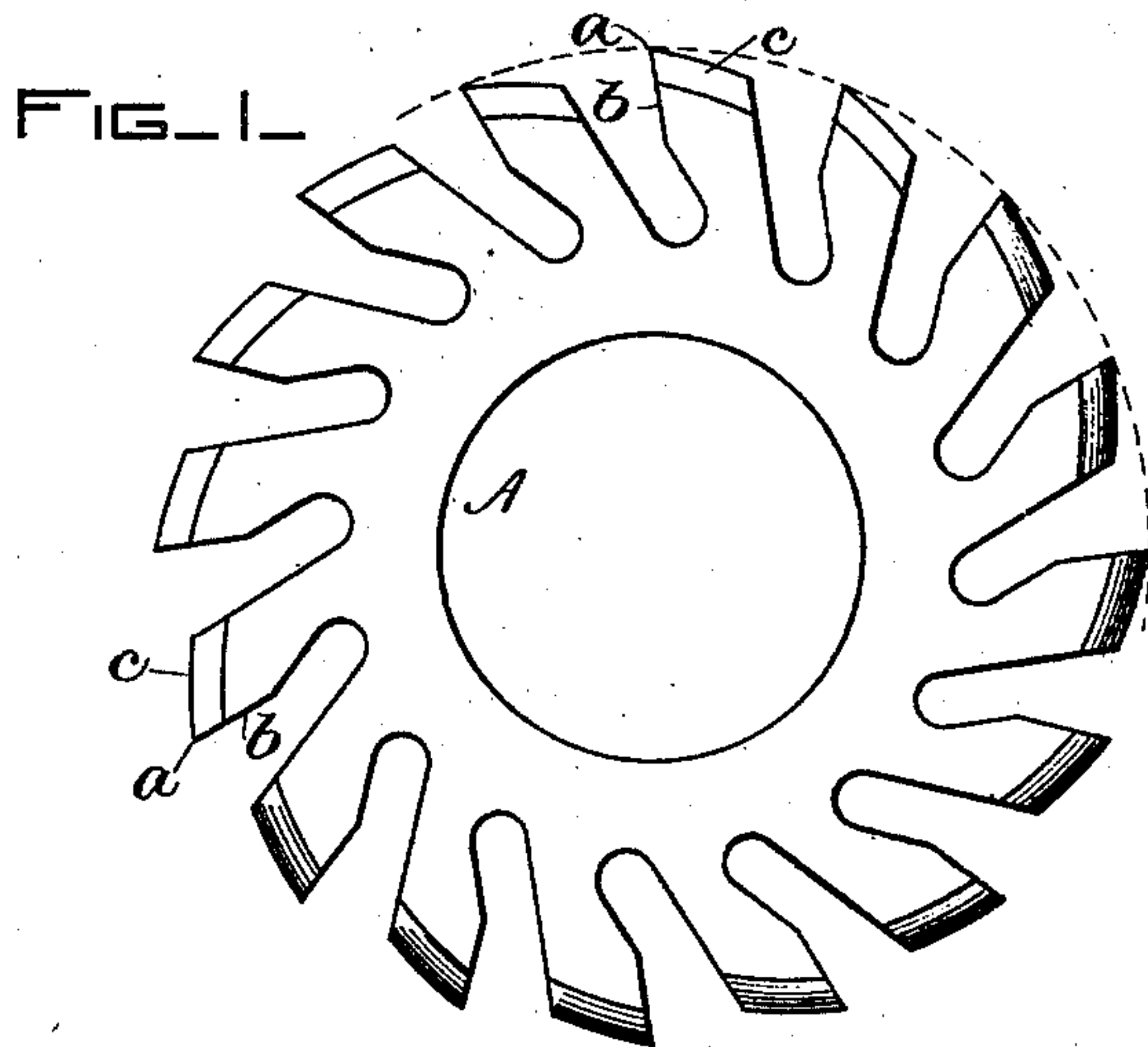
Patented Apr. 30, 1901.

S. N. CORTHELL.

ROTARY CUTTER FOR EDGE TRIMMING MACHINES.

(Application filed Aug. 22, 1900.)

(No Model.)



WITNESSES  
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# UNITED STATES PATENT OFFICE.

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## ROTARY CUTTER FOR EDGE-TRIMMING MACHINES.

SPECIFICATION forming part of Letters Patent No. 673,318, dated April 30, 1901.

Application filed August 22, 1900. Serial No. 27,724. (No model.)

*To all whom it may concern:*

Be it known that I, SAMUEL N. CORTHELL, a citizen of the United States, residing at Quincy, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Rotary Cutters for Trimming the Sole Edges of Boots and Shoes, of which the following is a specification.

My invention relates to rotary cutters for trimming the sole edges of boots and shoes; and it consists in a cutter having a series of cutting-blades arranged around a central hub and every other blade in the series being so constructed that the faces thereof which meet and form the cutting edges shall meet at a greater or less angle to each other than that at which the like faces of the remaining blades meet, thus forming alternate cutting edges of different degrees of sharpness in the same circle of revolution, as will be more fully explained.

Figure 1 represents a side view of a cutter embodying my invention. Fig. 2 is an edge view of the same. Fig. 3 represents a modification by which the same result is obtained.

A represents the body of the cutter, on which are formed the series of inclined blades *b*.

*a* represents the cutting edges of the blades, and *c* the tops of the same inclined to the peripheral circle, every other top being given a greater clearance or forming a greater angle with said circle and a smaller angle with the face *b* of the blade, and consequently having a sharper cutting edge than the other blades have. I have found by long practical experience with this class of cutters that this novel construction possesses great advantages over any other kind of rotary cutter in public use. A keen cutting edge is desirable, because it shaves the leather instead of beating it off, as dull edges do, and consequently does not compact and harden the edge by the hammering of the cutter-blades, but leaves it in better condition for the finishing process, known as "setting" or "burnishing." If, however, the blades are all alike sharp, they will take too rank a hold of the edge and

render it impracticable to hold a shoe steadily up to them. To avoid this difficulty, sometimes blades without clearance or cutting edges have been placed between sharp blades to act as guards or gages; but the result of such a construction and arrangement is to produce a rough, uneven, and wavy edge, and such cutters are liable when run at the usual high speed to burn the stock by frictional heat; but cutters constructed as herein shown and described, having the cutting edges of the blades alternately thin and thick, whereby the less sharp blades act as cutting-guards and prevent too rank a hold of the sharper blades, render it perfectly feasible to hold a shoe edge steadily up to them to be trimmed, and the duller edges while so acting as a guard or gage to the sharper blades also trim lightly and brush over the edge without compacting and hardening the same, thus leaving the sole edge in better condition for the blacking, burnishing, and final processes of finishing.

In Fig. 3 a modification is shown wherein the tops *c* of all the blades have the same clearance and form the same angle to the peripheral circle; but the fronts *b* are every other one under cut to a greater degree than the remaining blades, thus forming a smaller angle with top *c* and producing alternate thick and thin cutting edges *a*.

I claim—

A rotary cutter for trimming the sole edges of boots and shoes, having a series of cutting-blades formed upon or arranged around a common hub, and so constructed that the faces *b*, and *c*, of the cutting-blades, which meet and form the cutting edges *a*, shall in every other cutting-blade, meet at a greater or less angle to each other than that at which the like faces of the remaining cutting-blades meet; substantially as and for the purposes specified.

SAMUEL N. CORTHELL.

Witnesses:

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