

No. 848,000.

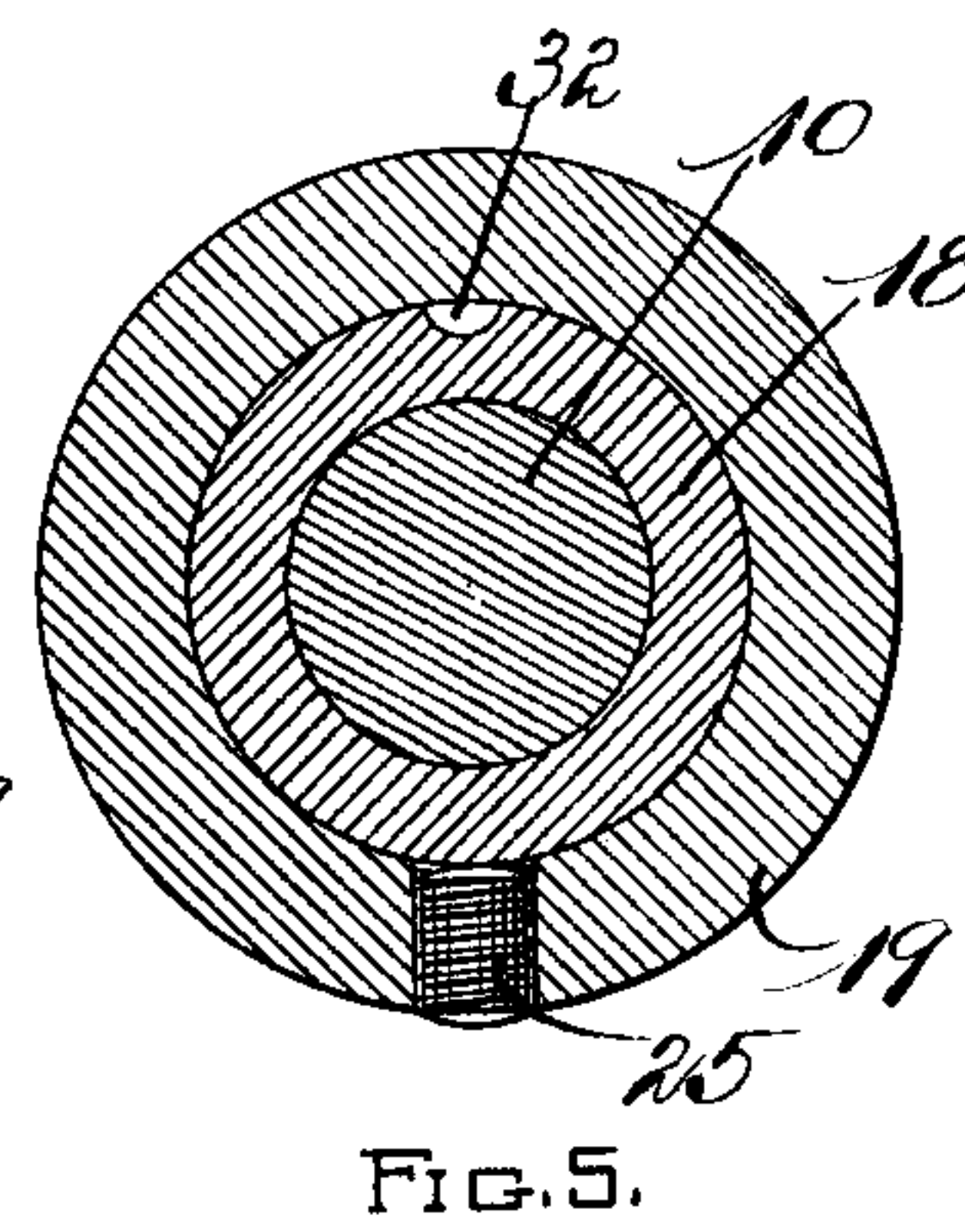
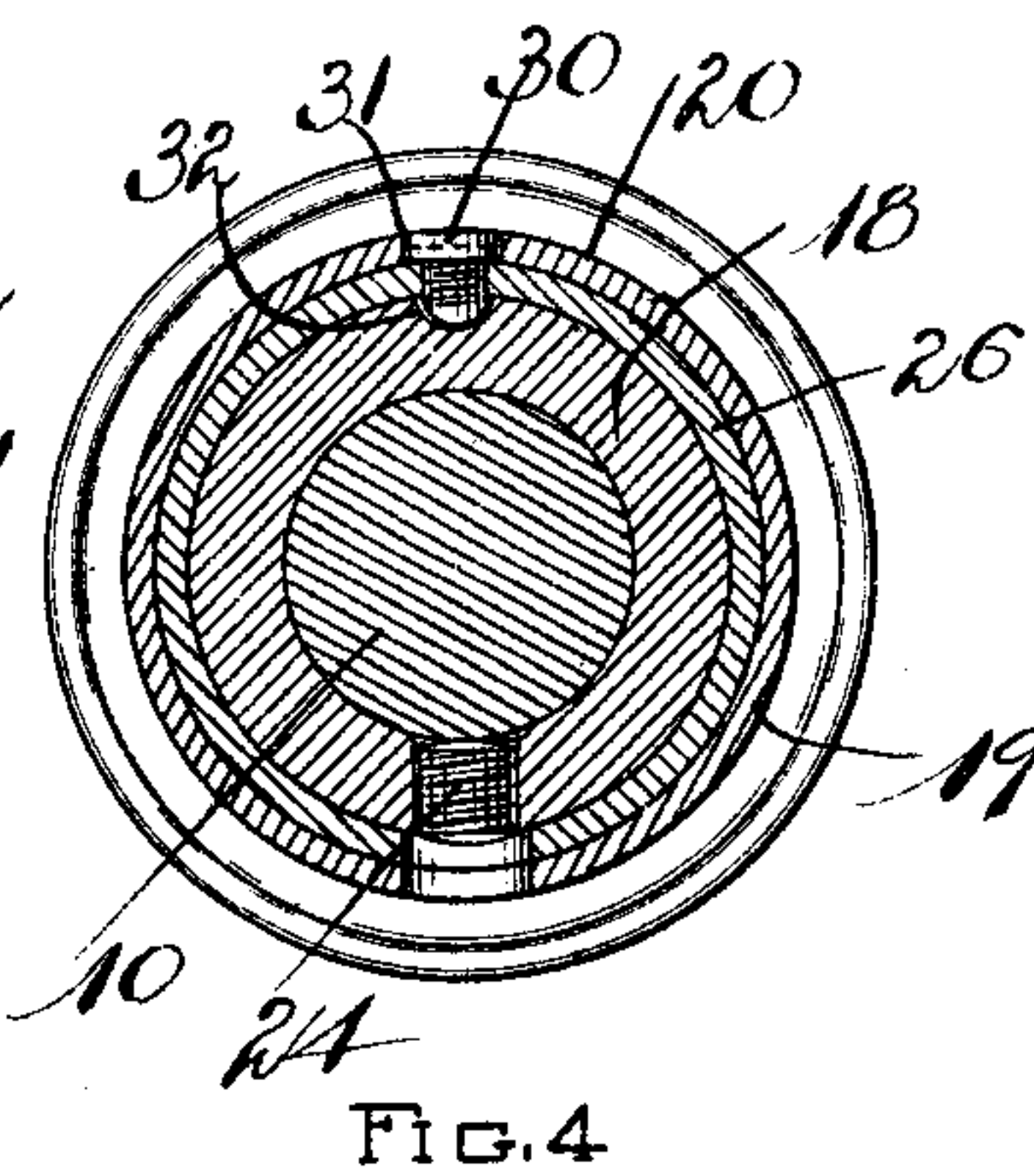
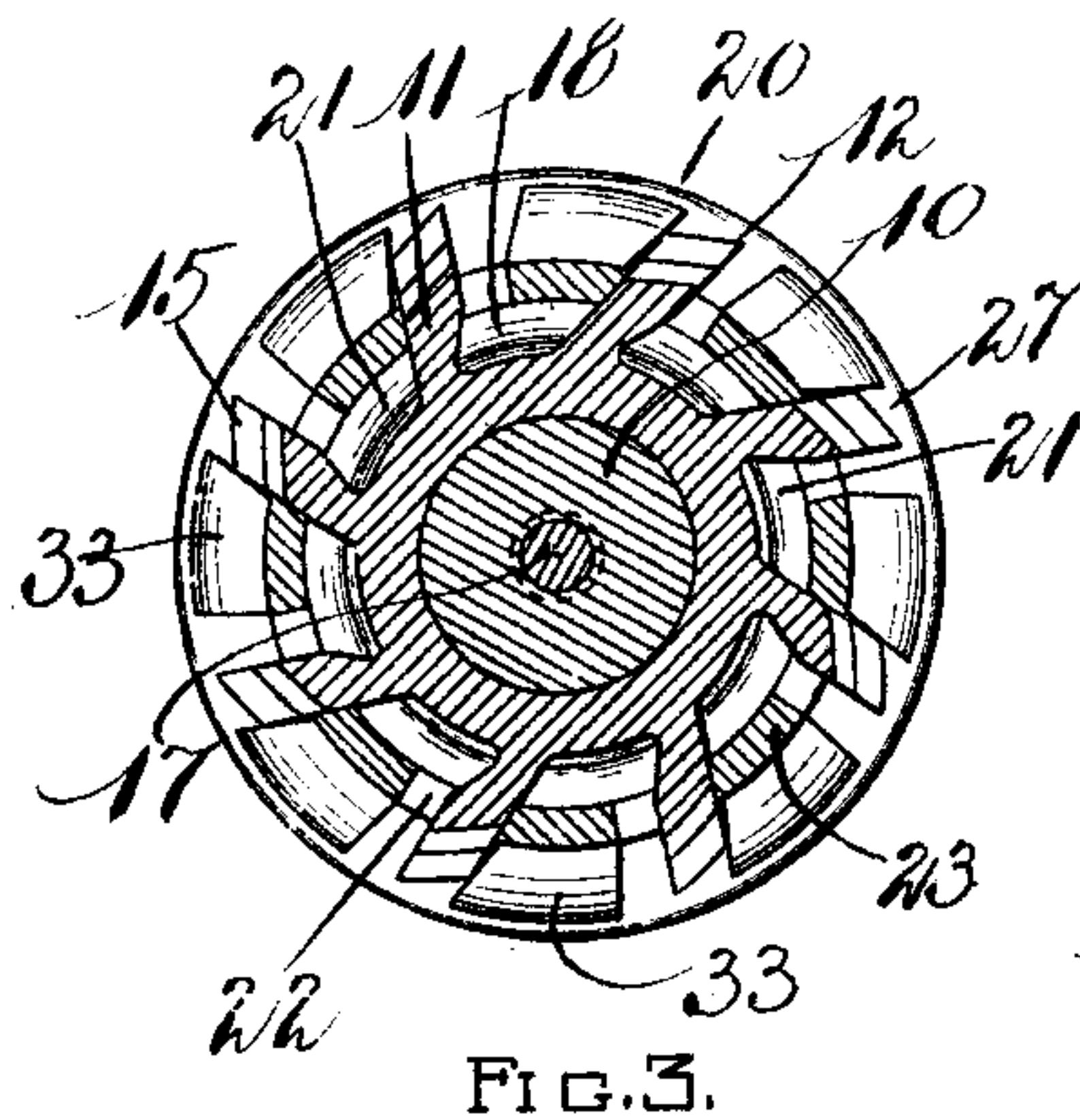
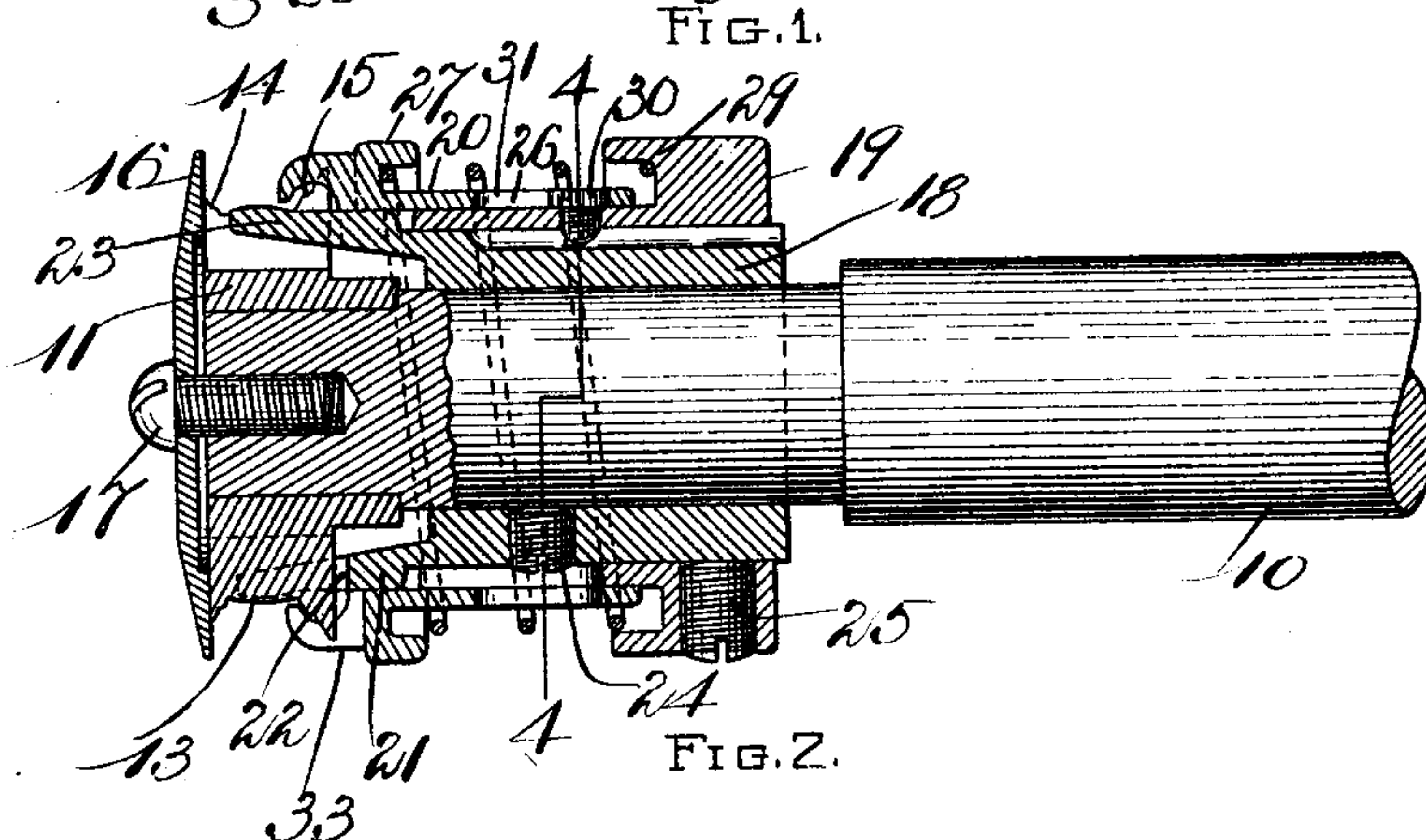
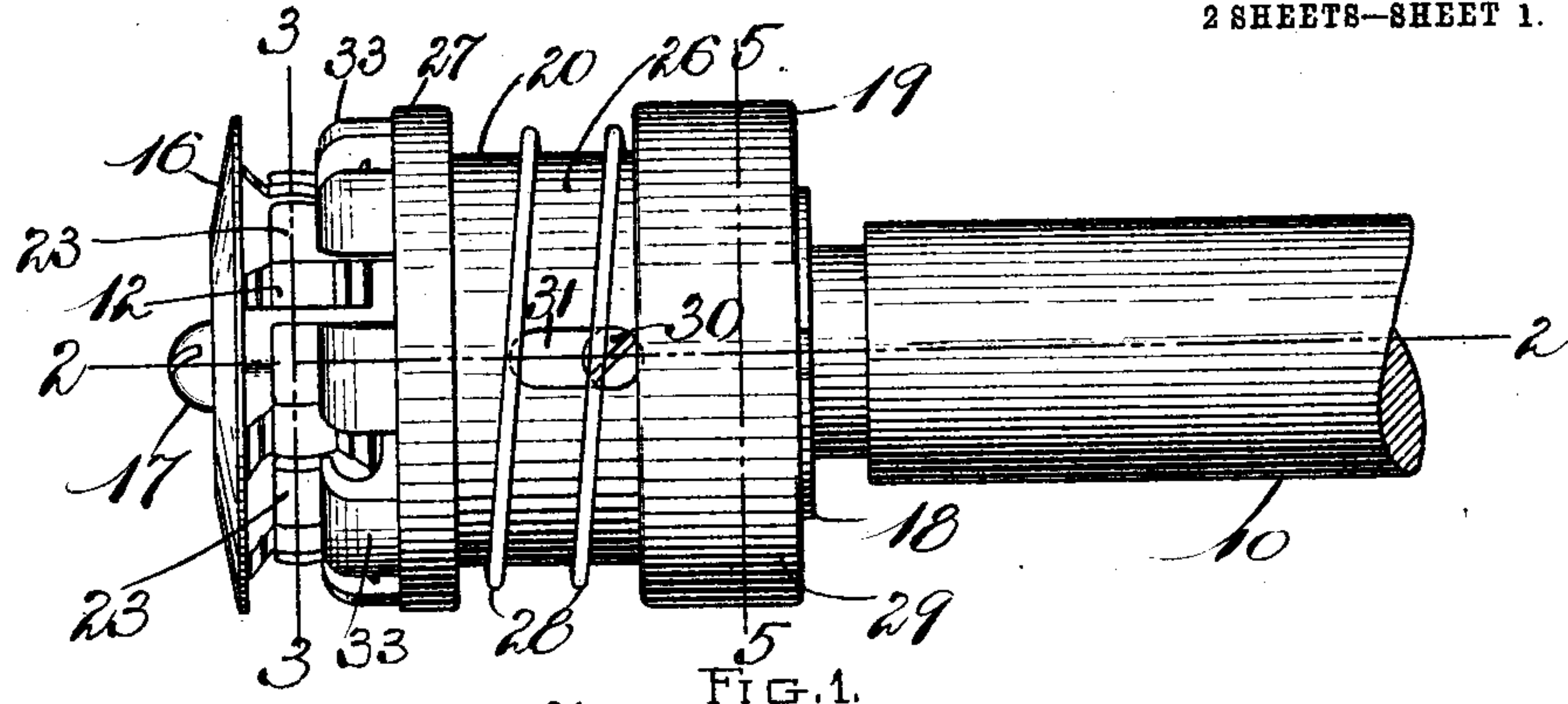
PATENTED MAR. 26, 1907.

Z. BEAUDRY.

TOOL FOR TRIMMING THE EDGES OF SOLES AND HEELS FOR
BOOTS AND SHOES.

APPLICATION FILED NOV. 19, 1902. RENEWED AUG. 13, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

Franklin E. Low.
Fred. C. Dorr.

INVENTOR:

Lotique Beaudry.

by his Attorney-

Charles V. Gooding.

No. 848,000.

PATENTED MAR. 26, 1907.

Z. BEAUDRY.

TOOL FOR TRIMMING THE EDGES OF SOLES AND HEELS FOR
BOOTS AND SHOES.

APPLICATION FILED NOV. 19, 1902. RENEWED AUG. 13, 1906.

2 SHEETS--SHEET 2.

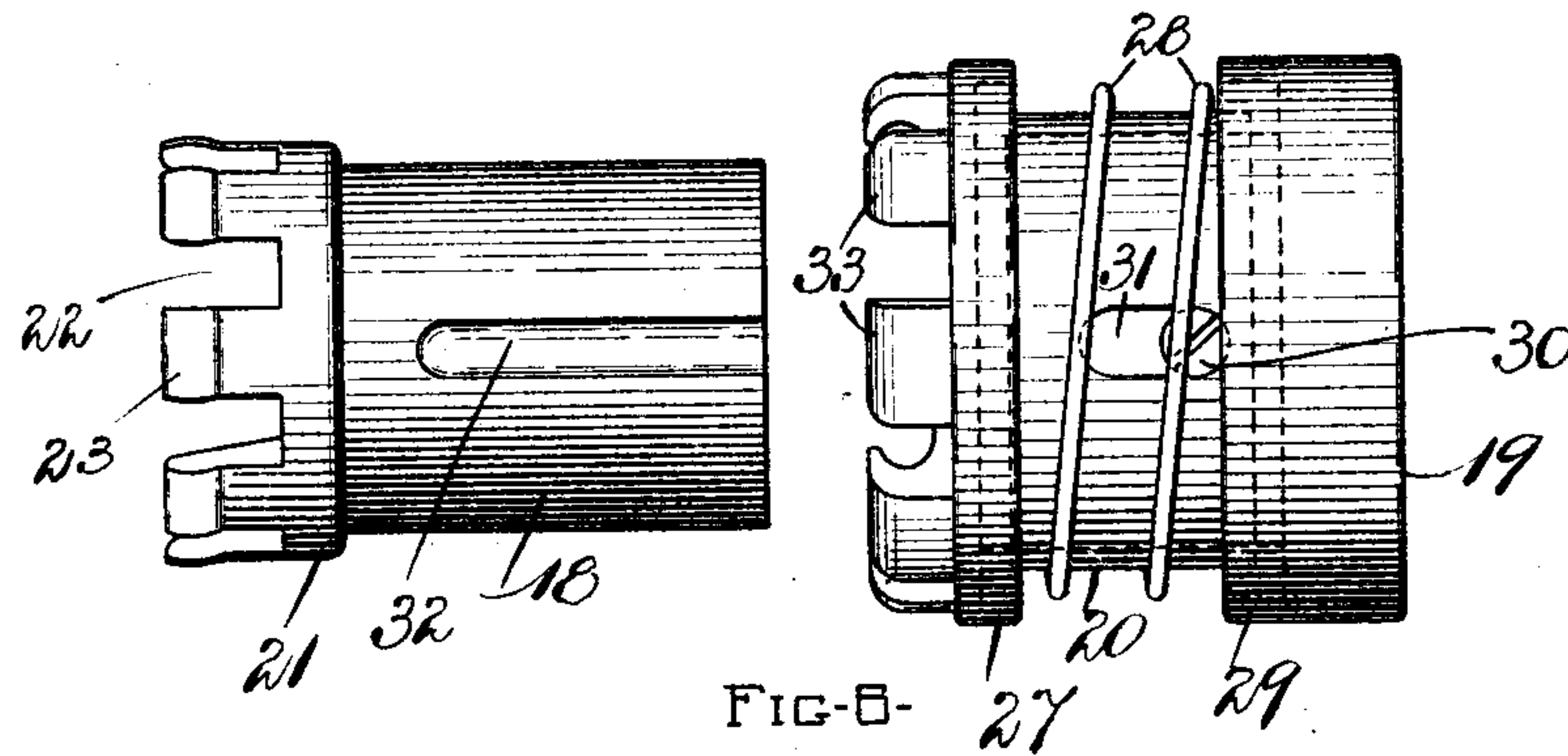


FIG-8-

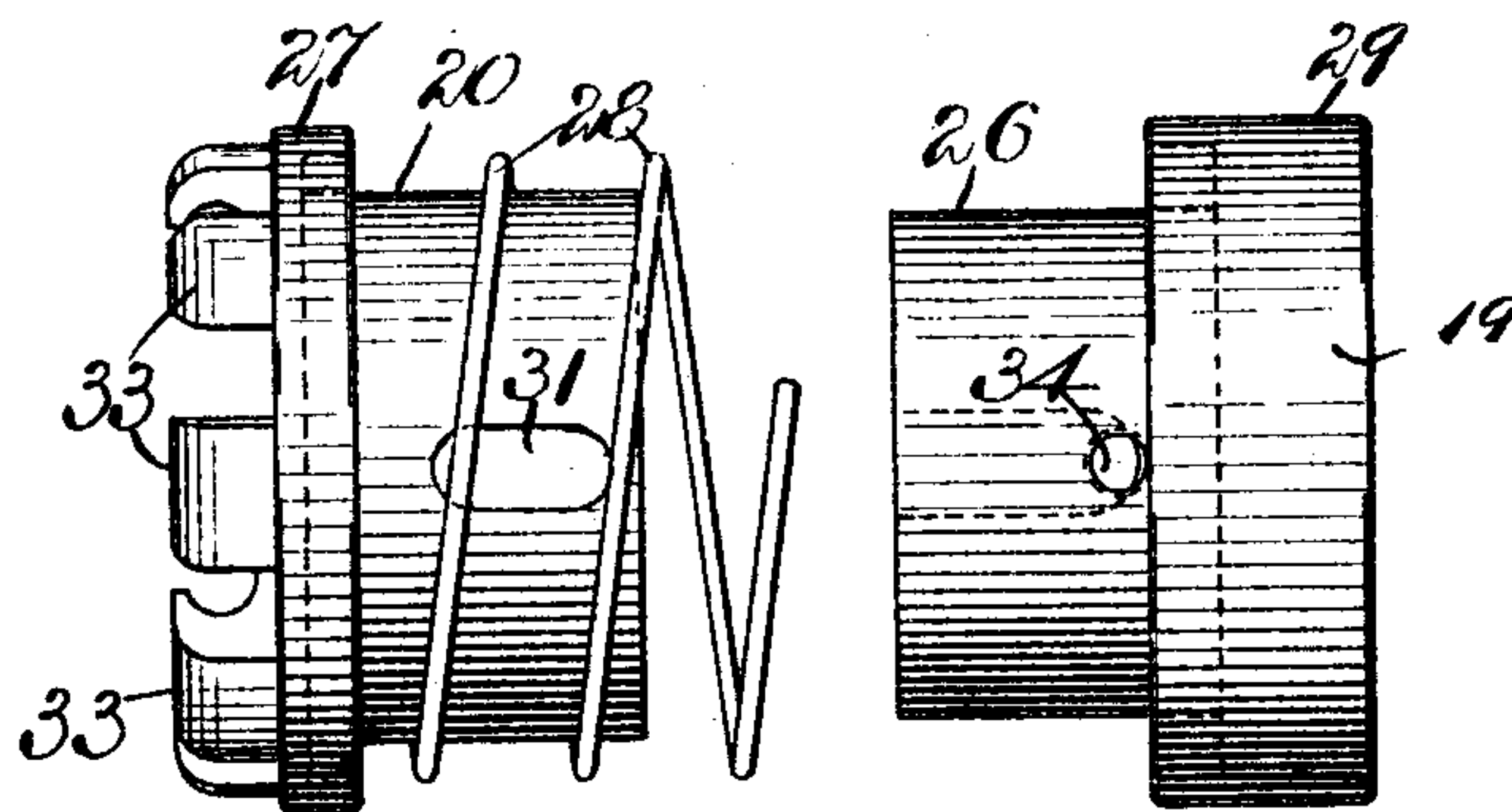


FIG-7.

WITNESSES:

Franklin E. Low
Fred. C. Dorr.

INVENTOR:

INVENTOR:
-Totique Beaudry-
by his Attorney, Charles V. Fording.

UNITED STATES PATENT OFFICE.

ZOTIQUE BEAUDRY, OF LYNN, MASSACHUSETTS.

TOOL FOR TRIMMING THE EDGES OF SOLES AND HEELS FOR BOOTS AND SHOES.

No. 848,000.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed November 19, 1902. Renewed August 13, 1906. Serial No. 330,487.

To all whom it may concern:

Be it known that I, ZOTIQUE BEAUDRY, of Lynn, Essex county, Massachusetts, have invented certain Improvements in Tools for
5 Trimming the Edges of Soles and Heels for Boots and Shoes, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

10 This invention relates to machines for trimming the edges of the soles of boots and shoes, the object of the invention being to provide a device which will combine a cutter-guard and feather-edge guard in such a man-
15 ner that the standard rotary cutters in use in the trade may be used in connection therewith without change, such device being adjustable or conformable to different sizes and widths of cutters.

20 The invention consists, in a machine of the character specified, of a rotary shaft and a cutter fast to said shaft and provided with cutting-teeth upon its periphery, in combination with three concentric sleeves mounted
25 upon said shaft and adjustable as one piece longitudinally thereof, one of said sleeves constituting a cutter-guard and provided with a series of guard-fingers which project between the teeth of said cutter and prevent said
30 teeth from taking too deep a cut into the edge of the sole-shoe, another of said sleeves being an auxiliary sleeve, mounted upon said cutter-guard sleeve and adjustable longitu-
35 dinally thereon, the third sleeve being a feather-edge-guard sleeve, which is provided with teeth projecting between the teeth of said cutter outside said guard-fingers, the feather-edge-guard sleeve and auxiliary
40 sleeve being held apart by a spring. A stop fast to one of said last-named sleeves limits their movement relatively to each other, said feather-edge-guard sleeve and auxiliary sleeve being adjustable as one piece longitu-
45 dinally of said cutter-guard sleeve.

The invention again consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings, Figure 1 is a plan
50 view of my improved sole-edge trimmer, the same being shown mounted upon a portion of a shaft. Fig. 2 is a longitudinal section, partly in elevation, taken on line 2 2 of Fig. 1. Fig. 3 is a section, partly in elevation, taken
55 on line 3 3 of Fig. 1 looking toward the right in said figure. Fig. 4 is a section taken on

line 4 4 of Fig. 2. Fig. 5 is a section taken on line 5 5 of Fig. 1. Fig. 6 is a plan view of the three concentric sleeves, the cutter-guard sleeve being shown at the left in said figure 60 and the feather-edge-guard sleeve, together with the auxiliary sleeve at the right in said figure, connected therewith. Fig. 7 is a plan view showing the feather-edge-guard sleeve and auxiliary sleeve separated and in the 65 relative positions assumed by said sleeves when about to be connected together.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 10 is the shaft of my im- 70 proved edge-trimming machine. 11 is a rotary cutter of a well-known type provided with teeth 12 upon its periphery, said teeth or blades having a curved central cutting portion 13, which cuts the central portion of 75 the edge of the sole, and beveled portions 14 and 15 for cutting the edge of the sole adjacent to the upper and the lower edge of the sole. 16 is a rand-guide or disk fastened to the end of the shaft by a screw 17. Said 80 disk also serves the purpose of securing the cutter upon the end of the shaft 10, so as to hold the same firmly secured thereto. These portions of my improved edge-trimming ma- 85 chine are old and well known to those skilled in the art.

The novel portion of said machine consists in the three concentric sleeves 18, 19, and 20. The sleeve 18 is a cutter-guard sleeve, the sleeve 19 an auxiliary sleeve, and the sleeve 90 20 a feather-edge-guard sleeve. The sleeves 18, 19, and 20, as hereinafter described, can be adjusted as one piece longitudinally of the shaft 10, upon which they are mounted, and the sleeves 19 and 20 can be adjusted as one 95 piece longitudinally upon the sleeve 18, upon which they are mounted. The sleeve 18 is shown in detail at the left of Fig. 6 and consists of a hollow cylinder having an enlarged portion 21 at the left-hand end thereof pro- 100 vided with slots 22, extending longitudinally thereof, the portions between said slots constituting guard-fingers 23, which, as seen in Figs. 1 and 2, project between the teeth of the cutter 11 and prevent the cutting edges 105 of said teeth from sinking too deep into the edge of the sole of the shoe which is being operated upon.

The cutter-guard sleeve 18 is fastened to the shaft 10 by a set-screw 24. The auxil- 110 iary sleeve 19 is mounted upon the cutter-guard sleeve 18 and is fastened thereto by a

set-screw 25. The feather-edge-guard sleeve 20 encircles the cylindrical portion 26 of the auxiliary sleeve 19 and is provided with a flange 27, against which one end of a spiral spring 28 bears, the opposite end of said spring bearing against a flange 29, formed upon the auxiliary sleeve 19. To limit the extent to which the spring 28 can move the feather-edge-guard sleeve 20 relatively to the auxiliary sleeve 19, a stop-screw 30 is provided having screw-threaded engagement with the cylindrical portion 26 of the auxiliary sleeve 19, the head of said screw projecting into a slot 31, provided in the feather-edge-guard sleeve 20. The inner end or point of said screw projects into a groove 32, formed in the periphery and running longitudinally of the cutter-guard sleeve 18. The feather-edge-guard sleeve 20 is provided with fingers 33 at the left-hand end thereof, which project between the teeth of the cutter 11 outside the guard-fingers 23.

In assembling the parts the feather-edge-guard sleeve 20 is slipped upon the cylindrical portion 26 of the auxiliary sleeve 19 and the stop-screw 30 screwed into the tapped hole 34, provided in said cylindrical portion, the head of the screw projecting into the slot 31 and the spiral spring resting, one end against the flange 27, the other against the flange 29, and thus tending to force the two sleeves 19 and 20 apart. The sleeve 18 is then slid into the interior of the auxiliary sleeve 19 and fastened thereto by the set-screw 25. The three sleeves are now joined together and are placed upon the shaft 10, to which they are fastened by the set-screw 24. It will be noted that the position of the feather-edge-guard fingers 33 with relation to the teeth of the cutter 11 and with relation to the fingers 23 of the cutter-guard sleeve 18 may be varied by loosening the set-screw 25 and moving the auxiliary sleeve and feather-edge-guard sleeve together toward the right or left, Figs. 1 and 2, as may be desired, and in this adjustment it will be noted that the location of the feather-edge-guard and auxiliary sleeves with relation to each other is not changed, and the tension upon the spring 28 remains the same. If one cutter be substituted for another, the thickness of said cutters between opposite faces varying, the three sleeves may be adjusted by means of the set-screw 24 and moving all three of said sleeves toward the right or left, as may be desired. These adjustments, it will be noted, are very quickly and easily accomplished. When by constant use in grinding the diameter of the cutter becomes changed, a new cutter-guard sleeve 18, in which the portion 21 is of less diameter is substituted, and in this substitution the set-screw 25 is loosened in order to allow the removal of said cutter-guard sleeve, the disk or rand-guide 16 being removed by removing the screw 17.

The fingers 23 are convexly curved at their outer ends upon their outer faces to adapt them to guide the edges of shoe-soles having a concave edge, as well as shoe-soles having a straight edge.

The advantages derived from my improved edge-trimmer are that the device is adapted to be used with the ordinary cutters well known in commerce for this purpose. The cutter-guard sleeve being all in one piece is very strong and is easily removed from or placed upon the machine, and the three sleeves combined being adjustable as one piece longitudinally of the shaft insures quickness of adjustment and great durability. The same advantages are obvious in the construction of the feather-edge-guard sleeve, together with the auxiliary guard-sleeve, said two sleeves forming as a whole a single piece which is adjustable, as hereinbefore described, by simply loosening a single set-screw and in the adjusting of which the tension upon the spring is not changed.

The general operation of the device hereinbefore described is as follows: The edge of the sole of the shoe is held against the periphery of the cutter with the rand-guide 16 inserted between the sole of the shoe and the upper. As the shoe is passed backward and forward upon the periphery of the cutter to trim the edge of the sole in a manner well known to those skilled in this art, the cutter removes portions of the edge of the sole and trims the portion of the sole adjacent to the edge, both on the top and bottom thereof, the bottom of the sole adjacent to the edge being further smoothed and finished by the fingers 33 of the feather-edge guard 20, said feather-edge guard yielding for different thicknesses of soles and for different thicknesses at different parts of the same sole, being held thereagainst by the spring 28.

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

1. An edge-trimming machine comprising in its construction a rotary shaft, a cutter fast to said shaft and provided with a series of cutting-teeth, three concentric sleeves mounted upon said shaft and adjustable as one piece longitudinally thereof, said sleeves comprising a cutter-guard sleeve having a series of guard-fingers integral therewith and projecting between the teeth of said cutter; an auxiliary sleeve mounted upon said cutter-guard sleeve and adjustable longitudinally thereon, and a feather-edge-guard sleeve provided with fingers projecting between the teeth of said cutter and mounted upon said auxiliary sleeve; and a spring acting to hold said auxiliary sleeve and feather-edge-guard sleeve apart.

2. An edge-trimming machine comprising in its construction a rotary shaft, a cutter fast to said shaft and provided with a series

of cutting-teeth, three concentric sleeves mounted upon said shaft and adjustable as one piece longitudinally thereof, said sleeves comprising a cutter-guard sleeve having a series of guard-fingers integral therewith and projecting between the teeth of said cutter; an auxiliary sleeve mounted upon said cutter-guard sleeve and adjustable longitudinally thereon, and a feather-edge-guard sleeve provided with fingers projecting between the teeth of said cutter and mounted upon said auxiliary sleeve; a spring acting to hold said auxiliary sleeve and feather-edge-guard sleeve apart, and a stop fast to one of said last-named sleeves adapted to limit their movement relatively to each other, said feather-edge-guard sleeve and auxiliary sleeve adjustable as one piece longitudinally of said cutter-guard sleeve.

3. An edge-trimming machine comprising in its construction a rotary shaft, a cutter fast to said shaft and provided with a series of cutting-teeth, a cutter-guard sleeve fast to said shaft having a series of guard-fingers integral therewith and projecting between the teeth of said cutter, an auxiliary sleeve fast to said cutter-guard sleeve and adjustable longitudinally thereof, a feather-edge-guard sleeve provided with teeth projecting between the teeth of said cutter outside said guard-fingers, said feather-edge-guard sleeve slidable longitudinally on said auxiliary sleeve, a spring interposed between said auxiliary sleeve and feather-edge-guard sleeve, and a stop fast on one of said last-named sleeves to limit their movement with relation to each other.

4. An edge-trimming machine comprising in its construction a rotary shaft, a cutter fast to said shaft and provided with a series of cutting-teeth, a cutter-guard sleeve fast to said shaft having a series of guard-fingers in-

tegral therewith and projecting between the teeth of said cutter, an auxiliary sleeve fast to said cutter-guard sleeve and adjustable longitudinally thereof, a feather-edge-guard sleeve provided with teeth projecting between the teeth of said cutter outside said guard-fingers, said feather-edge-guard sleeve slidable longitudinally on said auxiliary sleeve, a spring interposed between said auxiliary sleeve and feather-edge-guard sleeve, and a stop-screw having screw-threaded engagement with said auxiliary sleeve and projecting through a slot provided in said feather-edge-guard sleeve and limiting the movement of said sleeves with relation to each other.

5. An edge-trimming machine comprising in its construction a rotary shaft, a cutter fast to said shaft and provided with a series of cutting-teeth, a cutter-guard sleeve fast to said shaft having a series of guard-fingers integral therewith and projecting between the teeth of said cutter, an auxiliary sleeve fast to said cutter-guard sleeve and adjustable longitudinally thereof, a feather-edge-guard sleeve provided with teeth projecting between the teeth of said cutter outside said guard-fingers, said feather-edge-guard sleeve slidable longitudinally on said auxiliary sleeve, a spring interposed between said auxiliary sleeve and feather-edge-guard sleeve, and a stop-screw having screw-threaded engagement with said auxiliary sleeve and projecting at one end thereof through a slot provided in said feather-edge-guard sleeve and at the other end into a groove provided in said cutter-guard sleeve.

ZOTIQUE BEAUDRY.

Witnesses:

N. W. STEARNS,
EDWIN W. BROWN.