

No. 670,409.

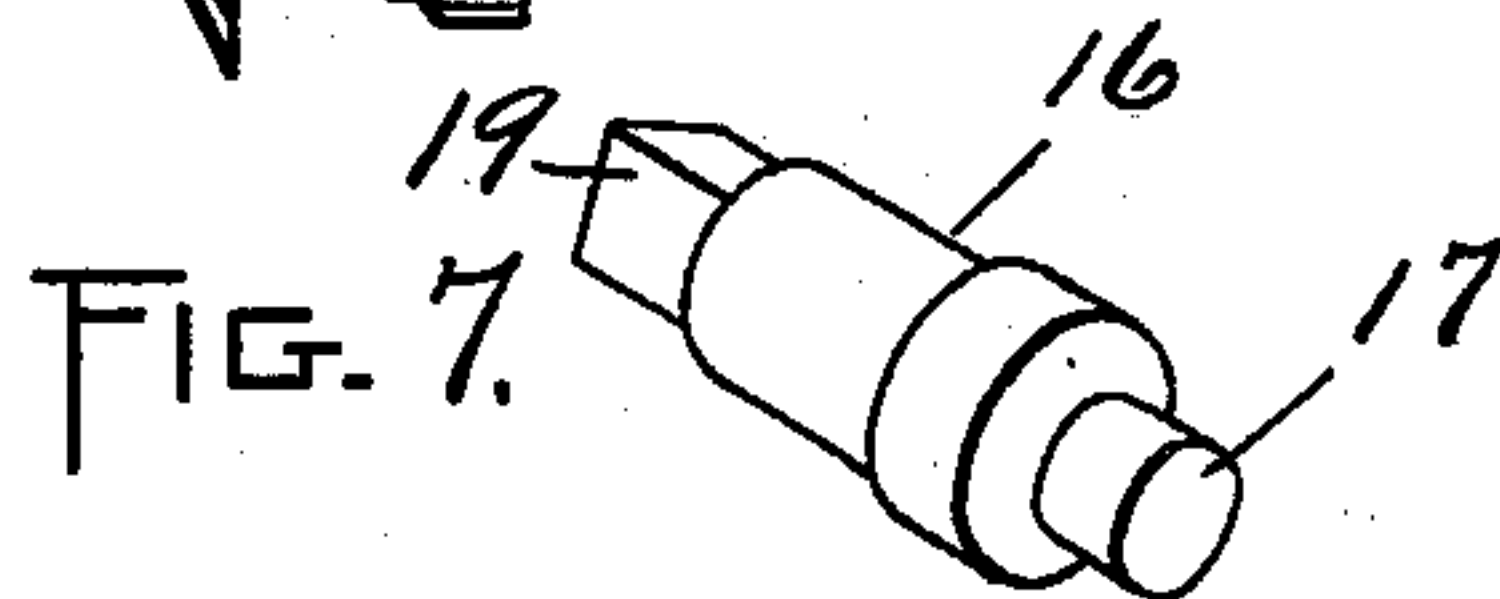
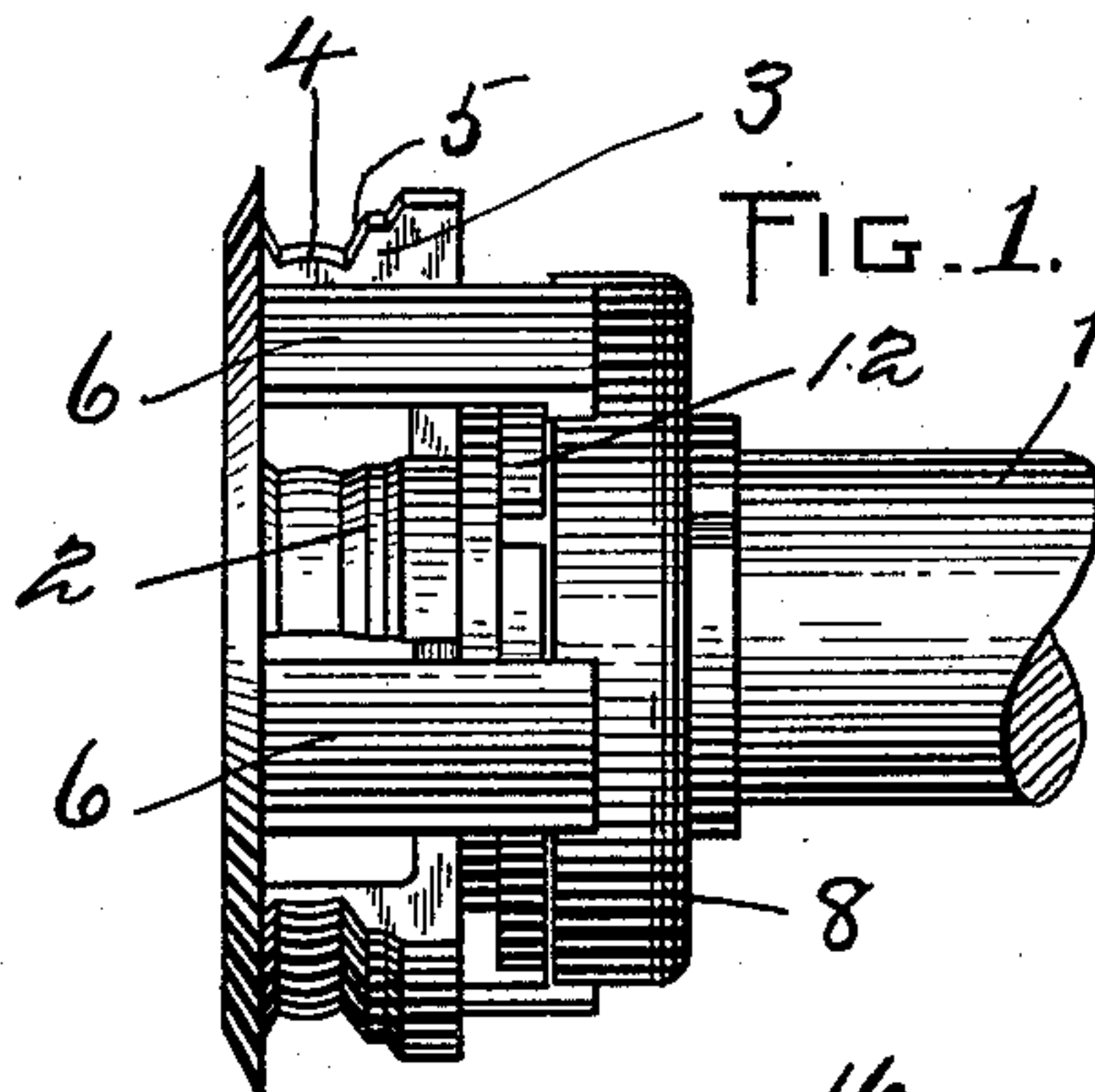
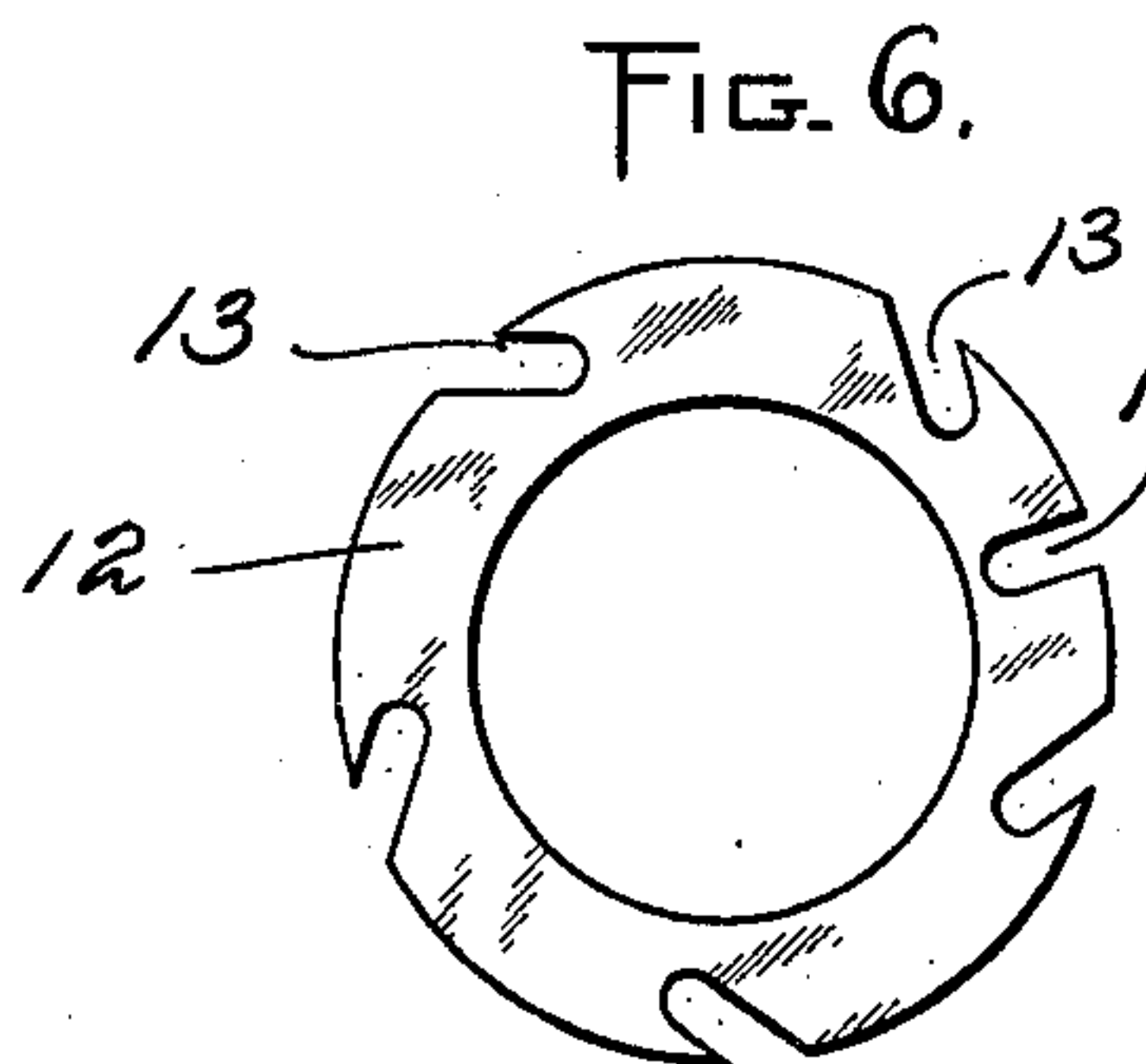
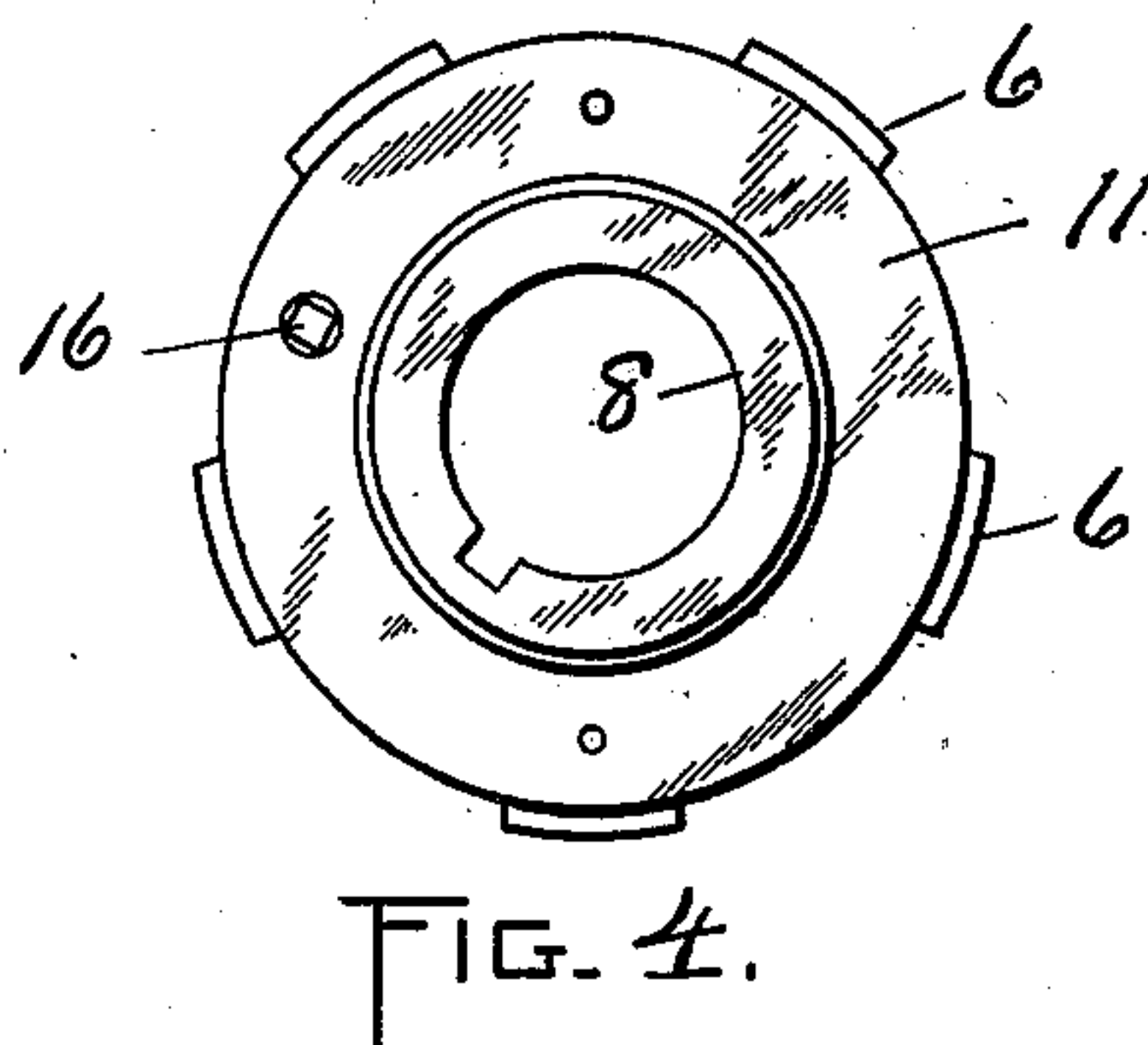
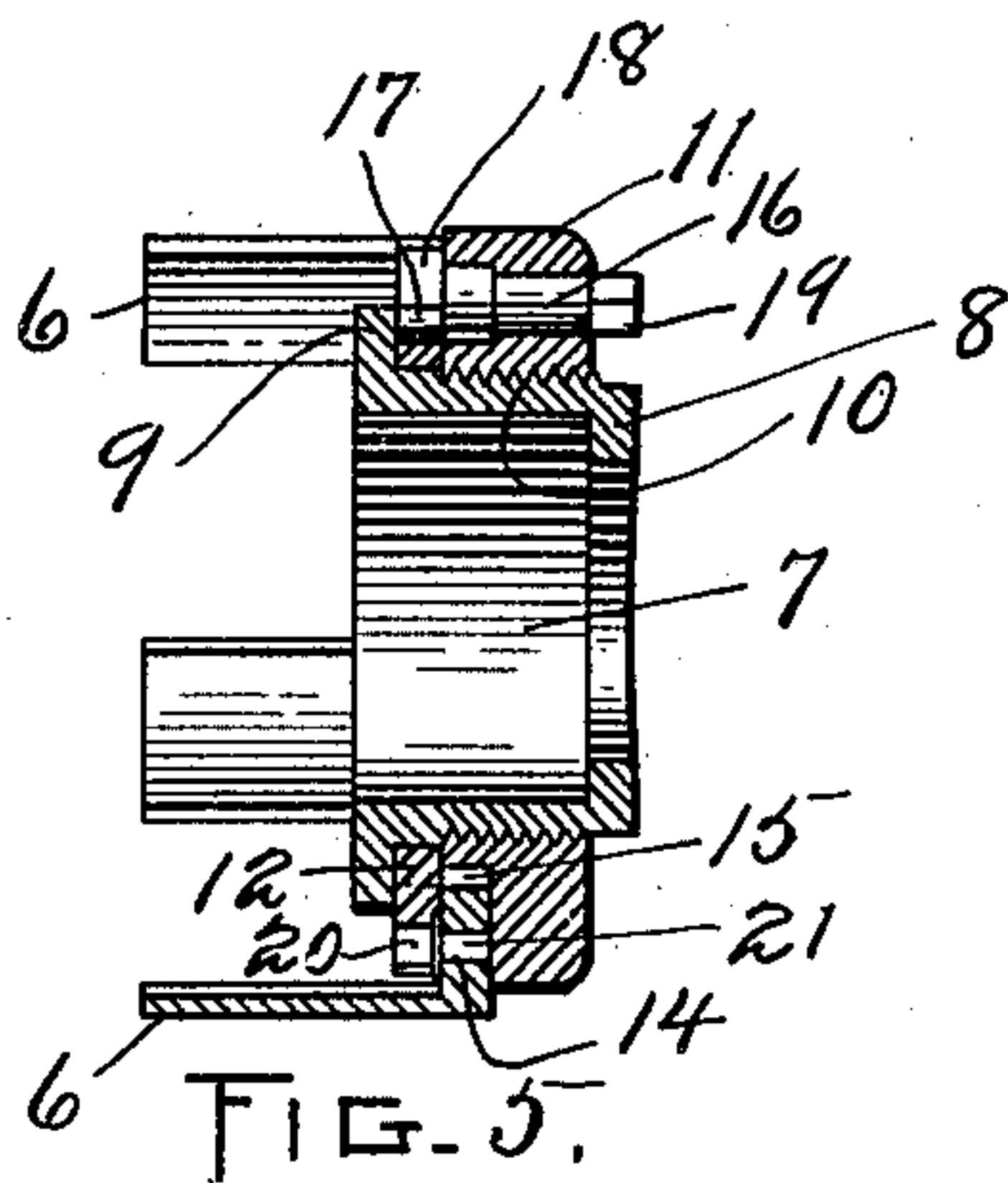
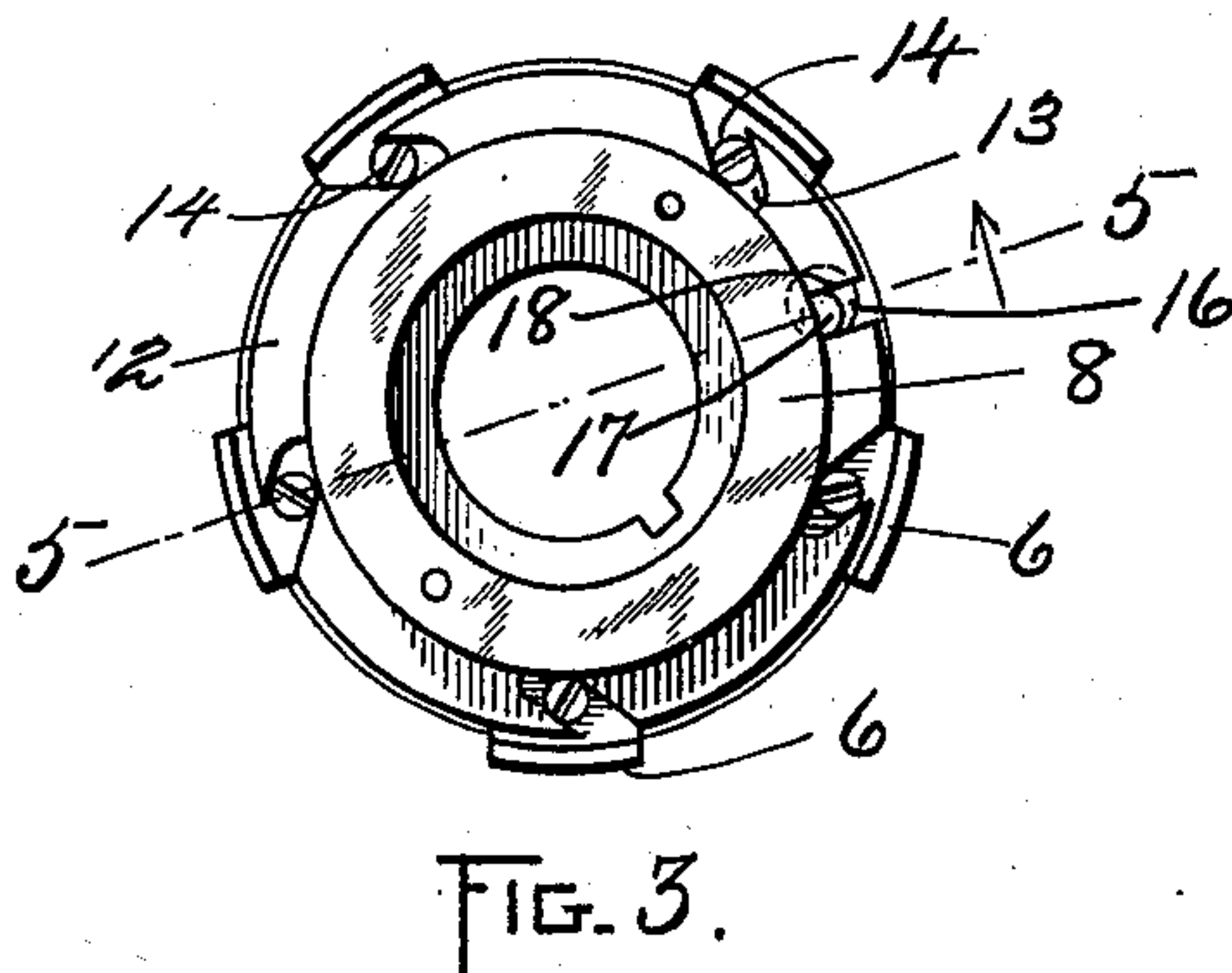
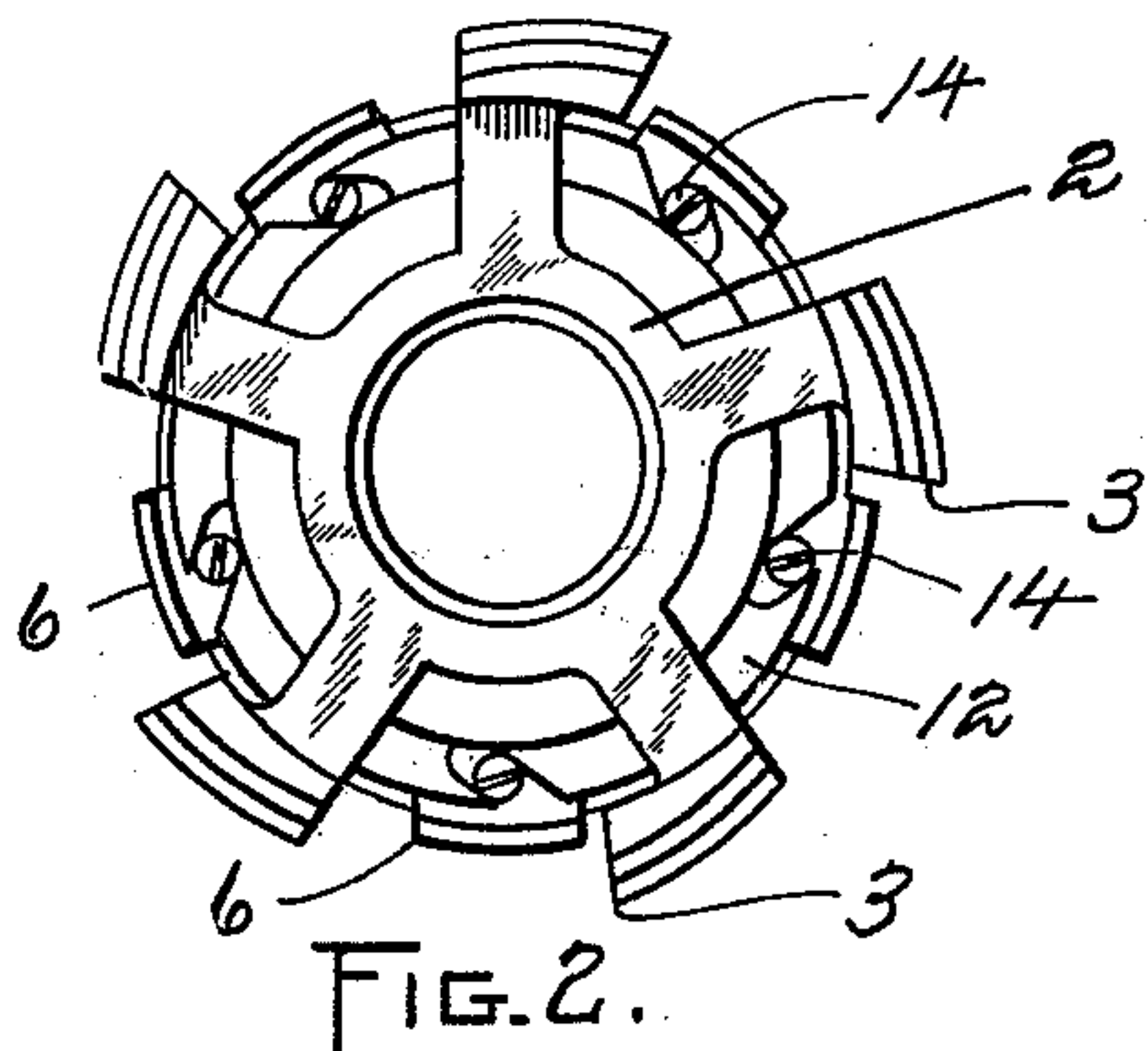
Patented Mar. 19, 1901.

E. F. MAXWELL & E. E. ANGELL.

SOLE EDGE TRIMMER.

(Application filed June 23, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

EDWIN F. MAXWELL, OF SAN FRANCISCO, CALIFORNIA, AND EDWIN E. ANGELL, OF SOMERVILLE, MASSACHUSETTS.

SOLE-EDGE TRIMMER.

SPECIFICATION forming part of Letters Patent No. 670,409, dated March 19, 1901.

Application filed June 23, 1900. Serial No. 21,261. (No model.)

To all whom it may concern:

Be it known that we, EDWIN F. MAXWELL, of San Francisco, county of San Francisco, State of California, and EDWIN E. ANGELL, of Somerville, county of Middlesex, State of Massachusetts, have invented certain new and useful Improvements in Sole-Edge Trimmers, of which the following is a specification.

This invention relates to sole-edge trimmers having an edge-guard to regulate the depth of cut of the edge-trimming portions of the cutter, such as is described in Patent No. 625,115, granted to E. F. Maxwell May 16, 1899. In the said patent the sections of the edge-guard were independently adjustable, and separate adjustment was required for each section when it was desired to vary the depth of cut.

The present invention has for its object to provide means for simultaneously adjusting the sections of the edge-guard; and to this end it consists in certain novel features of construction and arrangement, which we will now proceed to describe and claim.

Of the accompanying drawings, Figure 1 represents a side elevation of a sole-edge trimmer constructed in accordance with our invention. Fig. 2 represents a front elevation thereof with the shield removed. Fig. 3 represents a front elevation with the cutter removed. Fig. 4 represents a rear elevation of the parts in Fig. 3. Fig. 5 represents a section on line 5 5 of Fig. 3. Fig. 6 represents a detail elevation of the adjusting-ring. Fig. 7 represents a detail perspective view of the eccentric adjusting-pin.

The same reference characters indicate the same parts in all the figures.

Referring to the drawings, 1 designates a rotary shaft or arbor, to the end of which is clamped the cutter 2, consisting of a hub and spider, having at the ends of its arms the cutting members 3 3, which are adapted to trim the edge of the sole. Each cutting portion itself consists of an edge-trimming part 4 and a bottom-trimming part 5.

6 6 represent a number of horizontal forwardly-projecting arms located in the spaces between the cutter members 3 3 and constituting sections of an edge-guard which regu-

lates the depth of cut of the said cutting portions, the action of said guard being clearly apparent from the drawings, wherein it is seen that the different sections 6 lie just within the edge-trimming portions 4 of the cutter. The sections 6 are L-shaped, as seen in Fig. 5, and are mounted upon a base 7, rigidly fixed to the arbor 1 in a suitable manner. The base 7 is made up of an inner sleeve or collar 8, having an outwardly-projecting flange or shoulder 9 on its front end and a screw-threaded portion 10 behind said shoulder, on which threaded portion is mounted a nut or holder 11. The said nut holds a ring or plate 12 in place between itself and the shoulder or flange 9. In the ring are cut a number of tangential slots 13, occupied by pins or studs 14 on the individual edge-guard sections 6. The edges of the slots have a cam action on the pins, which when the ring is rotated has the effect of moving the sections 6 radially in or out. The holder 11 is provided with radial slots or guides 15, Fig. 5, on its face, in which the sections 6 are adapted to slide.

16 is an eccentric adjusting-pin, having a cylindrical rear portion or body journaled in the holder 11 and a stud 17 on its front end, set eccentrically on the said cylindrical portion and occupying a radial slot 18 in the ring 12. The rear end of the eccentric pin is squared, as at 19, to receive a wrench or turning-tool whereby the pin may be rotated, the rotation having the effect of rotating the plate with respect to the holder, and thus moving the edge-guard sections 6 6 simultaneously in or out in a radial direction, as described. This adjustment may be effected by first unscrewing the holder 11 slightly, so as to loosen the ring 12, then rotating the ring in the described manner by means of the eccentric pin, and finally retightening the holder, so as to clamp the ring between itself and the shoulder 9. The studs 14 may be affixed to the edge-guard sections 6 in any suitable manner. By setting their head portions 20 eccentrically to their journal portions 21 and mounting said journal portions so as to rotate with friction in the sections 6 an individual radial adjustment may be given to the edge-guard sections by applying a screw-

driver to the heads of the studs, which are slotted for the purpose, as shown in the drawings, and turning said studs.

The edge-trimming portions of the rotary cutter are rigid in the sense that they are immovable or non-adjustable relatively to the hub or body of the cutter. Hence there is no liability of the cutting edges becoming displaced under the strain of the trimming operation. In former constructions employing pivoted or sliding cutter-arms adapted to be adjusted relatively to the guard, the outer or cutting ends being adjustable in curved or straight lines tangential to the path of movement, there is considerable liability of the cutters being displaced by the resistance of the material being trimmed. In the present case, however, there is no possibility of such displacement, and as the resistance to the rotary movement of the edge-guard sections is very slight the latter are not liable to be displaced from the position to which they may be adjusted.

We claim--

1. In a sole-edge trimmer, a rotary cutter member having rigid edge-trimming portions, an edge-guard having sections which are adjustable radially toward and away from said edge-trimming portions to vary the depth of

cut thereof, and means for simultaneously adjusting said edge-guard sections.

2. In a sole-edge trimmer, a rotary cutter member having rigid edge-trimming portions, an edge-guard having sections which are adjustable radially toward and away from said edge-trimming portions to vary the depth of cut thereof, means for simultaneously adjusting said edge-guard sections, and means for positively holding the edge-guard sections in any position to which they may be adjusted.

3. In a sole-edge trimmer, a rotary cutter member having rigid edge-trimming portions, an edge-guard having sections which are adjustable radially toward and away from said edge-trimming portions to vary the depth of cut thereof, a rotatable ring having tangentially-arranged grooves engaged with studs on the guard-sections, and means for adjusting and holding said ring.

In testimony whereof we have affixed our signatures in presence of two witnesses.

EDWIN F. MAXWELL.
EDWIN E. ANGELL.

Witnesses:

C. F. BROWN,
A. D. HARRISON.