

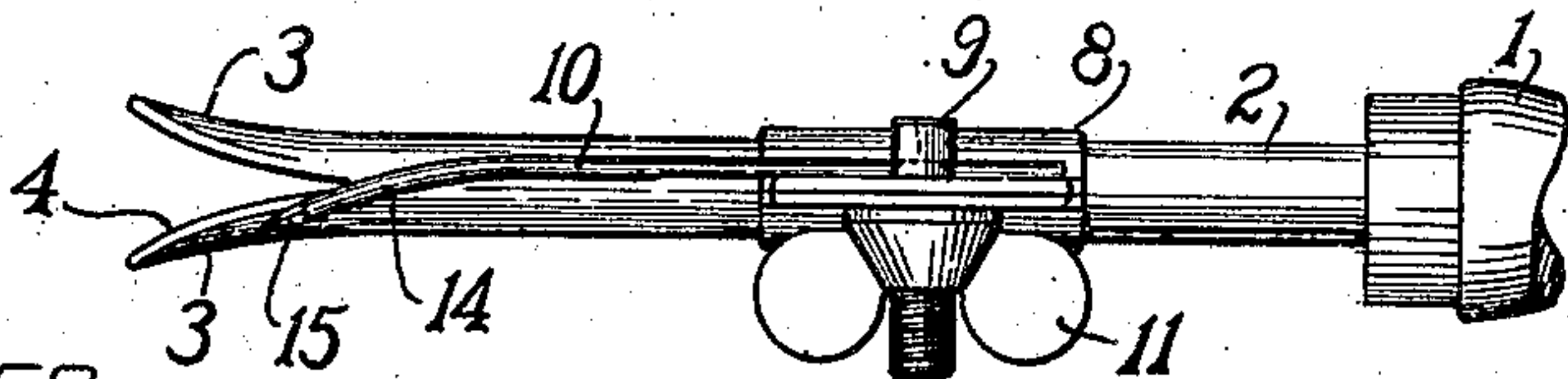
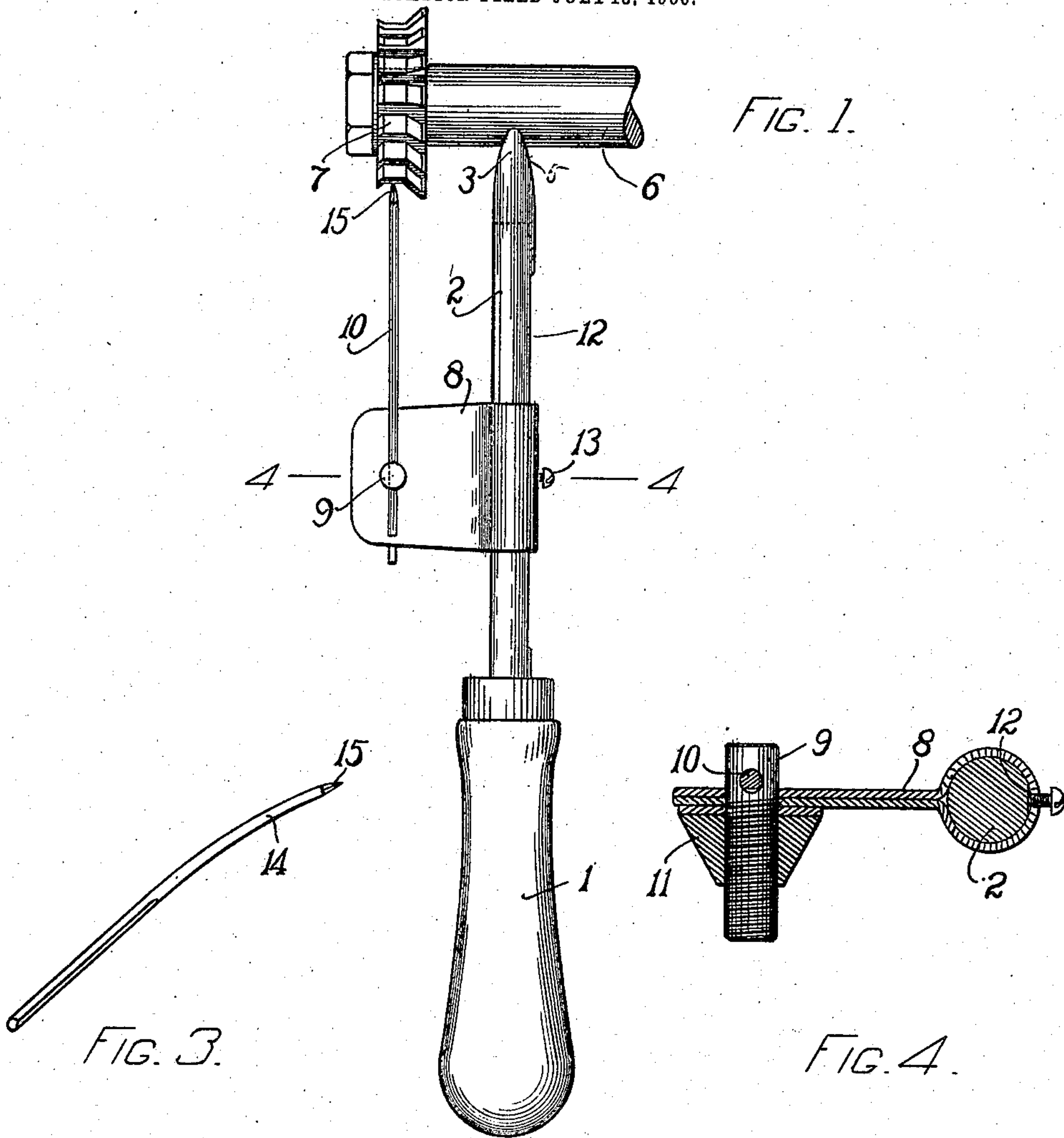
No. 848,097.

G. E. FULLER.

PATENTED MAR. 26, 1907.

LONG TOOTH FINDER FOR CUTTERS FOR EDGE TRIMMING MACHINES  
FOR BOOTS AND SHOES.

APPLICATION FILED JULY 18, 1906.



WITNESSES

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FIG. 2.

INVENTOR

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BY *Geo. H. Maxwell,*  
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# UNITED STATES PATENT OFFICE.

GEORGE E. FULLER, OF SOUTH HANSON, MASSACHUSETTS, ASSIGNOR TO  
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LONG-TOOTH FINDER FOR CUTTERS FOR EDGE-TRIMMING MACHINES FOR BOOTS AND SHOES.

No. 848,097.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed July 18, 1906. Serial No. 326,702.

*To all whom it may concern:*

Be it known that I, GEORGE E. FULLER, a citizen of the United States, residing at South Hanson, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Long-Tooth Finders for Cutters for Edge-Trimming Machines for Boots and Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The cutter-wheels or cutters for edge-trimmers in boot and shoe factories wear unevenly very rapidly and require grinding down even several times a day, the usual practice being for the operator to hold a piece of chalk as steadily as he can in his hand and thereby mark the long teeth of the rotating cutter wheel. It is impossible, however, to get accurate results in this manner, as the hand is unsteady and the method crude, so that it is usually necessary to make several trials before the job is finished. This consumes a great deal of the operator's time. Accordingly I have devised a tool which although primarily intended for edge cutters is capable of a much wider range of usefulness. I will describe it, however, as applied to edge cutters. It comprises a stem or spindle split or bifurcated at its forward end and provided with flaring rounded lips for giving precision of centering movement, while at the same time permitting the tool to be swung angularly to the shaft, and a device carried at one side of the stem for marking delicately and accurately a projecting or long tooth or unevenness of the cutter. I prefer to employ as the marking device a long stiff spring-needle having a sharpened steel point, deflected at a certain angle which I have found advantageous for securing the best results, all as will be more fully explained in the course of the following description, taken in connection with the accompanying drawings, in which I have illustrated the preferred form of my invention.

In the drawings, Figure 1 is a plan view of my long-tooth finder, showing the same in operative relation to a cutter. Fig. 2 is a side view of the tool. Fig. 3 is a perspective view of the marking device, and Fig. 4 is a sectional view on the line 4 4, Fig. 1.

From a suitable handle 1 projects a spindle or stem 2, having a bifurcated or split

outer end, whose sides flare outwardly to form curved lips 3, having their inner surfaces smooth and curved or beveled, as indicated at 4, Fig. 2, and their edges beveled or rounded to a convex shape, as indicated at 5, Fig. 1. I have found that this particular curvature and formation of the engaging end of the spindle 2 permits the most accurate swinging movement when said lips 3 are rested against a shaft 6, on which a cutter 7 is mounted in the trimming-machine. Adjustably secured to the spindle 2 is a slide 8, preferably formed of spring metal looped around the spindle and secured at its outer end by a stud 9, perforated to receive a steel finger or needle 10, slidingly mounted in said stud 9 and held tight against the adjacent surface of the slide 8 by a thumb-nut 11. The spindle 2 is flattened or slabbed off at 12 to receive an aligning-screw 13 in the slide 8 for maintaining the slide 8 in exact alignment with the shaft 6 and with the medial plane of the spindle 2 parallel to the lips 3. The steel finger 10 is deflected at its outer end at 14 and sharpened and hardened at 15, so that its hard point simply ticks the extreme edge or end of the long tooth, thereby leaving a bright mark or scratch on the steel of the cutter, said scratch or bright mark being readily seen and instantly detected. The operator can feel the tick or touch of the finger 10 against the cutter 7 instantly and can also detect the same by sound.

It will be understood that various changes in details may be resorted to without departing from the spirit and scope of my invention.

In use the operator places the lips 3 against the shaft 6 of the machine, thereby getting an absolutely firm and properly-centered bearing for the tool, which brings the finger 10 into proper position and holds the same absolutely steady. As he presses the tool forward against the shaft he swings the handle over to the left very slowly until the sharp end 15 of the finger 10 comes against the revolving teeth. In this manner he follows along the transverse edge of the cutters, thereby marking all the unevennesses in the cutter edge with extreme accuracy and rapidity. The slide 8 may be moved back for a larger cutter, and the angle of the finger 10 may be changed by loosening the clamping-nut. If a finger or needle 10 breaks, it may be quickly replaced simply by



loosening the nut 11. Although it does not wear away rapidly, such wear as takes place may be compensated by shifting it forward in the stud 9. By having the end deflected at 14, as shown, it cannot catch between the teeth of the cutter if held improperly, and I have also discovered that when deflected at the angle shown it produces brighter and better or more accurately defined marks on the teeth and gives superior results. By my construction the resting-point on the shaft is always rigid, it fits any size of shaft, and although the finger is yielding for giving the best marking results the construction is firm and accurate. Also the needle and its support are quickly adjustable together on the spindle, so that one tool will answer for all the different sizes of cutters and trimming-machines in the factory.

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

1. A long-tooth finder, consisting of self-centering means for removably engaging a rotating cutter-shaft, said means being constructed and arranged to permit of swinging the finger angularly to the rotating shaft, and a spring-needle having a sharpened point at its forward end mounted in said shaft-engaging means in position to contact with the projecting tooth of the cutter when being swung toward the same by said engaging means.

2. A long-tooth finder, consisting of a spindle having a flared split end rounded at its extremities to engage a cutter-shaft and permit accurate angular swinging movement while the shaft is rotating, and marking means movable with said spindle, having a sharp deflected marking-point to engage a long tooth of the rotating cutter on said shaft.

3. A long-tooth finder, consisting of a spindle provided with self-centering means at its outer end to engage a rotating cutter-shaft, an adjustable slide mounted on said spindle, and a spring-finger carried by said

slide at one side of said spindle to engage and mark a long tooth of the cutter.

4. A long-tooth finder, consisting of a spindle provided with self-centering means at its outer end to engage a rotating cutter-shaft, an adjustable slide mounted on said spindle, and a spring-finger adjustably carried by said slide at one side of said spindle to engage and mark a long tooth of the cutter.

5. A long-tooth finder, consisting of a spindle provided with self-centering means at its outer end to engage a rotating cutter-shaft, an adjustable slide mounted on said spindle, a perforated stud adjustably secured in said slide, and a spring-needle slidably mounted in the perforation of said stud, said needle having a sharpened end to mark the cutter-teeth.

6. A long-tooth finder, consisting of a spindle provided with self-centering means at its outer end to engage a rotating cutter-shaft, an adjustable slide mounted on said spindle, a perforated stud adjustably secured in said slide, and a spring-needle slidably mounted in the perforation of said stud, said needle having a sharpened end to mark the cutter-teeth, said end being deflected downwardly in the direction of rotation of the cutter.

7. A long-tooth finder, consisting of a spindle mounted in a handle at one end, and, at its other end, having flaring-lips, smooth and outwardly curved on their inner faces and having their edges curved and rounded to a point, combined with a slender needle-like finger supported by said spindle at a considerable distance at one side thereof, and having its forward free end deflected below the medial line of said flaring lips.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE E. FULLER.

Witnesses:

ROSANNA CALLANAN,  
GEO. D. SOULE.