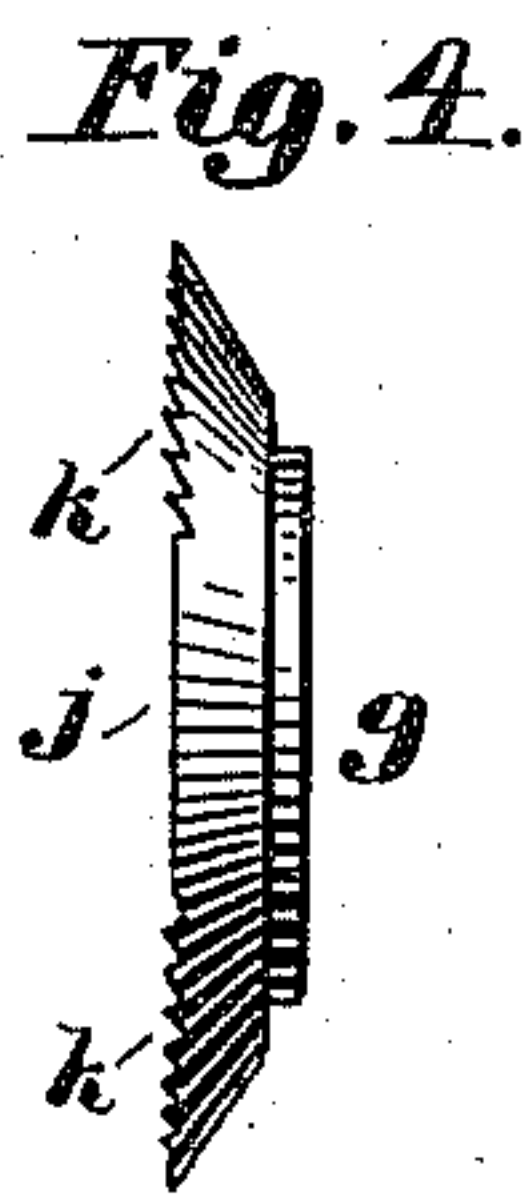
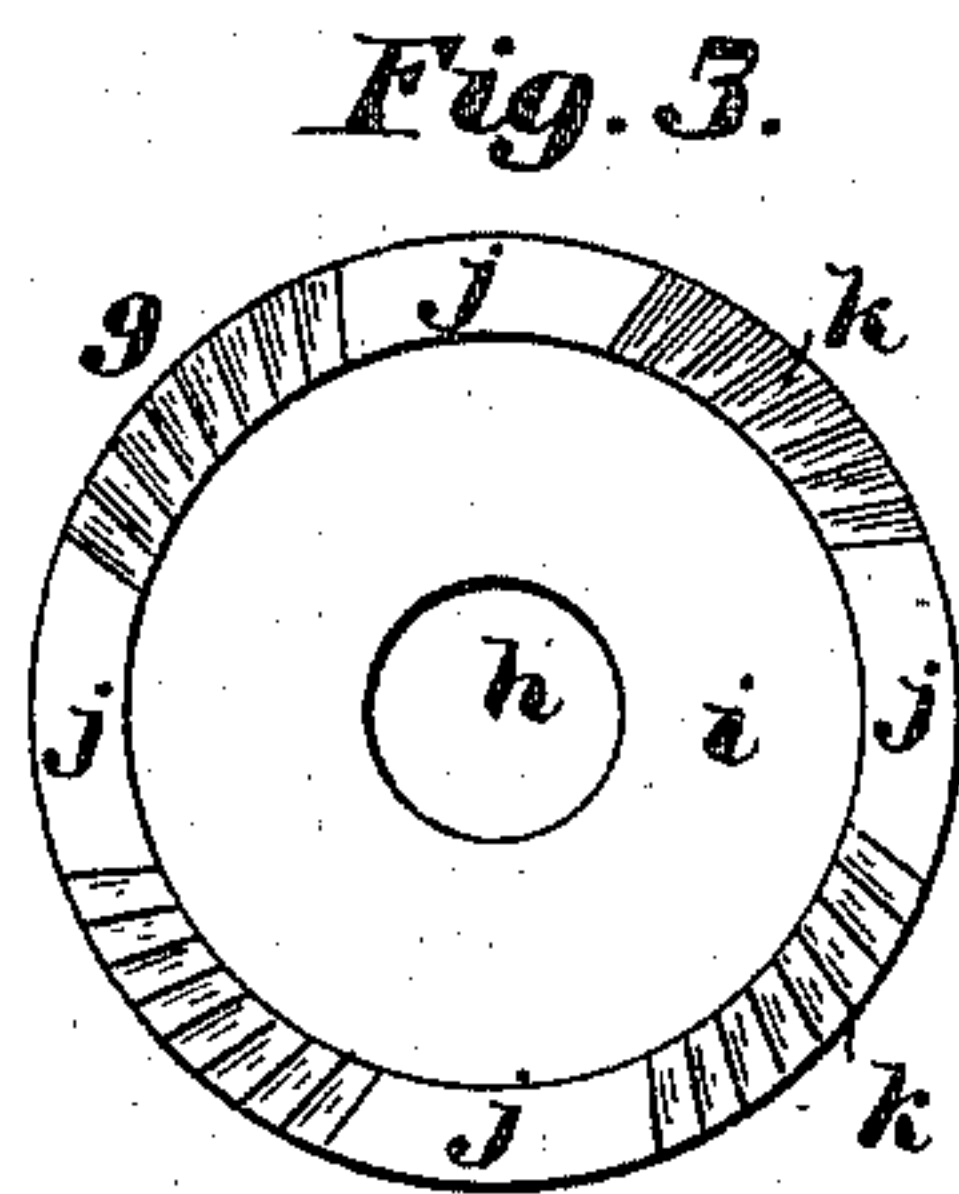
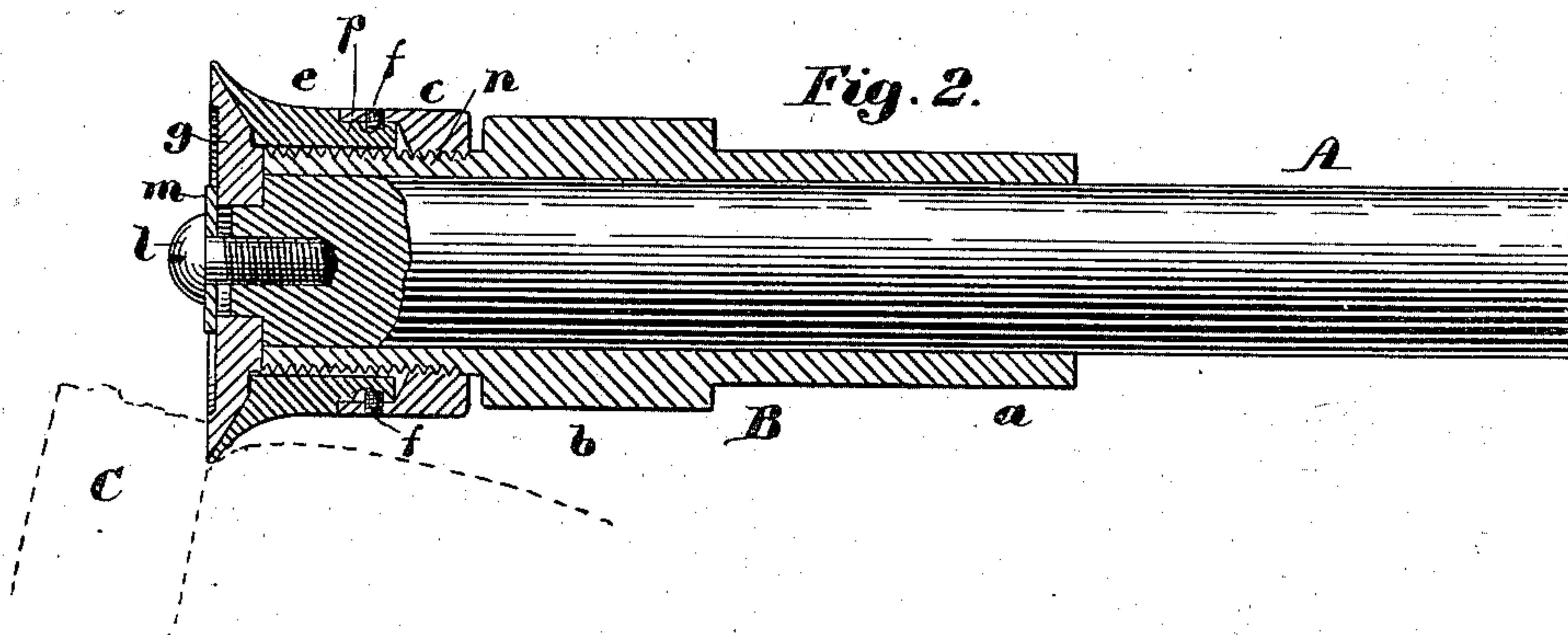
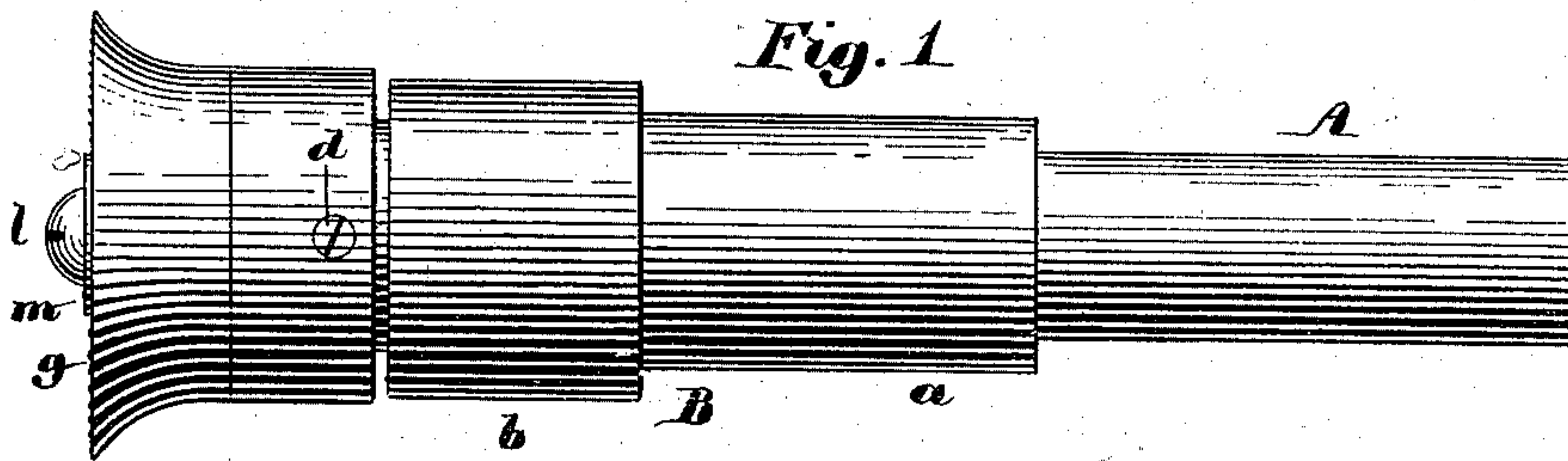


(No Model.)

E. F. WHITE.  
ROTARY RAND.

No. 559,508.

Patented May 5, 1896.



*Witnesses:*  
Walter E. Lombard  
M. E. Bonnich

*Inventor:*  
Edward F. White  
per J. W. Porter Atty



# UNITED STATES PATENT OFFICE.

EDWARD F. WHITE, OF QUINCY, MASSACHUSETTS, ASSIGNOR OF ONE-HALF  
TO J. E. TIBBETTS, OF BROCKTON, MASSACHUSETTS.

## ROTARY RAND.

SPECIFICATION forming part of Letters Patent No. 559,508, dated May 5, 1896.

Application filed February 12, 1896. Serial No. 579,031. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD F. WHITE, of Quincy, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Rotary Rands, which will, in connection with the accompanying drawings, be hereinafter fully described, and specifically defined in the appended claims.

In said drawings, Figure 1 is a side elevation of my improved rotary rand, with its shaft, the box and the fixed and slowly rotating collar. Fig. 2 is a central longitudinal section through all the parts except the shaft, and that is shown in section at and near the front end. Fig. 3 is a detached front elevation of my improved rotary rand, and Fig. 4 is a side elevation of the same.

The object of this invention is to quickly, and by a power-driven tool, cut away around the heel portion of a boot or shoe the portion of the outer sole adjacent to the upper, a duty heretofore performed by hand; and the invention consists in a peculiarly-formed randing-tool arranged in a protecting-shield that rotates only as the movement of the heel tends to move it, while the rotary rand revolves at high velocity and its finely-cut teeth remove the desired amount of the sole, the teeth of the rand being so formed that they cut only to the required depth in passing along the sole, as will be next herein described and then claimed.

Referring again to said drawings, A represents the shaft on which the rotary rand is secured, and B is a box in which one end of the shaft is mounted, said box being preferably formed with a smaller portion *a*, that is duly secured in a suitable bearing, and *b*, that is arranged outside said bearing. A collar *c* is threaded upon a reduced portion *n* of part *b*, so as to be adjusted outward and inward, and it is secured at the desired point by a screw *d*, that bears against part *n* when set against the same. An outer trumpet-shaped shield *e* is mounted loosely on said part *n*, and it is formed with a reduced portion *p*, that extends beneath the inwardly-reduced

portion of collar *c*, and it is secured in place by the screws *f* threaded in part *c* and that travel freely in a circumferential groove in part *p* of said collar *e*. The rotary rand is shown at *g*, and it is secured upon the outer end of shaft A by screw *l*, that bears upon a washer *m*. Said rand is formed with a central opening *h*, that fits closely upon a reduced part of shaft A. It is also formed with a slightly-reduced central portion *i*, and the portion outside of said part *i* is divided into the smooth portions *j* and the toothed portions *k*. Said teeth are what are known as "ratchet-shaped" teeth, and they rise above the adjacent surface *j* enough to constitute the extent of a cut upon the sole. Said rand is upon the back or inner face reduced toward the outer edge, so that, as shown, it will be entirely within shield *e*, except the slight extent to which its teeth extend beyond surface *j*, as already explained.

In operation box B and collar *e* do not revolve, collar *e* will move to the limited extent due to the movement of the shoe, but the rand and shaft have a high velocity when in use.

The especial use of this rand is to cut away the sole around the heel, as shown in Fig. 2, before trimming the outer edge of the same.

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

1. The combination of a rotary rand duly mounted and secured upon shaft A, the trumpet-shaped inclosing shield *e*, arranged to move with the heel of the shoe, and collar *c* secured upon box B and loosely connected with shield *e*, for the purposes specified.

2. A rotary rand *g* formed with a central recess *i*, the ratchet-teeth *k* and the smooth interspaced parts *j*, sunk slightly below the cutting edge of said teeth, substantially as specified.

EDWARD F. WHITE.

Witnesses:

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