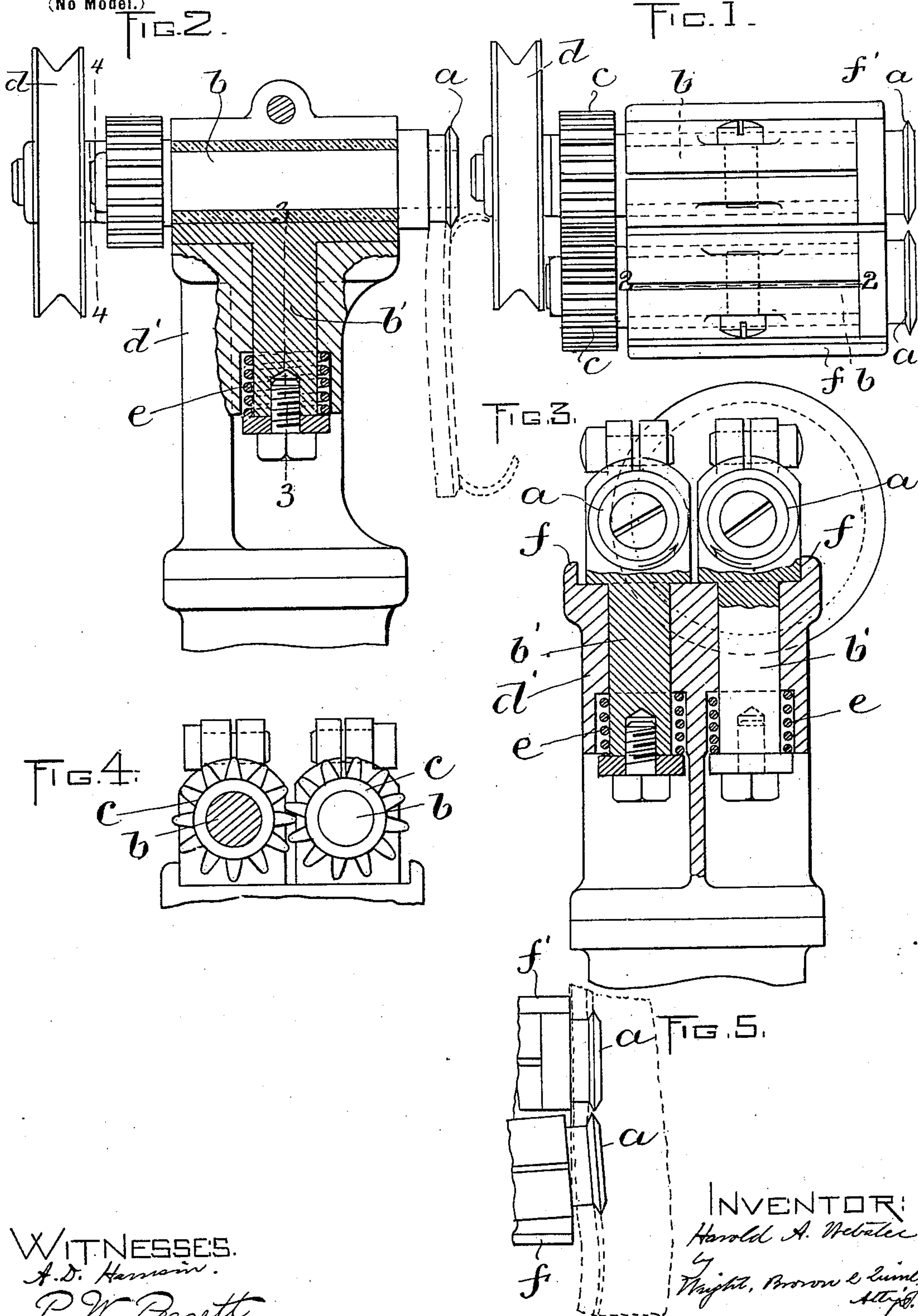


H. A. WEBSTER.
EDGE SETTING OR BURNISHING MACHINE.

(Application filed Oct. 18, 1897.)

(No Model.)



WITNESSES.
A. D. Harrison.
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UNITED STATES PATENT OFFICE.

HAROLD A. WEBSTER, OF HAVERHILL, MASSACHUSETTS, ASSIGNOR OF
ONE-HALF TO HERBERT B. NEWTON, OF SAME PLACE.

EDGE SETTING OR BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 631,865, dated August 29, 1899.

Application filed October 18, 1897. Serial No. 655,601. (No model.)

To all whom it may concern:

Be it known that I, HAROLD A. WEBSTER, of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Edge Setting or Burnishing Machines, of which the following is a specification.

This invention relates to machines for setting or burnishing the edges of boot or shoe soles, and particularly to an edge-setting machine comprising two rotary tools located edge to edge, so that the peripheries of the two tools can bear simultaneously on the edge of a sole, and means for rotating said tools simultaneously in opposite directions, each tool therefore moving on the edge of the sole in a direction opposite to the movement of the other tool, so that their united action produces a result equivalent to that of a reciprocating burnishing-tool, but without the jar or shake involved in the operation of a reciprocating tool.

The invention also consists in certain improvements in machines of this character, which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a top plan view of an edge setting or burnishing machine embodying my invention. Fig. 2 represents a partial side elevation and a partial section of the same, the section being on the line 2 2 of Fig. 1. Fig. 3 represents a partial end elevation and partial section, the section being on the plane of line 3 3 of Fig. 2. Fig. 4 represents a section on line 4 4 of Fig. 2. Fig. 5 represents a partial plan view of the machine.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a a* represent two rotary edge burnishing or setting tools, which may be formed to impart any desired shape in cross-section to the edge of a boot or shoe sole and are fixed to shafts *b b*, which are located side by side or substantially parallel with each other and journaled in suitable bearings. The tools *a a* are located edge to edge, as shown in Fig. 1—that is to say, their arrangement is such that their peripheries can bear simultaneously on the edge of a sole

presented to them. The shafts *b b* are provided with intermeshing gears *c c*, one of which is connected with a suitable driving-pulley *d*, the arrangement being such that the tools *a a* are rotated simultaneously in opposite directions, the preferred direction of rotation being as indicated by arrows in Fig. 3, so that the edge of a sole pressed against the lower portions of the tools will be rubbed upon in one direction by one tool and in the opposite direction by the other tool, the pressure of each tool being toward a point between the points of contact of the tools with the sole edge, so that there is no tendency of the tools to move the sole edge in either direction.

I prefer to yieldingly support the tools against the upward pressure of the work upon their lower portions. To this end the bearings in which the shafts *b b* are journaled are provided with studs *b' b'*, which are movable longitudinally in guides in the supporting-frame *d'* and are normally pressed downwardly by springs *e*, bearing upon the ends of spring-receiving cavities in said guides and upon shoulders or enlargements on the studs *b'*. Each tool is thus adapted to yield independently of the other, so that in case the sole edge is held in an inclined position the tools will conform to the inclination.

I prefer to provide for a relative movement of the tools which will permit them to conform to inward and outward curvatures of the sole edge—that is to say, the tools can stand in the same plane, as shown in Fig. 1, or one tool can stand at a slight angle to the other, as shown in Fig. 5. This provision is made in the present case by permitting the shank *b'* of one of the shaft-bearings to turn slightly in its guide or socket, the turning motion being limited by an ear or flange *f* on the supporting-frame, located at a slight distance from the adjacent side of the said bearing, as shown in Fig. 3. I do not regard it as necessary to provide a motion of this character for both bearings, and therefore I have shown the other bearing prevented from swinging horizontally by means of an ear or flange *f'*, which bears against one side of said bearing.

I claim—

1. An edge-setting machine comprising two

rotary tools located edge to edge, bearings for the shafts of said tools having provisions for relative movement of said tools, so that their peripheries can stand in different planes
5 conforming to curvatures of a sole edge, and means for rotating said tools simultaneously in opposite directions.

2. An edge-setting machine comprising a frame, a rotary tool, a bearing for the shaft
10 of said tool, a second rotary tool located edge to edge with the first said tool, a bearing for the shaft of said second tool, said bearing having a stud or stem adapted to slide longitudinally in a socket in the frame and to turn
15 therein, whereby the peripheries of the tools can stand in different planes conforming to

curvatures of a sole edge, a stop adapted to limit the angular movement of said second tool-bearing, a spring surrounding said stud or stem and adapted to support the said second tool against the pressure of the work, and means for rotating said tools simultaneously in opposite directions.

In testimony whereof I have signed my name to this specification, in the presence of
25 two subscribing witnesses, this 15th day of October, A. D. 1897.

HAROLD A. WEBSTER.

Witnesses:

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