

C. F. BENNION.
BURNISHING AND INDENTING TOOL.
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1,034,062.

Patented July 30, 1912.

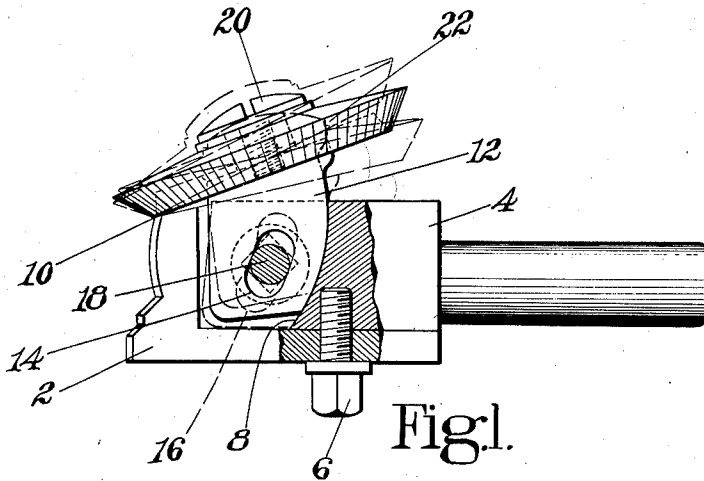


Fig. 1.

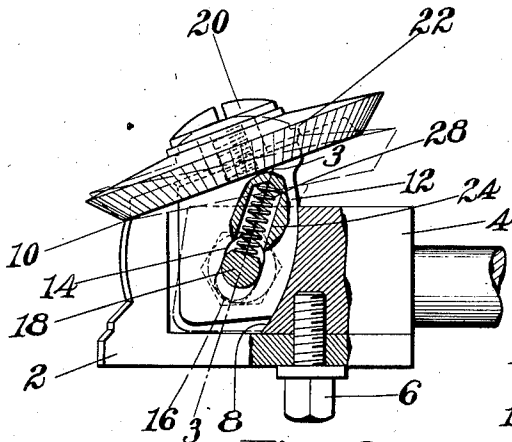


Fig. 2.

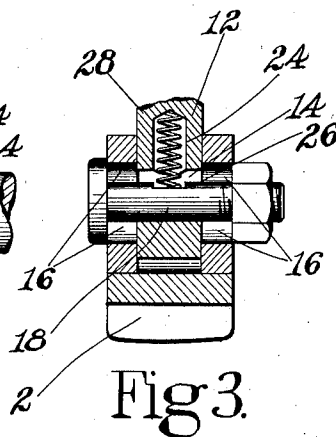


Fig. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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BURNISHING AND INDENTING TOOL.

1,034,062.

Specification of Letters Patent.

Patented July 30, 1912.

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To all whom it may concern:

Be it known that I, CHARLES F. BENNION, a subject of the King of Great Britain, residing at Leicester, Leicestershire, England, have invented certain Improvements in Burnishing and Indenting Tools, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings indicating like parts in the several figures.

This invention relates to machines and devices for finishing the marginal portions of the soles of boots or shoes.

More specifically it relates to machines and tools for setting the edges of shoe soles and simultaneously wheeling the soles; that is, forming a line of indentations upon the upper face of that portion of the sole edge, or of the welt, that projects beyond the upper of the shoe.

The invention has among its objects to provide a construction in which an angular adjustment may readily be effected between the working faces of the edge setting tool and the indenting wheel without disturbing the relationship between these tools in other respects; and to provide a construction with which a uniform line of indentations may be formed substantially unaffected by variations in the surface upon which the indenting wheel operates.

To these ends one feature of the invention consists in an arrangement of the edge setting tool and the indenting wheel whereby the wheel may be adjusted angularly with relation to the tool about an axis positioned substantially at the edge of the acting face of the edge setting tool that is adjacent to the wheel. This arrangement, while maintaining the adjacent edges of the tools in substantially constant relationship, enables the workman to adjust the angle between the acting faces of the tools to conform to different angles presented in shoes of different styles between the plane of the sole edge and the plane of the upper marginal surface of the sole or welt.

A further feature of the invention consists in a construction in which the edge setting tool and the indenting wheel are yieldingly maintained in a predetermined relationship. This relationship preferably

is such that the acting face of the indenting wheel is pressed yieldingly toward the surface of the work upon which it operates. By this construction the wheel is enabled to adjust itself automatically to variations in the work and it is further enabled to grip the work with an approximately constant pressure, thus insuring a more even impression than would be possible if the wheel were held rigidly with relation to the edge setting tool.

These features may or may not be combined in a single device.

The invention also comprises other features, including certain details of construction that later will be described and claimed.

In the drawings, Figure 1 is a side elevation partly in section of a device embodying this invention; Fig. 2 is a view similar to Fig. 1 showing a slightly different form of the invention; and Fig. 3 is a sectional view showing certain details of the construction shown in Fig. 2.

In the construction illustrated in Fig. 1, the edge setting tool 2 is secured to the lower side of the forward end of the tool holder 4 by a screw 6 in such a way that a space is left between the back of the tool and the body of the tool holder. A slot 8 is formed in the forward end of the tool holder leaving two extensions that project from the sides of the holder into this space. The rearward wall of the slot 8 is curved, lying in a cylindrical surface having its axis substantially at the upper edge 10 of the acting face of the edge setting tool. A slide 12 is movably mounted in the slot 8 and is provided with a curved face to cooperate with the curved wall of the slot. The slide 12 has a slot 14 formed therein which is concentric with the curved wall of the slot 8 and the extensions of the holder 4 are slotted in a corresponding manner, as indicated at 16. The slide may be moved freely in the slot 8 but can be clamped in adjustable position by a bolt 18 passing through the slots 16 and 14 and provided with a suitable head and nut to bear against opposite sides of the body 4. The upper end of the slide 12 is drilled and tapped to receive a screw 20 upon which an indenting wheel 22 is freely rotatable. It should be noted that the edge of the acting face of the indenting wheel is

positioned adjacent to the upper edge 10 of the acting face of the edge setting tool, and that since the slots 8, 14 and 16 are concentric and are scribed about an axis positioned substantially at the edge 10, the adjustment of the slide 12 in its slot will not appreciably affect the relation between the adjacent edges of the acting faces of the two tools but will effect a variation in the angle between the faces of the tools. This arrangement also enables the holder 4 to take the horizontal component of the thrust of the work against the indenting wheel.

The arrangement of parts shown in Figs. 2 and 3 is substantially like that in the device shown in Fig. 1, except that provision is made for enabling the tool to adjust itself automatically to variations in the surface of the sole or welt margin. For this purpose the slide 12 is recessed, as indicated at 24, and the upper face of the bolt 18 is flattened, as shown at 26, to provide a bearing for a spring 28 positioned in the recess 24. This device may be used in the same manner as that shown in Fig. 1, the nut on the bolt 18 being tightened to clamp the slide 12 rigidly between the extensions of the body 4. If, however, the bolt is left loose the action of the spring 28 will be to tip the slide 12 and indenting wheel 22 about the edge 10 as an axis to reduce the angle between the acting faces of the two tools to a minimum, or, in other words, to press the face of the indenting wheel against the surface upon which it operates. The spring 28 will permit the indenting wheel to accommodate itself to variations in the surface of the sole or welt margin and since this pressure is substantially uniform through the variation of movement to which the indenting wheel will be subjected, it will enable the tool to make a substantially uniform line of indentations, unaffected to any appreciable extent by variations in the surface of the work.

It will be understood by those familiar with this art that tools of this character ordinarily are used on edge setting machines which give them a rapid to-and-fro movement in substantially the plane of the acting face of the edge setting tool; thus enabling the tool to polish the edge of the sole held thereagainst and causing the wheel 22 to roll idly over the marginal portion of the sole or of the welt, in case the shoe is provided with a welt, this rolling motion serving to embed the teeth of the indenting wheel into the leather.

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

1. A device of the character described comprising an edge setting tool, an indenting wheel supported with its edge adjacent to the acting face of the tool and means

supporting said wheel for angular adjustment about an axis positioned substantially at one edge of the acting face of the tool adjacent to said wheel.

2. A device of the character described comprising an edge setting tool and an indenting wheel arranged to operate simultaneously therewith, means supporting said wheel for adjustment about an axis positioned substantially at one edge of the acting face of said tool and means for holding said tool and wheel yieldingly in a predetermined relationship.

3. A device of the character described comprising an edge setting tool and an indenting wheel arranged to operate simultaneously therewith, means supporting said wheel for angular adjustment relatively to said tool and means acting yieldingly to hold said tool and wheel in a predetermined angular relationship.

4. A device of the character described comprising an edge setting tool, an indenting wheel supported with its edge adjacent to the acting face of the tool, means supporting said wheel for angular adjustment about an axis positioned substantially at one edge of the acting face of the tool adjacent to said wheel and means for holding the wheel in adjusted position.

5. A device of the character described comprising an edge setting tool, an indenting wheel arranged to operate simultaneously therewith, means supporting said wheel for movement relatively to said tool and means acting to move the wheel relatively to the tool to press the acting face of the wheel against the surface upon which it operates.

6. A device of the character described comprising an edge setting tool, an indenting wheel supported with its edge adjacent to the acting face of the tool, means supporting said wheel for angular adjustment about an axis positioned substantially at one edge of the acting face of the tool adjacent to said wheel and means acting yieldingly to tip the wheel about said axis.

7. A device of the character described comprising an edge setting tool having a body and an acting face, a slide adjustably mounted in said body, an indenting wheel rotatably mounted on said slide and means acting on the slide to move it in a direction to press the working face of the wheel against the work.

8. A device of the character described comprising an edge setting tool having a body and an acting face, a slide mounted in said body, an indenting wheel rotatably mounted on said slide with the edge of its acting face positioned adjacent to the upper edge of the acting face of the tool, said slide being mounted for angular adjustment about an axis positioned substantially at the

upper edge of the acting face of the tool
whereby the wheel may be adjusted to vary
the angle between its face and the face of
the tool, and a spring acting on said slide to
5 press the wheel in a direction to diminish
said angle.

In testimony whereof I have signed my

name to this specification in the presence of
two subscribing witnesses.

CHARLES F. BENNION.

Witnesses:

FREDERICK WILLIAM WORTH,
ARTHUR ERNEST JERRAM.