

L. W. G. FLYNT.
MACHINE FOR BURNISHING STITCH IMPRESSIONS.
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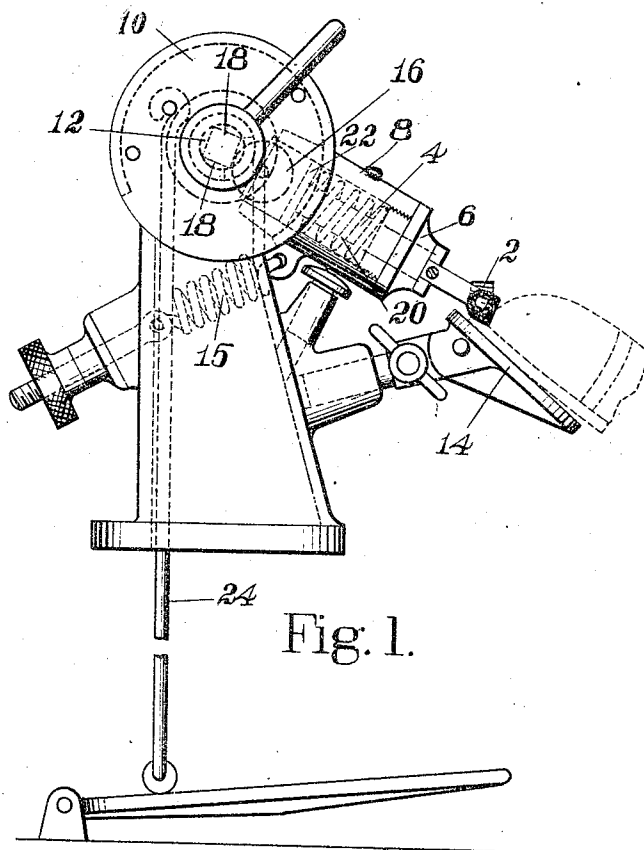


Fig. 1.

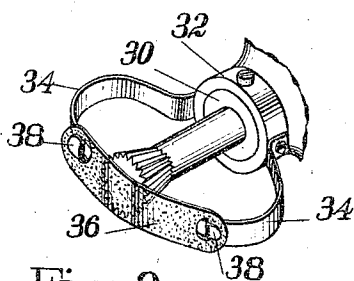


Fig. 3.

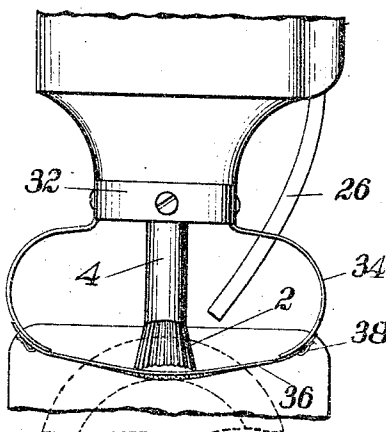


Fig. 2.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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MACHINE FOR BURNISHING STITCH IMPRESSIONS.

1,005,185.

Specification of Letters Patent.

Patented Oct. 10, 1911.

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To all whom it may concern:

Be it known that I, LOUIS W. G. FLYNT, a subject of the King of Great Britain, residing at Rochester, in the county of Monroe and State of New York, have invented certain Improvements in Machines for Burnishing Stitch Impressions, 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 for operating upon the projecting upper edge of the sole of a shoe, and is herein shown embodied in a machine for burnishing the imitation stitches which are commonly formed upon said edge. It will be understood, however, that certain features of the invention are not limited for use in machines for burnishing stitches, but may be employed with advantage in machines for forming impression or imitation stitches.

In machines of this class in which the tool is heated, there has previously been liability of heat being transmitted from the tool to the upper of the shoe. With certain grades of shoes the heat so transmitted causes discoloration of the upper and is therefore objectionable.

An object of the present invention is accordingly to provide a machine of this type with means for preventing the transmission of heat from the tool to the shoe upper.

With this object in view, a feature of the present invention contemplates the provision of a guard comprising a member of non-conducting material arranged to lie between the tool and the upper of a shoe, and of a shape to prevent engagement between the upper and said tool.

A further object of the invention is to provide a guard which may be employed in connection with a tool arranged to reciprocate in the stitch indentations commonly formed in the projecting upper edge of the sole of the shoe.

To this end a further feature of the invention consists in a guard arranged between the upper of the shoe and the reciprocating tool and for movement with the tool. By having the guard arranged for movement with the tool its acting portion may be sustained in continual engagement with the outer face of the reciprocating tool so that

in the operation of the machine the shoe may be held in close proximity to the tool. It will be understood that this feature of the invention is not limited for use with a guard formed of non-conducting material but may be employed with advantage in connection with a guard formed of other material.

According to a convenient construction, the guard is formed of flexible material and is sustained in continual engagement with the front face of the reciprocating tool by means of a pair of spring arms which are arranged on opposite sides of the tool and hold the flexible member under tension between them. The spring arms are preferably so arranged that the ends of the flexible member are positioned back of the front face of the tool, so that said member is sustained in a curved form with its convex side directed toward the upper of the shoe. With this arrangement, as the tool moves outwardly it outwardly displaces the flexible member against the resistance of the spring arms, and when the tool moves inwardly the spring arms cause a corresponding movement of the flexible member so that the latter is always in contact with the front face of the tool. By sustaining the guard in a curved form with its convex side directed toward the upper of a shoe, any liability of the ends of the guard or the ends of the spring arms interfering with the proper manipulation of the shoe in the burnishing operation is prevented.

Other features of the invention will be hereinafter described in the specification and pointed out in the claims.

In the drawings,—Figure 1 is a side elevation of a burnishing machine provided with a guard embodying the present invention; Fig. 2 is a plan view of a portion of the machine shown in Fig. 1; Fig. 3 is a view in perspective of the guard in its working position.

Referring to the drawings, 2 indicates a frusto-conical wheel mounted to rotate freely upon the end of a plunger 4 and arranged to reciprocate in the stitch indentations upon the projecting edge of the sole of a shoe, as indicated in Fig. 1. The plunger 4 is mounted to slide in a bushing 6 secured in a tubular member 8 which extends from the front part of a cylindrical casing 10. The casing 10 is pivotally supported on the

horizontal power shaft 12 of the machine in order that the wheel 2 may be raised to permit the insertion of the work between the wheel and the work supporting table 14. A coiled spring 15 extending between the frame of the machine and the member 8 serves to hold the burnishing wheel in engagement with the work. The plunger 4 is reciprocated from the power shaft 12 and for this purpose a roller 16 is mounted on the inner end of the plunger and positioned to be engaged by suitable cam surfaces 18 formed on the power shaft. A coiled spring 20 surrounding the plunger and extending between the bushing 6 and a shoulder 22, formed on the plunger, serves to hold the roller 16 in engagement with the cam surfaces. A treadle rod 24, having its upper end engaging a pin on the cylindrical casing 10, provides means for turning the casing 10 against the action of the spring 15 in order to elevate the burnishing wheel to permit the insertion of the work between the wheel and the work supporting table 14. The burnishing wheel may be heated by gas or other means, and for this purpose a burner 26 is cast on the tubular member 8 and arranged to be supplied with gas in the usual manner.

The construction and arrangement of the parts above described and their mode of operation are the same as disclosed in United States Letters Patent to Flynt, 845,939, March 5, 1907, to which reference may be had for a more detailed description.

In accordance with the present invention the bushing 6 is provided with a reduced end portion 30 upon which is adjustably secured a collar 32. A pair of opposed spring arms 34 are carried by the collar and arranged to sustain under tension a thin flexible strip of non-conducting material 36, such as raw hide, in front of the burnishing tool to prevent the upper of the shoe from coming in contact with the tool. Each end of the strip 36 is detachably secured to one of the spring arms 34 and for this purpose the arms are provided with integral fingers 38, as shown in Fig. 3, which are arranged to extend through openings formed in the ends of the strip 36 to hold the strip in place. The fingers 38 are so positioned that upon moving the spring arms together, the strip 36 may be detached and a new strip inserted in its place. The outer ends of the spring arms 34 are positioned back of the outer face of the burnishing wheel, so that the strip of raw hide engages this face of the wheel and is sustained in a longitudinally-curved form with its convex side directed toward the upper of the shoe. With this construction, as the reciprocating tool moves outwardly it outwardly displaces the flexible member of non-conducting material against the resistance of the spring arms

and when the tool moves inwardly the spring arms cause a corresponding movement of the flexible member so that the latter is always in contact with the front face of the tool.

In the use of the burnishing machine, the member of non-conducting material serves to prevent the upper of the shoe from coming in contact with the tool, and at the same time acts as an insulating medium to prevent transmission of heat from the heated tool to the upper of the shoe. In burnishing machines in which the guard is provided with a longitudinally straight acting surface, any failure of the operator to hold the nearly longitudinally straight portions of the upper in parallel engagement with the acting surface of the guard is liable to cause the shoe to engage the end of said acting surface and to be pivotally swung around said end in such manner as to prevent the edge of the sole from being properly presented to the burnishing tool. By sustaining the non-conducting member in a curved form with its convex side directed toward the upper of the shoe any liability of the ends of the member of non-conducting material interfering with the manipulation of the shoe in the manner above described is prevented.

It will be understood that the material of which the guard is composed has characteristics other than those above referred to, which render its use desirable for the purpose stated. For example, it is not only pliable, thus freely accommodating the movement of the tool, but is also extremely tough and is thus durable in use. As will be obvious, when a strip of raw hide becomes unduly worn it may be readily replaced by a new strip.

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

1. In a machine for finishing the projecting upper surface of the sole of a boot or shoe the combination with a metallic tool formed to operate upon said surface, of a non-metallic member arranged to prevent engagement of said tool with the upper of the shoe and means for yieldingly supporting said member in operative position.

2. A machine of the class described, having in combination, a tool formed to operate upon the upper surface of the projecting edge of the sole of a shoe, and a curved member of non-conducting material arranged to lie between the tool and the upper with its convex side outward for the purpose described.

3. A machine of the class described, having in combination, a reciprocating tool formed to operate upon the upper surface of the projecting edge of the sole of a shoe, and a longitudinally flexible member of non-

conducting material yieldingly sustained in contact with the tool and arranged to prevent engagement of said tool with the upper of the shoe.

- 5 4. A machine of the class described, having in combination, a tool formed to operate upon the upper surface of the projecting edge of the sole of a shoe, a flexible member of non-conducting material arranged to prevent the upper of the shoe from coming in contact with the tool and sustained in a curved form with its convex side directed toward the upper of the shoe.
- 10 5. In a machine for operating upon the projecting upper surface of the sole of a boot or shoe, the combination with a tool formed to operate upon said surface, of a curved member arranged in front of the tool in position to have its convex side engaged by the upper of the shoe to prevent said upper from coming in contact with said tool.
- 15 6. In a machine for operating upon the projecting upper surface of the sole of a boot or shoe the combination with a tool arranged for reciprocation toward and from the upper of the shoe, of a member positioned to prevent engagement of the upper of the shoe with the tool and arranged for movement with said tool.
- 20 7. A machine of the class described, having in combination, a tool arranged for continuous engagement with the projecting upper surface of the sole of a shoe and for reciprocating movement transversely of said surface and a member positioned to prevent engagement of the upper of the shoe with the tool and arranged to be sustained in continual engagement with the front face of said tool.
- 25 8. In a machine of the class described the combination with a tool formed to operate upon the projecting upper surface of the sole of a shoe and arranged to reciprocate transversely of said surface, of a member of flexible material positioned to prevent engagement of the upper of the shoe with the tool and arranged for movement with said tool.
- 30 9. A machine of the class described, having in combination, a tubular support, a shaft mounted for reciprocating movement in the support, a tool carried by said shaft formed to operate upon the upper surface of the projecting edge of the sole of a shoe, a collar removably secured upon said tubular support and a member of non-conducting material sustained from said collar and arranged to prevent engagement of said tool with the upper of the shoe.

10. A machine of the class described, having in combination, a tubular support, a shaft mounted for reciprocating movement in the support, a tool carried by said shaft formed to operate upon the upper surface of the projecting edge of the sole of a shoe, a collar removably secured upon said tubular support, a member of non-conducting material, a pair of opposed spring arms mounted on said collar and arranged to sustain said member in front of said tool to prevent the upper of the shoe from coming in contact therewith.

11. In a machine for finishing the projecting upper surface of the sole of a boot or shoe, the combination with a tool formed to operate upon the said surface, of a member of non-conducting material arranged to prevent engagement of said tool with the upper of the shoe, and means for sustaining said member under tension in its working position.

12. In a machine of the class described, the combination with a tool formed to operate upon the projecting upper edge of the sole of a shoe, of a member of flexible material yieldingly sustained under tension between the tool and the upper of the shoe.

13. In a machine of the class described the combination with a tool formed to operate upon the projecting upper surface of the sole of a shoe, of a member of thin flexible material sustained under tension between the tool and the upper of the shoe, said member being curved longitudinally and arranged with its convex side directed toward the upper of the shoe.

14. In a machine for finishing the projecting upper surface of the sole of a boot or shoe, the combination of a tool arranged to reciprocate transversely of said surface, a curved member arranged to lie between said tool and the upper of the shoe, with its convex side toward the upper, and yielding means for sustaining said member.

15. A machine of the class described having, in combination, a reciprocating tool formed to operate upon the projecting edge of the sole of a shoe, a support, and a guard arranged to extend between said tool and the upper of the shoe and yieldingly connected under tension with said support.

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

LOUIS W. G. FLYNT.

Witnesses:

HERBERT LEAR,
FRANK LAWLOR.