

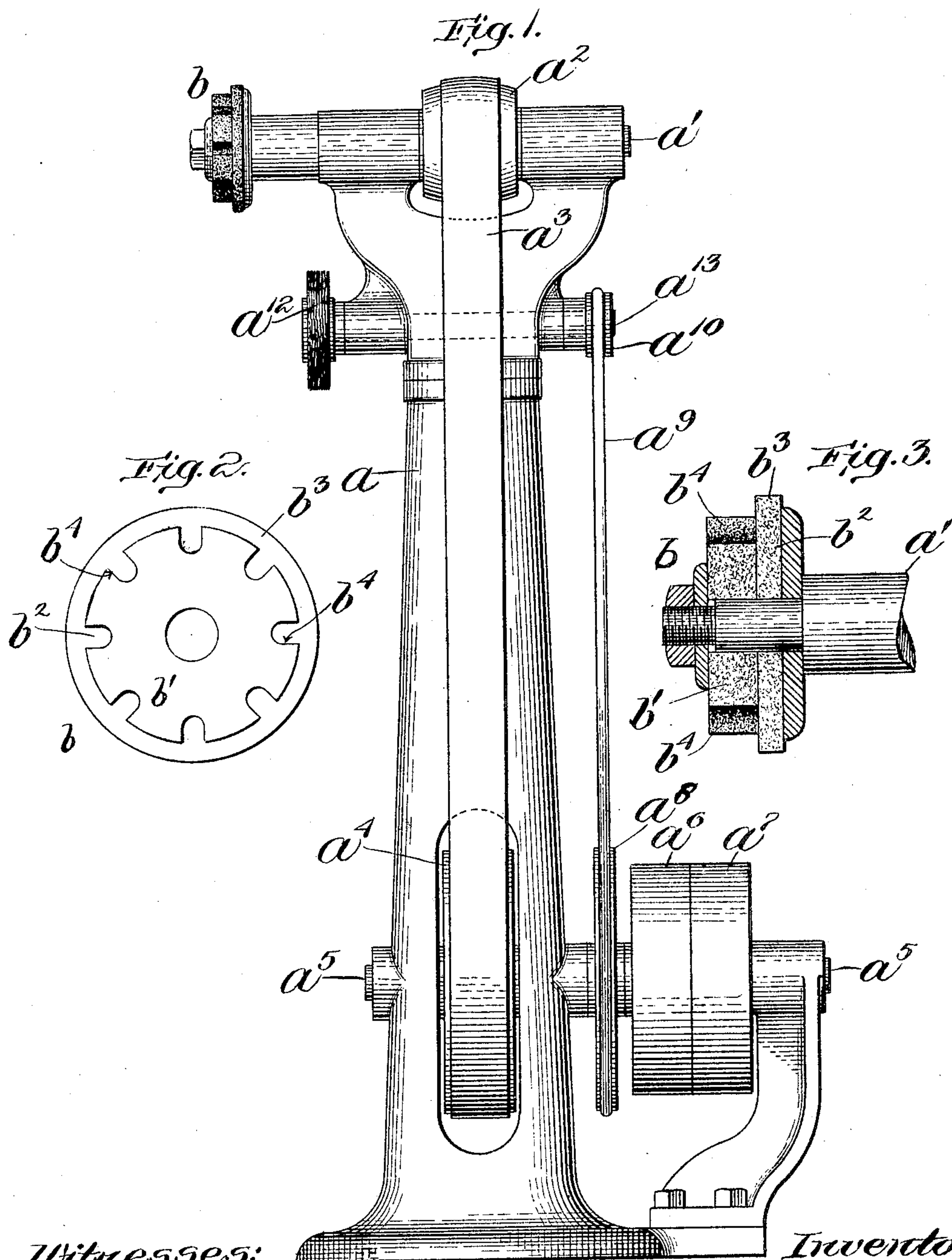
No. 803,087.

PATENTED OCT. 31, 1905.

W. B. ARNOLD.

BUFFING WHEEL FOR REFINISHING EDGES OF SHOE SOLES.

APPLICATION FILED MAR. 20, 1905.



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM B. ARNOLD, OF NORTH ABINGTON, MASSACHUSETTS.

BUFFING-WHEEL FOR REFINISHING EDGES OF SHOE-SOLES.

No. 803,087.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed March 20, 1905. Serial No. 250,922.

To all whom it may concern:

Be it known that I, WILLIAM B. ARNOLD, a citizen of the United States, residing at North Abington, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Buffing-Wheels for Refinishing Edges of Shoe-Soles, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My invention is a machine for refinishing the edges of boot or shoe soles, being particularly intended for putting them in proper condition after they have been marred in handling in the finishing processes of manufacture, although my invention may be used for finishing the edges entirely without employing any edge-setting machine.

While passing through the finishing stages and after the edges of the sole have been properly finished or burnished the handling usually mars and blurs the high polish, so that it becomes necessary to refinish said edges. For this purpose it has been customary to employ polishing-wheels of waxed felt having continuous polishing-edges, great caution and skill being necessary in using these felt wheels, because of their liability to burn the leather and remove the blacking, thereby taking off the gloss and injuring the shoe. Even when the operator is cautious and handles the shoe delicately these felt wheels will sometimes remove the blacking and leather sufficiently to injure the shoe.

My invention obviates the aforesaid disadvantages and produces an excellent polishing medium, requiring practically no skill in its use, and resides in providing air spaces or pockets in the felt wheels which maintain the surface of the leather comparatively cool and produce a fan-like action, while at the same time the successive shoulders produce an impact effect on the leather and felt which facilitates the finishing action of the machine. I employ also a felt guard which maintains the shoe in proper position and coöperates with the sole in giving the best results.

My invention will be more fully understood in the course of the following description, taken in connection with the accompanying drawings, in which I have shown a preferred embodiment of my invention.

In the drawings, Figure 1 shows in front elevation the complete embodiment of my invention. Fig. 2 is a view in side elevation

of the felt wheel and guard, and Fig. 3 is a vertical cross-section thereof.

On a suitable pedestal *a* is mounted a shaft *a'*, operated by a pulley *a²* and belt *a³* from a driving-pulley *a⁴* on the main shaft *a⁵*, provided with fast and loose pulleys *a⁶* *a⁷*. At its outer end the shaft *a'* carries the felt burnisher *b*, which constitutes the main feature of my invention. This burnisher or wheel consists of a disk *b'*, of thick heavy felt, and a thin disk *b²* at the inner side thereof larger in diameter, so as to provide a projecting flange *b³*. The disk or wheel *b'* is thick and relatively soft, while the disk *b²* is quite stiff, so as to withstand lateral pressure, while yet presenting a soft edge to bear against the bottom of the sole whose edge is being refinished by the disk *b'*. At frequent intervals the disk *b'* has transverse edge portions removed to provide air-pockets *b⁴*, so that when the wheel is rotated at low speed these pockets carry a sufficient quantity of cooling-air to prevent any injury to the leather or blacking and to aid in maintaining and renewing the gloss and finish of the sole edge. The main driving-shaft is also provided with a pulley *a⁸* and belt *a⁹*, engaging a pulley *a¹⁰* for driving a cleaning-brush *a¹²* on a shaft *a¹³*.

In use the operator first applies a little wax to the edge of the wheel *b* and holds the shoe against the same in usual manner; but instead of being obliged to exercise great caution and nicety of handling I have found that by reason of the provision of the air-pockets the polishing progresses without liability of injury to the shoe and is accomplished more rapidly and uniformly. The operator can move the edge surface of the sole much more rapidly over the wheel, so that a greater output is insured by my invention. The main advantage, however, is in the avoidance of the necessity of extreme care lest the sole edge should be injured instead of refinished.

Many changes in the form of the air-pockets and in the cushion-flange may be resorted to without departing from the spirit and scope of my invention as set forth in the following claims, taken in connection with this description.

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

1. A sole-edge-finishing wheel, consisting of a thick, solid felt wheel having a series of narrow, air-pockets in its periphery for preventing burning and damage to the sole edge.

2. A sole-edge-finishing wheel, having a wide periphery of solid yielding felt, and a series of narrow pockets extending transversely across the wheel at its periphery for delivering an air-blast to the sole edge being polished by said felt periphery.

3. A sole-edge-finishing wheel, having a broad polishing edge of solid yielding felt containing a series of peripheral air-pockets and provided at one side with a projecting flange of soft, slightly-yielding material, said

flange engaging the bottom of the sole as the edge thereof engages said broad polishing edge.

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

WILLIAM B. ARNOLD.

Witnesses:

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