F. WINSLOW & C. S. FIFIELD.

Machine for Buffing Boot and Shoe Soles.

No. 221,647. Patented Nov. 11, 1879.

Fig. 1.

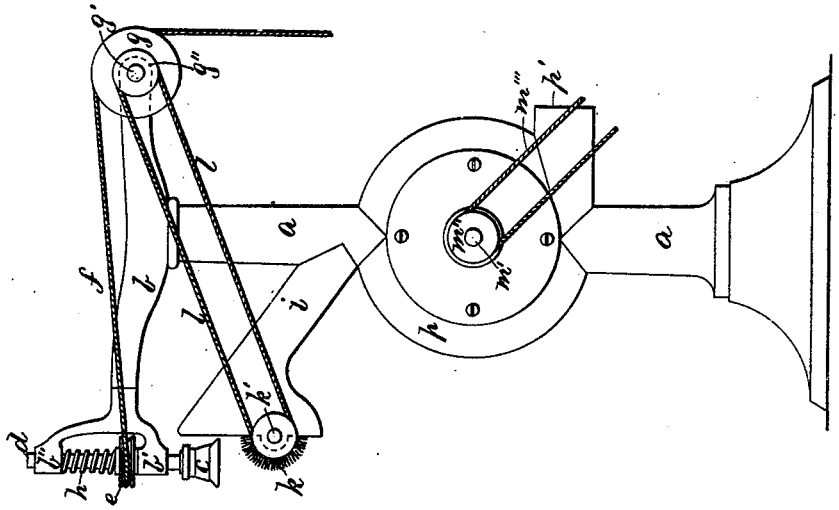


Fig. 2.

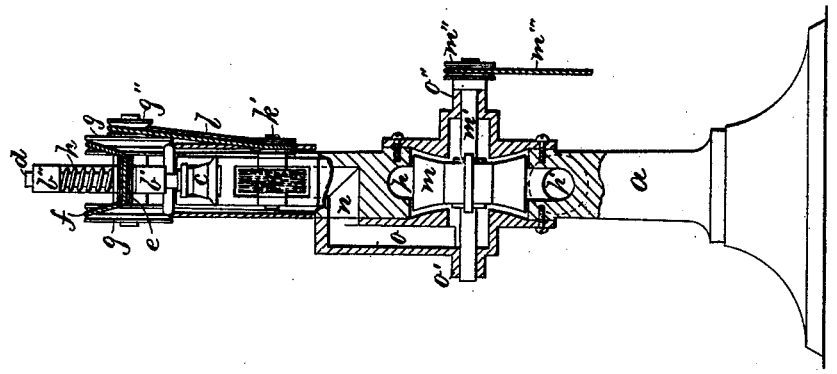
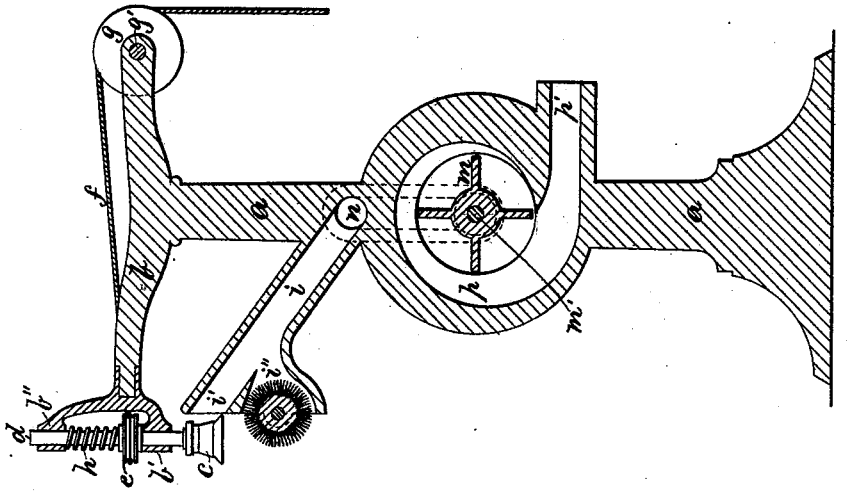


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

FREEMAN WINSLOW, OF SALEM, AND CHARLES S. FIFIELD, OF BOSTON, MASSACHUSETTS, ASSIGNORS TO SAID WINSLOW AS TRUSTEE FOR THE NAUMKEAG BUFFING MACHINE ASSOCIATION.

IMPROVEMENT IN MACHINES FOR BUFFING BOOT AND SHOE SOLES.

Specification forming part of Letters Patent No. **221,647**, dated November 11, 1879; application filed August 9, 1879.

To all whom it may concern:

Be it known that we, FREEMAN WINSLOW, of Salem, in the county of Essex and State of Massachusetts, and CHARLES S. FIFIELD, of Boston, in the county of Suffolk and State of Massachusetts, have jointly invented certain new and useful Improvements in Machines for Buffing the Soles of Boots and Shoes; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to machines for buffing the soles of boots and shoes; and the invention consists, essentially, in a novel means of arranging a rotary buffer on a spindle in bearings combined with a spring, whereby the buffer is caused to bear with a yielding spring-pressure against the soles of a boot or shoe, as will be more fully hereinafter set forth.

The invention further consists of certain other features, which will be first particularly described, and then pointed out in the claims.

On the accompanying drawings, Figure 1 represents a side elevation of the machine. Fig. 2 represents a sectional front elevation, and Fig. 3 represents a vertical section of the same.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

a is the standard or frame of the machine, as usual, and *b* is its upper horizontal arm, as shown in Figs. 1 and 3. *c* is a buffing-tool, attached to the buffer-spindle *d*, which spindle is free to rotate in the stationary forked bearings *b' b''*, attached to the forward end of the arm *b*, as shown. *e* is a pulley on the buffer-spindle, by means of which and a suitable cord or belt, *f*, and guide-pulleys *g g* on the shaft *g'* a rotary motion is imparted to the buffer-spindle *d* and its buffing-tool *c* from any ordinary rotary pulley, in the usual manner. In addition to its rotary motion around its axis, the spindle *d* is capable of a vertical adjustment in the direction of its axis within the bearings *b' b''*; and for the purpose of allowing said spindle and buffing-tool to yield upward when the sole of a boot or shoe is forced gently against the under side of said rotary buffing-tool, I provide said spindle *d* with a yielding coiled spring, *h*, located around such spindle, between its upper bearing, *b''*, and its cord-pulley *e*, as shown, which arrangement is of great advantage, as it enables the operator to manipulate the boot or shoe with both of his hands, and thus to press the boot or shoe sole more or less against the abrasive under side of the rotary buffing-tool *c*, which latter, being yielding upward, as described, will produce a better and more even finish on the sole of the boot or shoe as compared with an unyielding rotary buffing-tool.

As an equivalent for the coiled spring *h* shown in the drawings, a flat elliptic or other suitable spring or weight may, of course, be used to equal advantage without departing from the spirit of the invention.

i is the wind and dust conductor, having two separate orifices, *i'* and *i''*, the former terminating behind the rotary buffing-tool *c*, and the other surrounding the rotary brush or cleaner *k*, that is located on a spindle in bearings at the said orifice, by which arrangement one and the same conductor will serve as a conveyer for the dust from both the buffing-tool *c* and the rotary brush or cleaner *k*, as described. A rotary motion is conveyed from the shaft *g'* to the brush *k* by means of the cord or belt *l* and pulleys *g'' k'*, as shown.

m is the rotary fan-blower, secured to its rotary shaft *m'*, located in bearings *o' o''* in the standard *a*. The blower-shaft *m'* is provided with a pulley, *m''*, as usual, by means of which and a cord or belt, *m'''*, a rotary motion is imparted to the said blower, as usual.

To prevent any of the dust that is drawn from the buffing-tool and brush from escaping into the work-room, the conductor *i* is branched at *n* to one side of the fan, as shown in Fig. 2, from which the closed chamber *o* leads to the central part of the fan-chamber *p*, as and for the purpose described.

p' is the exit-opening from the fan-chamber, as usual.

Only one branch *n* and one closed chamber *o* are shown in the drawings; but we prefer to make two such branches and two closed side

chambers, so as to deliver the dust to the central portion of two opposite sides of the said blower, without departing from the spirit of the invention.

What we wish to secure by Letters Patent, and claim, is—

1. In a buffing-machine for boot and shoe soles, the rotary buffer *c*, located on a spindle, *d*, in bearings *b' b'*, in combination with a spring, *h*, surrounding the spindle, whereby the buffer is caused to bear with a yielding spring-pressure against the sole of a boot or shoe, substantially as specified.

2. In combination with the standard *a*, having passages *i i* and *i'*, connected with a suitable exhaust, the buffer *c* and brush *k*, the whole arranged to operate substantially as specified.

In testimony that we claim the foregoing as our own and joint invention we have affixed our signatures in presence of two witnesses.

FREEMAN WINSLOW.
CHARLES S. FIFIELD.

Witnesses:
ALBAN ANDRÉN,
HENRY CHADBOURN.