

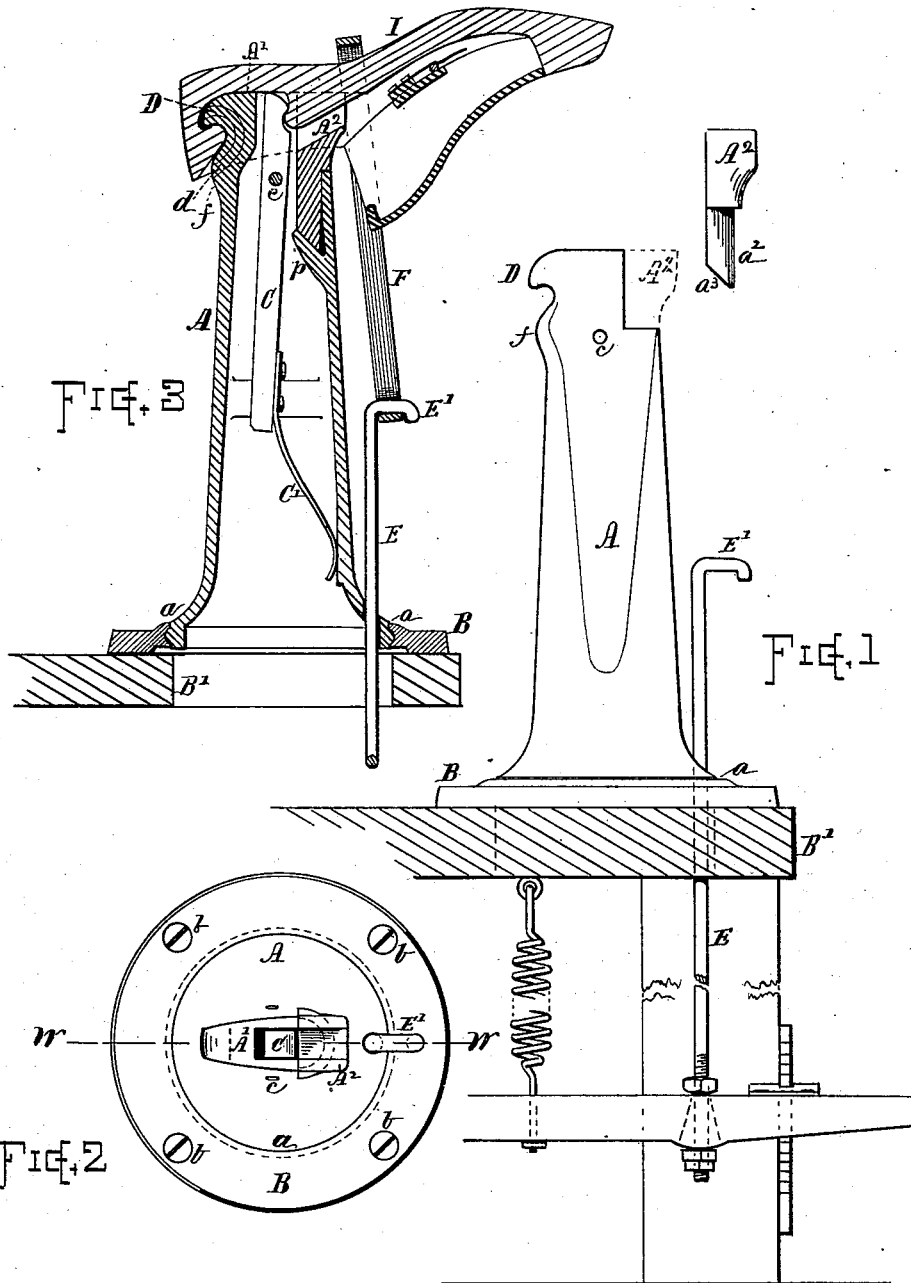
(No Model.)

2 Sheets—Sheet 1.

S. MAWHINNEY.
METAL LAST AND JACK.

No. 261,165.

Patented July 18, 1882.



WITNESSES
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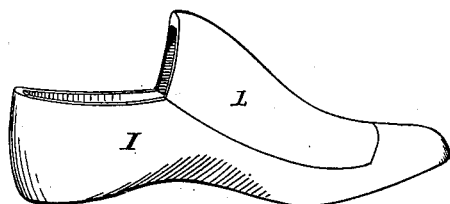


Fig. 4

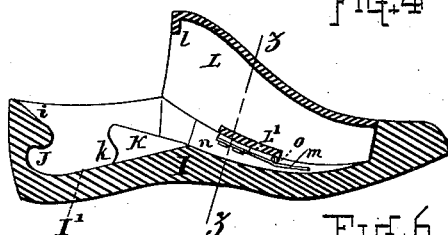


Fig. 6

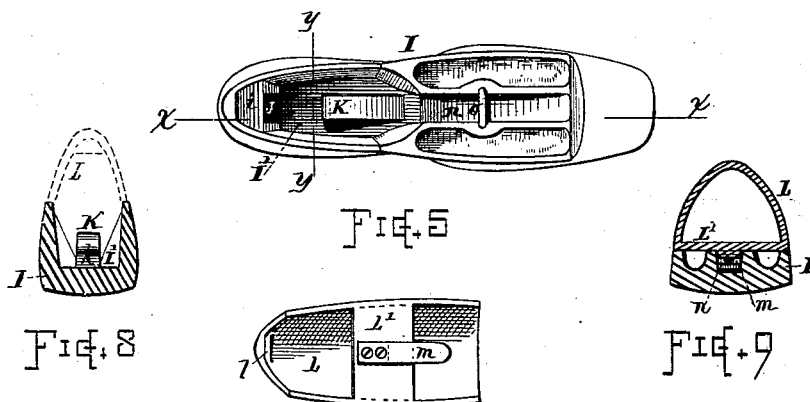


Fig. 5

Fig. 8

Fig. 9

Fig. 7

WITNESSES.

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UNITED STATES PATENT OFFICE.

SAMUEL MAWHINNEY, OF WORCESTER, MASSACHUSETTS.

METAL LAST AND JACK.

SPECIFICATION forming part of Letters Patent No. 261,165, dated July 18, 1882.

Application filed February 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL MAWHINNEY, of Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Metal Lasts and Jacks for Boot and Shoe Makers; and I declare the following to be a description of my said invention sufficiently full, clear, and exact to enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

The object of my present invention is to provide a convenient and serviceable metal last and supporting-jack for boot and shoe makers of such construction that the last will be firmly held in position and secured against rebounding action when hammering thereon, while it can at any time be readily taken from or placed upon the jack without trouble or delay; also, to afford facilities for changing the jack-head for larger and smaller sized lasts, to furnish means for operating a shank-strap, and to provide a light and convenient metal instep-block for a last. These objects I attain by mechanism constructed and arranged as illustrated in the accompanying drawings and herein described, the particular subject-matter claimed being hereinafter definitely specified.

Figure 1 shows a side view of a jack constructed in accordance with my invention. Fig. 2 is a top view of the same, showing the form of the head or last-seat. Fig. 3 is a central vertical section through the jack and last at the line *w w*. Fig. 4 is a perspective view of the last. Fig. 5 is a plan view of the last. Fig. 6 is a longitudinal section of the last at line *x x*. Fig. 7 is a bottom view of the instep-block. Fig. 8 is a transverse section at line *y y*, and Fig. 9 is a transverse section at line *z z*.

In my invention the jack is made with a hollow metal column or standard, A, provided with a broad base-plate, B, which is cast onto its lower end, with a loose lock-joint at *a*, so that the standard A can be turned around when the plate B is fixed on the work-bench B' or other suitable support by the screws or bolts *b*.

The top of the standard A is made with a flat surface or seat, A', recessed at the center for the tongue C, and provided at its back or heel with a beak or hook, D, formed substantially as shown. At the forward part there is

a removable block or extension-piece, A², that can be readily detached from the standard at pleasure, or interchanged with other larger or smaller pieces, thereby adapting the head or seat A' for large or small sizes of lasts.

The piece A² is made with a long shank or tang, *a*², that extends down into the interior of the standard A, for retaining said piece in position, and the lower end of said shank is fitted with a bevel, *a*³, that engages a lug or beveled projection, *p*, on the interior of the standard, which causes the upper end of the piece to press up closely against the head of the part A.

The top of the piece A² is recessed to correspond with the seat A'.

The tongue C is pivoted at *c* to have a swing or lever action within the standard A, and a spring, C', is attached to its lower end, the pressure of which operates the tongue-lever for retaining the lock-connection with the last. The upper end of the tongue is fitted with an inclined end and an under curve, as shown, to match corresponding forms on the last I and to permit of the last being slipped onto and off from the jack without trouble or inconvenience, the tongue acting automatically by the pressure of the connecting-surfaces.

A projection or swell, *f*, is formed at the back of the standard, just below the beak D, which serves to guide the last while putting it on and off the jack, and prevents injuring the back of the shoe-uppers against the standard, as the last is thrown backward before the upper is bent.

A piece of wrought-iron, *d*, may be put into the mold when casting the jack A, to be embedded in the metal of the beak D to give it greater strength to resist the shock of severe blows when hammering on the last.

A rod, E, extends up through the base-rim of the standard A, which rod is fitted with a hook, E', on which the shank-strap F can be used for drawing down and holding the shoe-soles. Said strap F may be made as a simple ring separate from the jack, and to be passed over the toe of the last as required. The hook E', being in proper position to catch into the loop of the strap as it is passed over the shoe-toe, requires no special attention to make the connection.

The lower end of rod E is swivel-connected

to a treadle or ratchet-lever, G, by means of which pressure can be applied to the strap F by the foot of the operator.

The jack may be made without the rod E and strap F, if desired.

The last I is made in the form illustrated, with open interior, low sides, and a flat inner seat-surface at I' to match the seat of the jack. At the heel end is a recess, J, to lock onto the beak or rear hook of the jack. Said recess is formed by a chill-core when casting the last. Above the recess is an inclined surface or bevel, i, to guide the heel down onto the jack-head.

A projection or lug, K, is formed within the last, centrally of the seat portion I'. Said lug has parallel sides, an inclined front, and is fitted at its rear portion with a curve or under bevel, k, of proper form to match with and be engaged by the jack-tongue for locking the last to the jack-standard.

The rounded surfaces of the lug and jack-tongue, forming a grip on each other, give sufficient tenacity to retain the last firmly on the jack and prevent any recoil or rebounding action from the blows of hammering on the shoe-soles, while they permit of the last being put onto or taken from the jack without inconvenience and by simply pressing down or throwing up the toe of the last to crowd the rounded parts past each other.

The block L is formed of metal in a thin shell, with a simple cross-bar, L', connecting the two sides in the manner shown. A small bar or flange is formed across the upper part at l, which serves as a grip for the hook by which the block L is withdrawn from the shoe. A spring, m, is attached to the under side of the cross-bar L', which spring enters the groove n of the last and is passed beneath the bar or staple o for centering and securing the block upon the last. This form of block may be

cast entire in one piece, is very light and convenient, and the blocks of a given size will fit any of the lasts of corresponding size, thus avoiding the inconvenience of specialty of fit between the lasts and blocks.

What I claim as of my invention, and desire to secure by Letters Patent, is—

1. The standard A, provided with the beak D, and the tongue or lever C, with its top end fitted for locking a last and its lower end provided with a spring or means for effecting locking action therewith, said parts being combined for operation substantially as hereinbefore set forth.

2. The combination, with the standard A, having the top seat for supporting a last, of the detachable extension-piece A², substantially as and for the purpose set forth.

3. The combination, with the standard A, provided with beak D and locking-tongue C, and revolvably supported in the base-plate B, of the rod E, provided with the top hook, E', for engagement with a shank-strap, and a treadle or means for operating said rod, substantially as and for the purpose set forth.

4. The combination, with the last-body I, formed with the seating-surface I' and cavity J, as described, of the central lug or projection, K, having an under bevel or curve, k, at its rear end, substantially as and for the purpose hereinbefore set forth.

5. The instep-block, formed of a thin shell of metal, with the bar L' connecting its side and supporting the attaching-spring, substantially as shown and described.

Witness my hand this 4th day of February, A. D. 1882.

SAMUEL MAWHINNEY.

Witnesses:

CHAS. H. BURLEIGH,
WALTER B. ALLEN.