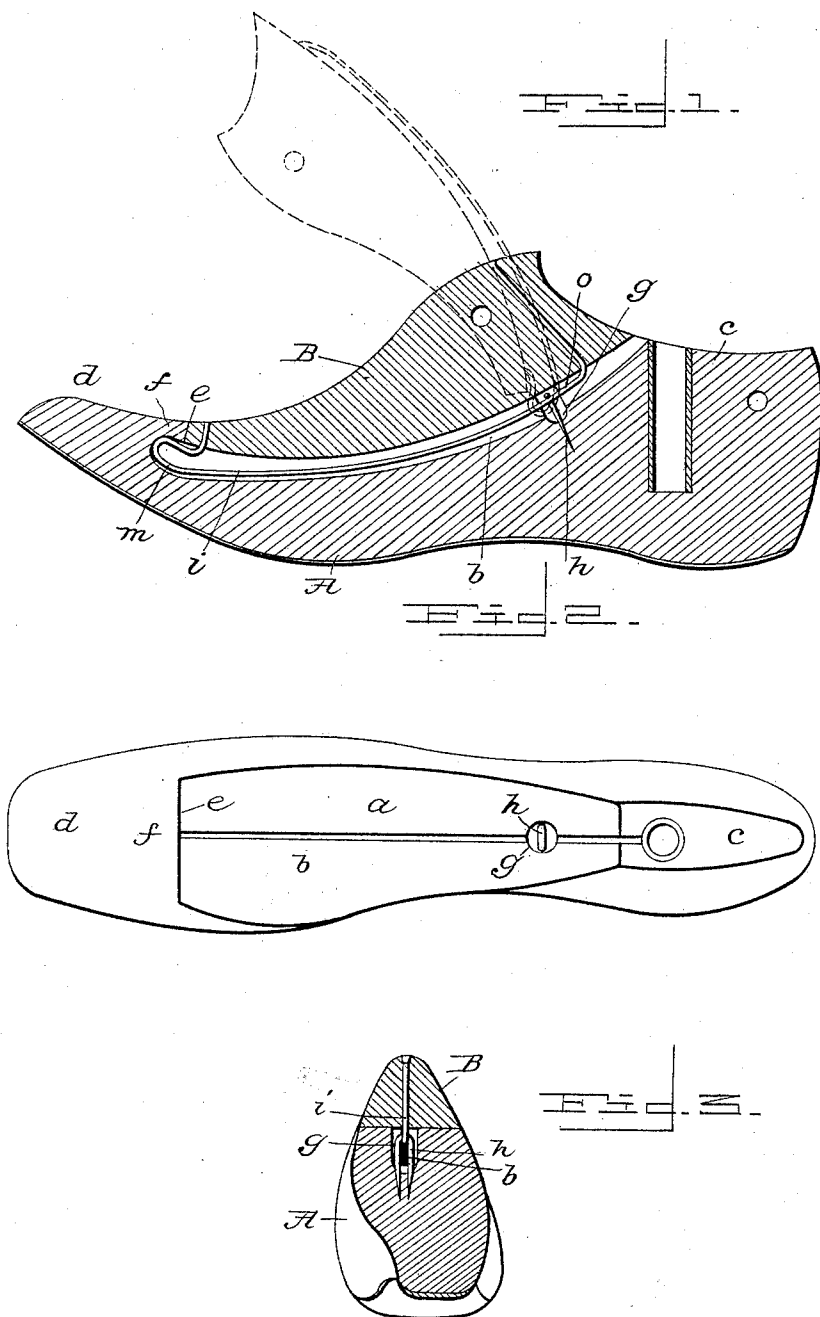


(No Model.)

M. J. BAGLEY.
LAST.

No. 476,858.

Patented June 14, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

MARTIN J. BAGLEY, OF LAKE VILLAGE, NEW HAMPSHIRE, ASSIGNOR OF ONE-HALF TO JOHN S. CRANE, OF SAME PLACE.

LAST.

SPECIFICATION forming part of Letters Patent No. 476,858, dated June 14, 1892.

Application filed December 16, 1891. Serial No. 415,244. (No model.)

To all whom it may concern:

Be it known that I, MARTIN J. BAGLEY, of Lake Village, in the county of Belknap and State of New Hampshire, have invented certain new and useful Improvements in Lasts, of which the following is a specification.

Nearly all shoe-lasts are made in two pieces—one the last proper and the other the instep-block. In order that the instep-block may not become separated from the last to which it belongs, it is customary to connect the instep-block to the last by a suitable permanent connection, which while preventing the detachment of the block from the last at the same time allows the necessary freedom of movement, so that the instep-block can be drawn back before the last itself is withdrawn from the shoe with which it is being used.

The present invention consists in the improved connecting devices between the instep-block and the last which permit the necessary freedom of movement and which securely lock the instep-block to the last when in position for use.

The present improvements are illustrated in the accompanying drawings, wherein—

Figure 1 is a central vertical longitudinal section of the improved last. Fig. 2 is a plan view of the last. Fig. 3 is a cross-section thereof in the plane indicated by the line 3 3 in Fig. 1.

The main part A of the last and the upper instep-block B are of any desired size or character, the present improvements being applicable to any of the existing styles of lasts. On its upper surface *a* the main part A of the last is formed with a narrow longitudinally-extending open groove *b*, which extends from the heel *c* to the toe *d* of the last. The upper surface of the toe *d* of the last is in a different plane from the general surface *a* of the last, so that a square shoulder *e* is formed between the two. The longitudinal groove *b* extends into the toe *d* of the last, and a portion of the toe *d* extends over this lower end of the groove, constituting a locking shoulder or ledge *f* thereabove. Near its upper end the groove *b* has an enlargement or communicating recess *g*, in which is located a ring, loop, or eye *h*, which is rigidly secured therein

to the last A. This eye *h* extends crosswise of the groove. The under surface of the instep-block B fits the upper surface *a* of the last, and it has a lower shoulder, which rests against the shoulder *e* of the last A when it is in position for use.

Rigidly secured at opposite ends to the under side of the instep-block is a longitudinally-extending stiff wire or rod *i*. This wire or rod extends at some distance below the under surface of the instep-block and passes through the loop or eye *h*. Both ends of the rod or wire *i* are secured to the instep-block by being tightly fitted in apertures formed in the same. When the instep-block is in position for use, as shown in full lines in Fig. 1, the wire or rod *i* lies in the longitudinal groove *b*, so that it does not interfere with the seating of the instep-block on the last and it is entirely concealed. At the same time the wire or rod *i*, with the loop or eye *h*, permanently connects the last and instep-block without interfering with the freedom of the movement of the instep-block, which can be withdrawn from the last, as indicated in dotted lines in Fig. 1.

In order that the instep-block may be firmly and securely held in place on the last when in position for use, as indicated in full lines in Fig. 1, a special construction of the wire or rod *i* relatively to the groove *b* and loop or eye *h* is adopted. The width of the groove *b* is just sufficient to accommodate and permit the free sliding movement of the wire or rod *i* therein, so that when the wire or rod is in position therein it and the instep-block can have substantially no lateral movement. The lower end of the wire or rod *i* is bent to form a loop or bend *m*, which extends outwardly beyond the lower end of the instep-block. The upper end of the wire or rod *i* also is specially shaped. It is not parallel with the lower surface of the instep-block, but is inclined or cam-shaped, as shown at *o*. When, therefore, the last is to be used and the instep-block is brought to proper operative position thereon, the projecting loop *m* of the fastening wire or rod *i* extends into the portion of the groove *b* extending into the toe *d* of the last and beneath the locking shoulder or ledge *f* of the

last. Since the wire or rod *i* is somewhat elastic, the loop *m* is thus wedged into the closed lower end of the groove *b* and is thereby securely locked in place. At the same time when the instep-block is being slid downward along the upper surface of the last and approaches its operative position, the inclined or cam-shaped part *o* of the wire or rod *i* comes into contact with the eye or loop *h*, and thereby the instep-block is drawn tightly against the last, thereby throwing into the proper position the instep-block, and also assisting in locking the instep-block to the last. The ledge *m* and loop *f*, it will be noted, constitute reciprocal means carried by the last and instep-block, respectively, for engaging and locking the lower end of the instep-block to the last, while the eye *h* and cam *o* constitute reciprocal means carried by the last and instep-block, respectively, for engaging and locking the upper end of the instep-block to the last.

It will be noted that the locking and positioning of the instep-block are accomplished by the conjoint action of the groove *b*, loop *h*, and wire or rod *i*, which are all needed to connect the instep-block to the last, so that these additional functions are accomplished without the presence of additional parts.

I claim as my invention—

1. The last having a narrow longitudinal groove and loop or eye fixed immovably to said last crosswise of said groove, in combination with an instep-block having a longitudinal wire or rod secured at opposite ends thereto, said wire or rod sliding in said groove and passing through said loop or eye, said groove being of just sufficient width to accommodate said wire, substantially as set forth.

2. The last having longitudinal groove extending into the toe of the last and a loop or eye *h*, in combination with an instep-block having a longitudinal wire or rod secured at opposite ends thereto, said wire or rod sliding in said groove and passing through said loop or eye, and said wire or rod having a loop or

bend *m* therein which extends beyond said instep or block and which enters and locks into the portion of said longitudinal groove which extends into the toe end of the last, substantially as set forth.

3. The last having longitudinal groove and a loop or eye *h* near the upper end of said groove, in combination with an instep-block having a longitudinal wire or rod secured at opposite ends thereto, said wire or rod sliding in said groove and passing through said loop or eye, and said wire or rod having near its upper end an inclined or cam-shaped portion *o*, which co-operates with said loop or eye to draw the upper portion of the instep-block to the last, and reciprocal means carried by the last and instep-block, respectively, for engaging the lower end of the instep-block to the last, substantially as set forth.

4. The last having open longitudinal groove *b* extending into the toe of the last, whereof a locking-shoulder *e* is formed above the lower end of the said groove, and a loop or eye *h*, fixed immovably to said last near the heel end thereof and crosswise of said groove *b*, in combination with an instep-block having a wire or rod *i* secured at opposite ends thereto, said wire or rod sliding in said groove and passing through said loop or eye, said wire or rod having at one end a loop or bend *m*, which extends beyond the lower end of the instep-block and which rod enters into the lower closed end of said groove *b* and locks beneath said locking-shoulder *e*, and said wire or rod having at its upper end an inclined or cam portion *o*, which co-operates with said loop or eye *h* to draw the instep-block to the last.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

MARTIN J. BAGLEY.

Witnesses:

A. C. MOORE,
HENRY B. QUINBY.