(No Model.)

G. E. BELCHER.

LAST BLOCK FASTENER.

No. 493,394. Patented Mar. 14, 1893.

FIG. 1.

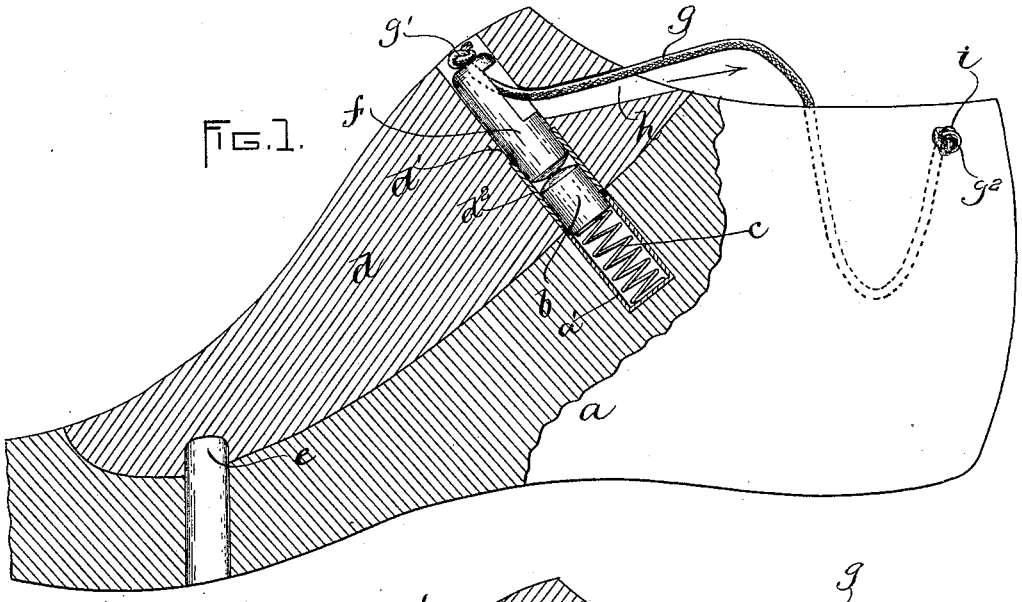


FIG 2.

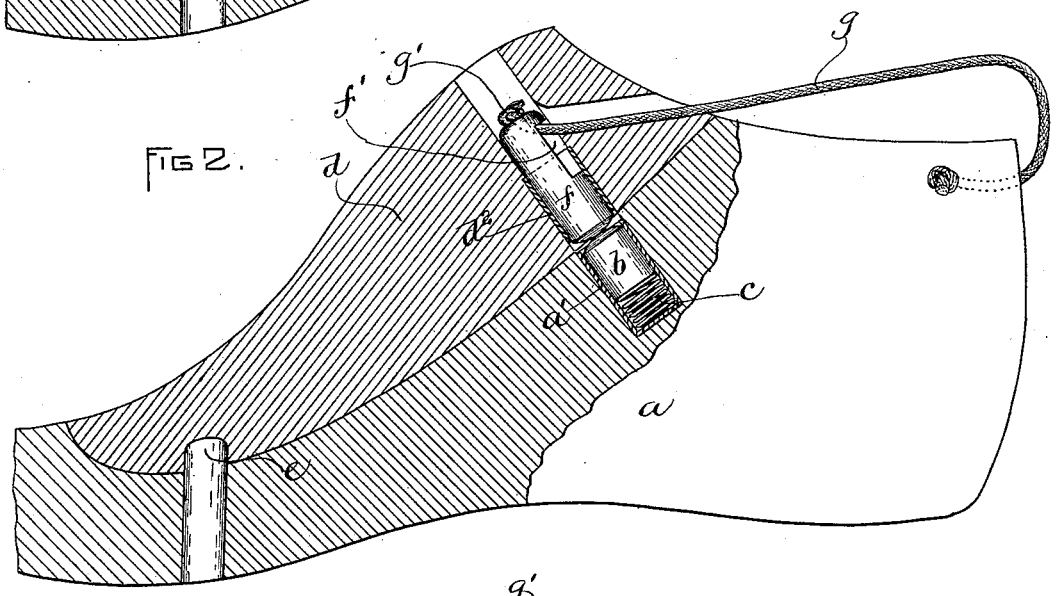
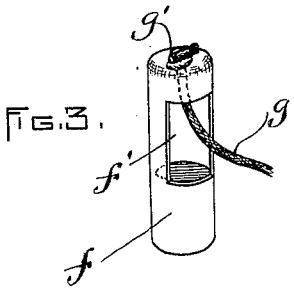


FIG. 3.



WITNESSES:

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H. S. McLeod

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UNITED STATES PATENT OFFICE.

GEORGE E. BELCHER, OF STOUGHTON, MASSACHUSETTS.

LAST-BLOCK FASTENER.

SPECIFICATION forming part of Letters Patent No. 493,394, dated March 14, 1893.

Application filed November 26, 1892. Serial No. 453,177. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. BELCHER, of Stoughton, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Last-Block Fasteners, of which the following is a specification.

This invention relates to lasts in which the block is fastened by means of a spring bolt, engaged with the last and yieldingly projected therefrom by a spring, its outer end engaging a socket formed for its reception in the block.

The invention has for its object to provide a last of this class, having in the block a bolt-retracting device, comprising a sliding pin and a cord connecting said pin with the body of the last, the arrangement being such that, when said cord is pulled toward the heel of the last, the bolt will be retracted by the pin, thus releasing the block, as I will now proceed to describe.

Of the accompanying drawings, forming part of this specification: Figure 1 represents a longitudinal section of a last having a block fastener embodying my improvements, the bolt being in position to lock the block. Fig. 2 represents a similar view of a portion of the last, showing the bolt retracted to release the block. Fig. 3 represents a perspective view of the bolt-retracting pin.

In the drawings: *a* represents a last having a cavity *a'*, in which is fitted to slide lengthwise a block-locking bolt *b*, said bolt being normally projected from the block-seat of the last by means of a spring *c*.

d represents the block, which is formed to bear upon the block-seat of the last, and is provided with an orifice or socket *d'*, extending through the block in line with the bolt *b*, the lower portion of said orifice receiving the bolt when the block is in place on the last, as shown in Fig. 1, so that the block is locked to the last by means of the bolt and a suitable pin *e* or other equivalent projection on the last at the lower portion of the block.

f represents a pin, which is fitted to slide lengthwise in the socket *d'*. To the upper portion of said pin is connected a flexible cord *g*, which extends from the pin through an orifice *h*, extending from the socket *f* toward the upper end of the block *d*. The pin *f* is preferably a sheet metal tube, have its lower end closed by a plug, and having a slot *f'* in one side of its upper portion, the upper end of the tube being turned inwardly to form a head, which has a small aperture at the center for the cord *g*. Said cord is provided with a knot or enlargement *g'* above the pin, and passes through the slot *f'*. The arrangement of the orifice *h*, through which the cord passes, is such, relatively to the socket *e'* and pin *f*, that, when the cord is pulled toward the heel portion of the last, or in the direction indicated by the arrow in Fig. 1, the pin *f* will be depressed in the socket *d'* and thus caused to retract or push backwardly the bolt *d*, until said bolt is disengaged from the socket in the block, as shown in Fig. 2, thus releasing the block and allowing it to separate from the last. It will be seen that the strain exerted in the direction described on the cord, not only displaces the bolt, but also removes the block from its seat.

The cord *g* constitutes a flexible handle, operating as described to both unlock and remove the block, and also a connection between the block and the last, one end of said cord being preferably secured to the rear portion of the last in any suitable way, as by being passed through the transverse orifice *i*, as shown in Fig. 1, and provided with a knot g^2 at one end of said orifice.

The socket *d'* is or may be provided with a metal lining or bushing d^2 at its lower portion, as shown in Figs. 1 and 2.

I am aware that a cord has been used to operate a block-fastening device or bolt, but, in the only instance of such use of which I am aware, the cord has been connected with a bolt which is permanently engaged with the block and is projected downwardly by a spring into a socket in the last, the arrangement being such that an upward pull on the cord is required to unlock the block. Under such an arrangement, if the cord is broken, the block cannot be unlocked without seriously injuring it, because the bolt is inaccessible and cannot be retracted without breaking the block. It will be seen that, in my improved fastening device, this difficulty does not exist, because the outer end of the pin *f* is accessible and can be pressed inwardly to retract the bolt by means of a last hook or other device inserted in the outer end of the socket *d'*, so that, in

the event of the breakage of the cord, there will be no difficulty in operating the locking device.

Another advantage resulting from my improvement is the unlocking and removal of the block by a pull on the cord in the direction of the length of the block, it being necessary to remove the block by an endwise movement, or one which will cause the block to slide upwardly along the block seat. Hence the cord *g* serves, as already stated, to both unlock and remove the last block, said cord making the use of the ordinary last hook commonly used in removing the block unnecessary.

The orifice *h* and the slot *f'* in the pin *f*, arranged as shown, enable a new cord to be readily applied to the pin and last in case of the breakage of the cord, it being necessary only to thread the cord through the orifice *h*, the slot *f'* and the orifice in the upper end of the tubular portion of the pin *f*, and then tie a knot in the cord above the pin; or, if desired, the pin may be removed from the socket *d'* before it is engaged with the cord, the socket *d'* being large enough to permit the pin and the cord to enter the socket side by side. It will be seen that the pull upon the cord required to remove the block from the last, when it is in place in the shoe, does not subject the bolt and spring to any strain liable to break or injure the same.

I claim—

A last having a spring-pressed bolt normally projecting upwardly from its block-seat, combined with a block having a hole or socket extending through it in line with said bolt, the lower portion of said socket receiving the bolt, and a bolt-retracting device comprising a pin fitted to slide in said socket and a flexible handle or cord connected with the upper portion of said pin and extending through an orifice in the upper end of the last block, said cord being arranged so that, when pulled toward the heel of the last, it will move the pin in the direction required to displace the bolt, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 19th day of November, A. D. 1892.

GEO. E. BELCHER.

Witnesses:
MABEL A. CURTIS,
WILLIAM CURTIS.