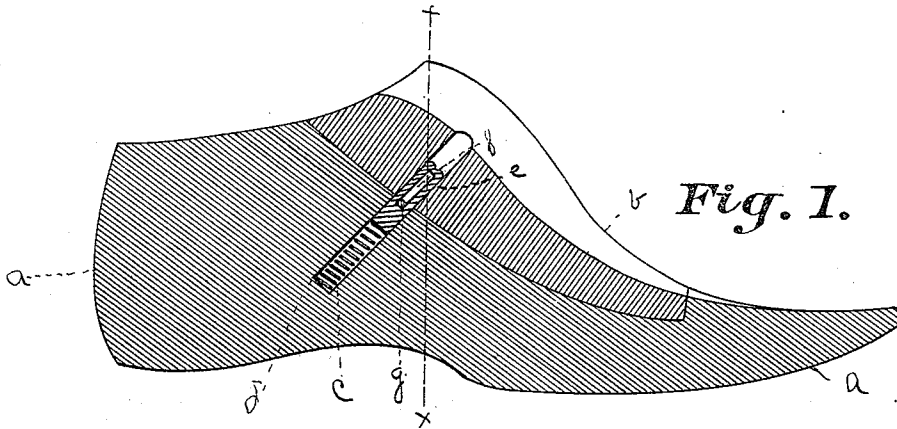


(No Model.)

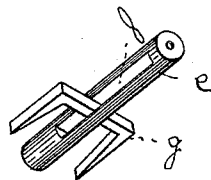
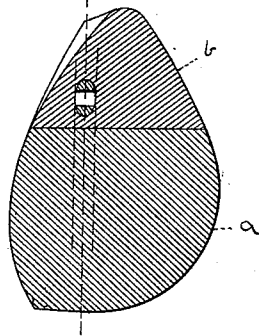
A. T. & J. HARPER.  
SHOE LAST.

No. 526,035.

Patented Sept. 18, 1894.



*Fig. 1.*



*Fig. 3.*

**Witnesses:**

Henry H. Whitney  
Grace E. Pollard

**Inventors.**

Abraham J. Harper  
and  
John Harper  
by  
Venell and Clifford  
their attorneys

# UNITED STATES PATENT OFFICE.

ABRAHAM T. HARPER AND JOHN HARPER, OF PORTLAND, MAINE.

## SHOE-LAST.

SPECIFICATION forming part of Letters Patent No. 526,035, dated September 18, 1894.

Application filed July 20, 1894. Serial No. 518,092. (No model.)

*To all whom it may concern:*

Be it known that we, ABRAHAM T. HARPER and JOHN HARPER, citizens of the United States of America, residing at Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Shoe-Lasts; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention relates to improvements in shoe lasts, and especially for providing means whereby the block may be quickly and securely fastened to the last.

It consists of a spring actuated plunger set in a socket in the last, means for holding said plunger, a socket in the block to receive the end of said plunger, and in certain other details of construction which will be hereinafter more fully described.

In the drawings herewith accompanying and making a part of this specification, Figure 1 represents a vertical longitudinal section of the last with the block and last in position. Fig. 2 is a cross section on line  $x-x$  of Fig. 1, and Fig. 3 is a perspective view of the plunger and staple.

Same letters refer to like parts.

In said drawings  $a$  represents a last, and  $b$  the block. Near the top of the last is a socket  $c$ , in the bottom of which is inserted a spring  $d$ . On the top of this spring is placed a plunger  $e$  having near its upper end a longitudinal slot  $f$ . A staple  $g$  is inserted through the slot in the plunger and the ends driven into the last, so as to keep the plunger, when the

block is removed, from springing out of its socket. The slot in the plunger should be sufficiently long to permit the plunger, when the block is being placed upon the last, to be pushed down flush with the top of the last, and it is evident that when the block is in position, the socket in the block will register with the socket in the last, and thus permit the plunger to enter the socket in the block, and lock the last and block together. To remove the block, a hook is inserted in the socket in the block, and by pressing down the plunger, the block is released.

We are aware that it is not new to provide a last with a spring bolt projecting into a socket in the block, and we do not broadly claim such means of securing the block.

Having thus described our invention and its use, what we desire to secure by Letters Patent, is—

The combination with a last having a socket therein, a spring actuated plunger set in said socket, a vertical slot in said plunger, and a staple passing through said slot and attached to the last, of a block having a socket therein adapted to register with the socket in the last, when the block is in position, and to receive the end of said plunger, substantially as and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

ABRAHAM T. HARPER.  
JOHN HARPER.

Witnesses:

NATHAN CLIFFORD,  
GRACE G. POLLARD.