No. 681,515. Patented Aug. 27, 1901.

J. E. SCOTT.

BLOCK FASTENER FOR SHOE LASTS.

(Application filed Dec. 2, 1899.)

(No Model.)

Fig. 1.

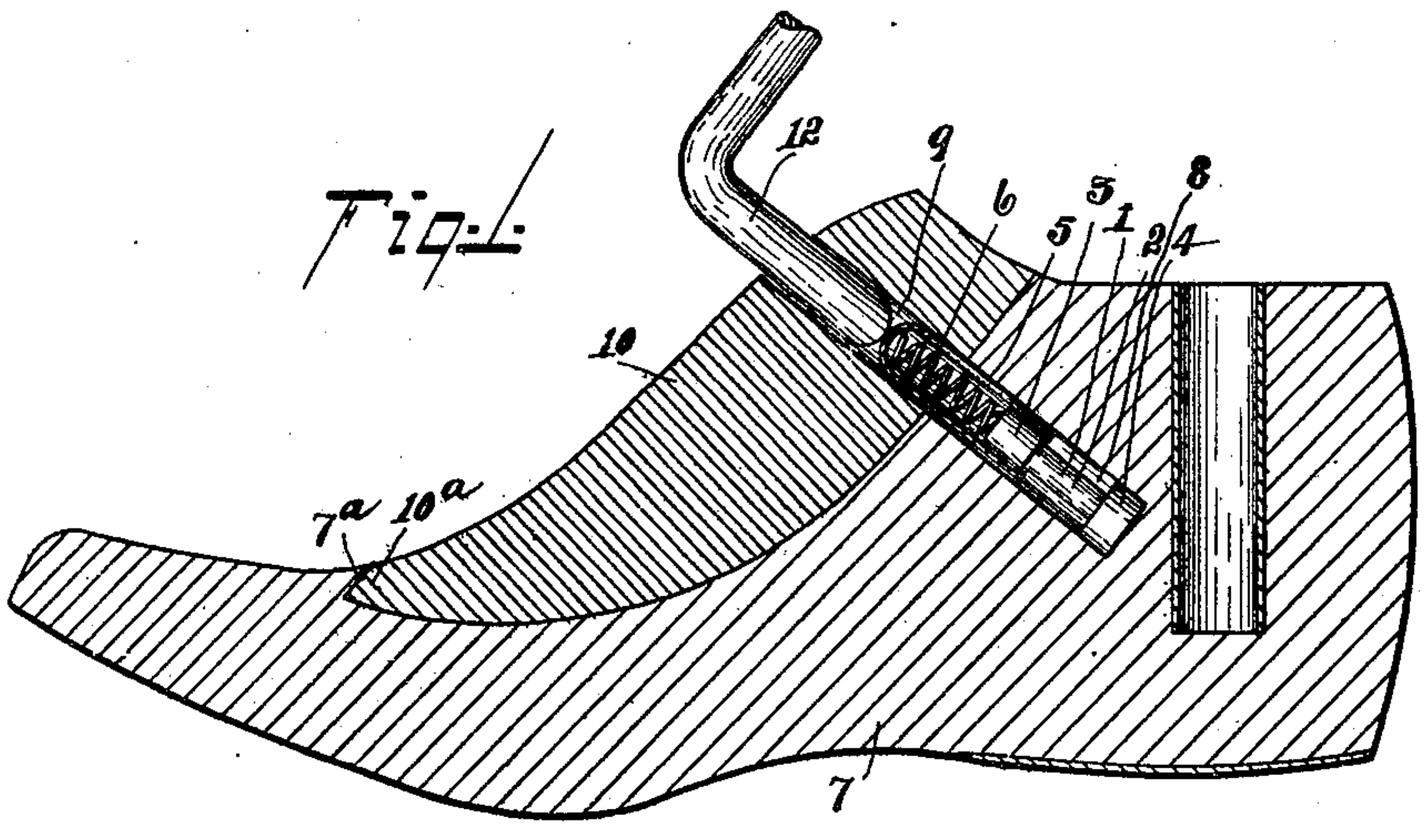


Fig. 2.

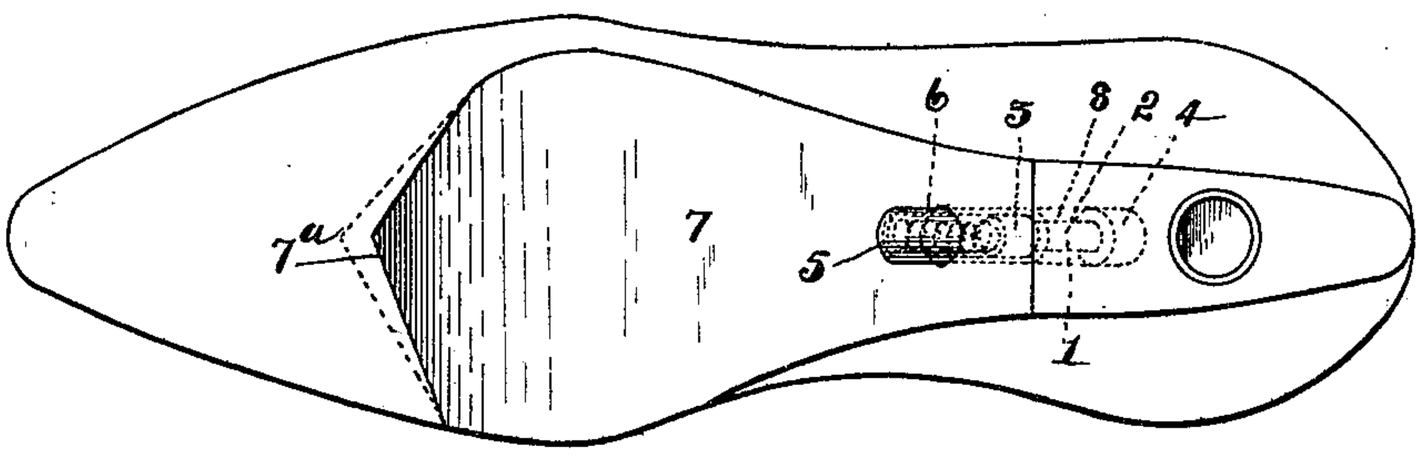


Fig. 3.

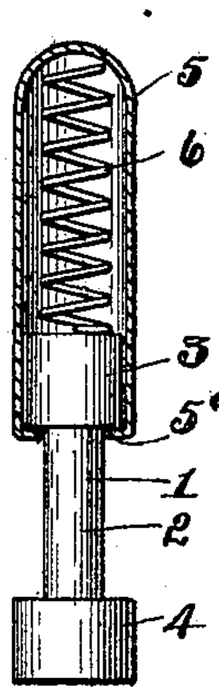
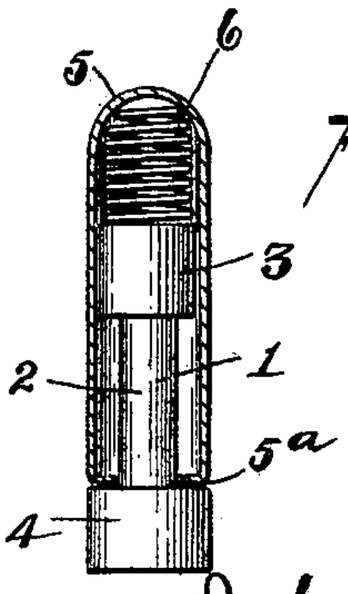


Fig. 4.



WITNESSES:

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BLOCK-FASTENER FOR SHOE-LASTS.

SPECIFICATION forming part of Letters Patent No. 681,515, dated August 27, 1901.

Application filed December 2, 1899. Serial No. 738,968. (No model.)

To all whom it may concern:

Be it known that I, JOHN EMERSON SCOTT, a citizen of the United States, residing in the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Block-Fasteners for Shoe-Lasts, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, of which—

Figure 1 is a longitudinal sectional view through the middle of a last and block to which my invention is applied. Fig. 2 is a top plan view of the last with the block removed. Fig. 3 is an elevation, partly in section, of the block-fastener detached and enlarged. Fig. 4 is a similar view, but showing the spring-controlled sleeve retracted.

This invention relates to those devices usually known as "block-fasteners," whose purpose is to retain in place the removable blocks of shoe-lasts, yet permitting the block to be readily detached from the last.

The object of the invention is to provide a fastener of this nature having certain advantages over those heretofore known, as hereinafter described.

The precise nature of the invention will fully appear from the following description, reference being had to the accompanying drawings, forming a part of this specification.

In the drawings, 1 designates what may be termed a "fixed" plunger or pin, composed of a stem 2, a head 3 at one end, of larger diameter than the stem, and a terminal head 4 at the other end. The head 3 is fitted within a tubular sleeve 5, whose lower end 5^a is bent inwardly to take under the end of the head 3, adjacent to the stem, in order to provide a stop to limit the forward protrusion of the sleeve, as shown.

6 is a helical spring within the sleeve, the ends of which spring bear against the end of the latter and the top of the head 3 of the pin 1, respectively, thus tending to maintain the sleeve in the relative or projected position seen in Figs. 1 and 3. The diameter of the terminal head 4 is slightly greater than the external diameter of the said sleeve.

In applying the device to the last I bore in the body 7 thereof an oblique recess 8 of suitable depth and of a diameter slightly greater than the external diameter of the sleeve 5, and so of about the same diameter as that of the terminal head 4 of pin 1. I insert in this recess the block-fastener, the terminal head 4 in advance, and then drive or force in the fastener a suitable distance, the same being then retained in the recess by the friction of the terminal head 4 against the side wall of the recess. I usually make the latter of such depth that when the end of the terminal head 4 stops against the bottom of the recess the fastener will be a suitable depth within the latter. I also bore a hole 9 through the usual detachable block 10, said hole being of the same diameter, substantially, as that of the recess 8 and in such location that when the block is placed in the usual proper position upon the last-body, as in Fig. 1, the hole and recess will be in registry with each other. In practice I first place the block in the proper position upon the last-body and then bore the hole and recess as one continuous operation, thereby insuring registration of the two. I then remove the block and insert the fastener in the recess in the manner above described. I prefer to have the stem 2 of the pin of such length that in driving the device into the recess 8 the inturned ends of sleeve 5 will stop against the inner end of the terminal head 4, as seen in Fig. 4, in order to avoid any liability of undue strain or compression of the spring 6. The depth of the recess with relation to the length of the block-fastener must be such that the sleeve 5 will project a suitable distance beyond the recess—that is, into the hole in the block—when the latter is in place, as in Fig. 1.

Having explained the construction of my device, I shall now explain the manner of its operation, as follows: The forward pointed end 10^a of the block 10 is brought into position to take under the usual cut-away part or projection 7^a of the last. The rear end of the block is then brought into a position that the hole 9 therein will come in line, or nearly so, with the protruding end of the sleeve 5, and the block being pressed toward the last the sleeve will first be pushed inwardly a certain distance until when the front end of the block becomes finally seated back of the projection 7^a it (the sleeve) will by the force of the spring 6 enter the hole in the block, and

the parts will then occupy the position seen in Fig. 1—that is, the block will be firmly secured in proper position to the last-body. To remove the block, it is merely necessary to force inwardly the sleeve 5 a suitable distance against the stress of the spring sufficient to permit the release of the block. As a convenient means for thus facilitating the detachment of the block I use a bent bar or rod 12, whose end is entered into the hole in the block, as seen in Fig. 1, and being pressed against the sleeve 5 the latter may be pushed in the required distance—that is, so as to be flush, or nearly so, with the line of junction of the block and the body of the last. When so pushed in, the bar is drawn rearwardly, carrying with it the block.

I am aware of the fact that there is a variety of block-fasteners in which spring-controlled plungers adapted to slide in sleeves are used; but, so far as I am informed, in all of these it is necessary to have the hole in the block of smaller diameter than that of the socket in the last-body. Usually a continuous hole and socket are bored of the same diameter and a tubular bushing afterward driven into the hole in the block to suit the diameter of the said plunger. In my construction the necessity of making the hole and socket of different diameters or of employing the aforesaid bushing is avoided.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a block-fastener for lasts, the combination of the sleeve, the pin, upon which the same is adapted to slide, having the terminal head of somewhat larger diameter than the external diameter of said sleeve, the spring within the latter, and means for limiting the outward movement of said sleeve against the stress of said spring, the said sleeve being adapted to slide freely within the usual holes in the block and last, substantially as and for the purpose set forth.

2. In a device for the purpose recited, the combination of the spring-controlled sleeve, the pin upon which the same is adapted to slide, having a head fitted to and within said sleeve, and the terminal head of somewhat larger diameter than the external diameter of said sleeve, the said sleeve being adapted to slide freely within the usual holes in the block and last, substantially as set forth.

3. The combination of the last-body having the recess therein, the detachable block having the hole therethrough, of substantially the same diameter as that of said recess, and adapted to register with said recess, the pin having the terminal head retained within the latter by friction, and the spring-controlled sleeve adapted to slide on said pin, and projecting normally into the hole in said block, substantially as and for the purpose set forth.

In testimony whereof I have hereunto affixed my signature this 18th day of November, A. D. 1899.

JOHN EMERSON SCOTT.

Witnesses:

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JOSHUA PUSEY.