(No Model.)

G. A. COLTON.

SHOE FASTENING.

No. 311,104. Patented Jan. 20, 1885.

Fig. 1

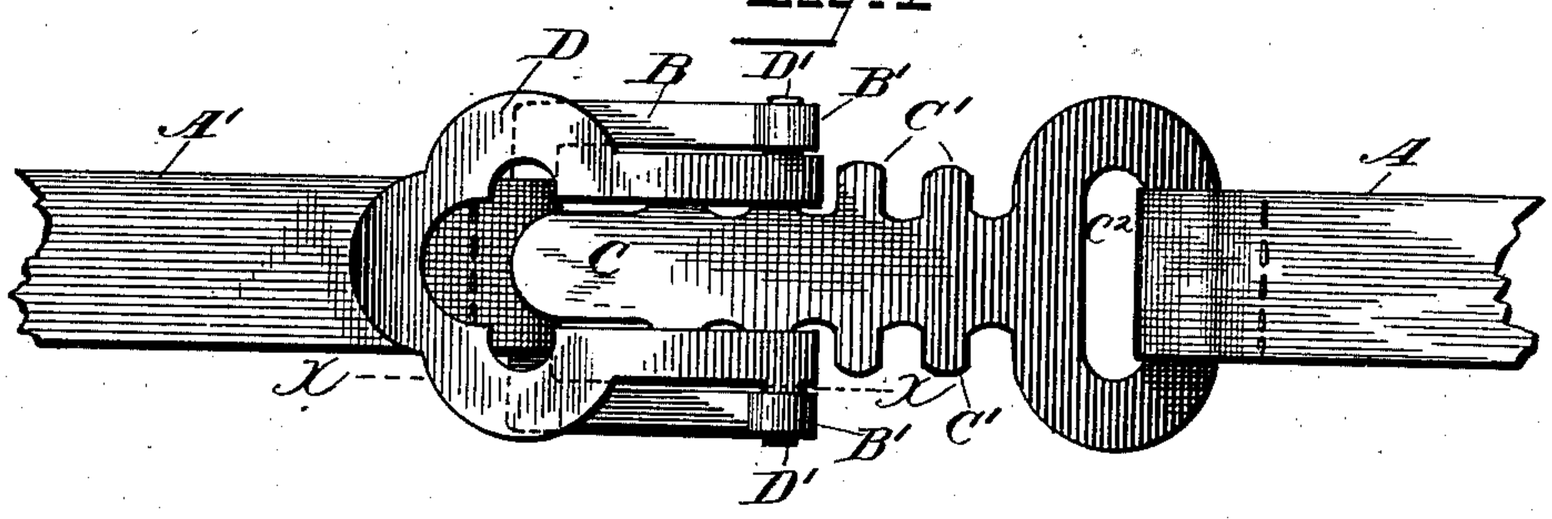
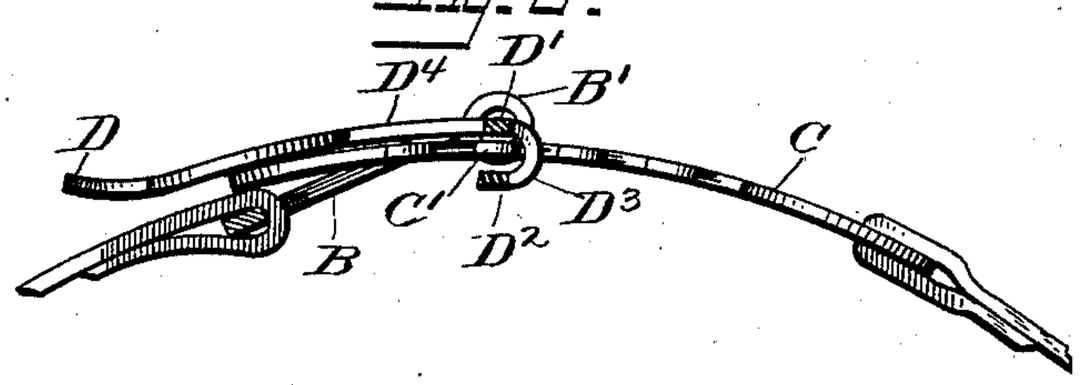


Fig. 2.



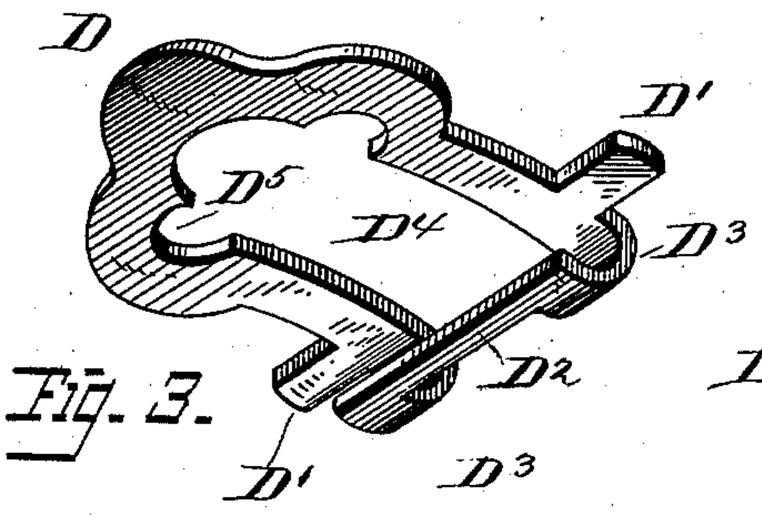


Fig. 3.

Fig. 4.

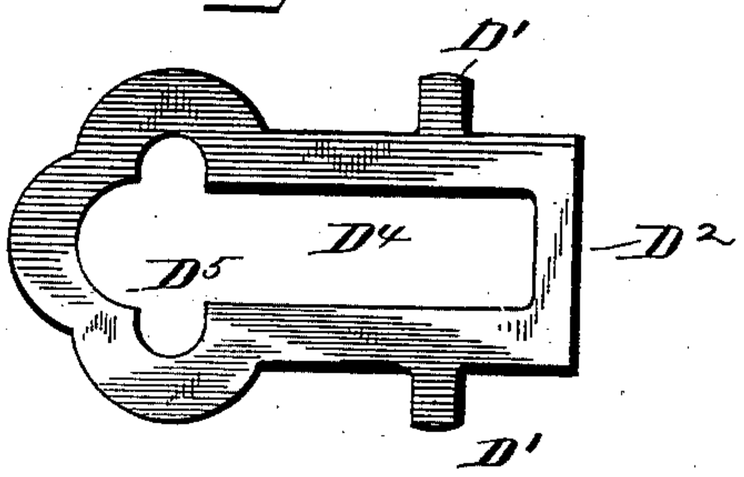
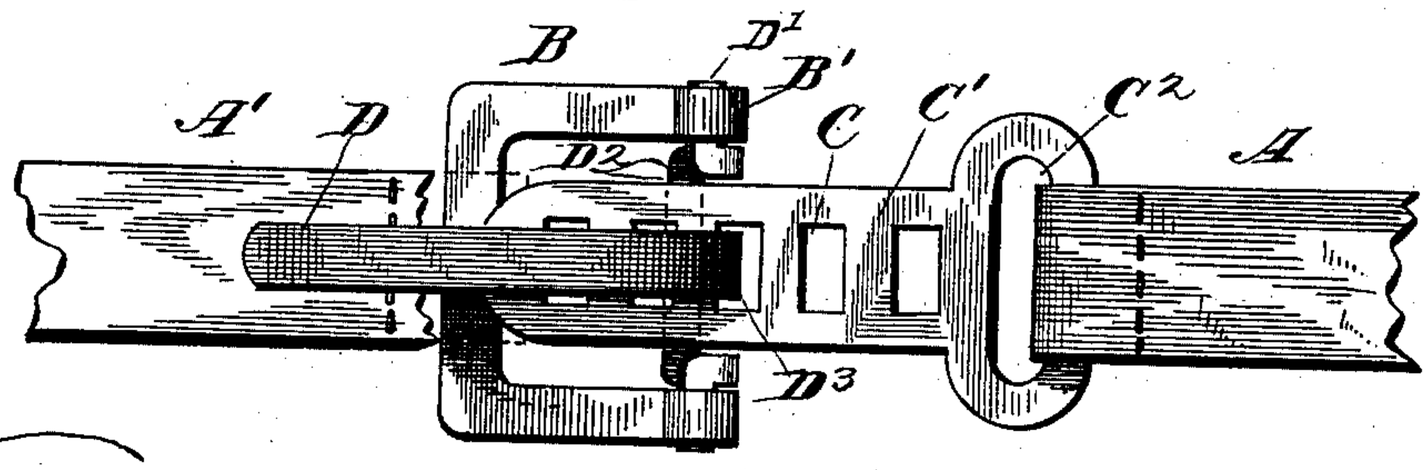


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

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SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 311,104, dated January 20, 1885.

Application filed November 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE A. COLTON, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Shoe-Fastenings, of which the following is a specification, reference being had to the accompanying drawings.

This invention has relation to that class of shoe-fasteners which are in their nature buckles, and which comprise, as at present constructed, four elements: an attaching-loop, a connecting-bar, a locking-lever, and means for maintaining the lever in a locked position, the attaching-loop and locking-bar being adapted for connection with the parts of a shoe or other article which is to be closed and secured by the fastener.

Heretofore in this class of fastenings or buckles springs have been employed maintaining the locking-lever in a closed position, and the connecting-bar has been usually a strip of metal having a series of transverse parallel slots therein for the passage therethrough and connection therewith of the locking-lever at different points along the length thereof, the locking-lever being pivoted so that after being passed through a slot in the connecting-bar it could be turned down, and by the action of a properly-arranged spring maintained in a locked position.

In the class of fastenings employed for hames, connecting-bars of cast metal having lateral lugs have been used in connection with cast-metal locking-levers, and without the use of springs, for the purpose above mentioned; but, as hereinafter set forth, the manufacture of sheet-metal fastenings for shoes, &c., is much simplified by my invention.

In the course of the manufacture of the fasteners, above described a comparatively large number of cutting and shaping dies have been necessarily used; and one of the advantages and objects of my invention is to so construct the individual parts of the fastening as to reduce the number of dies necessary to be used in their manufacture. Another object is to produce a fastening which will automatically and without the use of a spring maintain itself in a locked position.

Other objects and advantages will appear in the following description, and the novel features of my invention will be specifically pointed out in the claims.

Referring to the drawings, Figure 1 is a plan of a fastening constructed in accordance with my invention, and represented as connecting two straps. Fig. 2 is an edge view, partly in section on line *x*, Fig. 1. Fig. 3 is a perspective of a locking-lever. Fig. 4 is a plan of the locking-lever blank, and Fig. 5 is a plan of a modification.

Like letters indicate like parts in all the figures.

A A′ represent straps which are provided with connecting and fastening devices; and these straps may be considered as loops secured to parts of a shoe, or they may be considered as a portion of such parts of a shoe as are to be connected by a suitable fastening device.

I deem it proper to state at this point that, although described and represented as a shoe-fastening, my invention is capable of use for connecting any articles which require buckles or fastening devices, and I therefore do not limit the same to any of the specified uses. The straps or parts of the shoe are connected to the proper parts of the buckle or fastener by being passed through the same and doubled upon themselves; or, if desired, they may be stitched or riveted directly to the parts to be connected thereby in any of the manners customary in this class of devices.

The principal elements employed in my invention are as follows: an attaching-loop or bail, B, a connecting-bar, C, and a locking-lever, D, each of which has in itself, or in connection with the others, novel features of construction. The bail B is of ordinary construction, except that it is sufficiently wide between its eyes B′ to receive the connecting-bar C and the locking-lever D, so that, by a proper construction of the last two elements, the three, when in juxtaposition, occupy a minimum of space in vertical directions, whereby the thickness of the fastening device as a whole is reduced and compactness secured in construction and appearance. The connecting-bar C comprises a series of lugs, C′, formed

upon its body portion, which terminates in an eye or slot, C^2, which serves as a means for a connection of the bar with a part of the article. The locking-lever D comprises in its make up pivots or pintles D′, adapted to operate in the eyes B′ of the bail or loop B, a cross-bar, D^2, arranged in line with and below the pivots, intermediate draft-hooks, D^3, which are also below the pivots, and a longitudinal slot, D^4, extending from the free end of the lever to the cross-bar D^2. If desired, although not absolutely essential, the slot may be widened, as at D^5, to render it a key-hole slot, for a purpose hereinafter described.

By reference to Fig. 1 it is clear that a simple cutting-die will produce the connecting-bar C. By reference to Fig. 4 it will be seen that an equally simple die will produce the locking-lever blank, which, by additional dies, requires simply to be bent to form the draft-hooks D^3, this operation also bringing the cross-bar D^2 with the hooks below the pivots D′, and a well-known simple die will form the loop B, and either simultaneously or by subsequent means the eyes B′ may be formed. When the parts are in a closed position, the act of swinging the free end of the lever D upwardly brings the cross-bar D^2 against the under side of the connecting-bar and carries the same upwardly, so that the lugs or slots thereof are carried above the pivots D′, when the strain of the parts connected by the fastening carries the lever over still farther until the lugs C′ pass through the widened portions D^5 of the slot D^4, or, in the absence of said widened portion, until the bar C may be tilted edgewise until it and its lugs may pass through the slot B^4, and the parts thereby disconnected from each other. In connecting said parts by the fastening device the projections on the bar are, either by tilting or passing through the widened portion D^5, entered in the slot D^4 of the locking-lever while it is in a substantially upright position, so that in the act of turning the free end of said lever downwardly the cross-bar is thrown below the pivots D′ and exerts its strain upon the draft-hooks D^3, which, being below the pivots, act to render the strain or draft of the connecting-bar the means for positively retaining the lever D in a locked or lowered position without the use of springs for that purpose.

In the modification shown in Fig. 5 the connecting-bar is provided with the usual series of transverse slots, and the locking-lever is narrowed and merged into the cross-bar D^2 at its center, instead of at its ends, as heretofore described. In this modification the draft-hooks are merged into a single draft-hook, formed by curving the locking-lever, these changes resulting from the substitution of a slotted connecting-bar for one having lugs at its outer edges. By the adoption of this modification I retain the advantages of simplicity of manufacture, compactness, and the self-locking feature.

Although I have shown the parts of my fastener as constructed of sheet metal, it is obvious that they may be constructed of wire, especially the connecting-loop and the locking-lever, as I have demonstrated by actual practice, and I therefore do not limit my invention to the parts constructed of sheet metal. Furthermore, I deem it proper to state that the self-locking feature of my fastening may be supplanted or supplemented by the usual spring, if desired; but I prefer the construction illustrated.

Instead of the loops A A′, the bail and connecting-bar may be riveted or stitched directly to the shoe.

Having described my invention and its operation, what I claim is—

1. In a shoe clasp or fastening, the locking-lever D, provided with the pintles D′, the draft hook or hooks D^3, and the cross-bar D^2, arranged below the hooks, substantially as specified.

2. The locking-lever D, formed of a single piece of metal, slotted, as at D^4, and provided with the pintles D′, cross-bar D^2, and draft-hooks D^3, these features being arranged in the relative positions specified.

3. The combination, with the locking-lever D, having the draft hook or hooks D^3, and the cross bar D^2 below its pivots D′, of the bail B, the eye-bars of which are arranged outside of said hook or hooks and cross-bar, and the connecting-bar C, having bars or lugs C′, adapted to take into the hook or hooks D^3, substantially as shown and described.

4. The combination of the connecting-bar C, having lugs C′, the slotted locking-lever D, the sides of which are provided with pivots D′, and are bent to form draft-hooks D^3, and the bail B, the sides of which are separated to receive the lever and the connecting-bar, substantially as shown and described.

5. The combination, with the parts A A′ of an article, of the loop B, the lever D, having the pintles D′, mounted in the loop, and having the draft-hooks D^3 and cross-bar D^2, arranged below its pintles, and the connecting-bar C, having the marginal lugs C′ and the slot C^2, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE A. COLTON.

Witnesses:
D. F. HAYDEN,
MILLS STRYKER.