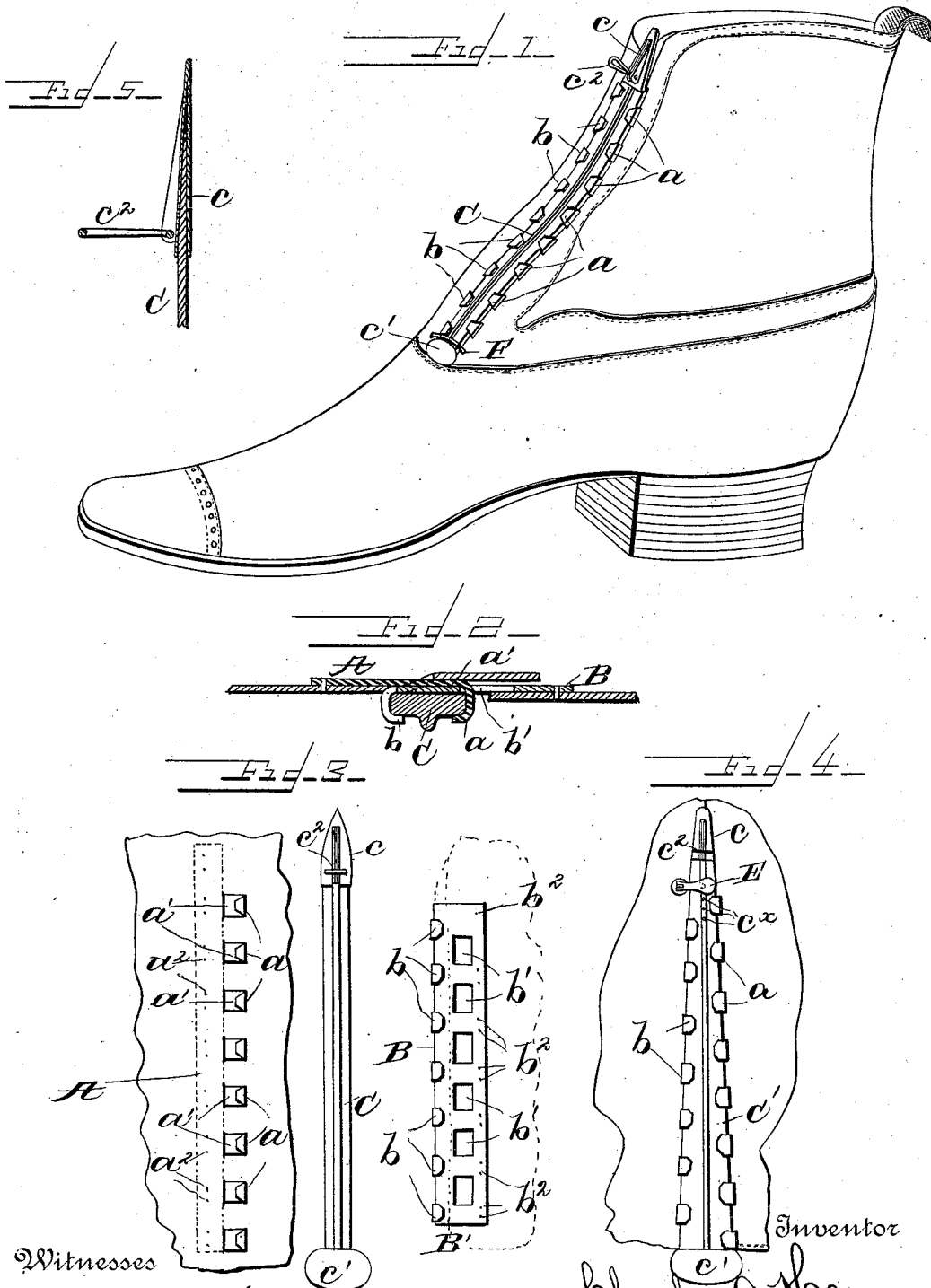


(No Model.)

C. A. HARVEY.
SHOE FASTENING.

No. 468,988.

Patented Feb. 16, 1892.



Witnesses

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SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 468,988, dated February 16, 1892.

Application filed July 2, 1891. Serial No. 398,264. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. HARVEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Shoe-Fastenings; and I 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.

My invention is an improvement in shoe-fastenings; and it consists in the most novel features of construction and combination of parts hereinafter fully described.

In the accompanying drawings I have illustrated one form in which I have contemplated embodying my invention, and said invention is fully disclosed in the following description and claims.

Referring to the said drawings, Figure 1 is a perspective view of a shoe provided with my improved fastening. Fig. 2 is a sectional view of the fastening device. Fig. 3 shows the parts of the fastening in detail. Fig. 4 is a plan view of a slightly-modified construction. Fig. 5 is a detail view of a ferrule of the securing-tongue.

My improved fastening device consists of the plates A and B, provided with retaining hooks or projections *a* and *b*, respectively and the tongue C, which engages said hooks or projections and effects the fastening of the shoe.

The plate A consists of a strip of metal, preferably spring metal, brass, steel, or other suitable material which will conform readily to the shape of the foot, and said plate is provided at one side with a series of projecting portions *a'*, terminating in the retaining hooks or projections *a*. The plate A is also provided with apertures *a''* or other means for enabling it to be attached to one of the flaps of a shoe.

The plate B is formed of the same material as plate A and is provided on the edge adjacent to the plate A with a series of hooks or projections *b*, the hooks *b* alternating with the hooks *a* and being in line with the re-

cesses formed between adjacent projections *a'* of the plate A. The plate B is also provided with a series of recessed portions or slots *b'* intermediate the hooks *b*. These recesses may be formed by punching slots in the plate B, as shown in full lines in Fig. 3, or they may be formed by cutting away portions of the plate, leaving projections opposite the hooks *b*, provided with means for attachment to one edge or flap of the shoe, as indicated in dotted lines. In the form shown in full lines the edge of the plate B, opposite hooks *b*, is provided with means for attaching it to one flap of the shoe, (here shown as a series of apertures *b''*;) which enables the plate to be sewed to the shoe.

The tongue C is preferably made of a single strip of leather having its edges smoothed and of such size and shape as to fit into the hooks or projections of the two plates, and it may be provided with a ribbed or ornamented central portion, if desired. I may form this strip of metal, if desired, but I prefer to make it of leather.

One end of tongue C is preferably provided with a metal ferrule or sheathing *c*, which is tapered and has its upper faces inclined to facilitate its entering into the hooks or projections, and its other end is provided with a small flexible ear or rosette *c'*, which prevents the tongue from being drawn in too far. The ferrule *c* is also provided with a projecting portion *c''*, which may be taken hold of to draw or push out the said tongue. This projecting portion is preferably pivotally secured to the ferrule *c*, as shown in the drawings, and will fold down out of the way when not in use.

The plates A and B are secured to the rear faces of the flaps of the shoe, the plate A being secured at some distance from the edge of the flap, with the hooks or projections passing through slots or openings in said flap, leaving a portion D of the flap, which is overlapped by the flap B.

To secure the shoe after it has been drawn on the foot, the plate B is placed over the plate A, when the hooks *a* will pass up through

the slots or recesses b' and oppose the hooks b of the plate B, as clearly shown in Fig. 2. The tongue C is then seized by the projection c^2 and the ferrule made to engage the lowest hooks, when it can be drawn up through the channel formed between the opposing hooks and will secure the two flaps of the shoe together. The portion B' of plate B between the hooks b and slots or recesses b' forms a guideway for the tongue C as it is moved up and down to fasten or unfasten the shoe. It will be noticed that the hooks of each plate engage the tongue C on the side opposite the flap, to which said plate is secured. Thus the hooks of the two plates draw toward each other and clamp the tongue between them. The greater the strain the tighter the hooks will clamp the tongue C and the firmer will be the fastening. The pressure of the hooks on opposite sides of the tongue also prevents the tongue from working loose and leaving its seat. Even a very slight pressure of the hooks upon the tongue will cause such a frictional engagement with the same that it cannot become accidentally disengaged.

When it is desired to loosen or unfasten the shoe, the tongue is removed with one quick motion by seizing the projection c^2 or rosette c' and the two plates can be instantly disengaged.

In Fig. 4 I have shown a slightly-modified form of fastening, in which the opposing hooks of the two plates when in operative position are arranged in lines converging slightly toward the top of the shoe. The tongue C' is also provided with inclined sides, as shown. When the said tongue is made to engage the hooks, after being drawn to a certain point, the edges of said tongue will engage all of the hooks with equal pressure. If it is drawn further, the inclined sides of the tongue will cause all of the hooks to separate more or less, according to the amount of movement given the tongue and the pitch of the inclined sides, and thus adjusting the shoe to the foot of the wearer. The tongue will be held in the position in which it is placed by the frictional engagement of the hooks; but it may be held positively in its adjusted position by any suitable means, as a spring clip or latch E, (shown in Fig. 4,) which is provided with a projection a , adapted to engage one of a series of apertures c in the tongue C.

I may employ a fastening device E with the form of tongue shown in Figs. 1 and 2, if desired; but it is not thought that it will ordinarily be necessary.

If found desirable, I may provide means for preventing the tongue C from being entirely disengaged from the shoe by constructing a loop or other retaining device F to engage the tongue and prevent it from being removed from the shoe, as shown in Fig. 1.

While I have described and illustrated this device as applied to shoes, it is obvious that

it may be employed to fasten two adjacent edges of any article together, and I may construct these fastening devices to be applied to corsets, gloves, and any other articles where found convenient or desirable.

What I claim, and desire to secure by Letters Patent, is—

1. A fastening device for adjacent edges of flexible material, consisting of a row of hooks secured to one edge, a row of hooks secured to the other edge and alternating with the hooks of the first-named edge, and the movable tongue adapted to pass between the said rows of hooks, said tongue being capable of yielding transversely of said rows of hooks, but being incapable of yielding laterally in the plane of said hooks, substantially as described.

2. A fastening device consisting of two plates provided with retaining devices and the securing-tongue adapted to engage said retaining devices, the said retaining devices of each plate engaging the tongue on the side opposite of said plate, said tongue being capable of yielding transversely of said plates, but being incapable of yielding laterally in the plane of said hooks, substantially as described.

3. A fastening device consisting of a plate provided with projecting arms terminating in hooks or projections, a second plate provided with hooks or projections and slots or recesses in rear of said hooks or projections for the reception of the hooks or projections of the other plate, and the securing-tongue, substantially as described.

4. A fastening device for two adjacent edges of flexible material, consisting of a row of hooks secured to one edge, a plate secured to the other edge provided along its outer edge with a row of hooks and with a row of slots or recesses a distance back from said edge for the reception of the hooks of the other edge of the material, and the movable tongue adapted to engage said rows of hooks, the portion of said plate between its hooks and recesses forming a guideway for said tongue, substantially as described.

5. A fastening device for adjacent edges of flexible material, consisting of a row of hooks secured to one edge of the material, a row of hooks secured to the other edge and alternating with the hooks of the first edge, and a movable tongue adapted to pass between said hooks and provided with a ferrule having its edges and upper face inclined, substantially as described.

6. A fastening consisting of two plates provided with hooks or projections arranged in converging lines and a tapering tongue for engaging said hooks or projections, the hooks or projections of each plate engaging said tongue on the side opposite the said plate, substantially as described.

7. A fastening device consisting of two

plates, one provided with the projecting arms terminating in hooks or projections and the other with hooks or projections and slots in rear of said hooks or projections, adapted to receive the hooks or projections of the other plate, the inclined tongue for adjusting the tension of the fastening device, and a latch for holding said tongue and securing said parts in their adjusted positions, substantially as described. 10

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

CHARLES A. HARVEY.

Witnesses:

ROBERT MCGILL,
W. H. ROBERTS.