

(No Model.)

J. N. SCHWANDER.
SHOE FASTENING.

No. 506,341.

Patented Oct. 10, 1893.

Fig. 1.

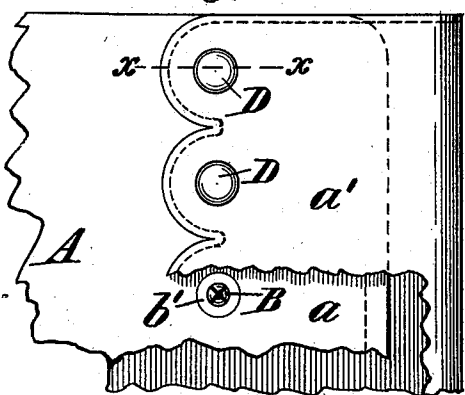


Fig. 2.

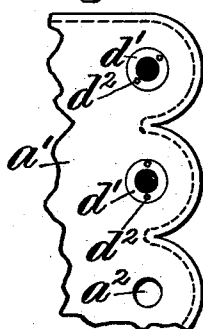


Fig. 3.

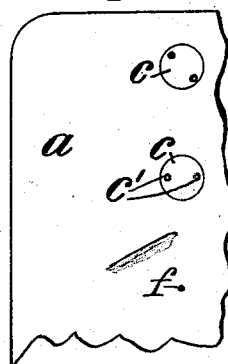


Fig. 4.

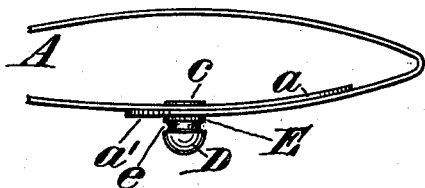


Fig. 5.

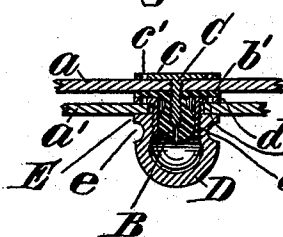


Fig. 6.

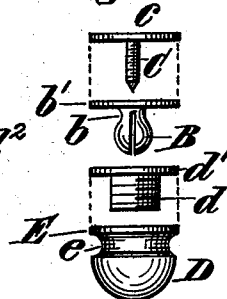


Fig. 7.

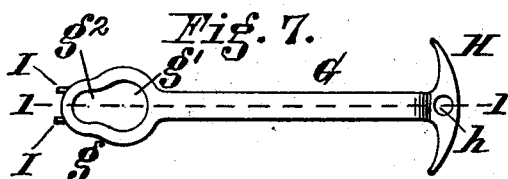
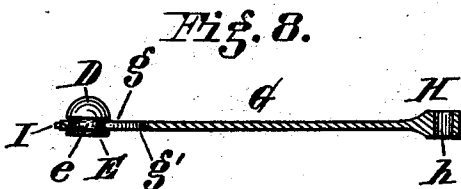


Fig. 8.



Attest

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UNITED STATES PATENT OFFICE.

JACOB N. SCHWANDER, OF CINCINNATI, OHIO, ASSIGNOR TO HIMSELF AND
KONN B. SAYRES, OF SAME PLACE.

SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 506,341, dated October 10, 1893.

Application filed May 31, 1892. Serial No. 434,924. (No model.)

To all whom it may concern:

Be it known that I, JACOB N. SCHWANDER, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Fastenings for Shoes or other Articles, of which the following is a specification.

My invention relates to an improvement in fastenings or clasps for closing the overlapping parts of articles of wear, such as the flaps or fliers of button or open shoes and the like, the arrangement, construction, and mode of operation being fully hereinafter described and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a full size, broken elevation of the upper part of a shoe having a side flap or fly usual in the common form of button-shoe, and showing my invention applied thereto; Fig. 2, a broken elevation of the inner face of said fly; Fig. 3 a broken elevation of the inner face of the shoe-upper or under-flap to which said fly is fastened by my device; Fig. 4 a broken plan of Fig. 1; Fig. 5 a broken, double-size cross-section of my invention in its preferred form, taken on line *x, x*, of Fig. 1; Fig. 6 an elevation showing all the parts comprising my preferred form of fastener in detail; Fig. 7 a full-size plan of the preferred form of special tool or device used in applying and operating my shoe-fastening; Fig. 8 a longitudinal section on line 1, 1, of Fig. 7, showing the manner of using said tool in connection with my peculiar form of button.

A represents an ordinary shoe-upper having an inner or bottom flap *a*, and an outer flap *a'*, the latter forming the customary overlapping fly.

My fastening for properly holding the fly closed, is composed of a male and female member, and is arranged in series, at the desired distance apart, along the said overlapping parts, as partially shown in Figs. 1, 2, and 3. The male-member is mounted on the under-flap *a*, and is composed of a projecting head or post *B* having a neck *b*, and a flange or base *b'*. Post *B* is preferably cross-slitted or split, as shown in Figs. 1, 5 and 6, and also suitably tempered for elasticity, and is detachably secured in place by means of

a screw *C*, which engages a central internal thread cut therein, as best seen in Figs. 5 and 6. The head of screw *C* is made in the form of a circular plate or disk *c*, which is brought up into close contact with the inner face of the leather when the said male-member is attached in place. Disk *c* is provided with a pair of holes or recesses *c'*, the purpose of which will be hereinafter referred to. The turning home of screw *C* into the post *B*, causes the end of the screw, which is sharp pointed, to enter the recess formed by the intersection of the slots in the head, and its continued presence therein, serves to properly expand the divisions formed by the cross slits, and maintain the desired outward pressure and elasticity, for the closing or locking engagement with the female-member, which I shall now describe. The female-member is mounted on the fly or flap *a'*, and is preferably composed of a hollow head or socket-cap *D*, and a hollow shank or thimble *d*, the latter having a flange or base *d'*. In Figs. 5 and 6 I have shown the preferred construction of shank *d*, whereby the head or cap *D* is readily attached to and detached from the fly. This preferred construction lies in externally-threading the said shank to suit an internal screw-thread made in the said head or cap, and these two parts engage each other on the fly, as most clearly shown in Fig. 5. The head or cap *D* is constructed to imitate the customary shoe-button, having a round face, or,—more particularly speaking,—hemispherical with an inner circular extension or base *E* of the same diameter, the latter (said extension) having preferably a circumferential groove or recess *e* cut or spun thereon, which forms an important feature of my invention, and whose special function will be presently described. The inner end or face of the extension is perfectly flat, and is brought tightly against the leather when the shank or thimble *d* is turned home. *d², d³*, represents a pair of holes or recesses made in the flange *d'* of said thimble, similar to those in the disk *c* of the post *B*, the purpose of which I shall also presently describe.

In Figs. 7 and 8, I have shown a special tool or implement whereby my fastening is best manipulated. This implement is com-

posed of a bar G having an elongated eye or loop g at one end, and a short transverse bar or handle H at its opposite end. The eye g is constructed in two internal diameters, g' and g^2 , the former (g') being the greater and made slightly larger than that of the socket-cap D, so as to accommodate or admit said cap, and the diameter g^2 , being the smaller and adapted to just accommodate the grooved part e of said cap. Two small pins or points I, I, project from the fore end of the eye g , and are spaced the same distance apart as the respective pairs of holes or recesses c' and d^2 , in the post-disk c and thimble-flange d' , hereinbefore described. These pins I, I, are inserted in said holes, (c' and d^2), and serve as a wrench, whereby said post-disk, or thimble-flange may be turned to or from place.

A hole h is made in the handle H whereby the implement may be conveniently attached to a key-ring, or otherwise hung as desired.

In practice, I prefer to make the head or cap D of hard rubber, gutta-percha, or other similar material or composition of matter, and black in color to correspond with the customary shoe-buttons. This black material will not be visibly affected by the rubbing of contiguous garments or otherwise thereon, in the manner and to the degree that japan-coated metal button-heads D would be.

In applying my fastening, the screw C, which is of small diameter and has a sharp pointed end, is very readily passed through the leather in the under-flap a , without previously piercing said leather; the elastic-post B is then turned into place on the part of screw C, which projects slightly beyond the outer face of flap a , until it comes in contact with said outer face of said flap. The pins I, I, on the operating tool or implement are then inserted in the holes c' in the screw-disk c , and said tool turned so as to tightly drive said disk c home, and thereby prevent the accidental disengagement of said post B. The button-head D is attached to the fly a' by first inserting the screw-threaded shank d through the hole a^2 in said fly, and then screwing or turning said button-head into place on the part of shank d which projects beyond the outer face of the fly, until it comes in contact with said outer face of the fly. The pins I, I, on the operating-implement, are then inserted in the holes d^2 in the shank-flange d' , and said implement turned so as to tightly drive said shank d home, and thereby obviate the accidental disengagement of said button-head.

To operate my fastening, the smaller diameter g^2 of the eye g of the manipulating-tool is brought into engagement with the groove e , of the button-head D; the said tool, whose handle H is conveniently and firmly held between two fingers of the hand, is then used to draw the fly over the ankle for a properly fitting shoe, and thereby bring the two elements (male and female) of my fas-

tening in position for ready locking engagement, the button-head forming a socket to receive the elastic-post, which latter is tightly clasped or held by the frictional engagement occasioned by the expansive pressure of its resilient-head against the inner face of the button-head shank d , as best shown in Fig. 5. When it is desired to remove the shoe, the fly is readily released or thrown open, by simply taking hold, with the thumb and finger, of its edge at each fastening, and drawing outward and forward from the ankle, the two elements of each fastening easily parting on such drawing motion, without any material or perceptible effort on the part of the wearer.

Both elements of each of my fastenings are very easily applied, a series of plain holes a^2 being first punched or cut in the fly, to correspond in position with the customary button-holes, and the several parts of each female element readily attached, as hereinbefore stated. The male elements on the under-flap a , are each attached as hereinbefore stated, the narrow, pointed screws C thereof, being readily inserted without previously piercing the leather, and enabling said male members to be conveniently moved forward or back, (by any one,) on said flap a to suit the ankle, and without leaving holes of any material size to disfigure or otherwise injure the shoe, the small dot f in Fig. 3, about showing the extent or character of hole made by either of the said screws.

Many advantages present themselves, and are apparent, in the use of my fastening, as compared with the common form of sewed button and button-hole used to close open over-lapping elements in shoes or other articles, among the many being the important one that, my button-heads D being mounted on the fly itself remain thereon when the shoe is both on and off the foot, and are therefore not passed in and out of button-holes to wear and tear said button-holes, or be subject to dropping off or accidental removal on account of the attaching thread of the button being worn or broken, like said sewed buttons and accompanying worked button-holes are, at any and all times. Besides, suitable button-holes are costly and difficult to make, and each requires quite a slit or hole in the leather for the accommodation of the several buttons, and when the sewing around them, at the point where the shank or attaching thread of the button comes into tight contact, on account of the close fitting on the ankle, and the expansive action or pressure thereon occasioned by the movements of the foot, gives way, the leather in the fly bursts or tears out and the shoe is made unsightly thereby and practically and irreparably unfit for further use or wear.

My male-element on the under-flap cannot become loose like a sewed button, or hang therefrom, or become affected by the strain of the ankle thereon, as does the sewed but-

ton, and each little hole *f*, left by the screw C, should the said member be removed either forward or back, is practically invisible as compared with the many holes left by the needle and thread of a removed and replaced sewed-button, as is very clearly obvious. Besides, also, my fastening is more easily closed and released by the wearer than said sewed button and button-hole connection, and when the shoe has become set to the foot, it is quite clear that the fly could be readily drawn over and fastened by the fingers without the use of the implements hereinbefore described, or any other means.

It is obvious that, if desired, my button-heads D could be made simply hemispherical and without the grooved extension-base, E, *e*, and thereby still more resemble the customary shoe-button, but they would not be well adapted to the use of a drawing-implement, while the shoe was passing through the setting or comfortably-fitting stage, and would occasion some effort on the part of the wearer to close the fly.

With my series of button-heads mounted directly on the fly, the latter always appears smooth and presentable, and never has the drawn, wrinkled, and untidy appearance of the shoe having the ordinary button and button-hole fastening, in which the button is mounted on the under-flap.

In use, the button-head of each of my fastenings is all that appears to view, the male

portion being hidden and invisible under the fly, and, as said button-heads, in the preferred form, are readily detachable, new ones, of the same, or any other color or material to suit the wearer, can be very easily applied. Both elements being made in so few parts, can be produced very quickly and at small expense, and they are equally well adapted to other uses and purposes than shoes, as is very clearly obvious.

I claim—

In a fastening for shoes or other articles; the combination, with a hollow socket, one end of which is flat and provided with a circumferential groove for the reception of an operating tool and the other end is convex, of a thimble within the socket, the outer end of which is provided with a flange to register with the flat end of the socket, a transversely slotted head provided with a neck and a flat base, and having a screw threaded perforation extending from the base to the intersection of the slots, and a screw to fit said perforation, the head of which is flat to register with the base and the point is sharpened to engage with the slotted portions of the head and cause them to fit snugly within the thimble, substantially as set forth.

JACOB N. SCHWANDER.

Witnesses:

JOHN E. JONES,
L. M. JONES.