(No Model.)

W. M. HAZEL.

DEVICE FOR ATTACHING BUTTONS.

No. 301,365. Patented July 1, 1884.

Fig. 1.

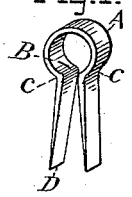


Fig. 2.

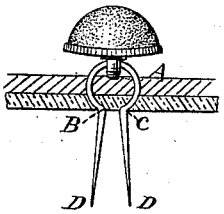


Fig. 3.

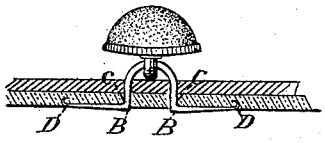
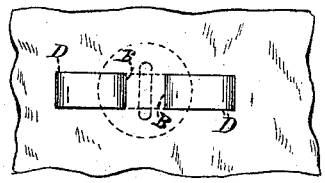


Fig. 4.



ATTEST:

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UNITED STATES PATENT OFFICE.

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DEVICE FOR ATTACHING BUTTONS.

SPECIFICATION forming part of Letters Patent No. 301,365, dated July 1, 1884.

Application filed January 4, 1883. (No model.)

To all whom it may concern:

Be it known that I, WM. M. HAZEL, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Devices for Attaching Buttons to Shoes, of which the following is a specification.

The object of my invention is to provide an economical, simple, more secure and sightly fastening for attaching buttons to shoes by clinching them into the fabric, without the use of an upper or under plate, than those now in use; and it consists, principally, in the formation and employment of a device with two shoulders or elbows formed opposite each other and depressions below circle of loop outside, from which depend two prongs gradually inclining outward from said shoulders, in a manner and for a purpose that will be more fully set forth hereinafter.

In the drawings, which are enlarged, Figure 1 represents the form of fastening as it is designed to be placed upon the market and before it is attached to button or shoe. Fig. 2 represents fastening when attached to button, as it appears after its prongs are forced through the fabric by a suitable machine until its elbows and depressions are exposed below said fabric. Fig. 3 represents the position the fastening assumes when finally secured to shoe, with the material between inside portions of loop, and elbows resting against said material, and depressions against material opposite elbows; Fig. 4, a bottom view of Fig. 3, showing the button and eye in dotted lines and the relation of prongs to same.

Similar letters of reference indicate like parts in the several figures.

My device in its preferred form is made from flat or half-round wire, with the loop A, shoulders or elbows B B, niches *c c*, and two projecting prongs, D D, inclining downward and outward from shoulders B B, said prongs being made gradually thinner their entire length, or near points, as preferred, to more readily pierce material, while the fastening is of equal width throughout its entire length. It will be seen, and it is claimed, that whether the fastening is made of flat or half-round wire the forming of elbows B B, and as a consequence the niches *c c* opposite said elbows, outside of and below said loop A, gives greater strength and utility by reason of the relief afforded ends of prongs when subjected to strain from button, thus permitting the prongs the better to maintain their position when finally secured to fabric. The outward position of prongs D D from elbows to point is such as to compel them to set at right angles to elbows B B and lower portion of loop A and on a line with each other, as shown in Fig. 3.

The manner of attaching buttons by means of my device is to pass the fastening through the eye of an ordinary shoe-button until said eye rests in loop A. The prongs D D are then forced through the fabric by a suitable machine (which is a separate invention) until the prongs D D, elbows B B, and depressions *c c* opposite said elbows, below outside of loop, appear below fabric, as fully shown in Fig. 2 of drawings. The bottom jaw of machine (suitably constructed) spreads the prongs, and with them the elbows, depressions, and lower part of loop are inclined outward until they spring into the two small incisions made in fabric by prongs D D, and securely and rigidly rest there at right angles to said prongs perpendicularly, while the button rests snugly down on fabric, but at liberty to play in loop, thus giving greater strength and general efficiency to fastening and much more resistance from material directly above niche and against elbows and inside of loop by material between them, which condition enables fastening to maintain its position far more securely than would be the result were an ordinary staple (which has been used) employed without a plate, where there would necessarily be an interference by material between upper jaw of a machine and staple while being clinched, which would, after being clinched, leave a gradual curve from loop to arms or prongs, this bringing the strain largely upon the extreme ends of arms, and by so much displacing the arms and permitting the staple or fastening to work loose, and finally, when in thin material, to become detached. The use of my invention obviates all these objectionable features.

My fastening may have its ends clinched into fabric, as shown in Fig. 3 of drawings; or it

may simply be secured by spreading the prongs until they rest up against material at right angles to shoulders and bottom part of loop, and on a line with each other in opposite directions, as preferred.

It will be observed that the forming of the shoulders or elbows B B and depressions *c c* opposite same, and the downward and outward inclination of the prongs D D from said shoulders B B to enable them to assume positively their final position without an under plate, as shown in Fig. 3 of drawings, form the vital features of my invention.

Having fully described my invention, what I claim as new and useful for the purpose described, and desire to secure by Letters Patent, is—

The described button-fastener, consisting of a strip of metal of equal width throughout its entire length, and bent into shape to form the loop A, and shoulders or elbows B B, having depressions *c c* on the surface opposite said shoulders, and downward and outward inclining elastic prongs D D, having thinned and square ends, the said prongs being nearest together at the shoulders B B, substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 3d day of January, A. D. 1883.

WM. M. HAZEL.

Witnesses:
BERNARD J. KELLY,
SPENCER C. DOTY.