

D. HEATON.
Lacing-Buttons.

No. 133,857.

Patented Dec. 10, 1872.

Fig 1.

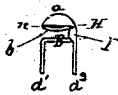


Fig 2.

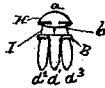


Fig 3.

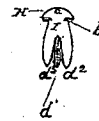


Fig 4.

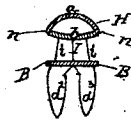


Fig 8.

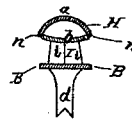


Fig 5.

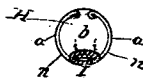


Fig 9.



Fig 6.

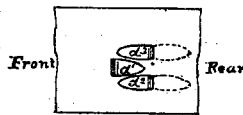


Fig 10.

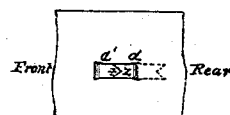


Fig 12.

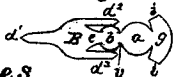


Fig 7.

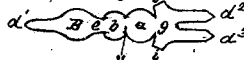
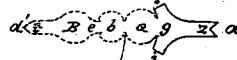


Fig 11.



Witnesses.

Orville Brown

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David Heaton.

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UNITED STATES PATENT OFFICE.

DAVID HEATON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN LACING-BUTTONS.

Specification forming part of Letters Patent No. 133,857, dated December 10, 1872.

To all whom it may concern:

Be it known that I, DAVID HEATON, of the city and county of Providence and State of Rhode Island, have invented certain Improvements in Lacing-Buttons and similar devices for Lacing Wearing Apparel, of which the following is a specification, referring to the accompanying drawing making part of the same, in which—

Figure 1 is a side elevation of my improved lacing-button; Fig. 2 is a front elevation of the same; Fig. 3 is a rear elevation; Fig. 4 is a front elevation of a vertical section of the same; Fig. 5 is a view of the under side of the button-head; Fig. 6 is a view of the back side of the material with the fastening-prongs of the button clinched thereon; and Fig. 7 is a view of the blank from which said improved lacing-button is made.

Similar letters mark like parts in all the figures.

The invention herein set forth relates to an improvement in the construction of the lacing-button patented by me July 16, 1872, by Letters Patent No. 129,474, to which reference is to be had for the consideration of this matter. The first part of the invention relates to the improvement of the button-head of the lacing device; and consists in inserting the edge of the under part of the button's head within the periphery of the upper part of the same, to make a smoother and better finish at the edge. The second part of the invention consists in making the neck tapering from the base to the head, to stiffen and strengthen the neck at the base so that it will resist the lacing strain more effectually. The third part of the invention consists in constructing the lacing-button with one fastening-prong in front and two fastening-prongs at the rear, by the neck, to fasten the button firmly at the base of the neck and for the sake of greater economy in stock, considering the form of the blank.

In the drawing, *a* is the upper part and *b* is the under part of convexo-concave button-head H. The under part *b* is made smaller than *a*, as shown in the blank, Fig. 7, and after being slightly concaved is doubled at *c*, and the under part *b* is let into the concavity of the upper part *a*, as shown in Figs. 4 and 5, leaving only the outer edge *n* of the upper

part exposed, to be afterward rounded by the operation of rattling, so that the joint of the two parts is effectually concealed, the only rough abrading edge smoothed, with all the appearance and effect of a solid head. The neck I of the button is formed by bending the part *e* of the blank, Fig. 7, against the part *g*, and confining both together by bending the two clasping parts *i i* around both *e* and *g*; and it will be observed that the neck part *e*, from the base B to the head H, and that the clasping parts *i i* are cut at an angle to embrace this tapering part *e*, and form the tapering neck shown in Figs. 2, 3, and 4. By this construction the neck is greatly stiffened at its junction with the base B, so that breaking or even bending at this point is entirely obviated. The set of three fastening-prongs are arranged one in front on the base-plate B, and two, *d*² and *d*³, at the rear, on each side, beneath the neck. The front prong *d*¹ is in line with the space between the two rear prongs *d*² *d*³, and they are in line with each other edgewise across the rear of the button, as shown in Figs. 1, 2, 3, 4, so that when bent and clinched together on the back side of the material, as shown in Fig. 6, the ends of the prongs lap by each other with the front prong *d*¹ between the ends of the other two; or the two rear prongs *d*² and *d*³ may be bent backward instead of forward from the rear of the neck, as shown in dotted lines, Fig. 6, and thereby obtain a firmer hold, and furnish additional resistance to the lacing strain, or a tendency to tear out of the material.

As shown in the drawing, the two rear prongs *d*² *d*³ are cut from the end of the blank or continuation of the part *g*, which forms the neck; but said rear prongs can also be cut from the material at the rear of the base-plate B on each side, in the same relative position with the front prong, as shown in Fig. 12, and capable of being clinched to fasten it in the material in the same manner as hereinbefore described. In like manner there may be one prong, *d*¹, at the front and another single prong, *d*, at the rear in place of the two *d*² *d*³, by simply changing the form of the rear end of the blank to that shown in full lines in Fig. 11; and said single rear prong *d* may be formed with a notch, *z*, in the end to receive the bevel-

point *t* of the front prong, when the two are clinched together, as shown in Fig. 10, and, besides, to aid in penetrating the material; Fig. 8 presenting a vertical section of this construction, and Fig. 9 a rear elevation of the same, showing the rear prong *d* extending down from the base of the tapering neck, and with a wide base-plate B to support the button laterally. The single rear prong *d* is shown bent backward from the rear of the neck, and clinched on the back side of the material, in the dotted lines of Fig. 10; and both constructions and arrangements of the prongs are applicable to lacing devices of different constructions, with the advantage of a considerable saving in stock, owing to the snug and compact form of the blank by the peculiar arrangement of the fastening-prongs, as shown and described in line parallel, or nearly so, with the body of the blank, instead of extending radially therefrom, as in the patent referred to, and in some other cases.

Having described the several features of my invention, I claim—

1. The construction of the button-head H with the under part *b* inserted within concave

periphery of the upper part *a*, substantially as shown and described.

2. The tapering neck I, from the base B to the head H of the lacing device, substantially as shown and described.

3. The construction and also the arrangement of a set of three fastening-prongs, with one prong in front in the middle, and two prongs at the rear on each side beneath the neck, with the mode of clinching the same, substantially as shown and described.

4. The construction and also the arrangement of a set of two fastening-prongs, with one prong in front and the other prong at the rear of the neck in line with the one in front, with provision for clinching the same, substantially as shown and described.

5. The mode of forming the three fastening-prongs described by cutting them in line parallel with the body of the blank, substantially as shown and described.

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Witnesses:

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ISAAC A. BROWNELL.