

D. HEATON.

Improvement in Lacing-Buttons.

No. 129,474.

Patented July 16, 1872.

Fig 1.



Fig 2.

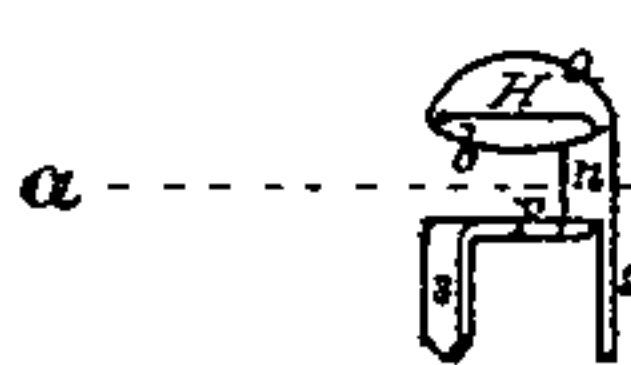


Fig 3.

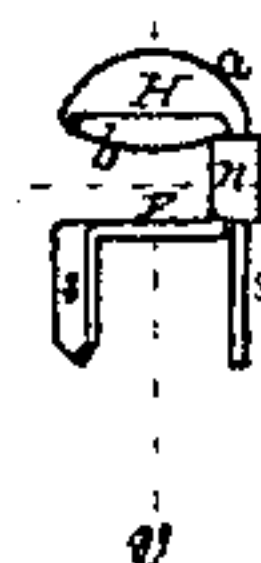


Fig 4.



Fig 5.



Fig 6.



Fig 7.



Fig 8.



Fig 9.

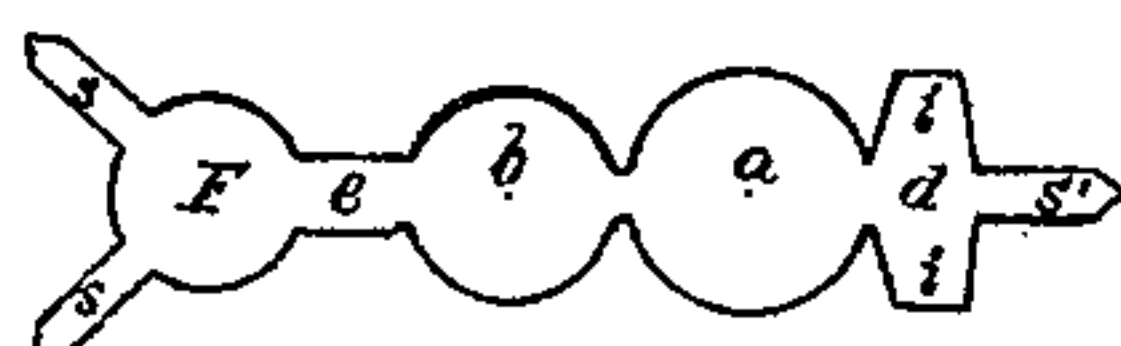


Fig 10.

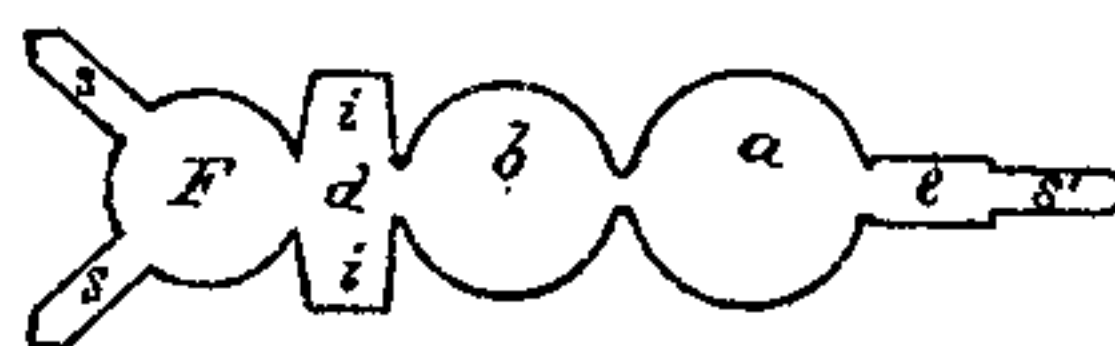


Fig 11.

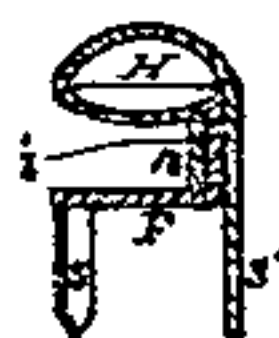


Fig 12.



Witnesses.

Isaac A. Brunell. —

Geo. M. Daniels. —

Inventor.

David Heaton.

UNITED STATES PATENT OFFICE.

DAVID HEATON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN LACING-BUTTONS.

Specification forming part of Letters Patent No. 129,474, dated July 16, 1872.

SPECIFICATION.

I, DAVID HEATON, of the city and county of Providence and State of Rhode Island, have invented a new and Improved Lacing-Button, for fastening wearing apparel by means of a lacing, of which the following is a specification, referring to the accompanying drawing, making part of the same, in which—

Figure 1 is a front elevation of my improved lacing-button. Figs. 2 and 3 are side elevations of the same, differing slightly in construction. Fig. 4 is a vertical section of the same by the line *v v*, Fig. 3. Figs. 5 and 6 are top views of Figs. 2 and 3. Figs. 7 and 8 are plans and sections by the line *a a* of Figs. 2 and 3. Fig. 9 represents the outline of the sheet-metal blank from which the construction shown in Fig. 2 is made. Fig. 10 represents the outline of the sheet-metal blank from which the construction shown in Fig. 3 is made. Fig. 11 is a vertical cross-section of the construction shown in Fig. 2 by the line *x x*, Fig. 1. Fig. 12 is a like view of the construction shown in Fig. 3.

Similar letters indicate like parts in all the said figures.

My improvement relates to the mode of constructing a lacing-button, or device resembling a button or stud, with its neck or lacing part on one side at the periphery, and its base provided with spurs to secure it to the surface of the apparel; and my improvement consists in constructing such lacing-button with a double convex head, a double clasp neck or shank, and with two spurs at the front to receive the strain, and one spur at the rear, by the neck, substantially as herein shown and described.

In the drawing, *H* is the double convex head; *n* is the double clasp shank or neck; and *s s s'* are the spurs. The head is round or oval, and consists of two convexo-concave disks of metal, *a* and *b*, with their concave sides doubled together. The neck or shank *n* consists of a continuation of the two parts *a b* of the head, one of which, *c*, is a narrow strip, and the other, *d*, is provided with projections *i* which embrace and firmly clasp the narrower part and confine both together, to make the neck stiff and inflexible. The continuation of the disk *b* below the neck forms the base or table *F*, at right angles to the neck and parallel with the plane of the head, and from said base two spurs, *s s*, extend

from the front at an angle, and are bent down at right angles to said base. The continuation of the disk *a* forms a third spur, *s'*, and extends below the base *F* at the rear or beneath the neck, like the others. Thus it will be seen that, by this construction two spurs instead of one are at the front of the base, where the greatest resistance to the lacing strain is required, and with the two a third is combined and arranged beneath the neck to firmly confine the rear of the button with the material to be laced; and that this, of itself, is an important and valuable improvement in the construction of such devices as compared with two spurs only on the same plane in front, or with one spur only in front and two in the rear, as has been employed heretofore.

The difference of construction between the two Figs. 2 and 3 is simply that the clasping projections and the part *e* which is clasped are reversed, the former being clasped inwardly, beneath the head, and the latter, Fig. 3, being clasped outwardly, at the rear of the head; either, however, fully accomplishing the purpose of stiffening the neck to withstand the lacing strain, and relieve the head of any other function than to keep the lacing in place and permit it to draw freely around the neck without undue wear or abrasion.

The operation of making said lacing-button is as follows: First, the blank is cut from sheet metal in the form of Fig. 9 or Fig. 10, by means of a cutting-die and punch of corresponding form, after which the two disks *a b* and the parts which form the neck or shank are made convexo-concave by striking the same in a suitable forming-die and former, which also bends the clasping parts *i i* at right angles to the other parts of the neck. The two disks *a b* are then doubled together; the neck parts are then bent at right angles thereto and clasped together; then the base is bent parallel with the head, and the spurs bent at right angles down from the base, when the button is completed.

The advantage of the double convex head is, that it presents a smooth rounded surface, without corners or sharp edges to abrade or wear the lacing. The advantage of the double clasped neck is, that it combines more than double the material, and is, as constructed, capable of withstanding any strain that can be exerted by the severest lacing, and a great-

er strain than by any conformation of a single thickness of metal. The advantage of the arrangement of two of three spurs at an angle in front, with the third at the rear beneath the neck, is, that the two at the front afford greater resistance to the lacing strain directly at the angle, or nearly so, at which the lacings are crossed, than would two on the same plane without tearing the material, or with one spur in front and two at the rear, without pulling out or tipping over in drawing the lacing.

Having described my invention, I claim—
The lacing-button with a double convex head, a double clasped neck or shank, and with two spurs at the front and one at the rear in combination, substantially as shown and described.

DAVID HEATON.

Witnesses:

ISAAC A. BROWNELL,
GEO. M. DANIELS.