D. HEATON.

Improvement in Lacing Buttons.

No. 133,223. Patented Nov. 19, 1872.

FIG 1.

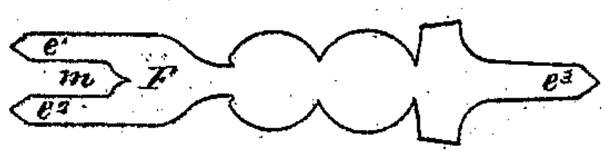


FIG 2.

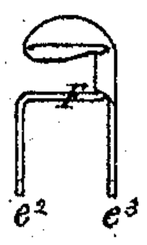


FIG 3.

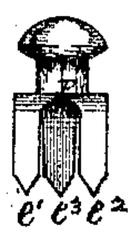


FIG 4.

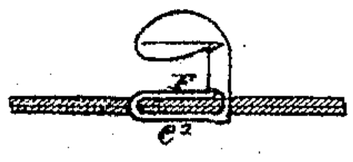
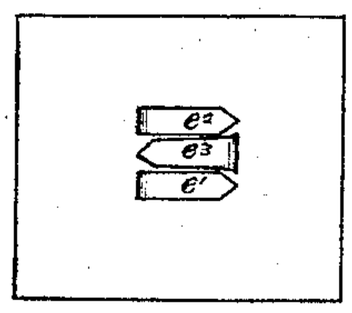


FIG 5.



Witnesses.

J. H. Hughes

Isaac A. Bonnell,

Inventor.

David Heaton

UNITED STATES PATENT OFFICE.

DAVID HEATON, OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN LACING-BUTTONS.

Specification forming part of Letters Patent No. **133,223**, dated November 19, 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 a new and useful Improvement in Lacing-Buttons, of which the following is a specification, referring to the accompanying drawing making part of the same.

My invention relates to the construction of the fastening prongs or spurs by which lacing-buttons and similar devices are fastened to the apparel; and consists in constructing and arranging a set of three such fastening prongs or spurs with two at the front in the same plane and the third at the rear in a parallel plane and in line with the space between the two front ones; the object being to have the prongs or spurs long enough to fasten through any probable thickness of material, and clinch flatly without overlapping on the back side parallel to each other, with the greatest possible firmness in the material, and also for the sake of greater economy of the stock from which these articles are made.

In the drawing, Figure 1 is the outline of a sheet-metal blank, from which the lacing-button mentioned is made. Fig. 2 is a side elevation, and Fig. 3 is a front elevation, of the said lacing-button complete. Fig. 4 shows the lacing-button inserted in the material for use in lacing. Fig. 5 shows the under side of the material with the prongs or spurs clinched parallel with each other.

Similar letters mark like parts in all the figures.

The blank, Fig. 1, after being cut from the sheet metal, is shaped in suitable dies, and bent into the form shown in Figs. 2 and 3. The three prongs or spurs e^1 e^2 e^3 are cut into form with the blank, the two e^1 e^2 at one end with a parallel space, *m*, between them, and the third e^3 at the opposite end and in line with the space *m* in front, by which construction the single prong e^3 on one blank is cut from between the two prongs e^1 and e^2 of the next blank with a saving in the length of the piece of metal, and all the prongs or spurs are in line with the main portion of the blank and do not extend laterally beyond its margin, by which a saving is also effected in the breadth of the stock, the two amounting in the aggregate to a saving of about one-half the area of stock that would be required under other circumstances, which is an important consideration in manufacturing these articles extensively. The two front prongs e^1 e^2 are bent at right angles downward from the base F in the same plane, as shown in Fig. 2, both being in line. The third prong e^3 extends below the base at the rear in a parallel plane and in line with the space between the two in front, as shown in Fig. 3. On being fastened into the material of the apparel the two front prongs or spurs penetrate the material in the same plane, and the single rear prong penetrates in a parallel plane in line with the space between the other two, so that when the protruding ends of the prongs are bent over and clinched they all lie parallel and flat with the surface without overlapping and forming a protruberence on the back side of the material; besides this, the prongs or spurs, from being thus bent and clinched parallel with each other, can be made unusually long to accommodate the thickest material, when, with the prongs constructed to bend and clinch radially toward a common center, the length of the prong becomes necessarily limited to meet the center without overlapping and forming an objectionable bunch on the back side, and when this is inserted into unusually thick material, and the length of the prong is thereby taken up, the ends of the prongs fall short of meeting at the center, and the fastening is in consequence, to that extent, imperfect.

What I claim is—

In a lacing-button, the construction and arrangement of a set of three fastening prongs or spurs with two in the same plane and the third in a parallel plane and in line with the space between the other two, substantially as shown and described, for the purpose specified.

DAVID HEATON.

Witnesses:

J. H. BUGBEE,

ISAAC A. BROWNELL.