

(No Model.)

M. BRAY.
LACING STUD.

No. 301,332.

Patented July 1, 1884.

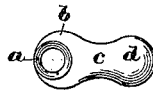


Fig. 1.

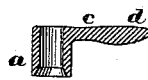


Fig. 2.

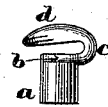


Fig. 3.



Fig. 4.



Fig. 7.

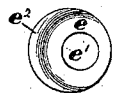


Fig. 5.



Fig. 8.



Fig. 6.

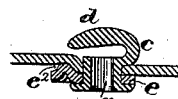


Fig. 9.

Witnesses:

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UNITED STATES PATENT OFFICE.

MELLEN BRAY, OF NEWTON, MASSACHUSETTS.

LACING-STUD.

SPECIFICATION forming part of Letters Patent No. 301,332, dated July 1, 1884.

Application filed May 10, 1884. (No model.)

To all whom it may concern:

Be it known that I, MELLEN BRAY, of Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Lacing-Studs, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to the construction of lacing-studs for boots, shoes, gloves, and other articles, and to the mode of applying them to the articles to be laced; and it consists in a novel construction of the stud, and in the combination of said stud with a washer or plate of peculiar shape, which will be readily understood by reference to the description of the drawings, and to the claims to be hereinafter given.

Figures 1 and 2 are respectively an inverted plan and a central vertical section of the partially-formed stud. Fig. 3 is an elevation of the finished stud. Figs. 4 and 5 are respectively a central vertical section and a plan of a washer or circular plate to be used in connection with said stud. Fig. 6 is a central vertical section through a stud set in a piece of material in connection with the washer shown in Figs. 4 and 5. Figs. 7 and 8 are respectively a central vertical section and a plan of a slightly modified form of washer or circular plate, and Fig. 9 is a central vertical section through a stud set in combination with the washer or plate shown in Figs. 7 and 8.

In carrying out my invention, I first form the blank, as shown in Figs. 1 and 2, substantially as described in Letters Patent No. 256,116, granted to me August 11, 1882, except that the shank *a* is set eccentric to the inner collar, *b*, instead of concentric, as in said patent, and the shank *a* may be drilled out before bending the neck *c* to bring the head *d* over the collar *b*, instead of after said bending, as described in said patent. The neck *c* is then bent to bring the head *d* over the shank *a* and collar *b*; but the blank is so shaped and pro-

portioned that the head *d* projects some distance beyond the collar *b*, as shown in Figs. 3, 6, and 9. A circular disk, *e*, provided with an opening, *e'*, to receive the shank *a* of the stud, and located eccentric to the circumference of said disk, is provided as a means of more securely attaching the stud to thin elastic material like glove-kid. The disk *e* is struck up in suitable dies to form upon its upper side a crescent-shaped raised surface, *e''*, concentric, or nearly so, with the opening *e'*, as shown in Figs. 4, 5, 7, and 8. The object of this raised surface *e''* is to raise the leather or other material at or near the outer edge of the head *d* nearer to said head, so that the lacing-cord will have to be compressed, and the leather or other material as well, in order that the lacing-cord may enter the space between the head *d* and collar *b* and engage with the neck *c*, and at the same time diminish the liability of fringes, laces, and other clothing catching on the lacing-studs.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. A lacing hook or stud provided with a tubular shank, *a*, set eccentric to the collar *b*, and having the head *d* arranged to project beyond said collar upon the side opposite to the neck *c*, substantially as described and shown.

2. In combination with a lacing stud or hook, a washer or disk provided with an aperture to receive the shank or fastening portion of the stud, and with the raised surface *e''*, all arranged and adapted to operate substantially as and for the purposes described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 7th day of May, A. D. 1884.

MELLEN BRAY.

Witnesses:

N. C. LOMBARD,
WALTER E. LOMBARD.