

(No Model.)

M. N. BRAY.

LACING HOOK.

No. 273,707.

Patented Mar. 13, 1883.



Fig. 6.



Fig. 8.

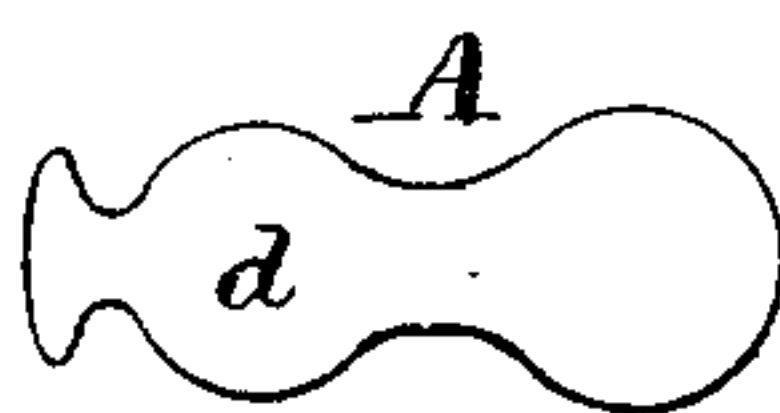


Fig. 5.

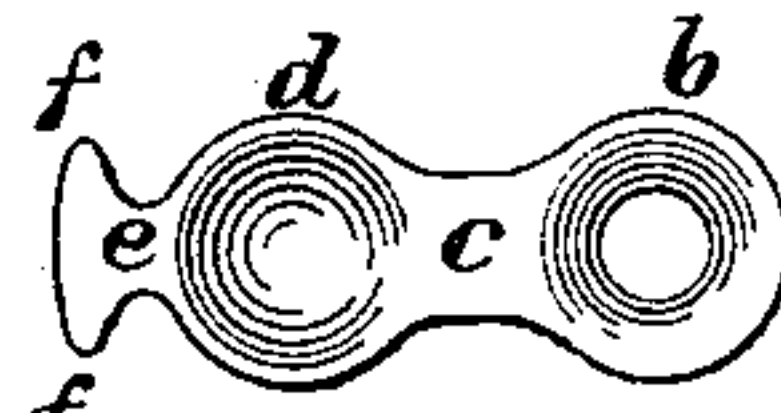


Fig. 7.

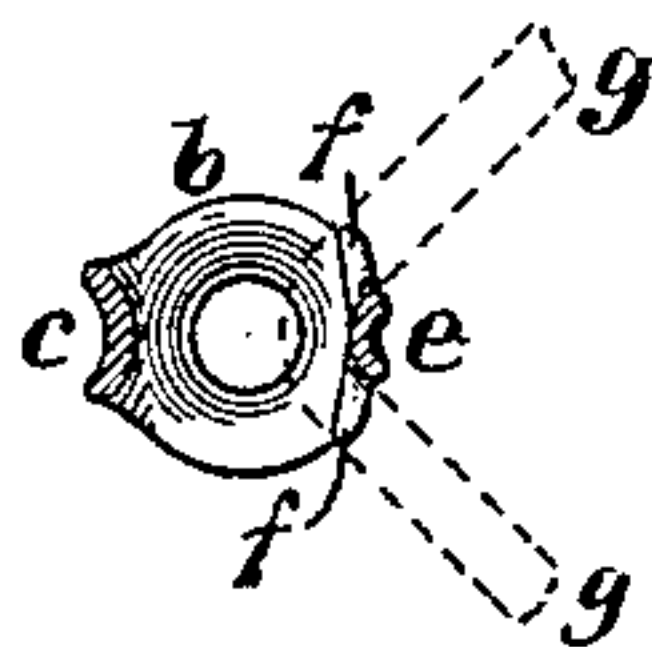


Fig. 4.

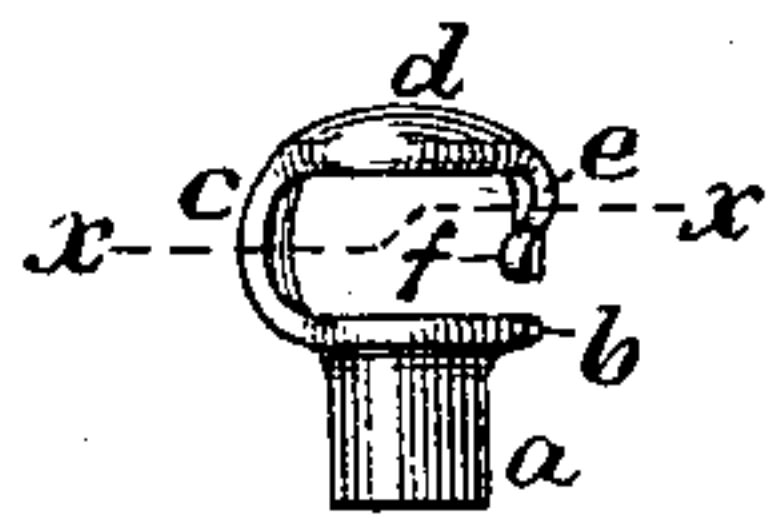


Fig. 1.

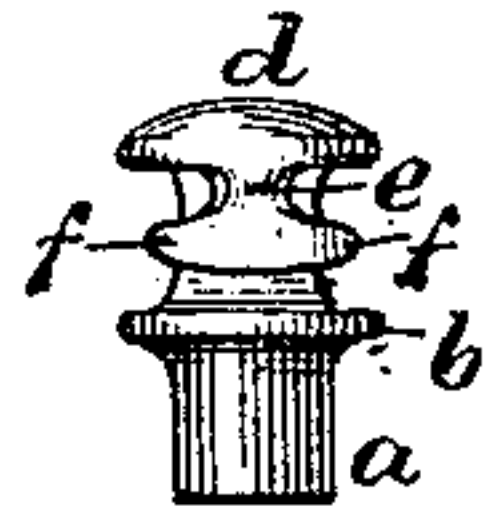


Fig. 2.

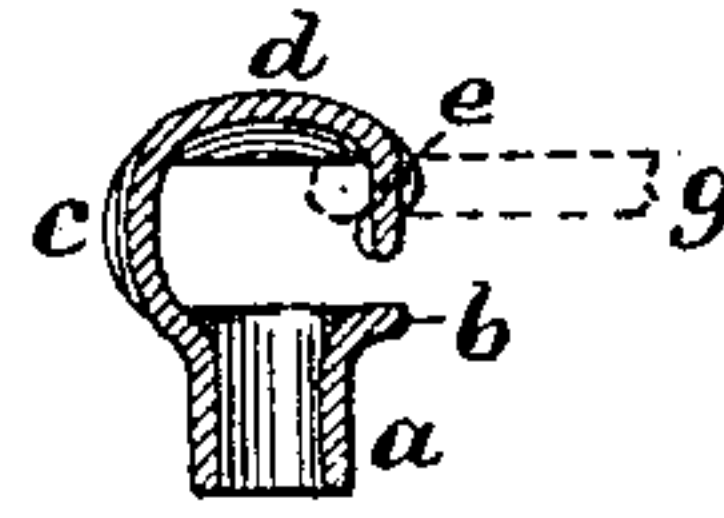


Fig. 3.

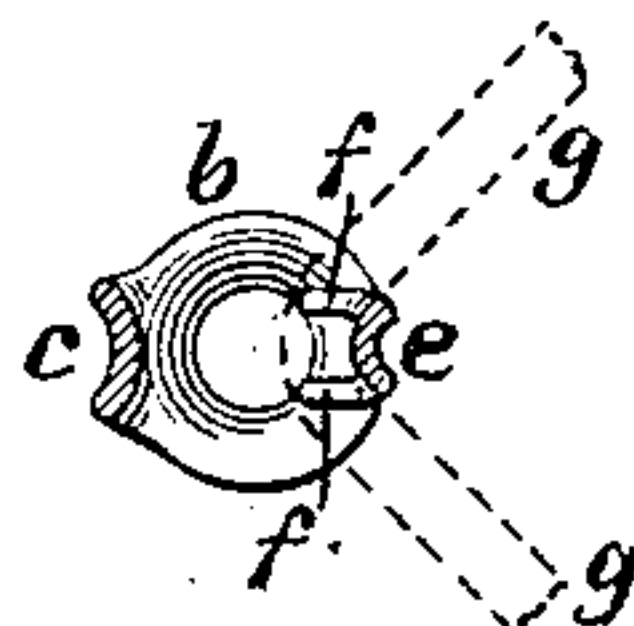


Fig. 11.

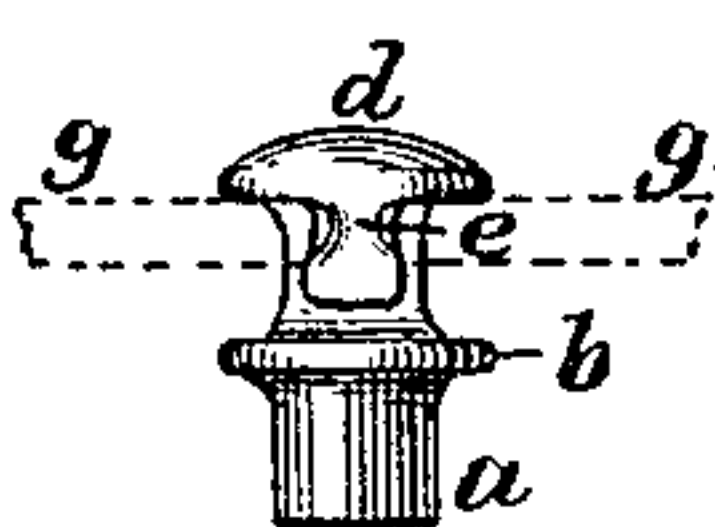


Fig. 9.

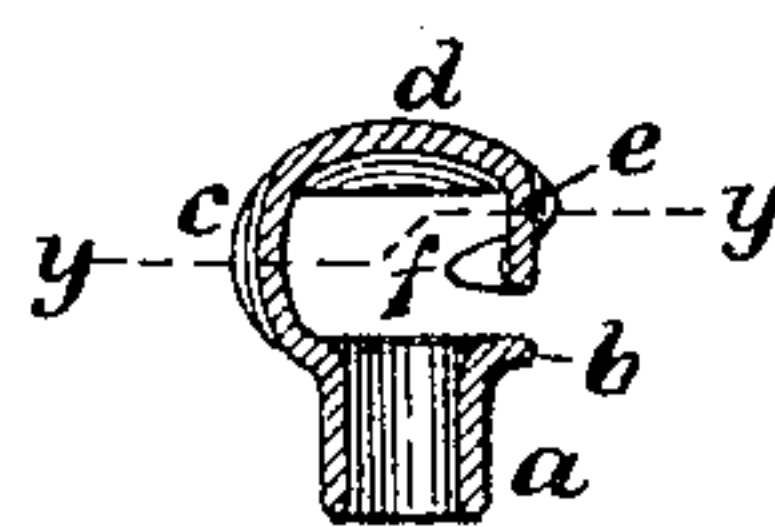


Fig. 10.

Witnesses:

E. A. Hemmenway.
Walter E. Lombard.

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UNITED STATES PATENT OFFICE.

MELLEN N. BRAY, OF BOSTON, MASSACHUSETTS.

LACING-HOOK.

SPECIFICATION forming part of Letters Patent No. 273,707, dated March 13, 1883.

Application filed January 8, 1883. (No model.)

To all whom it may concern:

Be it known that I, MELLEN N. BRAY, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Lacing-Hooks, of which the following, taken in connection with the accompanying drawings, is a specification.

My invention relates to a new and improved form of lacing-hook for use on boots, shoes, and other articles, and has for its object the production of a neat and serviceable hook which will be of such a form as to prevent any portion of the dress or clothing of the wearer from catching thereon or becoming entangled thereby, as will be further described.

In the drawings, Figure 1 is a side elevation of my improved lacing-hook. Fig. 2 is a front elevation. Fig. 3 is a vertical section. Fig. 4 is a horizontal section on line *xx* on Fig. 1, looking toward the shank. Figs. 5 and 6 are respectively a plan and edge view of the blank from which the hook is to be formed. Figs. 7 and 8 are respectively a plan and elevation of the partially-formed hook. Fig. 9 is an elevation of a modified form of hook. Fig. 10 is a vertical section of the same; and Fig. 11 is a horizontal section on line *yy* on Fig. 10, looking toward the shank.

This lacing-hook is designed to be made from sheet metal, and is provided with a tubular shank, *a*, for securing it to the leather or other material, made open at both ends in the form of an eyelet, and provided with the flange *b*, adapted to rest upon one side of the material when the shank *a* is clinched upon the opposite side thereof. From one side of the flange *b* extends the neck *c*, projecting upward and carrying the head or disk *d* directly over the flange *b* and substantially central with the axis of the shank *a*. From the edge of the disk *d* opposite the neck *c* projects downward the short neck *e*, provided at its lower end with two points, *ff*, which project in opposite directions therefrom, as shown.

This lacing-hook should be fastened upon the material with the neck *e* toward the slit or opening in the boot, shoe, or other article, and the lacing-cord should be passed into the opening of the hook between the points *ff* and the flange *b*, and then upward to a position beneath the disk *d* and drawing around the in-

ner side of the neck *e*, as shown by dotted lines at *g* in Figs. 3 and 4, the points *ff* serving to prevent the lacing-cord *g* from slipping out of place. The edges of the neck *e* are bent outward, thus making it convex upon its inner and concave upon its outer side, as shown in Fig. 4, and preventing said edges from coming in contact with the lacing-cord to injure or wear the same. The disk *d* is made concavo-convex, with its convex side uppermost, and is thereby strengthened and made to impart a neater appearance to the hook. The neck *c* may be strengthened or stiffened by bending its edges outward, thus making it concave upon its outer and convex upon its inner side, as shown in Fig. 4; or the curve may be reversed and have its convex side outward; or said neck may be formed with one or more longitudinal corrugations therein, as may be desired.

This lacing-hook is designed to be made from sheet metal of even thickness by first cutting therefrom, by the aid of suitable dies, a blank, *A*, of the form shown in Figs. 5 and 6, then subjecting said blank to the action of punching and swaging dies to form the tubular shank *a* and impart to the disk *d* the desired curve, when the blank will present the form shown in Figs. 7 and 8, and then bending the hook portion to the proper shape to form the finished lacing-hook, as shown in Figs. 1 to 4.

In Figs. 9, 10, and 11 is shown a modified form of hook, which is of a similar form to that previously described, except that the points *ff* are bent inward toward the neck *c*, whereby they may more effectually support the lacing-cord *g* shown in dotted lines in Figs. 9 and 11 and prevent it from slipping out of place. This hook is designed to be made from sheet metal in precisely the same way as previously described, and the lacing-cord applied thereto in the same manner as before mentioned.

This form of lacing-hook has the advantage of preventing any portion of the dress or clothing from becoming entangled by the hook, inasmuch as the opening of said hook, or the space between the points *ff* and the flange *b*, is protected by the lacing-cord *g*, which passes above and in close proximity to the same, as I have described in another application of even date herewith.

By making these lacing-hooks of sheet metal

they may be produced at a minimum cost, as less metal is required and a less quantity of metal is liable to be wasted in their manufacture.

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

1. In a lacing-hook, the combination of the tubular shank *a*, provided with the flange *b*, the neck *c*, disk *d*, and neck *e*, provided with
10 the projecting points *f f*, all made in one piece from sheet metal, substantially as and for the purposes described.

2. A lacing-hook composed of the tubular shank *a*, provided with the flange *b*, and the
15 outer button or head, *d*, directly over the shank *a*, and connected to the flange *b* at one side, and provided at its opposite side with the downwardly-projecting neck *e*, terminating in the projecting points *f f*, substantially as de-
20 scribed.

3. The blank *A*, shaped substantially as shown and described, from which to form a lacing-hook, as herein set forth.

4. In a lacing-hook made from sheet metal, the combination of a flange to rest upon the
25 surface of the material to which it is to be secured, a hook bent upward from one edge of said flange, over said flange, downward toward the opposite edge of said flange, and in-
ward between said flange and the upper por-
30 tion of said hook, and provided with a neck to receive the lacing-cord above said inwardly-bent portion, and means of securing said flange to the material, substantially as de-
scribed.

35 In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 4th day of January, A. D. 1883.

MELLEN N. BRAY.

Witnesses:-

E. A. HEMMENWAY,
W. H. CHAPMAN.