(No Model.)

H. B. TEN EYCK.

SHOE LACE FASTENING.

No. 359,477. Patented Mar. 15, 1887.

Fig. 1

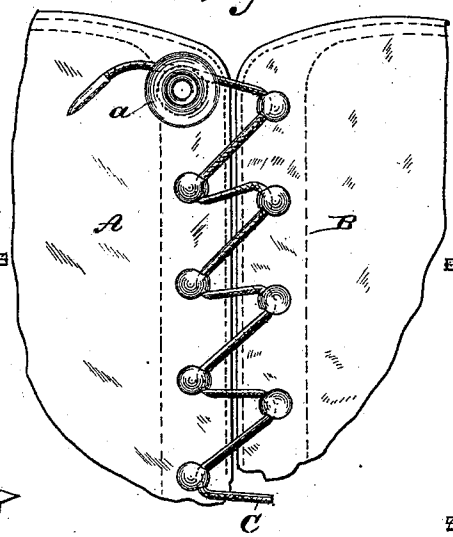


Fig. 11.

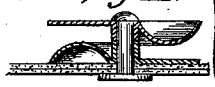


Fig. 12.



Fig. 9

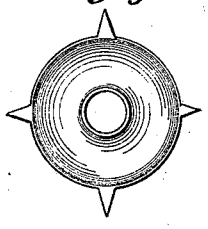


Fig. 4.



Fig. 6

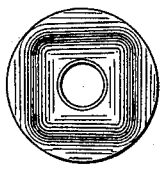


Fig. 10

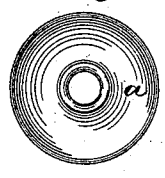


Fig. 7

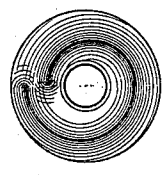


Fig. 2

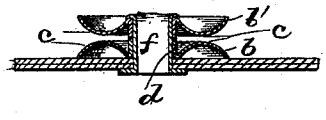


Fig. 5.

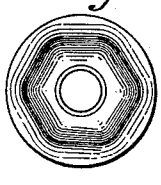


Fig. 8

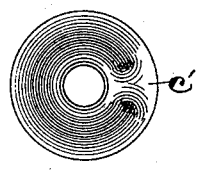
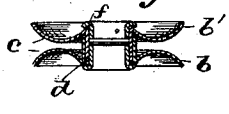


Fig. 3



Witnesses:
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Wm. E. Dyer

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by
Whitaker & Prouse
attys.

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

HENRY B. TEN EYCK, OF CHARLOTTE, MICHIGAN.

SHOE-LACE FASTENING.

SPECIFICATION forming part of Letters Patent No. 359,477, dated March 15, 1887.

Application filed June 17, 1886. Serial No. 205,463. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. TEN EYCK, a citizen of the United States, residing at Charlotte, in the county of Eaton and State of Michigan, have invented certain new and useful Improvements in Shoe-Lace Fasteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to fasteners for lace cords or strings in whatever connection employed.

It consists in two plates and a ridge or ridges projecting from one plate toward the other and extending wholly or partly around between the center and edges of said plates.

This invention was shown constructed in the preferred form in my former application, Serial No. 195,104, filed March 13, 1886, for which the present application is a substitute.

I am aware that lace-fastenings have heretofore been constructed and that one has been patented in which two disks or plates are employed, the lower of said disks being plain and smooth and the upper disk being formed of spring metal and slotted to admit the lace or string, which is drawn through said slot after having been passed around between the plates.

I am also aware that a device holding a cord by which a curtain was raised or lowered has been used, the same consisting of two disks of metal, one having a plain face and the other an evenly-curved face, the two being so placed that the space between the two decreases gradually toward the center of the plates. My invention differs from these, in that I provide one or more ridges or beads extending from one plate toward the other, forming an enlarged space at or near the center of the plates, with a narrow outlet. The lace, having been drawn into the central recess, is held from displacement by the ridges or beads tightly impinging the lace or cord.

I am also aware of the construction of the tension devices for sewing-machines, consisting of two plates having opposing ridges between the center and the edges and held together by spring-pressure.

I am also aware that there has been a bag-fastener consisting of two rigid plates held rigidly together, with ridges forming a narrow entry-space, except at the side at which the cords are introduced. At that side the under plate is extended and provided with two cord-holes through said extension, beyond the edge of the upper plate, the space between the two plates adjacent to said holes being much greater than at other points.

In the accompanying drawings, Figure 1 is a front view of a lacing with my fastener attached. Fig. 2 is a sectional view of the fastener and the article to which it is attached. Figs. 3 and 4 are sectional views of other constructions of my fastener. Figs. 5, 6, 7, and 8 are top or plan views of the bottom plate of different forms of my fastener. Figs. 9 and 10 are bottom views of the lower plate of my fastener. Figs. 11 and 12 are sectional views of modified constructions not shown in the other figures of the drawings.

In Fig. 1, A and B are the two edges of some article or part of an article brought together and provided with studs to receive the lace.

C is the lace, and *a* is the fastener. This fastener is formed of two plates, *b* and *b'*. In Figs. 2, 3, and 4 they are shown as being each provided with a bead or ridge, *c*, projecting from each plate toward the other. In Figs. 9 and 10 this ridge is shown as extending in a circle entirely around between the center and edges of the lower plate. The upper plate in this my preferred construction is provided with a ridge or bead corresponding with the one on the bottom plate. In Figs. 6 and 7 the bead or ridge is not circular, but polygonal. In Fig. 8 the same is helical, there being a space between the two ends of the bead or ridge. In Fig. 5 the ridge is circular in form, but is not a complete circle.

In my preferred form of fastener each plate or disk is provided with a short sleeve, *d*. Through these sleeves is passed the eyelet *f*, which serves to fasten the two plates firmly together and to the article to which it is attached, the two sleeves meeting upon the eyelet and retaining the two plates a certain distance apart.

In Fig. 3 the two plates are each provided with a sleeve, the sleeve of one fitting over the other. In Fig. 4 the two plates are constructed as in Fig. 2, and are held together and to the article by a solid rivet. In Fig. 9 the bottom

plate is shown provided at its edges with spurs, which may be two or more in number. These are to be passed through the article and clinched or bent over on the opposite side, and the fastening held securely in place thereby.

In some cases I may provide the fastener with a bar across the eyelet, as shown in Fig. 3, and the device attached to the article by sewing like a button. Other constructions may be employed to enable the device to be sewed to the article. In case the bottom plate is attached by spurs, as shown in Fig. 8, the upper plate may be held thereto by an eyelet or rivet. It may be held rigidly at a certain distance from the bottom plate, or it may be loosely mounted on the eyelet or rivet, but prevented from moving more than a certain distance from the bottom plate.

I have stated that the ridge or bead may be on only one of the two plates, as shown in Fig. 12; but the two plates may be constructed one with a part of the bead and the other with another part, the opposing plate being smooth and even against the ridge or bead. I have shown but one lace or string in the drawings; but two may be employed and both fastened by one fastener; or two fasteners may be employed—one for each lace—as shown in Fig. 1.

The operation of my device will be readily understood from the drawings. The lace is way, and is then passed between the plates and made to engage the hooks or knobs in the usual wound once around the fastener. The crossing of the lace between the plates inside of the bead or ridge secures the rigid locking of the same.

In case the form shown in Figs. 7 and 8 is employed the plates should be set upon the article so that the opening *c'* shall not be at the point where the crossing of the lace takes place.

Further changes may be made without departing from the spirit of my invention; and my device may be used for fastening cords or strings in other connections. It may, for instance, be used upon umbrellas and parasols in place of the button now commonly employed.

It is also obvious that my fastener may be made of other material than metal. It can be manufactured from any material which may be found desirable.

I claim as my invention—

1. A lace-fastening consisting of two rigid plates centrally connected and a ridge or ridges projecting from the inner faces of said plates between the center and edges of the same, the distance between the ridge or ridges and the opposing plate being just sufficient for the passage of a single lace at the point of the introduction of the same, with a greater space within the ridges, substantially as described.

2. A lace-fastening consisting of two rigid plates centrally connected, one of said plates being provided with a ridge or ridges on its inner face and extending between the center and edges thereof, the distance between said ridge or ridges and the opposing plate being just sufficient to allow the passage of a single lace at the point of introduction of the same, with a greater space within the ridges, substantially as described.

3. A lace-fastening consisting of two rigid plates centrally connected, said plates being each provided on its inner faces with a ridge or ridges extending between the center and edges thereof, the distance between the said ridges of the opposing plates being just sufficient for the passage of a single lace at the point of the introduction of the same, with a greater space within the ridges, substantially as described.

4. The combination, with an article provided with a lace, of a lace-fastener consisting of two rigid plates centrally connected and a ridge or ridges projecting from the inner faces of said plates between the center and edges of the same, the distance between the ridge or ridges and the opposing plate at the point of introduction of the lace being just sufficient for the passage of said lace, with a greater space within the ridges, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

H. B. TEN EYCK.

Witnesses:

T. T. WALKER,

W. M. BRINKERHOFF.