Sept. 2, 1924. 1,507,189

H. S. KEYES

SHOE TYING DEVICE

Filed Dec. 7, 1922

FIG. 4.

Fig. 1.

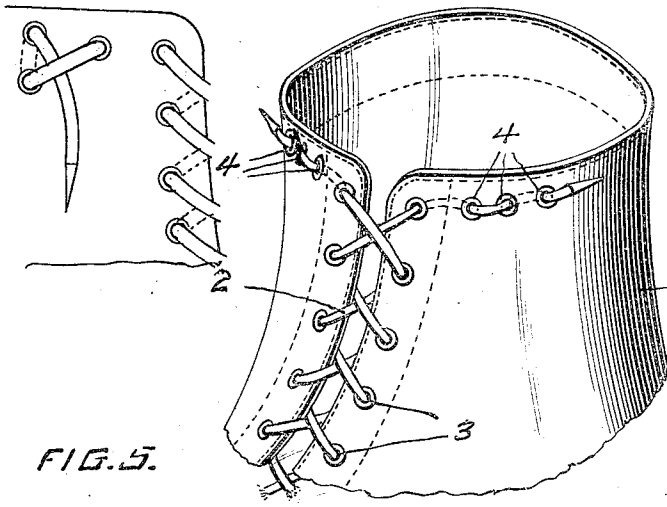


FIG. 3.

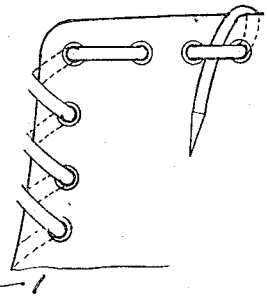


FIG. 5.

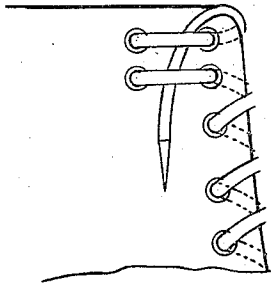


FIG. 6.

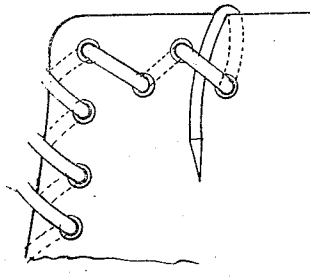
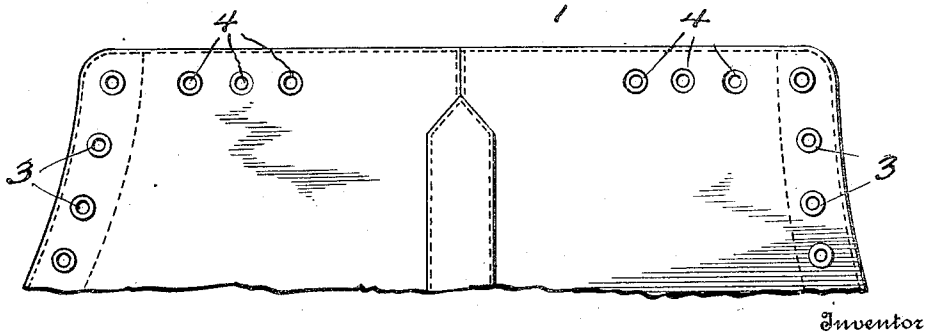


Fig. 2.



Inventor

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UNITED STATES PATENT OFFICE.

HENRY S. KEYES, OF LOS ANGELES, CALIFORNIA.

SHOE-TYING DEVICE.

Application filed December 7, 1922. Serial No. 605,484.

(FILED UNDER THE ACT OF MARCH 3, 1883, 22 STAT. L., 625.)

To all whom it may concern:

Be it known that I, HENRY S. KEYES, major, Medical Reserve Corps, a citizen of the United States, residing at Los Angeles, Calif., have invented an Improvement in Shoe-Tying Devices, of which the following is a specification.

The invention described herein may be used by the Government, or any of its officers or employees in prosecution of work for the Government, or by any other person in the United States, without payment of any royalty thereon.

This invention relates to improved means for securing without tying the upper ends of shoe laces or the like.

The object being to provide quickly applied means to the ordinary shoe whereby the upper ends of the shoe laces will be retained in position by friction instead of tying.

Similar numerals indicate corresponding parts in all the figures of the drawings in which:

Fig. 1 is a perspective view of the upper portion of a shoe, showing the improved lace retaining means applied thereto.

Fig. 2 is an elevation of the upper of a shoe, further illustrating the application of the improved retaining means.

Fig. 3 is a detail view, showing one manner of retaining the end of one of the shoe laces.

Figs. 4, 5 and 6 are details, showing a modified arrangement of the auxiliary eyelets.

Reference now being had to the drawings by numerals, 1 indicates a portion of the ordinary shoe, 2 the laces, and 3 the usual eyelets arranged along the adjoining edges of the shoe.

Ordinarily after the shoe lace has been passed through the two upper eyelets, it is brought across the front and tied in a double bow-knot. When anything is worn over the upper part of the shoe, such as a leggin in Army use, said knot becomes uncomfortable, owing to its being pressed into the shin bone.

In the present invention, the upper edge of the shoe is provided with a plurality of eyelets 4 on both sides, preferably about in line with the upper eyelet usually worn at the top of the shoe.

The additional eyelets 4 are of the usual construction, and are arranged approximately one-half inch apart, and the shoe lace may pass through the upper eyelet from the outside, or from the inside, and from there be interlaced or staggered through the eyelets along the top, it being found more satisfactory when three additional eyelets are added to pass the lacing inwardly through the upper eyelet, thus bringing the end of the shoe lace with the usual metal threading means outside of the shoe after passing through the last eyelet.

Should it be found advisable and practicable to use only two auxiliary eyelets along the top of the shoe, it may be found preferable to pass the shoe lace through the upper hole from the inside outwardly, from there across the outside through the first auxiliary eyelet into the shoe, and then outwardly through the second auxiliary eyelet, thus leaving the threading point in that instance outside of the shoe, and avoid any irritation that it might otherwise cause if permitted to come in contact with the leg of the wearer.

By actual test this device has proved to be highly efficient, and appears to be as effective when the lacing is tightly drawn as when somewhat loose,—in fact the tighter the upper portion of the shoe is drawn around the ankle of the wearer, the greater the friction that will be applied to prevent the lacing drawing backward, and loosening the shoe, it being seen that the lacing traverses the eyelets in a somewhat diagonal manner that owing to the stiffness of the shoe causes the eyelets to bite into the lacing and prevent it slipping. In addition to this, the leg of the wearer tends to stretch the shoe, and thereby further grip the lacing, and also to force the lacing which lies within the shoe against the inner surface of the shoe, a further addition to the tendency to firmly hold the lacing.

In Fig. 3 of the drawings is shown one of a variety of means for securing the end of the shoe lace when it passes inwardly through the last of the auxiliary eyelets. Fig. 4 shows a slightly modified arrangement of the auxiliary eyelets and a means for securing the end of the shoe lace beneath the shoe string on the outer face of the shoe. Figs. 5 and 6 show further modified arrangements of the auxiliary eyelets. In these three instances, provision is made as in Fig. 3 for retaining the end of the shoe lace be-

neath a part of the shoe lace lying on the outside of the shoe.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

An improved means for securing the upper ends of shoe lacings consisting of passing the upper free end of the lacing through auxiliary eyelets, arranged in staggered relation to each other, at alternating angles to cause parts of the lacing to rest on the inside of the shoe and intermediate parts of the lacing to rest on the outside of the shoe at alternating angles, to prevent slipping of the shoe lace.

HENRY S. KEYES.