No. 889,770. PATENTED JUNE 2, 1908.

R. DOROTHY.

TENSION DEVICE FOR SHOE LACES.

APPLICATION FILED OCT. 23, 1907.

Fig. 1

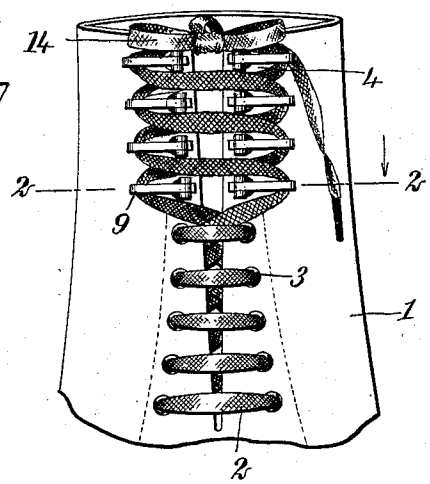


Fig. 2

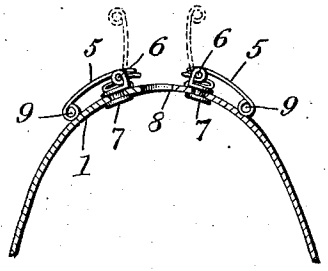


Fig. 3

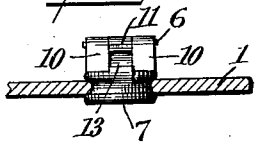


Fig. 4

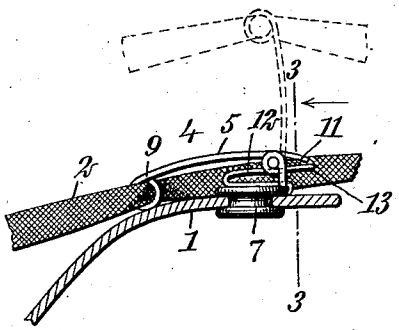
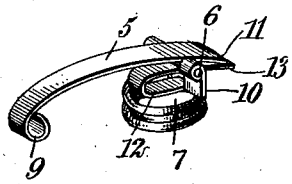


Fig. 5



WITNESSES

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TENSION DEVICE FOR SHOE-LACES.

No. 889,770. Specification of Letters Patent. Patented June 2, 1908.

Application filed October 23, 1907. Serial No. 398,730.

To all whom it may concern:

Be it known that I, ROY DOROTHY, a citizen of the United States, and a resident of Conconully, in the county of Okanogan and State of Washington, have invented a new and Improved Tension Device for Shoe-Laces, of which the following is a full, clear, and exact description.

This invention relates to boots and shoes, and the object of the invention is to produce a device which is adapted to enable the tension of the shoe laces to be relaxed when desired, so as to enable the shoe to be removed without untying the laces.

The invention consists in the construction and combination of parts to be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a front elevation of the upper portion of a shoe to which the invention has been applied; Fig. 2 is a horizontal section taken through the forward portion of the upper on the line 2—2 of Fig. 1; Fig. 3 is a cross section on the line 3—3 of Fig. 4, and illustrating details of the device; Fig. 4 is a transverse section taken about in the plane of the line 2—2 in Fig. 1, but upon an enlarged scale, and showing the construction in detail; and Fig. 5 is a perspective view of one of the levers or individual tension devices.

Referring more particularly to the parts, 1 represents the upper of the boot or shoe, which is provided with a shoe lace 2, the lower portion of which is passed in any suitable manner through alining eyelets 3. The upper or loose ends of the lace 2 are secured to the upper portion of the upper through the medium of the tension device 4 as illustrated in Fig. 1. This tension device consists of a plurality of oppositely disposed tension levers 5. These levers are pivotally mounted at 6 to a plurality of eyelets or studs 7 which are riveted near the edges 8 of the upper, as indicated. The said levers are preferably formed of sheet metal, as indicated in Fig. 5, and their outer extremities are bent or crimped downwardly so as to form an eye 9 at the end of each lever, as shown. The studs 7 are provided with outwardly projecting posts or wings 10 between which the inner extremities of the levers 5 are pivoted as indicated. The levers 5 extend beyond their pivot points 6 so as to form butt ends or toes 11.

On the upper sides of the studs 7, U-shaped leaf springs 12 are respectively placed, and these springs present tongues 13 which extend under the toes 11 and press them upwardly, as will be readily understood. In this way the springs tend to hold the levers 5 folded against the forward side of the upper, as indicated in Fig. 2. When the shoe is laced up, the upper ends of the lace are passed through the eyes 9 alternately from side to side, as indicated in Fig. 1, and at the upper edge of the shoe a suitable bow 14 is formed with the loose ends.

When it is desired to remove the shoe, the outer ends of the levers are forced forwardly and inwardly, as indicated by the dotted lines in Fig. 2. In this way the distance between the eyes 9 is decreased, and the considerable slack resulting in the lace enables the lower part of the lace to be loosened so as to permit the foot to be removed from the shoe.

It will be understood from the foregoing that the tension device has a closed position in which the shoe lace is maintained tight, and an open position in which the shoe lace is loosened to permit the removal of the shoe.

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

1. A tension device for a boot or shoe, having means for holding the shoe lace, and means for holding said tension device in a normal position maintaining tension in the shoe lace, said tension device being adapted to be opened to produce slack in the shoe lace.

2. A shoe having a tension device, consisting of members folding near the opposing edges of the upper of said shoe, and having guiding means for the shoe lace, said members normally lying flat upon the side of the shoe to maintain the tension in the shoe lace and adapted to fold forwardly to release the tension of the shoe lace when the shoe is to be removed.

3. A tension device adapted to be attached to a boot or shoe, comprising a plurality of levers normally lying close against the upper and projecting outwardly from a central line, said levers having means at their outer ends for engaging the shoe lace.

4. A tension device adapted to be at-

tached to a boot or shoe, comprising a plurality of pivoted levers projecting away from a central line, and having eyes formed at the outer ends thereof through which the shoe lace may be passed, and means tending to hold said levers closed against the upper of the shoe.

5. A shoe having a tension device attached thereto, said device, comprising a plurality of studs attached along the forward edge of the upper, levers pivotally attached to said studs respectively, and having eyes formed in the outer free ends thereof through which the shoe lace may pass, and springs attached to said studs and engaging said levers, said springs affording means for normally holding said levers in a folded or closed position.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROY DOROTHY.

Witnesses:
WM. G. HUGHES,
EDNA V. DOROTHY.