

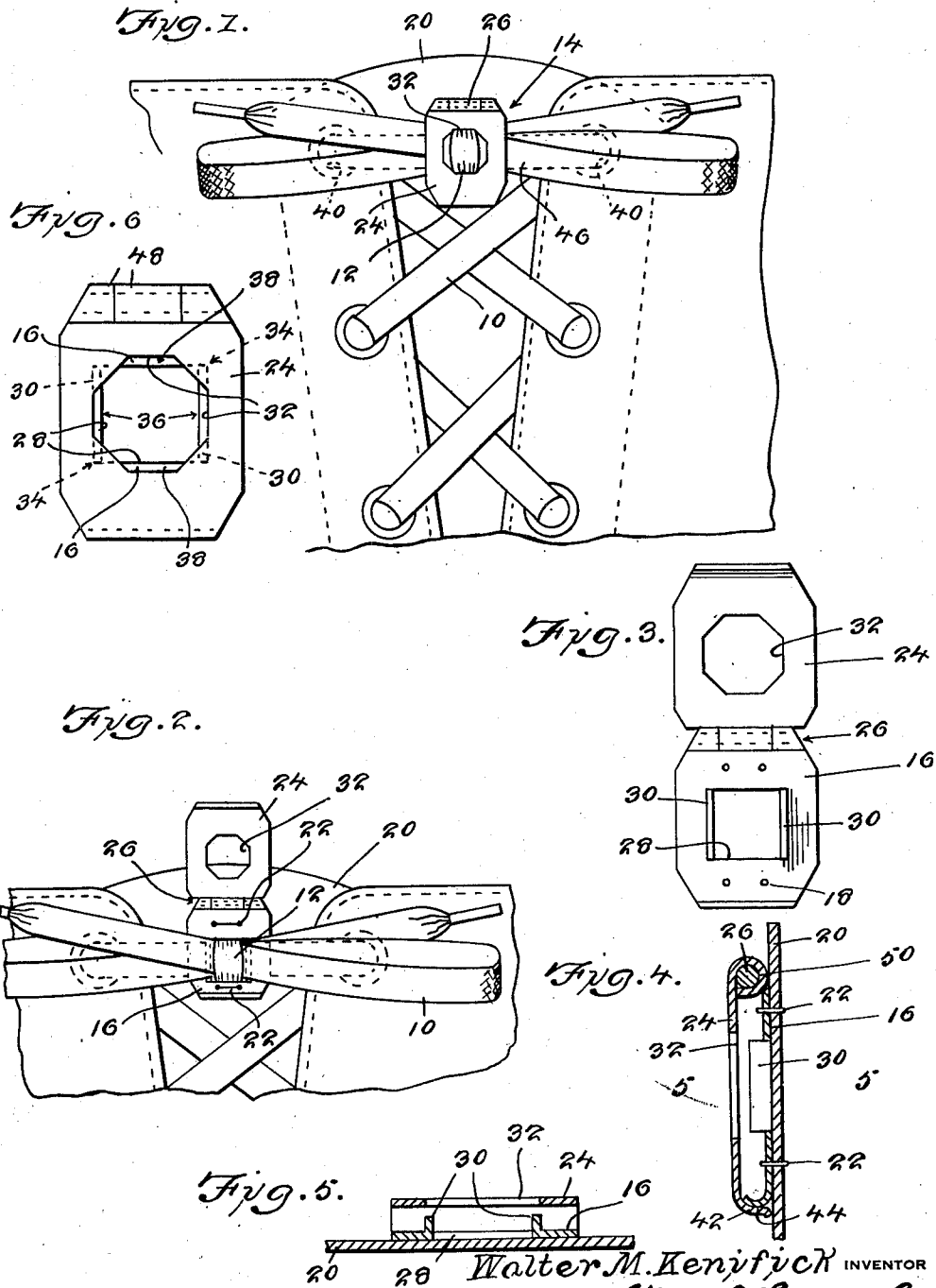
Oct. 10, 1939.

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2,175,962

KNOT LOCK

Filed Oct. 25, 1938



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UNITED STATES PATENT OFFICE

2,175,962

KNOT LOCK

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Application October 25, 1938, Serial No. 236,937

4 Claims. (Cl. 24—128)

My invention relates to knot securing means for shoelaces and the like, and has among its objects and advantages the provision of an improved knot lock.

5 An object of my invention is to provide a knot lock in the nature of a clasp which may be secured to the tongue of the shoe for mounting purposes wherein novel means are incorporated for effectively securing the knot and the loose ends of the lace in such manner as to prevent untying of the knot. The clasp is in the nature of two hingedly connected plates each provided with an opening cooperating with the other opening for accommodating the knot to prevent relative shifting thereof and in which one of the members is provided with novel means for clamping the loose ends of the lace. The loose end securing means is in the nature of ribs formed on one of the members and so arranged as to force the knot partly through the opening in the other member as the clamp or clasp parts are moved into connected relation. The knot lock is relatively simple in construction and is so designed as to be applicable to shoes and laces of conventional design.

In the accompanying drawing:

Figure 1 is an elevational view illustrating the invention applied to a knotted shoelace;

30 Figure 2 is a view similar to Figure 1 illustrating the clasp in an opened position with the shoelace knotted;

Figure 3 is a view illustrating the opened clasp separated from the shoe;

35 Figure 4 is a sectional view illustrating the manner in which the clasp is attached to the shoe tongue;

Figure 5 is a sectional view along the line 5—5 of Figure 4; and

40 Figure 6 is a view illustrating the closed clasp.

In the embodiment selected to illustrate my invention, I make use of a shoelace 10 which may be laced and tied in the usual manner. Fig. 2 illustrates the lace 10 as being knotted at 12. The clasp 14 comprises a bottom plate or clamp part 16 provided with openings 18 through the medium of which the part 16 may be stapled or sewed to the shoe tongue 20, as at 22 in Fig. 4. The top plate or clamp part 24 is hingedly connected at 26 with the part 16.

50 Part 16 is provided with a rectangular opening 28, and the material of the part adjacent two sides of the opening is bent upwardly to provide flanges 30. Part 24 is provided with an octagonal opening 32. The flanges 30 extend underneath the plate 24, as at 34, but the greater runs of the

flanges extend across the opening, as at 36. The opening 32 extends slightly beyond two sides of the opening 28, as at 38.

In operation, the member 16 is first attached to the shoe tongue, as illustrated in Figs. 1 and 2. 5 The unit is located centrally of the shoe tongue and in horizontal alignment with the upper eyelet 40. In tying the shoe, the member 24 is moved to the position of Fig. 2 about the axis of its pivotal connection with the member 16. Lace 10 10 may then be tied in the usual manner to provide the knot 12. The knot is located over the opening 28 in the member 16. Member 24 is then pivoted downwardly to lie over the member 16 and the knotted area of the shoelace 10. One 15 end of the member 16 is bent to provide a curvature 42, while the member 24 is bent to provide a latch flange 44 arranged to have frictional connection with the curvature 42 as the member 24 is pushed home. The flanges 30 force the knot 12 20 partly through the octagonal opening 32. At the same time, the flanges 30 operate to prevent relative shifting of the knot to the right or to the left. The lateral runs 46 of the knot are pinched between the flanges 30 and the lower face of the member 24. Openings 28 and 32 provide accommodation for the additional thickness of the knot. Runs 46 of the lace are made secure so as to be devoid of any loosening effect upon the knot. Latch flange 44 has such frictional relation with the curvature 42 as to effectively hold the parts 16 and 24 in connected relation with respect to all normal forces tending to separate the parts. However, the parts may easily be separated manually to permit untying of the knot.

The shoe lock embodies two parts only and may easily be formed of suitable sheet metal. The parts are provided with loop formations 48 for the reception of a pin 50 which pivotally connects the parts. The lock is applicable to shoes and laces of conventional design. Openings 28 and 32 accommodate the knot 12 in such manner as to eliminate additional bulk underneath the knot, thus lending comfort to the wearer.

Without further elaboration, the foregoing will so fully illustrate my invention that others may, by applying current knowledge, readily adapt the same for use under various conditions of service.

I claim:

1. A shoelace knot lock comprising a first plate, 50 a second plate hinged to the first plate, said second plate being provided with a knot receiving opening, and flanges carried by the first plate for forcing the knot into said knot receiving opening.

2. A shoelace knot lock comprising a first plate, a second plate hinged to the first plate, said second plate being provided with a knot receiving opening, flanges carried by the first plate for forcing the knot into said knot receiving opening, and latch means cooperable on said first and second plates for detachably latching the same in connected relation.

3. A shoelace knot lock comprising a first part provided with a knot receiving opening, a second part provided with an opening and pivotally connected with the first part, and flange means carried by the first part for pressing the knot of the shoelace into said knot receiving opening with

the knot lying partly inside said second-named opening.

4. A shoelace knot lock comprising a first part provided with a knot receiving opening, a second part provided with a knot receiving opening aligning with the first-named opening and pivotally connected with the first part, and flanges carried by the first part for pressing the knot of the shoelace into said knot receiving opening, with the knot lying partly inside the second-named opening, said flanges being adapted to press runs of the shoelace adjacent the knot against said second member.

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