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N. HACK

2,420,239

CONVALESCENT SHOE

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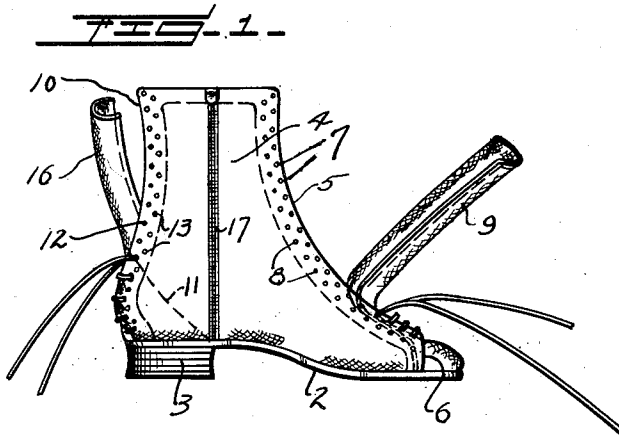


FIG. 2

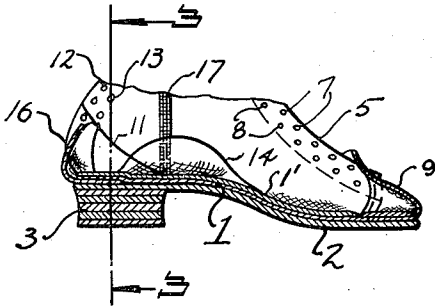


FIG. 4

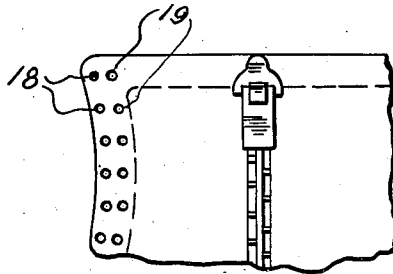


FIG. 3

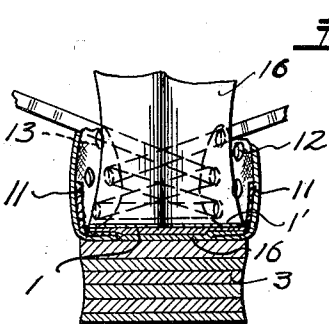
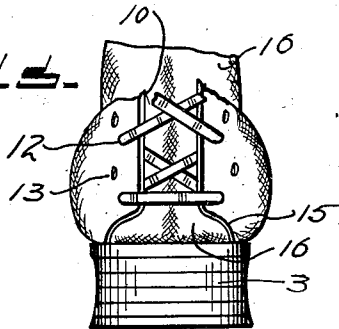


FIG. 5



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CONVALESCENT SHOE

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5 Claims. (Cl. 36—8.5)

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The present invention pertains to a novel surgical shoe for use on injured feet and particularly in cases of injury to the heel.

The principal object of the invention is to provide for adjustment of the shoe at both front and back to compensate for changes in the size of swelling, bandages, casts and the like. This object is accomplished generally by the use of a split at both the back and front of the upper, in each case extending preferably as far as the sole. This arrangement is particularly advantageous at the heel base inasmuch as it permits adjustment along the entire height of the heel. Moreover, the heel portion of the upper is left in a soft condition by omission of the rigid conventional counter and, if desired, substitution of soft upper leather or conventional hard split counters.

In order to leave the heel structure of the upper in an entirely unrestrained condition, the tongue for the back split is fastened between the inner sole and heel base so that it clears the back slit completely. In a preferred construction the upper is slit laterally from the extreme lower end of the back slit, and the lower end of the tongue is passed outwardly through the slit and then inserted and fastened between the insole and the outsole of the shoe.

Each of the slits or openings is provided with two rows of eyelets. The outer rows are used for normal lacing and the inner eyelets when the foot is swollen or enlarged. A staggered arrangement of the eyelets may be desirable for the purpose hereinafter set forth. A slide fastener may be provided along each side of the upper to permit taking off and putting on the shoe without disturbing the laces.

The invention is fully disclosed by way of example in the following description and in the accompanying drawings in which:

Figure 1 is a side elevation of a shoe built according to the invention;

Figure 2 is a vertical longitudinal section;

Figure 3 is a section on the line 3—3 of Figure 2;

Figure 4 is a detail elevation of a modification, and

Figure 5 is a rear elevation of the shoe.

Reference to these views will now be made by use of like characters which are employed to designate corresponding parts throughout.

In Figure 1 is shown a shoe having, as usual, an insole 1, an outsole 2 and a heel 3 of any suitable construction, such as a plurality of layers

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fastened beneath the outsole at the heel end thereof.

The upper 4 of the shoe consists preferably of a soft material and is split at 5 along the front center downwardly through the vamp 6 substantially as far as the insole 1, in the manner of a bicycle shoe, surgical shoe or the conventional blucher type shoe. At each side of the slit or opening 5 is provided a row of eyelets spaced closer than usual to the adjacent edge of the opening. A similar row of eyelets 8 is provided at a slight distance outward from the eyelets 7 for a purpose that will presently be described. Corresponding eyelets 7 and 8 are horizontally staggered.

The upper 4 is approximately the height of a conventional boot, although the height may be determined according to the purpose or case for which the shoe is to be used. At the opening 5 there is provided a tongue 9 within the upper and having its lower end fastened preferably to the vamp 6. The tongue herein disclosed is of the loose type but may if desired be of the bellows type having its longitudinal edges fastened respectively to the sides of the opening 5.

The back quarter of the upper 4 is also slit vertically at 10 downward through the heel and substantially as far as the insole 1. The heel portion of the upper does not have the usual stiff counter and can be reinforced on the inside by a soft split heel grip 11 or a conventional hard split counter at each side of the slit or opening 10. The split heel grip affords the necessary degree of reinforcement in this quarter area, without discomfort, and serves also as gripping pads. As at the front, two rows of eyelets 12 and 13 are provided at both sides of the opening 10 and staggered relatively to each other. The side edges of the insole 1 and lining 1' may be arched upward at 14 if desired.

At the extreme lower end, or at the heel seat, the opening 10 is widened at 15 at both sides. The tongue 16, disposed within the shoe, has its lower end disposed adjacent to the widened end of the slip 15 and inserted and fastened, as shown in Figure 2, between the insole 1 and the outsole 2.

One of the principal uses of the shoe is in connection with heel injuries such as bullet wounds. In such cases it is highly desirable to avoid restraint in the heel area of the shoe and to provide for expansion along the entire height of the heel. It is now evident that these qualities are incorporated in the shoe herein described. The slit or opening 10 along the entire height of the heel is unrestrained by the tongue due to the

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fact that the lower end of the tongue is not attached to the upper but rather to the soles.

The outer rows of eyelets 8 and 13 are used in lacing the shoe when the foot is not excessively swollen or enlarged by a cast. The lacing then has a substantially normal appearance. However, in case of swelling or a cast foot, the inner rows of eyelets 7 and 12 close to the openings 5 and 10 are used, thereby permitting a larger actual opening than if only normally positioned eyelets were provided.

Along each side of the shoe is provided a slide fastener 17 permitting the shoe to be put on or taken off the foot without disturbing the laces. This arrangement is particularly desirable when a careful and accurate adjustment of the shoe by means of the laces is required for a seriously injured and sensitive foot and where lacing and unlacing would be painful to the patient.

In Figure 4 is shown a modified arrangement of eyelets. An inner row and an outer row are provided at each side of one or both openings, as previously set forth. The eyelets 18 of the inner row are horizontally aligned with the eyelets 19 of the outer row rather than being staggered as in the first described construction. In the staggered arrangement, however, spacing of the eyelets in each row is greater than in the aligned arrangement so that less eyelets are required. In normal or nearly normal lacing the laces may be threaded through the eyelets 8 or through both sets of eyelets 7 and 8, furnishing close lacing in the latter case. For a wide opening however only the inner eyelets 7 are used.

Although specific embodiments of the invention have been illustrated and described, it will be understood that various alterations in the details of construction may be made without departing from the scope of the invention as indicated by the appended claims.

What I claim is:

1. A surgical shoe comprising an insole, a relative stiff outsole and an upper, said upper having a split at the front and at the back, the back split extending entirely from the top of the upper to said sole, a tongue in the shoe at each split, the tongue at the back split having its lower end fastened between said insole and outsole, whereby to clear the lower end of said back split.

2. A surgical shoe comprising an insole, a relative stiff outsole and an upper, said upper having a split at the front and at the back, the back split

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extending entirely from the top of the upper to said sole, a tongue in the shoe at each split, said upper being slit laterally from the lower extremity of the back split, the tongue at the back split covering said slit and inserted and fastened between said insole and outsole.

3. A surgical shoe comprising a sole and an upper, said upper having a split at the front and at the back, the back split extending entirely from the top of the upper to the said sole, a tongue in the shoe at each split, the tongue at the back split having its lower end fastened to said sole, whereby it is free of the lower end of said back split, the heel portion of said upper being relatively soft, and a soft heel grip within said heel portion at each side of the back split.

4. A surgical shoe comprising a relatively stiff sole and an upper, said upper having a split at the front and at the back, the back split extending entirely from the top of the upper to said sole, a tongue in the shoe at each split, said upper being slit laterally from the lower extremity of the back split, the tongue at the back split covering said slit and fastened to the heel portion of said sole, the heel portion of said upper being relatively soft, and a soft heel grip within said heel portion at each side of the back split.

5. A surgical shoe comprising a sole and an upper, said upper having a split at the front and at the back, the back split extending entirely from the top of the upper to said sole, a tongue in the shoe at each split the tongue at the back split having its lower end fastened to said sole, whereby it is free of the lower end of said back split, and a slide fastener along each side of said upper from the top thereof substantially to said sole.

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