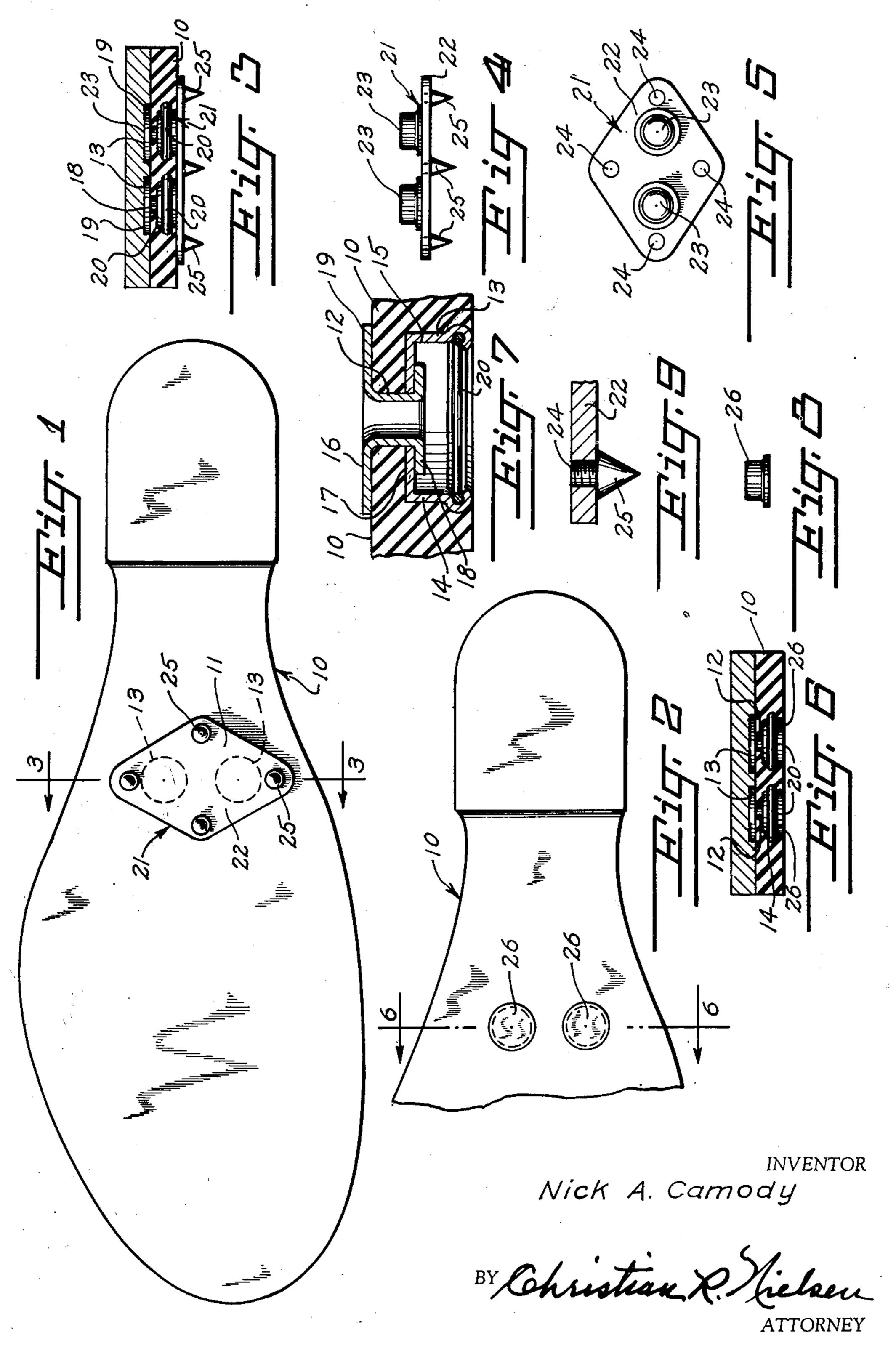
ICE CLEAT FOR FOOTWEAR

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## UNITED STATES PATENT OFFICE

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## ICE CLEAT FOR FOOTWEAR

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1 Claim. (Cl. 36—59)

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This invention relates to an ice cleat for footwear and it consists in the constructions, arrangements and combinations herein described and claimed.

It is an object of the invention to provide a cleat which may be readily attached or detached from the sole of footwear.

More specifically it is an object of the invention to provide an overshoe or the like wherein the sole thereof includes a separable fastener element, and the cleat means including a separable fastener element cooperable with the first fastener to firmly secure the cleat means to the sole of the overshoe, there being closure members complemental to the fastener elements of the sole to prevent accumulation of foreign matter, when the cleat is detached.

Additional objects, advantages and features of invention will be apparent from the following description, considered in conjunction with the accompanying drawing, wherein,

Figure 1 is a bottom plan view of a rubber or galosh having the cleat installed,

Figure 2 is a similar fragmentary view of the cleat detached and the closure members in- 25 stalled in the separable elements of the sole.

Figure 3 is a cross section on the line 3—3 of Figure 1.

Figure 4 is an elevation of the cleat detached. Figure 5 is a top plan view thereof.

Figure 6 is a cross section on the line 6—6 of Figure 2.

Figure 7 is an enlarged cross section of the separable fastener embodied in the sole of the rubber or galosh.

Figure 8 is a side elevation of one of the closure members, and

Figure 9 is an enlarged cross section illustrating the mounting of the cleat prongs in the cleat plate.

Reference is first made to Figure 1 of the drawing wherein a sole and heel 10 of a rubber or galosh is shown and at a suitable point longitudinally centered, an ice cleat 11 is detachably mounted as will now be described.

The sole 10 may be the original sole of the footwear as manufactured or it may be a repair sole, and in either event, a pair of openings 12 are formed for securement of a respective fastening element 13. Concentric with the 50 openings 12 and opening upon the ground contacting surface of the sole respective openings 14 are formed of a diameter considerably greater than the openings 12 and seated in respective openings 14 there is an annular housing 15 (see 55)

Figure 7), this housing being secured within the openings by means of a hollow rivet 16 extended through the opening 12 and through openings formed in the wall 17 of the housing. The rivet 16 has its ends upset to form flanges 18 and 19, the former lying in secure contacting engagement with the wall 17, while the latter snugly engages the inner face of the sole 10. The fastener element 13 is the female member of the complete unit, and within the annular housing a spring 20 is seated for securement of a male fastener unit 21, as will now be described, attention being invited to Figures 4 and 5.

A plate 22 of stainless steel is employed for mounting of a pair of studs 23 spaced so as to register with the openings of the housings 15 and secured therewithin by virtue of the tension of the spring 20 within the housing. The studs 23 are preferably spot welded to the plate, although other means may be employed as found practical.

The plate 22 is drilled and tapped inwardly of respective corners thereof and receive a threaded shank 24 of a spur 25, and in order to secure the spurs against working loose, the shanks are center punched.

With the female fasteners 13 mounted in the sole 10, the sole is secured to the rubber or galosh by usual methods presenting the open ends of the housings 15 so as to receive respective studs 23 which will be retained therein by means of the springs 20, and when fully engaged, the plate 22 will lie flush against the sole 10, with the spurs 25 projecting therefrom.

In use, it will be seen that the spurs 25 will puncture or penetrate ice or snow and thus provide a firm grip against slippage; and when the cleats are no longer required, they may be readily removed from engagement with the female section 13 by exerting a prying action upon the plate 22. After removal of the cleats, the open ends of the housings 15 are closed by a cap 26 which is held in position by the springs 20 of the units 13, and thus foreign matter is prevented from entering the housings when the rubbers or galoshes are again used.

While I have shown and described a preferred form of the device, this is by way of illustration only, and I consider as my own, all such modifications in construction as fairly fall within the scope of the appended claim.

I claim:

A detachable cleat assembly for a shoe including a sole, there being a pair of spaced open-

secured thereto.

ings in said sole, each of said openings including an inner portion provided with a central opening, a housing for each opening comprising an annular collar extending from said inner portion and provided with an annular recess 5 adjacent its outer end, a spring snugly seated in said recess, a securing element including a cylindrical shank extending through the first section of said opening, a first flange extending from an end of said shank and arranged contiguous to 10 file of this patent: the inner surface of said sole, a second flange arranged in spaced parallel relation with respect to said first flange and abutting the inner portion of said housing, a plate arranged intermediate the ends of said sole, a pair of spaced par- 15 2,149,893 Lehv

allel studs extending from one side of said plate and snugly seated in said housings and engaged by said springs, and a plurality of pointed spurs extending from the other side of said plate and

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