HEEL-ATTACHING MEANS FOR BOOTS AND SHOES.

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This invention relates especially, although not exclusively, to means for attaching French and other high heels to women's shoes and has for its object to provide heel attaching means of such a character as to facilitate the heel attaching operation, secure the heel firmly in place notwithstanding minor irregularities of fit, and prevent accidental breakage or detachment of the heel under external shocks or strains.

The foregoing and other objects of the invention, together with means whereby the latter may be carried into effect, will best be understood from the following description of one form or embodiment thereof illustrated in the accompanying drawings. It will be understood, however, that the particular construction described and shown has been chosen for illustrative purposes merely, and that said invention, as defined by the claims hereunto appended, may be otherwise embodied without departure from its spirit and scope.

In said drawings:

Fig. 1 is an interior plan view of the sole and the inner end of the heel attaching means.

Fig. 2 is a side elevation of the sole with the heel attached thereto.

Fig. 3 is a section taken substantially on the line 3—3, Fig. 1.

Referring to the drawings, 10 denotes the insole and 11 the outsole of a shoe, which may be of any type, said insole and outsole being hereinafter referred to collectively as the sole.

12 denotes a French or similar high heel having a toplift 13 secured thereto by any suitable means.

In accordance with the present invention, the heel is secured to the sole by means of a bolt 14 which extends through said heel from the outer side thereof and is provided at its outer end with a head 15. Preferably, as herein shown, the head 15 is located within the toplift 13 which is provided with an opening 16 affording access to said head and through which may be inserted a screw driver or other suitable implement for turning the bolt 14. Seated on the inner face of the sole is a metallic plate 17 having a portion depressed into an opening 18 formed in the insole 10, said depressed portion forming a pair of aligned, transversely disposed notches 19 in which are seated aligned, transversely disposed projections or trunnions 20 on a tubular nut 21 which extends through openings in the plate 17 and outsole 11 and into a recess 22 in the heel 12, said nut having threaded engagement with the inner end of the bolt 14.

In assembling the parts, the plate 17 is placed upon the inner face of the insole 10 and the trunnions 20 of the nut 21 seated in the notches 19 in said plate. The heel 12 is then applied, the threaded end of the bolt 14 engaged with the nut 21, and said bolt turned, by means of an implement inserted through the opening 16 until the heel is firmly clamped to the sole.

It will be seen that during the attachment of the heel, engagement of the trunnions 20 on the nut 21 with the notches 19 in the plate 17 serves to hold said nut against turning with the bolt 14, thereby facilitating the attachment of the heel. It will also be seen that said trunnions and notches permit rocking of the bolt 14 and heel 12 relative to the sole about an axis transverse to the shoe, thereby permitting the heel to seat itself properly on the sole irrespective of minor irregularities in the shape of said parts. It will further be seen that when the heel is in place, the more or less compressible sole is firmly clamped between the inner face of said heel and the plate 17, but that exterior forces applied to the heel in a direction longitudinal of the shoe are transmitted to the sole solely through the trunnions 20 which are free to rock in the notches 19, so that such forces have no resultant tendency to detach or rip the heel from the sole, a difficulty frequently encountered in the use of heels of this character. It will furthermore be seen that, by reason of this rocking connection, as well as the cushioning effect provided by the more or less compressible sole, the tendency of such forces to break the heel itself is also reduced to a minimum.

Having thus described my invention, I claim:

In a boot or shoe, a sole, a heel, a plate seated on the inner face of the sole and having transversely disposed notches in its inner face, a bolt extending through said heel from the outer side thereof, and a nut on said bolt having trunnions seated in said notches.

In testimony whereof I affix my signature.

PHILIP A. BOWEN.