May 15, 1923. 1,455,276

A. L. STAPLES

HEELPLATE FOR SKATES OR THE LIKE

Filed Jan. 20, 1922

Fig. 1.

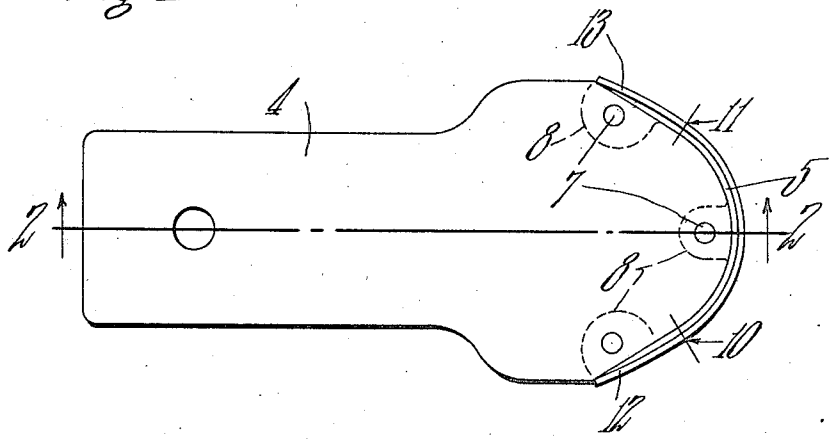


Fig. 2.

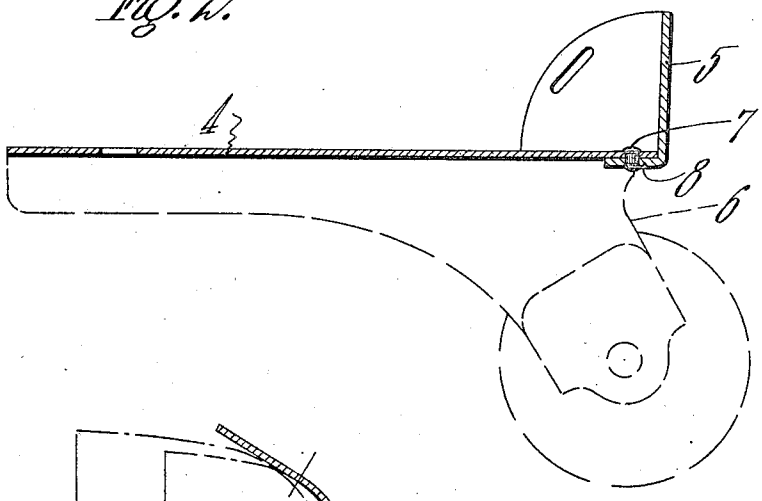
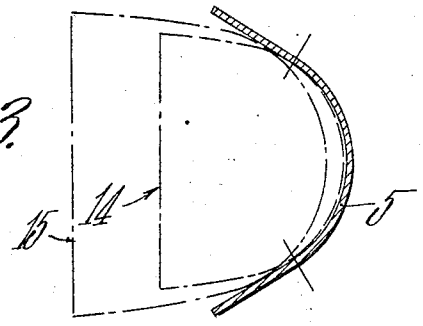


Fig. 3.



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UNITED STATES PATENT OFFICE.

ARTHUR L. STAPLES, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO WINCHESTER REPEATING ARMS COMPANY, OF NEW HAVEN, CONNECTICUT, A CORPORATION OF CONNECTICUT.

HEELPLATE FOR SKATES OR THE LIKE.

Application filed January 20, 1922. Serial No. 530,674.

To all whom it may concern:

Be it known that I, ARTHUR L. STAPLES, a citizen of the United States, residing at New Haven, in the county of New Haven and State of Connecticut, have invented new and useful Improvements in Heelplates for Skates or the like, of which the following is a specification.

This invention relates to heel plates for skates or the like and more particularly to the heel band or upstanding lip portion at the rear of the heel plate which is adapted to engage the rounded rear end of a shoe heel and serves to prevent relative lateral displacement of the heel and the heel plate.

In the manufacture of heel plates for skates it has been customary to make the heel band or upstanding lip portion of the heel plate semi-circular in plan throughout its length. A heel band so shaped, however, will not perform its above stated function in a satisfactory manner except when applied to heels having rear ends so shaped as to conform exactly to the semi-circular curvature of the heel band. Obviously a smaller heel will fit loosely within the heel band so that more or less side play will be permitted between the heel and the band. On the other hand, a larger heel cannot be forced into the curve of the heel band but will bear only against the extreme ends thereof with resulting injury to the heel.

The object of the present invention is to provide a heel plate for skates or like having a heel band or upstanding lip portion of improved construction whereby it is adapted to fit shoe heels of a wide range of sizes and styles and to function in such a manner as effectively to prevent relative sidewise displacement of the heel and heel plate irrespective of the size of the heel.

To this end the invention contemplates the construction of the heel band as hereinafter described and claimed.

In the accompanying drawings—

Fig. 1 is a plan view of a heel plate having a heel band embodying the invention in what may be considered its preferred form;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 is a horizontal sectional view of the heel band illustrating its application to heels of widely different sizes.

Referring to the drawings, the heel plate of a roller skate is indicated at 4 and the heel band or upstanding lip portion of the heel plate at 5. Except for the hereinafter described features of construction relating particularly to the heel band 5, the heel plate 4 may be made in any suitable form and it may be supported in the usual manner as by connection with the rear roller truck 6 as indicated by dotted lines in Fig. 2.

The heel band 5 rises from the curved rear edge of the heel plate and flares outwardly an amount equal to the average pitch of a shoe heel this permitting engagement between the heel and the heel band from the top to the bottom of the latter. As shown, the heel band and the heel plate may be made from separate pieces of metal and rigidly secured together by means such as rivets 7 extending through the heel plate and through ears 8 which project from the lower edge of the heel band and underlie the heel plate. The invention is not limited however to such construction, but comprehends also the making of the heel band as an integral part of the heel plate.

To enable the heel band 5 to fit heels varying considerably in size and style, the heel band is shaped, in accordance with the present invention, as follows: The central portion of the band, or the portion included between the points 10 and 11 in Fig. 1, has a true circular curvature extending through an arc of substantially ninety degrees. The two end portions 12 and 13 which constitute the remainder of the heel band are substantially straight and extend tangentially with respect to the curved central portion of the band. The radius of curvature of the central portion of the heel band is made the same as the radius of curvature of the rounded rear end of a heel of the smallest size in connection with which the heel plate is designed for use. Such a heel is indicated at 14 in Fig. 3 and the relation between said heel and the heel band is clearly illustrated therein, the curved central portion of the band conforming exactly to the rounded rear end of the heel. Consequently when the heel plate has been secured to the shoe, the plate and the heel will be securely held against relative lateral displacement. A larger heel such, for example, as the heel shown at 15 in Fig 3, will enter between the tangentially disposed ends of the heel band, engaging

each of said ends at a single point so that the heel will have a two-point bearing against the heel band. Thus the heel will be securely held without being engaged by the sharp end edges of the heel plate and without possibility of side play. It will be apparent that by reason of the improved shape of the heel band, as above described, the heel will be maintained by the heel band in such relation to the heel plate that relative sidewise displacement of said plate and heel is positively prevented, whatever the size of the heel may be, up to the maximum size which the heel band is designed to accommodate. In the illustrated embodiment of the invention the lower edge of the heel band adjoins the rear edge of the heel plate which is shaped to coincide exactly with the shape of the heel band. Obviously, however, if the heel band is made as shown, from a separate piece of material, the exact contour of the rear edge of the heel plate itself is not material so long as the band is shaped as above described and suitably secured to the heel plate.

The nature and scope of the present invention having been indicated and the preferred embodiment thereof having been specifically described, what is claimed is:—

1. A heel plate for skates or the like having an upstanding heel band at the rear of the plate constructed with a centrally disposed concave portion adapted to receive the rounded contour of a shoe heel of minimum size and straight side faces diverging forwardly therefrom to provide a two-point bearing for the rounded rear ends of heels of larger sizes.

2. A heel plate for skates or the like provided with a heel band having a central portion shaped to conform to the rounded rear end of a heel of minimum size throughout a sufficient distance around the heel to prevent relative sidewise displacement of the heel and heel-plate, and straight end portions extending tangenially from said central portion and flaring outwardly therefrom for engaging the rounded rear ends of heels of various larger sizes.

3. A heel plate for skates or the like provided with a heel band comprising an arcuate central portion extending through substantially ninety degrees said portion being adapted to conform throughout its length with the rounded rear end of a heel of minimum size, and straight end portions tangentially disposed with respect to said arcuate portion so as to present flat surfaces for engagement with the rear ends of heels of larger sizes.

4. A heel plate for skates or the like having a rear edge of arcuate form for substantially ninety degrees to coincide with the curve at the rear of the top lift face of a shoe heel and having substantially straight edges adjoining said arcuate edge and disposed tangentially thereto, said plate having also a lip portion rising from said arcuate and adjacent tangential edges for engagement with the rear end of the heel, said lip portion flaring upwardly throughout its length to accommodate the pitch of the heel.

In testimony whereof I have affixed my signature.

ARTHUR L. STAPLES.