O. A. KIMBER.

HEEL FASTENER.

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1,235,324.

Patented July 31, 1917.

Fig. 1.

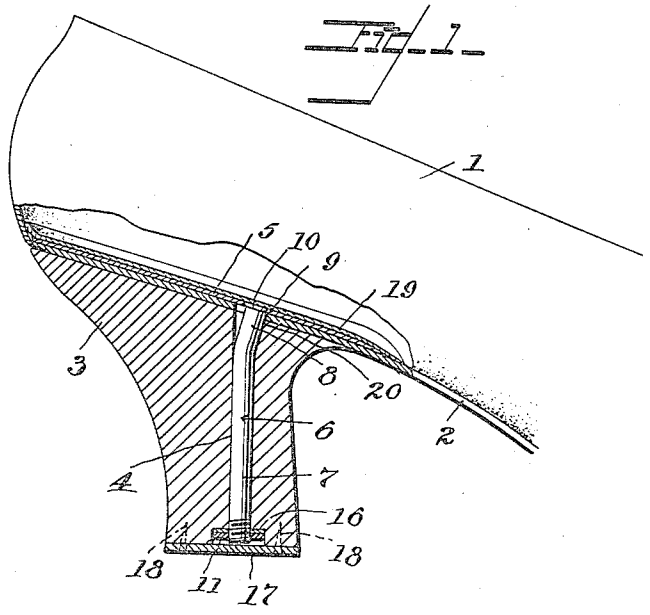


Fig. 2.

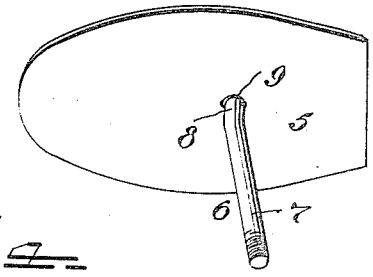


Fig. 3.

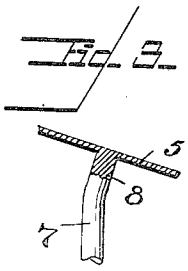
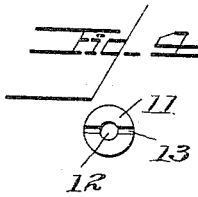


Fig. 4.



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UNITED STATES PATENT OFFICE.

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HEEL-FASTENER.

1,235,324. Specification of Letters Patent. Patented July 31, 1917.

Application filed October 5, 1916. Serial No. 123,890.

To all whom it may concern:

Be it known that I, OSCAR A. KIMBER, a citizen of the United States, residing in Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Heel-Fasteners, of which the following is a specification.

This invention relates to high-heeled shoes or slippers. The heels of such shoes or slippers are of very small dimensions near the lower end of the heel, and on account of their great height these heels are subjected to considerable strains, particularly in dancing, as a result of which they often are twisted off altogether or shear off on a substantially horizontal line at the narrow lower part of the heel.

The general object of the present invention is to provide very simple means for strengthening such a heel so as to prevent its failure in any manner, such as in the ways suggested above.

Further objects of the invention will appear hereinafter.

In the drawing which illustrates the preferred embodiment of my invention,

Figure 1 is a side elevation and partial section of the rear portion of a slipper to which my invention is applied,

Fig. 2 is a perspective showing the principal parts of the device removed from the slipper,

Fig. 3 is a section in detail illustrating a form that a certain feature of the invention may take, and

Fig. 4 is a plan of a fastening device shown in the form of a nut which is employed for holding the parts of the device in place.

Referring more particularly to the parts, 1 represents the counter of a high-heeled shoe or slipper, to the underside of the sole 2 of which, the heel 3 is attached.

In applying my invention I provide the heel 3 with a substantially vertical bore 4 which passes down through the upper face of the heel. Constructed to fit within the slipper over the upper end of the heel 3, I provide a heel-plate 5 which is formed of a thin plate of metal such as sheet steel, pressed into the required form. At a suitable point on the middle line of this heel-plate, I provide a bar or bolt 6, the lower portion of which forms a straight stem 7 which fits tightly against the side of the bore 4, throughout the circumference of the board, and the upper portion of which forms a shank 8. The bolt is inclined with respect to the stem 7 and disposed substantially at right angles to the plane of the plate 5. This shank 8 may be formed integrally with the stem by simply bending the bolt, and it may be attached to the plate in any suitable manner. I provide the plate 5 with a counter-bored opening 9, and I provide the shank 8 with a shallow conical head 10 which fits the counterbore. The bolt and the plate need not be rigidly secured together, which would permit a slight relative movement between the plate and the head 10. However, if desired, the head 10 may be welded to or in the plate 5 so that the bolt and plate become substantially integral with each other, in which case the section through the point of connection of these parts would have the appearance indicated in Fig. 3.

In a high-heeled slipper of this kind the upper face of the heel has a very great inclination so that the plate 5 would naturally tend to slide toward the toe of the slipper. The bolt 6, however, evidently prevents the plate from sliding forward. Furthermore, by reason of the fact that the stem 7 of the bolt fits tightly in the bore 4, it is evident that this stem gives the heel great strength, and operates not only to prevent the heel from becoming dislodged from the sole 2, but also operates to resist any substantially horizontal or lateral local shearing movement or strains which may be developed in any direction in different portions of the heel, and which are particularly dangerous in the lower portion where the horizontal cross sectional area is small.

The inclination or angle formed between the stem 7 and the shank 8 also has a very beneficial effect in another regard, namely, it operates to prevent the heel from twisting on the stem 7, and consequently the bolt will resist torsional strains tending to twist the heel bodily off of the sole.

At the lower end of the bolt I provide fastening means to secure the bolt and plate in position. This may consist simply of a nut 11 having a threaded opening 12 which screws onto the threaded lower end of the bolt. If desired, this nut may be of round form with diametrically opposite screw-driver slots 13, adapting the nut to be screwed up by means of a spanner screw-

driver or wrench. This nut is received in a recess 14 which I form at the lower face of the heel and the nut may seat upon a washer 16 in the bottom of the recess. After these parts are in place the lower face of the heel should be provided with a cap 17 which is simply a lift of leather held in place by brands 18. The upper side of the plate 5 is covered by a sock sole 19 which prevents the upper face of the plate coming in contact with the stocking.

At the location of the shank 8 a slight pocket 20 is formed extending off laterally from the upper portion of the bore 4. This pocket is of the same width as the diameter of the laterally extending portion or shank 8, so that the shank fits snugly in it. Evidently, this feature of the construction prevents any possibility of the heel rotating on the stem 7 as an axis, and enables the bolt to resist strains tending to twist the heel off bodily.

With a slipper having this improved heel it is evident that the bolt operates to give the heel great strength, enabling it to resist strains tending to bend the heel toward either side, in such a way as would dislodge it from the sole, and the bolt also resists any torsional strains or shearing strains which may be developed in the heel.

It is understood that the embodiment of the invention described herein is only one of the many embodiments this invention may take, and I do not wish to be limited in the practice of my invention nor in my claims to the particular embodiment set forth.

What I claim and desire to secure by Letters Patent is:—

1. In a high heeled slipper, the combination of a heel having a bore passing down through the same from its upper face, a heel plate constructed to fit into the slipper at the upper face of said heel, said bore having a laterally extending pocket, and a bar extending down from said heel plate fitting tightly in said bore to prevent a shearing movement of said heel in a substantially horizontal direction, said bar having a laterally disposed portion extending into said pocket to resist twisting strains developed around the axis of said bar.

2. In a high-heeled slipper, the combination of a heel having a bore passing down through the same from its upper face, a heel-plate constructed to fit into the slipper over the said upper face of said heel, a bolt having a stem and having a shank inclined to said stem, said shank extending substantially at right angles to said plate and connected with said plate, said stem extending down through said bore, and fitting snugly in said bore to prevent a lateral local shearing movement of the different portions of said heel, and fastening means adjacent the lower face of said heel engaging said bolt to secure the same and said heel-plate in position.

3. In a high-heeled slipper, the combination of a heel having a bore passing down through the same from its upper face, a heel-plate constructed to fit into the slipper over the said upper face of said heel, a bolt comprising a stem, said bolt being bent at its upper portion to form a shank integral with said stem and inclined to said stem, said shank extending substantially at right angles to said plate and connected with said plate, said stem extending down through said bore, said heel having a recess near its lower face, a nut received in said recess and mounted on the end of said stem to hold said bolt and plate in position, and a cap forming the base of said heel covering said recess.

4. In a high heeled slipper, the combination of a heel having a bore passing down through the same from its upper face, and having a laterally extending pocket at the upper face of said heel, a heel plate constructed to fit into the slipper above said heel, a stem extending downwardly from said shank and fitting tightly in said bore, and a shank connecting said stem with said plate, lying in said pocket and preventing a twisting movement of said heel around the axis of said stem.

In testimony whereof, I have hereunto set my hand.

OSCAR A. KIMBER.