Nov. 18, 1924. 1,516,355

S. SWETZOFF

DETACHABLE SHOE HEEL

Filed May 9, 1923

Fig. 1.

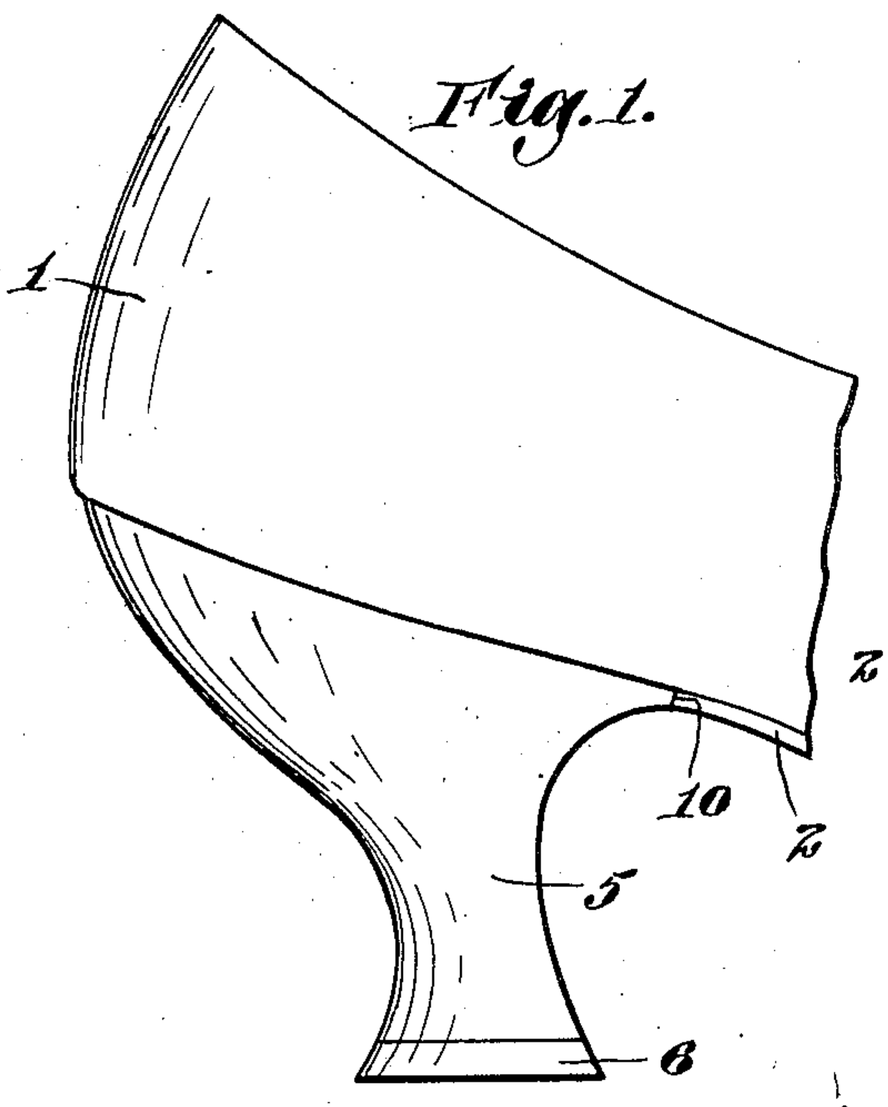


Fig. 2.

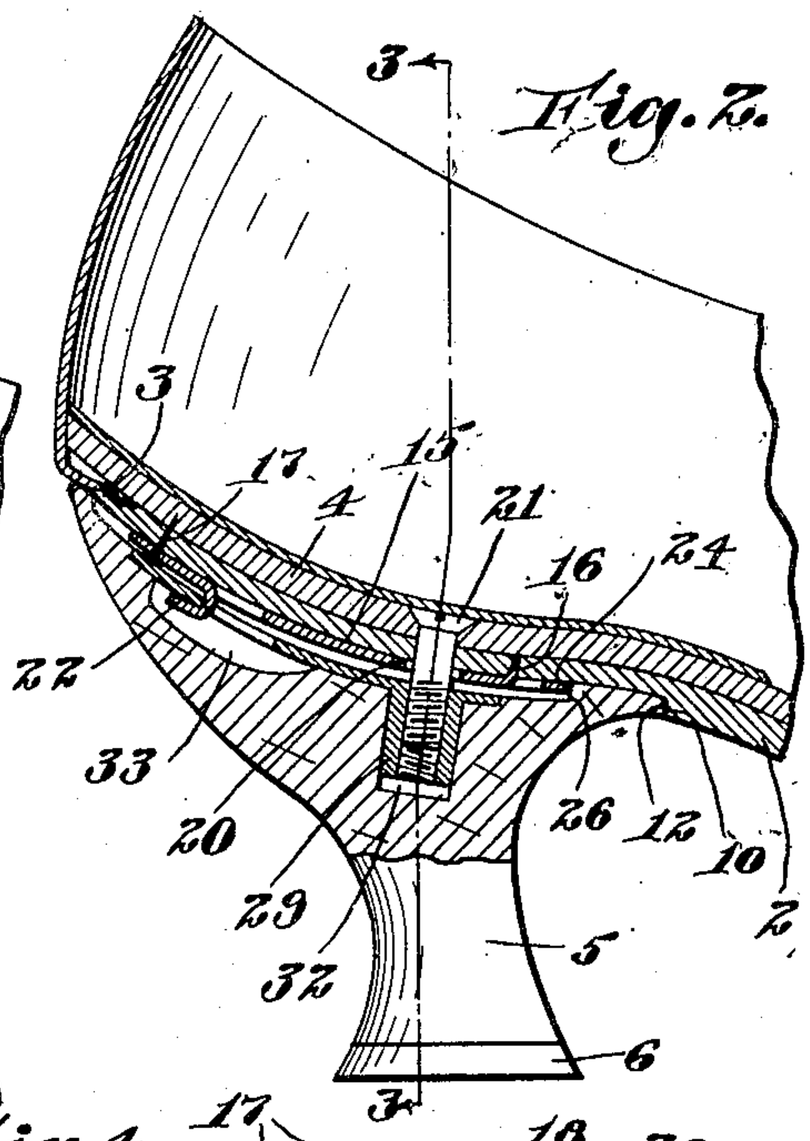


Fig. 4.

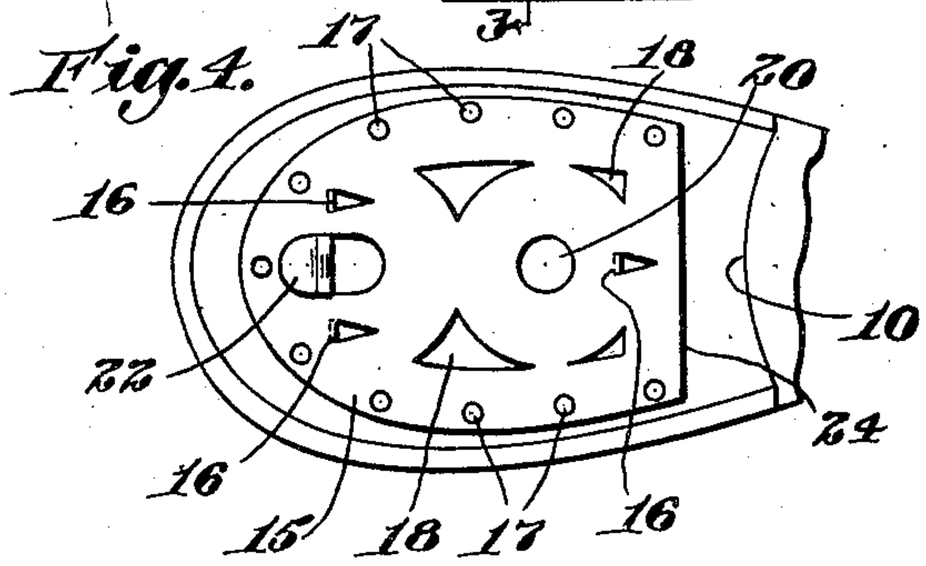


Fig. 3

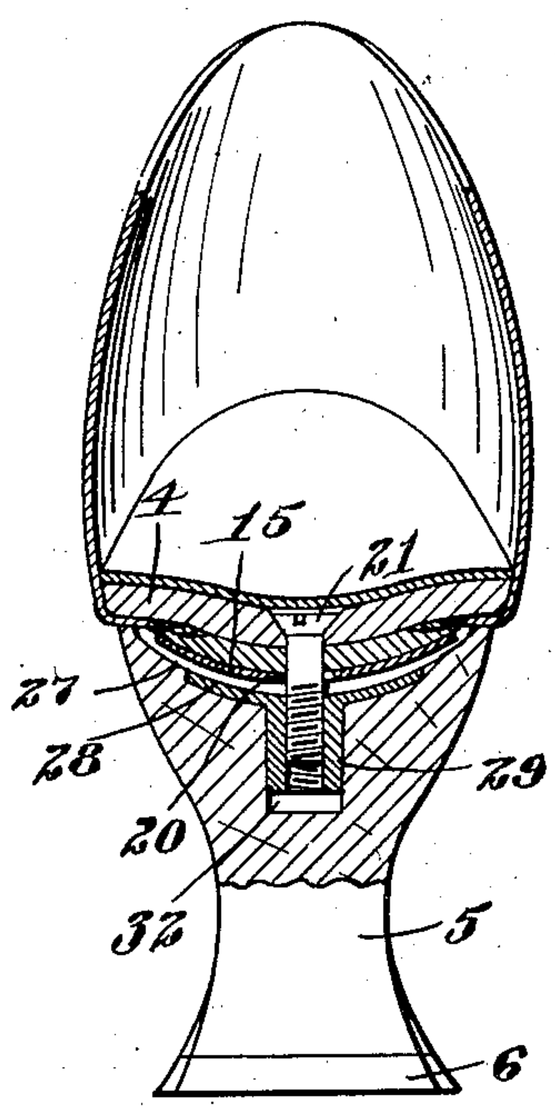
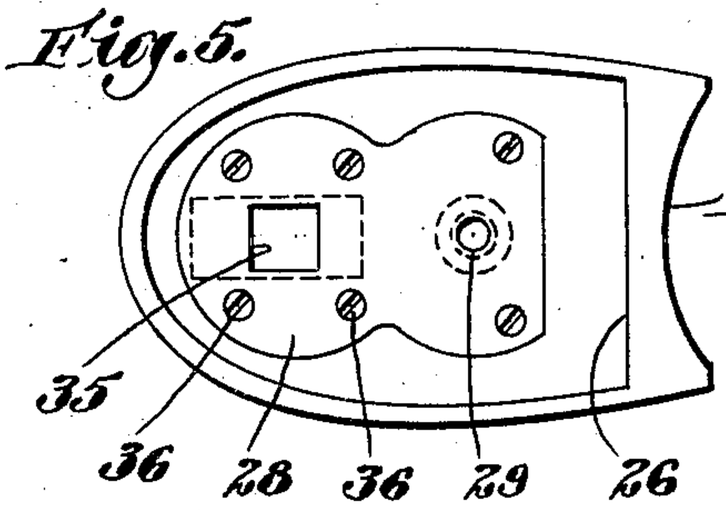


Fig. 5.



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UNITED STATES PATENT OFFICE.

SOLOMON SWETZOFF, OF BOSTON, MASSACHUSETTS.

DETACHABLE SHOE HEEL.

Application filed May 9, 1923. Serial No. 637,850.

To all whom it may concern:

Be it known that I, SOLOMON SWETZOFF, a citizen of Russia, and resident of Boston, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Detachable Shoe Heels, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

My present invention is an improvement in the art of manufacturing boots and shoes and particularly with regard to the heel formation and attachment, together with a novel construction of heel and heel attaching means.

In the manufacture of boots and shoes it is of great importance to secure a firm, solid and strong heel seat in the shoe, and my present invention contemplates the utilization of a metal plate which will solidify, strengthen and reinforce the heel seat of a shoe, either welt shoe, McKay shoe or turn shoe construction, and which plate will also constitute a cooperative holding and attaching device for a heel. Preferably also I make the heel so that it can be readily attachable and detachable, and therefore interchangeable. My invention is of particular importance with ladies' shoes wherein relatively high heels, and preferably wooden heels, are employed, such as the well-known type of Louis heel, half-Louis heel, or the like.

The invention is equally applicable, however, to other heel constructions, particularly leather heel layers, although herein illustrated and preferably applied to a high wooden heel, as it has been and is extremely difficult to secure a Louis heel by nailing in the usual boot and shoe methods of heel attaching.

By my present method I employ automatic cooperating attaching means and preferably at a substantial spaced position, as at the extreme front and extreme rear of the heel. Thus interlocked the heel may then be permanently and rigidly secured in place by a member, such as a threaded screw which will prevent displacement of the heel and heel seat interlocking means and hold the same tightly in position. This feature is of great importance and a great improvement over prior detachable or permanent wood heel attaching devices, consisting in a plurality of relatively long screws, separate nails or the like.

Furthermore a distinct novelty in my present invention with regard to attachability and detachability of the heel consists in the fact that I utilize fixed cooperating interlocking devices to hold the heel, as distinguished from one or more screws, which latter have heretofore been used, both to hold the heel in position, and to take up torsional strains. My interlocking devices take up the strain of the heel attachment, while the retaining screw merely prevents displacement and also holds the cooperating heel attaching means in close engagement.

Referring to the drawings, illustrating a preferred embodiment of the invention,

Fig. 1 is a fragmentary view of a shoe made according to my invention with reinforced heel seat and heel attaching means;

Fig. 2 is a longitudinal cross-sectional view;

Fig. 3 is a view partly in cross-section on the line 3—3 of Fig. 2;

Fig. 4 is a bottom view of the reinforced heel seat with heel attaching plate; and

Fig. 5 is a top view of the heel with a cooperating attaching heel plate member.

As shown in the drawings, my invention may be embodied in any type of shoe construction, either welt, McKay or turn shoes, and is of equal importance and usefulness in these several lines of manufacture. The shoe as herein illustrated is of turn shoe construction wherein the upper 1 is attached to the sole 2 by stitching 3 in the usual turn shoe method. A heel and shank piece 4 may be also applied. In the drawings I have shown a full Louis type of heel 5, to which is secured the usual toplift 6. This heel is here shown as formed of wood and of a typical exterior contour and style, which illustrates a heel of extremely difficult type to attach to a shoe, particularly as light a shoe construction as a turn shoe, by any heel attaching, nailing or other methods heretofore employed.

In carrying out my invention, I first recess the heel part of the sole 2 slightly to form a shoulder 10 against which the forward edge 12 of the heel 5 may abut to give a flush joint. Within the recessed heel portion thus formed I affix to the shoe a heel plate 15 which will reinforce and strengthen the entire heel seat, and on which

cooperating heel attaching devices are supplied. This heel plate is preferably formed with a plurality of prongs 16, 16, which prongs may be stamped out of the metal and will serve to hold the plate firmly in position as it is applied to and driven firmly onto the sole. Then a plurality of tacks 17, 17, driven through holes or recesses in the plate will still further hold the same firmly onto the sole and heel of the shoe. If desired spaces 18 can be cut from the heel plate to lighten the same, and a central recess 20 is formed to receive the retaining screw 21. At the rear of the plate a catch or lug 22 is stamped from the plate and turned and curved rearwardly to constitute one of the cooperating heel attaching members. The forward edge 24 of this plate 15 is formed perpendicularly and preferably squarely across to present a substantial abutment for the correspondingly formed portion 26 of the heel 5, this alone constituting a heel retaining means, as clearly shown in Fig. 2.

The heel 5 of wood or other suitable material, is formed,—as above explained,—with the portions or shoulders 12 and 26 to abut respectively against the surfaces 10 in the sole 2 and the edge 24 of the plate 15. The central portion of the heel is slightly recessed or countersunk as shown at 27, to receive a plate 28. This plate is preferably formed with an integral socket or hub 29, which is internally threaded to receive the correspondingly threaded retaining screw 21. This hub is fitted in a recess 32 bored or otherwise formed in the heel. At the rear of the heel plate 28 is also formed a recess 33 in the heel, so as to permit the catch 22 to engage freely with the rearmost portion of the heel plate 28 through a square opening 35. This heel plate is secured to the heel by a plurality of screws, nails or the like 36 and is firmly positioned therein. As thus described the shoe being made in any of the usual manners as above noted, is fitted with the reinforcing and heel retaining plate 15. This process is readily applicable to any shoe, either before the sole is lasted to the upper or after. The heels are then made and fitted with cooperating heel plate. The operation of attaching the heel consists simply in fitting the rear heel plate opening 35 over the catch 22, positioning the heel forwardly until the shoulders 26 and 12 abut respectively against the edges 24 and 10. These two interlocking and spacing devices spaced at the forward parts of the heel and extending clear across the same give as great a leverage as is possible to hold the heel against displacement or torsional strain. Thereupon the retaining screw 21 is fitted, holding, clamping, and securing the shoe and heel firmly together.

While I have necessarily described my invention somewhat in detail, it will be appreciated that I may vary the size, shape and style of the various elements within wide ranges without departing from the spirit of the invention.

My invention is further defined and described in the form of a claim as follows:

A detachable attaching means comprising a plate adapted to be secured to the heel seat of a shoe exterior of the outsole, said plate being provided with a perforation adjacent the forward end thereof, means formed integral with said plate for attaching the same to the heel seat, a depending hook extending downwardly from said heel seat and having the open end of the hook portion extending toward the rear of the shoe, a cooperating plate secured to the upper face of the heel, said plate being provided with a cut out portion adapted to register and engage with the hook-shaped member on the metallic plate, screw engaging means formed integral with the heel plate and having the main portion thereof extending downwardly into the heel structure, and a screw passing through the forwardly located perforation in the metallic plate and into the screw engaging means whereby the heel is maintained in position on the heel seat and in proper alinement with the shoe structure.

In testimony whereof, I have signed my name to this specification.

SOLOMON SWETZOFF.