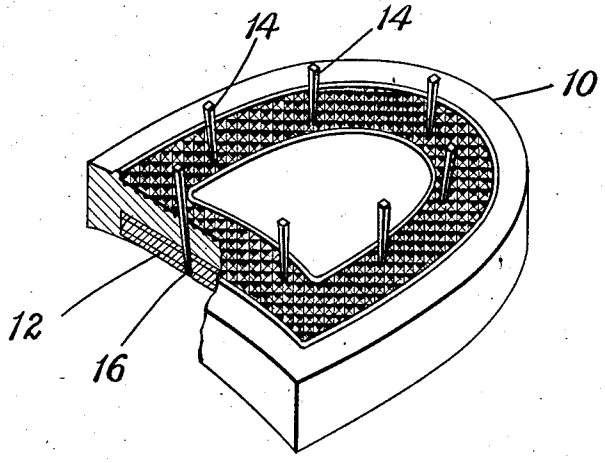
May 26, 1931. G. O'GORMAN 1,806,641

LOADED RUBBER HEEL

Original Filed Dec. 31, 1924



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UNITED STATES PATENT OFFICE

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LOADED RUBBER HEEL

Original application filed December 31, 1924, Serial No. 759,093. Divided and this application filed January 10, 1927. Serial No. 160,206.

This invention relates to heels of resilient material, commonly spoken of as "rubber heels", and is illustrated herein as embodied in a rubber heel loaded with attaching nails having their points securely embedded in a nail-anchoring element with which the attaching surface of the heel is provided.

To attach rubber heels to shoes by hand has heretofore been a troublesome operation by reason of the fact that, as rubber heels are ordinarily made, it is necessary to drive each attaching nail through a layer of tough rubber approximately half the thickness of the heel, extending from the washers to the attaching surface of the heel. The nature of this rubber is such as to tend to make the hammer rebound when the first blow is struck, and if the blow of the hammer is not sufficiently sharp, the nail also occasionally will bounce from the heel. The nails used for attaching rubber heels are so short that when one of these nails is held between the thumb and forefinger, with its point projecting through the usual hole in the tread surface of the heel into the washer while the first blow is struck with the hammer, there is imminent danger of the workman striking his thumb or finger, or both, with the hammer. This, of course, is not a satisfactory condition.

Moreover, in attaching rubber heels it is desirable that the nails be inclined or "toed-in" so that each nail will strike the convex clenching surface upon which the shoe is supported at right angles thereto. A nail which strikes the clenching surface at a substantial inclination thereto is likely to run rather than to clench properly and then has inferior holding power. When attaching rubber heels manually it has, on account of the conditions described above, heretofore been difficult to control with a satisfactory degree of certainty the directions in which the various nails were driven.

It is an object of this invention to facilitate the manual attachment of rubber heels to shoes. This is accomplished by loading the heels, before they are supplied to the workmen who are to attach them, with attaching nails penetrating a nail-anchoring element with which the heel is provided, the nails being thereby held rigidly in predetermined relation to each other. As illustrated, this nail-anchoring element is exposed at the attaching surface of the heel and consists of several layers of plywood vulcanized into the heel during its manufacture, the nails having their points driven into and securely held by this wooden element and being preferably "toed-in" so that each nail will start in a direction that will insure a good clench. Heels may be loaded in this manner by machinery and sold already loaded to shoe-repair men. This eliminates the necessity of the workman holding each nail manually while he starts it with his hammer, thus preventing many a bruised thumb or finger and insuring that every nail is started in the right direction. Heels intended for the repair trade can advantageously be loaded with the nails in different positions from those ordinarily used in attaching rubber heels by machinery in the manufacture of shoes. This insures that the nails used in the repair job enter a sound portion of the sole of the shoe and eliminates the necessity of plugging nail holes in the sole before attaching the new heel.

This application is a division of my copending application Serial No. 759,093, filed December 31, 1924 which has matured into Patent No. 1,729,797, granted October 1, 1929.

With the above and other objects and features in view, the invention will now be described in connection with the accompanying drawing and will be pointed out in the appended claims.

The accompanying drawing is a perspective view, partly in section, of a loaded rubber heel embodying the present invention.

The drawing illustrates a so-called "half heel" composed of a body of suitable rubber compound 10, with a nail-anchoring, reinforcing element or core 12 made up of a plurality of layers of plywood vulcanized therein and exposed at the attaching surface of the heel. As illustrated the heel is loaded with a plurality of headless nails 14 driven into and having their points 16 securely em-

bedded in the nail-anchoring element 12. It is not essential, however, that the points of the nails be embedded in the nail-anchoring element, since their points may project more or less beyond that element. The nails are "toed-in"; that is, their points are inclined away from the margin of the heel so that, after penetrating the sole of the shoe during the attachment of a heel, they will meet the convex clenching surface upon which the heel-seat of the shoe is supported, substantially at right angles thereto and will clench properly. With the nails toed-in and converging in this fashion, their holding power is increased and less metal is required for a satisfactory clench than would be necessary if the nails were parallel to each other. This lessens the amount of metal in the heel-seat of the shoe and thus eliminates humps and irregularities.

In this specification and claims it is to be understood that the words "rubber heels" are used to denote heel members whether whole heels, half heels, or otherwise, of any suitable resilient compound such as are commonly spoken of as rubber heels.

Having described the invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A loaded rubber heel having a penetrable nail-anchoring element, the nails with which the heel is loaded penetrating said element and being held thereby rigidly in predetermined relation to each other.

2. A loaded rubber heel having an imperforate nail-anchoring element of penetrable material at its attaching surface with the points of the nails with which the heel is loaded embedded in and securely held by said element.

3. A loaded rubber heel having a penetrable nail-anchoring element at its attaching surface, said heel being loaded with nails having their points "toed-in" and embedded in and securely held by said nail-anchoring element.

4. A rubber heel having a wooden nail-anchoring element at its attaching surface, said heel being loaded with nails having their points embedded in and securely held by said wooden element.

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

GAYNOR O'GORMAN.