I. E. BREMBERG.

CUSHION HEEL.

APPLICATION FILED DEC. 20, 1915.

1,322,285. Patented Nov. 18, 1919.

Fig. 1.

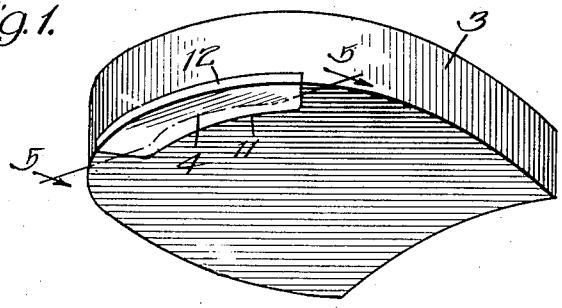


Fig. 2.

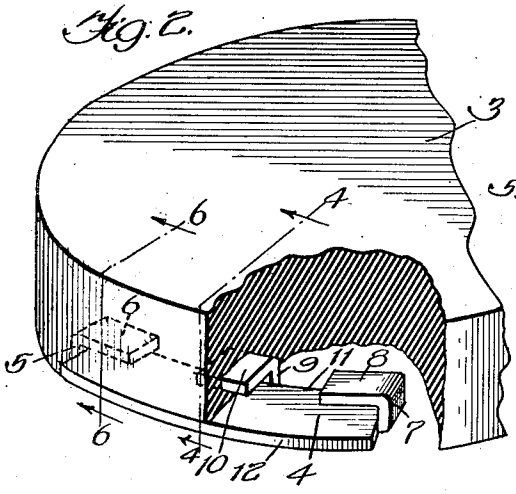


Fig. 3.

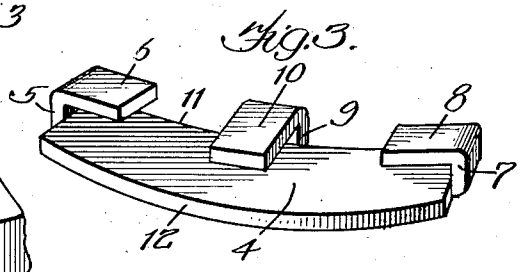


Fig. 4.

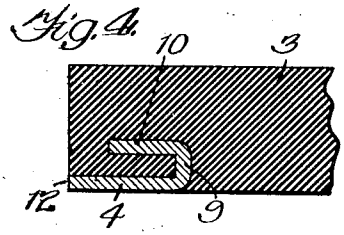


Fig. 5.

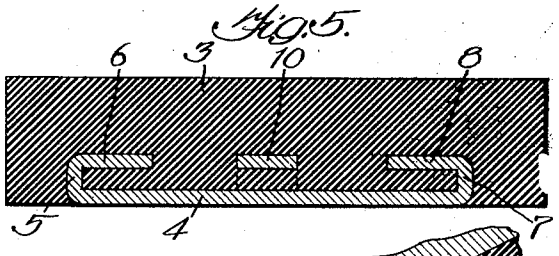


Fig. 6.

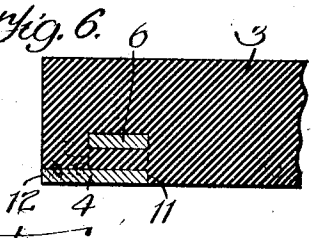
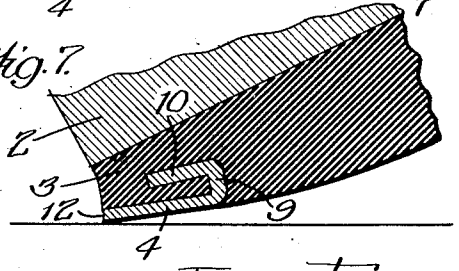


Fig. 7.



Witness:

Jno. A. Nelson

Inventor:

Ivar E. Bremberg.

By Munn & Dickstrom

Attys.

UNITED STATES PATENT OFFICE.

IVAR E. BREMBERG, OF CHICAGO, ILLINOIS.

CUSHION-HEEL.

1,322,285. Specification of Letters Patent. Patented Nov. 18, 1919.

Application filed December 20, 1915. Serial No. 67,730.

To all whom it may concern:

Be it known that I, IVAR E. BREMBERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cushion-Heels, of which the following is a specification.

This invention relates to cushion heels and has particular reference to steel reinforcement molded in on elastic heels such as rubber cushion heels and the like. The object of the invention is to overcome difficulties heretofore experienced in the various attempts to metal shoe that portion of the cushion heel which is battered down in advance of wear on remaining portions, and the invention consists in the improved metal shod cushion heel, in an improved heel plate molded in with its lugs or fasteners embedded so close to the surface of the rubber, that the resiliency of cushion heel is not lessened perceptibly, and in the combination, construction and arrangement of parts, all as hereinafter more particularly pointed out in detail description and in the appended claims.

In the drawing—

Figure 1 is a perspective bottom view of a cushion heel fortified with the present improvement.

Fig. 2 is an enlarged edge and top perspective view of the heel, partly broken away and partly in section to disclose the incorporation of the plate parts as substantially an integral part of the body of the heel.

Fig. 3 is a perspective view of the heel plate itself.

Fig. 4 is a section taken substantially on line 4—4 of Fig. 2.

Fig. 5 is an enlarged section taken substantially on line 5—5 of Fig. 1.

Fig. 6 is a section taken substantially on line 6—6 of Fig. 2.

Fig. 7 is a view of a broken away portion of a comparatively non-resilient heel with my improved heel applied thereto and showing the manner in which the metal portion, or plate, responds to or follows the movements of elasticity in the cushion or rubber heel.

In the several views 2 represents an ordinary leather heel and 3 a cushion or rubber heel embodying the present improvements which include a heel plate 4 so constructed and combined with the body 3 as to constitute substantially integral portions thereof. The usual method of fastening such a plate is to employ screws or nails, which act as rigid posts interposed against resiliency movements in the shod portions, or integral spurs which work loose and cause wearers a great deal of annoyance. Hence while to the uninitiated the problem of fastening these plates to rubber heels, has appeared easy of solution, a large variety of forms of devices have failed to operate successfully or acceptably owing to the exceptional strains imposed upon that portion or "corner" of the heel which receives nearly all of the blows of violent first impact against road or pavement.

In the present improvement the plate 4 and its holding means are cast or molded into the heel, or incorporated as a part of the body material. To this end the plate is provided with integral end lugs in the form of an upwardly bent portion 5 and a horizontally bent portion 6 extending over the body of the plate 4 at one end, and similar vertical and horizontal portions 7 and 8, respectively, at the opposite end. At the middle of the plate, but arranged at right angles to the lugs named is a similar elbow lug composed of parts 9 and 10, as shown very plainly in Figs. 2 and 3. These figures also show that the holding lugs are arranged on and near the rear edge of the plate 4, which rear edge is designated by the numeral 11, while the front, or exposed, edge is designated as 12. As the latter edge receives the most violent part of the blows of impact it is relieved of fastening means which would tend to work loose, and by being removed to the rear edge the fastening lugs will be so embedded in the body of the rubber, or other material used for the heel, that the tearing away of the shod portion of the heel is obviated. The lug portion 9 interposes a broad face surface against movement of the plate rearwardly with respect to the shoe or heel, or toward what has been termed the front edge 12 while the broad faces oppose movement at right angles to the facing of lug 9. The portions 5 and 7 project beyond the ends of the body portion 4 and present their edges, removed, as shown, a substantial distance from the vertical outer surface of the heel. This construction also enables me to employ heel plate metal of the necessary degree of temper, it being well known that the wear on the metal of an ordinary heel plate

is very severe. This construction also leaves the remaining portion of the plate securely anchored even if the use of inferior metal would cause the wearing away of, say, one end of the plate and the consequent loss of its holding lug.

On rubber heels metal plates also serve to produce a slight click, sufficient to give another warning of the approach of a pedestrian from the rear to obviate the unpleasant surprises that wearers of rubber heels often innocently occasion. The deflection from parallelism with the plate 4, of the holding portions 6, 10 and 8, is illustrated in connection with the part 10 in Fig. 7, the free end of which is slightly bent downward in obedience to the compression and expansion movements in the body of the heel 3, which movements, of course are greatest at the extreme rear of the heel. It will be seen that at this point the chief work of the heel as a shock absorber is accomplished, and that in the present invention the fastening means for the plate 4 interpose no resistance whatever to the compression of the cushion. However since the plate is molded in close to the tread or wear surface of the heel the resiliency is not materially interfered with even if the horizontal lugs are comparatively rigid. Their emplacement at right angles to the direction of strains tending to release the plate 4 from the heel makes them powerfully effective even if made so thin or weak that they would be useless if arranged parallel to said direction, or at right angles to the plate 4 in accordance with usual constructions.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination with a heel, of a plate extending to a fractional portion of the outer edge of said heel, said plate having integral angle lugs that project upwardly from and then horizontally over the body of the plate from an inner edge thereof and are spaced away from the outer edge of said plate.

2. The combination with a rubber heel, of a plate of metal embedded in the "outer corner" of the heel and having holding means which are molded into the heel and consist of integral angle lugs which project upwardly from the inner face of said plate and then project horizontally over, parallel to and spaced apart from said face and from the outer edge of heel and plate.

In testimony whereof I have hereunto signed my name.

IVAR E. BREMBERG.