

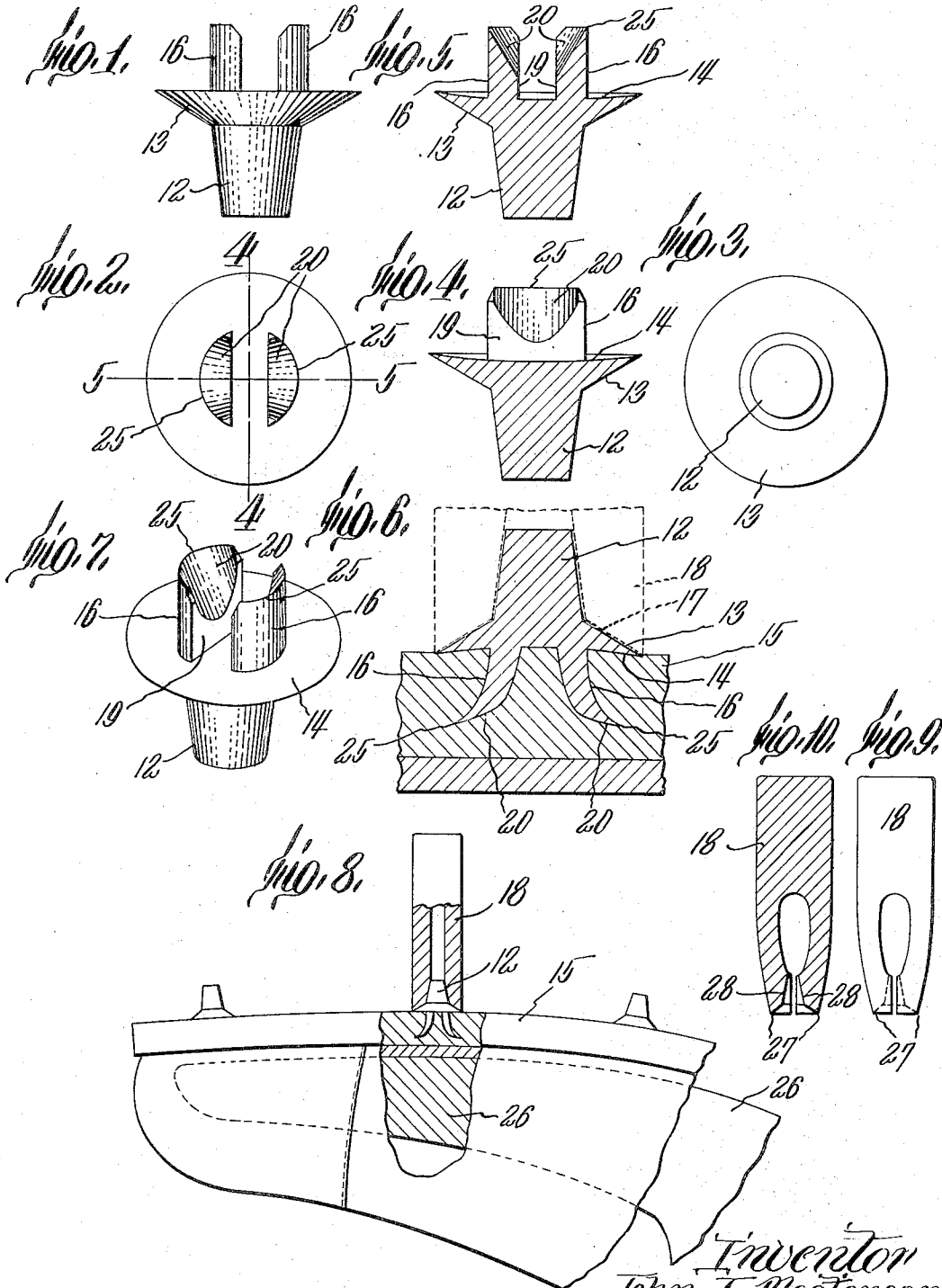
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ANTISLIPPING CALK FOR SHOES

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ANTISLIPPING CALK FOR SHOES

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This invention relates to a shoe whose outer sole is provided with spikes projecting outward from its tread face and adapted to indent the ground, and prevent slipping. shoes thus spiked are used by golfers, tennis players, runners, and others.

A spike formed as a tapering cylinder having a length considerably greater than its largest diameter is desirable, the spike having integral attaching means constituting a rivet portion of the spike and adapted to be inserted in an outer sole and clinched within the tread surface thereof.

Spikes having tubular rivet portions are now in use, the rivet portion being alined with the spike, inserted in a hole formed for its reception in the sole, and secured thereto by longitudinally splitting the rivet portion into tongues which are clinched on the inner surface of the sole by an operation which must be performed before the sole is attached and becomes a part of a shoe.

A sole thus spiked is objectionable because the spikes projecting from the tread face are liable to deface other portions of the shoe during the process of manufacturing, so that it is necessary to prevent this liability by means involving a considerable expenditure of time in completing the shoe, and an increase of the cost of manufacture.

My object is to enable spikes to be attached to the outer sole of an otherwise entirely completed shoe. In other words, my object is to provide shoe converting means adapted to convert the smooth tread of a completed shoe into a spiked ground-engaging tread.

This object is attained as hereinafter described and claimed.

Of the accompanying drawing forming a part of this specification,—

Figure 1 is a side view of a member which is one of a plurality of identical members adapted to convert the smooth tread of a completed shoe into a spiked ground-engaging tread.

Figure 2 is an end view of said member looking toward its inner end.

Figure 3 is an end view looking toward the outer end of the member.

Figure 4 is a section on line 4—4 of Figure 2.

Figure 5 is a section on line 5—5 of Figure 2.

Figure 6 shows the member in section attached to an outer sole.

Figure 7 is a perspective view of the member shown by Figures 1, 2, 3, 4 and 5.

The above mentioned figures are considerably enlarged.

Figure 8 is a side view of a portion of a shoe provided with a plurality of the above mentioned members a driver being shown in section applied to one of said members.

Figures 9 and 10 show a driver formed as a permanent magnet.

The same reference characters indicate the same parts in all of the figures.

In carrying out my invention I provide means adapted to convert the smooth tread of the outer sole 15 of a completed shoe into a ground engaging tread.

Said means comprises a plurality of identical members each characterized as next described.

The member shown separately by Figures 1 to 7 includes a spike 12, an enlargement having an outer impact face 13 surrounding and overhanging the base of the spike, and an inner seating face 14 formed to bear on the tread of the outer sole 15 of a completed shoe.

The member comprises also a plurality of spaced apart prongs 16 surrounded by and projecting from the seating face 14. Two prongs are shown by the drawing.

The spike 12 and impact face are formed to permit the application to said face of the annular impact end 17 (Figure 6) of a tubular driver 18, and to cause the correct positioning of said impact end by the spike, as best shown by Figure 6.

The prongs 16 have opposed inner sides which in this instance include parallel inner portions 19, and oppositely inclined outer portions 20 intersecting the outer sides of the prongs to form cutting ends adapted to penetrate the tread of the outer sole 15.

Said inclined portions are adapted to cause outward bending of the prongs, as shown by Figures 6 and 8, while they are being driven.

5 The impact face 13 is formed to distribute force exerted thereon by the driver 18 so that substantially equal bending of the prongs is ensured. The inner sides of the prongs 16 extend inward to the seating face 14, so that the length of the prongs is reduced to a minimum, enabling the bent prongs to be entirely contained between the tread and inner faces of a sole 15 of average thickness, without protruding from the inner face.

15 The impact face 13 is preferably frusto-conical, and intersects the seating face 14 to provide the enlargement with an acute angled margin adapted to conform closely to the tread of the outer sole, and form a tight joint therewith, preventing the entrance of moisture between the seating face and the sole tread.

20 The acuteness of said margin is preferably increased by imparting a dished form to the seating face 14, as shown by Figures 4, 5 and 6. The outer sides of the prongs 16 are parti-cylindrical. The inner portions 19 of the inner sides are perpendicular to the seating face 14, and the inclined portions 20 are grooved or longitudinally concaved, and intersect the outer sides to form arcuate chisel edges 25 on the outer ends of the prongs.

25 It will now be seen that any completed shoe having a sole leather outer sole and a smooth tread may be quickly converted into a shoe having a spiked tread, either at a shoe factory, or at a retail store, by applying the shoe to a suitable support such as a jack 26, (Figure 8), and attaching a suitable number of the described members to the outer sole by a driver such as that shown by Figures 6 and 8. The driver may be held by the operator and actuated by a hammer, or it may be otherwise operated to secure the described result.

30 The described members constitute articles of manufacture which may be marketed as such.

It is obvious that the converting member may be attached to any outersole having sufficient density, whether of sole leather or other material, and that it may be attached as well to the top lift of a heel of suitably dense material.

The driver may be a modified horse shoe magnet shown in side elevation by Figure 9, and in longitudinal section by Figure 10. The poles 27 of the magnet are slightly spaced apart and their ends and inner sides are formed as shown at 28 to bear on the impact face 13 and spike 12. One of the described converting members may be held by the magnet with the spurs 16 projecting from the poles in position to be forced into the outer sole.

A shoe having spikes projecting outwardly from its tread face, is known as a sporting shoe. A shoe not provided with spikes, may be called a non-sporting shoe.

It will be seen that my invention enables a shoe retailer to quickly and conveniently convert non-sporting shoes of various types into sporting shoes, and thus supply the wants of customers, without being obliged to carry both sporting and non-sporting shoes in stock.

I claim:

A member adapted to convert the smooth tread of a completed shoe into a ground-engaging tread, said member including a spike, an enlargement surrounding the base of the spike, and having an outer impact face and a seating face, and a plurality of spaced apart prongs projecting inwardly from the seating face, and having inner sides including inclined outer portions intersecting the outer sides of the prongs to form cutting ends adapted to penetrate the tread of an outer sole, the outer sides of the prongs being parti-cylindrical, the inner sides having inner portions perpendicular to the seating face and grooved oppositely inclined outer portions intersecting the parti-cylindrical outer sides to form arcuate chisel edges on the outer ends of the prongs.

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