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D. R. BRADY

2,222,650

ATHLETIC PEG

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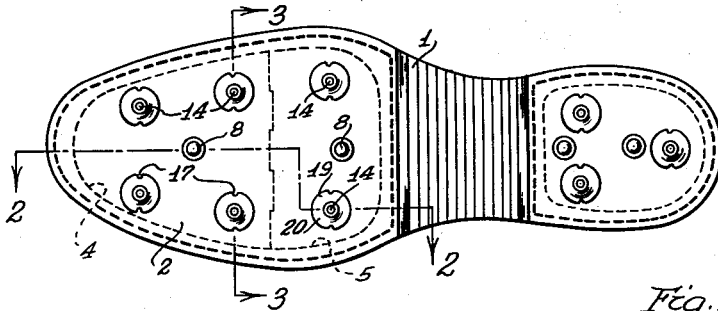


Fig. 1.

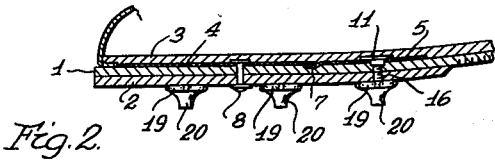


Fig. 2.

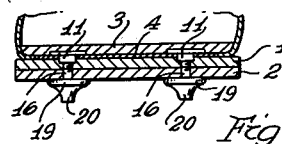


Fig. 3.

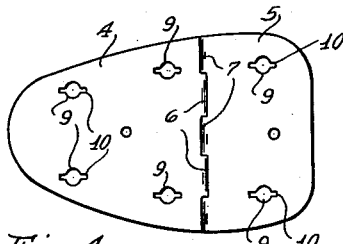


Fig. 4.

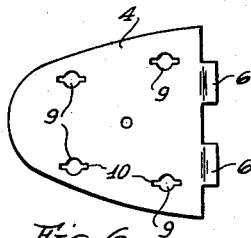


Fig. 6.

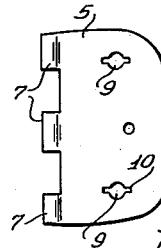


Fig. 8.

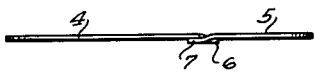


Fig. 5.

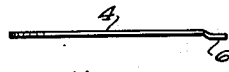


Fig. 7.

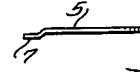


Fig. 9.

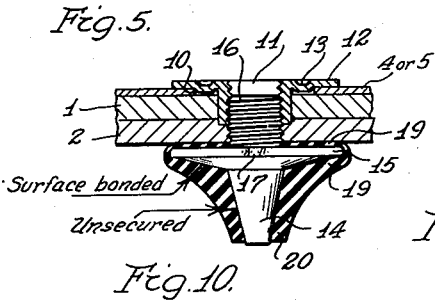


Fig. 10.

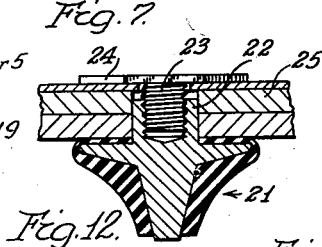


Fig. 12.

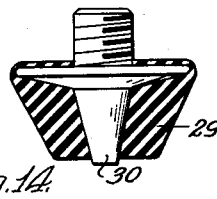


Fig. 14.

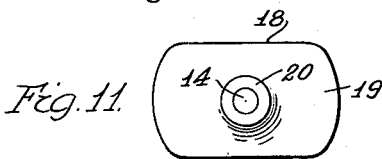


Fig. 11.

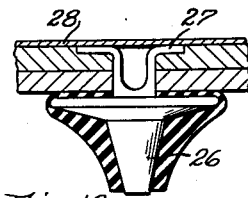


Fig. 13.

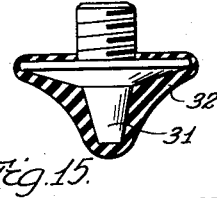


Fig. 15.

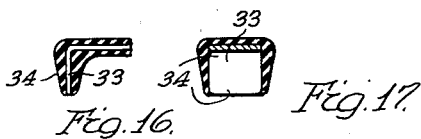


Fig. 16.

Fig. 17.

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UNITED STATES PATENT OFFICE

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ATHLETIC PEG

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Application April 28, 1939, Serial No. 270,613

4 Claims. (Cl. 36—59)

This invention relates to pegs or cleats such as worn on the shoes of athletes to improve traction, and has for its primary object to reduce the hazard due to the presence of such means, both as to the wearer or others contacted thereby.

The pegs or "spikes" worn upon the shoes of baseball players have long been recognized as a source of injury both to the wearer and opposing players. They are incapable of brushing over an object contacted thereby, often become snagged on the base bags and thus cause serious injury to the wearer, and often an opposing player is cut deeply when accidentally struck a glancing blow by the foot of the wearer. The main object of this invention, differently stated, is to provide a protective covering for shoe pegs or cleats to reduce the injury hazard without reducing the effectiveness of the pegs or cleats as traction improving means. Although baseball spikes are cited here as an illustration of the desirability of means such as the invention provides, it is to be understood, of course, that this is cited merely by way of illustration and that the cleats are adapted for use by players in various other athletic contests or games.

According to the object above stated, the invention provides metal pegs or cleats with an elastic sheath which covers the pegs at all times except when the shoe is pressed against the ground. The elastic sheath enables the pegs to brush over a base bag without snagging, or to strike an opposing player a glancing blow without gashing, and when in contact with the ground the sheath compresses to enable the peg to penetrate the ground.

Another object is to provide pegs which remain free from accumulations of dirt, and which assist rather than embarrass running of the wearer. In this respect it is to be noted that conventional cleats, such as baseball spikes for example, each act in the nature of a small spade. That is, each peg digs into the ground and displaces a small clod of dirt or turf with each step of the wearer, with the result that there is a tendency for slowing down the movement of the wearer. Furthermore, the spikes are so designed that dirt tends to cake thereon, with the result that their effectiveness is greatly impaired. In the instant case, however, the elastic sheath serves a dual purpose in that in addition to reducing the hazard to injury it avoids the spading or digging action and remains free from dirt accumulations. The elastic sheath acts in the nature of a spring and tends to withdraw the peg from the ground when the weight of the wearer is shifted. It tends to wipe the peg surface to remove any dirt tending to accumulate thereon, and because it is constantly changing

its shape due to compression, dirt does not accumulate on the sheath.

Ground conditions resulting from changing weather vary the traction conditions so that pegs or cleats suitable for dry ground are not effective when the ground is wet. Accordingly, it is another object of the invention to provide a mounting enabling interchangeability of the pegs or cleats. In this respect pegs or cleats of various sizes are provided and those best suited for particular conditions of use may readily be assembled upon the shoe. This feature of the invention has further importance in that it enables a player to select cleats best suited to his weight and peculiarities of movement.

Another object is to provide means for independently mounting a plurality of pegs or cleats on the sole of a shoe, said means being particularly designed to prevent accidental displacement of the pegs and to avoid foot discomfort to the wearer due to the presence of the pegs. In this respect the cleats are attached to a metal plate imbedded in the sole of the shoe. The metal plate is formed of two sections which are lengthwise extensible and which are so connected together that they hinge in one direction only, enabling it to bend in the direction of the shoe as during walking or running, and reinforcing the shoe against bending in the other direction.

Other objects and advantages will become more fully apparent as reference is had to the accompanying drawing, wherein my invention is illustrated, and in which:

Fig. 1 is a bottom plan of a shoe equipped with cleats,

Figs. 2 and 3 are sections taken respectively on the lines 2—2 and 3—3 of Fig. 1,

Figs. 4 and 5 are elevations of the attaching plate,

Figs. 6 and 7 are elevations of the fore part of the attaching plate,

Figs. 8 and 9 are elevations of the aft part of the attaching plate,

Fig. 10 is an enlarged section of a peg,

Fig. 11 is an elevation illustrating a peg shaped for the reception of a turning tool,

Fig. 12 is a section illustrating variation of the peg securing means,

Fig. 13 is a section illustrating the peg equipped with rivet means,

Fig. 14 is a section illustrating a variation in the shape of the sheath,

Fig. 15 is a section illustrating the peg completely enclosed in a sheath, and

Figs. 16 and 17 are sections illustrating the elastic sheath applied to a conventional baseball spike.

Referring to Figs. 1 to 10, 1 designates the sole of a shoe, the sole being constructed with an outside layer 2 according to the usual prac-

tice in athletic shoes, and having an insole or filler 3. Disposed between the sole 1 and the insole 3 is a plate composed of a fore section 4 and an aft section 5 having interlocking fingers 6 and 7 respectively. With the fingers 6 and 7 interlocked beneath the plate sections 5 and 4 respectively, as shown in Figs. 4 and 5 the two sections may hinge upwardly and may move relatively in a longitudinal direction. The two sections 4 and 5 are firmly secured to the sole portions 1 and 2 by rivets 8.

The plate sections 4 and 5 have symmetrically arranged apertures 9 with notches 10 in the wall thereof. In each aperture is a nut 11 having an enlarged flange 12 with projections 13 which extend into the notches 10. The insole 3 holds the nuts in the apertures 9 and the inter-engaging notches 10, and projections 13 prevent turning of the nuts in their respective apertures.

The cleats are formed of metal, having frustum shaped ends 14 and each having an enlarged flange 15 providing a bearing surface of comparatively large area adjacent the lower surface of the sole. The pegs also have integral screwthreaded studs 16 adapted to be screwed into the nuts 11. With the nuts held against rotation it is a simple matter to screw a peg therein and therefore the pegs may be replaced as desired. To enable gripping of the pegs with a tool the flanges 15 may be notched as indicated at 17 or they may be provided with facets 18 as illustrated in Fig. 11.

Each peg is encased in a sheath of rubber, the portion 19 of the rubber being surface bonded to the flange 15, and the portion 20 which overlies the frustum portion of the peg being unsecured. The portion 20 normally prevents contact of the peg with objects and yields to permit the peg to penetrate the ground.

The peg generally designated 21 in Fig. 12 is constructed similar to that above described with the exception that it has an internally threaded stem 22 receiving a screw 23 having a large head 24 which contacts the upper surface of the sole 25. In this case, as also with the form shown in Fig. 10, a portion of the sole is tightly clamped between a metal plate and the flange on the peg. The plate distributes the localized pressure, resulting from contact of the pegs with the ground, over a comparatively large area, thus avoiding discomfort to the foot of the wearer and also providing more durable anchorage for the pegs. It is to be noted that the flexibility and lack of strength in leather, and contemplated extremely rough usage, requires that the forces tending to displace the pegs be distributed over a large area of the sole. In the instant case practically the entire area of the sole receives and absorbs such forces without localized distortion such as would cause foot discomfort.

Fig. 13 illustrates a peg 26 permanently secured to the shoe, the peg having integral rivet-like fingers 27. The rivets may be secured over the metal plate 28 in a manner similar to the flanges 12 and 24, or they may be disposed beneath the plate as shown in Fig. 13. When disposed beneath the plate the rivets transmit thrust directly from the peg to the plate.

Fig. 14 illustrates the elastic sleeve 29 formed heavier than in the above described embodiments, and which is adapted for use by football players. The heavier rubber is more resistant to compression and ordinarily will penetrate

turf, except when the turf is extremely hard or frozen. In the latter case, the rubber compresses to allow the peg 30 to penetrate the turf.

Fig. 15 illustrates the peg 31 completely enclosed in a sheath of rubber. The rubber may 5 deform and stretch to enable the peg to penetrate the ground.

The element 32 shown in Figs. 16 and 17 represents one of the prongs of a conventional set of baseball spikes. The prong is sheathed in 10 rubber 34 which may compress to enable the prong to penetrate the ground.

Although specific embodiments of the invention are illustrated and described, it is to be understood that various other modifications 15 within the scope of the appended claims are contemplated, those illustrated merely being chosen as examples illustrating modification of the structure to suit some of the various conditions of use.

What is claimed is:

1. A spike for athletic shoes comprising a base portion adapted to be attached to a shoe, an elongate comparatively slender portion adapted to penetrate the ground, and an elastic sheath 25 secured to the base portion and surrounding and unsecured with respect to the ground penetrating portion, said elastic sheath being of such cross sectional thickness diametrically of the ground penetrating portion and of such elasticity that it 30 readily yields to expose a major portion of the length of said penetrating portion for penetration of the ground when the spike is pressed into contact with the ground.
2. A spike for athletic shoes comprising a base 35 portion, a ground penetrating portion of frusto-conical shape, and an elastic sheath secured to the base portion and surrounding said penetrating portion and unsecured with respect thereto, the portion of said sheath which surrounds the penetrating portion being comparatively thin 40 and highly elastic and adapted to be compressed to an extent exposing a major part of the length of said penetrating portion for penetration of the ground when the spike is pressed against the 45 ground.
3. A spike for athletic shoes comprising a first portion adapted to be attached to the sole of a shoe, a second or ground engaging portion, a radiating base portion between the first two base 50 portions, and an elastic sheath surface bonded to said base portion, said sheath having a portion thereof extending continuously over the rear surface of the base portion and adapted to be compressed between said base portion and the sole of a shoe when said first portion is secured to the sole of a shoe.
4. A spike for athletic shoes comprising a first 55 portion adapted to be attached to the sole of a shoe, a second or ground engaging portion, a radiating base portion between the first two base 60 portions, and an elastic sheath surface bonded to said base portion, said sheath having a portion thereof extending continuously over the rear surface of the base portion and adapted to be 65 compressed between said base portion and the sole of a shoe when said first portion is secured to the sole of a shoe, said sheath also having a portion of relatively thin cross section encasing said second portion and adapted to yield to 70 expose a major portion of said second portion for penetration of the ground when said second portion is pressed into contact with the ground.

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