

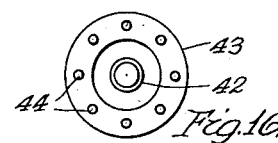
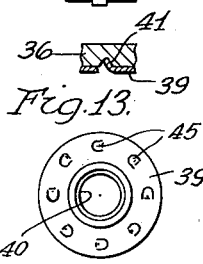
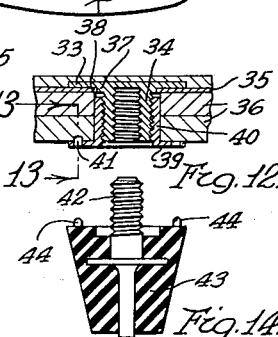
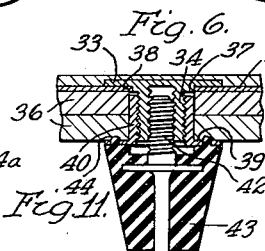
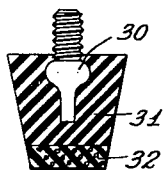
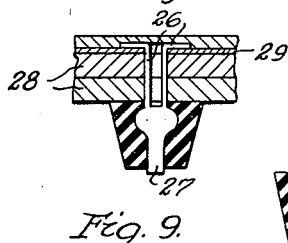
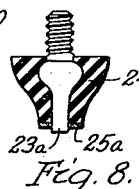
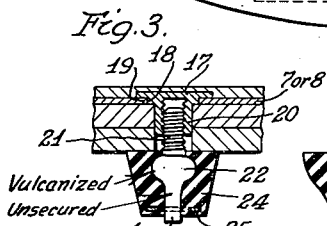
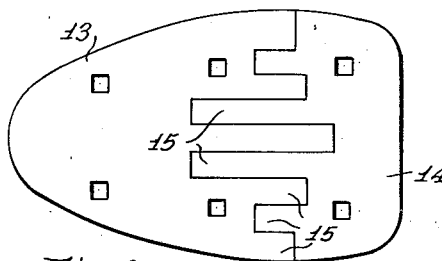
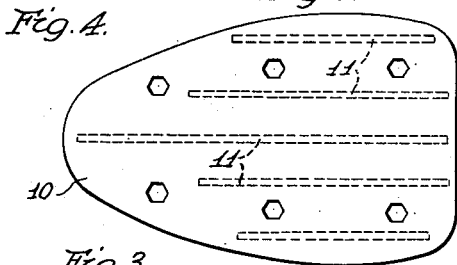
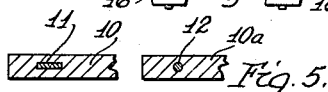
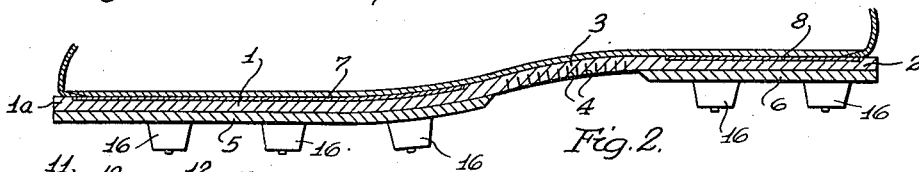
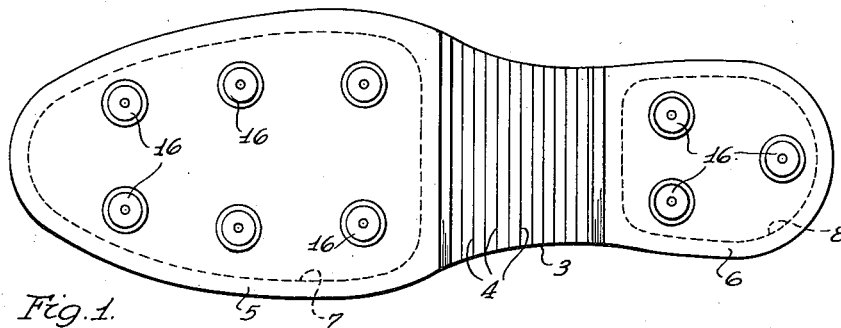
Oct. 14, 1941.

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2,258,734

PEG FOR ATHLETIC SHOES

Filed June 22, 1939



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UNITED STATES PATENT OFFICE

2,258,734

PEG FOR ATHLETIC SHOES

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Detroit, Mich.

Application June 22, 1939, Serial No. 280,648

4 Claims. (Cl. 36—59)

This invention relates to shoes for athletic purposes and has for its primary object to provide improved pegs or cleats therefor, and improved means for anchoring the pegs and cleats in a manner such that the presence thereof enhances, rather than embarrasses, movement of the athlete. This invention is similar, in some respects, to my co-pending application Serial No. 270,613, filed April 28, 1939.

The main object of this invention is similar to that of the co-pending application above referred to in that it relates to the provision of pegs or cleats on athletic shoes and aims to reduce the hazard resulting from the presence of such pegs, both as to the wearer or others contacted thereby. In this respect a metal peg having an elastic sheath is provided.

Another object is to provide an athletic shoe having a sole composed of fore and heel portions connected by a shank, the fore and heel portions having a bendable plate imbedded therein and rendering them less flexible than normally, and the shank having a plurality of slits therein rendering it highly flexible in one direction of bending without materially altering its flexibility in the other direction. In this respect the invention teaches alternative bendable plate constructions. According to the invention the bendable plate may be formed of a single piece of comparatively thin sheet metal having apertures for the reception of peg anchoring elements, it may be of non-corrosive plastic material reinforced by imbedded metal strips or imbedded cord-like material, or it may be of sheet metal sections having complementary bifurcations of such a substantial length that the joint between the section permits lengthwise extension without weakening the plate noticeably on any single transverse line.

Another object is to provide interengaging elements clamping a portion of the sole and the bendable plate in interposed relation therebetween and having means for removably anchoring pegs thereto. In this respect the invention provides two disc like elements having interengaging screw-threaded portions for drawing the two discs together. One element engages the bendable plate imbedded in the sole, the other element engages the outside surface of the sole, and the peg has a screwthreaded stem which interengages with a screwthreaded portion of one of said elements.

Another object is to provide a disc like element of the character above referred to having a portion shaped to coact with the walls of sim-

ilarly shaped apertures in the bendable plate to prevent rotation of the element.

Another object is to provide a disc like element of the character above referred to having 5 prongs struck therefrom and imbedded in the sole to prevent rotation thereof. In this respect a more specific object is to provide the pegs with yielding projections adapted to engage in the apertures formed by striking the prongs inwardly to prevent accidental rotation of the pegs which are screwthreaded into the anchoring elements.

Another object is to provide a peg comprising a metal core member having anchoring means, a base portion, a post adapted to penetrate the 15 ground, and an elastic sheath around the base portion and post, and secured with respect to the base portion only. To this end the base portion is copper coated in order that the sheath, which is of rubber or the equivalent, will be surface bonded thereto by vulcanizing the rubber.

Another object is to provide a peg which is reinforced to resist wear and destruction through rough usage, an example of said rough usage being use on frozen ground as commonly occurs 25 in football games. Alternative reinforcing means are contemplated according to the invention which discloses a metal washer-like element disposed at the extremity of the elastic sheath or imbedded in the elastic sheath, unsecured with respect to the metal post, or a layer of cord-like material impregnated with rubber and constituting a wear resistant surface.

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 sole equipped with pegs,

Fig. 2 is a longitudinal section of the sole,

Fig. 3 is a plan of a modified bendable plate construction,

Fig. 4 is a fragmental section illustrating a metal strip reinforcement in the plate shown in Fig. 3,

Fig. 5 is a fragmental section, similar to Fig. 4, illustrating a cord-like reinforcement as an alternative,

Fig. 6 is a plan of a sectional bendable plate,

Fig. 7 is a section illustrating a peg attached to the sole,

Fig. 8 is a section of a peg illustrating an alternative arrangement of the reinforcing element,

Fig. 9 is a section illustrating an alternative 55 peg anchoring means,

Fig. 10 is a section illustrating a wear resistant element applied to the peg.

Fig. 11 is a section illustrating an alternative anchoring means,

Fig. 12 is a view illustrating the peg anchoring means of Fig. 11,

Fig. 13 is a section taken on the line 13—13 of Fig. 12,

Fig. 14 is a section of the peg shown in Fig. 11,

Fig. 15 is a plan of one of the peg anchoring elements of Fig. 11, and

Fig. 16 is a plan of the peg.

Referring to Figs. 1 and 2, 1a designates a sole having a fore part 1 and a heel part 2 connected by a shank 3. The shank 3 has a plurality of transverse slits 4 rendering it highly flexible in one direction of bending, without noticeably affecting its flexibility in the other direction. Secured to the fore part 1 is an outer sole 5, and secured to the heel portion 2 is an outer sole 6. Resting on the fore part 1 of the sole is a thin metal plate 7 and resting on the heel portion 2 is a thin metal plate 8, both plates being covered by an insole 9.

The plates 7 and 8 provide anchorage for pegs or cleats in a manner hereinafter described, but their presence regardless of this purpose provides fore and heel portions which, although capable of bending, have less flexibility than normally is the case. The fore part and heel part which are comparatively stiff, in combination with the shank portion 3 which is highly flexible, provide a sole which is comfortable to an athlete, and which enhances, rather than embarrasses, movement of the feet.

As shown in Fig. 2, the bendable plate may be formed of a plastic which is non-corrosive under the conditions expected during use of a shoe. In this case, the sheet 10 has metal strips 11 imbedded therein to provide the desired degree of flexibility. As a further alternative, cord-like elements 12 may be imbedded in the sheet 10a to comprise the sole reinforcing means therefor, or they may, if desired, be used in conjunction with strips such as shown in Fig. 4.

In Fig. 6, the bendable plate is shown as formed in two sections 13 and 14 having complementary bifurcations 15 providing a plurality of juxtaposed fingers. The plate when so constructed is capable of lengthwise extension and is of substantially constant flexibility throughout its entire length.

Fig. 7 illustrates in detail the attachment of any one of the pegs 16 to the plates 7 or 8. As shown, a disc-like element 17 bears on the plate 7 or 8 and has an angular portion 18 extending into a similarly shaped opening 19 in the plate to prevent rotation of the element 17. An internally threaded stem 20 on the element 17 receives a screwthreaded stem 21, and integral with the stem 21 is a base portion 22 with a post 23 projecting outwardly therefrom. Surrounding the base 22 and the post 23 is an elastic sheath 24 having a metal ring or washer-like element 25 imbedded therein.

The base portion 22 is preferably copper coated so that when the sheath 24, which is formed of rubber, is vulcanized therearound, it will adhere thereto. The rubber 24 and the reinforcing ring 25 are unsecured with respect to the post 23 so that when the peg is placed in contact with the ground the sheath may be compressed to expose

the peg. Thus, the post 23 penetrates the ground, while the sheath merely presses against the ground.

Fig. 8 illustrates a metal ring or washer-like element 25a secured to the outer extremity of the elastic sheath 24a, unsecured with respect to the post 23a. The presence of the rings 24 and 24a, either imbedded or exposed, increases the useful life of the rubber sheath.

As shown in Fig. 9, the screwthreaded stem 17 and the anchoring element 17 may be dispensed with, to provide a less expensive construction, by the provision of rivet-like arms 26 on the metal peg core 27. The arms 26 extend through the sole members 28 and are bent over into engagement with the bendable plate 29.

In Fig. 10 there is shown a peg having a metal core with an encasing layer 31 of rubber. On the outer extremity of the rubber 31 is a layer 32 composed of rubber impregnated cord-like material which constitutes a wear resistant surface.

In Figs. 11 to 16 there is shown a construction embodying a disc like element 33 having an internally and externally threaded stem 34 integral therewith. The stem 33 projects through a bendable plate 35 and the sole members 36, and is held against rotation by an angular portion 37 which engages the walls of a similarly shaped opening 38 in the plate 35. A disc like element 39 has an internally threaded stem 40 screwed onto the external threads of the stem 33, and has prongs 41 struck inwardly therefrom after it is screwed into place to hold it against removal.

A peg having a threaded metal stem 42 and an elastic sheath 43 is placed with its stem engaging the internal threads of the stem 33. Integral with the sheath 43 are projections 44 which engage the apertures 45 formed by striking the prongs 41 inwardly, and function to yieldingly oppose removal of the pegs.

What is claimed is:

1. A peg comprising a metal element having anchoring means and a post, an elastic sheath around said post, and a reinforcing element secured to the sheath and unsecured with respect to the post, said reinforcing element having an opening through which said post is adapted to project when the sheath is compressed.

2. A peg comprising a metal element having anchoring means and a post, an elastic sheath around said post, and a reinforcing element secured to the sheath and unsecured with respect to the post, said reinforcing element comprising a metal washer on the outer extremity of said sheath.

3. A peg comprising a metal element having anchoring means and a post, an elastic sheath around said post, and a reinforcing element secured to the sheath and unsecured with respect to the post, said reinforcing element comprising a metal washer imbedded in the elastic material.

4. A peg comprising a metal element having anchoring means and a post, an elastic sheath around said post, and a reinforcing element secured to the sheath and unsecured with respect to the post, said reinforcing element comprising a layer of wear resistant material at the extremity of said sheath, said reinforcing element having an opening through which said post is adapted to project when the sheath is compressed.

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