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GOLF SHOE CLEAT
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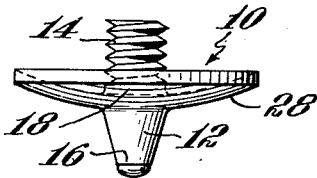


Fig. 1

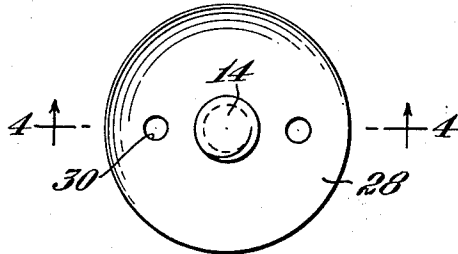


Fig. 2

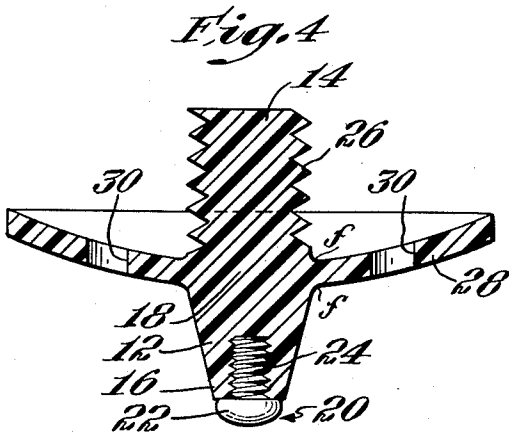


Fig. 4

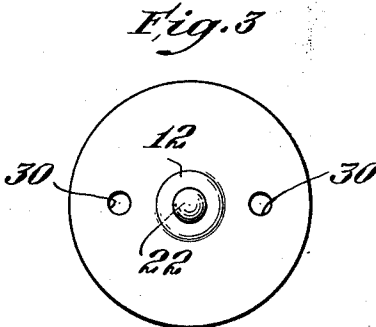


Fig. 3

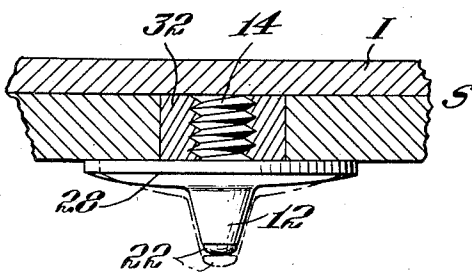


Fig. 6

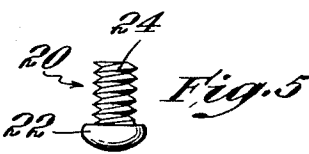


Fig. 5

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GOLF SHOE CLEAT

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5 Claims. (Cl. 36—59)

This invention relates to traction cleats for shoes and more especially to improvements in cleats attachable to the bottoms of shoes worn by golfers.

The principal objects of the invention are to provide a cleat which has some resilience or flexibility so as to cushion the feet when walking on hard surfaces and to eliminate the unpleasant jar which is transmitted to the wearer by the conventional metal cleats and yet which will be sufficiently stiff to penetrate the turf of the golf course and will withstand hard wear and usage. Other objects are to provide a cleat which is very light weight as compared to metal cleats thereby materially lightening the overall weight of the shoe to which they are applied and is a good insulator. Still further objects are to provide a cleat of such construction that when once attached to the shoe bottom it will resist detachment and which may be made by inexpensive methods and of comparatively inexpensive materials.

As herein illustrated, the cleat is in the form of a spur having a tip for tractive engagement with the ground and a root with which is integrally formed attaching means for fastening the cleat to the shoe bottom. A feature of the cleat of novel import that it is flexible, that is, its tip will yield laterally, appreciably with respect to its root. A further characteristic of the spur is that it has a rigid, hard cap at its tip incorporated in the substance of the cleat for resisting wear and furnishing a hard ground penetrating tip for the cleat. A further characteristic is that the body of the cleat is comprised of an insulative material or substance, for example a moldable plastic and the cap incorporated in the tip is a rust resistant metal. As illustrated, the attaching means is a threaded shank formed integral with the spur and is also comprised of plastic. A still further characteristic is that the cleat has a radial flange formed integral with it located substantially at the junction of the root of the spur and the attaching shank, the flange being concave at the side of the attaching shank and being appreciably elastic so that when brought up hard against the shoe bottom it functions as a lock washer preventing the cleat from loosening.

The invention will now be described in greater detail with reference to the accompanying drawings wherein:

Fig. 1 is a side elevation of the cleat;

Fig. 2 is a plan view of the cleat shown in Fig. 1, looking down at the top;

Fig. 3 is a plan view of the cleat shown in Fig. 1, looking upwardly from the bottom;

Fig. 4 is a diametrical section through the cleat on line 4—4 of Fig. 2 to larger scale;

Fig. 5 is a plan view of the hardened metal cap removed from the cleat; and

Fig. 6 is a vertical section through a portion of the bottom of a shoe showing the cleat attached thereto and illustrating in dot and dash lines the concavity of the flange before it is turned up hard against the bottom of the shoe.

Referring to the drawings, Fig. 1, the cleat 10 has a conically shaped spur body 12 with which there is integrally formed an attaching shank 14. The small end 16 of the spur 12 constitutes the ground engaging tip and the larger end 18 constituting the root. The small or tip end of the spur 12 has applied thereto a wear resistant cap 20. As illustrated in Fig. 5, the cap has a semi-spherical head 22 and a threaded shank 24 which is embedded within the substance of the body of the spur as shown in Fig. 4. The diameter of the head is

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substantially equal to that of the tip end of the spur, while the shank 24 of the cap, as shown, is quite short being confined to the lower part of the spur, it may extend nearly or all the way up to and with the attaching shank 14.

The spur and shank are comprised of a moldable material preferably one of the wear resistant plastics now available which is resistant to moisture and is a good insulator, for example the substance of the cleat may be nylon. The cap 20 is comprised of a hardenable metal such as steel, which is highly wear resistant and rust resistant. The shank 24 of the cap may be molded into the substance of the spur during the forming or molding operation in which the spur is made or may be forced or threaded into a preformed opening formed in the end of the spur.

The attaching shank 14 has threads 26 for attaching the spur to the bottom of the shoe which has been previously prepared with a female grommet correspondingly threaded to receive it as illustrated in Fig. 6.

In order to provide a firm support for the spur and to securely lock it in place so that it does not tend to unscrew itself in use, a radial flange 28 is formed integral with the body of the spur at the junction of its root 18 with the attaching shank 14. The flange 28 is made concave at the side of the attaching shank 14 and has diametrically arranged apertures 30 therein for receiving a tool to screw the cleat in place. Fillets *f* are provided at opposite sides of the flange at its junction with the spur and shank to eliminate any point at which cracking might start.

The cleat is attached to a shoe bottom, a fragmentary portion of which is shown in Fig. 6 as including an outsole S and an insole I, by screwing the attaching shank 14 into a grommet 32 which is correspondingly threaded and is set into the outsole and made fast thereto by suitable means. As the cleat is screwed into place the peripheral outer edge of the concave flange 28 comes into engagement with the bottom of the outsole as shown in Fig. 6 before the shank is completely seated in the grommet so that the cleat before it is completely tightened up occupies a position such as is shown in dot and dash lines. Further rotation of the cleat tends to deform or flatten out the flange 28 so that the concavity is substantially eliminated and the flange rests flat against the bottom side of the sole as shown in full lines. The resilience of the flange functions very much like a lock washer and hence resists any tendency for the cleat to unscrew itself in use. By this simple expedient, the cleat may positively be attached without danger of its becoming detached through use and without having to use lock washers or as in so many metal cleats of having to roughen the flange, cut serrations therein or form resilient tongues or teeth thereon to lock the cleat in place.

The important characteristics of the cleat as described above are that the plastic spur is flexible so that when the cleat is applied to the shoe as the wearer is walking on a hard surface it will yield with respect to its root sufficiently to cushion the jar which is inherent in metal cleats and which is so unpleasant to the wearer. While the spur is yieldable to the extent of cushioning the jar it is stiff enough to penetrate the turf of the golf course and to provide all the necessary traction required under the most severe conditions. A further important advantage of the cleat is that being made of a moldable plastic it can be made cheaply and yet it will have wear resistant characteristics far exceeding the conventional metal cleat. The conventional metal cleat is made of a comparatively soft metal because of the necessity of machining the spur and hence the tip is not of very high wear resistance. It would be too expensive to harden the tips after the machining operation and hence this is not ordinarily done. As illustrated herein, however, a very hard wear resistant and rust resistant cap may be provided without having to harden the rest of the cleat since the cap is merely incorporated in the substance in the end of the spur and the temperature of the molding operation is not so high as to spoil the hardened cap after it has been tempered to give it suitable wear resistance.

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A further advantage of the cleat as formed of plastic resides in the fact that it is an insulator and hence eliminates grounding the person wearing the shoes to which the cleats are attached in the case of a lightning storm. Still another advantage is that the plastic is susceptible of receiving coloring material so that the cleats may be made up in various colors and thus made attractive for the purpose of sale.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. A traction cleat for attachment to the bottom of a shoe including a spur having a ground engaging tip and a root, and an attaching shank integral with the root thereof characterized in that the spur is comprised of an elastic substance such that will yield laterally as a cantilever with respect to its root and there is a substantially unyielding wear resistant cap fast to the tip of the spur.

2. A traction cleat according to claim 1, wherein the substance of the cleat is a solidified plastic and the cap is a hardened steel.

3. A traction cleat according to claim 1, wherein a deformable flange is located substantially at the junction of the root of the spur with the shank, which is concave at the side of the shank.

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4. A traction cleat according to claim 1, wherein a flange is located substantially at the junction of the root of the spur with the shank, which is concave at the side of the shank and is comprised of a deformable plastic.

5. A traction cleat for a shoe bottom, comprising a spur having a ground engaging tip and a root, a deformable plastic flange originating at the root of the spur and extending radially from the axis thereof and a shank extending from the flange at the side opposite the spur in axial alignment with the spur for attaching the cleat to the shoe bottom, said flange being concave at the side from which stems the attaching shank.

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