Oct. 1, 1968 H. A. McCARNEY 3,403,461

FOOTBALL CLEAT

Filed Nov. 8, 1967

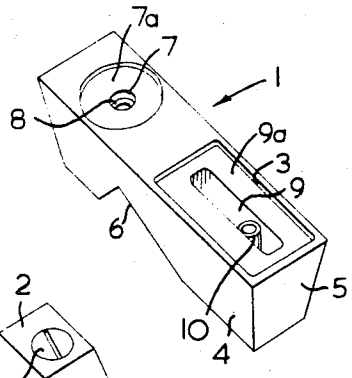


FIG. 1

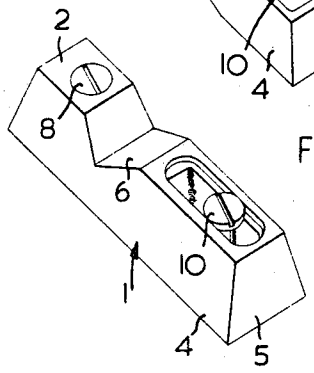


FIG. 2

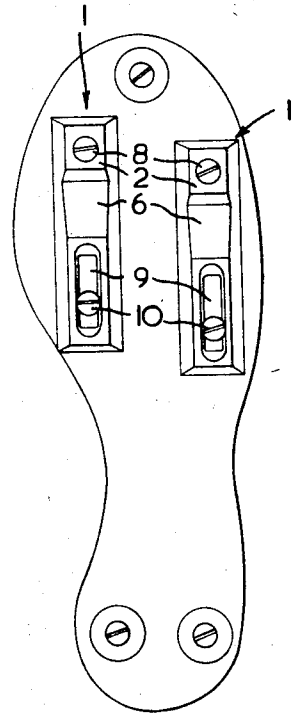


FIG. 3

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FOOTBALL CLEAT

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ABSTRACT OF THE DISCLOSURE

A mud cleat capable of being releasably fixedly attached to the sole of a football boot by means of the usual cleat posts which cleat is in the form of a bar having a pair of longitudinally spaced recesses in the boot engaging surface dimensioned to accommodate a pair of longitudinally adjacent posts on the sole of the boot, each recess including releasable locking means adapted to retain the cleat on the sole of the boot by means of said post. The bar is of a generally trapezoidal shape with the side surfaces taper for the boot engaging surface to the ground engaging surface and preferably also the end surfaces have similar taper which shape reduces the tendency of the mud to attach to the cleat during play.

The present invention relates to an improved mud cleat for attachment to a football boot and, in particular, relates to a mud cleat in the form of a bar for attachment to a football boot by means of the posts normally present in the sole of the boot for attachment to the boot of cleats used under fine weather conditions.

Conventional football boots normally have a series of spaced posts extending through the sole and heel of the boot which posts are either removable from the boot or are integral with the sole of the boot. The posts are externally threaded for attachment of the individual internally threaded cleats to the boot. Thus, the ordinary football rubber or nylon cleats are internally threaded and are attached to the externally threaded posts on the soles and heels of the football boot and usually tightened by means of a wrench once threaded onto the posts and rest adjacent to the sole of the boot.

For use in mud conditions the normal mud football cleat is usually an extra long fine weather cleat which it is believed gives them extra holding power to the ground and thus prevents the football player from slipping.

However while such cleats are superior for mud conditions to the normal shorter fine weather cleats they are generally unsatisfactory when the football player wishes to effect a sudden change of direction and in particular to cut to the right or left during play as the rounded mud cleats do not effectively push against the mud which readily passes through the spaces between the cleats on the sole of the boot with the result that the football player frequently slips when effecting such motion.

It has been recognized that cleats in the form of bars would provide such improved action and attempts have been made to substitute each individual cleat on the post by a bar of particular configuration. However, it has been found in practice that such bars under the stresses applied during play tend to pivot on the post and then lose their effectiveness and as such bars of this type such as are proposed in United States Patent No. 1,355,827 have not found any substantial utility.

Further it is known as is shown for instance in United States Patents Nos. 983,393; 2,367,736; 2,888,756 and 1,118,920 to attach bar cleats directly to the sole and heel of the boot and while this eliminates the twisting of the bar during play it is necessary to either remove the normal posts from the sole and heel of the boot which is a time-consuming and relatively difficult business in boots with removable posts and impossible with boots having integral

posts, or to have two pairs of boots one for normal conditions including the posts to which the cleats for normal weather conditions are removably attached and a second pair of boots in which the mud cleats in the form of bars are permanently attached. For this reason, mud cleats in the form of bars have not gained general use and it is conventional at the present time for football players to have a single pair of boots containing the post in which a single short cleat for normal weather conditions or a longer cleat for mud conditions, is attached to each post.

The present invention overcomes the above disadvantages of cleats in the form of bars for mud conditions and provides a mud cleat in the form of a bar which is adapted for releasably fixed attachment to the soles of football boots and desirably the heels of the football boots by means of the conventional posts in the football boots which cleats can be removed from the football boots when desired for attachment of fine weather cleats to the posts for normal weather conditions.

According to the present invention, therefore, there is provided a mud cleat for attachment to a football boot by means of the posts normally present therein comprising a bar having a boot engaging surface, a ground engaging surface and side surfaces which taper from the boot engaging surface to the ground engaging surface such that the area of the boot engaging surface is greater than the area of the ground engaging surface, said boot engaging surface including a pair of longitudinally spaced recesses dimensioned to accommodate a pair of longitudinally adjacent posts on said boot said recesses including releasable locking means adapted to retain said cleat on said boot by means of said posts.

The present invention also includes a football boot having a pair of longitudinally disposed laterally spaced cleats as set forth above on the sole portion thereof and desirably a transversely disposed cleat as set forth above on the heel portion thereof.

Suitably, the releasable locking means adapted to retain the cleat on the boot by means of the posts comprises an internally threaded screw means in each of the recesses for cooperation with the external thread on the posts and for ease of manipulation of said screw means the recesses in the bar extend through the bar to the ground engaging surface so that the screw means can be inserted into the bar from the ground engaging surface which is recessed to accommodate the head of the screw means. Further, to allow for variations of distance and attitude between adjacent posts such as occurs between different boots and occurs during the wearing of the boots at least one of the recesses is in the form of a longitudinally extending slot, the locking means e.g. the screw means being arranged to fixedly retain the post in any desired position in this slot.

In order to provide a suitable mud cleat in which the tendency of the mud to stick to the boot and cleat is at a minimum, and at the same time provide maximum traction for the football player and, in particular, his ability to cut during playing, the bar suitably takes a generally trapezoidal form in which the side surfaces of the bar generally taper from the boot engaging surface to the ground engaging surface such that the boot engaging surface has a larger area than the ground engaging surface. In practice the taper in the unattached cleat is slightly concave which concavity is removed automatically as the cleat is tightened in position on the boot. The bar operates during cutting by pushing against the mud along its elongated lower surface, i.e., its longitudinal edge and preferably the end faces of the bar are substantially perpendicular to the side surfaces which provides for the football player to apply a greater push to the cleat than is possible with normal circular cleats. The end

surfaces of the bar desirably taper for the boot engaging to the ground engaging surface in a similar manner to the side surfaces to reduce the tendency of the mud to stick thereto. The bars forming the cleats of the present invention have generally the same height as fine weather cleats. Further, the bars are desirably provided on their ground engaging surface with a generally V-shaped notch which allows the player when starting from a crouched position in which the heel of his boot and thus the rear end of the cleat on the boot is raised from the ground to obtain good traction, the front end of the bar cleat from the V-notch acting as an individual mud cleat. Thus, the player, e.g., the lineman can apply a substantial push to the front portion of the cleat, the V-notch providing the rear pushing edge of the cleat.

In order to reduce the tendency of the mud to stick to the cleats and the football boot the cleat is, in a preferred embodiment of the present invention made from a hydrophobic resin, suitably a hydrophobic thermoplastic resin such as a hydrocarbon polyolefinic resin and, in particular, a polyalkylene resin such as polyethylene, polypropylene or polybutylene and desirably polypropylene. The present invention will be further illustrated by the accompanying drawings in which:

FIGURE 1 is a part perspective view of a mud cleat according to one embodiment of the present invention;

FIGURE 2 is a bottom perspective view of the cleat of FIGURE 1; and

FIGURE 3 is a view of the sole of a football boot containing the cleat according to FIGURE 1.

Referring to the drawings, the cleat comprises a bar **1** formed of a hydrophobic resin and, in particular, polypropylene having a ground engaging surface **2** and a boot engaging surface **3**. The bar is of generally trapezoidal shape, the side surfaces **4** tapering from the boot engaging surface **3** to the ground engaging surface **2**. The end surfaces **5** are generally perpendicular to the side surfaces but taper from the surface **3** to the surface **2** in a similar manner in the side surfaces **4**.

The taper of the side surfaces **4** and the end surfaces **5** are slightly concave due to moulding, which concavity is removed automatically when the cleat is tightened into place on the sole of the boot (as in FIG. 3). The ground engaging surface **2** is provided with a V-notch **6** which thus provides a transverse edge to allow push to be applied to the front portion of the cleat without slipping, when the player is going forward from a crouched position in which his boot and thus the rear end of the cleat is raised from the ground. Extending through the bar **1** is a hole **7** which accommodates an internally threaded screw **8** and a longitudinal slot **9** which has slidable therein a similar internally threaded screw **10**. The heads of the screws **8** and **10** fit flush with the surface **2**. The areas **7***a* and **9***a* around the holes **7** and slot **9** respectively are recessed to accommodate the units which hold the posts to the boot and the lugs which grip the normal round fine weather cleat.

As shown in FIGURE 3, for attachment to the football boot the cleats which are used for normal weather conditions are removed from the posts on the sole of the football boots and the cleats of FIGURE 1 attached thereto longitudinally of the sole of the boot, the screw **8** being tightened onto its post, the screw **10** being adjusted in the slot **9** to locate its post and then being subsequently tightened. The post at the toe of the shoe and the post on the heel of the shoe are fitted with normal fine weather cleats used and while it is possible to substitute the two cleats on the heel of the boot by the cleat of FIGURE 1 football players generally prefer to maintain normal fine weather cleats on the heel of the boot as this, they consider, gives them better balance during play. It will be readily seen from FIGURE 3 that the longitudinal cleats on the sole of the shoe are offset due to the positioning of the posts which, in effect, lengthens the effective edge of the cleats being pushed against the mud when the football player is cutting.

It will be readily seen, therefore, that the present invention provides a cleat which is admirably suitable for mud conditions, which is firmly attached to the boot and does not twist during play, is adaptable to be fitted to a normal boot using its conventional posts and does not collect appreciable amounts of mud, i.e., does not clog with mud during play.

While the cleat of the present invention has application to football boots having posts on the soles and heels thereof and particular application to such boots in which the posts are integral with the boot, it may also be used on boots which do not have posts such as are used in Europe by attaching to bolts or the like driven through the soles of the boot.

I claim:

1. A mud cleat for attachment to a football boot by means of the posts normally present therein comprising a bar having a boot engaging surface, a ground engaging surface and side and end surfaces which generally taper from the boot engaging surface to the ground engaging surface such that the area of the boot engaging surface is greater than that of the ground engaging surface, said boot engaging surface including a pair of longitudinally aligned spaced apertures dimensioned to accommodate a pair of longitudinally spaced posts on said boot, said apertures including releasable locking means adapted to retain said cleat on said boot by means of said posts, at least one of said apertures is in the form of a longitudinal slot to provide adjustability, said locking means being arranged to fixedly retain the post in any desired position in the slot.

2. A cleat as claimed in claim **1** in which the apertures extend through said bar to said ground engaging surface and said locking means comprises internally threaded screw means in each recess for cooperation with the externally threaded portion of the posts.

3. A cleat as claimed in claim **1** in which the end faces of said bar are substantially perpendicular to the side surfaces and generally taper from the boot engaging surface to the ground engaging surface.

4. A cleat as claimed in claim **1** in which the bar is formed from a solid resilient hydrophobic natural or synthetic resin.

5. A cleat as claimed in claim **1** in which the bar is formed from a solid resilient hydrophobic polyolefin hydrocarbon.

6. A cleat as claimed in claim **1** in which the bar is formed from polypropylene, polyethylene or polybutylene.

7. A football boot having a pair of longitudinally disposed laterally spaced cleats as claimed in claim **1** on the sole portion thereof.

8. A football boot having a pair of longitudinally disposed laterally spaced cleats as claimed in claim **1** on the sole portion thereof and a transversely disposed cleat on the heel portion thereof.

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