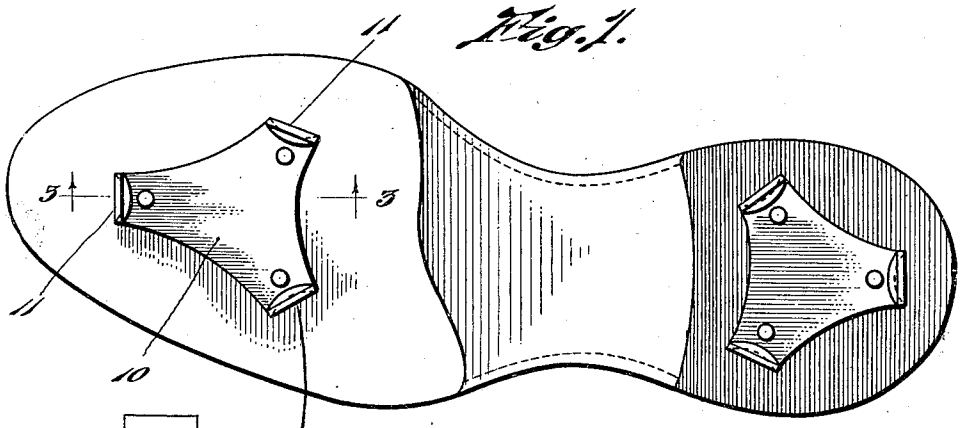
Jan. 14, 1930. E. A. RICHARDSON 1,743,285

CLEAT

Filed Aug. 3, 1929

Fig. 1.



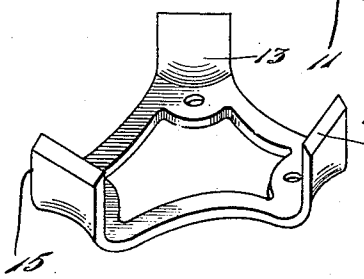


Fig. 6.

Fig. 2.

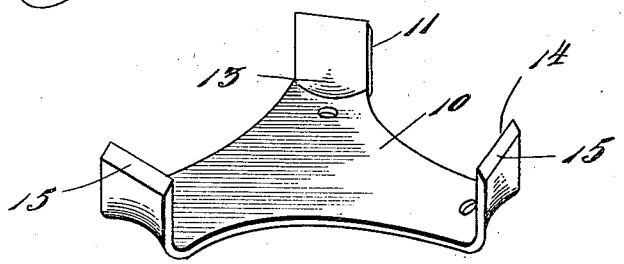


Fig. 4.

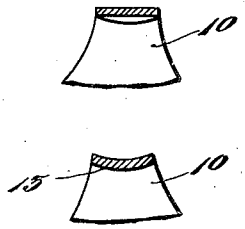


Fig. 5.

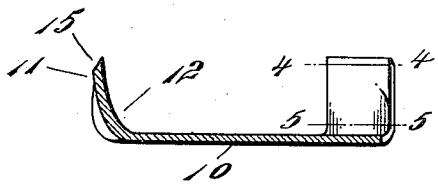


Fig. 3.

INVENTOR.
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Patented Jan. 14, 1930

1,743,285

UNITED STATES PATENT OFFICE

EDWARD A. RICHARDSON, OF WEST MANSFIELD, MASSACHUSETTS

CLEAT

Application filed August 3, 1929. Serial No. 383,329.

This invention relates to an improved construction of cleat for use on shoes worn more particularly by contestants in athletic sports; and is in an improvement on my prior Patent No. 1,617,418, dated Feb. 15, 1927; the object of this invention is to provide a cleat with an improved form or shape of blade which is designed to offer reduced resistance to penetrating the ground and also serves to reduce the liability of clogging or the gathering of soil between a group of blades.

The principal object of the invention is to so form the blade that it will offer great resistance to bending while in use so that the cleat as a whole may be formed from a very thin plate, to reduce to a minimum the weight of the cleat.

A further object of the invention is to prevent the clogging and gathering of soil in the cleat by forming the base plate of the cleat without a center opening therethru and positioning the rivet openings so that the rivet head extends to the blade.

With these and other objects in view, the invention consists of certain novel features of construction, as will be more fully described, and particularly pointed out in the appended claims.

In the accompanying drawings:

Fig. 1 is a view showing the bottom portion of a shoe with my improved cleat mounted thereon.

Fig. 2 is a perspective view showing the cleat removed from the shoe.

Fig. 3 is a section on the line 3—3 of Fig. 1, showing the curve at the bend where the blade is turned outwardly from the base plate.

Fig. 4 is a section on the line 4—4 of Fig. 3, showing the outer edge of the blade as being formed straight across to facilitate its entering the soil.

Fig. 5 is a section on the line 5—5 of Fig. 3, showing the curved lower portion of the blade which is formed to strengthen the blade against bending and to also prevent the gathering and clogging of soil against the cleat blade.

Fig. 6 is a perspective view showing the novel blade applied to cleats having a central opening therein.

It is found in the practical use of cleats for running shoes and the like, of advantage to form the cleat as light as possible also to form the cleat in such shape that it will not gather or become clogged with soil and it is also of advantage to so form the blades of the cleat that they will enter the soil with reduced resistance. To accomplish these important results in the formation of a cleat for this purpose, I preferably employ very thin sheet stock and form the blade concavo-convex for a portion of its length beginning at its base so as to strengthen the blade against bending and to also prevent the clogging of soil about the blades; also where the cleat is formed with a plurality of blades, to in some cases form the body or base plate of the cleat of such thin material, that I obtain the desired reduction in weight without cutting out the center portion of this base plate; and the following is a detailed description of the present embodiment of my invention and showing one construction of cleat by which these advantageous results may be accomplished.

With reference to the drawings, 10 designates the base portion of the cleat which is here indicated as being formed from a thin piece of sheet stock in somewhat of a triangular shape, the ends of the triangle being provided with extending portions each of which is turned outwardly to form a chisel-shaped blade 11; a relatively long curve is formed where the stock is folded outwardly as at 12, and this curve extends upwardly for a substantial portion of the length of the blade particularly at the middle portion of the blade, the curve being greater at the middle portion of the blade and its arc being reduced gradually towards the opposite edges thereof. By providing a blade which is concavo-

convex at the bend for a substantial portion of its length, the convex portion 13 of each blade faces inwardly toward other members of the group. In order that the blade may offer reduced resistance to entering the soil while in use, I have formed the outer edge portion 14 thereof in a straight line and have beveled the same back as at 15. By forming the arc at the bend of the blade on a long radius I reduce the rupturing effect or weakening of the stock at the fold; also this long radius serves to offer great resistance to strains on the blades when the cleats are in use; also the concavo-convex form of the blade at its lower portion again serves to stiffen the stock and prevent its bending at this point.

By my improved construction of cleat and formation of the blades thereon, I am enabled to employ a much lighter gage of sheet metal than has heretofore been possible and still obtain the desired strength of the blades and by employing this lighter gage of material, in addition to making the blades thinner at their entering edge to reduce their entering friction without much grinding, I also am enabled to use a plate which is not cut out at its center portion.

In some instances, during play, particularly when running on damp ground the soil becomes clogged or bound between the series of cleats thereby materially increasing the weight of the shoe and also materially reducing the effective holding power of the cleats. To obviate this disadvantage and reduce this objectionable feature to the minimum, I have rounded the working surface of the chisel-like blade of the cleat at its base portion so that the soil will have a tendency to break away from the cleat and not cling nor be retained to such an extent between them permitting the cleats to automatically clear themselves which in practice is found to be of great advantage; the inward projection of the rounded surface also enables me to position the cleat rivet holes so that the head of the rivet is adjacent the blade, thus preventing accumulation of soil between the rivet head and the blade.

My improved cleat is very light in weight, offers great resistance to becoming clogged with soil and is so shaped that the blades will enter the ground with the least possible resistance commensurate with the holding power required of a cleat of this character.

The foregoing description is directed solely towards the construction illustrated, but I desire it to be understood that I reserve the privilege of resorting to all the mechanical changes to which the device is susceptible, the invention being defined and limited only by the terms of the appended claims.

I claim:

1. A cleat for sport shoes having a base portion with a chisel-shaped blade, said blade being concavo-convex for a portion of its length beginning at its base and said blade being straight across its outer or soil entering edge.

2. A cleat for sport shoes having a base portion with a chisel-shaped blade folded outwardly from the margin of the base, the blade being concavo-convex at the fold for a portion of its length and straight across on its outer or entering edge.

In testimony whereof I affix my signature.

EDWARD A. RICHARDSON.