Jan. 27, 1959 A. R. HENDRY 2,870,947

SPUR GUARD

Filed March 22, 1955

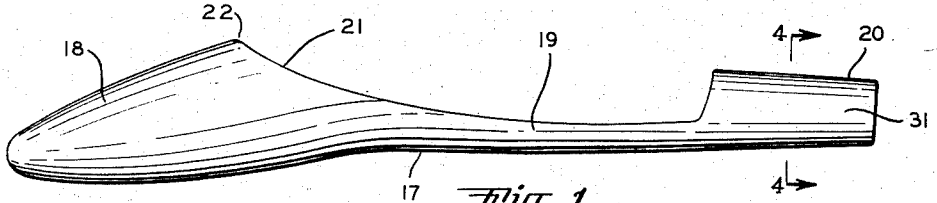


Fig. 1

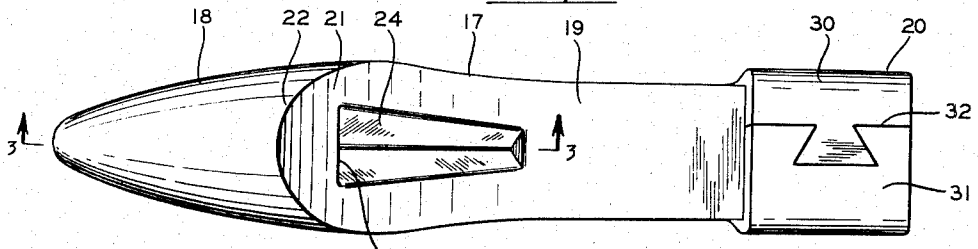


Fig. 2

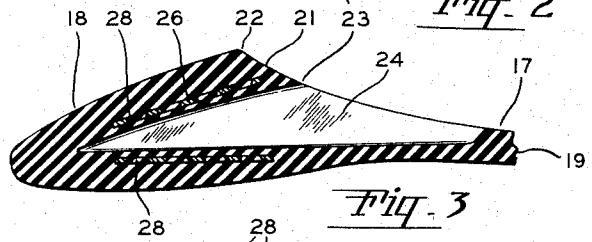


Fig. 3

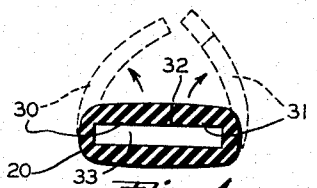


Fig. 4

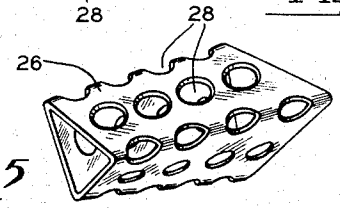


Fig. 5

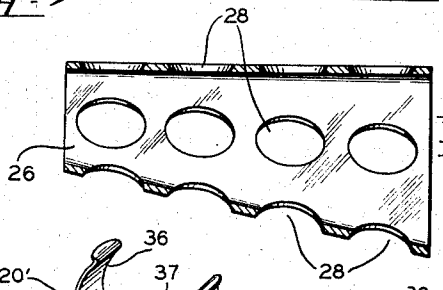


Fig. 6



Fig. 8

Fig. 7

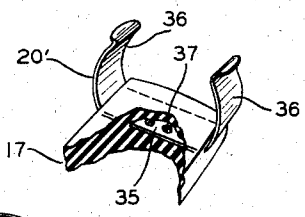


Fig. 10

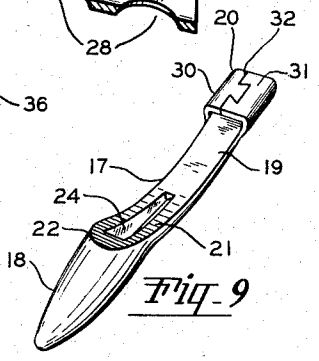


Fig. 9

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SPUR GUARD

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2 Claims. (Cl. 227—27)

This invention relates to an attachment for climbers' spurs for protecting sharp projections thereon against damage when the spurs are not in use.

For climbing wooden poles, linemen use spurs which are strapped to their legs and which have almost needle-sharp projections or prongs thereon adapted to be thrust into the wood fibers of the pole. It is imperative to the lineman's safety that the projections be maintained in a sharp condition, and if allowed to become dull or damaged said projections are apt to tear loose from the wood fibers and cause the lineman to slip. The spurs are removably strapped to a lineman's leg, and when not in use are unavoidably commingled with other equipment, whereby the projections may be rendered dull and unfit for safe use.

An important object of the invention, therefore, is to provide a guard attachment for climbers' spurs for protecting pole engaging projections thereon from damage when said spurs are not in use.

A further object is to provide a guard for climbers' spurs having novel means for enclosing and protecting the sharpened pole engageable projections thereon and having means for holding the guard in raised position on an upper portion of the leg iron of the spur when the spurs are in use.

A still further object is to provide a guard for climbers' spurs having novel means for removably mounting the guards on the spurs.

Additional objects are to provide a spur guard which is simple in structure and which is economical to manufacture.

The spur guard embodying the instant invention is preferably formed by a molding process utilizing a suitable material which is preferably flexible, such as rubber or certain types of plastics. The guard comprises, in general, a body portion having a socket for receiving the sharpened projection of the spur and having mounting means for removably mounting the device on said spur. The socket is embodied in one end of the body portion and is encompassed by a thickened wall portion reinforced with a rigid tube-like member embedded therein. The mounting means is disposed at the opposite end of the body portion and is adapted frictionally to engage the spur and removably attach the guard to the spur. The invention will be better understood and additional objects and advantages will become apparent from the following description taken in connection with the accompanying drawings which illustrate a preferred form of the invention. It is to be understood, however, that the invention may take other forms and that all such modifications and variations within the scope of the appended claims which will occur to persons skilled in the art are included in the invention.

In the drawings:

Figure 1 is a side elevational view of the present spur guard;

Figure 2 is a top plan view;

Figure 3 is a fragmentary sectional view taken on the line 3—3 of Figure 2 and showing in detail the reinforced socket end which receives the sharpened projection of the spur;

Figure 4 is a sectional view taken on the line 4—4 of Figure 1, showing one form of mounting means for attaching the guard on a spur;

Figure 5 is a perspective view of the rigid tube member embedded in the wall portion around the socket;

Figure 6 is a longitudinal sectional view of the tube member;

Figure 7 is a perspective view of a conventional spur, showing in dotted lines a spur guard of the present invention mounted thereon;

Figure 8 is a sectional view of the spur taken on the line 8—8 of Figure 7;

Figure 9 is a perspective view of the present spur guard; and

Figure 10 is a fragmentary perspective view of a modified form of mounting means.

Referring first to Figure 7, there is shown a spur of the type normally used by linemen. Such a spur comprises a shank portion or leg iron **11** terminating at its lower end in a right angular stirrup portion **12** which engages the instep portion of the lineman's shoe when the spurs are strapped to the lineman's leg. The spur has a sharpened projection or prong **13** thereon which extends downwardly and outwardly from the shank and which has a generally triangular shape in cross section as shown in Figure 8. The spur is held on the lineman's leg by a bottom strap **14** which engages his shoe and a top strap, not shown, which engages his leg.

The spur guard of the present invention comprises, in general, a body **17** having a toe or socket end **18**, a stem or shank portion **19**, and mounting means **20**. The socket end **18** is substantially cone-shaped and, as seen in Figure 1, has a rearwardly tapered top wall surface **21** continuous with the top wall surface of the stem **19**, the tapered wall **21** terminating in a corner **22** at its forward end.

The toe end **18** is provided with a socket **24** having a triangular configuration in cross section and extending inwardly from the top surface **21**. The socket **24** is tapered toward its closed end and is of a size readily to receive the sharpened projection **13** of a spur. Embedded in the wall portion around the socket **24** is a rigid, tube-like member **26** which serves to stiffen, reinforce and prevent spreading of the end portion **18** and also to maintain the triangular cross sectional configuration of the recess **24**. Referring specifically to Figures 5 and 6, the stiffening member **26**, which is preferably metal, is tapered from end to end and is triangular in cross section, assuming interior wall dimensions somewhat greater than the wall dimensions desired for the socket **24** whereby, as seen in Figure 3, a thickness of molded material is adapted to be disposed interiorly thereof to embed said insert entirely in the material.

The toe end construction described is accomplished in the molding operation by covering the surface of a core member having the same size and shape as spur **13** with a layer of raw rubber and then fitting the member **26** on the rubber covered core within the mold. In the vulcanizing process the layer of rubber on the core member is bonded to the interior surface of member **26** and integrally united with the main body of rubber stock introduced into the mold which has a cavity shaped to form the desired outside surface contour of the guard. The member **26** has a plurality of apertures **28** with outwardly tapering walls which funnel the surrounding rubber stock through the apertures into contact with the inner layer of rubber under the vulcanizing heat and pressure which causes the rubber to flow into and fill all voids in the mold. Thus the stiffening member

26 is completely embedded in the toe end 18 and the molded material in apertures 28 bridges the material on opposite sides of said member.

One form of mounting means 20 of the device comprises a pair of strap portions 30 and 31, preferably expansive, which may be opened out as shown in dotted lines in Figure 4, and which are adapted to be locked together by a dovetail joint 32, Figure 2. The straps in locked position form a sleeve adapted frictionally to receive and grip the shank 11 of the spur.

To mount the guard on a spur, the strap portions 30 and 31 are opened and the guard is moved relative to the spur to fit the sharpened projection 13 into the socket 24. Thereupon, the strap portions 30 and 31 are fastened together around the shank of the spur by means of the dovetail joint 32 and serve to hold the guard on the spur. The guard may be readily removed from the spur by unlocking the joint 32 and releasing the frictional grip on the spur. It is to be understood that the joint 32 between the two straps 30 and 31 may assume various forms and the invention is not limited to the use of a dovetail joint. If the spur should be dropped on the point of prong 13 the soft end of the guard socket will not be pierced because the tubular reinforcing member 26 will not permit expansion of the socket and also because the upper edge of member 26 lies close to the surface 21 at the lip 23 of the socket and engages the crotch between prong 13 and shank 11 to prevent forcible driving of the prong beyond its normal and intended position in the socket.

The mounting means 20 may comprise a closed sleeve of expansible material without the joint 32 and in such case the guard can be mounted on the spur by expanding the sleeve and moving it over the upper end of shank 11. It is not necessary to remove the guard from the spur when the spur is to be used. The socket may be disengaged from the projection 13 and the guard moved upwardly on the shank 11 to an out-of-the-way position, the guard being held in such position by the frictional engagement of sleeve 20 with the shank 11.

Referring to Figure 10, there is shown an alternative mounting means comprising a metallic clip member 20'. The clip 20' is channel shaped, having a bottom wall 35 and a pair of spring arms 36, and is embedded in the material when the guard is molded to form an integral part thereof. Bottom wall 35 of the clip member has a plurality of apertures 37 which are filled with the molded material during the molding process securely to hold the clip on the guard. This embodiment of mounting means is attached to a spur by clipping the arms 36 on the shank 11, the guard being held either in a protective or out-of-the-way position by frictional engagement of said arms with said shank.

Having now described my invention and in what manner the same may be used, what I claim as new and desire to protect by Letters Patent is:

1. A removable spur guard for a climber's spur of the type having a vertical metal shank with a pointed projection extending downwardly and laterally therefrom at an acute angle thereto, said spur guard comprising a molded flexible rubber body having a lower toe end and an upper shank strip, said toe end having a tapered socket to fit said pointed projection of the spur and a tapered tubular metal reinforcing member molded in said rubber surrounding said socket, one end of said reinforcing member being contained within a lip portion of said socket which engages the crotch of said spur in the acute angle between said pointed projection and metal shank to limit the depth of insertion of said pointed projection into said socket, and the upper end of said shank strip having integral transverse resilient arms arranged to embrace said metal shank of the spur to secure the guard thereto.

2. A removable spur guard for a climber's spur of the type having a vertical metal shank with a pointed projection extending downwardly and laterally therefrom at an acute angle thereto, said spur guard comprising a molded flexible rubber body having a lower toe end and an upper shank strip, said toe end having a tapered socket to fit said pointed projection of the spur and a tapered tubular metal reinforcing member molded in said rubber surrounding said socket, and the upper end of said shank strip having integral transverse resilient arms arranged to embrace said metal shank of the spur to secure the guard thereto, said resilient arms comprising rubber strap portions having interlocking dovetail ends forming a disengageable sleeve to receive said metal shank of the spur.

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