March 17, 1964 G. W. THOMPSON 3,124,919

HEEL SUPPORT FOR HORSES

Filed Nov. 17, 1961

FIG. 1

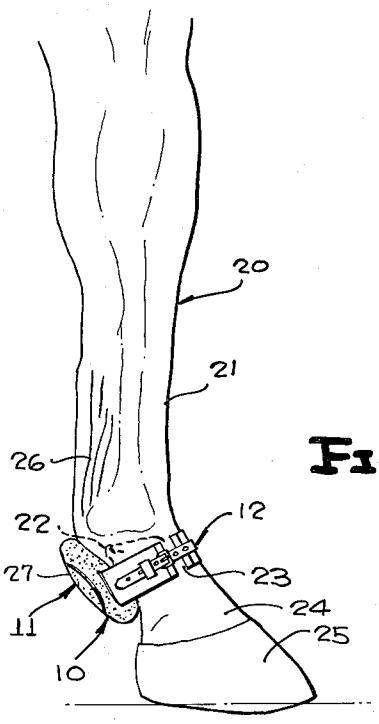



FIG. 2

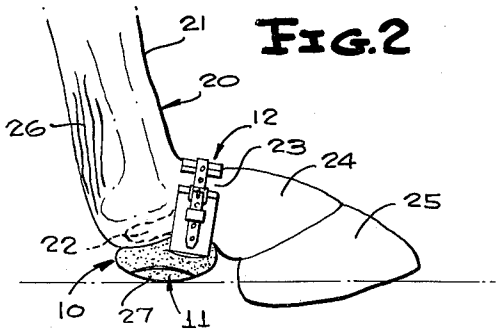



FIG. 6

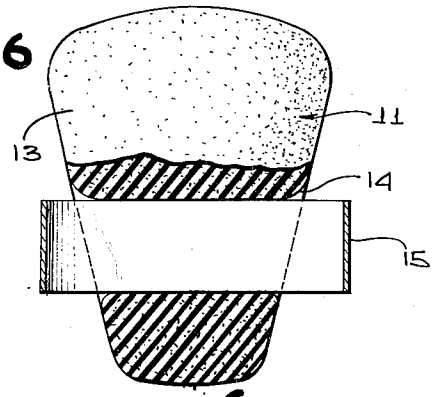



FIG. 3

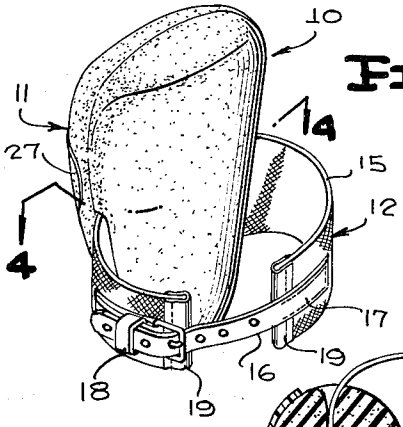



FIG. 5

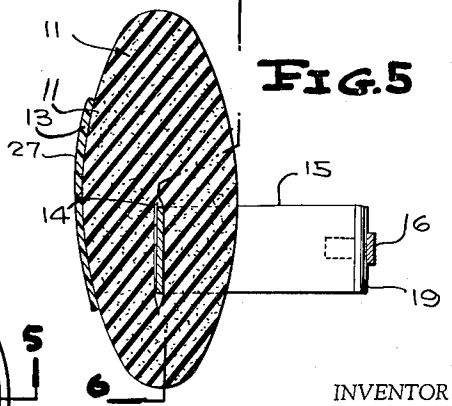
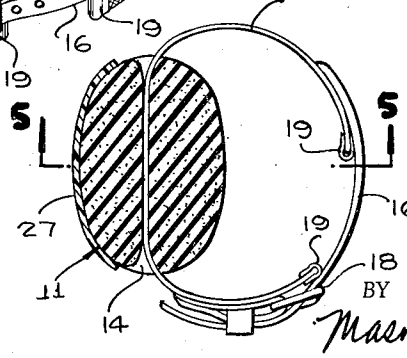



FIG. 4




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# HEEL SUPPORT FOR HORSES

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This invention relates in general to new and useful improvements in protective coverings for the legs of horses, and more particularly to a novel cushion type heel support for horses.

Although this invention may be utilized in conjunction with all horses, the invention is particularly adapted for use on race horses. A great number of racing horses is injured each year because in the act of running at high speeds, the heel is scuffed upon the track turf with the full weight of the horse upon the heel. As a result, many horses finish a race with torn or lacerated heels which frequently result in infection, causing both temporary and frequently permanent disability. Another disabling factor to a running horse is the circumstance that the shock of the entire weight of the horse on the heel will frequently result in a torn ligament which usually causes permanent disability.

As a result of the foregoing, it is the primary object of this invention to provide a novel heel support which may be readily secured to the leg of a race horse in a position wherein the support will take the shock and strain normally directly imposed upon the heel of the horse's leg, thus preventing the usual injury to the heels of horses.

Another object of this invention is to provide a novel heel support which is particularly adapted for use on racing horses, the heel support providing the necessary support to prevent injury to the heel of a running horse, and at the same time, being extremely light in weight and simple in structure wherein it may be easily attached to the horse's leg in a manner so as to in no way hinder the running ability of the horse.

Another object of this invention is to provide a novel heel support for horses which includes an extremely light weight soft spongy cushion formed of a cellular foam material and having a single strap bonded thereto for the purpose of securing the cushion to a horse's leg in a fixed proper position relative to the heel thereof.

Still another object of this invention is to provide a novel heel support for horses, particulary racing horses, the heel support including a relatively large cushion formed of a soft spongy cellular foam material and a single strap unit, the strap unit including a strap element passing through the cushion and being bonded thereto, and a narrow strap and buckle arrangement carried by the ends of the strap element for fastening the strap element and the cushion in place on a horse's leg.

Yet another object of this invention is to provide a novel heel support particularly adapted for use on a racing horse's leg to prevent injury to the heel thereof while running, the heel support including a soft spongy cushion having an elastic strap element passing therethrough and bonded thereto, the strap element providing for the necessary resiliency of the mounting of the cushion while at the same time providing the required connection to hold the cushion in place on a horse's leg.

A further object of this invention is to provide a novel heel support for horses, the heel support including a cushion formed of a cellular foam material for providing the necessary support and protection for a horse's leg, the cushion having means for securing the same in place on a horse's leg and being provided with an impervious skin to prevent the passage of water, sand and other foreign material into the interior thereof, which materials would both increase the weight of the cushion in an undesired manner and provide abrasive materials for acting upon the horse's leg.



A still further object of this invention is to provide a novel heel support primarily intended for the front legs of running horses, but being of a nature wherein the same heel support may be used on rear legs of running horses, when desired.

With the above and other objects in view that will hereinafter appear, the nature of the invention will be more clearly understood by reference to the following detailed description, the appended claims and the several views illustrated in the accompanying drawing:

In the drawing:

FIGURE 1 is an elevational view of a horse's front leg having mounted thereon in a heel supporting position the heel support which is the subject of this invention.

FIGURE 2 is an elevational view of the horse's front leg of FIGURE 1, showing the leg in a running position in full contact with the ground and with the heel support being disposed intermediate the ground and the heel of the horse's leg to effect the protecting of the horse's heel and the absorption of shock normally imposed thereupon.

FIGURE 3 is a perspective view on an enlarged scale of the heel support and shows the specific structural details thereof.

FIGURE 4 is a horizontal sectional view taken along the line 4—4 of FIGURE 3, and shows the specific cross-section of the cushion of the heel support and the strap unit carried by the cushion for securing the cushion in place on the horse's leg.

FIGURE 5 is a vertical sectional view taken along the line 5—5 of FIGURE 4, and shows further the details of the cushion and the relationship of the strap thereto.

FIGURE 6 is a vertical sectional view taken along the line 6—6 of FIGURE 5, and shows the specific outline of the cushion and the relationship of the strap element thereto.

Referring now to the drawings in detail, reference is first made to FIGURES 3 through 6, wherein there are illustrated the details of the heel support which is the subject of this invention, the heel support being generally referred to by the numeral 10. The heel support 10 is formed of a cushion, generally referred to by the numeral 11, and a single strap unit, generally referred to by the numeral 12.

The cushion 11 is of a soft spongy construction, and is formed of a light weight cellular foam material. The cushion 11 may be formed of foam rubber or suitable foam plastics.

It is to be noted that in elevation, as is shown in FIGURE 6, the cushion 11 has an outline which is generally that of a regular trapezoid, with the width of the cushion 11 increasing from the bottom to the upper end thereof. Also, as is shown in FIGURE 5, the thickness of the cushion 11 generally increases from the lower end thereof upwardly, although the upper portion of the cushion 11 is tapered. The cushion 11 is provided with an imprevious skin 13 so as to exclude the entrance of water, sand and other foreign matter into the interior of the cushion 11. The purpose of this imprevious skin 13 will be set forth in more detail hereinafter.

The cushion 13 also has an opening 14 disposed below the vertical center thereof. The opening 14 is in the form of a slit and receives a strap element 15 of the strap unit 12. The strap element 15 extends through the opening 14 and has the central portion thereof bonded to the material of the cushion 11 so as to prevent movement of the strap element 15 relative to the cushion 11.

The strap unit 12 also includes a narrow strap mem-

ber 16 which is secured to the strap element 15 adjacent one end thereof by means of stitching 17. In a like manner, a buckle member 18 is secured to the strap element 15 adjacent the other end thereof. The buckle member 18 cooperates with the strap member 16 to provide for the adjustment of the strap unit 12.

In order to protect the horse's leg against abrasion, the free ends of the strap element 15 are protected. This protection is in the form of coverings 19 disposed over the free ends of the strap element 15.

Reference is now made to FIGURES 1 and 2 wherein the heel support 10 is illustrated in position on a horse's leg 20. The horse's leg 20 includes a shank 21, the sesamoid bones 22, the pastern joint 23, the pastern 24 and the hoof 25. In addition, tendons run up the rear of the leg 20, as at 26. It will be seen that when the heel support 10 is in place, it is secured to the horse's leg in the area of the pastern joint 23, with the cushion 11 underlying and protecting the leg in the area of the sesamoid bones. The heel support 10 in no way interferes with the running action of the horse and as the horse's leg reaches forward and strikes the turf with the weight being placed thereon, in lieu of the heel of the horse's leg striking the turf, as in the usual case, the cushion 11 will strike the turf beneath the sesamoid bones so as to protect the heel against both the shock and strain resulting from the striking of the heel on the turf, and also to protect the heel against abrasion. In addition, by eliminating the shock, and the attendant strain, the tendons are thus protected against undue injury.

It is to be understood that the heel support 12 is extremely light in weight and therefore is not a deterrent to the running action of the horse. It is also to be understood that the heel support will be comfortable due to the material from which the cushion 11 is formed, and the wide strap element 15 which is the primary securing element of the heel support 10. In addition, since the strap element 15 is formed of elastic material, it will be seen that heel support 10 may be placed on the horse's leg with the desired tension and at the same time without exerting an undue pressure on the horse's leg. An added advantage of the heel support 10 is that the cushion 11 is formed of an impervious material so that the weight thereof will not increase during use due to the absorption of water and the entrance of fine foreign matter, such as sand, thereinto. Further, since the cushion 11 will not hold any foreign matter, and due to the shape of the heel support 10, there is no place where sand or other foreign matter can enter between the heel support 10 and the horse's leg, and the horse's leg will not be subject to abrasion due to the use of the heel support 10. Accordingly, it will be apparent that the heel support 10 provides the desired protection for the heel of a horse's leg without detracting from the horse's comfort or ability to run.

While the heel support 10 has been particularly illustrated with respect to a front leg of a horse, and the heel support 10 is primarily intended for use with the front legs, of horses, it is to be understood that the same heel support can be utilized on horse's rear legs where horses are experiencing heel injury problems during running.

The shape and size of the cushion 11 is such that a single heel support 10 will suffice for nearly all horses.



However, it is to be understood that minor modifications in dimensions of the cushion 11 may be made where necessary. At this time, it is pointed out that the cushion 11 is rounded both at the ends and the sides thereof so that it may constantly present smooth surfaces as against the possibility of any sharp corners, despite the fact that the cushion 11 is formed of a soft spongy material.

The heel support 10, in order to increase the wearing qualities thereof, has a patch of wear resistant material 27 on the outside rear half thereof which comes in contact with the ground, as is clearly shown in the several figures of the drawings. The wear resistant material is suitably bonded to the cushioning 11 and is relatively thin so as to not unduly increase the weight of the heel support 10 while greatly increasing the life thereof.

From the foregoing, it will be seen that novel and advantageous provision has been made for carrying out the desired end. However, attention is again directed to the fact that variations may be made in the example heel support disclosed herein without departing from the spirit and scope of the invention, as defined in the appended claims.

I claim:

1. A heel support for horses particularly adapted to overlie and protect the heels of a horse's foreleg between the hoof and the pastern joint, said heel support comprising a substantially thick and long impervious cushion of springy soft material adapted to overlie a horse's heel to support and cushion the heel and sesamoid bones thereof when the pastern joint is nearly parallel to the ground, said cushion being of a generally rectangular trapezoidal outline increasing in thickness from a first end portion toward a second end portion thereof, said cushion having a wear resistant area between said end portions to prevent undue wearing of the cushion during the use of the heel support, strap means connected to said cushion for securing the cushion in place on a horse's foreleg, said strap means comprising a strap element passing through said cushion and being secured thereto, and said strap element being adjacent said first portion of said cushion whereby a major portion of said cushion effectively supports and cushions the sesamoid bones of a horse's heel during the use of the heel support.

2. The heel support of claim 1 wherein adjustable strap and buckle members are carried by ends of said strap element.

3. The heel support of claim 1 wherein said cushion has an impervious skin.

4. The heel support of claim 2 wherein said strap element is of an elastic construction.

5. The heel support of claim 3 wherein said cushion is formed of a light-weight cellular foam material.

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