

[54] **SHOE ATTACHMENT FOR GOLFERS**

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[58] Field of Search **36/2.5 R, 2.5 AH, 7.6, 36/7.7, 62**

[56] **References Cited**
UNITED STATES PATENTS

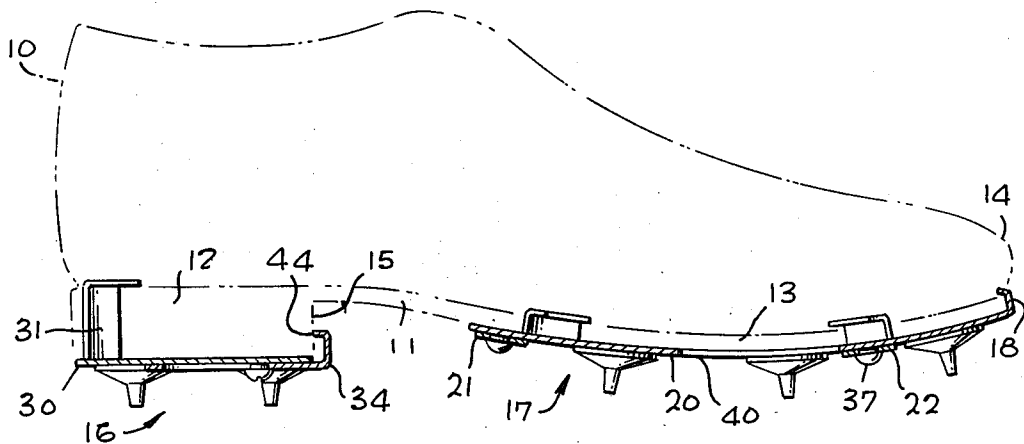
1,967,867	7/1934	Conway	36/7.7
2,182,375	12/1939	Erdman	36/7.7
3,755,929	9/1973	Frisch et al.	36/2.5 AH

Primary Examiner—Patrick D. Lawson

[57] **ABSTRACT**

An attachment is disclosed herein for removably securing a pair of spiked or cleated plates to the heel and sole of conventional street shoes for converting the shoes for golf use. Each plate includes edge grippers for gripping the peripheral sides of the heel and sole respectively and a plurality of downwardly depending spikes extending about the edge marginal region of each plate so that the spikes are located about the corresponding edge marginal region of the heel and sole. The grippers or clamps are adjustably supported on the plates by screws which are coupled to threaded inserts that are swaged into securement with the respective plates. Each insert includes a central raised portion which constitutes a guide for a gripper as well as providing additional threaded support for the screw.

5 Claims, 7 Drawing Figures



SHOE ATTACHMENT FOR GOLFERS**BACKGROUND OF THE INVENTION****1. Field of the Invention**

This invention relates to accessories for golf players and, more particularly, to a spiked attachment plate detachably mountable to the heel and sole of street shoes.

2. Brief Description of the Prior Art

In the past, it has been the conventional practice of golfers to use special golf shoes having a multiplicity of spikes downwardly projecting from the underside of the soles of shoes. Normally, each of the spikes is directly carried on the sole and heel of each shoe so that the golfer's feet may be readily engaged with the ground surface preparatory to swinging a golf club. The use of spikes shoes also assists the golfer in traversing the ground between the holes on the golf course. Normally, the terrain of a golf course is heavily grassed and the sod is generally soft so that the use of street shoes is not conducive to the player's performance. Obviously, smooth soled street shoes would have a tendency to slip on the lawn or grass of the golf course terrain and, in many instances, the lawn is wet which further increases the hazard of using smooth soled shoes.

Difficulties have been encountered when using conventional golf shoes having spikes integrally secured to the soles of the shoes which stem largely from the fact that the player must purchase special golf shoes for use during his game. Furthermore, the player must remove his street shoes and then place the golf shoes on his feet in preparation for playing. This procedure necessitates a storage area or space for leaving the street shoes while engaged in the play of the game. Therefore, a long standing need is evident for a means suitably attachable to street shoes which will extend the use of a street shoes to the playing of golf.

In some ancillary fields such as the logging industry and in the performance of telephone pole repair work, cleating devices are provided which include spikes carried on a bracing device so that the device may be coupled to the feet and legs of the wearer without necessitating special shoes. However, these devices are cumbersome since they engage the lower extremity of the leg and generally require straps, belts and other attachment means for securing the cleats to the wearer. Such devices are employed not only for providing cleats on the underside of the wearer's foot but include means for supporting and stabilizing the wearer during the performance of duties such as pole climbing or tree climbing. Such apparatus is not suitable for use in playing the game of golf.

One attempt to provide a cleated attachment for golf shoes is disclosed in U.S. letters Patent No. 3,755,929. Although successful for its intended purpose, this device employs springs for clamping hooks onto the edge of a shoe sole. Also, the clamps require an expensive rivet fabrication procedure or in the event a threaded securement is employed, an insufficient number of turns or threads are available to support the shoe sole attachment clamps under load conditions. The thinness of the attachment material prohibits additional threads.

SUMMARY OF THE INVENTION

The above difficulties and problems encountered with conventional footwear for golfers are obviated by the present invention which provides an accessory device comprising a pair of plates adapted to fit against

the heel and sole respectively of each shoe in a pair of street shoes. Each plate includes a peripheral edge which corresponds to the shape or outline of the respective heel and sole. The edge of each plate is provided with a plurality of gripping means for engaging with an opposing portion of the sides of the heel and sole respectively. A plurality of cleats or spikes are carried on each of the plates so as to downwardly depend from the side of the plate opposite to its side engaging with the heel or sole of the shoe. The gripping means include fastening nuts integrally formed with each of the heel and sole plates so as to threadably receive a threaded screw for mounting a clamp of gripping means on each of the respective plates. The spikes are arranged in fixed spaced relationship about the edge marginal region of each of the plates so that the general outline of the sole and heel are defined thereby.

Therefore, it is among the primary objects of the present invention to provide a novel accessory for permitting conventional street shoes to be employed by a player for the game of golf which do not require springs or resilient attachment devices.

Another object of the present invention is to provide an accessory for the game of golf comprising the heel and sole plates having gripping means including fastener nuts for ready attachment to the heel and sole of conventional street shoes. Another object of the present invention is to provide a novel shoe attachment device for golfers having spiked plates detachably secured by threaded fasteners to the respective heel and soles of a pair of street shoes for use in the game of golf.

Yet another object of the present invention is to provide a novel shoe attachment device for golfers permitting the extension of use of street shoes for the game of golf.

BRIEF DESCRIPTION OF THE DRAWINGS

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The present invention, both as to its organization and manner of operation, together with further objects and advantages thereof, may best be understood by reference to the following description, taken in connection with the accompanying drawings, in which:

FIG. 1 is a bottom plan view of the shoe attachment device as taken in the direction of arrows 2—2 of FIG. 1;

FIG. 2 is a longitudinal cross-sectional view of the shoe attachment device for golfers incorporating the present invention as taken in the direction of arrows 2—2 of FIG. 1;

FIG. 3 is a transverse cross-sectional view of the attachment plate for a heel plate shown in FIG. 1 as taken in the direction of arrows 3—3 thereof;

FIG. 4 is a transverse cross-sectional view of the gripping means employed on the sole plate as taken in the direction of arrows 4—4 of FIG. 1;

FIG. 5 is an enlarged fragmentary view of a screw and fastener nut thereof;

FIG. 6 is a plan view taken in the direction of arrows 6—6 of FIG. 5; and

FIG. 7 is an enlarged sectional view of a cleat or spike shown in FIG. 1 as taken in the direction of arrows 7—7 thereof.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIGS. 1 and 2, a conventional street shoe is shown in broken lines as indicated numeral 10 which includes a bottom sole 11 and a conventional raised heel 12. As is the usual practice, the heel is attached to the rearmost portion of the sole 11 by any suitable means, such as nails, screws or the like. The sole 11 includes a ground engaging portion 13 substantially provided at the ball of the foot of the wearer. The sole extends rearwardly from a toe portion of the shoe, as indicated by numeral 14, to the heel 12 so as to provide a raised instep substantially midway between the opposite ends of the shoe. The heel 12 is of suitable thickness so as to raise the heel of the wearer and to provide an arcuate surface 15 defining one side of the raised portion of the sole at the instep.

The shoe attachment apparatus of the present invention comprises, in one form, a pair of attachment plates indicated in the direction of arrows 16 and 17 adapted to be carried by the heel 12 and ground engaging portion 13 of sole 11, respectively. Attachment plate 17 includes a plurality of gripping means such as is indicated by numeral 18 representing a toe grip. The gripping means may take the form of a U-shaped clamp or gripper adapted to engage over the exposed edge of the sole 11 at the extreme end of the shoe. The gripper or clamp 18 includes an open slot or receptacle into which the exposed edge of the sole is insertably received in friction engagement therewith. The gripping means are carried about the peripheral edge of a plate 20 that is substantially form-fitted or corresponds to the shape and curvature of the ground engaging portion of sole 11.

It is to be particularly noted that the plate 20 lies flush against the sole portion 13 and that the plate is held in this position by means of the grips or clamps, such as the fixed clamp 18. However, self-adjusting clamps are indicated by the numerals 21 and 22 which are adjustably secured so as to press against the side edge of the sole. These latter clamps provide for lateral adjustment so as to compensate for any difference in shoe width depending on the size of shoe intended to be fitted by the plate. A plurality of spikes, such as is indicated by numerals 24-26 are provided which are downwardly depending from the underside of plate 20 so as to engage with the ground or turf. The plurality of spikes are spaced apart in fixed relationship about the edge marginal region of plate 20.

Attachment plate 16 for heel 12 includes a plate 30 carrying a gripping means 31 on either side of heel 12. The fixed gripping means 31 are similar to the fixed gripper or clamp 18 with the exception that the clamp is elongated so as to accommodate the height of the heel 12. The upper-most portion of the gripper or clamp engages over the edge of the sole 11 at a selected area where the heel 12 is attached thereto. A plurality of spikes, such as indicated by numerals 32 and 33, are carried on the underside of plate 30 and downwardly depend therefrom into ground engaging relationship with the turf or ground 27. The forward edge of plate 30 adjacent the instep of the shoe includes an adjustable clamp 34 adjustable to engage with arcuate side or wall 15 or the heel.

Referring now in detail to FIG. 1, it can be seen that the plurality of spikes, such as is indicated by numerals

24-26, are located on plate 20 so as to be arranged about the edge marginal region of the sole 11. The plate 20 includes a central cut-out or opening so that the general configuration of plate 20 is that of an oval. Also, it is to be noted that the upper-most portion of each fixed and adjustable clamp extends slightly toward the central opening in plate 20 so that the sole may be readily inserted or slid across the plate whereby the selected portions of the sole opposite the clamps will be engaged by the clamps.

Adjustable clamps 21 and 22 include an elongated portion 35 formed with an elongated slot 36 through which a pair of screw guides 37 and 38 are mounted. By this arrangement, the clamps 21 and 22 may slide outwardly to open the entrance into the clamp receptacles or openings when the sole is slid forward over the plate 20. Plate 20 is formed with an integral serrated edge for engaging the sole when the plate is clamped to the sole.

With respect to plate 30, it is noted that at least four spikes are provided and that the adjustable clamp 34 is constructed in a similar fashion to the adjustable clamps 21 and 22. A slot and screw combination is similarly employed for holding the clamp onto the plate 30. Furthermore, the upper inwardly extending edge 44 of clamp 34 is provided with a plurality of serrations, as noted in FIG. 1, that affords a secure engagement with the heel wall 15.

As shown more clearly in FIGS. 5 and 6, screw 37 includes a threaded shank 50 engagable with a threaded bore centrally formed in a nut 47. The nut includes a raised portion 52 disposed within the slot between parallel rails 53 and 54 of the extension associated therewith. Not only does the raised portion provide a guide about which the parallel rails slide, but the bore provides more threads for engagement by the threads of the screw shank than can be engaged if the nut has only the thickness of the sole plate. The nut is swagged into securement with the plate when the metal of the nut is upset so as to flow around annular shoulder 55 of the plate.

When in use, the width of the sole plate is adjusted to fit the width of the shoe by loosening set screws 37 and 38 and 37' and 38'. Once the hooked extensions 35 and 53 have been adjusted, the screws are tightened. Adjustment for the heel plate 30 by extension 34 is similar by the adjustment of screw 56 threadably carried in a guide nut as previously described.

While particular embodiments of the present invention have been shown and described, it will be obvious to those skilled in the art that changes and modifications may be made without departing from this invention in its broader aspects and, therefore, the aim in the appended claims is to cover all such changes and modifications as fall within the true spirit and scope of this invention.

What is claimed is:

1. An attachment device for converting street shoes for use in playing the game of golf wherein each shoe includes a sole having a continuous exposed edge and a raised heel having a forward wall defining a part of the instep, the combination comprising:
 - a first attachment plate removably carried on said heel;

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a second attachment plate removably carried on said sole in spaced relationship to said first attachment plate;

each of said plates having a plurality of clamping means arranged in spaced apart relationship along the peripheral edges of said plates and extending into frictional engagement with opposing portions of the edge of said sole;

a plurality of spikes carried on the underside of each of said plates adapted for ground engagement when said plates are affixed to said sole by said clamping means;

said clamping means comprising a pair of extensions arranged transversely across said second attachment plate having a hook fixedly carried on their respective ends adjacent said peripheral edge;

adjustment screws interconnecting said extensions to said second plate for releasable securement thereto;

said extensions include parallel rails separated by an elongated slot accommodating passage of said adjustment screws;

retainer nuts secured to said plate having a central raised portion extending through said extension

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slots serving as a guide for said extension during an adjustment procedure; and

said retainer nut includes an annular shoulder deformable with said plate so as to be upset and swagged into securement therewith.

2. The invention as defined in claim 1 including an elongated extension arranged along the longitudinal axis of said first attachment plate and having a hooked end facing said forward wall of said heel and adjustment screws for releasably securing said elongated extension to said first plate.

3. The invention as defined in claim 1 wherein said nut includes a central threaded bore formed in said central portion engagable by the threaded shank of said screw.

4. The invention as defined in claim 3 wherein at least three and one half thread turns are provided in said nut threaded bore.

5. The invention as defined in claim 4 wherein the thickness of said nut including said raised portion is greater than the thickness of said plate.

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