July 20, 1965 TAKESHI UEDA 3,195,246

SPIKE FOR SHOES

Filed Aug. 12, 1964

FIG. 1

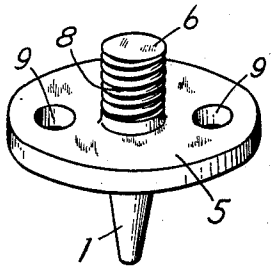


FIG. 2

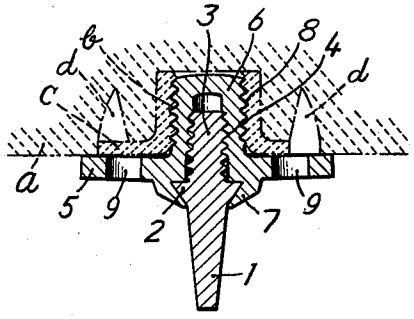


FIG. 3

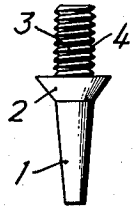


FIG. 4

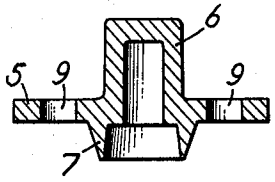
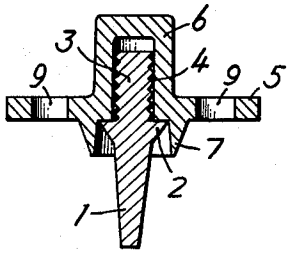


FIG. 5



INVENTOR

Takeshi Ueda

BY Linton and Linton

ATTORNEYS

United States Patent Office

3,195,246

Patented July 20, 1965

1

3,195,246

SPIKE FOR SHOES

Takeshi Ueda, 2–1 Izumi-cho, Isezaki, Japan

Filed Aug. 12, 1964, Ser. No. 389,092

1 Claim. (Cl. 36—67)

The present invention relates to a spike for shoes, and is more particularly directed to a spike unit which is to be detachably attached to shoes, chiefly golf shoes.

According to the present invention, there is provided an improved spike for shoes comprising a spike member which is made of an abrasion resisting steel and has at its middle portion a projecting rim and on the periphery of its head portion an uneven surface, and a washer member which is made of a light metal such as aluminum, aluminum alloy or the like and has at its central portion an upwardly projecting cup tube open at its lower end and a downwardly projecting short tube, said two members being so combined that the washer member is mounted at its cup tube on the head portion of the spike member, the projecting rim of the spike member is firmly embraced by the short tube of the washer member, and by a roll pressing process applied to the outer surface of the cup tube a thread is formed on the periphery thereof and, at the same time, the inner surface of the cup tube is pressed into the uneven surface of the perpihery of the head portion of the spike member.

In order that the invention may be clearly understood and readily carried into effect, the same will now be explained more particularly with reference to and by the aid of the accompanying drawings, wherein:

FIG. 1 is a perspective view of a spike according to the present invention.

FIG. 2 is a longitudinal sectional side view of the same.

FIG. 3 is a side elevational view of a spike member.

FIG. 4 is a sectional side view of a washer member before being combined with the spike member, and

FIG. 5 is a sectional side view showing the initial combination of the spike member and the washer member before completion of the spike.

Referring to the drawings, wherein like and corresponding parts are designated by similar reference characters, numeral **1** denotes a spike member which is made of an abrasion resisting steel and applied with a heat treatment for increasing the hardness thereof, and the spike member **1** is provided at the middle portion thereof with a projecting annular rim **2** and is threaded on the periphery of its head portion **3** to form thereon an uneven surface **4**. Numeral **5** denotes a washer member made of such a light metal such as aluminum, aluminum alloy or the like, and the member **5** has at its central portion an upwardly projecting cup **6** open at its lower end and also a short tube **7** projecting downwardly from the circumference of the lower end opening of the cup **6**.

For combining washer member **5** with the spike member **1**, as shown in FIG. 5, the cup **6** of the washer member **5** is put on the head portion **3** of the spike member **1**, and the short tube **7** is curved inwardly to embrace the projecting rim **2**. Thereafter, the cup **6** is applied to thread rolls so that by the roll pressing process, a thread **8** is formed on the periphery of cup **6** and, at the same time, the inner bore surface of the cup tube **6** is pressed into

2

the uneven surface **4** of the head portion **3** of the spike member **1** for being firmly and integrally connected thereto. This spike is attached to shoes *a* by the thread **8** formed thereon being screwed in a threaded opening *b* of an attaching washer *c* attached by its claws *d* to the sole of the shoes *a* as shown by dotted lines in FIG. 2. The washer member **5** is provided symmetrically at both sides of its center with a pair of openings **9** and **9**, so that a tool having at its top a pair of projections engageable with the pair of openings **9** and **9**, the same can be rotated to be screwed in washer *c* for being firmly attached.

According to the present invention, the spike member which is liable to be worn away is made of an abrasion resisting steel while the washer member for attachment is made of a light metal such as aluminum, aluminum alloy or the like, so that the total weight of the device may be decreased and may be of sufficient durability. Additionally, the combination of the spike member and the washer member is effected by the way the head portion of the spike member is inserted in the cup of the washer member, and the projecting rim of the spike member is firmly embraced by the short tube projecting downwardly from the washer member, and by the roll pressing process applied to the outer surface of the cup so that a thread is formed thereon and, simultaneously, the cup is pressed inwardly for causing the inner surface of the same to press into the uneven surface of the head portion of the spike member. Accordingly, these two members can be very firmly jointed together and excellent products can be supplied economically.

What I claim is:

A spike for shoes having a threaded insert adapted to be mounted in the sole thereof comprising a spike member of abrasion resisting steel having a tapered end portion, a lateral rim extending from its medial portion and a head portion with an uneven peripheral surface, a washer of a light metal provided at its central portion on one side with an axially extending cup open at its lower end and an axially extending short tube on the side opposite to said cup, said spike member head extending into said washer cup with said cup extending into the uneven surface of said spike member head, said washer short tube embracing said spike member rim on a side thereof opposite to said spike member head and said washer cup having external peripheral threads for being in threaded engagement with the threaded insert mountable in the shoe sole.

UNITED STATES PATENTS

References Cited by the Examiner

2,207,476	7/40	Bernstein	36—67.5
2,235,774	3/41	Pierce et al.	36—67.5
2,459,610	1/49	Zadina	36—67.5
2,578,591	12/51	Phillips	36—67.5
2,584,182	2/52	Bernstein	36—67.5

FOREIGN PATENTS

673,399	6/52	Great Britain.

JORDAN FRANKLIN, *Primary Examiner.*

FRANK J. COHEN, *Examiner.*