

1,058,504.

Fig. 1.

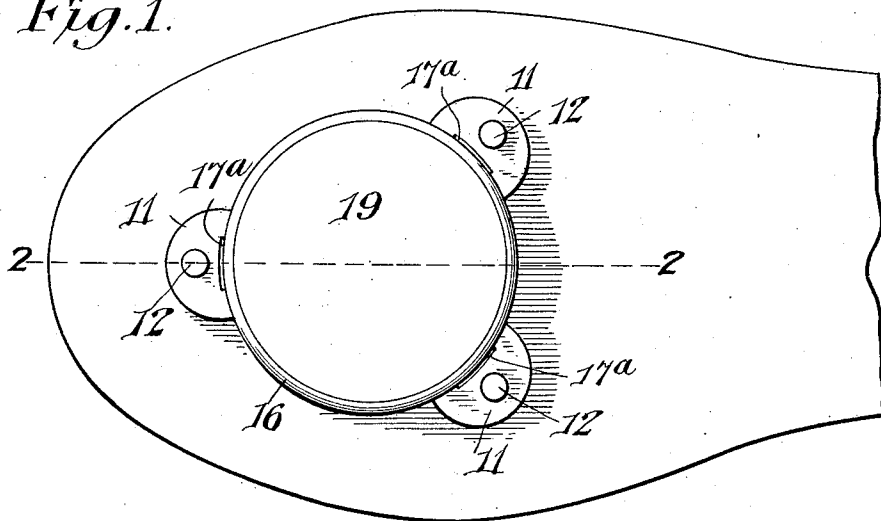


Fig. 3.

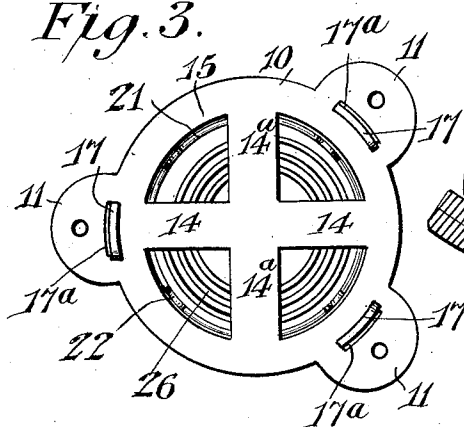


Fig. 2.

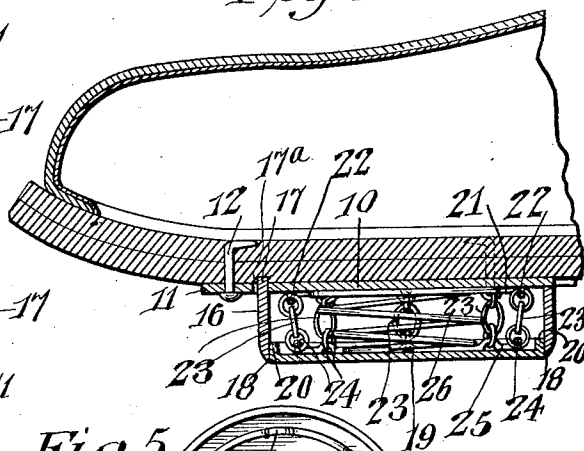


Fig. 4.

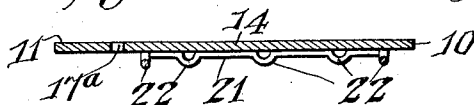


Fig. 5.

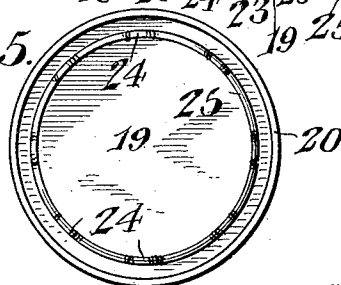
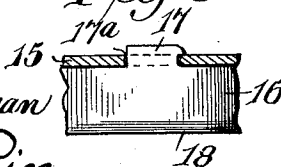


Fig.6.



WITNESSES

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RODDY VICTOR WESTON, OF ATHENS, TENNESSEE, ASSIGNOR OF ONE-THIRD TO HOWARD WHITEHART AND ONE-THIRD TO TROY GANGWER, BOTH OF ATHENS, TENNESSEE.

SPIKE FOR SHOES.

1,058,504.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed May 2, 1912. Serial No. 694,775.

To all whom it may concern:

Be it known that I, RODDY V. WESTON, a citizen of the United States, residing at Athens, in the county of McMinn and State of Tennessee, have invented a new and useful Spike for Shoes, of which the following is a specification.

My invention relates to improvements in spikes for shoes, primarily intended for base ball players, and has for its object to provide a simple and efficient spike, which will at all times afford the player ample support when he requires it, but will, when the player raises his foot from the ground, immediately assume a non-operative position, thereby removing any possibility of injuring other players or himself.

It consists in certain features of construction and a certain combination and arrangement of parts hereinafter fully set forth and particularly pointed out in the claims.

In the accompanying drawings:—Figure 1 illustrates one of my improved spikes applied to the bottom of the sole of a shoe. Fig. 2 is a transverse, vertical section on the line 2—2 Fig. 1. Fig. 3 is a bottom plan view of my spike. Fig. 4 is a transverse sectional view through the base plate of my spike showing the chain-supporting means. Fig. 5 is a top plan view of the guard plate. Fig. 6 is a fragmentary detail showing one of the fastening means employed to secure the body portion to the base plate.

Referring to the drawings, which illustrate the preferred embodiment of my spike, 10 designates a thin, flat base plate, which is circular in its general outline, and provided at its forward end with an outwardly projecting rounded lug 11 and at its rear with a pair of spaced apart, similarly-shaped lugs 11. Each lug 11 is provided with a centrally-disposed hole, through which is passed a suitable headed fastening means or nail 12, to secure the spike to the sole of a shoe. In order to insure lightness, the base plate is preferably made of aluminum or other suitable light material, and is cut out to form centrally-arranged right-angulantly disposed cross bars 14 and 14^a, respectively, connected to a circular rim portion 15. The front lug 11 is in alignment with the cross bar 14 running longitudinally of the sole, while the rear lugs 11 are arranged at each side of the other end

of the same cross bar and intermediate the ends of the two cross bars 14 and 14^a.

Secured to and depending from the rim 15 of the base plate is a cylindrical, open-ended body or casing 16, preferably made of steel. The upper end of the casing is provided with three spaced apart, upstanding lugs 17, which are adapted to be projected through correspondingly spaced slots 17^a in the rim 15 of the base plate, and then the ends of the lugs which extend above the rim are forced down to rivet the casing 16 to the rim, as illustrated in Fig. 6. While I have shown only one end of each lug 17 forced down, both ends could be so treated if desired, or the lugs could be secured in any other suitable manner. The outside of the cylindrical body is beveled at its lower end to provide an annular knife or cutting edge 18, which edge can be kept as sharp as desired.

Slidably mounted in the body 16 is a guard or tread plate 19, preferably of aluminum or other light material, which fits closely therein. The outer edge of the guard plate is provided with an upturned, right angular, annular flange 20, which has a close working engagement with the inside of the casing as shown in Fig. 2.

Soldered on the lower face of the base plate 10, within the body and spaced a short distance from the inside thereof, is a wire supporting ring 21, provided with a plurality of equi-distant, depending loops 22, to each of which is connected the upper link of a short chain 23. The lower link of each chain is connected to an upstanding loop 24 of a wire ring 25 soldered to the inner portion of the guard plate 19. The ring 25, while provided with as many equi-distant loops as the ring 21, is of less diameter than the said ring 21 and is concentric thereto, which, as shown in Fig. 2, gives the chains an inward slant from the base plate to the guard plate. This arrangement provides a series of any desired number of preferably equi-distant chains 23 arranged in a circle which will hold the outer face of the guard plate substantially flush with respect to the annular edge 18 of the body 16 as herein-after explained.

To the lower face of the base plate 10, concentrically within and spaced from the wire ring 21, is riveted, soldered or otherwise suitably secured the upper turn or base coil

of a spiral spring 26, the lower turn or coil of which bears against the inner side of the guard plate 19, and normally forces it to the position shown in Fig. 2. As illustrated, each turn or coil of the spiral spring is of such reduced diameter with respect to the one immediately above it, from the base plate 10 to the guard plate 19, that when a player steps on the ground, the contact instantly forces the yielding guard plate upwardly in the body 16, against the tension of the spiral spring 26, so that the sharp edge 18 of the body immediately sinks into the ground. The distance the yielding guard plate is forced into the body is of course governed largely by the condition of the ground, but the reduced diameter of the turns or coils of the spiral spring permit them to lie one within the other when the spring is compressed, while the flange 20 will enter the space between the wire supporting ring 21 and the inside of the body 16, and the links of the chains 23, owing to their inclination inwardly, will fold or fall within the flange of the guard plate.

The chains are of such length that they prevent the outer face of the guard plate from being pushed by the spring past the knife edge 18 of the body, and as shown in Fig. 2 hold the outer face of the guard plate flush with the knife edge, and, as is apparent, any slight lengthening of the chains will not result in the displacement of the guard plate owing to its flange 20.

Further the spike is self-cleaning, as when the guard plate is forced back by the earth entering the body when the player steps on the ground, the instant he raises his foot the guard plate is immediately forced outwardly flush with the edge of the body by the spiral spring 26, and at the same time all dirt that may have found lodgment in the body is forced out.

While I have shown only one of my spikes applied to the forward portion of the sole of a shoe, the only difference in the heel spike is that its diameter is less, so that no description or illustration of the same is necessary.

As is well known, the sharp spikes at present worn by the ball players are a continual menace to the other players, and players are often so badly "spiked" or cut as to force them to retire from the game. Players have frequently been permanently injured. Spiking usually occurs when a player is forced to slide in his efforts to safely reach a base, and then it is, when his spikes are not in use, that they become dangerous to the baseman, and this is just what my invention seeks to prevent, for the moment the player's foot is raised from the ground, the guard plate will be forced by the spiral spring flush with the annular knife edge of the body, as shown in Fig. 2, when the knife

edge of the spike is protected and consequently the spike is harmless on striking a player.

Changes in the form, proportion and minor details of the invention may be made without departing from the spirit or sacrificing the scope of this invention.

What is claimed is:—

1. A spike adapted to be attached to the bottom of a shoe comprising a base plate, a hollow body connected thereto and provided at its bottom with a knife edge, a guard plate slidably mounted within said body, an intumed flange formed on the periphery of the said guard plate and adapted to have a close working engagement with the inside of said body, resilient means for normally forcing said guard plate outwardly flush with said knife edge, and means for limiting the outward movement of said guard plate by said resilient means, said resilient means and said limiting means being connected to said guard plate at points within the flange, whereby when said guard plate is depressed against the pressure of said resilient means it will be forced within the body until said flange contacts with said base plate.

2. A spike adapted to be attached to the bottom of a shoe, said spike comprising a hollow body provided with a knife edge, a guard plate slidably mounted in said hollow body, elastic means for normally forcing said guard plate outwardly, and chains connected to said guard plate and adapted to limit the outward movement of said guard plate.

3. A spike comprising a base plate adapted to be secured to the bottom of a shoe, a hollow cylindrical body provided with a knife edge at its bottom carried by said base plate, a supporting ring secured to the bottom of said base plate and within said body and spaced from the sides thereof, a guard plate slidably mounted within said body, a supporting ring mounted on the upper face of said guard plate, a spiral spring mounted within said body and bearing against said base plate and said guard plate, and flexible means connected at one end to the supporting ring carried by said base plate and at their other end to the supporting ring carried by said guard plate, said flexible means being of such a length as to permit said guard plate to be normally forced out by the spring flush with the knife edge carried by said body.

4. A spike comprising a base plate adapted to be secured to the bottom of a shoe, a hollow cylindrical body provided with a knife edge at its bottom carried by said base plate, a guard plate slidably mounted in said body, an inwardly projecting flange carried by said guard plate, a spiral spring arranged concentrically within said flange

and adapted to bear against said base plate and said guard plate, each of the coils of said spiral spring being successively of less diameter from said base plate to said guard plate so as to lie within each other and within the area of the flange of said guard plate, whereby when said guard plate is depressed, said spiral spring will be compressed with its coils one within the other between said base plate and the top of said guard plate and lie within the confines of said flange, and means for limiting the outward movement of the guard plate to hold it normally flush with said knife edge.

5 5. A spike comprising a base plate adapted to be secured to the bottom of a shoe, a hollow body provided with a knife edge at its bottom, and secured to said base plate, a supporting ring secured to the inner face of said base plate and located concentrically within said body and spaced from the sides thereof, a guard plate slidably mounted within said body, a supporting ring mounted on the inner face of said guard plate, the supporting ring of said guard plate being of less diameter than the supporting ring of

said base plate and arranged concentrically with respect thereto, chains connected to the supporting ring of said base plate and the supporting ring carried by said guard plate whereby said chains are inclined inwardly from said base plate to said guard plate, said chains being of such length as to permit said guard plate to be normally positioned flush with said knife edge, and a spiral spring positioned in said body, said spiral spring having its coils each of less diameter from said base plate to said guard plate, whereby when said guard plate is forced up into said body against the tension of said spring, the coils of said spring will lie one within the other against the bottom of said base plate, and said chains will fold into the space between said base plate and said guard plate outside the spring.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

RODDY VICTOR WESTON.

Witnesses:

HOWARD STACY WHITEHEART,
TROY GANGWER.