

C. E. SIMPSON.
ATHLETIC SHOE.
APPLICATION FILED APR. 15, 1911.

1,021,166.

Patented Mar. 26, 1912.

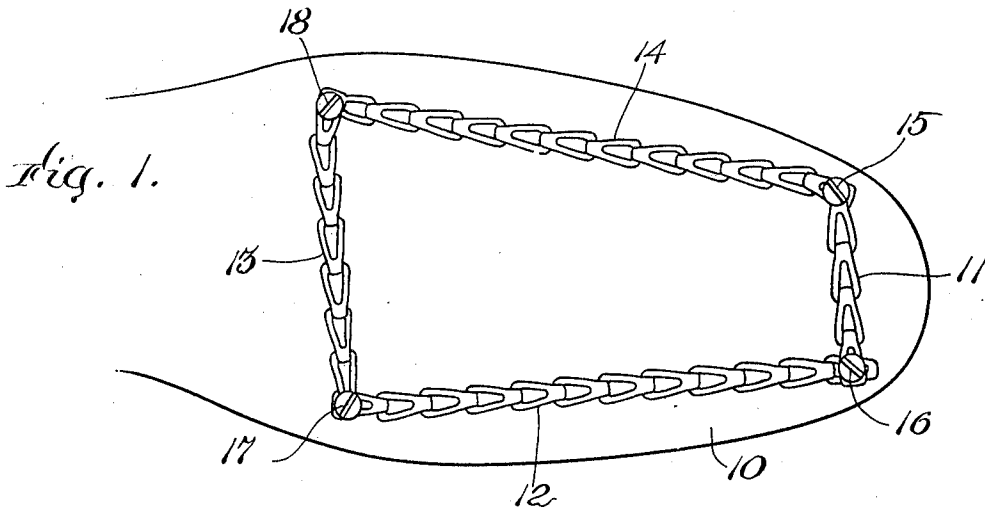


Fig. 2.

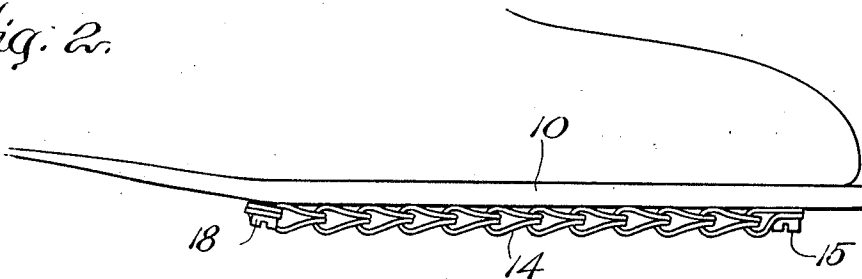


Fig. 4.

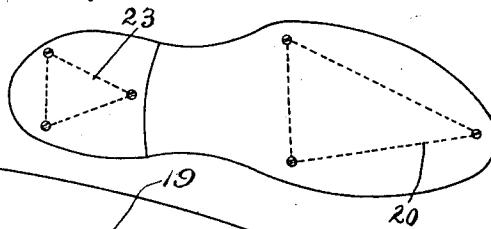
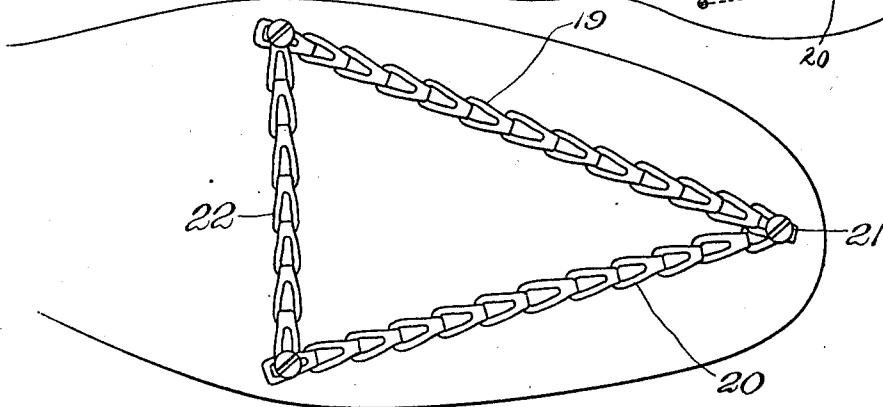


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES E. SIMPSON, OF WINTHROP, MASSACHUSETTS.

ATHLETIC SHOE.

1,021,166.

Specification of Letters Patent.

Patented Mar. 26, 1912.

Application filed April 15, 1911. Serial No. 621,345.

To all whom it may concern:

Be it known that I, CHARLES E. SIMPSON, a citizen of the United States, and resident of Winthrop, in the county of Suffolk and State of Massachusetts, have invented an Improvement in Athletic Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like reference characters on the drawings representing like parts.

This invention relates to shoes having a non-slipping tread and, while its advantages are applicable to other and general uses, it is especially designed for the use of athletes, as for tennis and ball players.

The invention consists in fixing to the sole of a shoe or boot, portions of chain having parts extending transversely of the sole and other parts extending generally lengthwise thereof, but desirably converging toward the front. A particular kind of chain is preferably employed, of a form to lie smoothly over the sole and present a smooth surface in ordinary walking so as not to mar or injure floors, but which presents a large extent of sharp biting surface to resist slipping of the shoe both lengthwise and crosswise or diagonally, as is a matter of common occurrence, especially in ball playing.

The invention will be fully understood from the following detailed description, taken in connection with the accompanying drawings, and will be thereafter pointed out in the appended claims.

Referring to the drawings, Figure 1 is a plan view of a shoe sole with my improved attachment fitted thereto; Fig. 2 is a side elevation thereof; Fig. 3 is a plan view of another form; and Fig. 4 shows diagrammatically the application of the invention to both the heel and sole portions of a shoe bottom.

Referring to Figs. 1 and 2, the shoe sole 10, of any ordinary or usual form, has fixed thereto portions of chain 11, 12, 13, 14 by means of screw or rivet fasteners 15, 16, 17, 18. The portions 11, 13 of the chain are stretched transversely of the sole and resist the straight endwise thrusts upon the shoe, as in running. The portions 12, 14 extend generally lengthwise of the sole, but converge more or less toward the front. These chain portions are designed to resist side slipping of the shoe, and, since the pressures tending toward this are usually not straight sidewise but with a lengthwise component, these por-

tions of chain are preferably somewhat angular with reference to the length of the sole so that these transverse slipping strains will come approximately crosswise thereof. As shown in Fig. 3, this converging is carried to a still further degree, the side portions 19, 20 of the chain meeting in a common point 21 at the front part of the sole. In this form, the converging side portions 19, 20 of course cooperate to a large extent with the transverse portion 22 in resisting endwise thrusts upon the shoes, and in like manner the portion 22 cooperates in resisting oblique thrusts.

While I do not desire to be specifically limited as to the kind of chain to be employed, I find the form shown to be a specially suitable kind. This is an ordinary stamped link chain, each link being formed of flat stock folded over with registering eyes at its ends to receive the bent middle of the next link. This form of chain provides relatively broad smooth bearing surfaces close together which lie flat upon the sole and have no tendency to dig in or bite in ordinary walking, but which, as thrusts are imparted to the shoe in running, turning, or sudden stopping, will afford a great number of sharp biting or gripping edges which will effectually hold the shoe and provide a reliable non-slipping tread.

In Fig. 4 a chain is shown at 23 fixed to the heel of the shoe as well as to the sole, thus further resisting slipping strains.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In combination, a sole, and a flexible non-slipping member held taut between separated points thereon, said non-slipping member being formed so as to present a relatively smooth tread in normal position but having sharp biting edges adapted to be brought into action as transverse thrusts are imparted thereto in use.

2. In combination, a sole, and a flexible non-slipping member held taut over the outer surface thereof between separated points to extend in an oblique direction generally lengthwise of the sole, said non-slipping member being formed to present a relatively smooth tread in normal position but having sharp biting edges adapted to be brought into action as thrusts are imparted crosswise of said member.

3. In combination, a sole, and a chain

held taut between separated points to extend over the sole in an oblique direction generally lengthwise of the sole and also crosswise of the sole, said chain having links
5 formed to present a relatively smooth tread in normal position but having sharp biting edges adapted to come into action as thrusts are imparted tending to twist the chain.

4. In combination, a sole and a chain held
0 taut between separated points thereof, said chain consisting of a series of links formed of flat stock folded over so as to present a relatively smooth tread in normal position but having sharp biting portions adapted
15 to come into action as the chain is twisted.

5. In combination, a sole, and a chain

fixed to the outer surface thereof to extend obliquely and generally lengthwise, said chain consisting of links formed of flat stock with sharp edges folded over so as to
20 present a relatively smooth tread in normal position and a sharp biting tread as the chain is twisted, said chain being held taut between separated points on the sole.

In testimony whereof, I have signed my
25 name to this specification, in the presence of two subscribing witnesses.

CHARLES E. SIMPSON.

Witnesses:

CLYDE L. ROGERS,

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