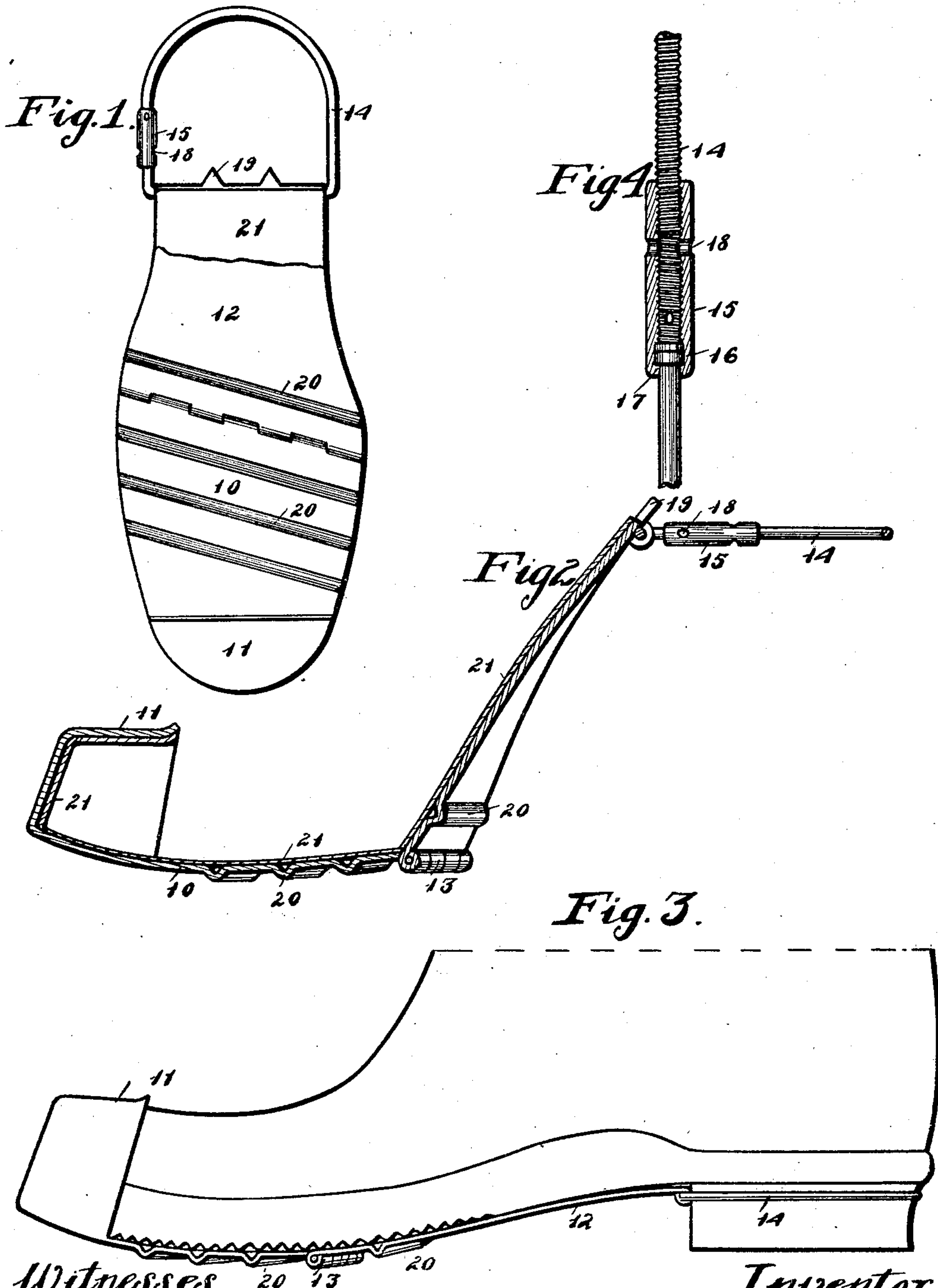


F. C. SPARKS.  
DETACHABLE METAL SOLE FOR FOOTWEAR.  
APPLICATION FILED OCT. 15, 1910.

999,681.

Patented Aug. 1, 1911.



Witnesses  
W. A. Loftis.  
A. S. Hague

Inventor.  
Fred C. Sparks.  
by J. Ralph Dringatt



# UNITED STATES PATENT OFFICE.

FRED C. SPARKS, OF NEW SHARON, IOWA.

DETACHABLE METAL SOLE FOR FOOTWEAR.

999,681.

Specification of Letters Patent.

Patented Aug. 1, 1911.

Application filed October 15, 1910. Serial No. 587,341.

*To all whom it may concern:*

Be it known that I, FRED C. SPARKS, a citizen of the United States, residing at New Sharon, in the county of Mahaska and State of Iowa, have invented a new and useful Detachable Metal Sole for Footwear, of which the following is a specification.

The object of my invention is to provide a metal sole for boots and shoes of simple, durable and inexpensive construction, capable of being readily and easily detached from the shoe.

A further object is to provide a metal sole so constructed as to prevent slipping and also hinged to permit its movement as the foot bends.

My invention consists in certain details, and in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 shows a plan view of the metal sole embodying my invention. Fig. 2 shows a central, longitudinal, sectional view of the same in a bended position. Fig. 3 shows a side view of said sole attached to a boot, and Fig. 4 shows a detail view of the means employed to secure the sole to the boot.

Referring to the accompanying drawings, I have used the reference numeral 10 to indicate the main part of the sole. Formed at the front of the part 10 is a cap 11 for the purpose of admitting the toe of the boot.

The reference numeral 12 indicates the arched portion, said arched and main portions being connected by a hinge 13 located under the ball of the foot. Hinged to the arched portion at its rear end is a loop 14 which passes around the heel of the boot. A screw threaded sleeve 15 coöperates with one end of the loop which is also screw threaded; the other end of the loop has an annular flange 16 rotatably mounted within the sleeve and resting on the shoulder 17 of the sleeve. The sleeve is provided with openings 18 into which a pin or key may be inserted for the purpose of tightening the loop around the heel.

Extending outwardly from the arched portion next to the heel is a number of pointed lugs 19 which penetrate the heel of the boot and thereby assist in holding said sole to the boot. From the foregoing it will be seen that the sole is firmly held in posi-

tion at all times. At intervals along the sole are corrugations or ridges 20 to prevent slipping. The toe cap and the surface of the sole next to the boot are provided with a lining 21 to thereby prevent wear on the boot.

In attaching the sole to a boot or shoe, the toe of the boot is first inserted in the toe cap. The pointed lugs are next forced into the heel and the loop is then placed around said heel and secured thereon by means of tightening the screw threaded sleeve.

It will readily be seen that I have provided a metal sole of very simple and inexpensive construction and one that may be readily attached to or detached from a boot or shoe. It is also obvious that in wearing this sole the foot will not become sore or chafed as the sole is so constructed that the hinges or other projections are so positioned as not to injure the foot; and furthermore the hinges are so placed as to permit the natural bending of the foot.

I claim as my invention:

1. In a device of the class described, a main sole portion constructed with a toe cap at its forward end, capable of receiving the toe of a boot or shoe, an arched portion hinged to said main portion, a loop secured to said arched portion designed to fit and engage the heel of a boot and constructed with screw threaded ends, and a screw threaded sleeve coöperating with the ends of said loop to secure said loop to the heel.

2. In a device of the class described, the combination of a main sole portion having a toe cap formed thereon, an arched portion hinged to said main portion, both of said main and arched portions being corrugated, pointed lugs on said arched portion extending rearwardly, a loop hinged to said arched portion and engaging the sides of a boot heel, and means for securing said loop to the heel.

3. A device of the class described, comprising a main sole portion having a toe cap formed thereon, an arched portion hinged to said main portion, both of said main and arched portions being corrugated, pointed lugs on said arched portion extending rearwardly to thereby penetrate the heel of a boot, a loop hinged at the rear of said arched portion and extending around said heel, and a screw threaded sleeve coöperating with the ends of said loop to thereby hold said loop to the heel.



4. In a device of the class described, a combination of a main sole portion having a toe cap formed thereon to receive the toe of a boot, an arched portion hinged to said  
5 main portion and extending rearwardly therefrom, said main portion and said arched portion being corrugated, rearwardly extending pointed lugs on said arched portion designed to penetrate the front of the  
10 heel, a loop secured to said arched portion and designed to encircle the heel of a boot, and means for securing said loop to the heel.
5. In a device of the class described, a main sole portion constructed with a toe 15 cap at its forward end designed to fit over and around the toe of a boot, an arched portion hinged to said main portion and extending rearwardly therefrom, an adjustable loop pivotally secured to said arched 20 portion and designed to fit the heel of the boot, and means for tightening said loop about the solid heel portion of a boot and for securing it thereto.

FRED. C. SPARKS.

Witnesses:

MARY WALLACE,  
W. A. LOFTUS.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."

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