

No. 638,048.

Patented Nov. 28, 1899.

F. A. FINCH.  
TOE STIFFENER FOR FOOTWEAR.

(Application filed July 31, 1899.)

(No Model.)

FIG. 1

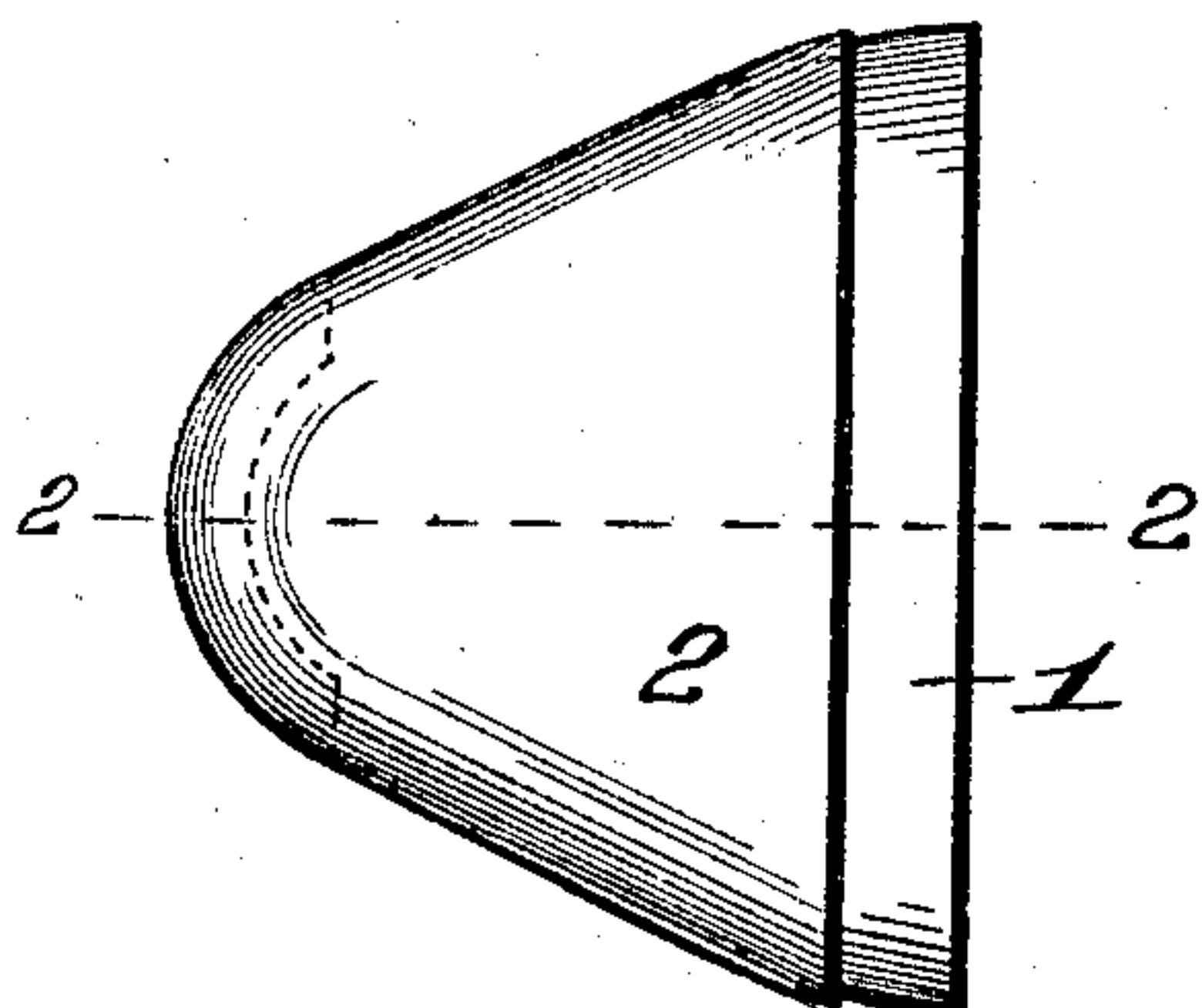


FIG. 3.

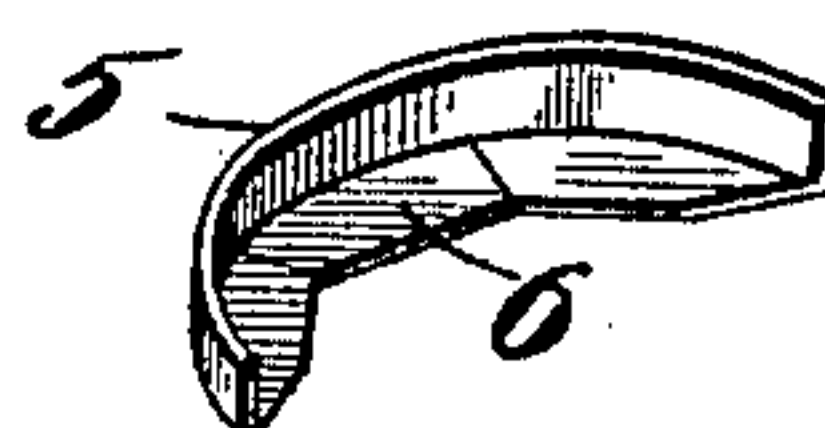


FIG. 2.

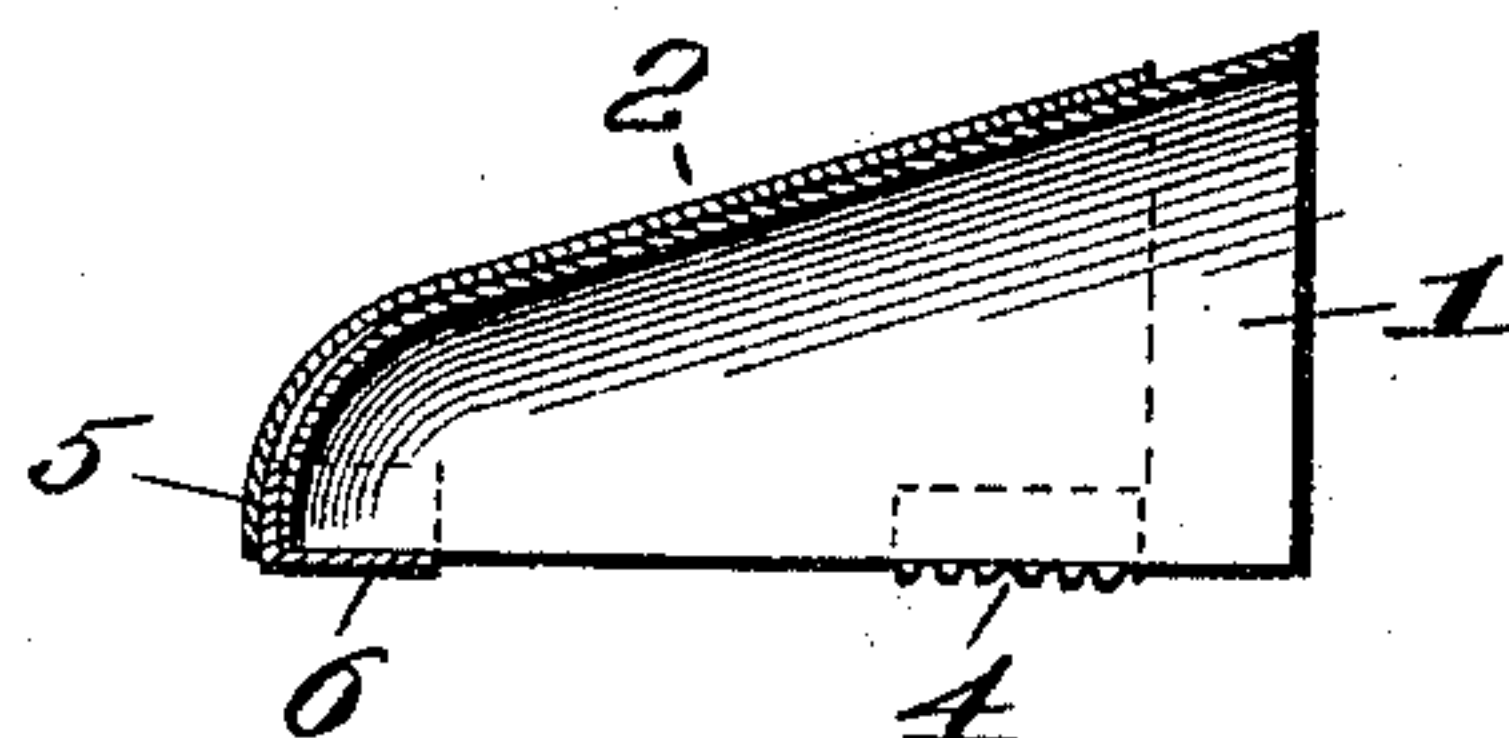


FIG. 4.

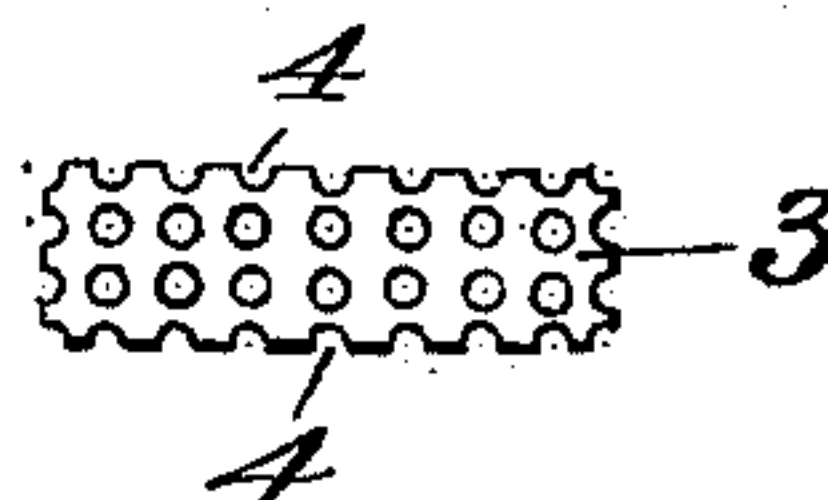
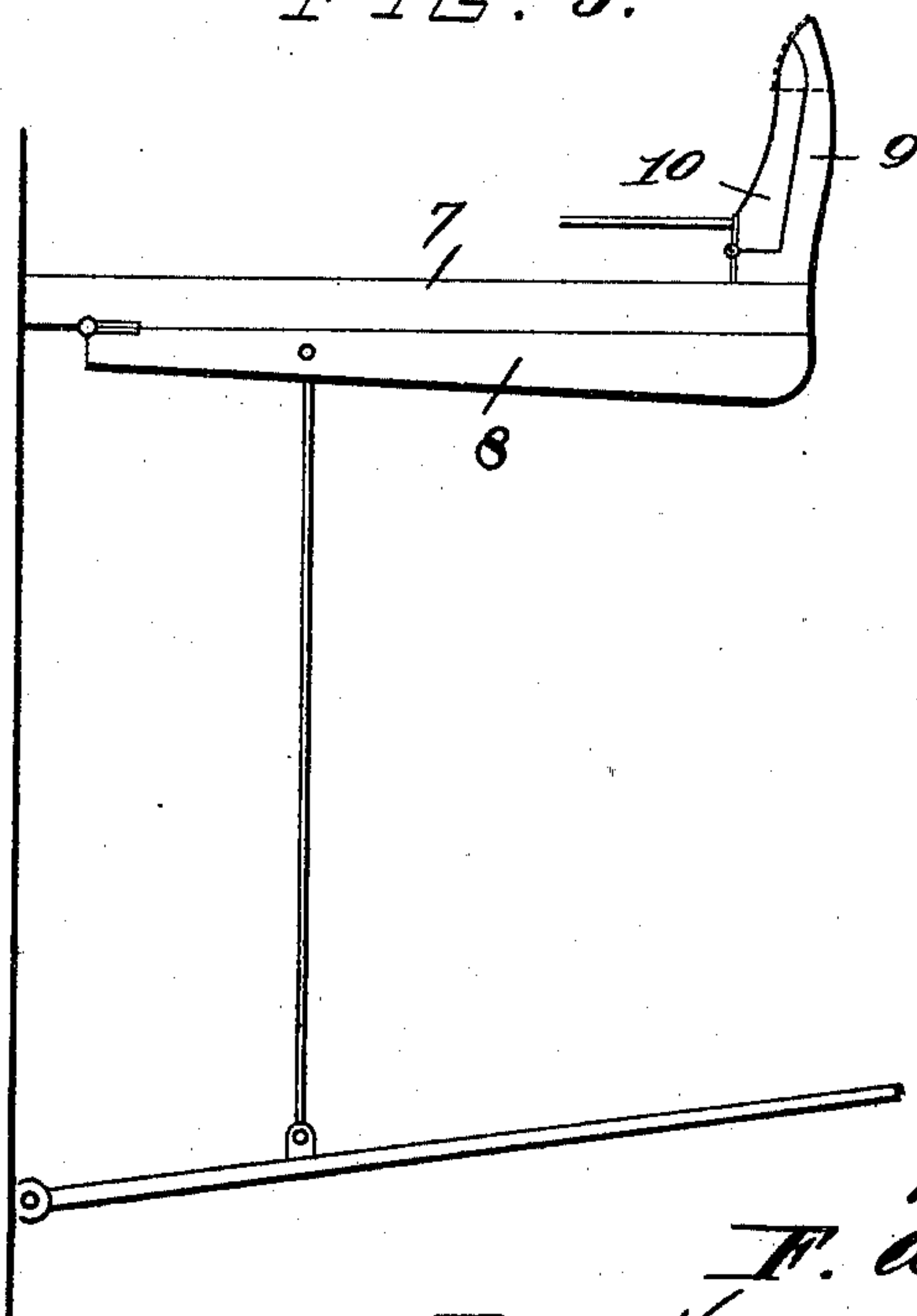


FIG. 5.



Attest  
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# UNITED STATES PATENT OFFICE.

FREDERICK A. FINCH, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-THIRD  
TO F. W. KLEINE, OF SAME PLACE.

## TOE-STIFFENER FOR FOOTWEAR.

SPECIFICATION forming part of Letters Patent No. 638,048, dated November 28, 1899.

Application filed July 31, 1899. Serial No. 725,620. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK A. FINCH, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Toe-Stiffeners for Footwear, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to toe-stiffeners for footwear; and it consists of the novel construction, combination, and arrangement of parts hereinafter described and claimed.

Figure 1 is a plan view of my improved toe-stiffener. Fig. 2 is a longitudinal sectional view taken approximately on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of a sheet-metal reinforcing-clip that is positioned at the forward end of the lower portion of the toe-stiffener. Fig. 4 is an elevation of one of a pair of plates made use of in carrying out my invention. Fig. 5 shows the apparatus made use of in positioning my improved toe-stiffener in a boot or shoe.

In the construction of my improved toe-stiffener I make use of a pair of sections 1 and 2 of flexible material—such as canvas, cloth, or leather—said sections being approximately triangular in shape, and the lower section 1 is slightly longer than the upper section 2. These sections 1 and 2 are securely held together by paste or analogous material, and after said paste is first applied the sections are molded or placed over a suitable form, which form is similar in shape to the toe portion of a boot or shoe, and the edges of said, triangular sections 1 and 2 are pressed downwardly around the sides of said form, and when the paste that retains the two sections together becomes dry and hardened the two sections 1 and 2 will become very stiff and of the proper shape to insert in the toe of the shoe.

Located between the sections 1 and 2, at the lower edges thereof and adjacent the rear end of the section 2, are the thin metallic plates 3, the same being provided with the toothed or serrated edges 4, and said plates are preferably perforated. The lower edges of these plates 3 project a slight distance below the lower edges of the sections 1 and 2 in order that said projecting edges may engage

against the insole of the boot or shoe when the stiffener is placed therein to retain said stiffener in proper position.

The clip seen in Fig. 3 comprises a curved plate 5, that is inserted between the sections 1 and 2, at the extreme forward ends thereof, and a flange 6 is formed integral with the lower edge of said plate 5, which flange 6 extends rearwardly at right angles to said plate, and when the stiffener is in position within a boot or shoe this flange 6 lies directly upon the extreme forward end of the insole. This sheet-metal clip is made use of in order to prevent the breaking or bending in of the forward end of the stiffener, this end being subjected to the greatest pressure when the stiffener is in use.

To position the stiffener in a boot or shoe, I have devised the apparatus seen in Fig. 5, said apparatus comprising the horizontal bar 7, to the under side of which is hinged a bar 8, that is normally held elevated by a spring or in any suitable manner, which bar 8 is adapted to be lowered by means of a treadle. Adjustably located upon the end of the bar 7 is a last 9, the instep portion 10 of which is hinged and arranged to swing outwardly away from the body portion of said last. The toe-stiffener is placed in position over the toe of the last, while the instep portion 10 occupies its normal position, after which the boot or shoe is passed over the last, with the heel portion thereof immediately beneath the forward end of the bar 8. The operator now manipulates the foot-treadle so as to swing the forward end of the bar 8 downwardly, pulls the boot or shoe downwardly onto the toe of the last, and in so doing the stiffener is properly located in the toe of the boot or shoe, and after this operation has taken place the operator swings the instep portion 10 of the last outwardly by means of its operating-handle, thus forcing the rear end of the stiffener up against the top portion of the shoe, after which said shoe is removed from the last with the stiffener in its proper position.

My improved toe-stiffener may be made of either two sections of canvas or of a section of canvas and a section of leather, and when this latter construction is used the leather section is the outside and smaller section.



A toe-stiffener of my improved construction is simple, inexpensive, easily applied for use, will remain in proper position within a boot or shoe, and very effectually retains the toe thereof in the desired position.

I claim—

1. A toe-stiffener, comprising a plurality of sections of material stiffened and bonded together by paste, means located between the lower edges of said sections for retaining the stiffener in position, and a metallic stiffening-clip located between the forward ends of the sections forming the stiffener, substantially as specified.

2. In a device of the class described, a plurality of sections stiffened and bonded to-

gether by paste, sheet-metal plates having serrated edges arranged between the lower edges of the rear ends of the sections forming the stiffener, and a semicircular stiffening-clip arranged between the sections at the forward end of the lower edges thereof, and a laterally - projecting flange formed integral with the lower edge of said clip, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK A. FINCH.

Witnesses:

EDWARD E. LONGAN,  
ALFRED A. EICKS.