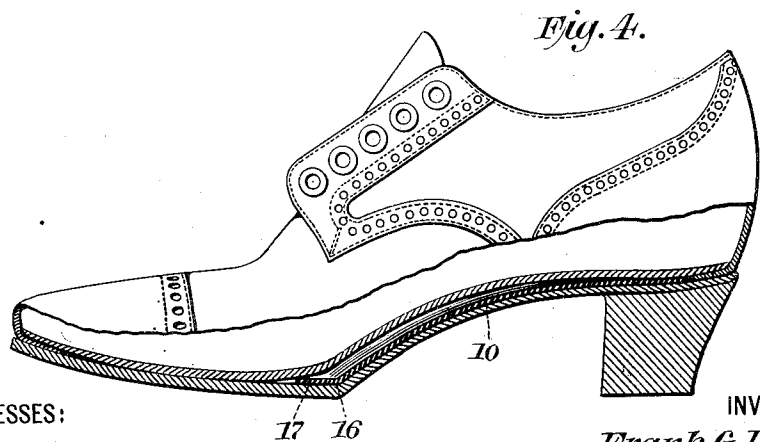
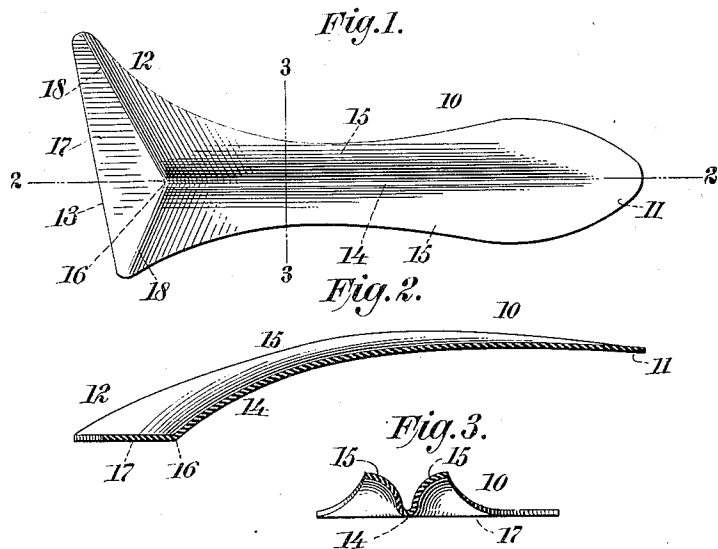


No. 874,884.

PATENTED DEC. 24, 1907.

F. G. DELBON.  
SHOE SHANK STIFFENER.

APPLICATION FILED NOV. 23, 1904. RENEWED MAY 10, 1907.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

FRANK G. DELBON, OF BROOKLYN, NEW YORK, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO HYGIENIC SHOE SHANK COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## SHOE-SHANK STIFFENER.

No. 874,884.

Specification of Letters Patent.

Patented Dec. 24, 1907.

Application filed November 23, 1904, Serial No. 233,931. Renewed May 10, 1907. Serial No. 372,895.

*To all whom it may concern:*

Be it known that I, FRANK G. DELBON, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Shoe-Shank Stiffeners, of which the following is a specification.

The invention relates to improvements in shank-stiffeners for shoes, boots and the like, and consists in the novel features of construction hereinafter described and particularly pointed out in the claims.

The object of the invention is to produce a light, easily applied, inflexible metallic shank or shank-stiffener whose structural features are such that it possesses a breaking strength in excess of any natural strain or weight to which it may be subjected when in use, and which shank-stiffener due to its construction possesses many features of advantage in practical use, among which it may be mentioned that it preserves the proper form and prevents the breaking down of the shoe, it affords the proper support for the arch of the foot, it enables the construction of a shoe having an inflexible shank portion and a perfectly flexible sole, which is the ideal construction, it enables the production of what is known in the art as a "fish bone" finish of the shoe shank, without extra labor or expense, and it adds life to the wear of the shoe and preserves its form and appearance.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is a bottom view of a metallic shank stiffener constructed in accordance with and embodying my invention, this stiffener being of the form employed for ladies' high-heeled shoes; Fig. 2 is a longitudinal section of same on the dotted line 2—2 of Fig. 1; Fig. 3 is a transverse section of same on the dotted line 3—3 of Fig. 1; Fig. 4 is a side elevation, partly broken away, of a shoe equipped with the shank-stiffener presented in Fig. 1.

In the drawings 10 designates the shank stiffener, which is in one integral piece of sheet metal, preferably steel, and of a length and width adapting it for the type of shoes with which it will be used.

The shank shown in Figs. 1 to 4 inclusive is of narrow elongated form rounded off at its upper end 11 and broadened out at its

lower end 12, where it terminates in the straight angular edge 13, which projects, when in the shoe, forwardly and inwardly, the shank stiffener shown in Fig. 1 being for use in the right shoe. The shank-stiffener presented in Fig. 1 is formed with the depressed longitudinal middle portion 14 which is of abrupt and narrow formation (Fig. 3) and creates on the lower side of the stiffener a pronounced rib and on the upper side thereof a longitudinal groove, and from this depressed or rib portion 14 the sides 15 of the stiffener arch upwardly and outwardly, as shown. The rib 14 does not extend entirely to the upper end 11 of the stiffener, since said end is intended to be left plain, for convenience in applying the stiffener to the position in the shoe shown in Fig. 4, nor does the rib extend to the edge 13 of the broad lower end 12 of the stiffener but terminates at the point 16, which represents the lower end of the shoe shank proper, while beyond this point 16 the stiffener is formed with the substantially flat triangularly shaped section 17 which enters the sole adjoining the lower end of the shank and from which the stiffener, starting from the well defined diverging lines 18 arches or curves upwardly toward its upper end 11. The side edges of the shank curve inwardly toward each other intermediate the ends of the shank, the shank being narrower at its middle transverse portions than at its end portions, as shown. The stiffener has thus the longitudinal rib portions 14 and transversely and longitudinally upwardly arched side portions 15, 15, and as a consequence the stiffener is rendered capable of withstanding any natural strain or weight that may be placed upon it. The formation shown of the lower end 12 of the stiffener is of considerable importance, especially in high-heeled shoes, since with the flat section 17 entering the sole of the shoe and the upper end 11 of the stiffener retained between the heel and insole, it is obvious that the arched and ribbed stiffener will be inflexible and cannot break down and will admit of the shoe-sole being made flexible. The rib portion 14 not only adds strength to the stiffener but it enables the shoe manufacturer to readily impart the double inclined or "fish-bone" style to the lower surface of the shoe shank.

The shank-stiffeners will be specially made to suit each last, and hence when in

the shoes they may be relied upon to preserve the form of the latter and properly support the arch of the foot.

What I claim as my invention and desire to secure, is:

1. A shank-stiffener in one integral piece of metal having the longitudinal depressed rib portion 14 commencing at a point 16 at the lower end of the shank and extending upwardly to near the upper end thereof, said shank at its lower end having a somewhat triangularly shaped portion sharply defined by outlines 18 diverging from said point and from which the shank arches upwardly toward its upper end, the sides of said shank being extended upwardly and outwardly in a transverse direction from said rib portion; substantially as set forth.

2. A shank-stiffener in one integral piece of metal having the longitudinal depressed rib portion commencing at a point 16 at the lower end of the shank and extending upwardly to near the upper end thereof, said shank at its upper end being flat and rounded at its edges and at its lower end having a somewhat triangularly shaped portion sharply defined by outlines 18 diverging from said

point and from which the shank arches upwardly toward its upper end, and said shank having inwardly curved side edges and sides which extend upwardly and outwardly in a transverse direction from said rib portion and are upwardly arched; substantially as set forth.

3. A boot or shoe comprising an outer sole having a flat tread which forms an irregular obliquely arranged ridge by its junction with the shank portion, and a shank piece the body portion of which is longitudinally curved to conform to the shank portion of the outer sole, the forward portion of the shank piece having a flat face which forms an irregular obliquely arranged ridge by its junction with the bottom surface of the body portion, and supports the ridge and the rear portion of the flat tread of the outer sole.

Signed at New York city, in the county of New York and State of New York this 22nd day of November A. D. 1904.

FRANK G. DELBON.

Witnesses:

CHAS. C. GILL,  
ARTHUR MARION.