No. 897,032. PATENTED AUG. 25, 1908.

# W. THOMPSON.

## SHOE SHANK SUPPORT AND SHOE.

APPLICATION FILED MAY 31, 1907.

Fig. 1.

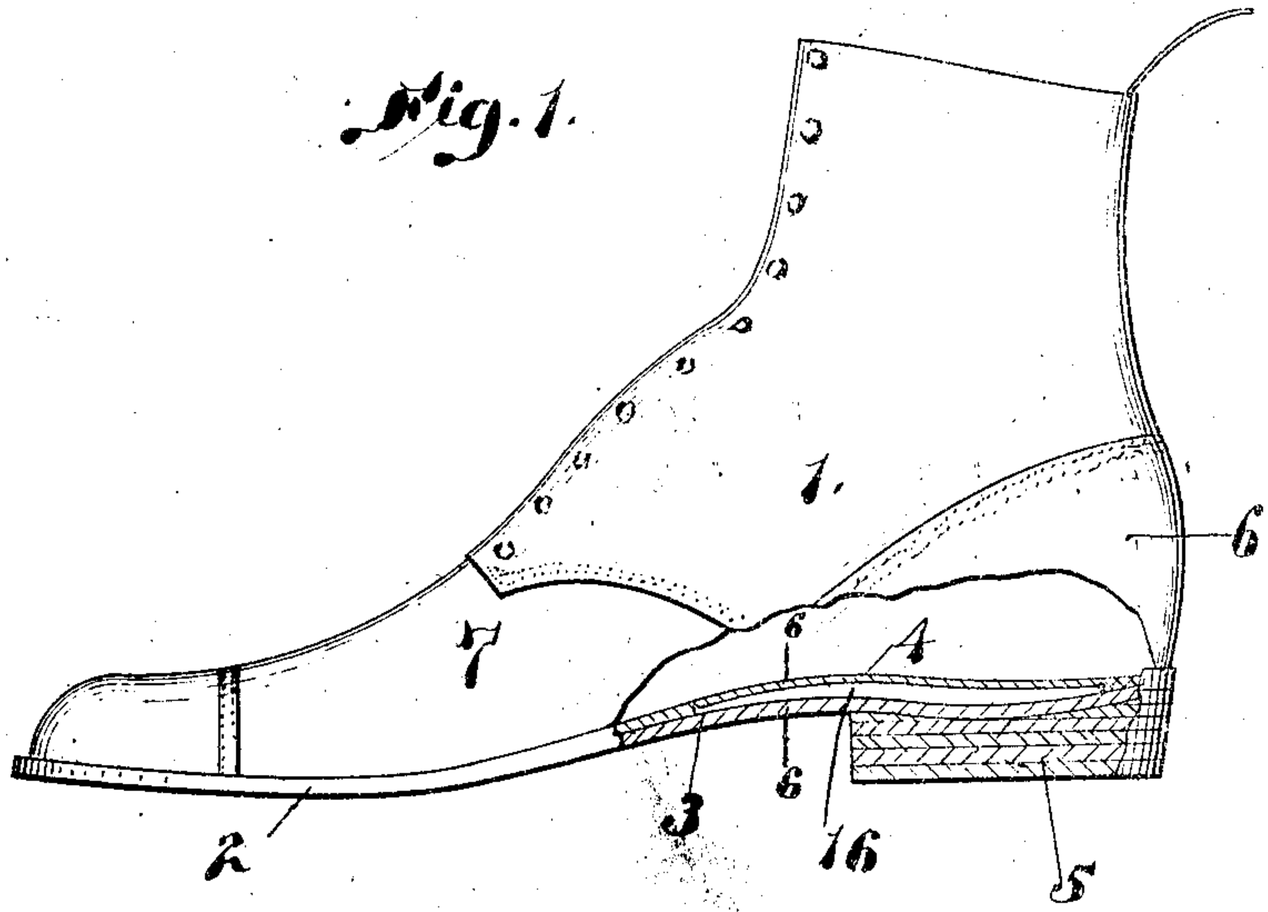



Fig. 2.

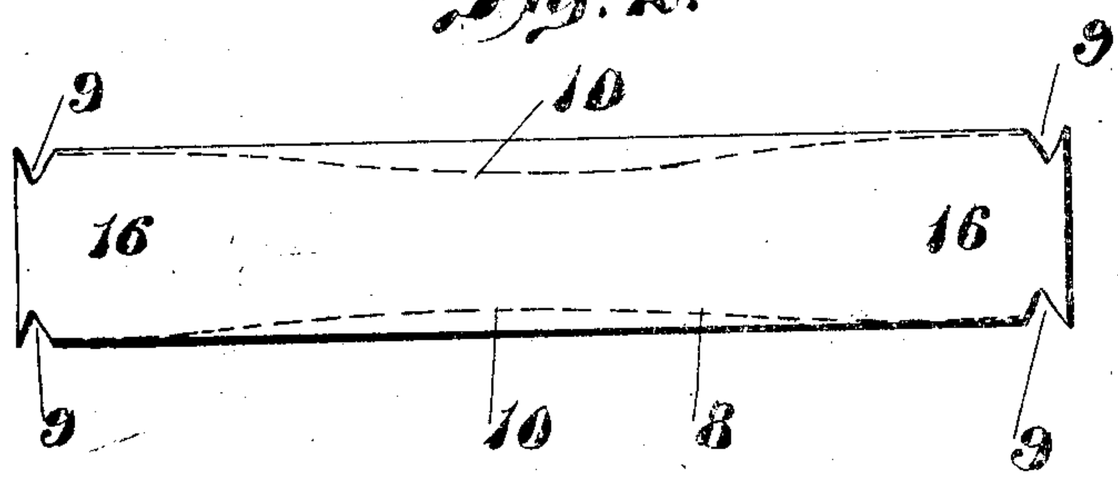



Fig. 3.

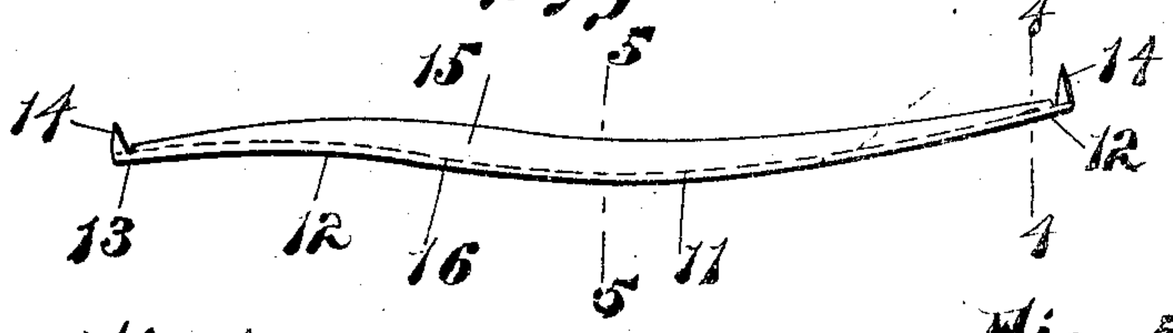



Fig. 4.




Fig. 6.

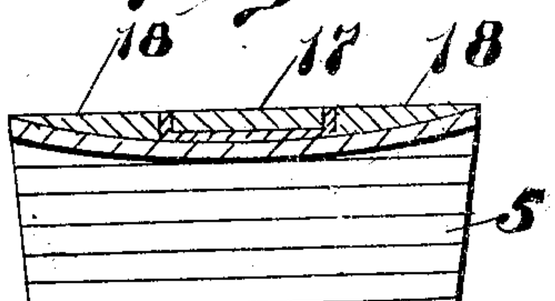
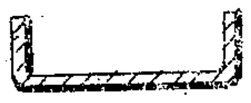



Fig. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## SHOE-SHANK SUPPORT AND SHOE.

No. 897,032. Specification of Letters Patent. Patented Aug. 25, 1908.

Application filed May 31, 1907. Serial No. 376,593.

*To all whom it may concern:*

Be it known that I, WILLIAM THOMPSON, a citizen of the United States, and a resident of Brockton, in the county of Plymouth and State of Massachusetts, have invented an Improvement in Shoe-Shank Supports and Shoes, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

In making shoes it is customary to have the arch of the foot supported by a stiffened shank, said stiffening being accomplished usually by placing between the forward end of the heel and the rear end of the tap or corresponding portion of the sole, a stiff piece of spring steel, wood, or other stiffening material interposed between the sole and innersole. I have discovered that a much more satisfactory and comfortable shoe can be made by providing, instead of this kind of a shank stiffener which I have just explained, a projecting rigid support above the heel which terminates as an unyielding abutment or brace at about the middle of the length of the shank, thereby leaving the entire forward portion of the shank freely flexible. Accordingly, I have provided a stiffening piece interposed between the heel and the innersole extending rigidly forward like a cantaliver, to the middle of the arch or shank, where it terminates abruptly, the entire projection being unyielding, being formed at its rear end to correspond to the shape of the heel of the foot, so that it is anchored and held rigidly by the heel, and having a strong stiff, thin end projecting, with a slightly downward curve at its end, forward from the normal breast line of the heel, to the middle of the shank, for preventing the arch of the foot from breaking down, or for restoring it and supporting it if broken down. The forward portion of the shank of the shoe beyond the end of my cantaliver-like stiffener is left perfectly free to bend up and down and to conform to the requirements of the foot.

My invention is a support, but not a stiffener, as commonly understood, as it aims to leave the shoe more flexible than before.

By reason of this invention the ordinary low shoe or Oxford is adapted to general use. At present many people cannot wear Oxfords because of the lack of support at the counter. As commonly constructed, the counter or heel portion of the vamp or upper is sustained only by the connecting portion of the upper which extends forward to the forepart of the shoe, and hence, unless the shoe is a tight fit about the heel of the foot, there is apt to be more or less looseness and a noticeable lack of support to the foot, especially the ankle. By reason of my invention, however, the heel-enveloping portion of the upper is held up against the heel of the foot firmly and with considerable supporting resistance, thereby sustaining the heel by the shank, but leaving the forward part entirely flexible.

One advantage of my invention is that it leaves the nerve center of the foot easy and flexible, it being well understood that the nerve center of the foot is just at the forward end of the arch back of the ball of the foot. In practice, I have found that, on this account, the shoe does not produce the fatigue commonly experienced, and is exceedingly comfortable.

In the drawings, in which I have illustrated my invention, Figure 1 is a side elevation of my improved shoe, a portion being broken out to show the internal construction which constitutes my invention; Fig. 2 is a view of the blank from which the shank-stiffener or heel support is formed; Fig. 3 is a side elevation of the shank stiffener; and Figs. 4 and 5 are sectional views taken on the lines 4—4, 5—5, Fig. 3; and Fig. 6 is a sectional view through the lower part of the shoe on the line 6—6, Fig. 1.

It will be understood that the shoe 1 may be of any usual or preferred construction, including a welt 2 extending upwardly in proper arched shape at the shank 3 and an innersole or lining 4, heel 5, counter portion or heel end 6 of the upper, and forward part or foot portion 7 of the vamp. I first take a blank 8, preferably shaped as shown in Fig. 2, having V-shaped notches 9 adjacent its opposite ends. This blank is formed preferably of comparatively heavy sheet steel or other suitable strongly resistive material. I bend the edges inwardly along the dotted lines 10, and curve the rear portion downwardly at 11 and upwardly therefrom in both directions for about two thirds of its length, as shown at 12, and downwardly at its front end 13, bending the corners of the blank upwardly to constitute pricks or prongs 14 for engaging the leather and automatically holding the shank against any possible shifting movement. The upwardly bent edges constitute supporting flanges 15 which practically merge into the plane of the body 16 of the stiffener

at its opposite ends and gradually widen or thicken from the ends toward the middle, as clearly shown in Fig. 3, so as to make the stiffener entirely rigid and unyielding. This trough-shaped formation is filled with a piece of leather or other filler 17 and supported at its opposite sides by similar filler 18, and permanently holds the shoe in exactly the position required.

It will be understood that the curvature of the stiffener will vary with the style of shoe and the requirements of the wearer.

This construction constitutes an invisible bracket or strut for the heel, which is sufficiently narrow to occupy the longitudinal middle of the shank and heel without interfering in any way with the transverse curvature of the shank and the requirements necessary in order to give a desirable finish and grace to the shoe as an article of manufacture, and yet being sufficiently strong and having the right downward curvature at its forward end to coöperate with the shank in supporting the heel portion of an Oxford or low-cut shoe, said short forwardly-extending part of the stiffener terminating in all instances about midway of the length of the shank, *i. e.*, back of the nerve center to which I have referred.

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

1. A shoe, comprising an upper, sole, heel and insole, and having an unyielding stiffener interposed above the heel between the insole and sole, said stiffener terminating in an unyielding forward end midway of the length of the shank and having its unyielding rear end terminating near the rear of the heel, the rear portion of said unyielding stiffener being curved from near the middle of the stiffener downwardly toward the rear end for a short distance and thence curved upwardly the remaining distance to said rear end to conform to the heel of the foot, and the forward unyielding portion of said stiffener being curved from the near middle of the stiffener upwardly toward the front end for approximately half the distance to said front end and thence downwardly the remainder of the distance to said front end to fit the shank.

2. A shoe, comprising an upper, sole, heel and insole, and having a rigid stiffener interposed between the insole and sole and extending above the heel, said stiffener terminating in an unyielding forward end midway of the length of the shank of the shoe, and terminating in an unyielding rear end near the rear of the heel, to provide an unyielding bracing abutment within the shank projecting from and supported rigidly at the heel, the rear portion of said stiffener being curved downwardly from the normal breast line of the heel rearwardly and thence upwardly to its extreme end to conform to the heel of the foot, and the forward portion of said stiffener from said breast line having a permanent unyielding curve corresponding to the normal curve of the shank, and having at its opposite ends integral retaining means for preventing shifting of position.

3. A shank stiffener, having its body portion unyielding in any direction and reversely curved toward its opposite ends, said stiffener being provided with opposite side flanges shallow at their opposite ends and gradually increasing in vertical width intermediate said ends, rendering the stiffener lengthwise unyielding, said stiffener being provided with retaining prongs arranged to extend into the adjacent layer of leather for preventing longitudinal movement.

4. A shank stiffener formed from an approximately parallel-sided blank, said stiffener being curved from one end downwardly and thence upwardly to a uniform concavo-convex shape for approximately two thirds of the length of the stiffener from said end, the remaining third of said stiffener being curved in a reverse direction to a similar but shorter concavo-convex shape, one end of the stiffener curving downwardly and the other end of the stiffener curving upwardly, said stiffener becoming gradually narrower widthwise toward its middle portion, and having opposite side flanges extending from end to end of the stiffener, shallow at their opposite ends and gradually increasing in vertical width intermediate said ends, rendering the stiffener unyielding.

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

WILLIAM THOMPSON.

Witnesses:
M. J. SPALDING,
GEO. H. MAXWELL.