F. KOESTER.

SHOE AND STIFFENER STRIP FOR THE SAME.

APPLICATION FILED SEPT. 11, 1917.

1,296,530. Patented Mar. 4, 1919.

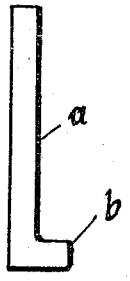


Fig. 1.



Fig. 2.

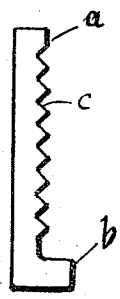


Fig. 3.

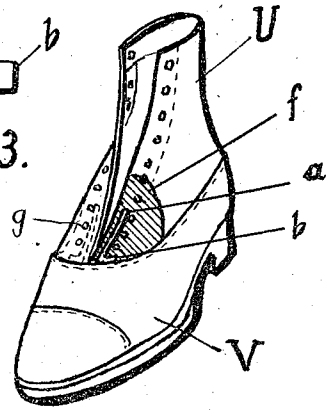


Fig. 4.

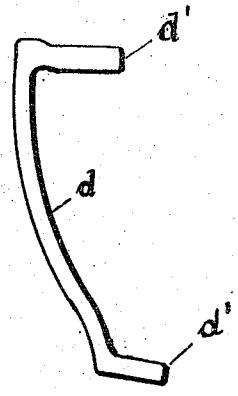


Fig. 5.

Inventor

By his Attorney Frank Koester

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UNITED STATES PATENT OFFICE.

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SHOE AND STIFFENER-STRIP FOR THE SAME.

1,296,530. Specification of Letters Patent. Patented Mar. 4, 1919.

Application filed September 11, 1917. Serial No. 190,730.

To all whom it may concern:

Be it known that I, FRANK KOESTER, a citizen of the United States, residing at the borough of Manhattan, in the county, city, and State of New York, have invented a new and useful Improvement in Shoes and Stiffener-Strips for the Same, of which the following is a specification.

The objects of my invention, are to provide as a new article of manufacture, a shoe of a new and improved form, which may be of the laced or button-type; which is incapable of becoming wrinkled at the lower instep portion; which is greatly strengthened at such portion where the greatest strain is on the eyelet or button-holes which are frequently torn out and the shoe practically ruined.

These objects are accomplished by providing the shoe upper adjacent to the abutting portions of the closure slit, whether the shoe be of the lace or button secured type; with stiffener members or strips at the bottom slit central portion of the upper, formed usually of thin spring highly flexible tempered steel, usually and preferably of what is known as rustless steel; or if not, of non-oxidizable metal, provided with a covering impervious to moisture.

My said invention is fully shown, described and claimed in the following specification, of which the accompanying drawing forms a part, wherein similar letters of reference designate like or equivalent parts, wherever found throughout the several views, and in which—

Figure 1 is a plan view of one of my improved metal shoe stiffeners of L-shape having the upright long leg *a*, and the bottom short leg *b*;

Fig. 2 is a stiffener having a short leg *b* at either end;

Fig. 3 is a stiffener like that shown in Fig. 1, having serrations *c* to receive stitchings of thread, through the shoe upper, when in place in the shoe; such serrations, while being adaptable to all the various forms of my improved highly resilient flexible shoe stiffeners shown, being more especially designed and adapted to be used in shoes having no eyelets, such as those of the button and button-hole type, and the stitchings of thread being passed through the shoe-upper when the stiffener is in place in the shoe so as to lie in the hollows of the serrations.

Fig. 4 is a front view in perspective of a shoe of my improved form, of the eyeleted laced-type, provided with the form of stiffener shown in Fig. 1, shown in position therein; a portion of the outer ply or layer of the shoe upper being broken away in order to better show the same and how it is secured against displacement by the eyelets passing through both inner and outer plies; and

Fig. 5 is a plan view in detail of a modified form of stiffener having a curved main-bar and inwardly extending end portions, more especially designed and adapted for use in the outer and overlapping button-hole carrying flap of the shoe, when buttons instead of eyelets are used.

Referring to the drawing:

In Fig. 4, the reference letter *u* represents the upper of a shoe of the laced type, the outer leather or ply of the fabric forming the same being partially broken away in order to better show the construction, and manner of placing in position my improved form of shoe upper stiffening herein disclosed; and such upper of the shoe is provided with two of my said highly flexible, thin resilient, shoe-stiffeners which, in this case, are of substantially the L-shaped form shown in Fig. 1, which are held in position between the plies of the upper, and held against displacement by the lower three eyelets *g*, (the stiffener on the unbroken away side being shown in dotted lines) through which eyelets, as well as those above them, the shoe lacing is passed; and in place of the stiffener of the form shown in Fig 1 having the longitudinal upright bar *a*, and the horizontally extending bottom bar *b*, either the form shown in Fig. 2 with a top as well as a bottom bar *b*, or a stiffener shaped like that in Fig. 1 provided with serrations *c* Fig. 3 may be used. And in either of the forms shown, especially that in Fig. 3, having the serrations *c* in addition to the eyelets abutting against the lower end piece *b* and the adjacent inner edge of the bar *a*, from end to end of such bar a line of stitching (not shown) may be sewn through all the several plies of the upper, to more fully secure the stiffener against displacement.

In shoes of the well known button and button-hole, or of the glove-snap-fastener types of securing at the slit of the uppers; the flap on one side (that carrying the button-hole) of necessity overlaps on the other flap (carrying the button, etc.) and its edge

is of more or less curved contour, especially for a short distance above the lower end of the slit, and for these forms of shoes I provide the modified form of my improved thin, highly flexible, resilient shoe-stiffener shown in Fig. 5, which, as shown, has the longitudinal bar *d* (answering to the straight bar *a* of Figs. 1 to 4) curved to fit the contour of the edge of the outer and button-hole flap of the shoe, whatever it may be; and such stiffener is provided with the inwardly-projecting upper and lower bars *b'*, performing the same securing functions as the like bars *b* of Figs. 1 to 4, and when my improved stiffener of such form, is in place in the upper of the shoe, between the plies thereof, the button-holes worked in the shoe-upper, or when the shoe is of the snap-fastener type, such fastener members, as in the case of the lace-type of shoe shown in Fig. 4, are so located as to prevent inward or longitudinal displacement of the stiffener between the plies of material, the outer edges of the enlarged portion of the button hole, worked in and through the shoe upper, abutting against the concaved inner edge of the stiffener and one of such button holes usually the fourth from the bottom, being formed in such position as to be in contact with the upper edge of the upper horizontal end bar *d'* of the stiffener. And while two stiffeners are sometimes, especially in the case of cloth or very thin leathered button-shoes, used, in shoes of heavy material I have found one of such stiffeners secured in the outer and button hole flap of the shoe abundantly sufficient.

I am aware that several devices, somewhat resembling my improved shoe-upper, thin, highly flexible, resilient, stiffening-strip herein shown and described, adapted to be used in shoes, and other various articles of personal wear, are to be found in the art; but none of them, so far as I have been able to learn, are of the same form or of the high flexibility, thinness and great resiliency necessary to bring about the results, first to my knowledge brought about by my invention herein disclosed; and nowhere in the art, so far as I know, prior to my said invention, have stiffening devices of the same shape and contour been used or secured in the same manner as herein shown, described and claimed.

I claim:

1. As an article of manufacture, a thin, highly flexible, resilient stiffener strip for shoes, adapted to be secured between the plies of the fabric of the upper adjacent to the bottom end of the closure-slit, and held against displacement by abutment with the inner closed edge of such closure-slit, and by the slit-closing and securing members carried by the upper adjacent to such closed edge, in abutment with such stiffener-strip at its inner edge.

2. As an article of manufacture, a thin, highly flexible, resilient stiffener strip for shoes, adapted to be secured between the plies of the fabric of the upper adjacent to the bottom end of the closure-slit, and held against displacement by abutment with the inner closed edge of such closure-slit, and by the slit-closing and securing members carried by the upper adjacent to such closed edge, in abutment with such stiffener-strip at its inner edge, such stiffener-strip being provided with one or more projecting securing end portions formed integral therewith.

3. As an article of manufacture, a thin, highly flexible, resilient stiffener-strip for shoes, adapted to be secured between the plies of the fabric of the upper adjacent to the bottom end of the closure-slit and held against displacement by abutment with the inner closed edge of such closure-slit, and by the slit-closing and securing members carried by the upper adjacent to such closed edge, in abutment with such stiffener-strip at its inner edge, such stiffener-strip being provided with one or more projecting securing end portions formed integral therewith, and having the main body portion thereof curved.

4. As an article of manufacture, a shoe provided with a thin, highly flexible, highly resilient stiffening-strip secured between the plies of the fabric of the upper adjacent to the bottom end of the closure-slit, and held against displacement by abutment with the inner closed edge of such closure-slit, and by the slit-closing and securing members carried by the upper adjacent to such closed edge, in abutment with such stiffener-strip at its inner edge.

Signed at New York city in the county of New York and State of New York this 10th day of September, A. D., 1917.

FRANK KOESTER.

Witnesses:
ADAM E. SCHATZ,
MARTHA R. BERNHEIM.

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