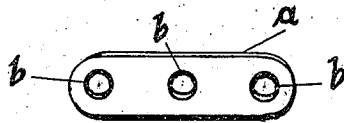


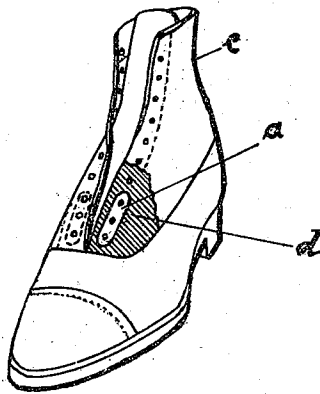
F. KOESTER.  
SHOE AND STIFFENER STRIP FOR THE UPPERS THEREOF.  
APPLICATION FILED AUG. 4, 1917.

1,296,529.

Patented Mar. 4, 1919.



*Fig. 1.*



*Fig. 2.*

Inventor  
F. Koester  
By his Attorney  
Adam E. Schatz

# UNITED STATES PATENT OFFICE.

FRANK KOESTER, OF NEW YORK, N. Y.

SHOE AND STIFFENER-STRIP FOR THE UPPERS THEREOF.

1,296,529.

Specification of Letters Patent.

Patented Mar. 4, 1919.

Application filed August 4, 1917. Serial No. 184,388.

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 Uppers Thereof, of which the following is a specification.

The objects of my invention, are to provide as a new article of manufacture a thin, highly flexible, highly resilient, shoe upper stiffener-strip, and by its insertion and securing within the upper thereof, to also form a shoe of a new and improved form, of the laced-type, which is incapable of becoming wrinkled at the lower instep portion of the lacing-slit; which is greatly strengthened at such portion where the greatest strain on the eyelet-holes comes; where in weak-leathered uppered or vamped shoes, (especially where no metallic eyelets are used) the eyelet holes are frequently torn out and the shoe practically ruined.

Another object of the invention is to effect a more uniform distribution of pressure due to the pull of the lacing along the lacing-slit, thus adding to the life of the shoe and the comfort of the wearer.

These objects I accomplish by providing a narrow and extremely thin but highly flexible and highly resilient stiffening-strip, with a perforation or perforations of such width or diameter as to permit of the passage therethrough of the metallic or other suitable lace-eyelets, or bases of the lace-hooks when such are used, so as to secure the same to the shoe upper adjacent to the lace-slit; usually but not necessarily in all cases, located and concealed from view between the several plies of the fabric of which the shoe upper is formed, and beneath the upper-leather and quarter-lining, and above the lace-stay; which stiffener-strip when in position in such shoe-upper extends upward from the vamp of the shoe to any required distance, according to the type of shoe, in this case, to slightly above the third lace-eyelet from the bottom of the lace-slit.

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 front view in detail of my improved lace-slit shoe stiffening strip; and

Fig. 2, is a front view in perspective of a shoe provided with my said improved lace-slit-shoe stiffener strip, a portion of the outer-ply of the upper of the shoe-top being broken away at one side of the lace-slit adjacent to the bottom thereof in order to better show the position of the stiffener-strip in the shoe top or upper.

Referring to the drawing:—

The reference letter *a* designates my improved flexible resilient lace-slit shoe-stiffener, which is formed usually of thin spring highly tempered steel, usually and preferably of what is known as the rustless or non oxidizable variety; and when of oxidizable metal provided with a protective covering of Japan varnish, lacquer, or other suitable protective coating or covering.

Whatever the length of such stiffening-strip *a*, in the exact form which I prefer to use, but to which I do not intend to in any manner strictly limit myself, the same is rounded at the ends and provided with a plurality of circular holes or perforations *b*, spaced apart the distance the lacing-eyelets will be spaced apart when secured in place in the shoe upper, and such strips are secured in position in the shoe-upper, on either side of the lace-slit, at its lower end between the plies of the upper, by the ordinary metallic (or other) lacing-eyelets which pass through all such several plies of the upper, and through such holes of the interposed flexible, resilient stiffening-strip. In this case three holes *b* are shown for the reception of such securing eyelets, or other like securing member, but the same may be increased indefinitely in number, in case the strip be made longer.

In cases where it is desired not to have the eyelets show, or in what is commonly known in the shoe-trade as the "non-eyeleted laced-shoe", instead of having the eyelets passed through the outer ply of the shoe-upper, they may be only passed through the inner plies and the strip, and be concealed by such outer facing-ply, which is provided with perforations registering with the orifices of such eyelets; which will give the shoe the appearance of a non-eyeleted one, while being much stronger, and a shoe in

which however tight the lacing edges are drawn, the holes of the upper leather, or the eyelets cannot be broken away.

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, the purpose and design of which is (a) to prevent the shoe from wrinkling at the instep, and sometimes above the same, without cramping the foot, or rendering the leather or other fabric of which the shoe-upper is composed of any greater stiffness; and (b) to at the same time strengthen the shoe at the lacing-slit, in such manner that the lacing-eyelets, holes, or other securing devices, performing the like functions, will have less likelihood of being torn out.

I am aware that British Letters Patent #2648, of 1877, shows a corset having adjacent to the slit a steel stiffening-strip, on either side, through which, as well as through the superposed outer and inner plies of the fabric of the corset, pass the eyelets for the reception of the corset cord, or lace; but in such construction, and for the purposes of giving a new and different shape to the torso of the wearer, as is the main purpose of a corset, such stiffening-strip is of much greater stiffness, and in most cases fully four or more times greater in stiffness, and non-flexibility, than could be used in shoes, as in the case of my highly flexible, thin, highly resilient, stiffening-strip.

I claim:—

1. As an article of manufacture, a laced-shoe having a thin, highly flexible resilient stiffening-strip secured to the shoe-upper along each side of the lace-slit, provided with a plurality of apertures, for the reception of the shoe-lace.

2. As an article of manufacture, a laced shoe having a thin, highly flexible resilient stiffening-strip secured to the shoe-upper

along each side of the lace-slit, provided with a plurality of apertures, and a lace-eyelet passing through the shoe-upper and each of such apertures in the stiffening-strip securing the same in position in the shoe-upper. 55

3. As an article of manufacture, a laced-shoe having a thin, highly flexible resilient stiffening-strip secured to the shoe-upper along each side of the lace-slit, provided with a plurality of apertures, and a lace-eyelet passing through the shoe-upper and stiffening-strip for each of such apertures in the stiffening-strip securing the same in position, such strip being interposed between the inner and the outer layers or plies of the shoe-upper. 60 65

4. As an article of manufacture, a laced-shoe having a thin, highly flexible resilient stiffening-strip secured to the shoe-upper along each side of the lace-slit, provided with a plurality of apertures, one at either end of such strip, and a lace-eyelet passing through the shoe upper and stiffening-strip for each of such apertures in the stiffening-strip, securing the same in position, such strip being interposed between and concealed by the inner and the outer layers or plies of the shoe-upper. 70 75

5. As an article of manufacture, a stiffening-strip for stiffening shoe-uppers which is provided with perforations, and adapted to be secured to the shoe-upper, adjacent to the securing or lace-slit, by having passed therethrough, as well as through the fabric of the shoe-upper, the securing-members, or lace-eyelets; such stiffening-strip being composed of thin, highly flexible, resilient material. 80 85

6. As an article of manufacture, a stiffening-strip for stiffening shoe-uppers, formed of thin, highly-flexible, resilient material, provided with three perforations to receive the securing members, or lace-eyelets. 90

Signed at New York city, in the county of New York and State of New York, this 3d day of August, A. D. 1917. 95

FRANK KOESTER.

Witnesses:

ADAM E. SCHATZ,  
JOHN H. C. WEBER.