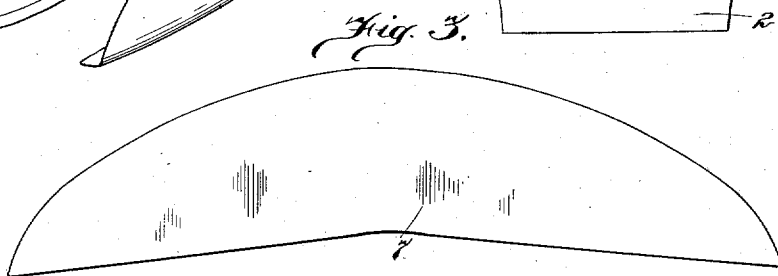
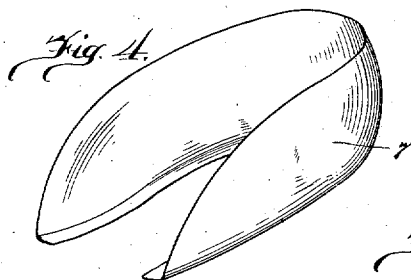
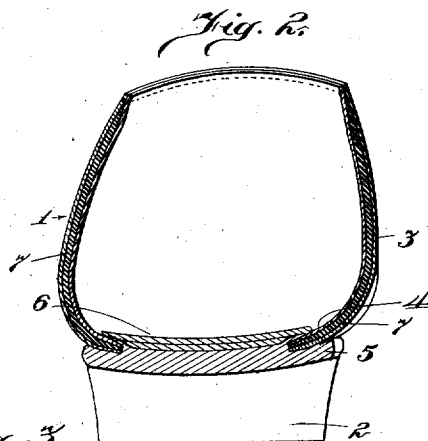
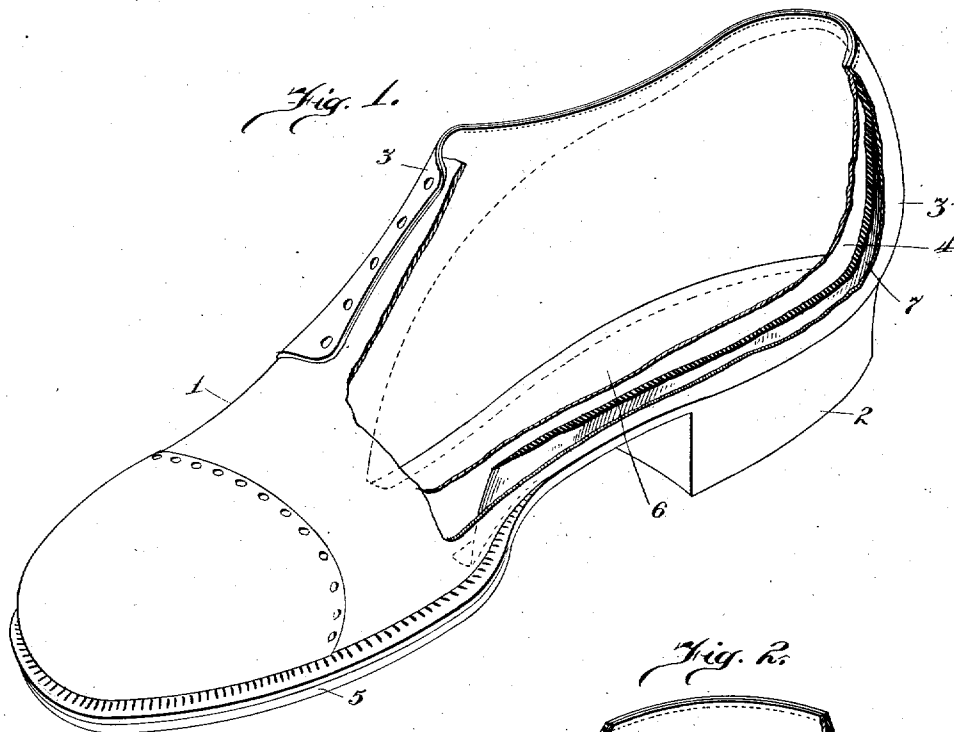


F. BEEBE.  
 COMBINED COUNTER STIFFENER AND ARCH SUPPORT.  
 APPLICATION FILED SEPT. 25, 1911.

1,017,730.

Patented Feb. 20, 1912.



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# UNITED STATES PATENT OFFICE.

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## COMBINED COUNTER-STIFFENER AND ARCH-SUPPORT.

1,017,730.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed September 25, 1911. Serial No. 651,057.

*To all whom it may concern:*

Be it known that I, FRANK BEEBE, a citizen of the United States, residing in the city of Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Combined Counter-Stiffeners and Arch-Supports, of which the following is a specification.

My invention relates to improvements in combiner counter stiffeners and arch supports and has among its salient objects to provide a construction which not only serves as a counter but also as an arch support for both sides of the foot; to provide a construction which while extremely economically manufactured can nevertheless be used with the finest grades of shoes; to provide a construction which as an arch support effectively sustains both sides of the foot and strengthens and supports the ligaments and tissues between the heel and ball of the foot and also supports the cuneiform bones; to provide a construction which serves as an arch support without regard to the character of shoes to which it is applied and which effectively supports the arch whether the shoe be laced or buttoned tightly or loosely; and in general to provide an improved construction of the character referred to.

The invention consists in the matters hereinafter described and more particularly pointed out in the appended claims.

In the drawings—Figure 1 is a perspective view of a shoe of the so-called Oxford type equipped with my invention, with parts broken away and shown in section. Fig. 2 is a vertical transverse sectional view taken through the heel of the shoe. Fig. 3 is a plan view of my combined counter stiffener and arch support shown as laid out flat. Fig. 4 is a similar view showing the counter stiffener and arch support bent into position.

Referring to the drawings, 1 designates as a whole the shoe of the so-called Oxford type, 2 the heel, 3 the upper of the shoe and 4 the inner lining. The shoe is of course, provided with an outer sole 5 and an inner sole 6.

Within the shoe is secured my combined counter stiffener and arch support designated as a whole 7. It is situated between the upper of the shoe and the inner lining

and extends from the first metatarsal bone of the large toe joint back around the heel and up to the fifth metatarsal bone at the little toe joint. This counter stiffener and arch support is at its rear end of sufficient height to form the usual counter stiffener for the shoe and extends forwardly to points in front of the cuboid bone on the outer side of the tarsus of the foot and scaphoid bone on the inner side. At its front end the sides of the counter stiffener and arch support taper gradually downwardly. The lower edge of the counter stiffener and arch support are turned slightly inwardly and are sewed between the outer and inner soles of the shoe.

It is to be particularly noted that the sides of the counter stiffener and arch support are of sufficient height to extend above the cuboid and scaphoid bones. The sides of this arch support are so arranged as to grip and support the ligaments and bones in the arch of the foot, at the same time without gripping the foot too tightly. In practice it has been found that the present invention so compacts the ligaments, tissues and bones of the arch of the foot as to strengthen what is the weakest part of the foot and permit it to sustain the weight of the body without tiring the foot or inconveniencing the wearer.

The present invention keeps the weight of the body back of the toe joints or ball of the foot and at the same time allows perfect freedom of movement of the joints in the forepart of the foot. I am aware that numerous devices have been patented and used for heel stiffeners and so-called arch supports, but none of them obtain the results of the present invention. It is to be noted that the sides of my combined counter stiffener and arch support extend along both sides of the arch of the foot and up to the toe joints as heretofore specified and not only along one side of the arch of the foot as in some of the prior art constructions. None of the prior art devices act to brace and support both sides of the arch as does the present construction. This construction gives the arch an additional support and does not allow the shoe to turn from side to side, placing the foot in a perfectly natural position.

My combined counter stiffener and arch

support is preferably made from sole leather and skived down at its edges, being thicker through its central portion. It may be stated here if the device is found to be too stiff at the cuboid it may be softened to conform to the particular bone to prevent too great a pressure on this bone.

The invention is not limited to the details of construction shown, except as set forth in the appended claims.

I claim as my invention:

1. The combination with a shoe, of a combined counter-stiffener and arch-support therefor formed of sole leather and slightly thicker as to its central portion, and secured between the outside and the inner lining of the shoe, said counter-stiffener and arch-support extending from the first metatarsal bone at the large toe joint around the heel and forwardly to the fifth metatarsal bone at the little toe joint, the rear part of the counter-stiffener and arch-support serving as a counter-stiffener and the sides thereof as an arch-support, said sides extending above the cuboid and scaphoid bones and

tapering from thence gradually downwardly to said toe joints, said arch-support bracing and supporting the arch structure of the foot equally and yieldably on both sides of the arch structure including said cuboid and scaphoid bones.

2. The combination with a shoe, of a combined counter-stiffener and arch-support therefor formed of leather, secured within the shoe, and extending from the large toe joint rearwardly around the heel and forwardly to the little toe joint, the sides of said counter-stiffener and arch-support being of a width to extend above the cuboid and scaphoid bones and sloping downwardly toward the toe joint, the rear of said counter-stiffener and arch-support serving as a counter-stiffener and the sides thereof bracing and supporting the arch structure of the foot equally and yieldingly on both sides of the arch structure.

FRANK BEEBE.

Witnesses:

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