No. 756,940. PATENTED APR. 12, 1904.

C. A. CONGER.

SHOE LACE FASTENER.

APPLICATION FILED MAR. 30, 1903.

NO MODEL.

Fig. 1.

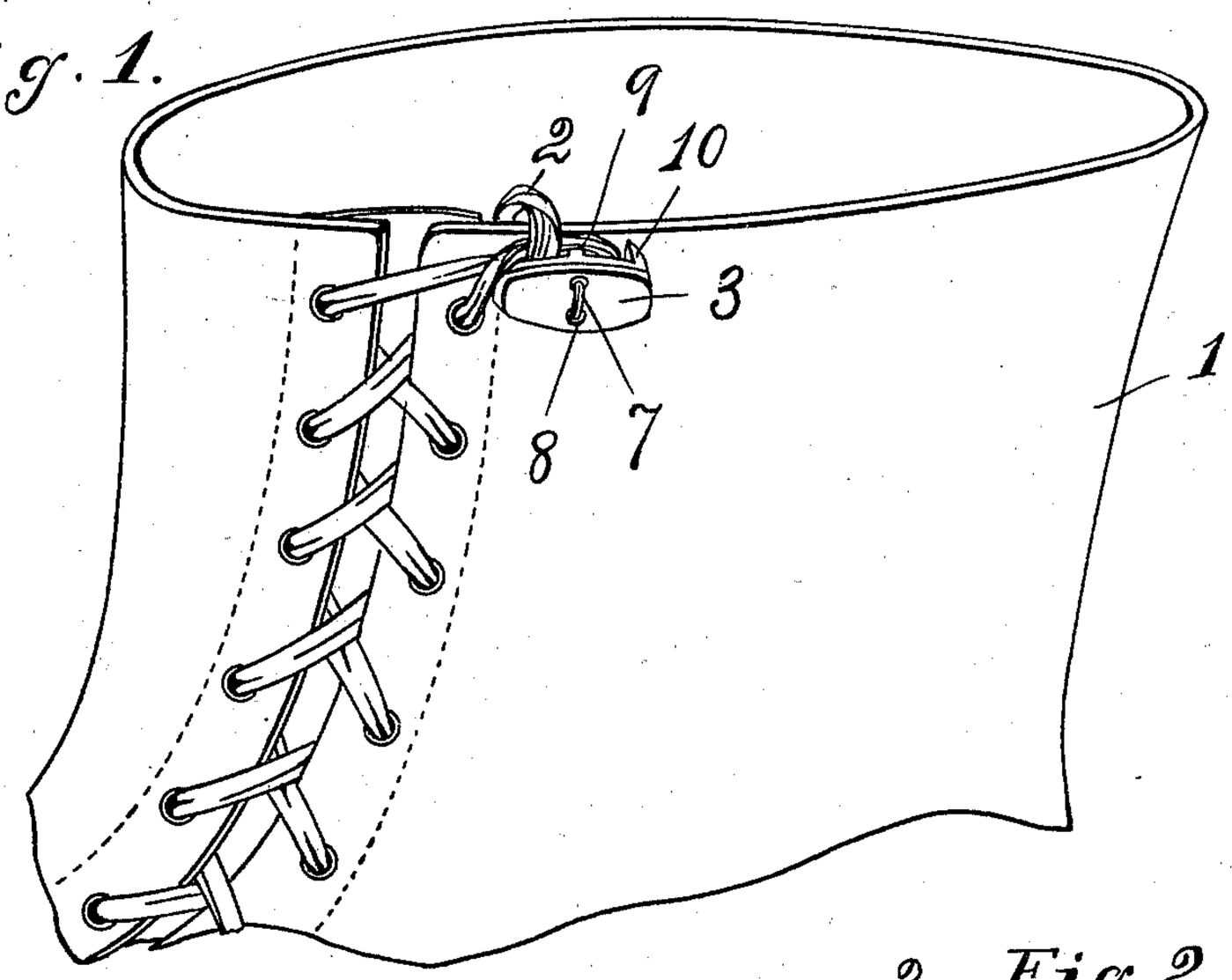


Fig. 8.

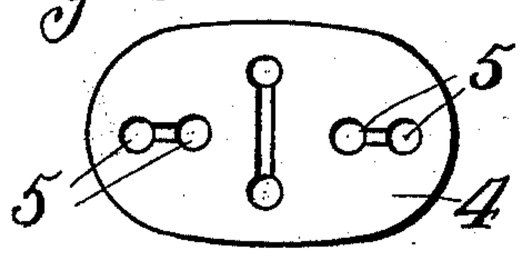


Fig. 5.

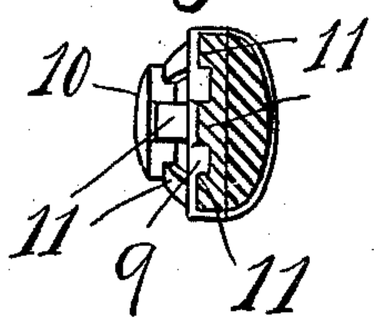


Fig. 2.

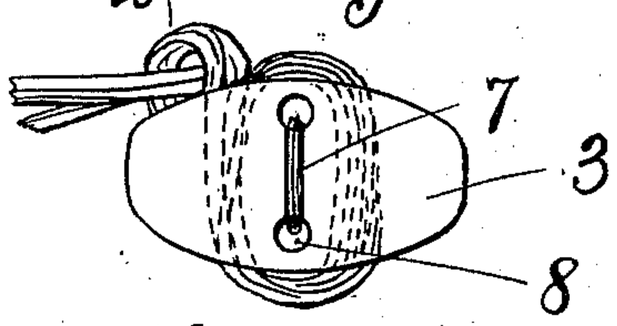


Fig. 9.

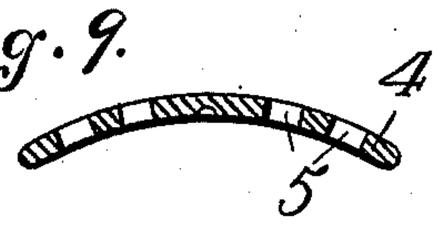


Fig. 3.

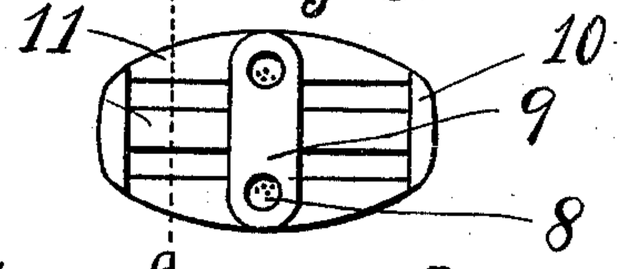


Fig. 7.

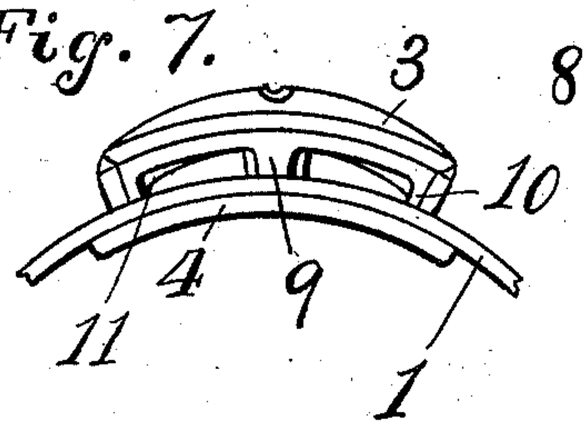


Fig. 6.

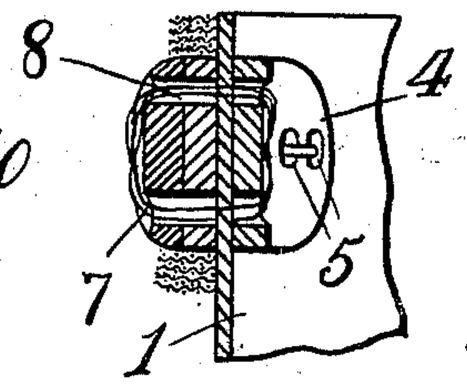


Fig. 4.

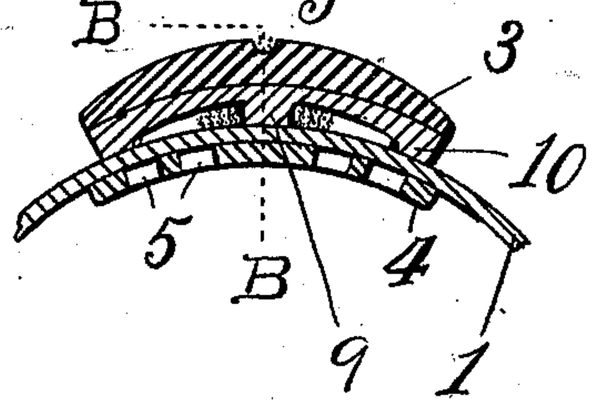
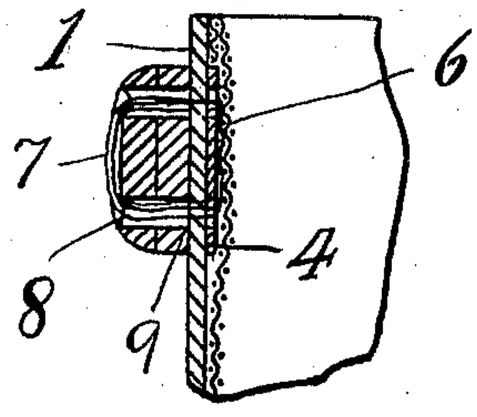


Fig. 10.



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No. 756,940. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

CHARLES A. CONGER, OF OAKLAND, CALIFORNIA.

SHOE-LACE FASTENER.

SPECIFICATION forming part of Letters Patent No. 756,940, dated April 12, 1904.

Application filed March 30, 1903. Serial No. 150,112. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. CONGER, a citizen of the United States, residing at Oakland, in the county of Alameda and State of California, have invented certain new and useful Improvements in Shoe-Lace Fasteners, of which the following is a specification.

My invention relates to improvements in shoe-lace fastenings, the object of my invention being to provide a device for securing the ends of a shoe-lace in place without the necessity of tying a knot, as is customary.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of the upper portion of the shoe equipped with my improved fastener. Fig. 2 is an enlarged front view of the device detached. Fig. 3 is an inside view of the device detached. Fig. 4 is a longitudinal section of the device. Fig. 5 is a vertical section on the line A A of Fig. 3. Fig. 6 is a vertical section on the line B B of Fig. 4. Fig. 7 is a top plan view of the device. Fig. 8 is a rear view of the stiffener-plate. Fig. 9 is a longitudinal section of the same. Fig. 10 is a view similar to Fig. 6, showing a modified arrangement of the stiffener-plate.

Referring to the drawings, 1 represents the upper of a shoe, and 2 the ends of the shoe-lace. Upon the outer surface of the upper, near the top edge thereof, is secured my improved lace-fastener 3, around which the ends of the lace are wound to hold them against slipping and maintain the shoe tightly laced. Before securing said fastener in place there is first secured on the inner side of the upper a stiffener-plate 4, which is preferably elliptical in shape, corresponding to the shape of the fastener, and is stitched to the upper through a pair of eyes 5 at each end. By so stitching said stiffener-plate to the upper and by the additional stitches which are passed through the upper and stiffener-plate when securing the fastener in position there is provided a broad bearing-surface which is perfectly rigid and stiff, so that the twisting strain upon the leather caused by winding the laces around the fastener, as hereinafter described, is distributed over a large extent of surface of the upper, so that all danger of tearing the leather is avoided.

When the fastener is sold as a separate article to be attached to the completed shoe, the stiffener-plate will be stitched upon the under side of the upper, as above described; but when the fastener is sold with the shoe and is attached thereto in the process of manufacture of the shoe the stiffener-plate may be inserted between the leather of the upper and the lining 6 of the same, as shown in Fig. 10. In the latter case it will be sufficient to make said stiffener-plate of metal. In the former case it will preferably be made of hard rubber as being a material which will not corrode or deteriorate by use. However, the material of which said stiffener-plate is made is not an essential feature of my invention. It should be sufficiently rigid to form a stiff inflexible base upon which to secure the fastener.

The fastener or holding device itself may be described as an elongated or elliptical button secured to the upper and to the stiffener-plate by stitches 7, passed through eyes 8 in the minor axis of said ellipse, which is placed vertical, said eyes being as close as possible to the edge of the button for the purpose of withstanding the twisting strain on the stitches. The outer portion of said button is made of hard inflexible material, such as metal or hard rubber, while the inner surface thereof next the upper is made of soft rubber. Said inner surface is conformed as follows: First, there is a central vertical rib or portion 9, through which are extended the eyes 8 used for stitching the fastener to the stiffener-plate; next, there are terminal vertical ribs or inwardly-extending hooked portions 10 at the ends of the button, and, lastly, there are horizontal ribs or friction devices 11 extending from the central rib to the terminal ribs, but of less depth than the latter. As already explained, all of these ribs are made of soft rubber. It will be seen from the above construction that while the central and terminal ribs are in contact with the leather of the upper between the central rib and each terminal rib

the fastener is spaced its entire width from the upper, forming a space to receive the shoe-laces.

In operation after the laces have been drawn tight their ends are passed around the button, first under the farther terminal rib 10, then under the near rib 10, and so on, passing around the button twice. The ends are then tucked in over the top edge of the upper. It is found that by this contrivance the shoe-laces are held securely on account of the frictional contact of the laces with the soft-rubber inner face of the button. By giving the laces a double turn sufficient friction is developed to absolutely insure against slipping. The terminal ribs 10 of the button are important because they prevent the shoe-laces dropping away from the button, and thus gradually unwinding. It will be observed also that by reason of the compressibility of these terminal ribs the shoe-laces can be easily passed under either rib, the rib at one end being compressed when the rib at the other end is pushed out from the upper to permit the shoe-laces to pass underneath. It is also of advantage that the central rib should be made of soft rubber, because this insures that the fastener will be held at all times tight against the upper. If it were made of inflexible material, then in case of stretching of the stitches 7, which is liable to occur owing to changes in moisture in the thread, the fastener would gradually work loose from the upper, in which case there would be a tendency of the button to twist as a whole about its fastenings, which would impair the effectiveness of the device.

It will be observed that the outer surface of the terminal ribs or teeth 10 slope inward or toward the center of the button. This admits of the shoe-laces finding ready entrance below said teeth into the space between the teeth and the central rib, and this permits of the laces being secured very quickly and with great ease.

While I have described my invention as a fastener for shoe-laces, I desire it to be understood that it is not to be limited thereto, but may be used for fastening any lacing-strings for any purpose whatever—as, for instance, laces for securing artificial limbs.

I claim—

1. A lace-fastener comprising an elongated button attached near the ends of its short axis to the upper of the shoe, the ends of the long axis being free, but having inwardly-extending ribs, said button between said ends and the points of attachment being spaced its entire width from the upper to receive the shoe-laces, substantially as described.

2. A lace-fastener comprising a portion attached directly to the upper of a shoe, a portion extending therefrom substantially parallel with said upper but spaced therefrom, the space between said latter portion and upper being unobstructed, and a resilient portion extending inwardly toward the upper from the last-named portion and at a distance from the attached portion, said fastener between said attached and resilient portions being spaced its entire width from the upper, substantially as described.

3. A lace-fastener comprising a portion attached directly to the upper, a portion extending therefrom substantially parallel with said upper, but spaced therefrom, and having an inwardly-directed resilient rib, and a portion extending from said last-named portion inward toward the upper and at a distance from the attached portion, substantially as described.

4. A lace-fastener comprising a portion having a resilient inner surface secured directly to the upper, a portion extending therefrom substantially parallel with the upper, but spaced therefrom, and a terminal resilient portion extending inward toward the upper, substantially as described.

5. A lace-fastener comprising a portion secured to the upper of a shoe, portions extending in opposite directions therefrom, spaced from said upper and having resilient ribs, and terminal portions extending inward toward the upper, substantially as described.

6. A lace-fastener comprising a portion secured to the upper, portions extending in opposite directions therefrom but spaced from said upper and having resilient ribs, and terminal resilient inwardly-hooked portions, substantially as described.

7. A lace-fastener comprising a portion secured to the upper having a resilient inner surface in contact with said upper, a portion extending therefrom substantially parallel with the upper and having a resilient rib spaced from said upper, and a terminal inwardly-extending hooked portion, substantially as described.

8. A lace-fastener comprising a central portion secured to the upper and having an inner resilient surface in contact with the upper, portions extending in opposite directions therefrom, having resilient friction devices permitting the shoe-laces to pass between the same and the upper and terminal inwardly-extending hook portions, substantially as described.

9. A lace-fastener comprising a holding device for the laces secured on the outside of the upper to said upper, said holding device comprising means for holding the ends of the shoe-lace, a stiffener-plate behind the leather of the upper, and means for securing said stiffener-plate to said leather independent of the means for securing the holding device, substantially as described.

10. A lace-fastener comprising a holding device for the shoe-laces secured on the outside of the upper to said upper, said holding device comprising a portion secured against the outer surface of the upper, a portion ex-

tending therefrom between which and the upper the shoe-laces pass, and an inwardly-extending hook portion to prevent unwinding of the laces, a stiffener-plate behind the leather of the upper and means for securing said stiffener-plate to said leather independent of the means for securing the holding device thereto, substantially as described.

11. A lace-fastener comprising a button secured to the upper having an outer portion of hard rubber and an inner portion of soft rubber, the soft-rubber portion having projections extending inward toward the upper and spaced from the part by which the button is attached to the upper whereby the lace is held between said projections and said part, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two subscribing witnesses.

CHARLES A. CONGER.

Witnesses:

FRANCIS M. WRIGHT,

BESSIE GORFINKEL.