No. 746,042. PATENTED DEC. 8, 1903.

A. A. DE LOACH.

SHOE LACING ATTACHMENT.

APPLICATION FILED DEC. 23, 1902.

NO MODEL.

Fig. 1.

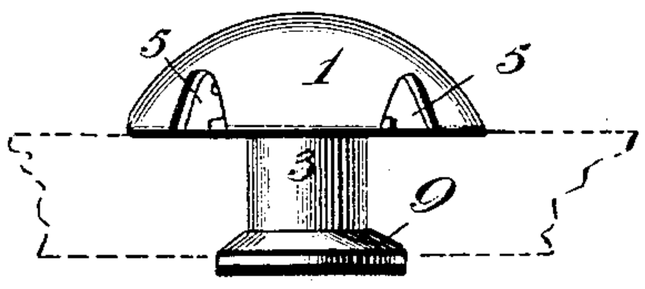


Fig. 2.

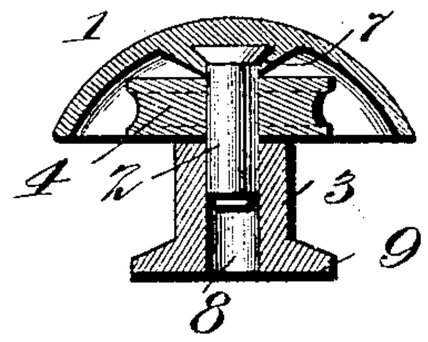


Fig. 3.

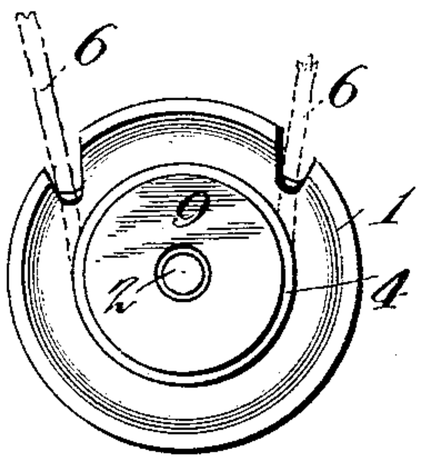


Fig. 4.

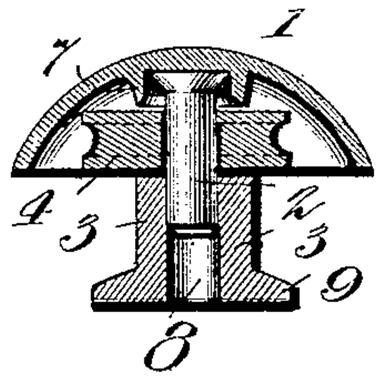
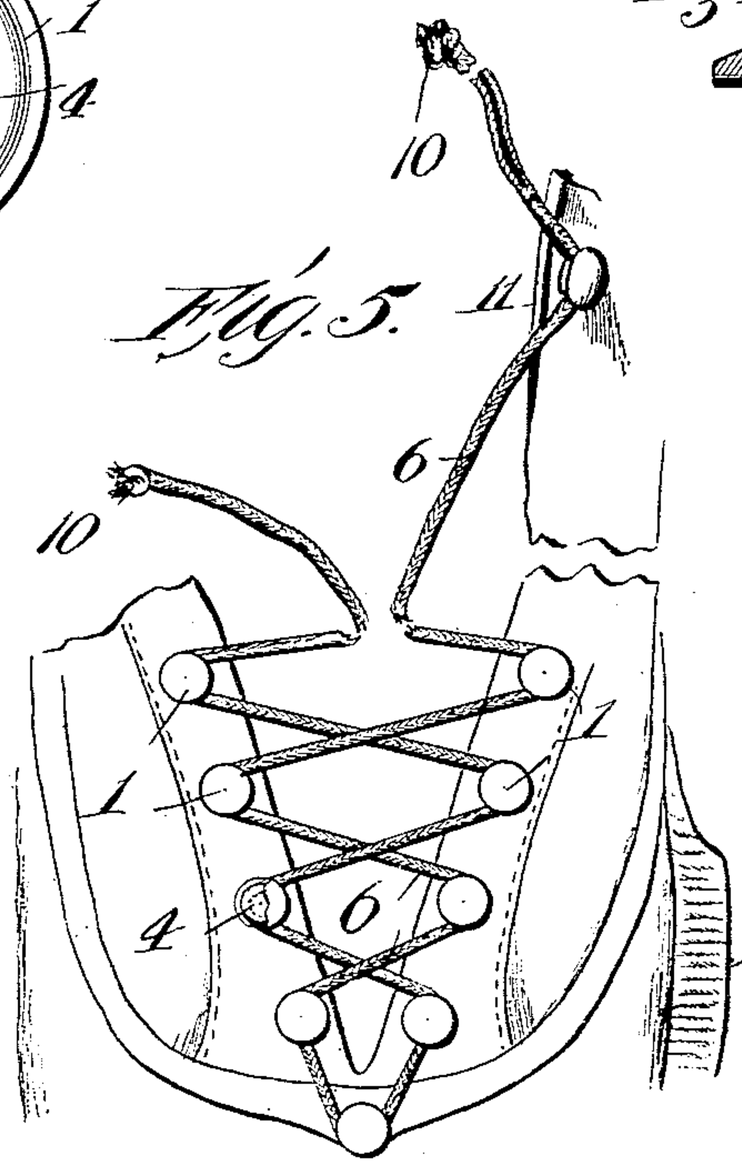


Fig. 5.



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No. 746,042. Patented December 8, 1903.

UNITED STATES PATENT OFFICE.

ALONZO AARON DE LOACH, OF ATLANTA, GEORGIA.

SHOE-LACING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 746,042, dated December 8, 1903.

Application filed December 23, 1902. Serial No. 136,336. (No model.)

To all whom it may concern:

Be it known that I, ALONZO AARON DE LOACH, a citizen of the United States, residing at Atlanta, in the county of Fulton and State of Georgia, have made certain new and useful Improvements in Shoe-Lacing Attachments, of which the following is a specification.

My invention is an improvement in that class of shoe-lacings in which the buttons secured to the shoe along the edge of the slit therein are provided with rollers to relieve friction of the lacing-cord in drawing and tightening the same.

The details of construction, arrangement, and operation of parts are hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved button. Fig. 2 is a central vertical section of the same. Fig. 3 is a bottom plan of the same. Fig. 4 is a view similar in the main to Fig. 2, but illustrating the manner of securing certain parts together. Fig. 5 is a perspective front view of the portion of a shoe provided with my improved lacing attachments.

My improved button is composed of a concavo-convex cap or hood, a pin or stud 2, a tubular flanged stud or shank 3, and a roller 4. The said cap 1 has side apertures 5 (see Figs. 1 and 3) for the lacing cord or string 6, which is indicated by dotted lines, Fig. 3, and shown in full in Fig. 5. The pin or stud 2 has a flanged head and is secured to the center and under side of the cap 1 by means of a flange 7, formed on the latter. As shown in Fig. 4, the cap or hood 1 is formed with its flange projecting downward, and the same is subsequently pressed inward or spun upon the head of the pin, as shown in Fig. 2. It is to be understood that the cap or hood 1 will be formed of some metal which permits this operation to be easily effected. The stud 3 has a central vertical bore 8 of such size as to receive the pin 2, but requiring the latter to be forced into place, so that when the two are thus connected the attachment is permanent. The base of the stud 3 is provided with a lateral flange 9. The roller 4 is preferably grooved, as shown, and is applied to the pin in the space between the cap 1 and the tubular stud 3, its under side being preferably in the same line or flush with the base of the cap. The pin 2 thus forms the journal for the roller 4, the latter being adapted to rotate with great freedom.

To apply my improved button to a shoe, as shown in Fig. 5, the shoe is provided with a series of holes at the right distance apart along the edges of the slit therein, such holes being adapted to receive the shank of the tubular stud 3. When the said stud is thus applied, the base-flange 9 rests against the under side of the leather, which is indicated by dotted lines in Fig. 1. The roller having been slipped on the pin 2, the latter is then forced into the tubular stud 3 and the parts assume the position and relation shown in Figs. 1, 2, and 3. In such case the cap or hood 1 rests upon the upper edge of the leather, as indicated in Fig. 1. It is apparent that the cap thus presents no projecting edges which can catch in the garment of the wearer and, besides, forms an ornamental attachment of the shoe. A small lacing cord or string 6 is employed, the same being passed through one of the openings 5 in the cap 1 and around the roller and out through the other opening 5, as will be readily understood by reference to Figs. 3 and 5. When the string or lacing 6 has been thus applied, knots 10 (see Fig. 5) are formed at its ends, the same being made of such size as to prevent withdrawal of the string through the top button-cap 1. The upper portions of the lacing 6 are provided with an elastic core, so that they have great elasticity, and thus permit the top portions of the shoe to be distended or separated widely, as required for putting on the shoe with desired freedom.

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

1. The improved button hereinbefore described, comprising the concavo-convex cap having two side notches, a tubular stud having a base-flange, a pin permanently secured to the cap in its inner side and also in said stud, and the grooved roller mounted rotatably on said pin in the space between the stud and cap, the edge of the cap extending down to a point where it is flush with the lower side of the roller, as shown and described.

2. The combination, with a slitted shoe, of buttons constructed as described, the same

comprising a tubular stud having a base-flange, concavo-convex caps having two side notches in their flanges which press upon the leather, pins permanently secured in the under side of said caps and in the studs, and rollers journaled on the pins between the caps and studs, and the lacing rove through the buttons and having knots at its ends which are larger than the notches in the button-caps, as shown and described.

3. The combination, with a slitted shoe and buttons comprising tubular flanged studs, concavo-convex caps having side notches, central depending pins which enter said studs, and rollers journaled on said pins, of the lacing having knots at its ends, and an elastic core adjacent thereto, substantially as shown and described.

4. The improved shoe-button comprising the flanged tubular stud, the concavo-convex cap, a pin rigidly secured in both stud and cap, and a roller journaled on the pin within the cap and arranged with its lower side in the same plane with the edge of the cap, substantially as shown and described.

ALONZO AARON DE LOACH.

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