

No. 652,647.

Patented June 26, 1900.

A. A. SODERBERG.

SHOE FASTENING.

(Application filed May 3, 1899.)

(No Model.)

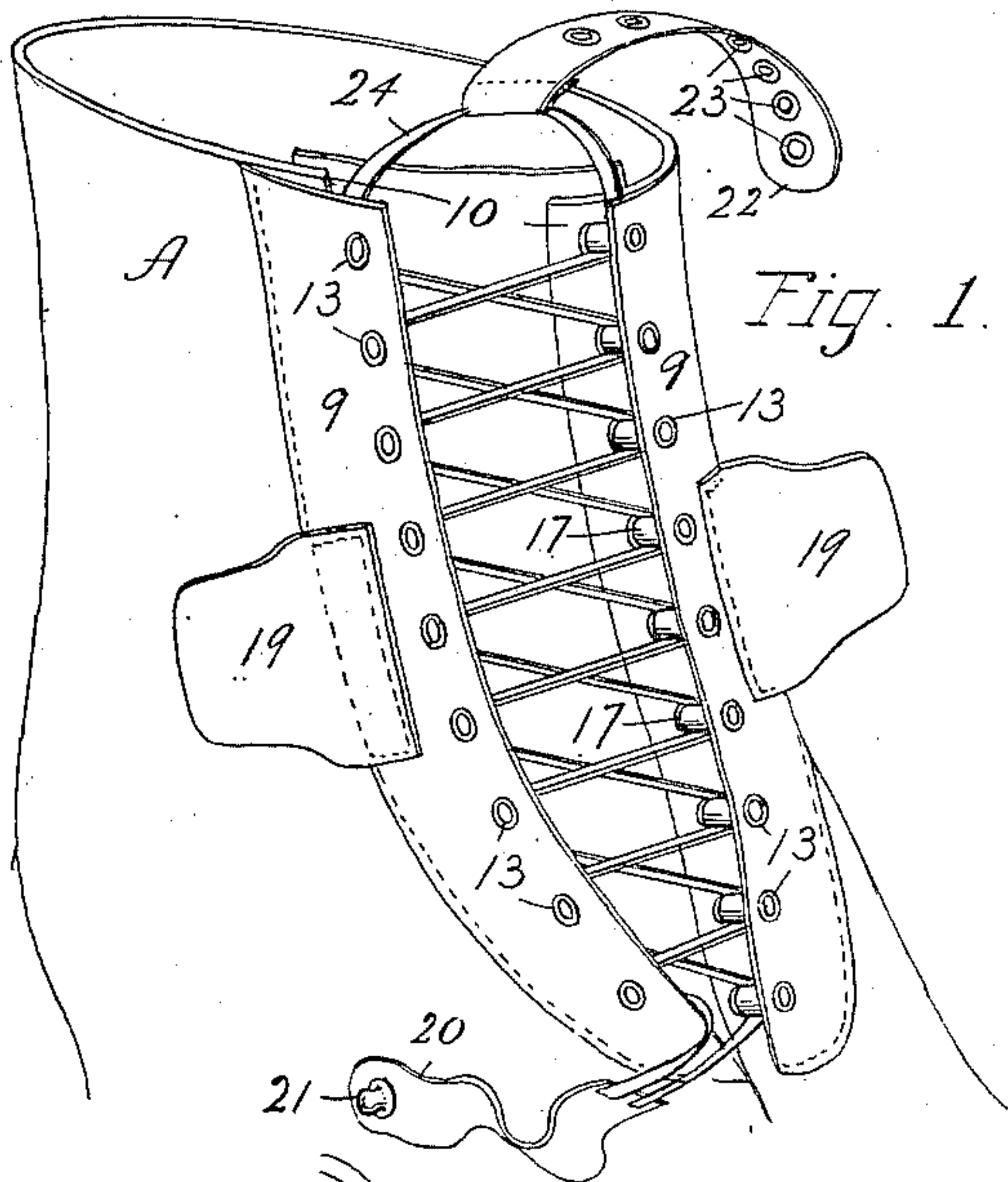


Fig. 1.

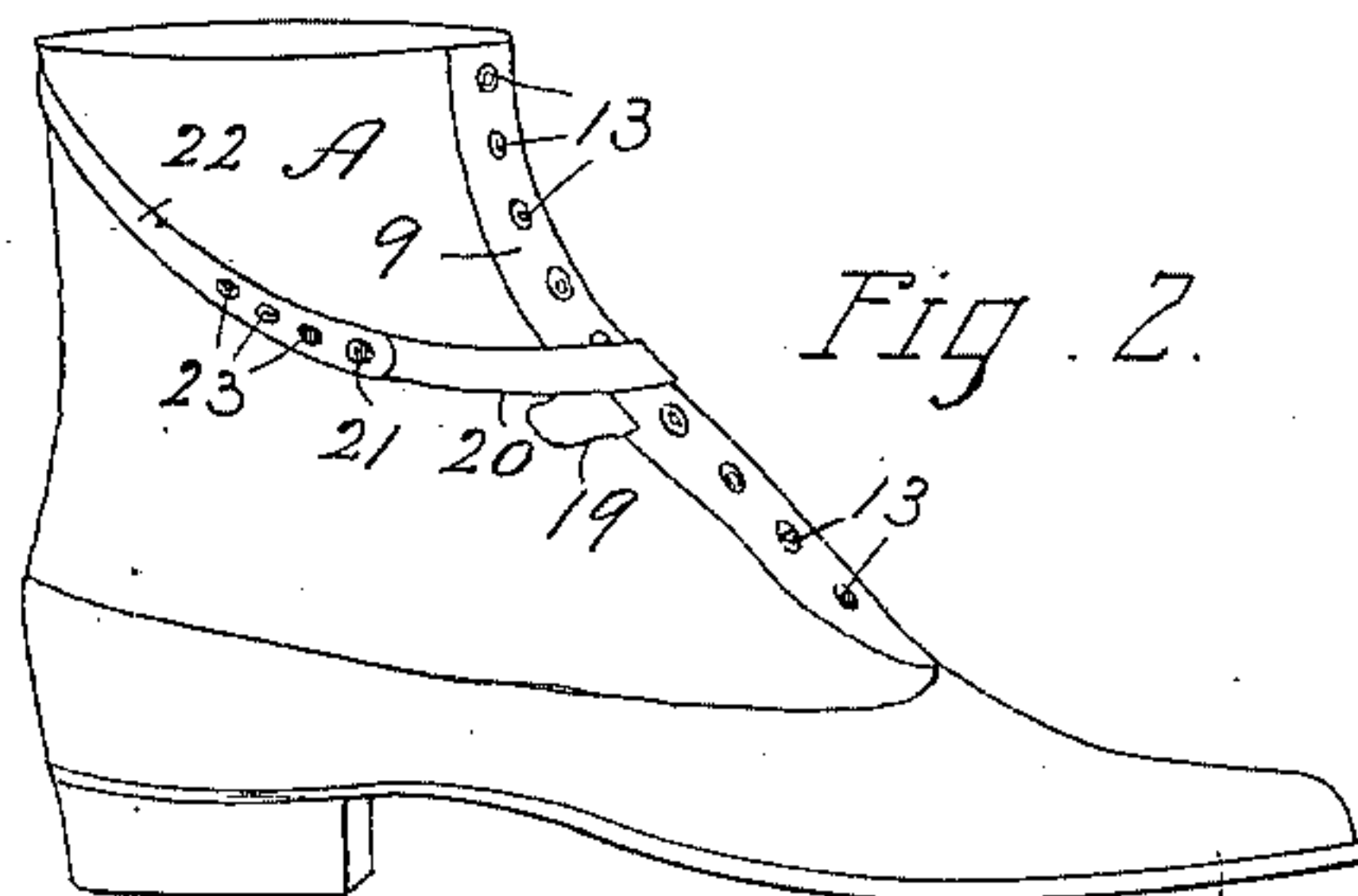


Fig. 2.

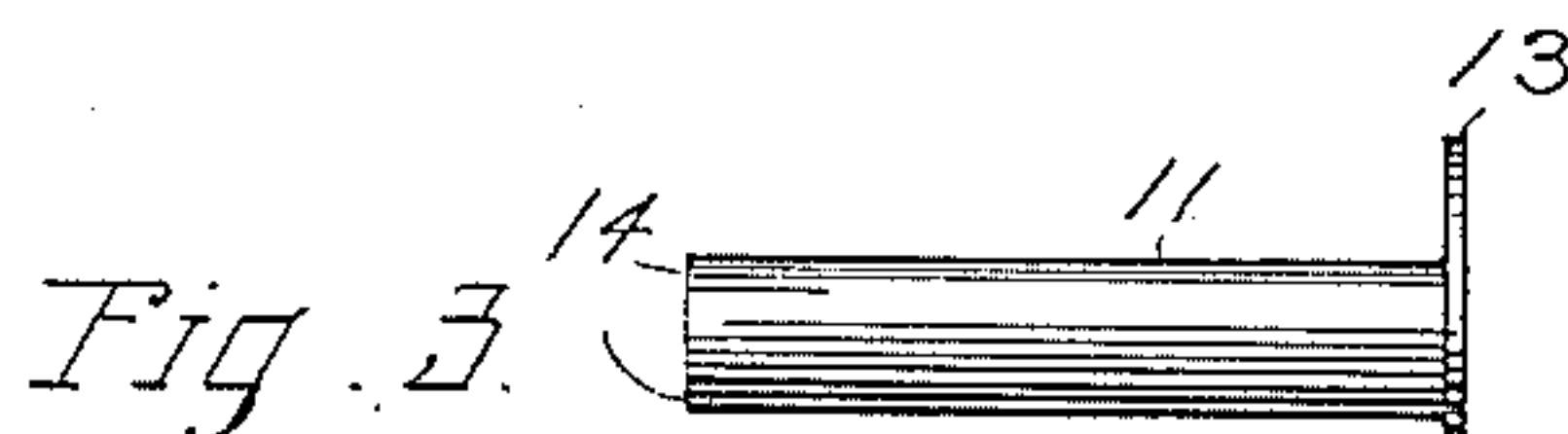


Fig. 3.

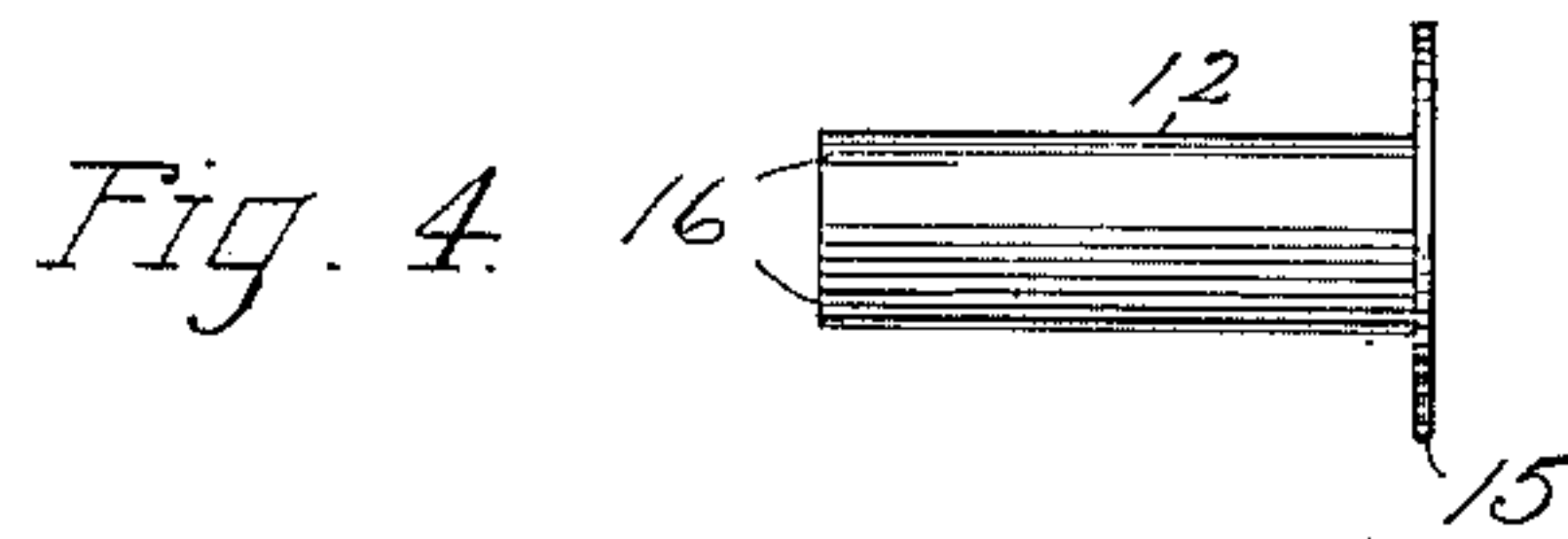


Fig. 4.

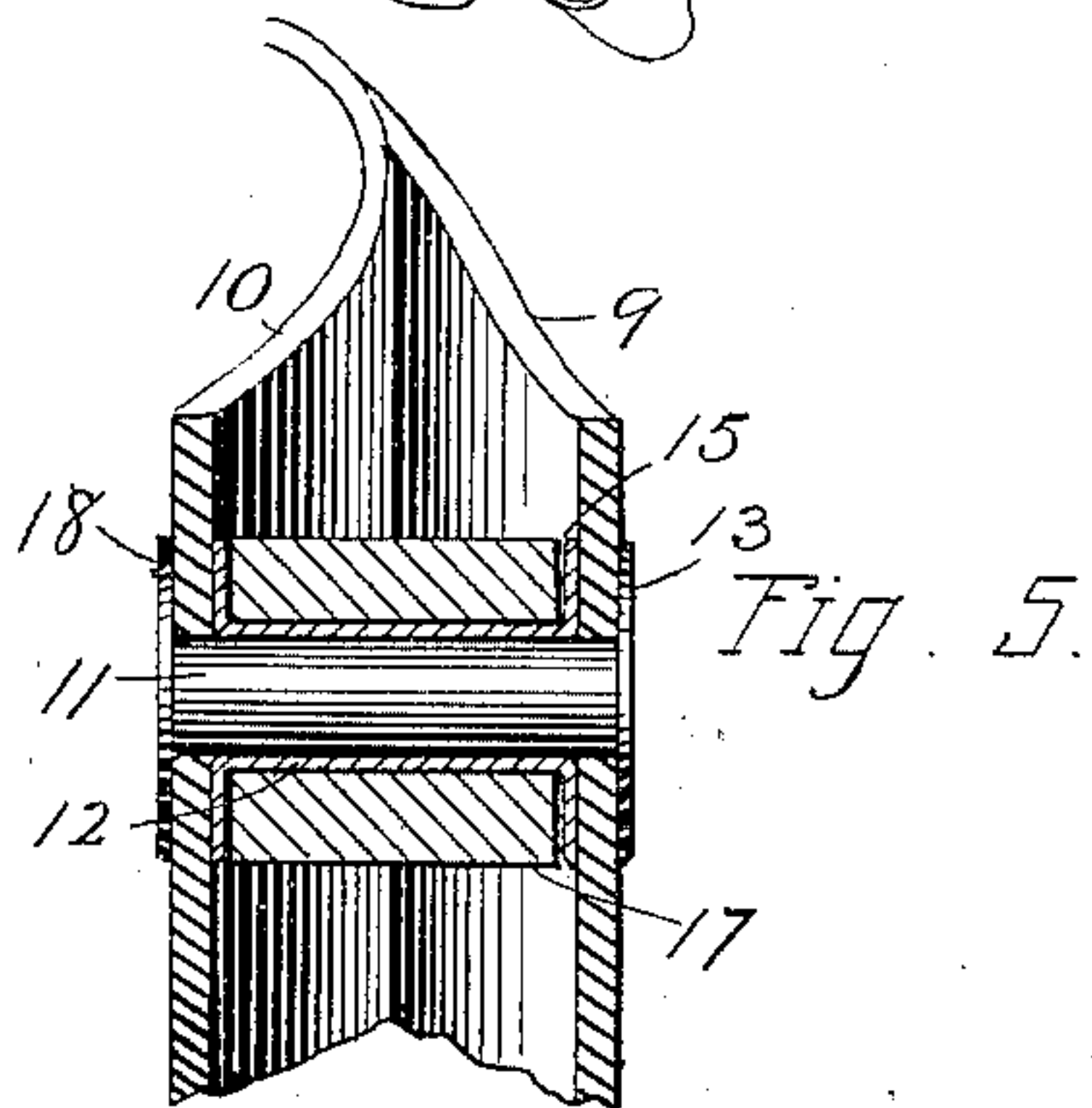


Fig. 5.

Fig. 7.

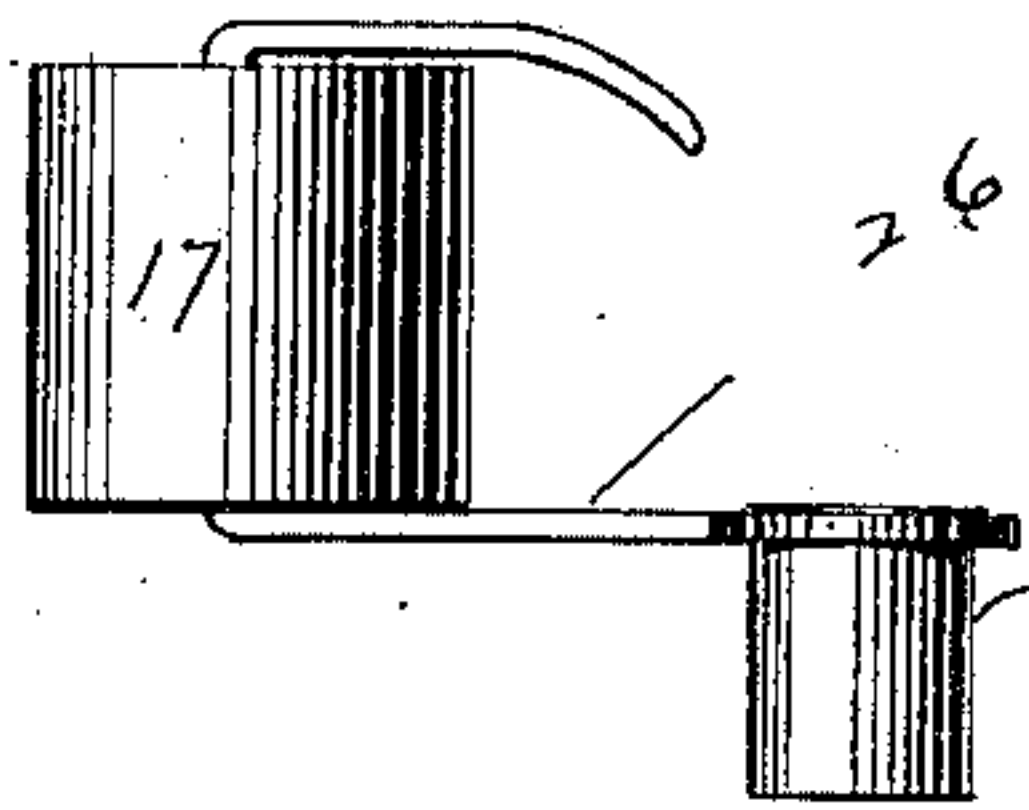


Fig. 6.

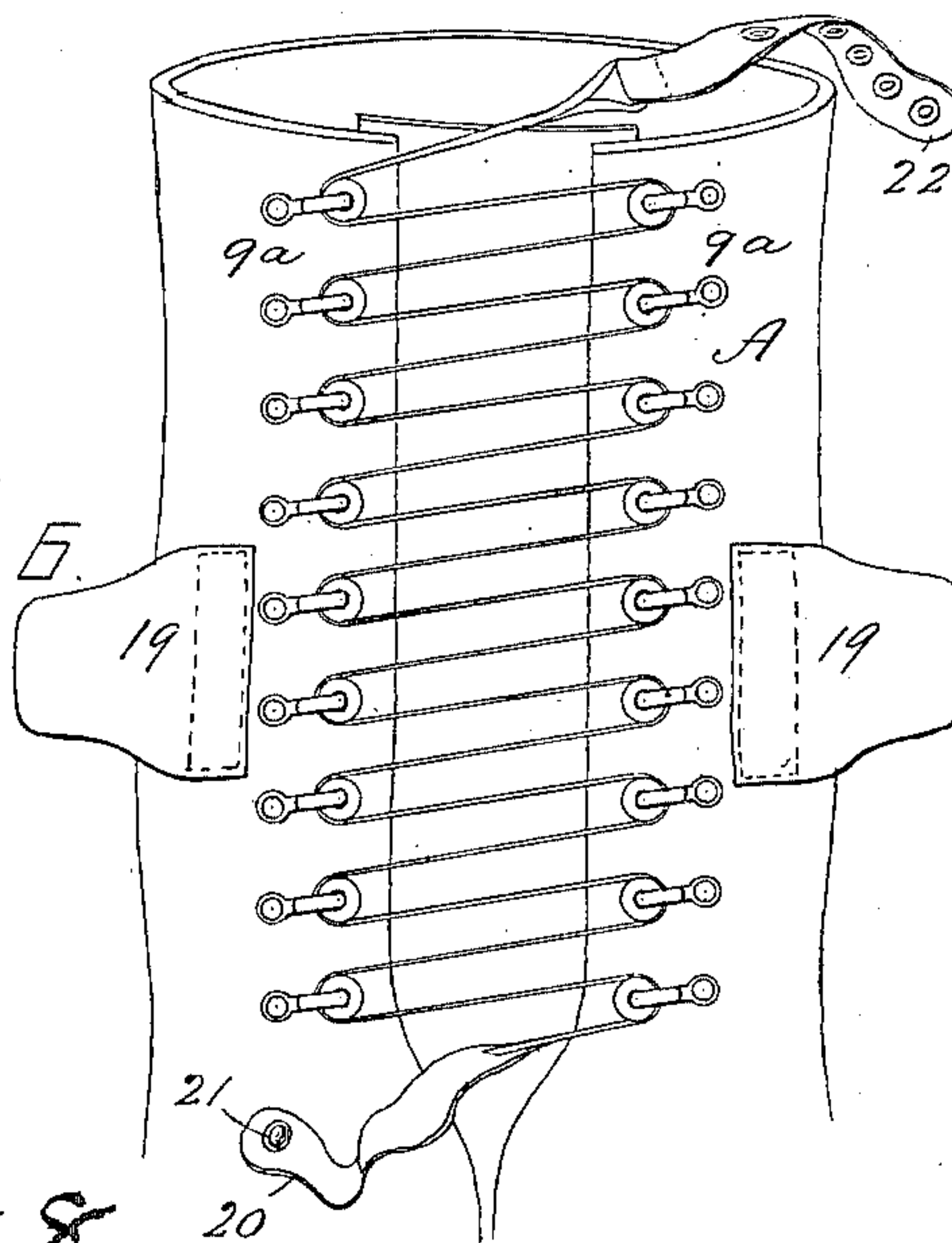
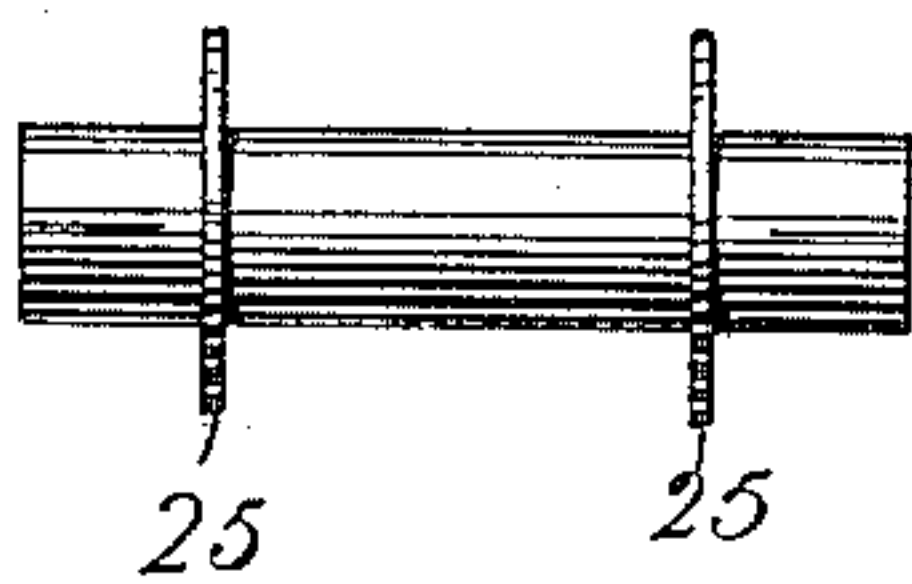


Fig. 8.



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SHOE-FASTENING.

SPECIFICATION forming part of Letters Patent No. 652,647, dated June 26, 1900.

Application filed May 3, 1899. Serial No. 715,436. (No model.)

To all whom it may concern:

Be it known that I, ALFRED A. SODERBERG, a citizen of the United States, residing at Worcester, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Shoe-Fastenings, of which the following is a specification.

My invention relates to shoe-fastenings and their connection with the shoe; and the main object of my improvement is to enable the shoe-lacing to be tightened or loosened by a single pull.

In the accompanying drawings, Figure 1 is a perspective view of my shoe-fastening, together with so much of a shoe as is necessary to show its connection therewith. Fig. 2 is a side elevation of the same on a smaller scale. Fig. 3 is a detached side elevation of the main lacing-stud for my fastener. Fig. 4 is a like view of a spacing-tube for said main lacing-stud. Fig. 5 is a sectional view of a portion of the shoe on the line of one of the lacing-rollers, the central part being shown in side elevation. Fig. 6 is a view of the lacing portion of a shoe with a modified form of fastening on the same scale as Fig. 1. Fig. 7 is an enlarged detached view of one of the fastenings shown in Fig. 6, and Fig. 8 is a detached side elevation of the main lacing-stud in a modified form.

A designates the upper portion of a shoe, having at each edge of its lacing-opening the outer flaps 9 and inner flaps 10, separated from each other by means of the lacing-studs sufficiently to permit a shoe-lacing to extend around the studs between the said flaps. I prefer to form the lacing-studs of two parts—the main stud 11 and spacing-tube 12—and to employ a roller on the said spacing-tube. In Figs. 3 and 5 the main stud is in the form of a tube, with a flange 13 at one end and with its other end slit longitudinally, as at 14, Fig. 3, to facilitate turning a flange or head on that end after the stud is inserted through the flaps 9 and 10. The spacing-tube is formed with a like flange 15 and slit 16. A roller 17 is placed upon the spacing-tube, and the slit end is turned out to form a second flange on said spacing-tube. The said tube and roller are then placed between the flaps 9 10 and

the main stud inserted through said flaps and spacing-tube, preferably with the flange 13 on the outside of the outer flap 9 and its slitted end clenched or turned over, as shown at 18, Fig. 5. Upon each side of the lacing-opening I secure pulls 19, as shown. The lacing 24 is passed around the several rollers between the flaps, preferably so as to cross each other, as shown in Fig. 1. The two ends of the lacing are then secured together in any proper manner, so as to make practically an endless lacing. I have shown, for example, the two ends at the bottom of the lacing-opening as secured to the fastening-strap 20, which strap is provided with a spring button-stud 21, the same constituting one member of the well-known ball-and-socket fastener, such as is used on gloves. Another strap 22 is secured to the upper end of the double or endless lacing, and the same is provided with a series of sockets adapted to engage the ball member 21 of the ball-and-socket fastener.

In order to tighten the lacing, it is only necessary to pull simultaneously in opposite directions on the two fastening-straps 20 and 22 and then pass them around the ankle until they meet on the inner side or the ankle, where they may be fastened by the ball-and-socket fastener, as shown in Fig. 2. To untie or loosen the lacing, it is only necessary to detach the fastening-straps from each other and give a pull upon the two pulls 19.

I have illustrated a flat lacing and rollers with a flat face; but the form of the lacing and rollers is not essential. I also show as the preferred form a main stud with a spacing-tube applied thereto for properly separating the flaps 9 and 10; but, if desired, the main stud may have spacing-flanges 25, formed or attached as a substitute for the spacing-tube, as in Fig. 8. While I prefer to employ the rollers, some parts of my invention would not be changed if the rollers were omitted, the lacings then resting directly on the spacing-tubes when the spacing-tube is employed, as in Fig. 5, or on the main stud when the spacing-tube is omitted, as in Fig. 8. When a roller is used with the flanged stud, Fig. 8, it must of course be placed on the stud before the second flange is formed on or secured

thereto. While I have, for example, shown and described a ball-and-socket fastener for the fastening-straps 20 and 22, the particular kind of fastener for said straps is not essential.

In Fig. 6 I have shown the rollers 17 as secured upon the flaps 9^a on a hook-like lacing-stud 26 by means of an eyelet 27. (See Fig. 7.) Instead of crossing the lacing 24^a I have merely passed it around the rollers, as shown, and secured the fastening-straps 20 and 22 to the single ends of the lacing instead of the double ends before described. While in this construction the rollers are on the outside of the shoe instead of being enclosed by two flaps, it is evident that either style of passing the lacing around the rollers may be used with either of the constructions shown.

It is apparent that some changes from the specific construction herein disclosed may be made, and therefore I do not wish to be understood as limiting myself to the precise form of construction shown and described, but desire the liberty to make such changes in working my invention as may fairly come within the spirit and scope of the same.

I claim as my invention—

1. A shoe-lacing, comprising the series of lacing-studs mounted on either side of the lacing-opening, the lacing passing around the said series of studs and fastening-straps secured to the said lacing with one of the said straps projecting from the upper end of the lacing-opening and the other fastening-strap projecting from the lower end of the said open-

ing, and fastening devices on the said straps for securing them and the upper and lower projecting portions of the lacing together, substantially as described.

2. In a shoe-lacing, the combination of the flaps 9 and 10 with the separate individual studs extending through both of the said flaps and having holding-flanges at each end on the outside of the said flaps, and a cylindrical body between the said flaps, said body having spacing-flanges against which the inner faces of the said flaps are firmly pressed, and which flanges project radially beyond the said cylindrical body, and a roller mounted on the said cylindrical body, substantially as described.

3. In a shoe-lacing, the combination of the flaps 9 and 10 with the main lacing-stud 11 having a cylindrical body and headed ends, the spacing-tube 12 mounted on the said cylindrical body of the main lacing-stud, the said spacing-tube having a cylindrical body and spacing-flanges at each end thereof that project beyond the said cylindrical body of the said tube, substantially as described.

4. The combination of the lacing-studs mounted on either side of the lacing-opening, with the lacing, the fastening-straps secured to the lacing at the upper and lower ends of said opening, and the pulls 19, on the opposite sides of the lacing-opening, substantially as described.

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Witnesses:

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