

No. 827,987.

PATENTED AUG. 7, 1906.

R. M. MILES & E. YOUNG.

SHOE LACER.

APPLICATION FILED FEB. 2, 1905.

Fig. 1.

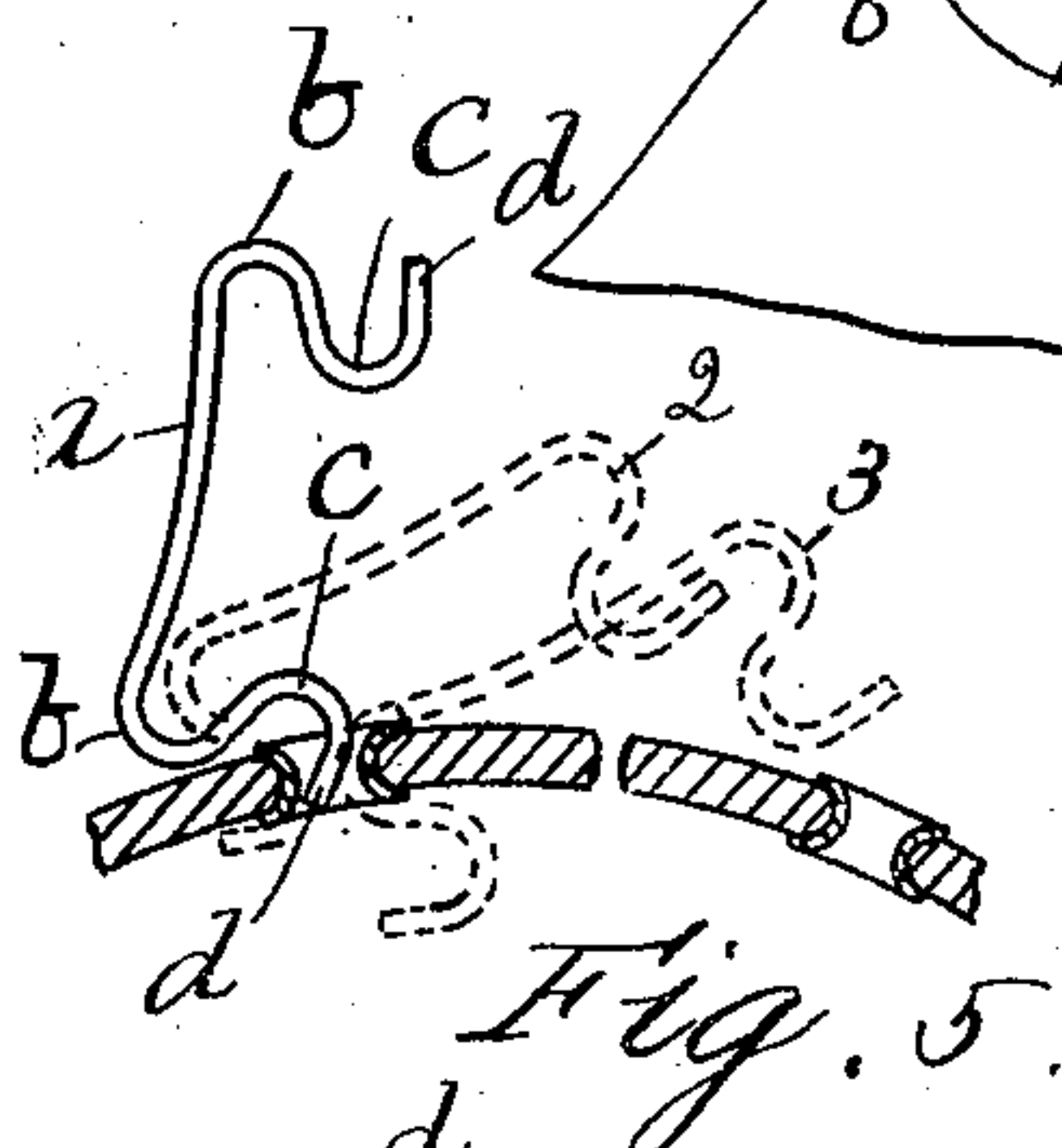
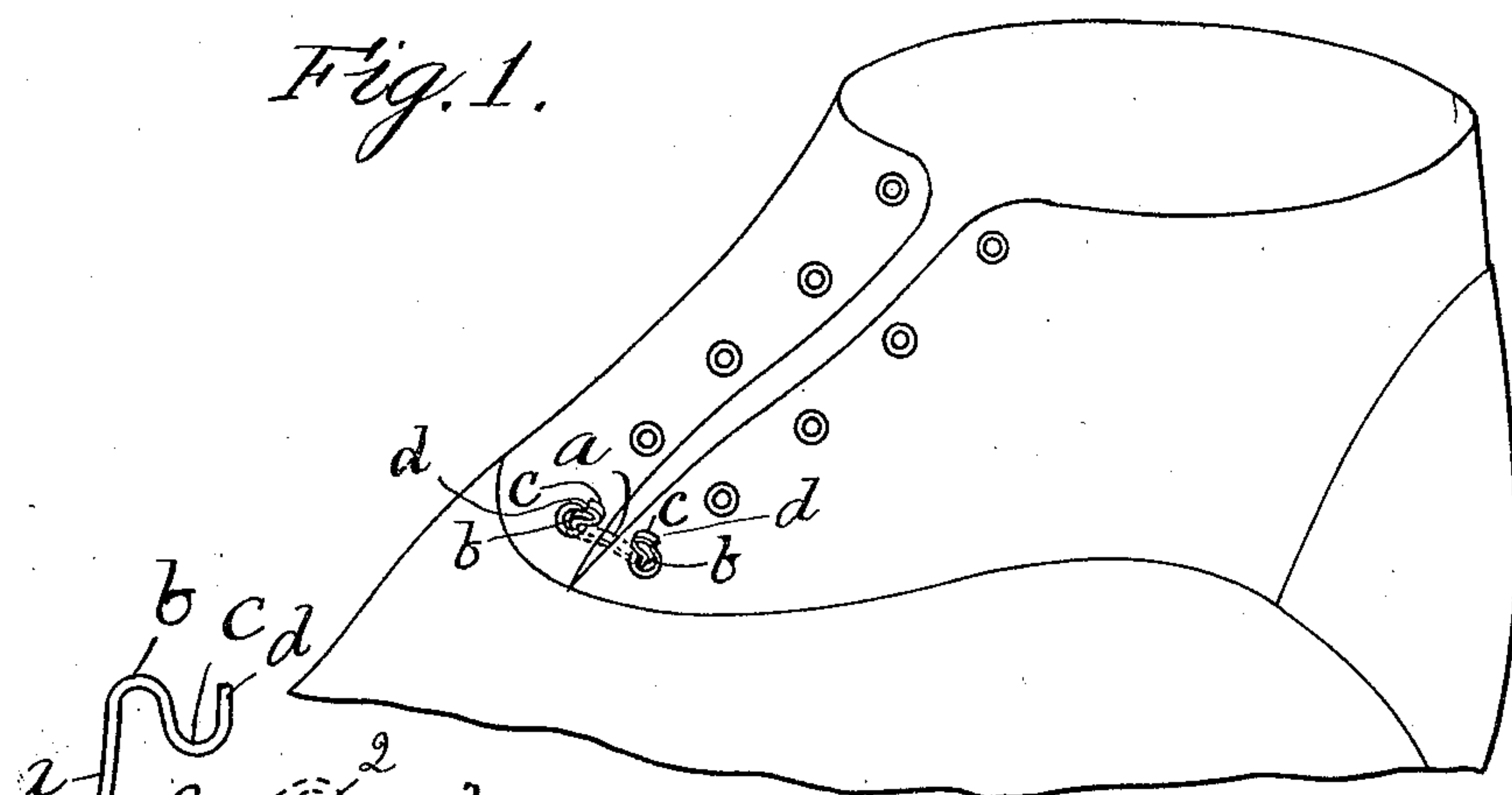


Fig. 5.

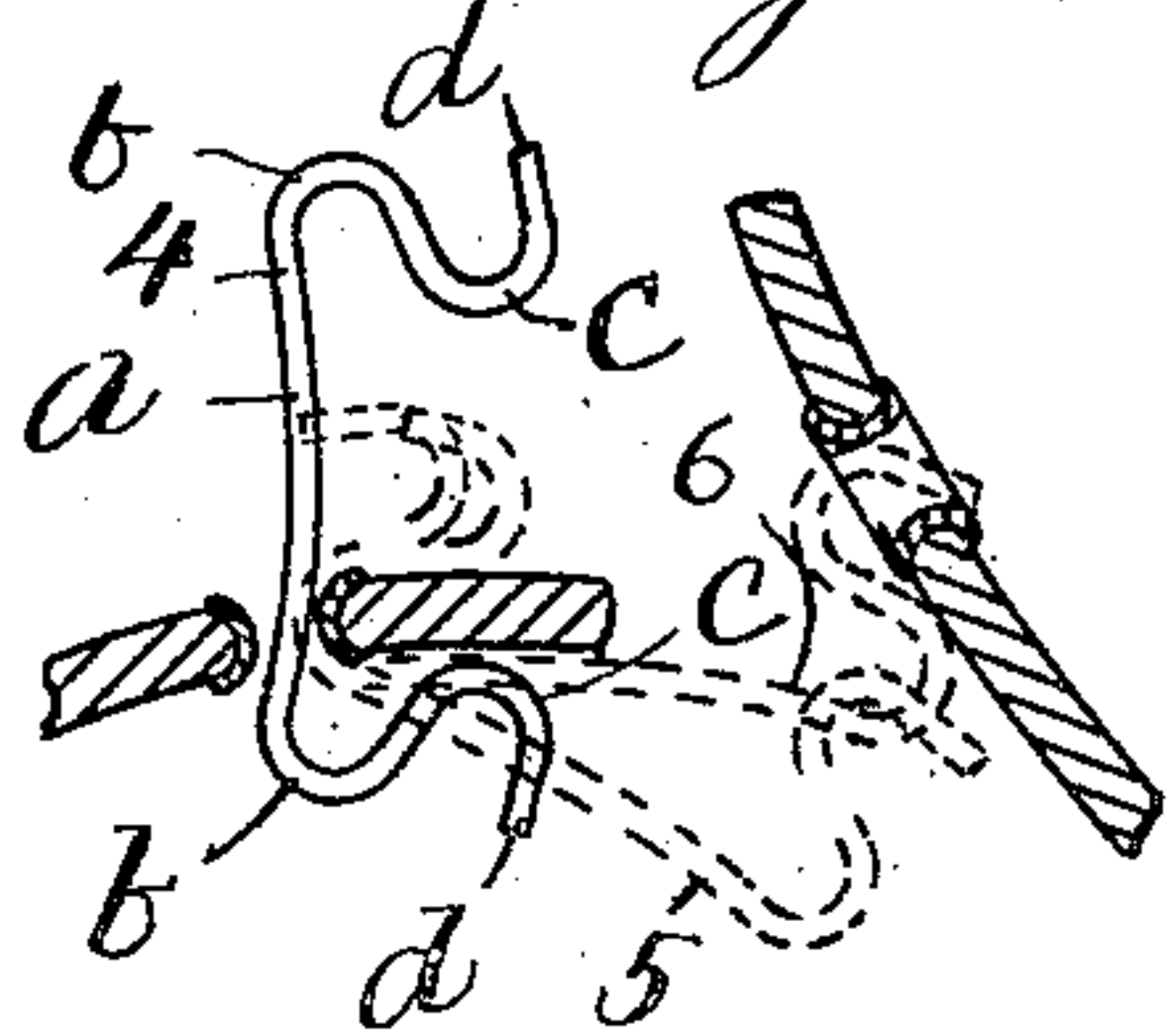


Fig. 6.

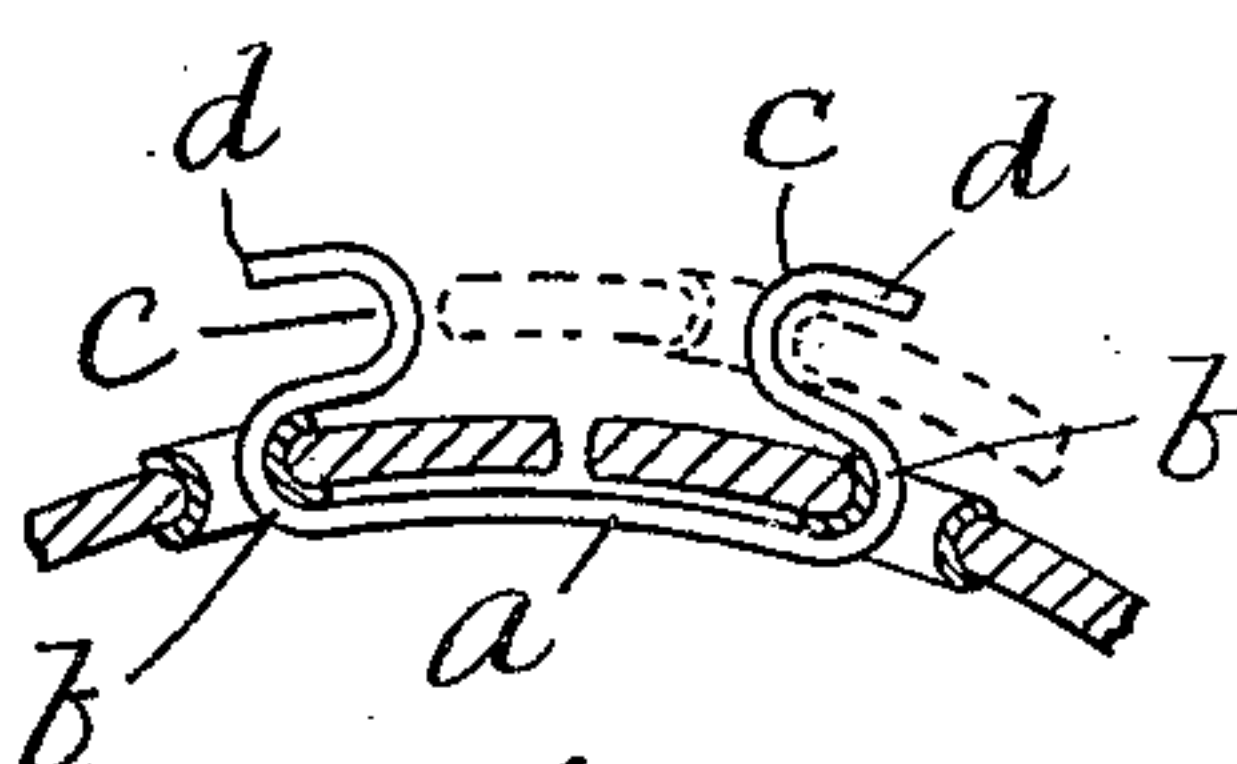


Fig. 2.

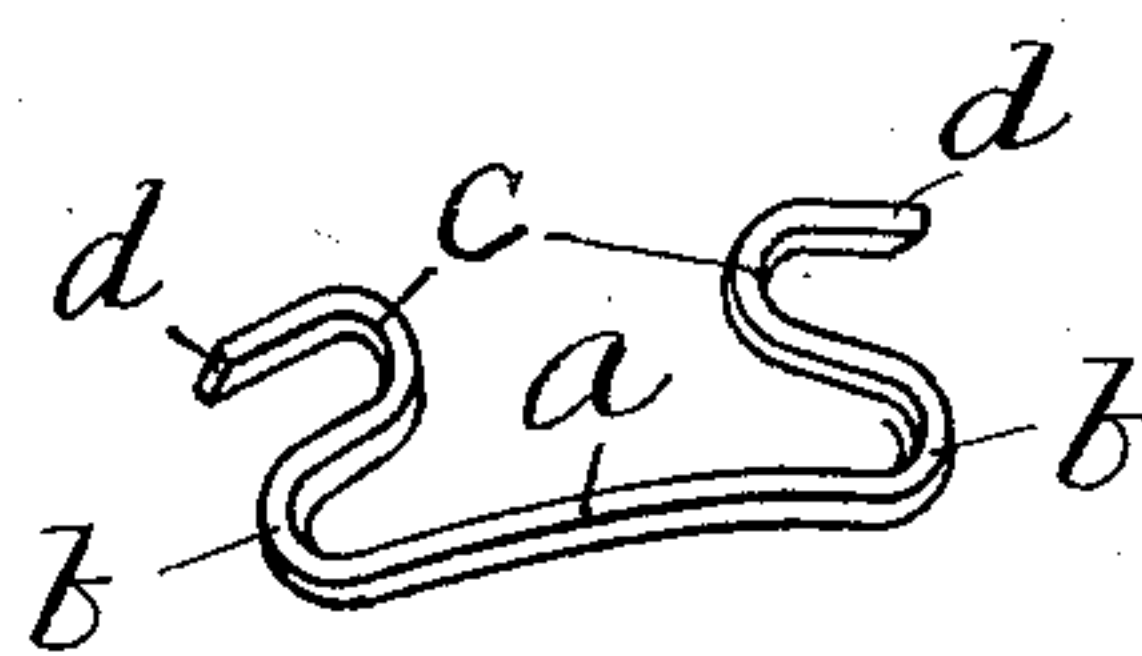


Fig. 3.

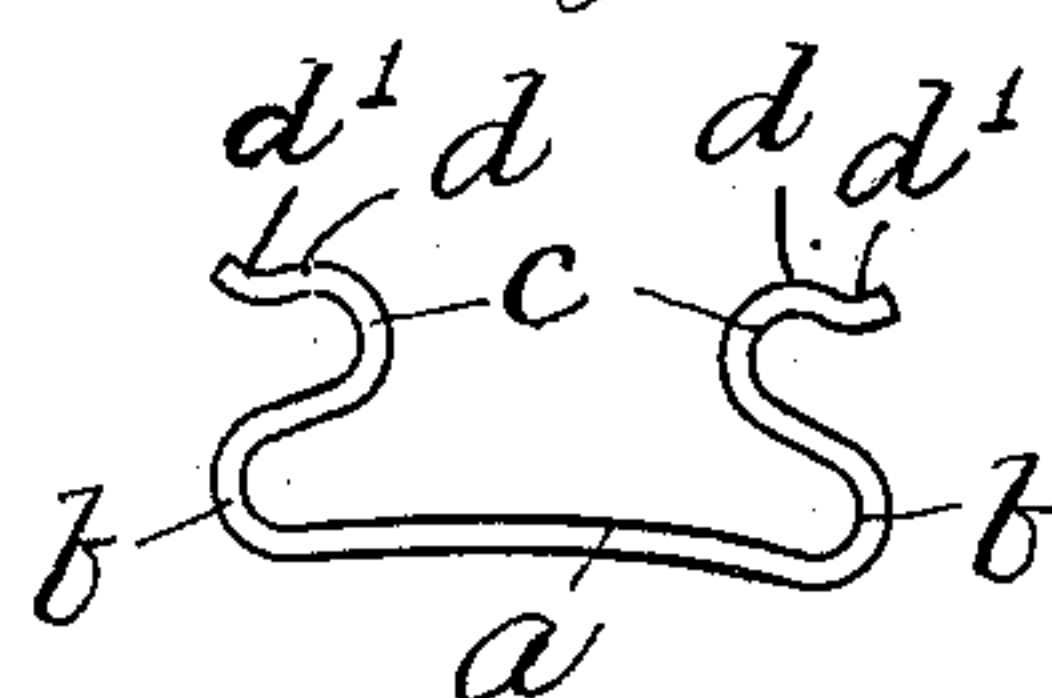


Fig. 4.

Witnesses:

H. B. Davis.

Man and M. Piper

Inventors,

R. M. Miles and  
E. Young by  
Noyes Hamman  
Attys



# UNITED STATES PATENT OFFICE.

REUBEN M. MILES AND ERNEST YOUNG, OF HAVERHILL, MASSACHUSETTS.

## SHOE-LACER.

No. 827,987.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed February 2, 1905. Serial No. 243,786.

*To all whom it may concern:*

Be it known that we, REUBEN M. MILES and ERNEST YOUNG, of Haverhill, in the county of Essex and State of Massachusetts, have invented an Improvement in Shoe-Lacers, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to that class of devices known as "lacers," which are employed for temporarily holding closed the lacing-opening of a shoe during the process of manufacture.

The invention more particularly relates to a lacer which is adapted to engage a single pair of eyelets only.

In the process of manufacturing McKay-sewed shoes, in which a horn is inserted in the shoe during the process of sewing, it often happens that the vamp is torn or the stitches are ripped at the end of the lacing-opening, so that it is desirable to secure the opening temporarily during the process of sewing in such a manner that the shoe will not be injured at this point. Moreover, if a shoe is not held in shape at the lacing-opening while it is being sewed the distortion is likely to become permanent.

When the upper is not stretched over a last, there is nearly as much tendency to push the laced edges of the quarter together as there is to draw them apart, particularly while the shoe is being McKay-sewed, and while temporary lacing devices have been produced which hold the opening in the shoe together satisfactorily while a last is in the shoe, yet these devices are very liable to become disengaged when the last has been removed.

The object of our invention is to provide a temporary lacer for a single pair of eyelets which is adapted to be applied readily to the shoe and to be removed as readily, which will hold the eyeleted portions of the shoe securely together, and which will not become accidentally disconnected therefrom under ordinary conditions, even though the last has been removed from the shoe. We accomplish this object by means shown in the accompanying drawings, in which—

Figure 1 illustrates a lacer made according to our invention and applied to a shoe. Fig. 2 is a side elevation of the lacer in position in

a shoe. Fig. 3 is a perspective view thereof. Fig. 4 is a side view of a modified form of the invention, and Figs. 5 and 6 illustrate different positions of the lacer while being inserted.

The lacer consists of a single continuous stiff wire bent to form an arched middle portion or cross-bar *a* and two semicircular portions or main eyelet-holding loops *b b*, oppositely disposed at each end thereof. Said loops are formed at the upper or convex side of the bar *a*, and the distance between the inner sides of said loops is approximately the same as the thickness of an ordinary eyelet. The opposite side of each loop *b* from bar *a* is approximately parallel to the adjacent portion of said bar, though they preferably diverge slightly therefrom as they extend toward each other and are extended and reversely curved to provide independent semicircular supplemental loops *c*, which are of practically the same diameter as the main loops *b*, each supplemental loop being disposed oppositely to the adjacent main loop, the closed ends of the supplemental loops being nearer together than the closed ends of the main loops. The opposite sides of loops *c* from loops *b* extend approximately parallel to bar *a*, though preferably slightly divergently therefrom, and the extreme end portions thereof are each preferably, though not necessarily, provided with an upturned end or toe *d'*, as shown in Fig. 4.

The lacer may be conveniently inserted in several ways; but the most convenient way, so far as we are aware, is illustrated in Figs. 5 and 6. According to this method the workman grasps one end of the lacer and passes the end portion *d* at the other end of the lacer through the eyelet nearest to him. (See full-line position, Fig. 5.) He then swings the lacer across the shoe-opening to positions 2 and 3 successively until the loop *c* has been passed through the eyelet, and then he swings it back to position 4 of Fig. 6 and passes the bar *a* through the eyelet to position 5. Then he turns up the farther edge portion of the quarter slightly or presses the nearer portion downward with the lacer and passes the end *d* (see position 6) and then loop *c* through the opposite eyelet. Then he draws back the lacer, so that both eyelets will be located in the end of loops *b*, as in full lines in Fig. 2. In this position the lacer effectively prevents the meeting portions of the



quarter from being pulled apart to an extent sufficient to cause the shoe to be injured. However, if said meeting portions of the shoe-quarter should be pressed together one of the eyelets will simply slide up into the supplemental loop *c*, where it will be held by the end of the loop and its upper side *d*, as indicated in Fig. 2 in dotted lines, until said portions of the shoe are pulled apart again and the eyelet is drawn back into loop *b*.

The lacer may be readily removed by moving it to the several positions above described in the reverse order; but as the edges of the quarter are practically never moved so as to cause the lacer to assume such successive positions it will not become disconnected from the shoe with the ordinary handling incident to McKay-sewing and other work which is performed on the shoe after the last is removed.

The upturned ends *d'* of the lacer materially assist the ready insertion of the end portions *d* in the eyelet while the lacer is being applied.

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

1. A shoe-lacer consisting of a cross-bar having a pair of oppositely-disposed main eyelet-holding loops connected to opposite ends of said bar and disposed at one side thereof, the opposite sides of each loop from the bar being extended convergently and then divergently to provide a supplemental retaining-loop oppositely disposed to and adapted to receive the eyelets independently of the adjacent main loop, substantially as described.

2. A shoe-lacer consisting of a cross-bar having a pair of oppositely-disposed main eyelet-holding loops connected to opposite

ends of said bar and disposed at one side thereof, the opposite sides of each loop from the bar being extended to provide a supplemental retaining-loop at its end, disposed oppositely to and with its sides in approximate parallelism with the adjacent main loop, substantially as described.

3. A shoe-lacer consisting of a cross-bar having a pair of oppositely-disposed main eyelet-holding loops connected to opposite ends of said bar and disposed at one side thereof, the opposite sides of each loop from the bar being extended to provide a supplemental retaining-loop oppositely disposed to, and adapted to receive the eyelets independently of the adjacent main loop, the opposite side portions of said supplemental loops from said bar having their end portions extending divergently therefrom, substantially as described.

4. A shoe-lacer consisting of a cross-bar extended reversely on itself at each end to form a pair of oppositely-disposed main eyelet-holding loops opening toward each other, and a pair of supplemental retaining-loops oppositely disposed to each other and each oppositely disposed to the adjacent main loop and adapted to receive the eyelets independently thereof, the closed ends of said supplemental loops being nearer together than are the closed ends of said main loops, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

REUBEN M. MILES.  
ERNEST YOUNG.

Witnesses:

L. H. HARRIMAN,  
H. B. DAVIS.

