No. 811,872. PATENTED FEB. 6, 1906.

M. RIES.

LACING DEVICE.

APPLICATION FILED JUNE 18, 1904.

Fig. 1.

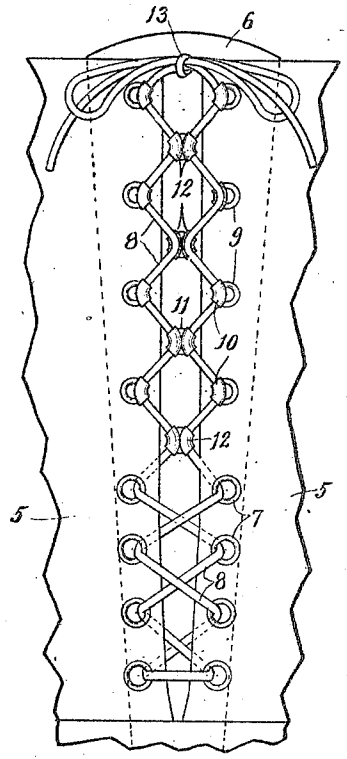
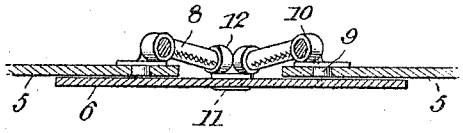


Fig. 2.



Witnesses.

C. N. Keeney.

R. S. C. Caldwell.

Inventor.

Moses Ries

By Benedict Morrell

Attorneys.

UNITED STATES PATENT OFFICE.

MOSES RIES, OF MILWAUKEE, WISCONSIN.

LACING DEVICE.

No. 811,872. Specification of Letters Patent. Patented Feb. 6, 1906.

Application filed June 18, 1904. Serial No. 213,085.

To all whom it may concern:

Be it known that I, MOSES RIES, residing in Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Lacing Devices, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

This invention relates to lacing devices, and has for its object to provide a more efficient means for lacing shoes, gloves, corsets, and any other devices requiring lacing, rendering it possible to quickly and easily open wide the flaps connected by the lacing without the necessity for removing the lacing therefrom even in part.

When the laced flaps of an opening of an article of apparel are desired to be readily and frequently opened or unlaced, the simplest method of lacing by passing the lacing back and forth through eyelets in the edges of the two flaps is found to be unsatisfactory by reason of the fact that the numerous sharp bends and turns of the lacing, with their bearing on the flaps, produce too much friction to permit of the free sliding of the lacing through the eyelets for allowing the flaps being forcibly drawn apart when the ends of the lacing have been untied. To avoid this, it has been found advisable to provide means other than the ordinary eyelets for engaging the lacing near the tied ends thereof, which will be capable of more readily releasing the lacing than such eyelets, which have to be threaded and unthreaded each time.

Another object of this invention is to provide a lacing device which will automatically care for the proper positioning and tightening of the shoe-tongue or corresponding part of an apparel-lacing.

With the above and other objects in view the invention consists in the devices and parts or their equivalents, as hereinafter set forth.

Referring to the accompanying drawings, in which like characters of reference indicate the same parts in both views, Figure 1 is an elevation of an apparel-lacing embodying the present invention with parts sectioned, and Fig. 2 is a transverse section thereof.

In the drawings 5 represents the flaps of an opening to be laced together, with a tongue member 6 therebehind, all arranged in the manner common with shoe-openings. The flaps 5 are provided with ordinary eyelets 7 at the lower parts of their edges, through which the lacing 8 is passed in the usual manner. Above the eyelets 7 the edges of the flaps 5 are provided at regular intervals with lacing-guides, which comprise rivet-like securing portions 9, secured in openings in the flap edges in a manner similar to that now employed with the ordinary lacing-hooks, and curved guide-tubes 10 are located on the front surface of said securing portions 9, near to the opening between the flaps, with their ends extending toward said opening. Intermediate lacing-guides are arranged on the tongue 6 midway between the pairs of the before-mentioned lacing-guides and comprise the rivet-like securing portion 11, similar to the corresponding portion 9 of the other lacing-guides; but on their outer faces they are provided with a pair of curved guide-tubes 12, similar to guide-tubes 10, and placed back to back, with their ends extending toward the ends of the nearest guide-tubes 10.

The ends of the lacing 8 after passing through the uppermost pair of eyelets 7 converge and pass through their respective guide-tubes 12 of the lowest double lacing-guide, then diverge and pass through the first single guide-tubes 10 on their respective flaps, from which they converge and pass through their respective guide-tubes 12 of the second double lacing-guides, and so on to the top of the flaps, where the ends of the lacing after passing through a pair of the single lace-guides are tied together in a knot 13.

From the foregoing it will be seen that the lacing passed through the several guide-tubes, which are curved to follow its windings, is comparatively free of frictional engagement therewith, and when the knot 13 is untied the flaps may be quickly and easily drawn apart, the lacing sliding freely through the guide-tubes to permit of the same. When it is desired to draw the flaps together again, it is only necessary to pull upon the ends of the lacing, which have not during the opening operation been removed from any of the guide-tubes, so that each flap is drawn toward the row of double guide-tubes on the tongue 6, and therefore close the opening. This closing operation is also readily accomplished, owing to the frictionless engagement between the lacing and the curved guides.

It is obvious that with curved guide-tubes such as here employed no liability of their catching in and tearing other articles of apparel is possible, and therefore this form of lacing may be employed where the use of

lacing-hooks is impossible. Furthermore, it will be observed that with the double guide-tubes secured to the tongue 6 said tongue is automatically centered across the opening between the flaps and tightened to its proper position when the lacing is drawn tight for closing the opening between the flaps.

What I claim as my invention is—

1. In a lacing device, a pair of flaps, curved tubular lacing-guides carried thereby, a lacing having sections for each flap passing through the lacing-guides of said flap, and intermediate lacing-guides having a pair of oppositely-curved guide-tubes through which the lacing-sections of both flaps are passed between their connections with the lacing-guides of the flaps.

2. In a lacing device, a pair of flaps, lacing-guides carried thereon comprising curved guide-tubes, a tongue member underlapping the flaps, double lacing-guides carried thereby comprising a pair of curved guide-tubes, and a lacing having portions passed through the guide-tubes of each flap independent of the other, the guide-tubes of the double lacing-guides of the tongue member receiving the lacing of each of the flaps between the guide-tubes of said flaps.

3. In a lacing device, a lacing-guide comprising a securing means, and a pair of oppositely-disposed curved guide-tubes carried thereby.

4. In a lacing device, a lacing-guide comprising a pair of joined oppositely-disposed curved guide-tubes.

In testimony whereof I affix my signature in presence of two witnesses.

MOSES RIES.

Witnesses:
ANNA F. SCHMIDTBAUER,
ALMA KLUG.