No. 795,119. PATENTED JULY 18, 1905.

E. P. HARLOW.

FASTENING FOR SHOES, GLOVES, OR THE LIKE.

APPLICATION FILED SEPT. 15, 1904.

Fig. 3,

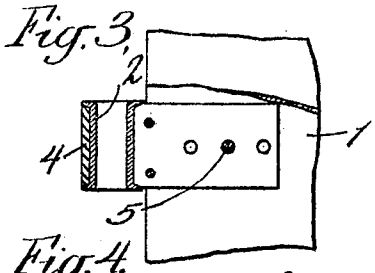


Fig. 4,

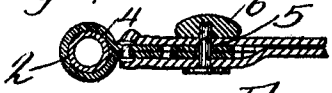


Fig. 5,

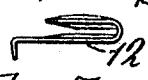


Fig. 6,



Fig. 7,



Fig. 2,

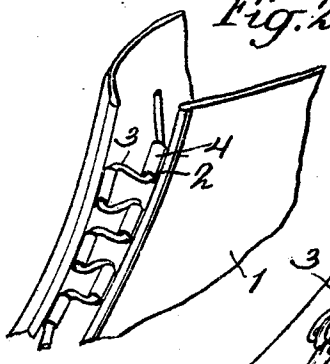


Fig. 1,

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UNITED STATES PATENT OFFICE.

EDWIN P. HARLOW, OF NEW YORK, N. Y.

FASTENING FOR SHOES, GLOVES, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 795,119, dated July 18, 1905.

Application filed September 15, 1904. Serial No. 224,530.

To all whom it may concern:

Be it known that I, EDWIN P. HARLOW, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Fastenings for Shoes, Gloves, or the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to fastenings for shoes, gloves, and similar articles comprising two edges, flaps, or opposite parts which are to be drawn together and held together by a lacing-cord or the like; and my invention comprises improved lacing means whereby it is unnecessary when removing the shoe, glove, or other article to unlace it and whereby when such shoe, glove, or other article is put on again a pull upon a single cord or the like draws the parts of the article together, so that when the cord is fastened the shoe or other article is securely fastened.

My invention further consists in other features of invention hereinafter more particularly described, and set forth in the claims.

The objects of my invention are to facilitate the fastening or lacing and the removal of shoes, gloves, and similar articles, to permit a shoe or other article to be removed without unlacing it and to permit such shoe or other article when put on again to be drawn up tight by a pull upon a single lacing-cord or the like, to preserve adequate flexibility of the parts, and to accomplish the above objects by means which are simple, relatively inexpensive, inconspicuous in appearance, which do not mar the appearance of the shoe or other article, and which may be operated with ease and without the acquirement of any special knack or skill.

In the following drawings I show my invention as applied to a shoe, and I have not deemed it necessary to illustrate the invention as applied to gloves and other articles, since from the description and illustration of my invention as applied to shoes herein contained it will be apparent to those skilled in the art how the same invention may be applied to many other articles; but I wish it to be understood that in illustrating my invention as applied to shoes only I do not intend to limit myself to such application of said invention only; on the contrary, I do not limit myself to the application of my invention to any particular class of articles, but intend to cover the said invention to whatever article it may be applied.

In the said drawings, showing one embodiment of my invention as applied to a shoe, Figure 1 is a perspective view of a shoe embodying my improved fastening, the upper of the shoe being drawn up tight by the fastening device. Fig. 2 is a similar detail perspective view showing the front seam or fly of the shoe open to permit the shoe to be put on or taken off. Fig. 3 is a detail sectional view showing how the eyelets are connected to the edges of the fly, the section being taken longitudinally of one of the eyelets. Fig. 4 is another detail sectional view taken transversely with respect to one of the eyelets, showing means for adjustably connecting the eyelets to the upper of the shoe. Fig. 5 is a detail perspective view of the hook for fastening the lacing-cord at the top of the shoe. Fig. 6 shows a detail section of such hook on a larger scale, and Fig. 7 shows the lacing-cord and in detail section the means for fastening the lower end of said cord detachably to the shoe at the bottom of the fly.

According to my invention I provide along the adjacent edges of the shoe, glove, or other article or articles to be drawn together a number of eyelets adapted to be brought into line when the said edges are drawn together, alternate eyelets being connected to opposite sides of the shoe or other article. The bores of these eyelets are longitudinal with respect to the edges to be drawn together, and the eyelets are spaced so closely together that when drawn together they form in substance a continuous tube, the space between adjacent eyelets being preferably less than the diameter of the internal bore of the eyelets, so that a lacing-cord the diameter of which approximates the diameter of bore of the eye-

lets must of necessity draw said eyelets into line, preventing them from forming a zigzag line, as might be the case if too much space were left between adjacent eyelets. Sufficient space may be left, however, if desired, to permit the insertion of a hook or similar instrument between adjacent eyelets to pull out the lacing-cord when desired. The eyelets are preferably attached flexibly to the edges to be drawn together, and I prefer to so connect said eyelets that their distance from said edges may be adjusted to some extent.

Referring now to the drawings, the same show a shoe the flaps 1 1 of the upper of which are provided along their adjacent edges with a series of eyelets 2, alternate eyelets attached to opposite flaps. As shown in Fig. 3, the internal bore of the eyelet employed flares slightly at the ends, presenting rounded edges to the lacing-cord to cause the same to run freely and to prevent cutting thereof. The said lacing-cord 3 is detachably secured at its lower end to the shoe or other article to which my improved fastening is applied, said point of attachment in the case of a shoe being preferably at the bottom of the fly. The means of attachment employed is preferably such that the cord may be grasped at its lower end and the upper end of said cord being free may be pulled through the tube formed by the row of eyelets when removing the shoe or other article. At its lower end, and for a distance substantially equal to the length of the tube formed by the registering eyelets, said cord preferably has a diameter nearly equal to the internal diameter of the eyelets, after which the cord preferably grows considerably smaller. The purpose of this will be seen hereinafter.

While I do not limit myself to any particular method of attaching the eyelets to the edges or articles to be drawn together, the means illustrated is convenient for the purpose, comprising a strip of leather, fabric, or other suitable flexible material 4, which encircles the eyelet and is inserted between the layers of material of the shoe-upper and is there fastened by suitable means, such as a headed screw 5, passing through the upper and through said strip 4 and screwing into a flat nut 6, formed to simulate a button. It is desirable that the device employed for connecting the eyelet to the article to which the fastening is applied shall permit adjustment of the distance of the eyelet from the edge of such article, and this is permitted by the means of attachment illustrated, for the strip 4 may have in it a number of different holes through which the screw may be passed, or the strip 4 may be pierced at any desired point to permit the passage of the screw.

The means for fastening the eyelets to the shoe just described permits all necessary flexibility to permit the shoe to adapt itself to the movements of the wearer.

For detachably securing the lower end of the lacing-cord 3 a button 7 may be secured to the lower end of the cord, and this button may be provided with a flange 8 at its bottom, said flange adapted to be received within a fastening-piece 9, secured to the shoe just beneath the fly and provided with flanges 10, adapted to overlap the said flange 8 of the button. The tension on the cord will hold the button 7 in place within this fastening-piece until when it is desired to loosen the fastening said cord is unfastened at the top of the shoe, whereupon the button 7 may be grasped and the lacing-cord drawn out at the lower end until the reduced portion of said cord is within the eyelets or most of them. It is then easy to spread apart the flaps of the upper, the reduced portion of the lacing-cord running very freely through the eyelets, though, if desired, a hook may be introduced between any two eyelets to draw out the lacing-cord at such point. Preferably the button 7 is provided with another flange 11 intermediate the flange 8 and the cord 3, flanges 11 and 8 being spaced apart just sufficiently to permit easy passage between them of the flanges 10 of the fastening-piece 9.

The lacing-cord may be secured at the top of the shoe in various ways, and I do not limit myself to any particular way of so fastening it. It may be merely tied around the foot, for example. I have illustrated, however, one method of fastening the lacing-cord which I find convenient. Said means comprises a spring clamping-hook 12, secured to the upper of the shoe and adapted to receive the lacing-cord. Said hook preferably is provided with means for causing it to hold the cord more securely than said cord would be held by a hook having smooth inner surfaces, and to increase the holding power of the hook I preferably provide one of its inner surfaces with two grooves 13 with a central rib 14 between them and provide the other surface with two ribs 14 opposite the said grooves 13 and a groove 13 opposite the said rib 14 of the other surface. A hook so formed holds a cord very firmly without mutilating it. The cord when gripped by the hook may be passed around the shoe and tied loosely. Owing to the fact that the upper portion of the lacing-cord is of relatively small diameter, it is a simple matter to insert a lacing-cord through the eyelets in the first instance. This having been done, to fasten the shoe it is necessary merely to draw upon the upper end of the cord until it is drawn tight and then to pass the cord through the hook 12 and, if necessary, to pass the cord around the shoe and tie it. As the lacing-cord is pulled tight, as above described, the various eyelets come into line and the button 7 catches in the fastening-piece 9 at the bottom of the fly. To loosen the shoe, the upper end of the lacing-cord is freed, the lower end of the cord is

grasped and drawn out until the reduced portion of the cord is within most of the eyelets, and then the flaps of the shoe are spread apart.

It is obvious that my invention is susceptible of many variations and modifications without departing from the spirit and scope thereof, also that certain parts may be used in connection with other parts of different construction. Therefore I do not limit myself to the particular details of construction, combination, and arrangement of the parts herein illustrated and described.

What I claim is—

1. In a fastening for shoes, gloves and the like, the combination of a series of short tubes or eyelets, strips of flexible material surrounding the same and projecting laterally therefrom, and means adjustably connecting said strips to the parts to be drawn together.

2. In a fastening for shoes, gloves and the like, the combination with a series of short tubes or eyelets connected to the opposite parts to be drawn together, arranged to come substantially into line when so drawn together, and spaced to form substantially a continuous tube when so drawn together, of a single lace within said eyelets, one portion of which, normally located within said eyelets, has a diameter approximating the internal diameter of said eyelets and another portion of which has a less diameter.

3. The combination with a shoe or other article having a fly, and lace-receiving means connected to opposite sides of said fly, of a lace, a button having a shank to which said lace is secured and a flange, and a fastening device at the bottom of said fly, adapted to receive and retain such flange between said fastening device and the shoe.

4. The combination with a lace, and a button having a shank to which said lace is secured and a flange, of a fastening device for such lace, having an opening adapted to receive said button-flange and having itself flanges adapted to overlap said flange of the button when in place in such fastening device, and thereby to hold said button in place between said fastening device and the shoe.

5. The combination with a shoe or other article having a fly, and means connected to opposite sides of said fly for receiving a lace, of a fastening device for such lace, located at the end of the fly, and comprising an approximately arc-shaped piece having a flange which is approximately parallel to the surface of the shoe or other article near the end of the fly and is adapted to receive beneath it the flange of a button attached to such lace.

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

EDWIN P. HARLOW.

Witnesses:
H. M. MARBLE,
L. S. ANDREWS, Jr.