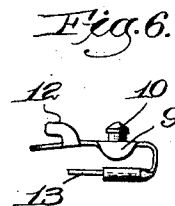
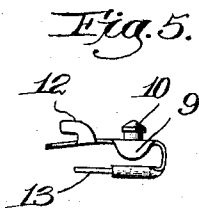
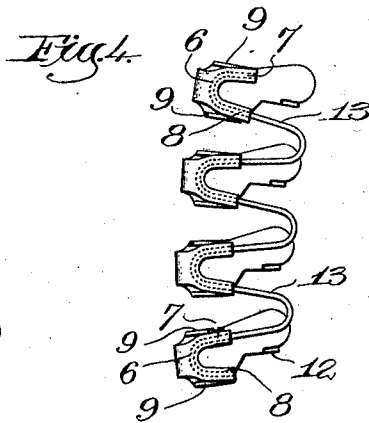
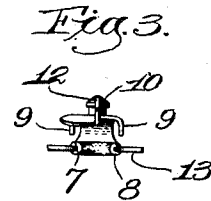
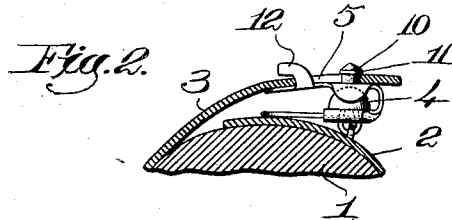
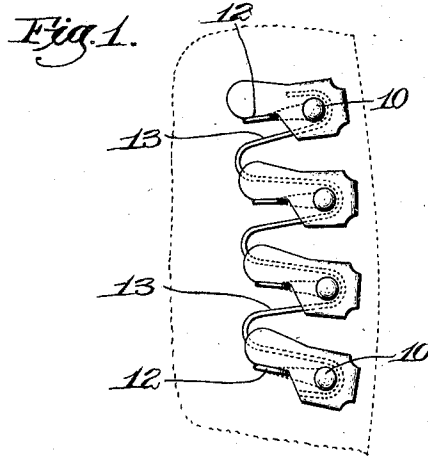


P. F. W. C. KRIPPENDORF.
 LASTING BUTTONEE.
 APPLICATION FILED DEC. 8, 1909.

967,939.

Patented Aug. 23, 1910.



Witnesses:
 Thomas Drummond,
 Joseph M. Ward.

Inventor:
 Paul F. W. C. Krippendorf,
 by Kirby, Gregory,
 Attys.

UNITED STATES PATENT OFFICE.

PAUL F. W. C. KRIPPENDORF, OF LYNN, MASSACHUSETTS.

LASTING-BUTTONER.

967,939.

Specification of Letters Patent.

Patented Aug. 23, 1910.

Application filed December 8, 1909. Serial No. 531,945.

To all whom it may concern:

Be it known that I, PAUL F. W. C. KRIPPENDORF, a citizen of the United States, residing at Lynn, county of Essex, and State of Massachusetts, have invented an Improvement in Lasting-Buttoners, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

This invention resides in a device to secure and hold the flaps of a button shoe during the processes of manufacture, such, for example, as lasting. During the lasting process, it is necessary to hold the upper of the shoe firmly fitted over the last. Hitherto this has commonly been done by buttoning the shoe over the last, but the buttoning and unbuttoning of the shoe over the rigid and inelastic last results in much injury to the buttonholes, stretching and distorting them and injuring not only the appearance of the shoe, but also its strength.

The present invention provides a device which engages the button and the buttonhole and holds the shoe in position firmly on the last without injury to the shoe, to the button or to the buttonhole. It may be readily adapted to any size of shoe and any arrangement of spacing of buttons and buttonholes.

The nature of the invention will more fully appear from the accompanying description and drawings and will be particularly pointed out in the claims.

The drawings represent the preferred form of the invention.

In the drawings, Figure 1 is a top plan view of the device in position with a portion of the shoe indicated in dotted lines; Fig. 2 is a view in cross section through a portion of the last and a portion of the shoe upper showing the device in position to hold the shoe on the last; Fig. 3 is a front elevation of one fastening member of the device; Fig. 4 is a bottom plan view of the device as shown in Fig. 1; Figs. 5 and 6 are side elevations of one of the fasteners showing different relative lateral positions of the parts.

In the drawings a portion of an ordinary last is indicated at 1 in Fig. 2 and upon it are shown portions of the button flap 2 and buttonhole flap 3 of an ordinary button shoe, the button being indicated at 4 and the buttonhole at 5.

The lasting buttoner embodying this invention is made up of a series of what are herein termed "fasteners" and which comprise means herein termed "a button grip" for engaging the button and means herein termed "a buttonhole grip" for engaging the buttonhole, and these grips are preferably firmly united as by being formed in an integral piece. These fasteners are connected to each other by a yielding connection permitting a yielding separation of the fasteners from each other in order to conform to different spacings of buttons and also permitting the yielding of the fasteners in a curvilinear direction to conform to any particular curve in the buttons of the shoe. Preferably this connection between the fasteners takes the form of a sinuous spring member made of wire, the fasteners being attached in suitable manner to the sinuous member at alternate bends thereof.

Referring to the drawings it will be necessary to describe but one of the fasteners. In the form shown it is made of a piece of sheet metal bent into a general U-shape form, as clearly seen in Figs. 2 and 6. The lower portion 6 is forked to form two limbs 7 and 8 adapted to pass on either side of the button shank. The upper portion is provided above the fork with depending ears 9 adapted to receive between them the button head, the limbs of the U into which the fastener is formed being separated sufficiently to allow of the passage therebetween of the button head. The upper limb of the U-shaped fastener is provided with a projecting stud 10. This stud should be of a diameter substantially equal to the diameter of the eye of the buttonhole and is finished at its top in conical form and with a very slight shoulder or projection 11. The forward end of the upper limb is provided with a hook-shaped catch 12 adapted to pass through the slot of the buttonhole and engage the flap of the shoe. It will thus be seen that each fastener comprises two parts, first, a button grip, namely, the lower member which engages the shank of the button, and a buttonhole grip, namely, the upper member which engages the buttonhole, and which consists primarily of the stud 10 and secondarily of the hook 12.

The series of fasteners are held together by sinuous spring wire connection 13 and are secured to alternate bends thereof in suitable manner and as shown by having the

metal of the forked portions 7 and 8 bent around the wire and swaged thereto. It will thus be seen that the several fasteners are yieldingly or extensibly connected so that they may separate one from the other to conform to different spacings of buttons and that they may also assume as a series lines of varying curvature to conform to the curvature of the row of buttons on the shoe.

The fasteners when made as indicated of sheet metal may be adjusted, that is, may have the button grip and the buttonhole grip which each comprises adjusted with respect to each other by bending the metal of the fastener at different points, one form being indicated in Figs. 1 to 4 inclusive, and other forms being indicated in Figs. 5 and 6 respectively, wherein the projection or stud 10 is shown in laterally different positions with respect to the button-engaging fork. This enables fasteners of one size to be used with varying sizes of lasts.

When the fastener is to be placed in position the button grips are slipped over the button shanks, bringing the shanks within the forks formed by the parts 7 and 8 and the heads of the buttons between the lugs 9. The hooks 12 are then passed through the slots of the buttonhole and the studs 10 are then pushed through the eyes of the buttonhole, the little shoulder 11 catching over the edge of the eye without in any way straining or distorting the buttonhole. The fasteners are usually applied before the insertion of the last and the upper with the fasteners in place is frequently subjected to handling and to operations which tend to displace the fasteners, but they are held in place against dislodgment by the construction disclosed. The hook 12 catching over the upper at one end and the shoulder 11 catching over the upper at the other end of the buttonhole hold the buttonhole grip in place while the two plates forming the fasteners converge slightly toward the mouth so that the button snaps in between them and is thus prevented from slipping out from the button grip. The shoe flaps are thus secured in place firmly upon the last without injury either to the button or the buttonhole. The fastener is removed with equal ease because the eye of the buttonhole readily slips over the stud allowing the fastener to be removed.

It is intended herein to claim the invention broadly as it is believed that this is the first device to unite the shoe flaps by engagement with the button and the buttonhole and without injury to either.

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

1. A lasting buttoner for holding the flaps of button shoes comprising a series of fasteners; each fastener comprising a button

grip, and a buttonhole grip; and means for yieldingly connecting the fasteners.

2. A lasting buttoner for holding the flaps of button shoes comprising a series of fasteners; each fastener comprising a button grip, and a buttonhole grip; and means connecting the fasteners to permit varying separation and varying curvilinear arrangement thereof.

3. A lasting buttoner for holding the flaps of button shoes comprising a series of fasteners; each fastener comprising a button grip, and a buttonhole grip; and a sinuous spring member, the said fasteners being mounted on alternate bends thereof whereby varying separation and varying curvilinear arrangement of the fasteners is secured.

4. A lasting buttoner for holding the flaps of button shoes comprising a sinuous spring member and means carried at alternate bends thereof for gripping a series of buttons and their corresponding buttonholes to unite and hold the shoe flaps without buttoning.

5. A lasting buttoner for holding the flaps of button shoes comprising a series of fasteners for gripping a series of buttons and their corresponding buttonholes to unite and hold the shoe flaps without buttoning, and means for yieldingly connecting the fasteners to permit varying separation and varying curvilinear arrangement thereof.

6. A lasting buttoner for holding the flaps of button shoes comprising a series of fasteners, each fastener comprising a button grip and a connected buttonhole grip, said buttonhole grip having a stud to enter the buttonhole eye, and means for yieldingly connecting the said fasteners.

7. A lasting buttoner for holding the flaps of button shoes comprising a series of fasteners, each fastener comprising a button grip and a connected buttonhole grip, said buttonhole grip having a stud to enter the buttonhole eye and a hook to engage the flap at the slot end of the buttonhole, and means for yieldingly connecting the said fasteners.

8. In a device for holding the flaps of button shoes, a fastener comprising a forked member for engaging the button shank and a stud member for engaging the buttonhole eye.

9. In a device for holding the flaps of button shoes, a fastener comprising a forked member for engaging the button shank and a stud member for engaging the buttonhole eye, and means for rigidly uniting the said members.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

PAUL F. W. C. KRIPPENDORF.

Witnesses:

LEONA CHANDLER,

THOMAS J. DRUMMOND.