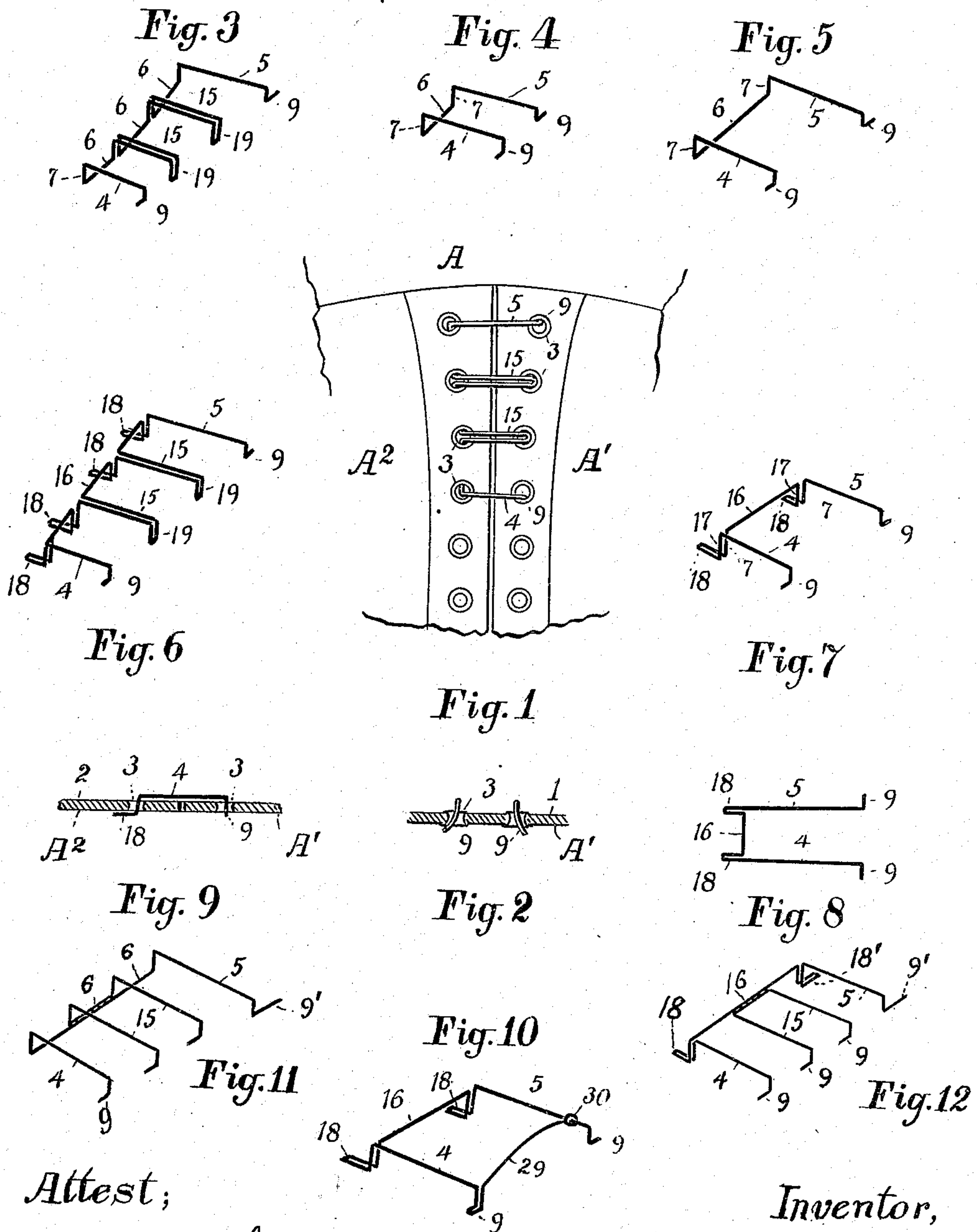


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HOLDER FOR THE EYELETED EDGES OF BOOTS AND SHOES.
APPLICATION FILED MAR. 20, 1899.

930,485.

Patented Aug. 10, 1909.



Attest;

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UNITED STATES PATENT OFFICE.

CURTIS N. LEONARD, OF BROCKTON, MASSACHUSETTS, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, TO VICTORIA SELF-LACING COMPANY, OF BOSTON, MASSACHUSETTS, A CORPORATION OF MAINE.

HOLDER FOR THE EYELETED EDGES OF BOOTS AND SHOES.

No. 930,485.

Specification of Letters Patent.

Patented Aug. 10, 1909.

Application filed March 20, 1899. Serial No. 709,706.

To all whom it may concern:

Be it known that I, CURTIS N. LEONARD, a citizen of the United States, and residing and having my post-office address at Brockton, in the county of Plymouth and State of Massachusetts, have invented a new and useful Improvement in Holders for the Eyeleted Edges of Boots and Shoes, of which the following is a full, clear, and exact description.

This invention relates to means for holding the eyeleted edges or flies of a boot or shoe during the lasting and other operations in which said edges are liable to be forced out of proper relative positions or the shoe distorted or strained if the edges are disconnected.

The object of the invention is to provide an improved holder which can be manufactured at small cost and can be easily applied to a shoe and, while not liable to become disconnected from the shoe accidentally may be readily disconnected from one edge of the shoe to permit a last to be withdrawn without first materially changing the tension on the shoe upper.

It is the custom to secure the flies of a shoe upper by a temporary lacing cord or a holder before the upper is placed on a last. The fastening holds the flies in proper relation to each other so that the upper can be pulled and fitted snugly to the last without the flies becoming separated further than they are intended to be in the completed shoe. The last has to be withdrawn through the top and lacing opening of the shoe and it is very desirable in low-cut shoes to disconnect the edges or flies of the upper before the last is withdrawn, while in high shoes or boots it is always necessary to disconnect the flies before the last can be taken out of the shoe.

With holders as heretofore constructed it has been necessary in disengaging the upper from the holder to pull or manipulate it, as over a hook on the holder, in a way that involved drawing the upper even more tightly about the last than it was drawn in the lasting operation.

A very important feature of this invention consists in a holder which can be disengaged from one of the flies of a shoe on a last without first materially changing the tension of the shoe upper.

The invention is shown as embodied in a holder comprising a connecting member

formed at one end so that it can be withdrawn from an eyelet by a movement laterally and upwardly with relation to the eyelet without materially straining the upper lengthwise of the connecting member.

A preferred embodiment of the invention consists in a holder comprising a plurality of connecting members, the end members of which are formed with prongs projecting or deflected laterally in opposite directions to an extent sufficient to hold said members securely in the eyelets of a shoe fly when the upper is not under tension, and such a shoe fly holder comprises another feature of this invention.

In the operation of withdrawing a last from a shoe through the top and lacing opening of the shoe the vamp is sometimes strained at the lower end of said opening, particularly if the last is full over the lower instep or if the vamp comes high up on the instep of the last. To avoid this straining of the upper I may, in accordance with another feature of this invention, provide the fly holder with a connecting member adapted to engage the lower eyelets and constructed and arranged to maintain its connection with the two flies of the upper after one edge of the upper has been disconnected from the other member or members of the holder to permit the withdrawal of a last. As herein shown this lowermost connecting member of the holder is provided with a laterally projecting prong which is longer than the projecting prongs of the other connecting member or members and will not be disengaged from its eyelet by the movement required to disengage the other members from the eyelets with which they cooperate.

Other features of the invention, including certain details of construction and combinations of parts, will be hereinafter described and pointed out in the claims.

Referring to the drawings forming part of this specification, Figure 1 is a top view of a section of a shoe upper, showing the lacing edges or flies thereof, and my fastener holding the same together; Fig. 2 is a sectional view of a portion of the upper, through two of the eyelets thereof, and showing the manner in which the free ends of the spring arms are adapted to be engaged with the eyelets; Fig. 3 is a perspective view of my invention adapted for more than two eyelets at each

side; Fig. 4 shows the device with the two spring arms adapted for adjacent sets of eyelets; Fig. 5 shows the two spring arms adapted for eyelets not adjacent; Fig. 6 illustrates a modified form of fastener adapted for more than two eyelets at each side; Fig. 7 shows the same modification designed for two non-adjacent eyelets; Fig. 8 shows the same modification designed for two adjacent eyelets; Fig. 9 is a sectional view of a portion of the upper showing the said modification in position; Fig. 10 shows this same modification with the spring arms provided with a locking member; Fig. 11 is a perspective view of another form of fastener adapted for more than two eyelets at each side; and Fig. 12 is still another form of fastener to be used with more than two pairs of eyelets.

Referring to Fig. 1, A represents the vamp, and A', A², the two parts of the top, or upper of a shoe or of any other separable fabric-like elements formed with perforations along their approximate edges; while 3, 3 indicate the eyelets which receive the engaging members of the fasteners to hold the two parts of the upper together while the shoe is being lasted.

One form of my invention is that illustrated in Fig. 4, in which 4 and 5 indicate the spring arms previously referred to. These arms are preferably formed from spring wire and are united at their bases by the offset bar, 6, the vertical bends, 7, being somewhat greater in length than the thickness of the leather and the metal eyelets inserted therein. The free ends of these arms are formed with the downward and laterally bent hooks, 9, which are adapted to lie in the same vertical plane one with the other, and this plane to be substantially at right angles to the arms. The bends, 7, in the fastener here illustrated, are made a distance apart practically equal to the space from center to center of two adjacent eyelets on the same side of the upper. The free ends of said arms are, however, given a normal distance from each other somewhat greater than that of their bases, in order that these ends must be pressed toward each other to fit down into two adjacent eyelets. This will be made clearer when we notice the entire operation of fastening the lacing edges together with the device represented in Figs. 1, 3, 4 and 5. The first step, in applying the fastener or holder to a shoe in accordance with the illustration in Fig. 1, is to insert the two arms up through two adjacent eyelets in the same fly, from within the upper. This leaves the offset bar, 6, beneath the leather and permits the spring arms to be brought down upon the face of the upper. When thus brought down, said arms are pressed slightly toward each other until the hooks, 9, are directly over the proper eyelets and can be pushed down therein. When thus in place, the pres-

sure on the arms is removed and the resilience of said arms throws said hooks into engagement with the eyelets entered each hook underlying the eyelet and maintaining the fastener in its working position. By again pressing said arms together, the hooks, 9, are released and the arms raised. If it is desired to remove the device from the upper, the arms are withdrawn from the eyelets through which such arms were first inserted.

The advantages resulting from the construction above described would, of course, be secured if the free ends of the arms were bent inwardly toward each other instead of being bent outwardly away from each other as shown, and while I have shown the free ends of arms bent laterally at right angles with the length of the arms, the angle which the free ends form with the arms is not important so long as the ends are deflected laterally enough to form prongs or hooks which will engage eyelets with sufficient security to prevent their accidental disconnection. It will also be obvious that the fastener may be used by inserting the arms through the first eyeleted edge from the outer side, passing them beneath the upper across the opening between the eyeleted edges, and then projecting the free ends upwardly from the second edge. When the fastener has been applied in this way it may be disconnected by engaging the hooks themselves to force the arms 4 and 5 toward each other and downwardly with relation to the eyelets, or the upper itself may be manipulated over the prongs of the holder, as will be readily understood.

The exact form of the hooks, 9, may be either that of a slight curve, as indicated in Fig. 2, or a sharper bend, practically a right angle, as indicated in the other figures. This latter is preferable, as being more secure to retain it in its place.

The construction illustrated in Fig. 5 is substantially the same as that of Fig. 4, the only difference being in lengthening the bar, 6, sufficiently to adapt the device for engaging eyelets at some distance apart. In other words, instead of engaging the first and second eyelets in the row, it will engage the first and third, or second and fourth, etc. To adapt the fastener for several eyelets in each row, I combine two or more sets of spring arms, either by means of the many bends shown in Fig. 3, or by soldering together the two bars, 6, of a narrow pair and of a wide pair, as shown in Fig. 11.

The advantage of the construction of my device in which the bar, 6, is offset below as shown, is that such device can not so easily fall out and be mislaid when the shoe is being carried from one operator to another during the process of making the shoe. The fasteners can be applied to the uppers by inexperienced help, so that when the lasters

receive the uppers they can begin to work upon them without delay.

The essential difference between the construction previously described and that set forth in Figs. 6, 7, 8 and 9 consists in the means for engaging the bases of the spring arms with the eyelets of the upper. In this latter construction the bar 16 comes above the leather, and each arm has a corresponding hook 18 which extends below the eyelet parallel with the arm. The advantage of this construction is that such a fastener may be applied to the upper more easily; but it also possesses the disadvantage of being liable to fall out whenever the hooks 9 are disengaged from the eyelets.

The modification shown in Fig. 12 differs from that just described in having the bars, 16, of a narrow and wide pair soldered together; and further, in having the hook, 18', turned parallel with the said bars instead of parallel with the spring arms as in the other construction. In applying this fastener to the upper, the hooks, 18', and 9', are first inserted in the proper eyelets; then the hook, 18, and finally the hooks, 9.

In the construction shown in Figs. 11 and 12, it will be noticed that the hook, 9', is made longer than the other hooks of the fastener, which are turned in the opposite direction thereto. The purpose of this is as follows. When the spring arms are inserted through the first set of eyelets, the elongated hook, 9', is engaged with the proper eyelet before the others; this being accomplished by bending up the upper-half containing the first set of eyelets, until said hook can be entered into its eyelet. Then both upper-halves are brought to the same plane and the hooks, 9, engaged with the proper eyelets; the pressure of the spring-arm, 5, serving to keep each of the other hooks securely in place. Now, when it is desired to remove the lasted shoe from the last, the operator can easily disengage the hooks, 9, from their eyelets, while the hook, 9', being too long to remove in the same manner, remains securely in place and serves the very important service of preventing the vamp of the shoe from being torn or split while being forcibly removed from the last. By thus binding together the two lowest eyelets on the upper, the fastener accomplishes the function of a vamp-stay.

In the construction illustrated in Fig. 10, I have shown a locking bar 29, reaching from the spring arm, 4, and formed with an eye, 30, clasping the spring-arm, 5. By pressing this bar 29 toward the bar, 16 the spring-arm, 5, is thereby drawn toward the arm 4 and the fastener will be released. When the bar 29 is in its normal position said arms will be locked against withdrawal. As will be readily understood, this fastener is quickly and easily applied, and removed; is

very inexpensive to manufacture; is reliable and secure in use; serves both to lace together the upper while being lasted, and if desired to stay the vamp when the shoe is removed from the last; and lastly, can be employed as a fastening device for shoes while being worn. For this last purpose, the construction set forth in Fig. 11 is preferable, such a fastener being provided with as many spring arms as there are pairs of eyelets in the shoe.

What I claim as my invention and for which I desire Letters Patent is as follows, to wit;—

1. A holder for the eyeleted edges of boots and shoes, composed of wire bent to present substantially parallel arms which are adapted to yield one toward the other and are united at their bases and extended from said bases in but one direction, the bases of said arms engaging the eyelets of one of said eyeleted edges the free ends of said arms being extended substantially parallel with said bases and engaging the eyelets of the opposed edge.

2. The fastener for securing together the edges of articles provided with eyelets, comprising a plurality of substantially parallel spring arms united at their bases by a suitable bar and adapted to be engaged thereat with one set of said eyelets, and having at their free ends hooks bent downwardly and laterally and in a plane at an angle to such arms, one of said hooks pointing outwardly and the others in the opposite direction, substantially as set forth.

3. The fastener for articles provided with eyelets, comprising a plurality of spring arms united by the downwardly offset bars, and having their free ends formed with the hooks which are also off-set downwardly and are bent laterally at an angle to the said arms, one of said hooks being longer than the rest and turned outwardly, and all the other hooks being substantially equal in length and turned oppositely to the longer hook.

4. A holder for uniting the opposed eyeleted flies of boots and shoes, comprising wire bent to present a plurality of pairs of engaging members yieldingly connected by a part of the wire of which the engaging members are composed, said members being adapted to enter eyelet holes in opposed flies, the movement of one member of each pair of engaging devices laterally with relation to the other member enabling the engaging devices at one side of the holder to be withdrawn from the eyelet holes of one fly.

5. A yielding holder composed of spring wire and presenting at one edge a plurality of engaging devices to enter a plurality of eyelet holes of one fly, said holder having at its opposite edge a plurality of oppositely extended prongs adapted to be kept normally in engagement with the eyelet holes of the

opposite fly, said pronged ends being adapted to be disengaged from said holes by a movement of said pronged ends one toward the other.

- 5 6. A holder for the lacing edges of boots and shoes comprising a base and a plurality of arms extended therefrom substantially at right angles to said base, the free ends of the arms which form the upper and lower engaging members of said holder being oppositely bent, said arms being adapted to enter the eyelets in one of said edges from their inner faces and the eyelets in the opposite edge from their outer faces.
- 10 7. A holder for the eyeleted edges of boots and shoes, comprising a plurality of arms arranged to extend across the opening between the opposed edges and to engage eyelets in said opposed edges, one of said arms having a prong on its free end constructed and arranged to enter from one side an eyelet in one of said edges and to extend laterally on the opposite side of the eyelet at an angle to the arm.
- 15 8. A holder for the eyeleted edges of boots and shoes, comprising connected members each arranged to extend across the opening between said edges, said holder being formed to engage a plurality of eyelets in each edge and including a lower end member having engaging means differing from the engaging means of the other members to enable it to maintain connection with eyelets of the opposed edges after the other members are disconnected from the eyelets of one edge, whereby tearing of the vamp during withdrawal of a last from the shoe is prevented.
- 20 9. A holder for the eyeleted edges of boots and shoes, comprising connected members arranged to extend across the opening between said edges and formed to engage a plurality of eyelets in each edge, and a prong formed on the free end of one of said members arranged to project laterally from said member in a plane substantially parallel with the plane in which the several connected members lie whereby said pronged member is adapted to maintain engagement of said member with an eyelet after the other members have been disconnected from the eyelets with which they were engaged.
- 25 10. A holder for shoe flies, comprising connected members arranged to extend across the opening between the flies of a shoe and formed to engage a plurality of eyelets in one fly, and prongs formed on said members to enter eyelets in the other fly, said prongs being arranged to extend laterally over the eyelets in a plane substantially parallel with

the plane in which the connected members are located. 60

11. A holder for shoe flies, comprising connected members arranged to extend across the opening between the flies of a shoe and constructed to engage a plurality of eyelets in one fly, and prongs on said members constructed and arranged to be introduced into eyelets in the other fly by a relative lateral movement of the members, said holder being formed to press the members normally in the direction to retain said prongs in the eyelets. 65 70

12. A holder for shoe flies, comprising connected members arranged to extend across the opening between the flies of a shoe and constructed for engagement with a plurality of eyelets in one fly, and prongs bent downwardly and laterally from said members for engaging eyelets in the other fly, said holder having provision for normally maintaining said engagement. 75 80

13. A device for holding the flies of a shoe in normal position when under tension produced by a last in the shoe, comprising connected spring arms arranged to extend across the opening between the flies and to engage eyelets of opposite flies, one of said arms being constructed to permit withdrawal from an eyelet in one fly by a movement of said arm relatively to the eyelet while the flies are under tension. 85 90

14. A holder for shoe flies, comprising a plurality of resilient members adapted to extend across the opening between the flies of a shoe and constructed and arranged for detachably engaging eyelets in opposite flies, said resilient members being formed to permit them to be sprung transversely of their lengths to effect disengagement from the eyelets of one fly while a last is in the shoe without first changing the tension on the flies, substantially as described. 95 100

15. A holder for the eyeleted edges of boots and shoes, comprising connected members arranged to extend across the opening between said edges and to engage a plurality of eyelets in each edge, and a prong bent downwardly and laterally from one of said members and shaped to enable it to be withdrawn from an eyelet by an oblique movement laterally and upwardly with relation to the eyelet. 105 110

In testimony that I claim the foregoing invention I have hereunto set my hand this 16th day of March, 1899.

CURTIS N. LEONARD.

Witnesses:

F. E. CALLER,
A. B. UPHAM.