

No. 740,938.

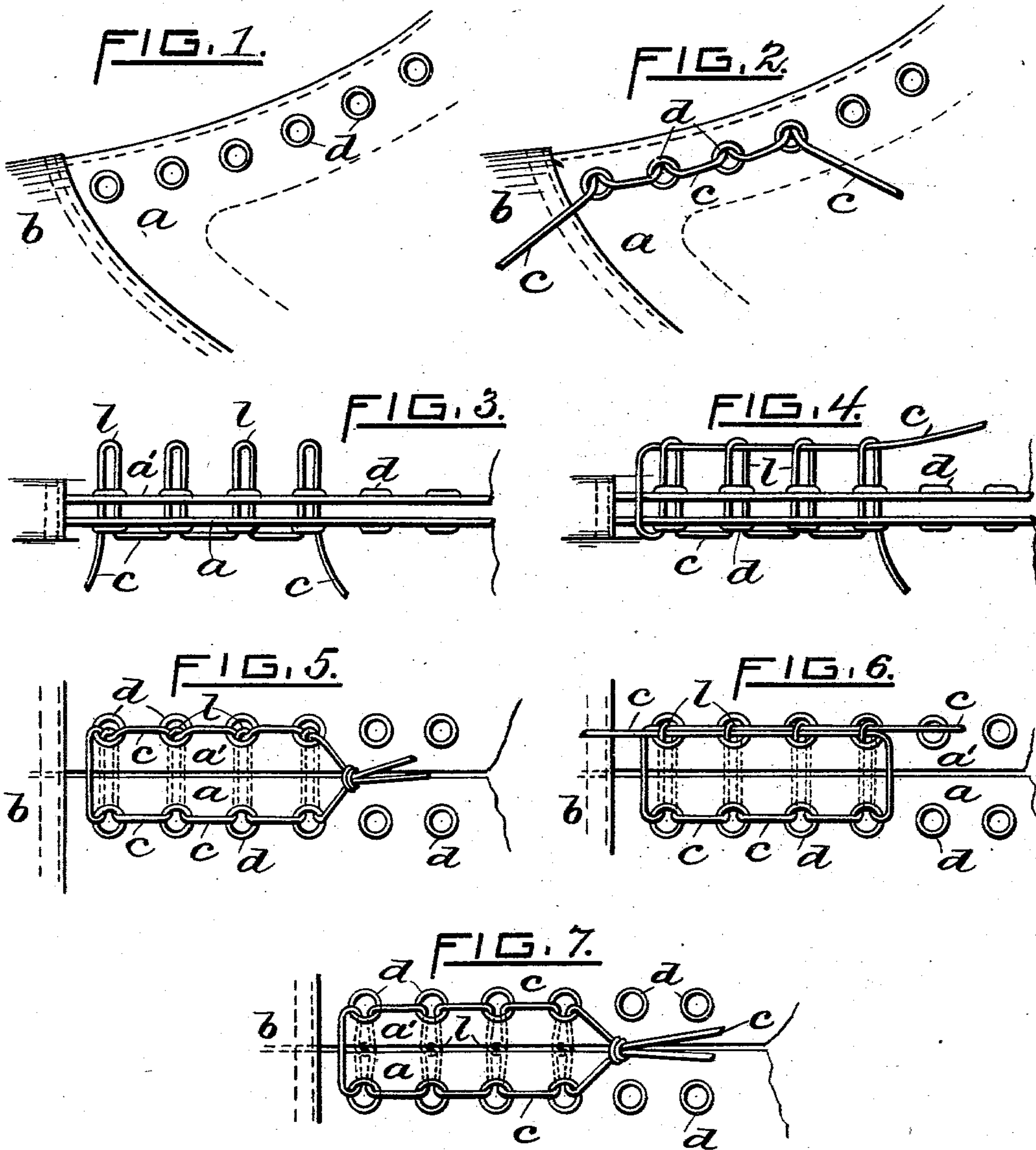
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W. A. SMITH.

MEANS FOR SECURING SHOE UPPERS PREPARATORY TO LASTING.

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NO MODEL.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLARD A. SMITH, OF PORTSMOUTH, NEW HAMPSHIRE.

MEANS FOR SECURING SHOE-UPPERS PREPARATORY TO LASTING.

SPECIFICATION forming part of Letters Patent No. 740,938, dated October 6, 1903.

Application filed August 6, 1902. Serial No. 118,593. (No model.)

To all whom it may concern:

Be it known that I, WILLARD A. SMITH, a citizen of the United States of America, and a resident of Portsmouth, in the county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Means for Securing Shoe-Uppers Preparatory to Lasting, of which the following is a specification.

My invention relates to a new and improved means for temporarily securing or holding together the two eyeleted portions of shoe-uppers preparatory to "lasting" them, or, in other words, the invention resides in the novel manner of lacing a removable cord through one or more pairs of eyeleted holes located in the shoe-upper contiguous to the vamp, so as to keep the upper in shape when it is drawn over the last to fasten the bottom on—that is, during the operation of "soling" or securing the sole to the upper.

In the operation of lasting shoes it is usually necessary to lace and tie the first two or three pairs of eyeleted holes in order to retain the upper in shape while it is being "bottomed." Heretofore the lacing operation has been a comparatively slow process, whether done manually or mechanically. In some cases the cord is passed through the first pair of holes in the upper and then tied, followed by lacing the cord in a zigzag manner through two or three more pairs of holes and again tying it. Sometimes, however, the first knot is omitted. In other cases the cord is tied at each pair of holes. After the bottom has been secured to the upper the lacing-cord must be removed or withdrawn. This is effected by first untying or possibly cutting the knot, and if a number of knots are employed a correspondingly greater length of time is consumed in the operation.

In my improved means for lacing shoe-uppers, which may also be done mechanically, the cord is first looped transversely and preferably simultaneously from one side through a plurality of pairs of eyeleted holes previously formed in the upper—say four pairs—thus forming four loops extending beyond the eyelets on the opposite or other side of the upper. An end of the cord is next passed through the said four loops, commencing with the one next to the vamp, followed by fasten-

ing the two ends of the cord, thus completing the operation. After the bottom has been secured to the upper or when it is desired to remove the last the cord is cut and readily withdrawn from the eyeleted holes.

In the accompanying sheet of drawings, illustrating my improved means of lacing shoe-uppers preparatory to lasting them, Figure 1 is a side elevation showing a portion of the shoe-upper, the lacing-cord being omitted. Fig. 2 is a similar view showing the cord inserted through a series of the eyeleted holes, but unfastened. Fig. 3 is a corresponding top view. Fig. 4 is a similar top view showing the lower end of the lacing-cord extended through the several loops. Fig. 5 is a plan view showing the lacing portion of the upper flattened out and the ends of the cord fastened together. Fig. 6 is a view similar to Fig. 5, showing the two ends of the cord passed through the series of loops in opposite directions; and Fig. 7 shows a modified arrangement of the loops.

The shoe-upper as a whole is or may be made substantially as usual, its lacing portions *a a'* being stitched or secured to the vamp *b*, as common. In shoes of this class the said parts *a a'* of the upper are provided near each edge with a series of eyeleted lacing-holes *d*, the holes in one part registering with those formed in the other, as clearly shown. Now in order to secure the two parts *a a'* of the upper together, so as to keep them in proper relation during the lasting operation, it is the usual practice in shoe manufacturing to first introduce a lacing cord or string in a zigzag manner through a series of the eyeleted holes *d*, commencing with those nearest the vamp *b*.

In carrying out my improved means of lacing the unlasted upper may be first bent or folded, substantially as shown in Figs. 1 and 3, wherein the holes *d* of one side or part *a* register with those formed in the other part *a'*. A suitable length of lacing-cord *c* is next folded or reflexed and passed through a series of registering holes *d*, thereby producing in the same cord a corresponding series of loops *l*. An end of the lacing-cord, preferably that nearest the vamp, is then passed across the two edges of the upper and transversely through the series of thus-formed

loops, substantially as shown in Fig. 4. In order to further secure the cord, the two ends thereof may be tied together, as shown in Fig. 5, or fastened in any other suitable manner.

5 The loops *l* extend quite a distance beyond the part *a'* of the upper, (see Figs. 3 and 4,) so that when the latter is flattened out or fitted over the last the two said parts *a a'* of the upper will then lie substantially parallel with
10 each other or normally, the result being to draw the loops and the end portion of the cord passing therethrough rearwardly and snugly into the respective lacing-holes, as shown in Fig. 5. The knot or other suitable
15 fastening device in the cord serves to maintain the adjacent parts of the upper in the proper relation during the lasting and bottoming operations.

After the sole or bottom has been fastened
20 to the upper or when it is desired to remove the last the cord is untied or cut, followed by easily and quickly withdrawing it from the upper.

In lieu of tying the ends of the lacing-cord
25 together, as shown in Fig. 5, the ends may be passed through the several loops *l* in opposite directions, as represented in Fig. 6.

By extending the loops through the side *a'* of the folded upper—say about one-half the
30 distance represented in Fig. 3—and then introducing the end of the cord therethrough,

thus connecting them together, followed by unfolding or flattening out the upper, the loops will thereby be drawn rearwardly through the holes in *a'*, thereby too at the
35 same time drawing with them through the same holes the connecting portion of the cord, which latter operation also produces loops in that part of the cord, as clearly represented in Fig. 7.
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I claim as my invention and desire to secure by United States Letters Patent—

1. A device for securing shoe-uppers while lasting, comprising a cord formed in a series of loops and passed as loops through the con-
45 tiguous eyelets of the uppers, with one end drawn through the loops beyond the eyelets to prevent withdrawal of the loops.

2. A cord formed in a continuous series of loops, each loop being passed through a con-
50 tiguous pair of eyelets of adjacent shoe-uppers, the end of the cord being passed through the head of all the loops beyond the eyelet adjacent such loop-head, the ends of the cord being secured together.
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Signed at Portsmouth, New Hampshire, this 2d day of August, 1902.

WILLARD A. SMITH.

Witnesses:

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