Aug. 3, 1937. T. ROBERTS 2,089,072

BINDING FOR SHOE UPPERS AND METHOD OF APPLYING THE SAME

Filed March 10, 1937

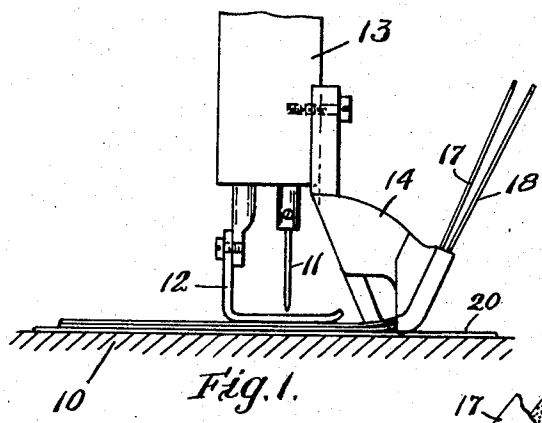


Fig. 1.

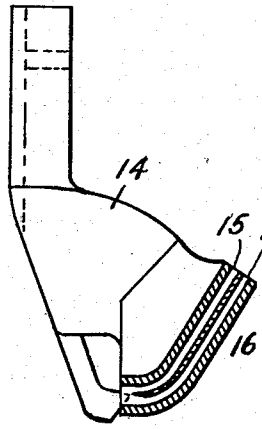


Fig. 2.

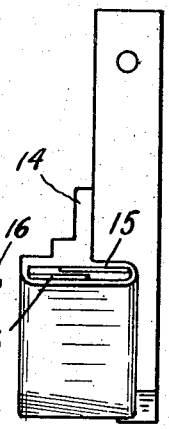


Fig. 3.

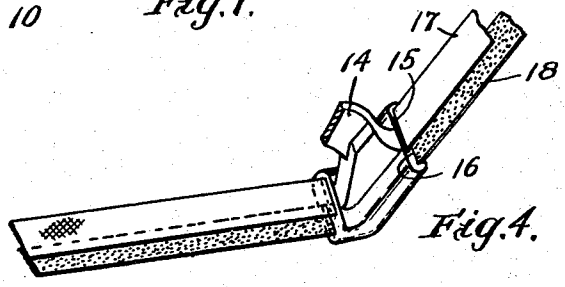


Fig. 4.

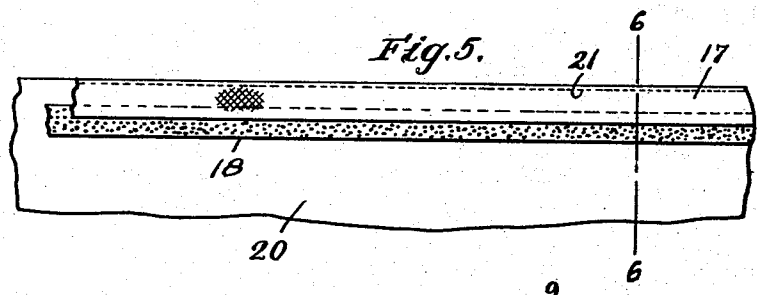


Fig. 5.

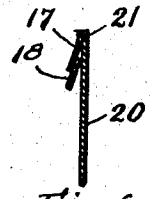


Fig. 6.

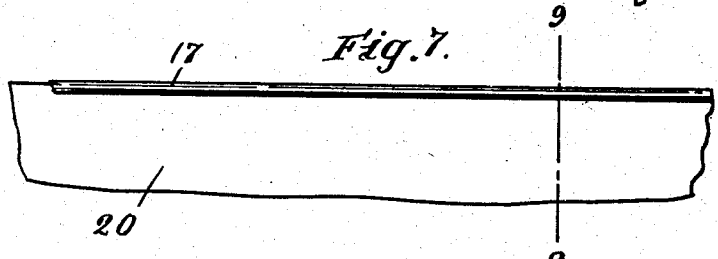


Fig. 7.

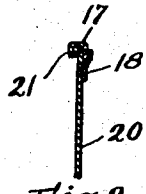


Fig. 9.

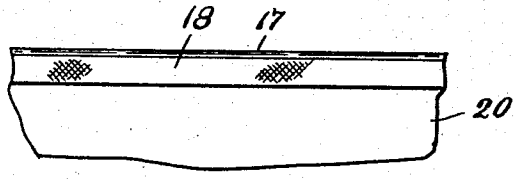


Fig. 8.

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UNITED STATES PATENT OFFICE

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BINDING FOR SHOE UPPERS AND METHOD OF APPLYING THE SAME

Thomas Roberts, Haverhill, Mass.

Application March 10, 1937, Serial No. 130,058

3 Claims. (Cl. 36—57)

This invention relates to means and methods of binding or finishing the edge of upper leather of shoes by what is commonly known as the "French Cord" process, in which a narrow ribbon, or galloon is stitched at one edge to the outer side of the upper, close to the edge of the latter and then is turned over the edge of the upper and adhesively secured to the inner side thereof beneath the lining.

It has become customary to reinforce the edge of the upper with a narrow textile tape, which has usually been applied in one of two ways. One method, which has been quite generally employed, consists in providing one side of the tape with a non-drying adhesive, by which it is attached to the inner side of the upper close to the edge, and then adhesively attaching the portion of the galloon which is turned over onto the inner side of the leather to the outer surface of the tape, the edge portion of the galloon having previously been provided with an adhesive, which is activated just before it is pressed against the tape. Another method is to provide both surfaces of the tape with the non-drying adhesive, so that when the edge portion of the galloon is pressed against the tape it will be adhesively attached thereto.

Both of these methods involve mechanical difficulties and are somewhat expensive on account of labor costs.

The objects of my invention are to provide an improved method of applying the reinforcing tape, which will avoid the mechanical difficulties of previously employed methods, and which will enable the tape to be applied without increase in labor costs, as compared with the costs when the tape is not employed, and will also enable a narrower galloon to be employed than previously, so that a saving in this respect may be made.

I accomplish these objects by providing a reinforcing tape, to one side of which a non-drying adhesive has been applied, providing the sewing machine with a double guide through which the tape and galloon are simultaneously fed, respectively, and delivered to the sewing mechanism in such a position that one edge portion of the galloon will be fed onto the outer surface of the upper with its edge flush with the edge of the upper, so that it may be stitched thereto in the usual manner. At the same time the other edge portion of the galloon will be fed onto one edge portion of the adhesively coated side of the tape and pressed thereagainst, so that they become adhesively connected, after which the galloon will be bent over the edge of the upper and pressed against its inner side and the exposed adhesively coated edge portion of the tape will also be pressed against the inner side of the upper, so that it will become adhesively attached thereto, and as the tape has already become adhesively attached to the galloon, it will hold the galloon firmly against the inner side of the upper.

For a more complete disclosure of my invention, reference is now made to the following specification, in connection with the accompanying drawing, in which:—

Fig. 1 is a side elevation of a portion of the sewing mechanism which is employed in performing a preliminary step of the method.

Figs. 2 and 3 are respectively a sectional view and a front elevation of a guiding means which is employed in connection therewith.

Fig. 4 is a detail view illustrating the relative positions of the galloon and tape as they are fed onto the upper.

Fig. 5 is a plan view of a portion of the outer side of the upper after the sewing operation has been performed.

Fig. 6 is a sectional view at line 6—6 of Fig. 5.

Fig. 7 is a plan view of the outer side and Fig. 8 of the inner side of the upper after the turning operation has been performed and

Fig. 9 is a sectional view at line 9—9 of Fig. 7.

In Fig. 1 of the drawing a portion of the sewing mechanism of a sewing machine is illustrated, comprising the table 10, needle 11, presser foot 12 and a fixed portion 13 of the machine to which a guide 14 is attached, said guide having passages 15 and 16 through which the galloon 17 and tape 18 are fed, respectively. One side of the tape is covered with a coating of non-drying rubber adhesive 19, and both the galloon and tape are delivered to the sewing mechanism and onto the outer side of the upper 20 in such a position that one edge of the galloon is flush with the edge of the upper, to which it is attached by a row of stitches 21. The passage 16, through which the tape is fed, is so arranged that it underlaps the opposite edge portion of the passage 15 from that which guides the edge of the galloon in coincidence with the edge of the upper and delivers the tape beneath the corresponding edge portion of the galloon and directly onto the upper. The tape is passed through this passage with its adhesively coated side uppermost, so that, as the tape and galloon pass beneath the presser foot, the opposite edge portion of the galloon from the edge portion through which the stitches are passed will be pressed onto the adjacent edge portion of the adhesively coated surface of the tape, so that it

becomes adhesively attached thereto. The condition of the work as the stitching operation is finished being illustrated in Figs. 5 and 6.

The next operation is performed by hand and merely consists in bending the galloon over the edge of the upper and pressing it against the inner side of the upper. At the same time the exposed edge portion of the adhesively coated side of the tape will be pressed against the inner side of the upper, so that it becomes adhesively attached thereto, as shown in Figs. 8 and 9. The tape is thus placed and secured in its reinforcing position and at the same time holds the galloon securely against the inner side of the upper. By a subsequent operation the tape and inner portion of the galloon will be covered by the shoe lining in the usual way.

By thus attaching the tape to the edge portion of the galloon, the effective width of the latter is increased, so that in practice the width of the galloon which is employed may be decreased in width by one fourth, as compared with the width necessary when other methods are employed. A corresponding reduction in expense for galloon may therefore be secured.

It will be noted that the labor of attaching the galloon is not increased over the labor cost of attaching when the tape is not employed, so that the additional labor cost of applying the tape, necessary by previous operations is eliminated, as well as other items of expense.

The above described method also permits the application of a reinforcing tape to portions of the shoe upper to which it has not been practical to apply it by previously employed methods, as for example to narrow pointed straps.

It will be understood that similar results may be secured by providing the surface of the tape with any other form of activated adhesive than the non-drying rubber adhesive which is employed, the latter being preferably employed for several reasons, principally because it is comparatively inexpensive and may be fed through a guide without danger of clogging or other difficulty.

I claim:

1. That method of applying a reinforced binding to the edge portion of a shoe upper which consists in providing a binding ribbon and a reinforcing tape having one side coated with an activated adhesive, simultaneously feeding both the ribbon and tape onto the outer surface of the upper with the adhesively coated side of the tape uppermost and with one edge portion thereof underlying one edge portion of the ribbon and pressing the latter against the tape so that they become adhesively connected, sewing the other edge portion of the ribbon to the upper with their edges in coincidence and folding the ribbon over the edge of the upper and pressing it and the other adhesively coated edge portion of the tape against the inner side of the upper, adhesively to connect the tape thereto and hold the ribbon thereagainst.

2. That method of applying a reinforced binding to the edge portion of a shoe upper which consists in providing a binding ribbon and a reinforcing tape having one side coated with a non-drying rubber adhesive, simultaneously feeding both the ribbon and tape onto the outer surface of the upper with the adhesively coated side of the tape uppermost and with one edge portion thereof underlying one edge portion of the ribbon and pressing the latter onto the tape so that they become adhesively connected, sewing the other edge portion of the ribbon to the outer side of the upper with its edge in coincidence with the edge thereof, and folding the attached ribbon over the edge of the upper and pressing the other adhesively coated edge portion of the tape against the inner side of the upper.

3. A reinforced binding on the edge of a shoe upper which consists of a ribbon having one edge portion stitched to the outer side of the edge portion of the upper and bent over its edge onto the inner side thereof, and a reinforcing tape having one side coated with a non-drying adhesive and having one edge portion overlying the edge portion of the ribbon on the inner side of the upper with its adhesively coated surface engaged therewith and with its other adhesively coated edge portion engaged with the inner surface of the upper.

THOMAS ROBERTS.