Aug. 16, 1932. H. A. EVANS 1,871,679

BINDING OF SHEET ARTICLES

Filed Nov. 23, 1929

Fig. 1.

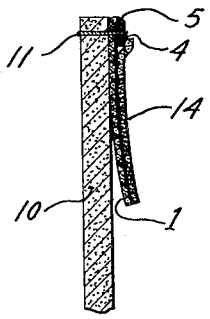


Fig. 2.

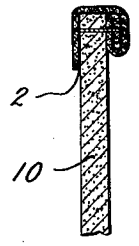


Fig. 3.

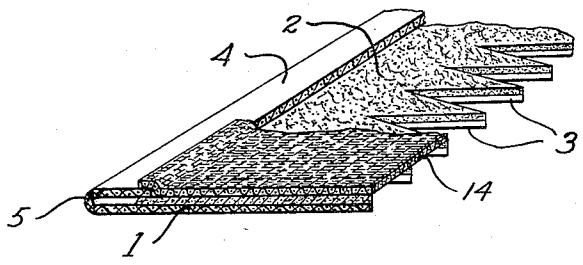


Fig. 4.

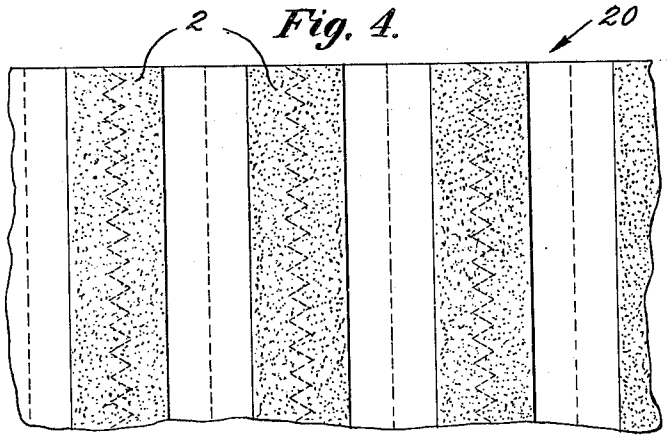
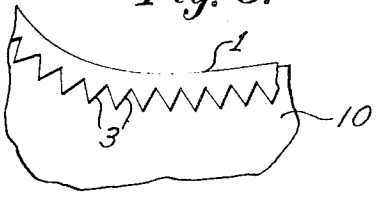


Fig. 5.



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Att'ys.

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UNITED STATES PATENT OFFICE

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BINDING OF SHEET ARTICLES

Application filed November 23, 1929. Serial No. 409,379.

The present invention, although having fields of more general usefulness, is more particularly related to the art of boot and shoe manufacture. In its more specific aspect it relates to the manufacture of shoe uppers having French cord binding strips around their edges and to a method of preparing and applying said binding strips.

My patent No. 1,618,754, issued February 22, 1927, discloses a French cord binding strip having a partially coated portion adapted to be adhesively secured to the inner face of the shoe upper after the opposite uncoated portion has been stitched to the outer portion of the upper and folded over its edge. In accordance with the disclosure of the above-identified patent a binding ribbon or strip having a selvaged edge was stitched to the sheet, such as the shoe upper. This invention permits the use of strips of material which need not be woven with a selvaged edge, and accordingly the elongate binding strips may be cut from a large sheet of the material and employed for French cord binding. Preferably these binding strips are manufactured with an adhesively coated and notched marginal portion which permits their ready application to the curved margin of a shoe upper or the like without necessity for painstaking cutting by the operator when applying the ribbon.

In the accompanying drawing:

Fig. 1 is a sectional view of the marginal portion of a sheet with my binding strip stitched thereto;

Fig. 2 is a similar view showing the binding strip folded over the edge of the sheet;

Fig. 3 is a perspective view of one form of the binding strip;

Fig. 4 is an elevational detail of a portion of a sheet which may be cut as indicated by dotted lines to provide a plurality of binding strips; and

Fig. 5 is a perspective view of a portion of a shoe to which my improved binding strip is readily applied.

French cord binding may be manufactured in accordance with the present invention without necessity for a selvaged edge in order to avoid raveling or breaking away of the binding strip from the stitching. For this purpose an elongate strip 1 of material, such as a suitable woven fabric, for example grosgrain silk, may be provided with a layer of permanently plastic cement 2 along one of its marginal faces. Preferably, this margin of the strip may be notched or pinked, as designated by numeral 3. The opposite marginal portion of the strip, designated by numeral 4, preferably is folded back upon the body portion thereof, with its edge in engagement with an edge of the cementitious layer 2 so that the folded portion 4 is held in parallelism with the body portion of strip 1. The width of the cementitious material is preferably so determined that a considerable portion of the ribbon adjoining its fold 5 is free from cementitious material.

A binding strip of this character may be sewed to a suitable sheet 10 of material, such as a shoe upper, as illustrated in Fig. 1, the body portion of the strip being juxtaposed to the outer face of the sheet article 10 and the fold 4 being arranged outmost. The strip may then be secured by stitching 11 to the marginal face of the sheet material, the stitching being confined to the portion of the strip which is not adhesively coated. The strip is then folded over the edge of the sheet and the notched margin carrying the adhesive layer 2 is brought against the margin of the inner face of the sheet article 10, as illustrated in Fig. 2; the body portion of the strip may thus be adhesively secured to its fold 4 that is stitched to the sheet, to the edge of the sheet and to its marginal face.

If desired, a suitable temporary covering strip 14 may be disposed over the cementitious layer 2 and may remain in place until after the stitching 11 has been completed to avoid objectionable sticking of the cementitious material to adjoining articles or accidental daubing of the finish of the sheet material. If such a covering strip is employed, it is peeled off of the adhesive layer after the strip has been stitched to the sheet article and before it is folded over the edge of the same.

It is evident that a French cord binding

of this character may be inexpensively manufactured by slitting elongate strips from a large sheet of suitable fabric without necessity for weaving separate strips having selvaged edges. For example, a fabric sheet 20, Fig. 4, may be slit into a plurality of elongate portions, as designated by dotted lines in that figure. The elongate strips thus provided may themselves have sufficient width to form separate French cord binding strips, or they may have sufficient width to form two of these binding strips. The adhesive material may be applied in separate strips to the sheet before the same is severed, or the adhesive may be applied to the separate strips whether the same are of such a width as to form individual binding ribbons or are originally made of a width to provide two ribbons. In the latter case, the intermediate portion of the elongate strip which is to be formed into two separate ribbons is coated with adhesive and the marginal portions of this strip are folded over into engagement with the edge portion of the adhesive strip, the intermediate part of the latter being cut by a suitable corrugated or zigzag cutter to provide the pinked or notched edges in accordance with the preferred embodiment of the invention. With this arrangement economy of material is permitted, since there is no loss of material due to the notching of the edges, and in fact this arrangement permits the manufacture of two binding strips of suitable width out of a strip of material which has a width considerably less than the aggregate widths of the two resulting strips.

The arrangement of the stitching which extends through the folded portion of the strip permits the firm union of the sheet and strip despite the absence of a selvaged edge. Furthermore, the raw edge is covered by the folding of the strip, thus avoiding its exposure, which would adversely affect the appearance of the finished article. The provision of a doubled thickness of material through which the stitches extend permits the firm connection of the strip to the sheet and avoids any possibility of objectionable breaking away of the strip from the stitches. The notched inner edge of the material is particularly advantageous when the seam is folded over in the manner illustrated herein, since it permits the ready application of the strip to curved portions of the sheet margin despite the opposition to such bending of the strip provided by the plurality of thicknesses of the same upon the outer face of the sheet article.

From the foregoing it is evident that the present invention permits the manufacture of an article finished with a French cord binding strip which may be manufactured economically out of practically any desired material and which may readily be applied to the edge of a sheet article despite irregular curvatures in the same. The arrangement of the folded portion through which the stitches extend not only permits the firm securing of the ribbon to the sheet article, but also avoids necessity for providing a selvaged ribbon for this purpose, thus broadening the choice of possible materials which may be employed for French cord binding and permitting a much lower cost of manufacture.

I claim:

1. The method of finishing the edge of a sheet article, which comprises coating one marginal face of a binding strip with a permanently plastic adhesive, folding the other marginal portion of the strip so that its edge is engaged by the adhesive but so that a portion of the adhesive is exposed and a portion of the strip adjoining the fold is free from adhesive, sewing said uncoated portion of the strip to one face of the marginal portion of the sheet article, folding the strip over the edge of the sheet and causing the exposed adhesively coated portion of the strip to adhere to the opposite face of the marginal portion of the sheet.

2. As an article of manufacture, a sheet of material, a strip having a raw edge portion, the margin of the strip adjoining this edge being doubled back into engagement with the strip, stitching securing this doubled thickness of the strip to one face of the sheet adjoining its edge, the remainder of the strip being folded back over this stitched portion and folded over the edge of the sheet, so that the other marginal portion of the strip is juxtaposed to the opposite face of the sheet, and a layer of permanently plastic cement securing the folded margin of the strip in engagement with the same and securing said last-named marginal portion of the strip to the face of the sheet.

3. As an article of manufacture, a sheet of material, a strip having raw edge portions, one margin of the strip being coated with adhesive material, the other marginal portion of the strip being doubled back upon itself with its edge portion in engagement with said adhesive coating, the portion of the strip adjoining the fold being free from adhesive coating, the doubled back portion of the strip being stitched to one marginal face of the sheet, the strip then being folded over the edge of the sheet with the adhesive coating in engagement with the stitched fold of the strip, the edge and the opposite face of this margin of the sheet.

Signed by me at Boston, Massachusetts this 22nd day of November 1929.

HAROLD A. EVANS.