

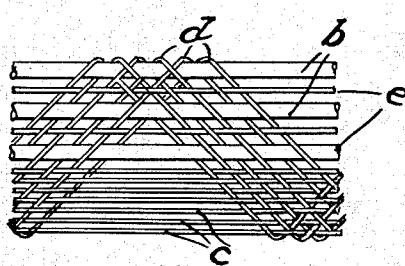
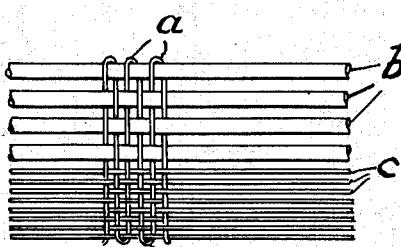
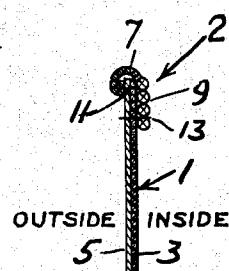
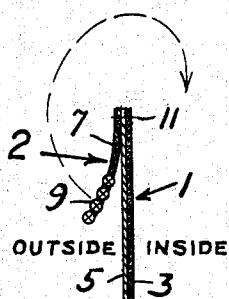
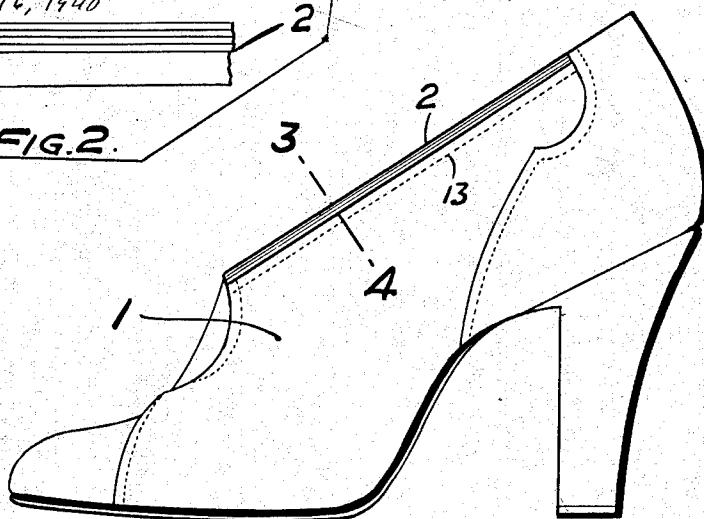
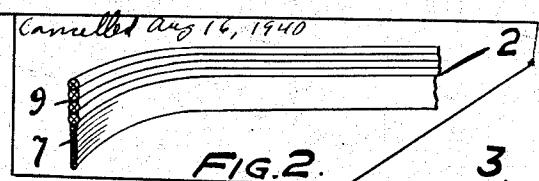
Dec. 23, 1941.

A. VAMOS

2,267,540

BINDING AND REINFORCING TAPE

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WITNESS:

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UNITED STATES PATENT OFFICE

2,267,540

BINDING AND REINFORCING TAPE

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3 Claims. (Cl. 36—57)

This invention relates to an improved binding and reinforcing tape for shoes, and to shoes formed with the use of such tape.

It is an object of this invention to provide a binding and reinforcing tape that can be formed in a unitary operation and will be strong yet unobtrusive when applied. Preferably the tape will be elastic, and so adapted for use in binding the edge of elastic materials used in the construction of certain types of shoes, as ladies' novelty pumps.

Further objects of this invention and the manner in which they are accomplished will appear from a consideration of the accompanying drawing, which illustrates a preferred embodiment of the invention, and in which—

Figure 1 is an elevation of a lady's pump embodying the reinforcing strip of this invention;

Figure 2 is a diagrammatic view, including a section taken on the line 3—4 in Fig. 1, which illustrates the mode of attachment of the tape to the shoe upper;

Figure 3 is a similar view showing the position of the tape when attachment is complete;

Figure 4 is a diagrammatic view illustrating the formation of a woven reinforcing tape in accordance with this invention; and

Figure 5 is a similar view illustrating the formation of a braided reinforcing tape.

In Figure 1 there is illustrated a lady's novelty pump in which the portion 1 of the upper is relatively elastic. This portion 1, as more fully described in my Patent No. 2,184,261, may desirably be of two-ply construction, comprising an inner ply 3 of elastic fabric, i. e., one formed of or containing elastic threads, as lastex, and an outer ply 5 of "elasticized" or stretchable leather formed by well-known methods. The plies will be cemented or otherwise secured together.

The improved binding and reinforcing tape 2 will be formed in accordance with this invention by incorporating in a braided or woven tape, during the braiding or weaving operation, a plurality of elastic warp threads of at least two different diameters arranged so as to divide the tape lengthwise into two portions of different thickness, and, if desired, different elasticity. Non-elastic warp threads may or may not be used as well, while the filler threads will be non-elastic.

The tape 2 may be woven, as illustrated in Fig. 4, where fine inelastic filler threads *a* are interwoven with relatively large diameter elastic warp threads *b* and relatively small diameter elastic warp threads *c* in a plain one-and-one weave.

Or the tape may be braided, as illustrated in Fig. 5, where fine inelastic filler threads *d* are

braided over elastic warp threads *b* and *c*. Inelastic warp threads *e* are also present.

In weaving or braiding the fabric the elastic warp threads *b*, *c* are placed under tension, so that when tension on the elastic threads is released the fine filler threads *a*, *d* are drawn close together, and the tape assumes the appearance of a tightly woven or braided fabric.

In Figs. 4 and 5 the size of the filler threads *a*, *d* is exaggerated.

The tape 2 is secured to the raw edge of the fabric 1 as shown in Figs. 2 and 3. The tape is first placed on the outside face of the fabric 1, with its thin portion 7 (containing the small elastic threads *c*) uppermost, and is secured in place by a line of stitching 11. The tape is then folded over the raw edge of the fabric 1, and its thick portion 9 (containing the large elastic threads *b*) is secured to the inside of the fabric by a line of stitching 13.

Thus the raw edge of the fabric 1 is reinforced by the relatively heavy and strong portion 9 of the tape 2, insuring a snug fit to the shoe upper, while only the thin, unobtrusive portion 7 of the tape, which, however, is sufficiently elastic to yield with the fabric 1, is visible from the outside.

What I claim and desire to protect by Letters Patent is:

1. In a shoe at least a portion of the upper of which is formed of elastic material, the combination with said portion of an elastic binding and reinforcing tape for the raw edge thereof, said tape comprising a narrow fabric having two longitudinally extending portions of different thickness and formed of inelastic filler threads interwoven with two sets of elastic warp threads, the warp threads of one set being of greater diameter than those of the other set, said tape having the thinner portion thereof secured to the outer face of said elastic portion of the shoe upper along the raw edge thereof and being folded over the said raw edge to cover the same, and having the thicker portion thereof secured to the inner face of said elastic portion of the shoe upper adjacent the edge thereof to reinforce the said edge.

2. In a shoe at least a portion of the upper of which is formed of elastic material, the combination with said portion of an elastic binding and reinforcing tape for the raw edge thereof, said tape comprising a narrow fabric having two longitudinally extending portions of different thickness, said tape having the thinner portion thereof secured to the outer face of said elastic

portion of the shoe upper along the raw edge thereof and being folded over the said raw edge to cover the same, and having the thicker portion thereof secured to the inner face of said elastic portion of the shoe upper adjacent the edge thereof to reinforce the said edge.

3. In combination in a shoe having an upper which includes an elastically stretchable portion having a free marginal edge, an elastically stretching forces exerted longitudinally than is 10

the other, the binding being folded to embrace extending strips one of which is more resistant to stretching forces exerted longitudinally than is the other, the binding being folded to embrace the free marginal edge of the elastically stretchable portion of the shoe upper with the more resistant strip secured to the inner face of the upper and with the other strip secured to the outer face of the upper.

ALFRED VAMOS.