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A. HAYNER

2,068,025

FASTENING

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Fig. 1.

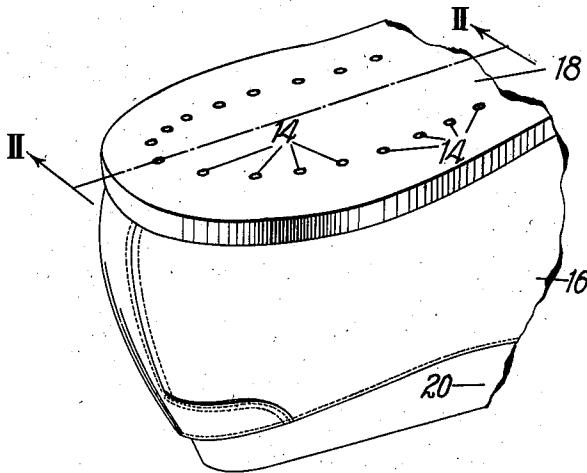


Fig. 4.

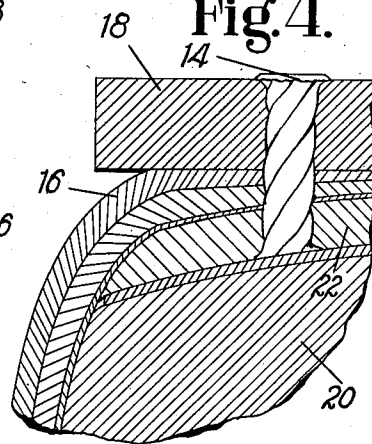


Fig. 2.

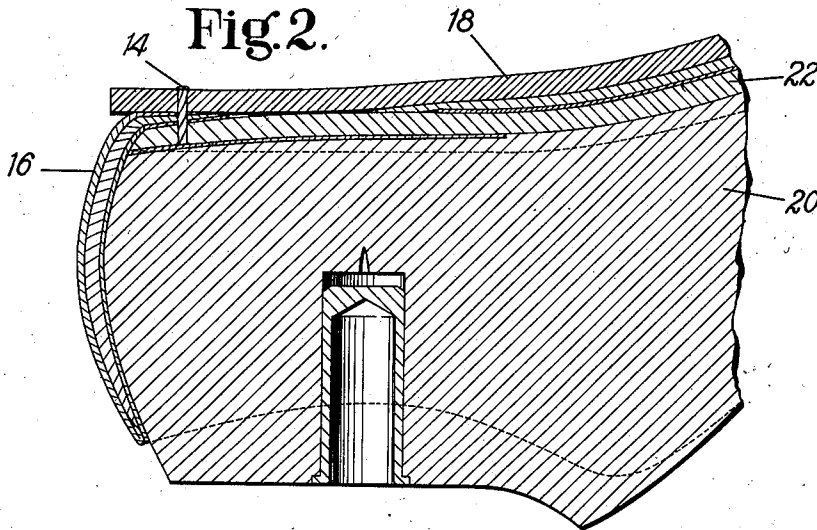
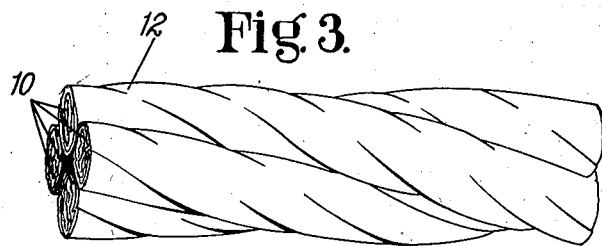


Fig. 3.



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UNITED STATES PATENT OFFICE

2,068,025

FASTENING

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2 Claims. (Cl. 36—24)

This invention relates to improvements in fastenings and is shown herein by way of illustration as embodied in pegs formed from twisted paper impregnated with glue or other suitable stiffening material.

Pegs formed of felted, fibrous material, such as paper, of the type disclosed in United States Letters Patent No. 1,729,169, granted September 24, 1929, on an application filed in the name of Fred N. LaChapelle have gone into use on an extensive scale. Under most conditions they form effective fastenings for securing together parts of leather or other work pieces, either temporarily or permanently. Under some conditions, for example when the pegs are driven into relatively thin work pieces, the pegs may not have sufficient holding power to secure the parts together. This is due partly to the fact that the pegs do not broom or spread sufficiently at their ends to prevent the pegs from being pulled from one or the other of the parts of the work piece.

An object of the present invention, accordingly, is to provide an improved fastening by the use of which the above-mentioned difficulties will be overcome. In accordance with this object, a feature of the present invention resides in a fastening formed of a plurality of strands of twisted felted fibrous material. As illustrated, the fastening is in the form of a peg composed of a plurality of strands of twisted paper twine impregnated separately with glue, the strands being twisted together and secured to each other by additional glue.

With the foregoing and other objects and features in view, the invention will now be described with respect to the accompanying drawing, in which

Fig. 1 is a view of the heel end of a shoe having a sole member secured to the shoe by the use of fastenings embodying the present invention;

Fig. 2 is a view taken along the line II—II of Fig. 1;

Fig. 3 is a view on an enlarged scale of a fastening illustrating a preferred embodiment of the present invention; and

Fig. 4 is a sectional view on an enlarged scale showing the fastening driven into a shoe to hold the parts of the shoe together.

Material from which pegs or other fastenings may be made is illustrated in Fig. 3 of the drawing as composed of a plurality of twisted strands 10 of paper. The individual strands of paper preferably are twisted and impregnated with glue or other suitable sizing material in the manner disclosed in United States Patent No. 1,837,433,

granted December 23, 1931, on an application filed in my name. By the use of this method the strands 10 are formed of a uniform diameter and are impregnated with a suitable quantity of glue to impart the necessary stiffness to the strands 10. After the individual strands 10 have been formed a number of these strands, for example four, are passed through a bath of glue and are twisted together to form a continuous length of fastening material 12. The strands 10 are twisted about each other and are cemented together by the glue. Fastenings formed from this material are sufficiently rigid to withstand the hammering action necessary to drive them into holes formed in a work piece.

As shown by way of illustration in Figs. 1, 2 and 4 of the drawing, pegs 14 are driven into the heel end of a shoe 16 to secure a sole member 18 to the shoe. The pegs 14 are severed from a continuous strip 12 of the twisted fastening material and may be inserted into the shoe or other work piece by a machine of the type disclosed in United States Letters Patent No. 1,849,253, granted March 15, 1932, on an application filed in the name of Fred N. LaChapelle.

As shown most clearly in Fig. 4 the strands 10 of the fastening material 12 form a screw-like fastening. The entering end of the peg 14 which penetrates the shoe and strikes the bottom of a last 20 or other support on which the shoe 16 is mounted tends to spread or broom, thereby forming an enlarged end which prevents the peg 14 from pulling out of the insole 22 into which it is driven. The other end of the peg 14 is driven substantially flush with the surface of the work and is also slightly broomed. It is apparent that a fastening having slightly enlarged ends presents considerable resistance to removal. Furthermore, since the peg 14 is formed of a plurality of strands, there is a tendency for these strands to separate slightly during the driving operation and thus increase slightly the diameter of the pegs. This tendency to separate the strands together with the pressure incident to the machine driving of the fastenings forces the strands tightly against the sides of the hole into which the peg is driven, thereby adding greatly to the holding power of the peg. It is evident that a peg or other fastening formed from the multi-stranded fastening material 12 will effectively secure together parts of shoes or other work pieces.

Although the present embodiment of the invention has been illustrated as applied in the manufacture of shoes, it is apparent that it can be

used in securing together parts of other work pieces.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

5 1. A paper peg composed of a plurality of strands of paper twisted separately and twisted together, said strands being impregnated with and

secured to each other with adhesive and stiffening material.

2. A peg comprising a plurality of strands of paper twisted individually and thereafter twisted together, said strands being impregnated with 5 and coated with stiffening material.

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