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R. S. AYRES

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METHOD OF TREATING LEATHER

Filed June 14, 1927

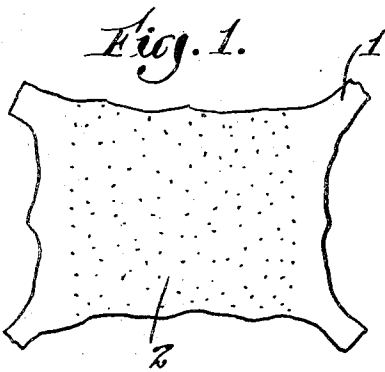
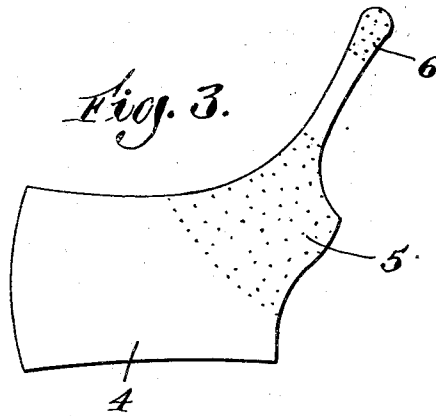
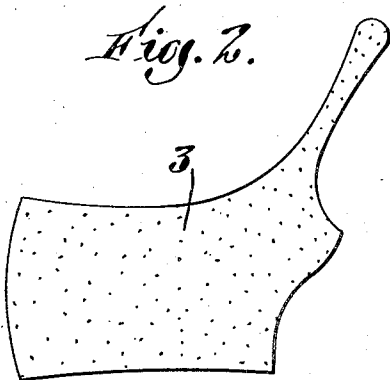
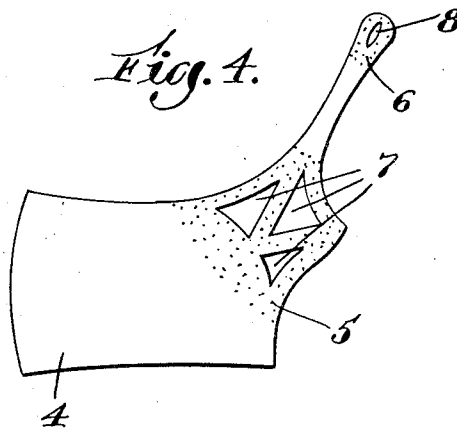


Fig. 5.



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METHOD OF TREATING LEATHER

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My present invention is a novel and improved method of treating leather, and other shoe fabrics.

An important object of the present invention is to so treat such leather or other shoe fabrics as to "plump up", and increase the body and the firmness of the same. To accomplish this desirable result, I utilize a flexible, tough and penetrating compound, and for this purpose I have discovered that a compound, consisting of a commercial lacquer and nitrocellulose compounds, is best adapted. I do not, however, wish to limit myself to the use of such a specific compound, but may utilize other compounds, if the same will produce the beneficial results desired. The use of such a compound will prevent stretching of the leather or other shoe fabric, and in this manner will tighten the grain of the leather, and will also increase the available cutting area.

To obtain the best results, I find that such compound should be applied to the unfinished, or flesh side, of leather, hides, skins, and other shoe fabrics. Also, such penetrating and tough compound can be applied either prior to cutting, or subsequent to cutting, depending upon the class or type of work for which the leather or other fabric is to be utilized. Such compound may be applied to the material in any desired manner, such as by spraying the same on, applying the compound by use of a brush, a sponge, or a cloth, or may be directly applied by a stamping pad.

A further feature of the present invention consists in the applying of such a tough, flexible and penetrating compound to particular portions of leather or other fabrics. Heretofore, when strengthening or reinforcing particular portions of leather, such as in boots and shoes, the strips, cutouts, buttonholes, and the like, many different materials have been utilized, such as paper, leather, linen, cotton, tufsta, or similar materials. However, the addition of this reinforcement necessarily resulted in forming a laminated material, with more than a single layer, and this consequently resulted in a bulky and unwieldy portion, where such bulk

was not desired, particularly on ladies' shoes, wherein strips, cutouts, buttonholes, and the like attractive and fancy designs are utilized.

My present invention eliminates and displaces the use of all these prior reinforcing materials, since, by the use of a compound such as above described, the body and firmness of the leather or the like is increased and plumped up, thus preventing stretching of the leather at or adjacent to the point thus treated, and since the compound utilized is a penetrating compound, a sufficient reinforcement through the leather or other fabric, at the point desired, is obtained.

When utilizing my present method for reinforcing portions of leather only, such as for straps or cutouts, it is not necessary to treat the entire piece of leather, and therefore such treating method may be carried out only adjacent those parts of the leather which are to be subsequently cutout, or perforated.

I believe that my present method of thus treating leather or other shoe fabrics, is novel, and I have therefore claimed the same broadly herein.

Further features of the invention, details and advantages, will be hereinafter more fully pointed out and claimed.

Referring to the drawings, illustrating a preferred embodiment of the present invention,

Fig. 1 is a plan view of a skin or hide, treated before cutting;

Fig. 2 is a plan view of a strap portion of a shoe upper cut therefrom;

Fig. 3 is a plan view of a strap portion of a shoe upper treated, after cutting, at predetermined portions;

Fig. 4 is a plan view of the strap portion of Fig. 3 subsequent to the cutting or perforating operations; and

Fig. 5 is a cross sectional view illustrating the leather penetrated or impregnated with the strengthening and reinforcing compound.

As shown in the drawings, the hide 1 has been sprayed, brushed, sponged, or otherwise treated with a flexible and penetrating compound, as at 2. Preferably this compound consists of a commercial lacquer and nitro-

cellulose compounds. From the hide, as thus treated, and as shown in Fig. 1, may be cut various portions or parts of shoe materials, or materials for other uses, 3 illustrating the strap portion of a shoe upper. When treating the leather, the compound is applied, in the present instance to the flesh or unfinished side of the material, since, in this particular process, it is desired to have the compound penetrate the leather, to secure the advantageous features desired.

In Fig. 3 is illustrated the strap portion 4 of a shoe upper which has been cut from an untreated hide, and subsequent to such cutting has been treated at the points illustrated at 5 and 6 with a compound as above described. Subsequent to this treating, the strap portion is then subjected to cutting operations, to cut the perforations or cutouts 7, and the buttonhole 8. By thus treating these portions of the strap piece, the body of the leather surrounding parts to be cut out is so strengthened and reinforced that a separate reinforcement, such as paper, leather, cloth or other separate layer, is not required. The addition of such reinforcing piece has been a disadvantage, and has also been an unsatisfactory method of reinforcing these portions of shoe materials.

It will be apparent that a strap portion, as illustrated at 4, for example, when treated by my novel process, has no greater thickness than before the treating, but by so treating and impregnating the material surrounding or adjacent the parts to be cut out, I have built into the leather or other fabric, an inherent strength, permanent and lasting, and which will accomplish the desirable results of strengthening and reinforcing the cutout portions of leather, without the addition of supplemental or additional reinforcing elements. In Fig. 5 is illustrated, in cross sectional detail, the completeness with which the penetrating compound will impregnate the leather, or other shoe fabric, when applied on the unfinished or flesh side of said material.

The advantages of my novel process will be instantly apparent to those skilled in this art, and I do not limit the use of my novel process to shoe leathers or materials, since it will have a wide range of application in all fields or arts where a similar result is desired to be obtained.

Also, while I have described the compound preferably utilized, as consisting of commercial lacquer and nitrocellulose, I am not limited thereto, but may utilize any tough, flexible, and penetrating compound, which will produce the advantage above outlined.

My invention is further described and defined in the form of claims as follows:—

1. In the manufacture of leather articles the step of applying to the flesh side of portions of the articles which must sustain

stresses greater than the other portions thereof a tough, strengthening and penetrating compound which will not increase the thickness of the leather.

2. In the manufacture of leather articles the steps of applying to the flesh side of portions of the articles which must sustain stresses greater than the other portions thereof a tough, strengthening and penetrating compound which will not increase the thickness of the leather, and then subjecting said treated portions to a cutting operation to produce desired shapes or designs.

In testimony whereof, I have signed my name to this specification.

RICHARD S. AYRES.