Sept. 29, 1931. H. G. LUMBARD 1,825,191

METHOD OF TEMPERING SHOE UPPERS

Filed March 20, 1931 2 Sheets-Sheet 1

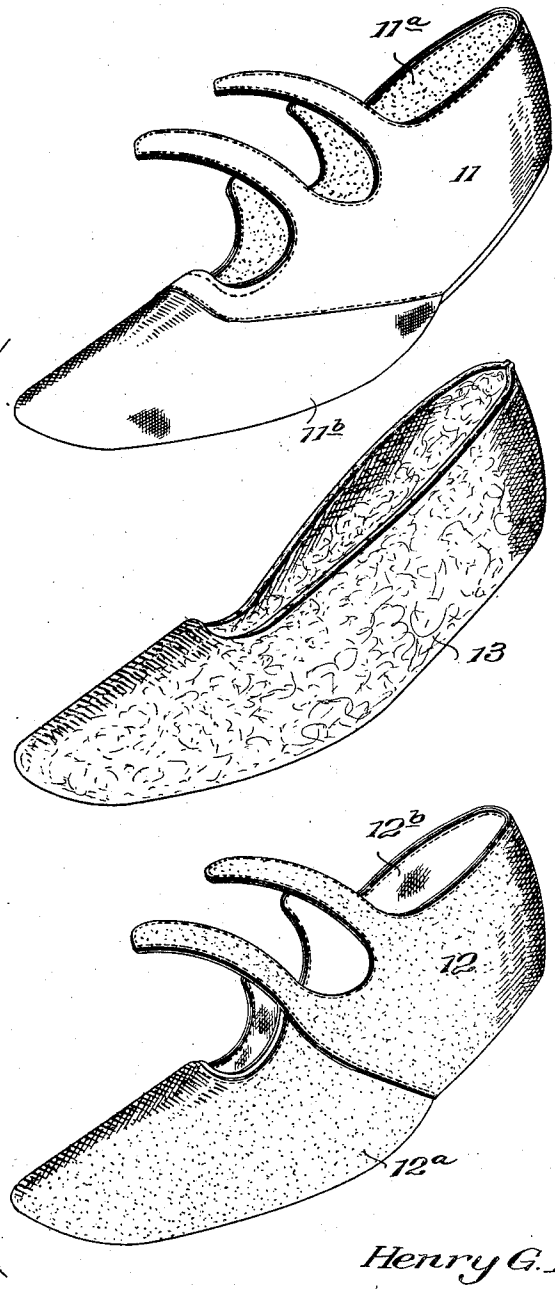


Fig. 1.

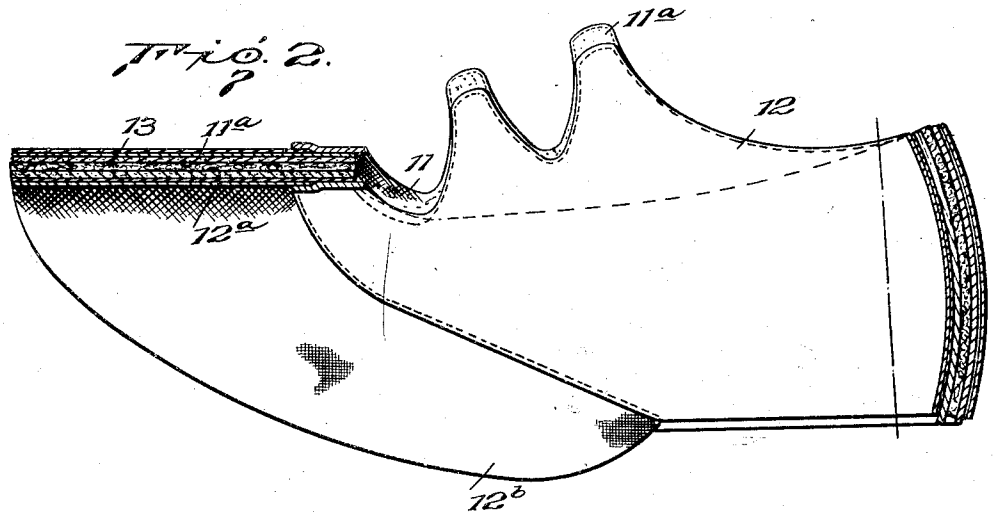
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Fig. 2.



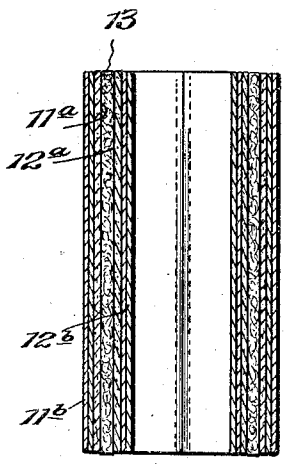


Fig. 3.

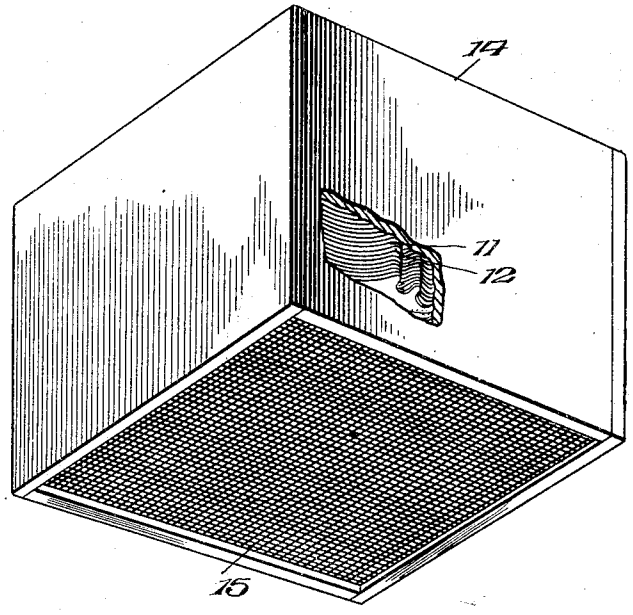


Fig. 4.

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UNITED STATES PATENT OFFICE

HENRY G. LUMBARD, OF AUBURN, MAINE

METHOD OF TEMPERING SHOE UPPERS

Application filed March 20, 1931. Serial No. 524,189.

My invention relates to an improved method of tempering shoe uppers, and has to do more particularly, with the method of moistening the leather uppers of shoes prior to the lasting thereof.

The principal object of my invention is to decrease the period of time heretofore required for the tempering step of shoe manufacture.

A further object of my invention is to provide a method of tempering leather shoe uppers which ensures uniform, as well as sufficient, moisture absorption.

A further object of my invention is to provide a method of tempering fabric lined leather shoe uppers which will not result in the spotting of either the leather finish or the fabric lining.

A further object of my invention is to provide a method of tempering leather shoe uppers by which the amount of moisture absorbed may be more directly and accurately controlled than by methods heretofore in use.

A further object is to provide a method of tempering shoe uppers which is inexpensive, requiring but simple equipment, and requiring far less personal supervision and attention than former methods.

Further objects relating to details and economies of operation and construction will definitely appear from the detailed description to follow. In one instance, I accomplish the objects of my invention by the means described in the following specification. My invention is clearly set forth and defined in the appended claims. A structure constituting a preferred embodiment of my invention is illustrated in the accompanying drawings forming a part of this specification, in which:

Figure 1 is a disassembled perspective view of a pair of shoe uppers and a moisture applying member;

Fig. 2 is a longitudinal sectional view through a pair of shoe uppers and a moisture applying member as associated in accordance with my invention;

Fig. 3 is a transverse sectional view through the heels of a pair of shoe uppers associated with a moisture applying member; and

Fig. 4 is a perspective view of tempering box having a perforate bottom, a portion of one end wall thereof being broken away to reveal therein a plurality of pairs of uppers associated with moisture applying members.

In the drawings the same reference numerals refer to the same parts throughout the several views.

In general, my invention consists in disposing one of a pair of shoe uppers right side out and the other inside out, and interposing between the pair of shoe uppers a moisture ladened piece of material having the general configuration of a shoe upper, in such intimate and uniform contact with both uppers that each will absorb substantially equal quantities of moisture therefrom.

Referring to the numbered parts of the accompanying drawings, which illustrate a preferred embodiment of my invention as especially adapted for the tempering of delicately tinted leather uppers for women's shoes, I have shown a left shoe upper 11, and a right shoe upper 12. Shoe uppers are generally received from the stitcher in an inside out condition. Left upper 11 is shown as received from the stitcher, while right upper 12 has been turned right side out. The external leather portions of the uppers are designated as 11^a and 12^a, respectively, whereas the conventional linings of fabric or other light material are designated as 11^b in the left upper and 12^b in the right upper. A moisture applying member 13 is provided which has the general shape and form of the shoe uppers with which it is to be associated. Member 13 is preferably formed of medium weight felt, or similar material, capable of being readily saturated with liquids.

The preferred method of tempering the leather of shoe uppers in accordance with my invention is as follows. The moisture applying member 13 is charged with water to the desired extent, as by immersing it in a quantity of water and squeezing out any excess which can not normally be retained without dripping. The member 13 is then

alined with the upper 11 and placed in contact with its lining 11^b. The upper 12, which is right side out, is then alined with the member 13 and placed with its lining 12^b in contact therewith. The uppers 11 and 12 are then pressed together so that the linings 11^b and 12^b are in intimate and uniform moisture absorbing relation with the water-ladened member 13. The leather portions 11^a and 12^a, being in close contact with the linings 11^b and 12^b, respectively, readily absorb moisture carried by member 13. The upper 11, moisture applying member 13 and upper 12 thus constitute a unit and a number of such units are laid in a box 14 having a perforate bottom such as wire mesh material 15 and are allowed to remain therein for the period required for the leather portions 11^a and 12^a to absorb the necessary amount of moisture. They are then said to be in temper. In commercial practice a number of such boxes 14, filled with uppers as described, are placed upon shelves in a closet and when the proper quantity of moisture has been absorbed by the leather of the uppers the members 13 are removed from the associated uppers 11 and 12 and the latter are then ready for lasting. The member 13 may be reused again and again in the same manner for the tempering of other pairs of uppers.

The above described method I have found to be particularly satisfactory for the tempering of delicately tinted uppers to be used in women's shoes. The water is transmitted to the inside surface of the leather and will not result in spotting or otherwise staining the external surface thereof. Because the water is transferred uniformly to the linings, no discoloration is effected therein. The present method reduces, by approximately fifty percent, the period required for tempering by the methods heretofore in common use. The equipment required is simple and inexpensive and has the advantage of long life. The amount of moisture required in applying member 13, and the length of time required for the necessary absorption, may be readily determined for various kinds of leather by trial. The method may then be carried out with an absolute minimum of personal supervision.

While I have described my method as especially adapted to the tempering of delicate leather, it is to be expressly understood that leather shoe uppers of less delicate nature may be satisfactorily tempered by applying the moisture directly to the normally external surface of the leather. In this case the water-laden member 13 is placed upon the shoe upper having its right side out and the shoe upper which is inside out is placed thereon so that the leather uppers themselves are in contact with the member 13. This arrangement is particularly desirable where the lining is more delicate than the leather finish of the upper. Where a large number of uppers are to be tempered in boxes disposed upon shelves in a compartment, it may be found desirable to spread cloth or similar material upon the shelving and to spray the cloth or other material with water before placing the boxes thereon.

It is also to be understood that the member 13 may be formed of materials other than felt, any absorbent material such as cloth, paper, etc., being contemplated. For the purpose of general efficiency, as well as to provide a direct means of regulating the amount of water to be absorbed, the material for the member 13, and its thickness, may be selected in terms of water containing or retentive capability. The kind of leather, its thickness, the material of which member 13 is composed, its thickness, the amount of moisture with which it is charged, and the surface to which it is applied, are all factors to be considered. The amount of water absorbed by a pair of uppers to effect tempering is easily determinable by weighing them before and after association with member 13.

I am aware that the method herein disclosed may be varied considerably without departing from the spirit of my invention. I, therefore, claim my invention broadly as indicated by the appended claims.

What I claim is:

1. The method of tempering shoe uppers which comprises disposing one upper right side out and a second upper inside out, and interposing a moisture ladened member between said uppers so that like surfaces of both uppers are in substantially uniform and equal contact with said member and absorb substantially equal quantities of moisture therefrom.

2. The method of tempering shoe uppers which comprises disposing one upper right side out and a second upper inside out, arranging a moisture ladened member similar in configuration to an upper between said uppers so that like surfaces of both uppers are adjacent each other but separated by said member, and pressing said uppers together upon said member so that said surfaces are in substantially uniform and equal contact with said member and absorb substantially equal quantities of moisture therefrom.

3. The method of tempering fabric lined leather shoe uppers which comprises disposing one upper with its fabric lined surface out and a second upper with its leather surface out, interposing a moisture ladened felt member similar in configuration to an upper between said uppers so that the fabric linings of both uppers are in substantially uniform and equal contact with said member and transmit substantially equal quantities

of moisture for absorption by the leather of the uppers.

4. The method of tempering leather shoe uppers which comprises disposing one upper right side out and a second upper inside out, interposing a moisture ladened member similar in configuration to an upper between said uppers so that the normally internal surfaces of both uppers are in substantially uniform and equal contact with said member and absorb substantially equal quantities of moisture therefrom.

5. The method of tempering leather shoe uppers which comprises disposing one upper right side out and a second upper inside out, interposing a moisture ladened member similar in configuration to an upper between said uppers so that the normally external surfaces of both uppers are in substantially uniform and equal contact with said member and absorb substantially equal quantities of moisture therefrom.

6. The method of tempering shoe uppers which comprises disposing one upper right side out and a second upper inside out, interposing a water retentive member similar in configuration to an upper and charged with the requisite amount of water between said uppers so that like surfaces of both uppers are in substantially uniform and equal contact with said member and absorb substantially equal quantities of water therefrom.

7. The controlled method of tempering shoe uppers which comprises disposing one upper right side out and a second upper inside out, interposing a felt member similar in configuration to an upper and charged with a definite amount of water, between said uppers so that like surfaces of both uppers are in substantially uniform and equal contact with said member and absorb substantially equal quantities of water therefrom, and removing said felt member from between said uppers when sufficient water has been absorbed therefrom.

8. The method of tempering shoe uppers which comprises moistening a member of absorptive material, interposing said member between a pair of uppers with substantially the entire area of each upper closely associated with a surface of said member, and placing said associated elements in a compartment until the moisture is transferred from said member to said uppers by absorption.

9. The method of tempering shoe uppers which comprises nesting together a plurality of uppers, interposing between each alternate pair of adjacent uppers a moisture ladened member from which the moisture may be transferred to said uppers by absorption, and placing said nested uppers with the interposed moisture ladened members in a compartment until the desired quantity of moisture has been transferred to said uppers.

10. The method of tempering shoe uppers which consists in moistening an absorbent member similar in configuration to a shoe upper, interposing said member between a pair of uppers with substantially the entire area of each upper closely associated with said member, and placing said associated elements in a compartment until the desired quantity of moisture has been transferred from said member to said upper by absorption.

11. The method of tempering shoe uppers which comprises nesting together a plurality of uppers, interposing between each alternate pair of adjacent uppers a moisture ladened member having the same configuration as a shoe upper and from which moisture may be uniformly transferred to said uppers by absorption, and placing said nested uppers with the interposed moisture ladened members in a compartment until the desired quantity of moisture has been transferred to said uppers.

HENRY G. LUMBARD.