

UNITED STATES PATENT OFFICE.

WILLIAM WINSLOW CROCKER, OF EVERETT, MASSACHUSETTS, ASSIGNOR OF ONE-HALF
TO HENRY C. LITTLE, OF WEST NEWTON, MASSACHUSETTS.

METHOD OF REPAIRING CRACKS IN PATENT-LEATHER.

994,503.

Specification of Letters Patent. Patented June 6, 1911.

No Drawing.

Application filed October 7, 1910. Serial No. 585,794.

To all whom it may concern:

Be it known that I, WILLIAM WINSLOW CROCKER, of Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Methods of Repairing Cracks in Patent-Leather, of which the following is a specification.

This invention relates to the operation of denuding portions of the surface of a piece of patent leather forming a part of a boot or shoe, or other article, after the article has been manufactured.

Manufacturers of boots and shoes are subjected to much trouble and expense in repairing cracks which develop in the glaze or enamel of so-called patent leather after the boot or shoe has been completed. It is necessary to remove the glaze not only where it is cracked, but for some distance on each side of the crack, the denuded portion of the leather being subsequently recoated to give it the same appearance as the original coating. Heretofore the leather has been denuded by subjecting it to the action of a buffing wheel or tool having a facing of sand paper or other like abrasive material. It is practically impossible to denude the leather in this way without removing a considerable part of the grain surface of the leather to which the glaze is applied, the leather being thus weakened and rendered objectionably brittle. I have discovered that patent leather may be denuded by subjecting the glazed surface to the action of a rapidly moving abrasive surface of textile fabric, such as cotton duck or canvas yieldingly backed, and that the denuding operation thus practiced cannot abrade or wear away the grain surface of the leather. I have also discovered that the denuding operation is greatly facilitated by applying to the part of the glaze to be removed a volatile solvent, of the same, such as acetone, this solvent acting to temporarily weaken the glaze and render it brittle so that it may be readily and quickly removed by the denuding agent.

In carrying out my invention I provide a denuding instrumentality which is preferably a band of textile fabric such as cotton duck or canvas surrounding a circular yielding cushion which may be composed of sponge rubber, and is suitably mounted on a hub or core adapted to be rapidly rotated,

the whole forming a soft and yielding buffing wheel. The periphery of the wheel may have any suitable form adapting it to conform to the portion of the leather to be denuded. For example the buffing wheel, when used on the upper surface of a patent leather toe cap, may be of substantially cylindrical form, and when used on one side of a crease, the periphery of the buffing wheel should be suitably molded to enable it to conform to the shape of the crease. While a buffing wheel of this character when rapidly rotated is capable of denuding a patent leather part presented to its periphery, without previous treatment of the glaze, I prefer to weaken the glaze and render it brittle before the denuding operation, by applying thereto a volatile solvent which may be acetone or any other suitable material or composition adapted to quickly penetrate the glaze, and of such volatile character that it is quickly dissipated. I have obtained satisfactory results by employing a solvent composed of acetone, amyl acetate, and a hydrocarbon such as tetrachlorid of carbon.

Assuming then that the patent leather toe cap of a boot or shoe is cracked, the preferred procedure is to apply to the cracked portion of the glaze a coating of the solvent which fills the crack and covers the glaze on both sides of the crack. Then, after the solvent evaporates, the portion thus treated is presented to the periphery of the buffing wheel, the latter being rapidly rotated. This operation quickly removes the portion of the glaze in which the crack has formed exposing the grain surface of the leather, without removing any part of said surface. This is due to the fact that the soft and yieldingly supported abrading agent, while acting readily on the brittle portion of the glaze, is not an abradant of the grain side of the leather, or in other words, does not develop sufficient friction to wear away the said grain side. The glaze, previously treated as described, is removed in the form of dry powder, and so quickly that there is no liability of injuring the denuded grain surface of the leather by frictional heat. After the denuding operation the denuded part is recoated in accordance with the usual practice.

I find that it is entirely feasible to quickly and economically remove all the glaze from the exposed surface of a patent leather part,

in order that the same may be recoated over its entire surface.

A suitable instrumentality for denuding patent leather in the manner described, is set forth and described in Letters Patent of the United States No. 868,532, dated October 15, 1907.

I claim:

1. That improvement in the art of repairing cracked lasted patent leather, which consists in removing the cracked portion or portions of the glaze or enamel by subjecting the same to the action of a yieldingly supported rapidly moving agent of textile fabric which is an abradant of the glaze and is not an abradant of the grain side of the leather, thus denuding said grain side without abrading the same and then recoating the denuded portion.

2. That improvement in the art of removing the glaze or enamel of so-called patent leather, which consists in first applying to the glaze a volatile solvent to render it brittle, then after the evaporation of the solvent subjecting the glaze thus treated to the action of a rapidly moving yieldingly supported agent of textile fabric, which is an abradant of the glaze and is not an abradant of the grain side of the leather, and thereby denuding a portion of the grain side of the leather without abrading it, and then recoating the denuded portion.

In testimony whereof I have affixed my signature, in presence of two witnesses.

WILLIAM WINSLOW CROOKER.

Witnesses:

C. F. BROWN,
J. H. CHURCHILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
