To all whom it may concern:

Be it known that I, Edward Wright Terry, a subject of the King of Great Britain and Ireland, and a resident of 643 Burwood road, Upper Hawthorn, in the city of Hawthorn, a suburb of the city of Melbourne, in the county of Bourke, State of Victoria, Commonwealth of Australia, have invented certain new and useful Improvements Relating to the Waterproofing of Chrome-Tanned Leathers, of which the following is a specification.

This invention relates to the treatment of chrome tanned leather with the object of making it waterproof and thereby preserving the material in such a manner as to lengthen its life, without subjecting it to severe conditions during treatment.

It has hitherto been proposed to heat leather with a solution or composition of resin and tallow to obtain the above objects. The present invention also utilizes these ingredients, but it is to be understood that no claim is made to the use of the ingredients themselves, the invention residing in the manner of using them as hereinafter described.

The invention consists in placing the tallow in a vessel or vat which is heated by steam or any other suitable medium to a temperature of approximately 160 degrees Fahrenheit; or upward from 160 degrees Fahrenheit to such a heat that will not damage the fibers of the leather. In this respect from 160 degrees Fahrenheit to 170 degrees Fahrenheit is found to be the most suitable. When the tallow has been heated to the temperature mentioned the resin is added to it. The resin may be in the powdered or granular form or in the lump state but preferably it is in the granular condition and is distributed broadcast into the tallow and thoroughly stirred or mixed therein by any suitable means or apparatus. The mixing of the tallow and resin is continued until the resin is completely dissolved and the two become a homogeneous mass. The addition of the resin to some extent reduces the temperature, which during the mixing operation is again brought to the temperature previously existing, being from 160 degrees to 170 degrees Fahrenheit (more or less). When the temperature has reached the required heat the chrome-tanned leather is immersed in the solution, and the vat cover is by any suitable means in order to retain the heat therein. The chrome tanned leather is permitted to remain in the solution while at the temperature mentioned for a period of from thirty (30) to sixty (60) minutes (more or less) dependent upon the class of hide being treated, or the conditions under which the prepared leather is to be used. If the leather is required to be particularly flexible and is consequently comparatively thin, a shorter period of immersion is necessary, than would be the case if a harder or thicker leather is being treated. Provision may also be made for agitating the leather or the mixture or both, or for suspending the leather in the solution. After immersion for the desired period the leather is taken out and spread upon a table which is heated by steam or any other suitable means. Preferably the table may have a double top which provides a steam space through which steam passes and heats the table. The object of having the table hot is to prevent the solution on the outside of the leather from setting or becoming fixed.

The hide is then cleansed by means of hard brushes which are dipped in hot tallow and rubbed over first one side and then the other of the leather in order to remove any superfluous compound that has not been absorbed by the leather. The leather is next taken to a second table. It is not essential that this table should be hot, although under some conditions it may be advisable to have it warm. While on this table the leather is well rubbed with a fabric or sponge dampened with kerosene, in order that it may be further cleansed of any superfluous deposit. The leather is then dried by exposure to the air or by artificial means, after which it is ready for use.

The proportion of the tallow used in the above process or method of treatment to the proportion of resin employed, varies accordingly to the quality of the chrome tanned leather being treated and depends upon the use to which the product is to be put. In ordinary cases for, uppers for boots and shoes or even for soles of the same about ten pounds (10 lbs.) of tallow (more or less), is used for approximately every thirty pounds (30 lbs.) of resin (more or less), but if the leather is to be made harder than is necessary for general purposes the quantity of resin may vary from thirty (30) to forty (40) pounds. I wish it to be understood at the same time that experiments...
have disclosed to me that one part of tallow to three parts of resin will give every satisfaction, yet under some conditions the same result may be obtained by using up to one part of tallow to five parts of resin, dependent upon the texture of the hide being treated and the thickness of the same and also upon the use the treated leather is required for.

Having now described my said invention what I claim as new and desire to secure by Letters Patent is:

A process for waterproofing chrome tanned leather which consists in immersing the leather for approximately one hour in a closed vat containing a homogenous mass of mixed resin and tallow heated to approximately 170° Fr., then removing the leather from the vat and spreading the same upon a heated surface to prevent the mixture of resin and tallow from setting, then removing the surplus mixture of tallow and resin from the surface of the leather, and then drying the leather.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD WRIGHT TERRY.

Witnesses:

Cecil M. P. Slaster, George A. McKen.