

UNITED STATES PATENT OFFICE.

EDWIN A. WARREN, OF ST. PAUL, MINNESOTA.

TREATMENT OF LEATHER.

SPECIFICATION forming part of Letters Patent No. 667,269, dated February 5, 1901.

Application filed June 8, 1900. Serial No. 19,617. (No specimens.)

To all whom it may concern:

Be it known that I, EDWIN A. WARREN, a citizen of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in the Treatment of Leather, of which the following is a specification.

This invention relates to the treatment of leather; and it consists in the process and product of the process, as hereinafter shown and described, and specifically pointed out in the claim.

The process which is the subject of the present invention may be applied to leather of various grades and kinds, but is more particularly applicable to sole-leather, which for any reason has become hard and brittle, to restore it to its pliable condition, or applicable to pliable sole-leather to increase its pliability.

The process and the manner in which it is operated are as follows: The leather is first treated with an oil, preferably neutral oil or a paraffin-oil, and allowed to stand about twenty-four hours, more or less, until the oil has thoroughly permeated the leather, so that the leather will not be injured by the second step of the process. The neutral oil employed will be of the quality described in *Crew on Petroleum*, pages 318 and 319. Philadelphia, 1887. The leather is then immersed in a solution of water and a soap which is strong in alkali—such, for instance, as what is known as “green” soap or “soft” soap. This solution should be composed of about one part soap to twenty parts of water. The leather should remain in this solution about twenty-

four hours and should then be thoroughly washed in water to remove the superfluous material of the solution. The leather thus treated becomes pliable and ductile, and any brittleness and hardness which it may have possessed are entirely removed, so that it will readily receive pegs or threads when being employed in the manufacture of boots and shoes or for other purposes without danger of the breakage of the shreds of the leather at the points where the awls or needles are inserted.

The oil may be employed in the form of a bath, or it may be applied with brushes on one or both sides, or in any other manner which may be found most convenient or desirable.

The leather should be quite moist before the oil is applied, and if the leather is not sufficiently moist it should be immersed in water to an extent sufficient to impart the requisite moisture.

Having thus described my invention, what I claim as new is—

The process for treating leather, consisting in first impregnating the leather with a neutral oil and then immersing it in a bath of a solution of soap which is strong in alkali, in about the proportions and in the manner substantially as hereinbefore shown and described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDWIN A. WARREN.

In presence of—

C. N. WOODWARD,
J. S. MACKEY.