

UNITED STATES PATENT OFFICE.

GUISEPPE BOTTERO, OF BOSTON, MASSACHUSETTS.

IMPROVED LEATHER AND PROCESS OF MANUFACTURING THE SAME.

Specification forming part of Letters Patent No. **46,443**, dated February 21, 1865.

To all whom it may concern:

Be it known that I, GUISEPPE BOTTERO, late of Turin, in the Kingdom of Italy, but now of Boston, in the county of Suffolk and State of Massachusetts, have made a new and useful Invention having Reference to the Tanning of Hides and Skins or the Production of Leather; and I do hereby declare the same to be as follows.

The leather manufactured in accordance with my invention is "mineral tanned," the gelatine of the hide or skin being converted into an insoluble compound by means of sulphate of iron.

In carrying out my invention I take a quantity of the sulphate of iron and put it into a suitable pot or vessel, and by a strong fire under the same I roast or heat the sulphate until it attains a dark-red color. After this I put the roasted sulphate in water and stir it well therein, and then suffer it to remain for about twenty-four hours. Next I pour off the liquid from the sediment and use the said liquid or "solution," as it may be termed, for the tanning of the hides. I increase the strength of this solution from time to time during the period required to effect the tanning of the hide, which is about six days. Into this solution the hides or skins, after having been prepared in the usual way for being tanned in tan vats, are to be immersed.

The strength of the solution is to be determined by the tanning hydrometer made and

sold by Negretti & Zambra, of London, and which is an instrument well-known to tanners.

The solution as at first used should be of the strength of one-half a degree of such instrument, the said strength or density of the solution being increased from time to time, according to the nature of the skin or hide, and should not exceed 6° of such instrument at any time, provided it may be desirable to prevent the texture of the skin or hide from being injured.

After the hides or skins may have been a sufficient period in the solution, which will generally be about six days, they should be taken out of the solution and thoroughly washed in water, and subsequently be allowed to dry. The hairy surface of the hides may next be oiled with a little linseed-oil.

The principal advantages resulting from this course of procedure are that it effects the conversion of the hide into leather in the short space of about six days, and the leather produced is nearly, if not entirely, impermeable by water, and has all the useful properties of leather tanned by common tanning.

What I claim as my invention is—

The process above described as well as the material or manufacture produced thereby.

GUISEPPE BOTTERO.

Witnesses:

FREDERICK CURTIS,
F. P. HALE, Jr.