

# UNITED STATES PATENT OFFICE.

FRIEDRICH VALENTINER, OF LEIPSIC-PLAGWITZ, GERMANY.

## TANNING OR DRESSING HIDES, SKINS, OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 682,825, dated September 17, 1901.

Application filed November 27, 1900. Serial No. 37,875. (No specimens.)

*To all whom it may concern:*

Be it known that I, FRIEDRICH VALENTINER, a subject of the King of Saxony, residing at Leipsic-Plagwitz, in the Kingdom  
5 of Saxony, German Empire, have invented certain new and useful Improvements in the Tanning or Dressing of Skins, Hides, or the Like, (for which I have applied for a patent in Germany and which application is dated  
10 February 6, 1900,) of which the following is a specification.

The tanning of animal hides and the like may be effected in various different manners. In the following description I disclose a  
15 method of preparing a fluorinated chromium compound by means of which the tanning of hides and such like may be very quickly and perfectly effected.

My invention can with advantage be carried out in the following manner: The fluorinated chromium hydroxid which I prefer to employ for the tanning process is preferably prepared as follows: One hundred kilograms sodium bichromate are dissolved in  
25 four times the quantity of water and mixed with five kilograms formalin, (forty per cent. aqueous solution of formaldehyde in water.) To this solution are added two hundred kilograms of ten per cent. hydrofluoric acid, and  
30 the whole is then heated at 60° to 70° centigrade until a test portion taken from the same gives with caustic potash in excess the emerald-green coloration peculiar to the chromium-hydroxid compound. The fluorinated  
35 chromium hydroxid is added to water to make a solution containing four per cent. of the

hydroxid or in the same proportion to a solution of quebracho, sumach, chestnut-oak, divi-divi, &c., of the usual strength for tanning purposes.

Example: A hide or butt, of twenty kilograms weight, intended for ordinary sole-leather, is introduced into a vat containing forty kilograms of a solution of four-per-cent. strength of fluorinated chromium hydroxid  
45 and left in the solution, being frequently stirred, until test pieces cut off at the thickest parts of the hide show that the tanning process is completed. The hide is then rinsed and drawn through a weak bath of milk of  
50 lime, soap, or other alkaline bath in order to bind any free acid present which might have prejudicial effect in the further treatment of the hide, especially in the dyeing. The treatment of the hides by the fluorinated chromium hydroxid in solution results in the production of a leather which when further  
55 treated by the processes usually employed is suitable for the uses to which leather is commonly put.

What I claim, and desire to secure by Letters Patent of the United States, is—

A method of tanning or dressing skins, hides and the like, comprising the treatment of the same with a fluorin compound of  
65 chromium hydroxid.

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

FRIEDRICH VALENTINER.

Witnesses:

RUDOLPH FRICKE,  
CHAS. J. BURT.