

UNITED STATES PATENT OFFICE.

ADOLPH FLEISCHHAUER, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN TANNING HIDES.

Specification forming part of Letters Patent No. **135,214**, dated January 28, 1873.

To all whom it may concern:

Be it known that I, ADOLPH FLEISCHHAUER, of Brooklyn, county of Kings and State of New York, have invented a new and useful Process of Tanning Leather; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to use the same.

The object of this invention is to provide a process of manufacturing leather by a new combination of chemicals, in successive stages, each stage in the process of manufacture in the order named being preparatory to the succeeding one.

The chemicals are employed in such combination and order of succession with reference to each other as to insure such chemical action upon the substance of the skins, or reactions among the chemical agents themselves, as are necessary for loosening the hair from the skin, removing the oily matter, opening the pores, neutralizing the chemicals already employed, tanning, bleaching, &c.

My invention, therefore, consists of the combination of the chemicals named, when employed in the order set forth.

My process produces a superior grade of leather, of greater market value than ordinary stock, since it possesses valuable properties not found in leather prepared by the common process of tanning. The manufacture of leather by my process proceeds in successive stages in the order set forth.

The following is a statement of the ingredients required for tanning twenty (20) pounds of hides. The ingredients to be employed in any case will, of course, vary with the quantity of skins to be treated. First, take five ounces of sulphur, fifteen ounces of unslaked lime, two ounces of carbonate of ammonia, and four ounces of soda; dissolve in one-half gallon of hot water, boiling until the sulphur is thoroughly dissolved. Then, in a vat containing ten gallons of water, place twenty pounds of lime; pour in the solution and stir thoroughly. Place the hides therein and let them remain for three days or until the hair is easily removed. The time will vary somewhat with the weight and condition of the hides.

This compound removes the hair and grease and opens the pores of the skin to receive the chemicals employed in the subsequent treatment.

Second. Take two ounces of the sulphate of

zinc, two ounces of potash; dissolve in one-half gallon of hot water. Pour the solution into a vat containing ten gallons of water. Let the hides remain therein for one hour; then remove and clean preparatory to the tanning process.

This process corrects the action of the chemicals employed in the preceding solution, and prepares the hides for the next (tanning) process.

Third. Take of terra-japonica one pound; of sumach one-half pound; dissolve in hot water; pour into ten gallons of water; and add one ounce of muriatic acid. Let the hides remain therein for eight days.

In this process the skin is tanned and bleached.

Fourth. Take two ounces of sulphur, two ounces of potash, and one ounce of nitric acid; dissolve in one-eighth gallon of water. Pour the solution into ten gallons of water. Add two pounds of salt. Let the hides remain therein for three hours.

This process develops a peculiar toughness and elasticity in the fiber of the leather and gives it its characteristic color.

In the above formula I have given what I consider the best proportions of the various ingredients. A slight variation from the proportions given will not affect the general result. Neither do I consider the precise time named for the various processes essential to my method of proceeding. The time required for each process is named which is found to give the average best results. To secure the maximum effects of the various solutions the time during which the hides are left therein should vary somewhat, according to the temperature of the solution and the character of the hides undergoing treatment.

Claim.

Having thus described my invention and the method of its application, I claim as new and desire to secure by Letters Patent—

The process of tanning hides by the formulas numbered first, second, third, fourth, using the chemicals in the combinations, and the combinations in the order of succession, hereinbefore described, substantially as and for the purpose specified.

ADOLPH FLEISCHHAUER.

Witnesses:

F. A. WARD,
JAMES HURST.