

UNITED STATES PATENT OFFICE.

GEORGE C. WALTER, OF HASTINGS, MICHIGAN.

PROCESS OF DEPILATING HIDES.

SPECIFICATION forming part of Letters Patent No. 545,560, dated September 3, 1895.

Application filed May 16, 1894. Serial No. 511,478. (No specimens.)

To all whom it may concern:

Be it known that I, GEORGE C. WALTER, a citizen of the United States, residing at Hastings, in the county of Barry and State of Michigan, have invented a new and useful Process of Depilating Hides, of which the following is a specification.

My invention relates to a process for depilating hides by the use of alkaline sulphides.

The objects of my invention are the lessening the cost, saving material, shortening the time, and lessening the labor of dehairing hides and preparing them for tanning.

Other and further objects are to overcome certain objections encountered by so using sulphide of sodium that it shall not cause bluish stains and destroy the grain of the leather, and so that the hair may be preserved as a commercial product when so desired.

Other processes of using alkaline sulphide heretofore result in the destruction of or in seriously injuring the hair, while my improved process leaves the hair clean and in perfect condition when so desired and in very much better condition than when lime is used alone. The hide is also left in a more perfect condition for tanning than when the lime process is used for dehairing or when the hide is de-haired by other processes.

A further object in my invention is the preparation of the hide in a superior manner for tanning by thoroughly cleansing the same on both the hair and flesh side.

Another object accomplished by my invention is the material loosening of the flesh on the hide, so that it is easily removed.

Another object accomplished by my invention is the saving of a very necessary preparation of the hide when the hair is removed by the old way of liming or any other way heretofore known.

A still further object of my invention is the use of alkaline sulphides in such a manner that no matter how long the hide is left in contact with the same no injury may result to the hide or leather afterward produced therefrom.

In the practice of my invention I employ a solution of sulphide of sodium mixed with lime until it is pasty or in a soupy condition, or, more correctly speaking, a paint. After the hides have been softened in water or by

any other means I apply the paint or preparation above referred to on the fleshy side of the hide, putting a thin layer over the entire surface of the hide. Then the hide is folded up together so the hair side is out, then rolled up and laid aside. Then another is prepared in the same way, packing the hides all together. The sulphide of sodium acts upon the hair by penetrating through the hide and loosens the hair from the roots in the course of one to twelve hours, removing all short hairs, as well as the long ones, along with the scurf or dirt, the time depending on the strength of the preparation. The exact strength of the preparation which I prefer to use consists of sulphide of sodium one part, lime two parts, and water four parts by measure. The substance may be mixed in other proportions and the result be obtained; but these proportions will be found most satisfactory. A solution of sulphide of sodium and water may be used, wetting the flesh side of the hide thoroughly. This secures only a partial benefit of my invention. The lime added in itself has a very beneficial action. The application of the sulphide with lime directly to the flesh side of the hide accomplishes the very important result of preserving the hide and at the same time thoroughly cleanses it, removing all blood stains and oil and other greasy matter and opening the pores thoroughly to receive any tan-liquor that may be used. When the hides are treated by my improved process, they may be left in a pile an indefinite length of time, running into the months if need be, when the proportion of the ingredients above given is used without injury.

While I have indicated above the process whereby the hair is preserved for commercial purposes, when it is not desired to so preserve the hair the process may be expedited very much by piling the hides one above the other, the hair side down, and painting the flesh side only. After the hides have been prepared and packed and the hair loosened I prefer usually to throw them into a vat of clear water, which dissolves the sulphide and clears away the lime, making it very much less objectionable to handle the same. However, when treated in this way no such soaking is necessary. The hair can be removed at once, and where the hair is to be used as an article

of commerce it is preferred to remove it before soaking the hides.

While in the above description I have used the term "hair," it will be understood it applies equally to wool and fur, and it contemplates the removal from the hides and skin of any hirsute growth, such removal being either in connection with or in preparation for a tanning process for the preparation of leather or a step in the preparation of raw-hides which are not subjected to the final processes of tanning.

I desire to say that I am aware that solutions of compounds containing sulphide of sodium and other alkaline sulphides have been used in dehairing hides before in combination with lime and other ingredients with it, an instance of which is found in Patent No. 176,606, issued April 25, 1876, to De Montoisen, but that the other constituents were always included as necessary, which destroy the effectiveness of the processes.

My improved process, consisting of application of a paste made up of lime and alkaline sulphide and water to the flesh side of the hide for dehairing purposes, accomplishes its result in a very satisfactory manner, cleans the hide perfectly, and results in preserving the grain of the leather without any discoloration whatever.

The process prepares the hide for easy fleshing, and when it is fleshed a very short wheeling cleans it and plumps it fully and leaves it in the best possible condition for tanning. This has not heretofore been accomplished

by any of the compounds with which I am familiar, and this is the important feature of my invention.

Having thus described my invention, what I claim is—

1. The process of depilating and preparing hides consisting of applying to the flesh sides thereof a compound consisting of a mixture, by measure, of one part sodium sulphide, two parts lime and four parts water.

2. The herein described process for depilating and preparing hides, consisting in applying to the flesh side thereof a compound containing only sulphide of sodium, lime and water mixed to a pasty consistency.

3. The herein described process for depilating hides consisting in applying to the flesh side thereof a mixture of sulphide of sodium, lime and water and folding the flesh side of the hide together, as specified.

4. The process for depilating and preparing hides consisting of applying to the flesh side of the hides a solution consisting of alkaline sulphide, lime and water mixed to a pasty or soupy consistency for the purpose of removing the hair, cleansing the hides and loosening the fleshy material, as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE C. WALTER.

Witnesses:

DANIEL STRIKER,
WM. E. POWERS.