UNITED STATES PATENT OFFICE.

ROBERT HEIN, OF ST. MARY'S, PENNSYLVANIA.

IMPROVEMENT IN THE ART OF TANNING.

Specification forming part of Letters Patent No. **194,090**, dated August 14, 1877; application filed April 30, 1877.

To all whom it may concern:

Be it known that I, ROBERT HEIN, of St. Mary's, in the county of Elk and State of Pennsylvania, have invented a certain new and useful Bate or Compound for Tanning Purposes; and I do hereby declare that the following is a full, clear, and exact description thereof.

This invention relates to that class of compounds used in the tanning of leather or skins. It is what is known in the trade as a "bate," and is used to take out the lime and open the pores of the skins.

The compound consists of equal parts of red arsenic and potash, with sufficient warm water to dissolve them.

The potash is dissolved first in the warm water, then brought to a boiling-point, when the arsenic is added.

In using the bate the compound is put in the vat, and sufficient water added to cover the hides.

For, say, three hundred calf-skins the proportions will be about two pounds of red arsenic and two pounds of potash, with water as above; for, say, one hundred "upper" sides, the same; for, say, one hundred kip, about three pounds of red arsenic and three pounds of potash.

The compound is put in the vat with the hides as warm as the safety of the hides will allow, and they are left in it for four or five hours, having been handled at least every half hour during the bath, when they are removed and put in the liquor the same as usual.

This bate does not injure the leather, which retains its usual weight and color, but it does take the lime out of the hides in one-third of the time now required; also, saves at least one-third of the bark and labor required by the common process. It is also much superior to any bate now in use for opening the pores of the skins.

I am aware that a preparation of arsenic has been used in tanning, but not during that part of the process for which my bate is used.

I therefore claim—

As an improvement in the art of tanning, a bate composed of red arsenic, potash, and water, prepared as described, and for the purpose set forth.

Witnesses: ROBERT HEIN.

DAVID R. SECOR,

J. M. MECUM.