

UNITED STATES PATENT OFFICE.

CHARLES BAUCHMAN, OF NORTH WHITEHALL, PENNSYLVANIA.

MACHINE FOR BREAKING HIDES.

Specification of Letters Patent No. 7,281, dated April 16, 1850.

To all whom it may concern:

Be it known that I, CHARLES BAUCHMAN, of North Whitehall, in the county of Lehigh and State of Pennsylvania, have invented certain new and useful Improvements in Machines for Working Hides and Scouring Leather; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawing, which forms part of this specification and which represents a view in perspective of my machine.

My hide breaking and scouring mill consists of a series of cylinders revolving above a vat or cistern; each cylinder is furnished with a beater which is alternately raised and allowed to fall upon the barrel of the cylinder beneath it, the latter is studded with blunt pins or bosses and the face of the beater is studded with similar pins which correspond in position with the spaces between those on the cylinders; the cylinders also are arranged with respect to each other that the pins on one intervene between those of the others.

In the drawing A is the quadrangular frame of the mill applied to the top of a vat B. The frame supports the bearings *a, a, a*, of three cylinders C, C', C², one gudgeon of each cylinder is prolonged beyond its bearing and is furnished with a beveled wheel *b*, which gears into a beveled pinion *c* secured to a driving shaft D which crosses the frame at right angles to the axes of the cylinders. The beveled wheels and pinions of each cylinder are of equal size so that the three are turned with equal velocities. Immediately above the cylinders are the beaters E, E', E², each of these consists of a heavy beam hinged at one extremity *d* to a standard *e* erected on the frame and fitted at the opposite extremity with a bray *f* which is acted upon by pins or tappets *i* projected from a cam ring G secured to a shaft H parallel with the driving shaft D, but at the opposite side of the frame. This cam-shaft is put in motion from one of the cylinders C by a pair of beveled wheels *g, g'*, one of which (*g'*) is secured to the shaft and the other (*g*) to the gudgeon of the cylinder which is prolonged beyond its box for that purpose. The pins *i* in the several cam rings G, G, G, are arranged in such manner that the three beaters are raised and allowed to fall in regular succession, and the beaters are guided in a vertical direction by guides *h, h', h²*, secured to the frame. The barrels of the cylinders

and the faces of the beaters are studded with bosses or blunt pins *k, k, k, k*, which are so arranged that those of the beaters fall between those of the cylinders with which they act, while those of each cylinder fall between those of the one next to it.

The mill thus constructed may be used for breaking or softening hides, for working out the lime or the bate, and for scouring the tanned hides. The hides to be acted upon are tied together, so as to form an endless belt which is supported on the cylinders and hangs down into the vat beneath, the latter is filled with water which should be changed as often as it becomes foul. The cylinders are put in motion by the application of horse or other power to the driving shaft D; as they revolve they carry the hides in endless succession beneath the beaters which are raised by the pins *i* and allowed to fall by their weight upon the hides passing beneath which are thus beaten and worked by the bosses as they rise from the water at one extremity of the vat and pass into it again at the opposite extremity. After the hides have been properly softened, they are limed in the usual manner and again subjected to the action of the mill which will wash them clean. The mill may also be used with advantage to work out the bate before the hides are subjected to the tanning liquor. After the tanning is completed the leather may again be placed on the mill, which will scour the hides and remove the discoloration resulting from the use of black-oak or inferior bark in the preparation of the tanning liquor, thus leaving the hides of a uniform color throughout and greatly improving their appearance.

Having thus far described my mill as composed of three cylinders with their appropriate beaters but I do not limit myself to this precise number but intend to use one or more as circumstances may render expedient.

What I claim as my invention and desire to secure by Letters Patent is—

The breaking of hides, the working out of the lime and the bate and the scouring of the tanned hides by means of revolving cylinders and beaters, substantially as herein set forth.

In testimony whereof I have hereunto subscribed my name.

CHARLES BAUCHMAN.

Witnesses:

E. L. RENWICK,
P. H. WATSON.