J. ROOD.

OPERATING TOOL FOR LEATHER WORKING MACHINES OR THE LIKE.

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OPERATING-TOOL FOR LEATHER-WORKING MACHINES OR THE LIKE.

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To all whom it may concern:

Be it known that I, JOHN ROOD, a citizen of the United States, residing at Danvers, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Operating-Tools for Leather-Working Machines or the Like, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention has for its object to provide an improved operating-tool for use in putting out machines for working hides, as well as for other machines for similar purposes; and it consists in the improved tool, of which the following is a description, taken in connection with the accompanying drawing. The novel features thereof are pointed out and clearly defined in the claims at the close of this specification.

In making out the drawing I have shown in plan view a tool embodying my invention.

In working a hide—as, for example, in performing the operation known as "putting out"—the hide is placed in the machine in such position that the long axis of the roll of the putting-out tool is substantially parallel with the center of the back of the hide—that is, that portion of the hide which was directly over the backbone of the animal. The hide and tool are then moved relatively to each other, so that the hide is worked or "put out" in lines at substantially right angles to this center line. In this way the central portion of the hide intermediate the quarters may be perfectly worked or put out. The quarters, however, diverge to the right and left, and a tool adapted to only work at right angles to the central line of the hide—that is, the line of the backbone of the animal—does not work the quarters and the flanks properly, but causes a plait or fold to be formed which has to be worked or put out subsequently by a hand operation.

The object of my invention is to produce a tool which will properly work at one and the same time both the quarters and the intermediate portion of the hide, and thus render unnecessary any subsequent manual operation. This object is attained by the employment of a tool constructed as hereinafter set forth.

Referring to the drawing, the journals of the operating roll or tool, which are at the ends of the shaft thereof, are designated 1. The said roll, which may be of any suitable material and suitably secured to the shaft, is designated 2. The working blades, which are set and firmly secured on the surface of this roll in the well-known manner, comprise, preferably, four distinct groups or arrangements of blades, which are designated 3, 4, 5, and 6.

The groups of blades designated 4 and 5 occupy in the preferable arrangement the central portion of the roll, as shown, and are the blades which work the central portion of the hide. The said groups of blades 4 and 5 comprise blades set, preferably, at substantially the same angle, but having a reverse twist with reference to each other, as shown. The blades of the group 4 butt against the blades of the group 5, as shown, so that the proximate ends of the roll overlap the point at which the said groups of blades join, the junction of the two groups of blades being preferably substantially central of the length of the roll or tool. The portion of the roll occupied by the group of blades 4 is preferably substantially equal to the portion occupied by the group of blades 5. As will be clear, however, the proximate ends of the groups of blades 4 and 5 may join or overlap at a point at either side of the center of the roll, thus causing the blades comprising one of said groups to be longer and to occupy a greater portion of the length of the roll than the blades of the other group. Furthermore, it is not essential to my invention that the angle at which the blades of one of said groups 4 and 5 is set shall be the same as the angle at which the blades of the other one of said groups is set. The angles are reverse, but they may vary with reference to each other.

The groups of blades designated 3 and 6 occupy the end portions of the roll, as shown, outside the groups 4 and 5. The inner ends of the blades of group 3 overlap the outer or proximate ends of the blades of group 4, and in the same way the inner ends of the blades of group 6 overlap the proximate ends of the blades of group 5. The chief object gained in lapping the proximate ends of the groups of blades is that the working of every por-
tion of the hide is thereby insured. The groups of blades designated 3 and 6 work on the quarters and flanks of the hide. These are given a quicker twist on the roll— that is, they are set at a more obtuse angle to the long axis thereof. By this means the quarters and flanks are spread more than the intermediate portions of the hide and are worked on lines parallel with a line extending from the back centrally down the quarters to the extremity thereof. Since the quarter portions of a hide diverge, the blades of group 3 are set at a reverse angle to the blades of group 6. The pitch or angle of the blades in said groups 3 and 6 is preferably the same, although I do not desire to limit myself to the same angles for these groups, as said angles might be varied without departing from my invention. When the pitch or turn of the blades is quicker, a less number of blades may be satisfactorily employed. For example, a less number of blades will be required in groups 3 and 6 than in groups 4 and 5.

By the employment of my improved tool a hide may be worked throughout its entire surface evenly and uniformly and without the aid of subsequent manual operations.

The tool, as will be clear, may be substituted for tools now in use in machines of the present well-known forms which are used in working hides.

What I claim is—

1. An operating-tool comprising a roll having helical blades set thereon in groups the groups of blades at one or both ends of the roll being of sharper pitch than those at the central portion thereof, substantially as described.

2. An operating-tool comprising a roll having oppositely-disposed helical blades set thereon, the pitch of the said blades increasing from the center toward one or both of the ends of the tool.

3. An operating-tool comprising a roll having oppositely-disposed helical blades set thereon in groups, the pitch of the said groups of blades being greater at one or both of the ends of the roll than at the center.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN ROOD.

Witnesses:

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