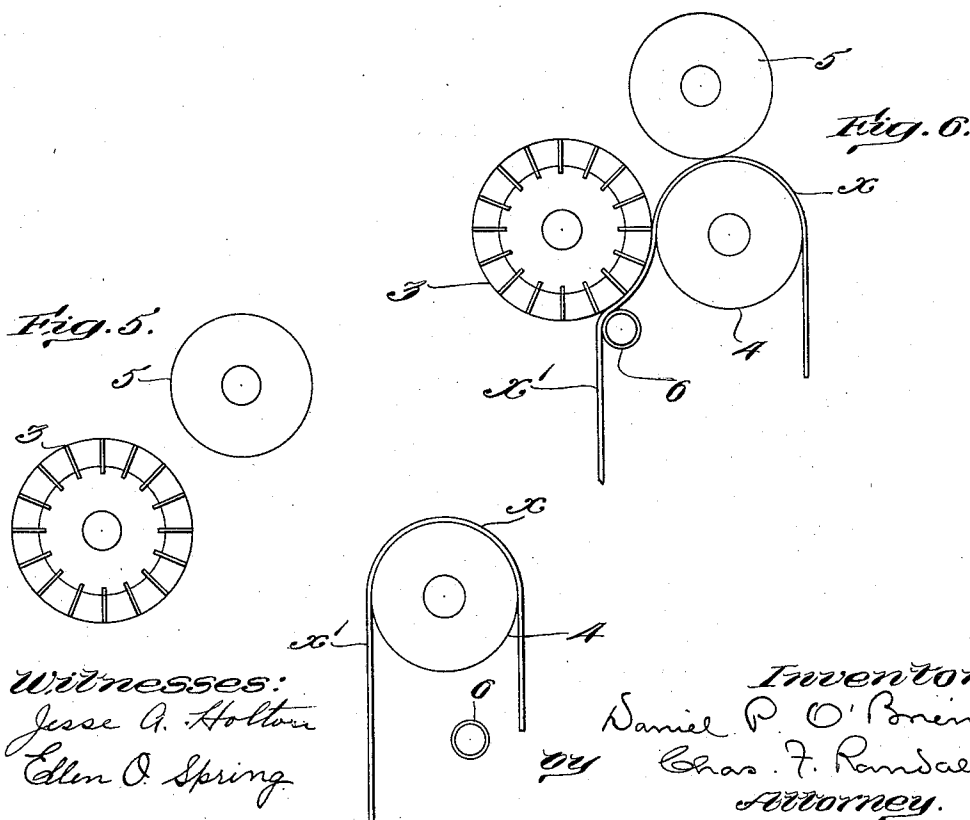
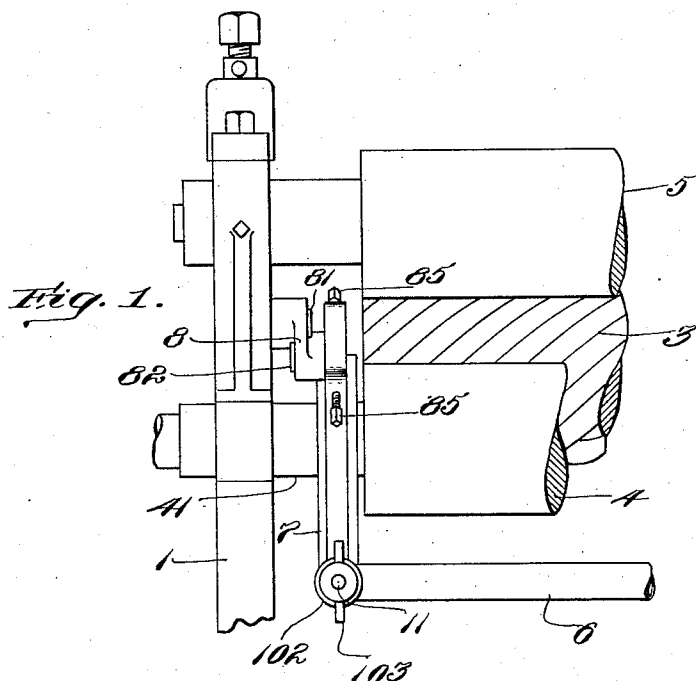


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APPLICATION FILED AUG. 1, 1911.

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Patented May 20, 1913.

2 SHEETS—SHEET 1.

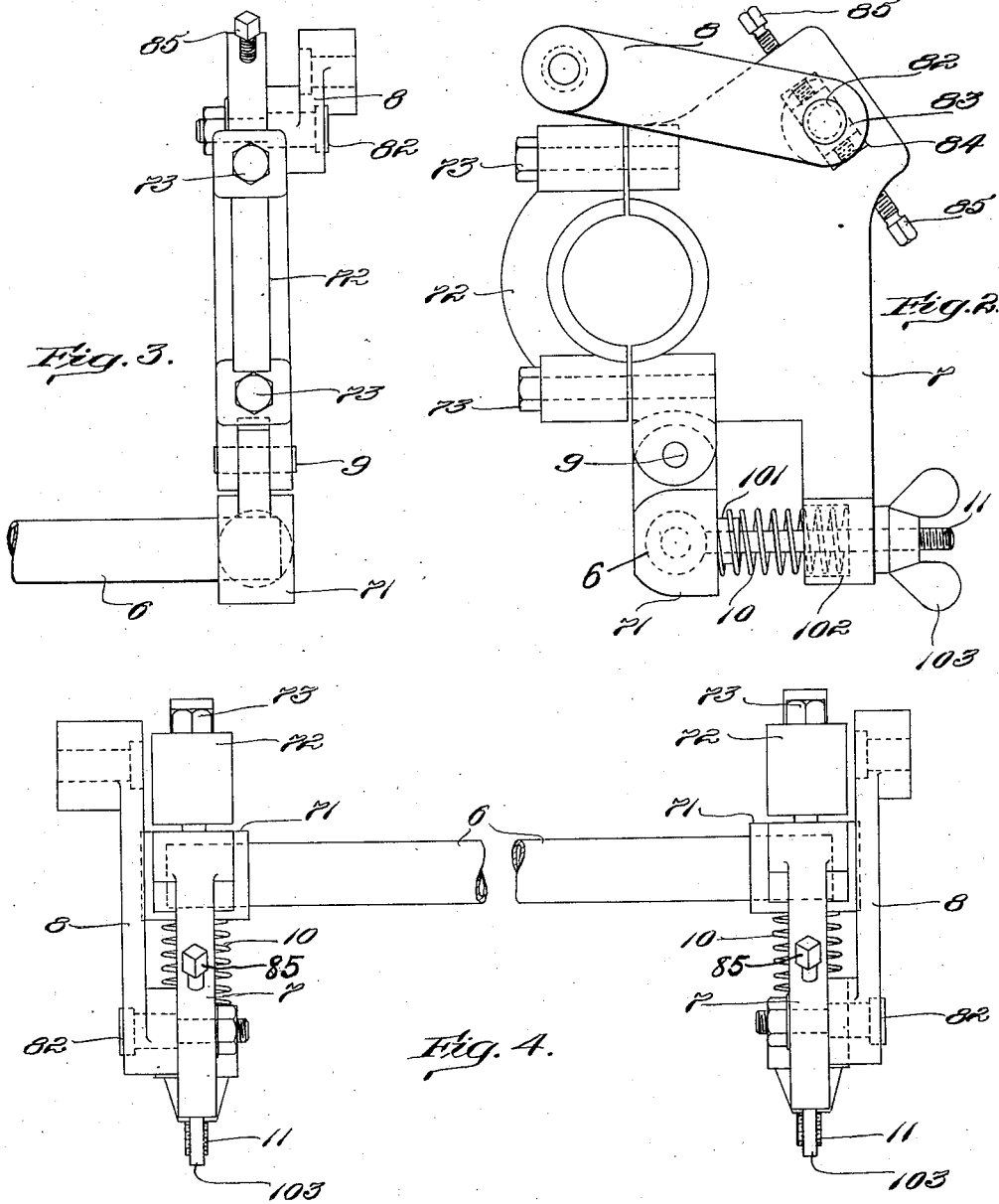


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UNITED STATES PATENT OFFICE.

DANIEL P. O'BRIEN, OF WOBURN, MASSACHUSETTS.

MACHINE FOR TREATING HIDES, SKINS, AND LEATHER.

1,062,026.

Specification of Letters Patent.

Patented May 20, 1913.

Application filed August 1, 1911. Serial No. 641,797.

To all whom it may concern:

Be it known that I, DANIEL P. O'BRIEN, a citizen of the United States, residing at Woburn, in the county of Middlesex, State of Massachusetts, have invented a certain new and useful Improvement in Machines for Treating Hides, Skins, and Leather, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to machines for treating hides, skins and leather, and more particularly to machines of the class employing a work-cylinder clothed with helically-disposed blades, and in conjunction therewith a bed-roll for supporting a hide, skin, or side (hereinafter, for convenience, termed a hide) while being operated upon by the work-cylinder. In such machines means is provided for separating the bed-roll and work-cylinder to permit a hide to be flung over the bed-roll so as to rest thereon with a portion hanging loosely, and for then closing them together so as to cause the work-cylinder to act upon the surface of the hide while the latter is being fed through between them.

The invention provides means for presenting the loosely-hanging portion of the hide to the action of the work-cylinder, so that the work-cylinder shall act upon such portion before the latter arrives at the nip between the bed-roll and work-cylinder.

The invention also provides the combination with a work-cylinder and bed-roll which are relatively movable so that they approach and separate, of a rod or roll which is actuated through such relative movement so that in the approach of the work-cylinder and bed-roll the said rod or roll shall engage with the hanging portion of the hide that has been entered between them, and hold such portion up to the action of the work-cylinder to receive a preliminary action therefrom in advance of arriving at the nip between the work-cylinder and bed-roll.

An embodiment of the invention is illustrated in the drawings, in which latter,—

Figure 1 shows in front elevation certain parts at one end of a machine having the said embodiment applied thereto. Fig. 2 is a view of the parts in Fig. 1 in which the invention more particularly resides, viewing

the same from the left in Fig. 1. Fig. 3 is a rear elevation of the parts shown in Fig. 2. Fig. 4 shows in plan the parts which I add to the machine. Figs. 5 and 6 are diagrams illustrating the action of the rod or roll aforesaid.

Having reference to the drawings,—Fig. 1 shows a portion of the frame 1, and portions of the work-cylinder 3, bed-roll 4, and feed-roll 5, of a machine on the order of that of United States Letters Patent to me, No. 904,079, dated Nov. 17, 1908. The bed-roll is movable, through the mechanism provided for the purpose, from its open position shown in Fig. 5, separated from the work-cylinder and feed-roll, to its closed position shown in Fig. 6, closely adjacent the work-cylinder and feed-roll. In the open position shown in Fig. 5, the hide which is indicated at *x* may be thrown over the bed-roll so as to hang down behind (at the left of the latter) as shown in Fig. 5. When, now, the bed-roll is closed against the work-cylinder and the feed-roll, the hide is nipped between the bed-roll and the two latter, as shown in Fig. 6.

The rod or roll which I add in conformity with the present invention is shown at 6. It is supported by carriers 7, 7, which are mounted upon the bushings 41 of the journals at the opposite ends of the bed-roll, so that the said carriers accompany the bed-roll in its movements toward and from the work-cylinder. The ends of the said rod or roll 6 are seated in sockets in blocks 71, 71, attached to the carriers. To enable the carriers to be applied readily to a machine, or removed therefrom, each carrier is furnished as shown in Figs. 2 and 3 with a cap-piece 72 and the body of the carrier and also the cap-piece are shaped like the halves of a split or divided box or bearing to fit the exterior of the corresponding bearing, and turn or swivel thereon. The cap-piece is held in working position upon the carriers by bolts 73, 73. The required swinging movements of the rod or roll 6 are provided for by means of links 8, 8, one for each carrier. Each of the said links is in pivotal connection, at one end thereof, with a fixed pin or the like 81, Fig. 1, projecting from the machine-frame 1, and at the other end thereof is in like connection with a pin 82 pro-

jecting from the corresponding carrier. As the bed-roll moves in and out, taking the carriers bodily with it, the links occasion the desired rocking movements of the carrier, and thus the rod or roll 6 is swung from its position in Fig. 5 to that in Fig. 6, and vice versa. As it swings from the former position toward the latter, it encounters the hanging portion w' of the hide, and by its further movement in the said direction presses such portion toward and against the surface of the work-cylinder, as in Fig. 6.

Yielding action of the rod or roll 6 is provided for, so that it may bear the hide with yielding force into contact with the work-cylinder, and may accommodate itself to differences between the thicknesses of different hides and to differences between different portions of the same hide. To these ends, the blocks 71, 71, which, as already indicated, have sockets receiving the end-portions of the said rod or roll, are connected by pivots 9 to the carriers, so as to provide for movement of the blocks relative to the carriers, and the said blocks are backed up by expanding helical springs 10, 10. Each of the said springs partly surrounds by one end thereof a nipple 101, Fig. 2, projecting from the corresponding block, its other end-portion being partly contained within a socket 102 in the corresponding carrier, the spring being compressed between the block and the inner end wall of the said socket. The extent of the expansion of the spring, and consequently the degree of its tension, is regulated by means of a stud 11 projecting from the block 71 through the center of the spring and a hole in the said end-wall, and at the outer side of said end-wall receiving a thumb-nut 103. This constitutes one means of regulating the force with which the rod or roll 6 presses the hide against the surface of the work-cylinder. To adjust the closeness of approach of rod or roll 6 to the work-cylinder, the pin 82 of each carrier is adjustably mounted in connection with the latter, so that by adjustment thereof the carrier may be caused to assume the desired angular position as the bed-roll completes its inward movement. Thus, the pin 82 is mounted in a block 83, occupying an oblique slot 84 in the carrier, and engaged at opposite sides of said pin by adjusting screws 85, 85. The adjustment of the block within the said slot effects an angular shift of the carrier around the axis on which it oscillates. This constitutes another means of regulating the force with which the rod or roll 6 presses the hide against the surface of the work-cylinder.

When the hide is thrown over the bed-roll the hanging portion w' thereof is liable to be wrinkled and uneven, and portions there- of will be formed turned over upon adjoin-

ing portions. In the case of my invention, however, when the bed-roll is closed up against the work-cylinder and feed-roll, the relative movement of the rod or roll 6 from its position in Fig. 5 to that in Fig. 6, presents the loosely-hanging portion w' of the hide to the action of the work-cylinder, so that the work-cylinder acts upon such portion before the latter arrives at the nip between the bed-roll and work-cylinder. Thereby the said portion is opened out, or spread and smoothed, preliminary to being operated upon by the work-cylinder and bed-roll combined. A long shank of a hide will be so presented to the work-cylinder and held by the rod or roll 6, and so smoothed out, that plaiting thereof will be prevented.

The movable rod or roll 6 is applicable to unhairing machines, fleshing machines and putting-out machines, with beneficial results in all of them. It operates to place an extra amount of the hide in contact with the periphery of the work-cylinder. In the unhairing operation this gives much improved results in the removal of fine hairs.

I claim as my invention:—

1. In a machine of the class described, the combination with a work-cylinder and a roll which holds the hide up to the action of said cylinder, movable relative to each other to separate them to permit a hide to be thrown over the said roll and to close them together upon the hide, of means for presenting the loosely-hanging portion of the hide to the action of the work-cylinder, to be operated upon thereby before arriving at the nip between the roll and work-cylinder.

2. In a machine of the class described, the combination with a work-cylinder and a bed-roll which are relatively-movable so that they approach and separate, of a rod or roll which is actuated through such relative movement and in the approach of the bed-roll and work-cylinder engages the hanging portion of a hide entered between them and holds such portion up to the action of the work-cylinder to receive a preliminary action therefrom prior to arriving at the nip between the work-cylinder and bed-roll.

3. In a machine of the class described, the combination with a work-cylinder and a movably-mounted bed-roll, of a rod or roll, carriers therefor mounted to accompany the bed-roll back and forth, and means for causing the said carriers to move the rod or roll to hold the hanging portion of a hide entered between the bed-roll and work-cylinder up to the action of the latter prior to arriving at the nip between bed-roll and work-cylinder.

4. In a machine of the class described, the combination with a work-cylinder and a

bed-roll, of a rod or roll, swinging carriers therefor mounted to swing concentrically with the bed-roll, and links connecting said carriers with relatively stationary portions
5 of the machine, the bodily movement of the bed-roll operating the said carriers and in the approach to the work-cylinder causing the rod or roll to hold the portion of hide

hanging from the bed-roll up to the action of the work-cylinder.

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

DANIEL P. O'BRIEN.

Witnesses:

CHAS. F. RANDALL,
ELLEN O. SPRING.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."