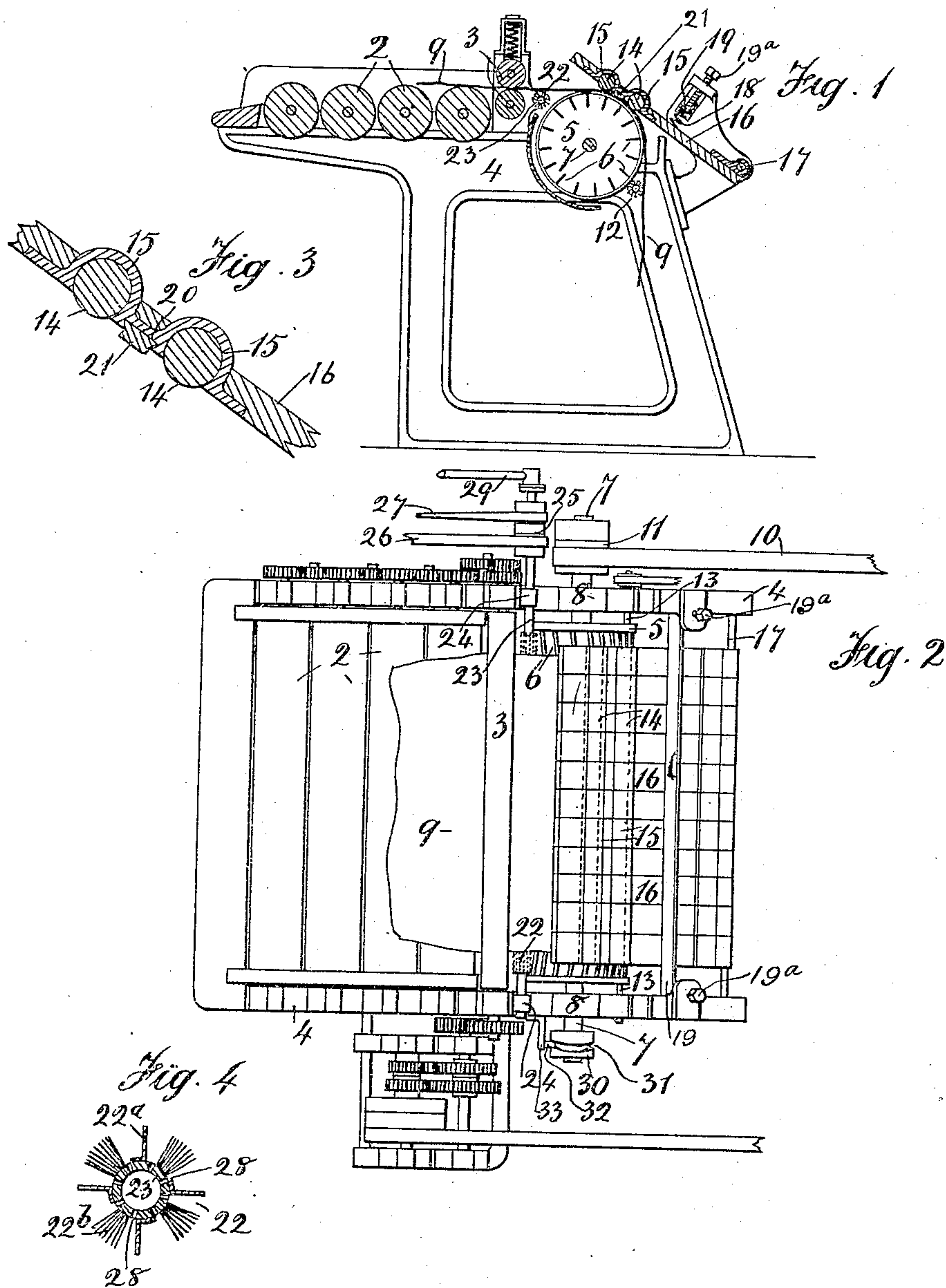


No. 766,073.

PATENTED JULY 26, 1904.

J. STRAITON.
HIDE WORKING MACHINE.
APPLICATION FILED SEPT. 5, 1902.

NO MODEL.



Witnesses

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JOHN STRAITON, OF LIVERPOOL, ENGLAND.

HIDE-WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 766,073, dated July 26, 1904.

Application filed September 5, 1902. Serial No. 122,245. (No model.)

To all whom it may concern:

Be it known that I, JOHN STRAITON, a subject of the King of Great Britain, residing at Liverpool, in the county of Lancaster, England, have invented new and useful Improvements in Hide-Working Machines, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a central longitudinal section of a machine embodying my improvements. Fig. 2 is a plan of the same. Fig. 3 is a detail section of the pressing-rollers, and Fig. 4 is a detail section of the water-supply brush.

The invention relates to machines in which the skins or hides to be cleaned or otherwise treated are passed backward and forward in contact with a rotating drum provided with beaters, scrapers, or knives; and the object is to construct such machines that the skins may be held longer in contact with the beaters and in a more effective manner with but little hindrance to the passage of the skins or liability to jamming or doubling, that water may be more effectively supplied near the roots of the wool or hair on the skins, and that such machines may be used either for cleaning or unhairing, as desired.

Referring to the drawings, 2 represents traversing-rollers, and 3 represents a pair of nipping or feeding rollers, the shafts of all of which are journaled in bearings on the main framework 4. These rollers 2 and 3 are of the usual kind provided with ordinary reversible gear, so that a skin may be fed forward or drawn backward over a drum 5, provided with the usual beaters or knives 6 and secured to and rotating with a shaft 7, journaled in bearings 8 on the framework. The skin 9 is fed with its hair side downward over the drum, the circumference of which it follows for some distance, as shown, thereby being exposed to the action of the beaters for a longer time than when the skin is fed under the drum as hitherto, when it touches the beaters at only one point.

10 is a belt passing round a pulley 11, secured to the shaft 7 for rotating the drum.

12 is a circular brush fixed on a shaft 13 and caused to revolve by belt or other gear

close to the beaters, so as to detach the free end of the skin and prevent it catching and wrapping the skin round the drum. When the weight of the skin is not sufficient to keep it against the beaters with the necessary pressure, I use one or more series of short rollers 14, each roller of a series being carried in a recess 15, formed in one end of a narrow board 16. The recesses 15 may be formed in a plate attached to the boards 16, near one end thereof. A number of these narrow boards and rollers are arranged side by side, with the rollers of a series in line axially. The other ends of the board are pivoted on a rod 17, secured to the frame 4, so that the boards can be pressed by springs 18 toward the drum, so that the rollers 14 press the skin against the beaters. The pressure of the springs, of which there is one for each board, may be varied by moving the bar 19, against which they abut, in any usual way—for example, by set-screws 19^a. The rollers 14 revolve as the skin passes between them and the drum thus allowing the skin to pass freely without friction or liability to double up where it is being acted on by the beaters. Several series of rollers may be used, and the different series may be arranged close together; but I prefer when two series only are used to arrange them a little distance apart, as shown, and I insert between them in a groove 20 in each board 16 or otherwise attach a piece of rubber or like yielding material 21, thus forming a bolster parallel to the rollers 14, the nip on the skin between the drum and the last series of rollers insuring the drawing of the skin over the bolster 21 without liability of jamming. The rollers 14 and their supports may also be used in connection with ordinary machines in which the skin is passed at the inner side or underneath the drum.

22 is a circular brush or raiser secured on a shaft 23, journaled in bearings 24 and arranged to bear against the hair side of the skin. 25 is a pulley secured on the shaft 23, and 26 27 are a straight and crossed belt, respectively, either of which may by any well-known means be moved onto the pulley 25, so that the motion of the brush 22 may be

first in the same direction as the drum 5 until the skin is nipped between the drum and the rollers 14, the motion of the brush 22 being then reversed, so as to raise up the hair on the skin and allow jets of water to pass freely to the roots of the hair and wash out all dirt therefrom. I prefer to make the shaft 23 hollow and with perforations 28 therein, through which the washing-water may be forced from a pipe 29, as by this means such water will be brought more certainly to the roots of the hair.

The brush is preferably constructed with metal plates 22^a, alternating with bristles 22^b. To insure more efficient action of the beaters or knives when the machine is being used for unhairing skins, I cause the drum 5 to have a reciprocating motion longitudinally of its axis. This may be accomplished by an oblique grooved cam 30, secured on the shaft 7. The groove 31 engages with a pin 32, fixed to a bracket 33, secured to the frame 4, so that as the cam revolves with the shaft such shaft and the drum reciprocate a short distance, thus rubbing the hair sidewise and insuring its removal from the skin. Instead of a cam 30 any other convenient gear operated from a moving part of the machine or gear may be used for reciprocating the drum at a suitable speed.

I claim—

1. A hide-working machine comprising a drum having beater-knives, and a series of rollers arranged in line axially, with the ends abutting against each other, a series of movable boards having recesses containing the rollers, and springs arranged to press the boards toward the beater-knives; substantially as described.

2. A hide-working machine comprising a drum having beater-knives, several series of

rollers, each series being arranged in line axially, with the ends abutting against each other, a series of movable boards having recesses for the rollers, and springs arranged to press the boards toward the beater-knives; substantially as described.

3. In combination with a skin cleaning or unhairing machine, a drum having beater-knives, two series of rollers each series being arranged in line axially and disposed in recesses in a series of movable boards, and pieces of yielding material attached to the movable boards between the series of rollers, said movable boards being adapted to allow of the rollers and yielding material being pressed toward the beater-knives of the machine, as described.

4. A machine for treating skins comprising a drum having beater-knives, feed-rolls for feeding the skins, a circular brush bearing against the hair side on the same side as the beater-drum, reversible gear arranged to revolve the brush in either direction, and a perforated water-supply pipe; substantially as described.

5. A machine for treating skins comprising a drum having beater-knives, feed-rolls for feeding the skins, a circular brush arranged to revolve against the hair side, the shaft of the brush being hollow and perforated, a water-supply pipe connected to the hollow shaft, and reversible gear arranged to revolve the brush in either direction; substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN STRAITON.

Witnesses:

W. B. JOHNSON,
E. OWEN.