(No Model.)

J. W. VAUGHN.

PUTTING OUT MACHINE.

No. 299,701. Patented June 3, 1884.

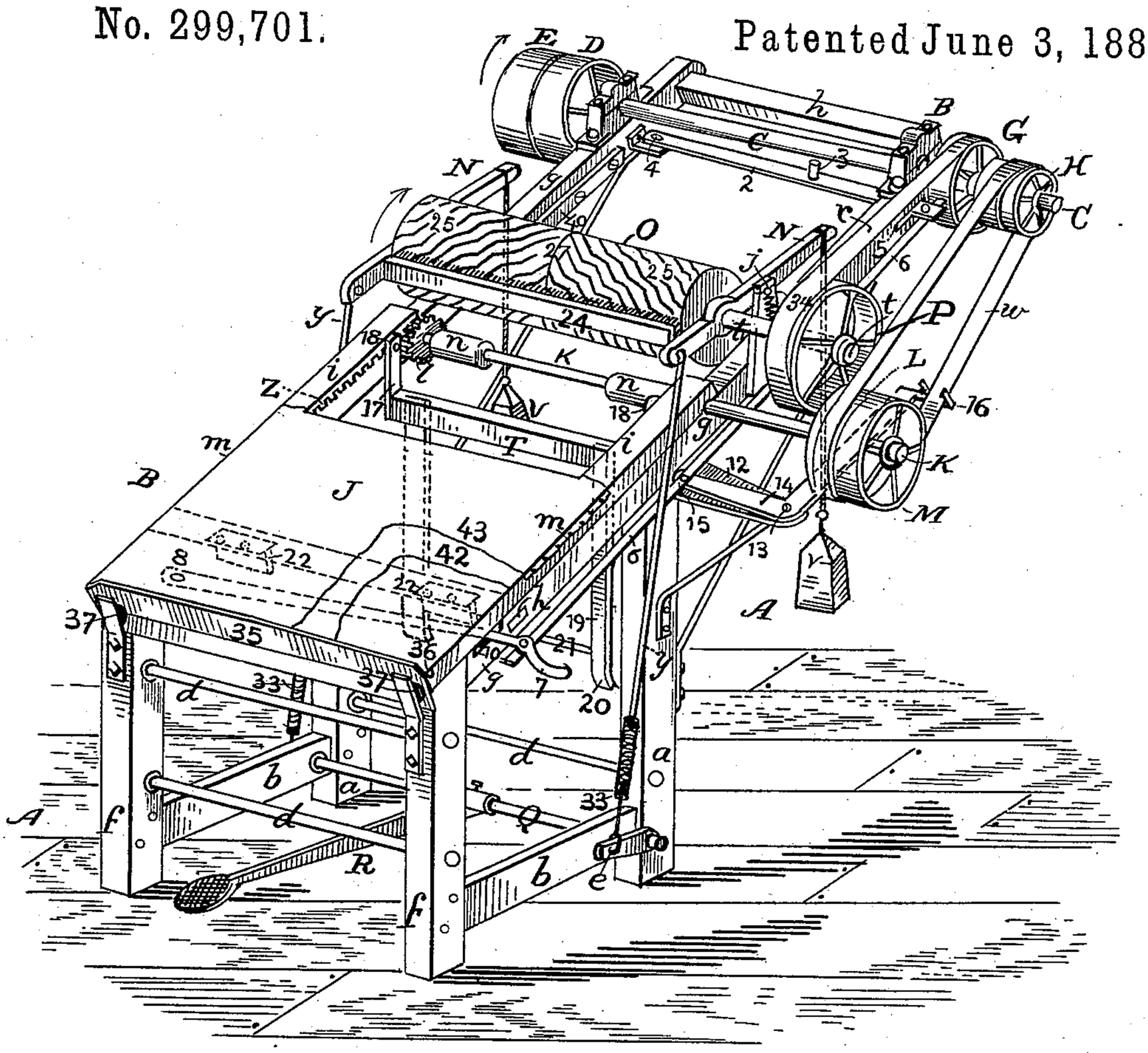

Fig. 1.

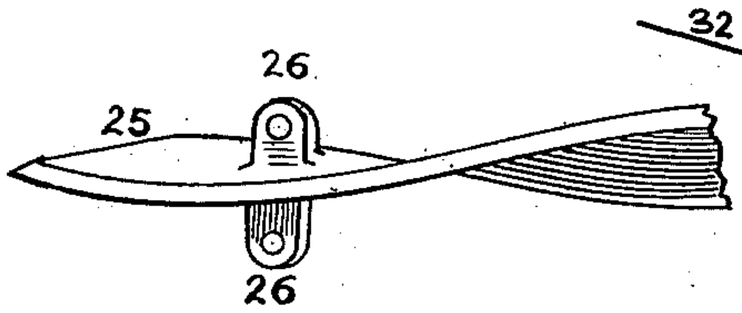

Fig. 2.

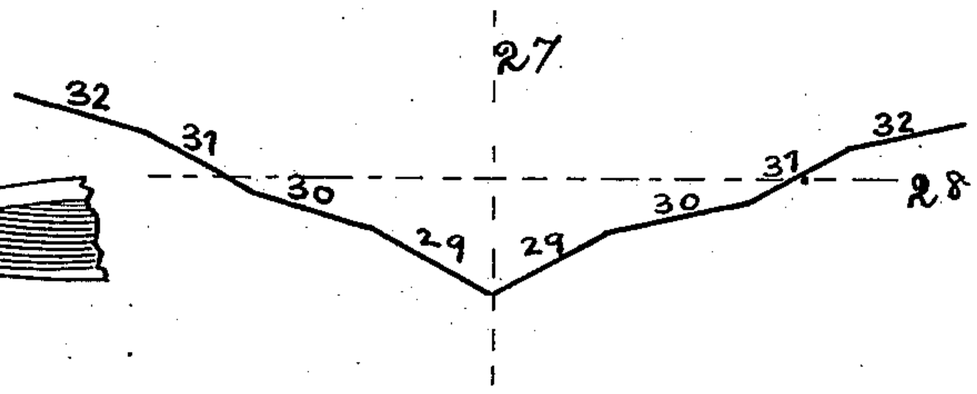

Fig. 3.

Witnesses

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PUTTING-OUT MACHINE.

SPECIFICATION forming part of Letters Patent No. 299,701, dated June 3, 1884.

Application filed February 11, 1884. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. VAUGHN, of Peabody, in the county of Essex, State of Massachusetts, have invented a certain new and useful Improvement in Putting-Out Machines, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an isometrical perspective view of my improved machine; Fig. 2, an enlarged perspective view of a section of one of the flanges, showing the method of attaching the flanges to the roller; and Fig. 3, a view showing the arrangement of the flanges on the roller.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of machines which are used in the manufacture of leather for putting-out, scouring, fleshing, and unhairing the hides and skins; and it consists in a novel construction and arrangement of the parts, as hereinafter more fully set forth and claimed, by which in some respects a more desirable device of this character is produced than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation:

In the drawings, A represents the upright frame-work, and B the inclined frame-work, these constituting the body of the machine. The upright frame-work consists of the long standards *a* and short standards *f*, connected by the beams *b* and rods *d*. The inclined frame-work consists of the side rails, *g*, and cross-rails *h*, the lower ends of the side rails being attached to the tops of the short standards *f*, and their upper ends projecting beyond or to the rear of the long standards *a*, on which they rest and to which they are attached.

Arranged horizontally in proper bearings at the rear or upper end of the frame-work B there is a shaft, C, provided at one of its ends with the main driving-pulley D and loose-pulley E, and at the other with the fast-pulleys G H. A carriage or table, J, is disposed on the frame-work B, being fitted to slide longitudinally on the ways 40, attached to the side rails *g*. The table is provided with side rails, *m*, which rest on said ways and project upwardly or forward of the center of the table proper, as shown at *i*, and attached to the inner sides of these rails are toothed racks *z*.

Disposed horizontally near the center of the frame-work B there is a shaft, K, carrying at its outer end the fast pulley L and loose pulley M, and between the rails *g* the pinions *l* and small elongated rollers *n*, the pinions being adapted to intermesh with the racks *z*, beneath the side rails of the table J.

Projecting upwardly from either of the rails *g*, near the shaft K, there is a standard, *j*, and pivoted horizontally, near its center, in either of said standards, in parallelism with the rails *g* there is a lever, N, a counterbalance, *v*, being suspended from the upper or rear end of each of these levers.

Journaled horizontally in the levers N, between the forward ends of said levers and the standards, *j*, there is a shaft, *t*, carrying a roll, O, provided around its periphery with a series of flanges, 25, as hereinafter more fully described. The shaft *t* has one of its ends extended beyond the frame-work B, and is provided with a fast pulley, P, which is connected with the pulley G by the belt *r*, the pulleys H L being also connected by a belt, *w*.

A rocker-shaft, Q, is disposed in the rear ends of the side rails, *b*, being provided at its outer ends with arms *e*, and near its center with the treadle R. The lower or forward ends of the levers N are connected with the outer ends of the arms *e* by means of extensible spring-rods *y*, so that when the foot of the workman is placed on the treadle R the action of the weight *v* will be overcome and the roll O depressed, the weight being sufficiently heavy to keep the roll elevated, so that the table J may pass beneath it without coming into contact therewith when the foot is removed from the treadle.

A rod, 2, provided with an upwardly-projecting stud, 3, has its inner end pivoted at 4 to a bracket on one of the rails *g*, its other

end passing through a mortise, 5, in the opposite rail and jointed to a rod, 6. A rod, 7, arranged in parallelism to the rod 2, has its inner end pivoted at 8 to one of the rails *g*, its other end passing through a mortise, 10, in the opposite rail, and being jointed to the rod 6.

A bracket, 12, projects from the standard *a*, and pivoted thereon at 13, is a bell-crank lever, 14, having its inner end jointed at 15 to the rod 6, and its opposite end provided with studs 16 between which the belt *w* passes, the rods 2, 6, and 7 and lever 14 constituting a shipping mechanism for said belt.

A horizontally-arranged bar, T, is suspended between the projections *i* of the side rails, *m*, by means of the lugs 17, the lugs having their upper ends pivoted to said projections at 18.

Projecting downwardly from either end of the bar T there is a bar, 19, having its lower end curved, as seen at 20, these bars being connected by the cross-rod 21.

Attached to the under side of the lower cross-rail, *h*, beneath the table J, there are two downwardly-projecting studs, 22, these studs being arranged at the same distance from the side rails, *g*, as the bars 19.

A brush, 24, is supported in the forward ends of the levers N, its teeth or bristles being so arranged as to be in constant contact with the roll O.

The flanges 25 are preferably composed of brass, composition, or similar metal, and are secured to the body of the roll by screws passing through the laterally-projecting ears 26. These flanges start at the center 27 of the roll and pass spirally around it to either end, and are irregular in their formation, as illustrated by a plan view in Fig. 3, in which the dotted line 28 represents the central axial line of the roll O; 25, the flanges, and the dotted line 27 the line or point from which the flanges radiate or start. The first section, 29, stands at a greater angle to the line 28 than the second section, 30, and the third section, 31, stands at the same angle as 29 and in parallelism therewith, while the section 32 stands at the same angle as 30, and so on through the series. The object of this peculiar construction and arrangement of the flanges on the roll is to put out the hide or skin both laterally and longitudinally, or sidewise and lengthwise, the sections 29 and 31 acting to scrape and stretch the skin lengthwise, (or from the center toward the sides of the table,) and the sections 30 and 32 sidewise, (or from the rear toward the front of the table,) thus performing the work much more perfectly than would be possible if the flanges were straight or segments of a true spiral. Each of the flanges may be formed in a single piece or in several pieces, as preferred, or most convenient and economical; and the ears 26 may be employed on one or both sides of the flange, as desired.

In the use of my improvement the hide or skin to be put out, fleshed, scoured, or unhaired, as the case may be, is placed on the table J with its upper edge overhanging the upper edge of said table, a proper roll for the work to be performed having been mounted on the shaft *t*. The bar 7 is then moved to ship the belt *w* onto the fast pulley L, thereby causing the table to pass upwardly under the roll O. As the table advances, carrying the suspended bar T, the bars 19 will be brought into contact with the rollers *n*, and elevated or swung upwardly beneath the table, causing the bar T to be brought into contact with the overhanging portion of the skin, and firmly clamp it between said bar and the upper edge of the table. The table continuing to advance, the skin now passes under the roll and is brought into forcible contact therewith by means of the treadle R, acting on the levers N, and the work performed in a manner which will be readily obvious without a more explicit description. When the table has passed beneath the roll far enough to bring all parts of the hide or skin into contact therewith, it strikes the stud 3 on the bar 2 and ships the belt *w* onto the loose pulley M, and at the same time the foot of the workman is removed from the treadle R, thereby permitting the table to descend by gravitation to the position shown in the drawings, preparatory to repeating the operation. As the table descends when the bars 19 have passed over the rollers *n*, their curved ends 20 are brought into contact with the studs 22, thereby forcing the bars downwardly and releasing or unclamping the hide or skin from between the bar T and edge of the table.

The roll O rotates as indicated by the arrow, or in such a direction as to cause its flanges to oppose the passage of the hide or skin beneath it.

The brush 24 prevents the water and particles of flesh, hair, &c., taken up by the flanges 25 from being carried over the roll and brought into contact with the finished portion of the skin beyond it.

The table is covered with a thick sheet of rubber, 42, over which there is placed an outer covering of leather, 43, so as to render it slightly yielding, and thereby prevent the roll from injuring the skin. A stout coiled spring, 33, is also introduced in either of the rods *y*, and another, 34, at each of the pivots *j* of the levers N for the same purpose; but the springs may be omitted, if desired, although I deem it preferable to use them, more especially those in the rods *y*.

Instead of the roll O any well-known form of roll for the same purpose may be employed, and, likewise, instead of the bar T, any well-known device for clamping the hide or skin may be used, if desired.

A guard, 35, is attached to the foot of the table, to prevent the water expressed from the skin from running down onto the clothing of the workman, a channel, 36, being provided to drain it off at either side of the machine.

Buffers 37, composed of rubber, are also pro-

vided, against which the table strikes when it descends from the upper part of its course, as described.

It will be understood that the flanges 25 are to be constructed with sharp, angular, or rounded edges, in accordance with the work they are required to perform, and are to be changed as may be found necessary.

By inclining the table J, as shown and described, the water runs off readily from the hide or skin, and it is always in a position to be inspected by the workman. The machine may be adapted for light or heavy work, and requires but one person to operate it.

Having thus explained my invention, what I claim is—

1. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the combination of the following instrumentalities, to wit: an inclined table for holding the hide or skin, said table being adapted to traverse or move in a line corresponding with the angle at which it is inclined; a clamp or clamps for securing the hide or skin to the table; a roll adapted to scrape, scour, flesh, put out, or unhair the hide or skin, as the case may be; a treadle for causing the roll to press upon the hide or skin; an automatic belt-shipping device, substantially as described; mechanism for causing the table to move back and forth under the roll, and operative mechanism for the roll, substantially as forth.

2. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the brush 24, mounted in the levers N, pivoted on the shaft *t*, in combination with the roll O, substantially as and for the purpose specified.

3. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the roll O, provided with a series of flanges, 25, having the sections 29, 30, and 31, constructed and arranged to operate substantially as specified.

4. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the flange 25, having the sections 29 and 30, arranged, respectively, at different angles to the central axial line of the roll O, and provided with the flange 26, for attaching it to the roll, substantially as and for the purpose set forth.

5. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the swinging bar T, provided with the bars 19, in combination with the rollers *n* and table J, substantially as specified.

6. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the stud 22, in combination with the table J, bar 19, and bar T, substantially as and for the purpose set forth.

7. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the roll O, shaft *t*, levers N, and weight *v*, in combination with a treadle or device for causing the roll to press on the hide or skin, substantially as specified.

8. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the rod *y*, provided with the spring 33, in combination with the roll O, lever N, and a treadle or means for exerting a pressure on said roll, substantially as and for the purpose set forth.

9. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, and having an inclined table, a shipping mechanism, substantially as described, adapted to be operated automatically by the advancing table, whereby the table may be released and permitted to descend by gravitation to the lower end of its course, substantially as specified.

10. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the bars 6 and 7, bell-crank lever 14, provided with the studs 16, and bar 2, provided with the stud 3, in combination with the table J and operative mechanism, substantially as set forth.

11. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the shaft K, provided with the pinions *l*, rollers *n*, and pulleys L M, in combination with the table J, provided with the racks *z*, bar T, provided with the bars 19, and operative mechanism, substantially as set forth.

12. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the inclined table J, having the side rails, *m*, projecting in advance of its rear edge, as shown at *i*, and provided with racks *z*, in combination with the shaft K, pinions *l*, rollers *n*, bar T, and operative mechanism, substantially as specified.

13. In a machine for putting out, scouring, fleshing, or unhairing hides or skins, the body consisting of the upright frame-work or structure A and inclined frame-work or structure B, the shaft C, provided with the pulleys E D G H, the shaft *t*, carrying the roll O and pulley P, the shaft K, provided with the pinions *l*, rollers *n*, and pulleys L M, the levers N, provided with the weights *v* and rods *y*, the treadle, consisting of the rocker-shaft Q, arms *e*, and part R, the shipping device, consisting of the bars 2, 7, and 6, and lever 14, the table J, provided with the racks *z*, and the bar T, lugs 17, bars 19, studs 22, and brush 24, combined and arranged to operate substantially as specified.

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