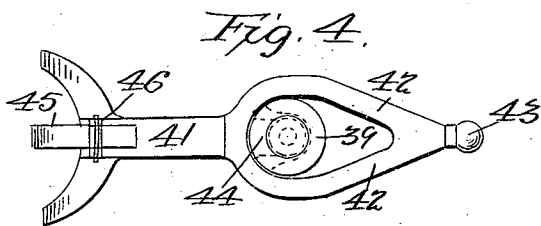
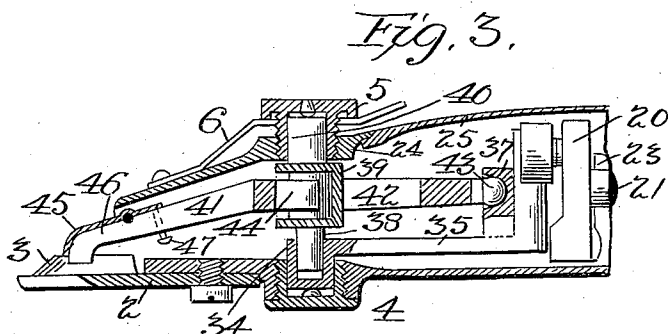
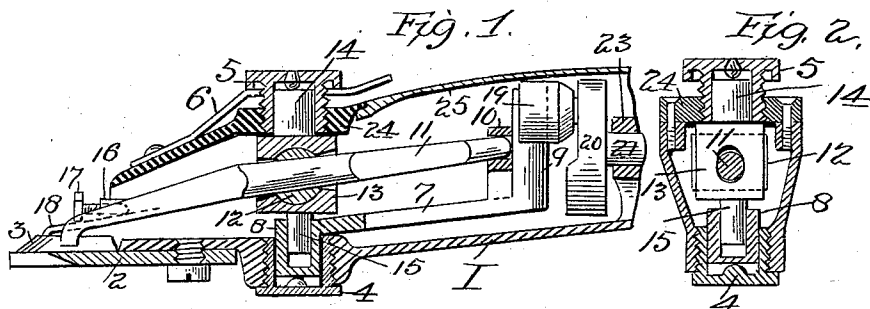


(No Model.)

D. & C. T. SILVER.
SHEEP SHEARING MACHINE.

No. 543,905.

Patented Aug. 6, 1895.



Attest
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UNITED STATES PATENT OFFICE.

DAVID SILVER AND CHARLES THOMAS SILVER, OF TAMWORTH, NEW SOUTH WALES.

SHEEP-SHEARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 543,905, dated August 6, 1895.

Application filed October 7, 1893. Serial No. 487,478. (No model.) Patented in England September 4, 1893, No. 16,599.

To all whom it may concern:

Be it known that we, DAVID SILVER and CHARLES THOMAS SILVER, engineers, subjects of the Queen of Great Britain, residing at Tam-

worth, New South Wales, have invented certain Improvements in Sheep-Shearing Machines, (for which we have obtained a patent in England, No. 16,599, dated September 4, 1893,) of which the following is a specification.

This invention relates to that class of sheep-shearing machines in which a reciprocating cutter and fixed gathering-plate are used in combination with driving-levers operated from a driving-shaft.

In the drawings, Figure 1 is a longitudinal section of one form of the invention. Fig. 2 is a transverse section of the same. Fig. 3 is a longitudinal section of another form of the invention, and Fig. 4 is a detail view of a part of Fig. 3.

Referring to Figs. 1 and 2, 1 is the case of the machine; 2, the comb or gathering-plate; 3, the cutter working over the same; 4, the bushing or foot-step threaded into the casing; 5, the tension-nut and bushing threaded into the upper part of the casing and in line with bushing 4; 6, the tension-locking spring; 7, the main vibrating lever, having a hub or center 8, which works in the bushing 4 and is bored centrally to form a bearing-socket for the lower spindle 15 of the center block.

9 is a vertical slider-piece on the rear end of the lever 7, and 10 is a socket therein in which the rear end of the tension-lever is held pivotally.

12 is a cylindrical or spherical rolling piece, set in the center block 13 in such a way as to be immovable transversely of the machine.

14 is the upper spindle of the center-block 13 on the top of which the spherical point in the tension-nut 5 bears and applies tension.

The driving-lever 7 always vibrates in a fixed horizontal plane and does not move either upward or downward. The center-block as well as being capable of rotary vibratory motion, is also made capable of moving upward and downward along the axis of vibration in order that it may act upon the lever 11, which operates as a third-class lever and apply tension through it to the cutter. The piece 12 can roll in the block 13 so as to

permit adjustment of the lever 11 about the fulcrum 10, and the lever 11 can roll transversely in the piece 12 to settle the fork or claw on the cutter and distribute the tension evenly.

16 is a screw-socket on the forward end of the lever 11 into which the screw 17 is threaded. This screw is so arranged that when it is screwed in its head will bear upon and depress the spring center-finger 18. Its head is made polygonal in order that its contact with the spring 18 may lock it. The vibrator 19 consists of two jaws parallel with each other and formed to grasp the slider 9 on each side and connected pivotally to the disk 20. The slider 9 is cylindrical in section.

21 is the main shaft; 23, the main bearing; 24, the top of casing, and 25, the cover.

The tension action of the parts shown in Figs. 3 and 4 is substantially the same as that shown in Figs. 1 and 2. The parts 34, 35, 36, and 37 correspond with the parts 8, 7, 9, and 10, and the parts 38, 39, and 40 with the parts 15, 13, and 14. The part 39 is formed like a box to receive the tongue-piece 44, which projects rearwardly into it from the shank 41. This shank is bifurcated in the rear part and formed into two pieces 42, which are united in a ball in the rear end, which ball fits a spherical cavity in the part 37.

There is a spherical point on the tongue 44 which fits into a spherical cavity in the under part of the box 39, thereby locking the two levers in working position and allowing a universal movement relative to each other. In this form the pressure of the spring center finger is secured in a modified manner from that of Fig. 1. The spring is made as a first-class lever 45, having its fulcrum at 46 and being acted upon by a screw 47 at the rear end, the said screw passing through the lever 41.

Having now particularly described and explained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

1. In combination in animal shears the cutter, the tension lever, the upper and lower bearings 4 and 5, the driving lever pivoted in the lower socket and the tension device

having an upper portion fitting in the upper socket and a lower portion fitted in a socket formed in the end of the driving lever said driving and tension levers being pivoted together at their rear ends, substantially as described.

2. In combination, the cutter, the tension lever, the tension device comprising the pin with a central box and the upper and lower bearings for said pin, means for adjusting the pin vertically, the said tension lever being in

the form of an open frame embracing the box and having a bearing in said box and the connection between the rear extension of the open frame and the driving lever, substantially as described.

DAVID SILVER.

CHARLES THOMAS SILVER.

Witnesses:

EDWIN FRANCIS HOBDEN,
MICHAEL LAWLER.