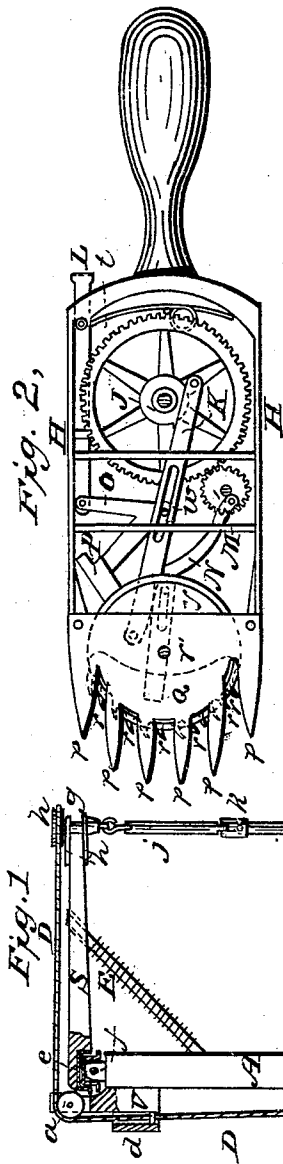
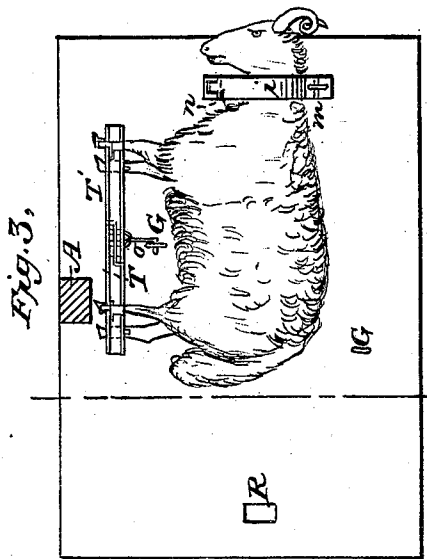
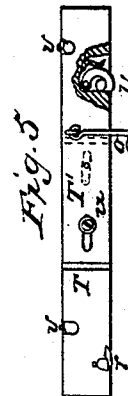
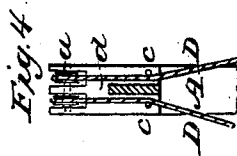


H. A. REID.

Sheep-Shearing Machine.

No. 81,210.

Patented Aug. 18, 1868.



WITNESSES

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United States Patent Office.

HIRAM A. REID, OF BEAVER DAM, WISCONSIN.

Letters Patent No. 81,210, dated August 18, 1868.

IMPROVEMENT IN SHEEP-SHEARING MACHINE.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HIRAM A. REID, of Beaver Dam, in the county of Dodge, and State of Wisconsin, have invented a new and useful Improvement in Sheep-Shearing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side view of the working part of my machine from a section through the platform of the same, taken through the line *x x* of fig. 3.

Figure 2 is a detail bottom view of the shearing-comb, showing the interior mechanism of the same.

Figure 3 is a top view of the platform from a horizontal section through the crane-posts at the line *y y*, fig. 1, showing the manner of fastening the sheep for shearing.

Figure 4 is a detail view of the pulleys at the top of the crane-post.

Figure 5 is a detail view of the leg-stock.

Similar letters of reference indicate like parts.

The object of this invention is to accomplish the shearing of sheep by machinery, and it consists of the mechanism hereinafter set forth.

In the accompanying plate of drawings, the crane-post, with its swinging crane-beam, spring-brace, and flexible shaft, connecting the shearing-comb with the crank-wheel belt, is shown in fig. 1, the general operation of which will be described before setting forth the operative mechanism of the shearing-comb.

The crane-post A rises from the platform B, and fixed firmly thereto. The crane-beam which supports the flexible shaft, the pulley *b*, and the shearing-comb H, is permitted a horizontal movement upon the crane-post, by means of a circular cap affixed in its end, which works with easy contact upon a similar cap pivoted on the reduced end of the crane-post, as shown at *e*, fig. 1. The lower cap is pivoted on the reduced end of the crane-post, as shown at *f*, for the purpose of permitting the crane-beam S to vibrate vertically, so that the shearing-comb, H, may be brought to follow the contour of the sheep in the operation of shearing. The lateral vibration of the crane-beam also enables the shearing-comb to be moved to and fro over the sheep. The mechanism of the shearing-comb is driven by the belt D from the hand-wheel C, the said belt passing through the guide *d*, which latter forms part of the block U, and brought to a vertical position suitable for working on the pulleys *a a* by pins *c c*, as shown.

The crane-beam is braced by a spring-brace, E, the coiled spring of which exerts its tension against the crane-beam end. The upright for the lower end of the said brace is pivoted on the crane-post, and its upper end slides in a mortise in the crane-beam, as indicated by the dotted lines.

The shaft *g* of the pulley *b* revolves in bearings *h h*, affixed to the crane-beam, as shown. The flexible shaft is composed of the rods *j j j*, united by any suitable universal joint, as shown at *k k*.

The lowest rod of this flexible shaft forms the shaft of the toothed wheel J in the box H of the shearing-comb. The wheel J drives the pinion M, which latter operates the hook-plate Q by means of the rod N, which latter is affixed to the plate Q, and pivoted to the pinion M. The said rod is slotted and guided by a pin within the slot, as shown.

The rotation of the pinion moves the hook-plate with a gyratory motion, which is effective in giving the hooks *r, r, r*, &c., of said plate a prehensile movement, which draws the fibres of wool up to the shearing-wheel V. The shearing-wheel is driven by means of a slotted rod, K, which vibrates on the stud-pin *w*, which pin also serves as a pivot for the bell-crank O, which bears the sharpener P, which latter is two plates of steel or mineral bevelled to fit the edge of the shearing-wheel, and held in the recessed head of the bell-crank O.

The sharpening-plates can be actuated against the edge of wheel V at will, for the bell-crank is connected with a rod, L, which extends beyond the box H of the shearing-comb, as shown, where it is conveniently accessible to be pressed upon by the thumb when the hand grasps the handle I.

The front edge of the wheel V and the hooks *r, r, r*, &c., of the hook-plate, operate between the upper

and lower plates $q q'$ and their teeth p, p, p , &c., as shown. The shearing-comb is thus suspended from the crane-beam by the flexible shaft which operates its mechanism, and can be moved freely within any reasonable limit in the operation of shearing sheep.

The sheep rest upon the platform with the feet confined in the leg-stock, which consists of two pieces of wood clamped together by means of a slotted halved joint, and set-screw u . The feet of the sheep are held in notches by means of latch-hooks $v v v$, the said latch-hooks being actuated to close over the said notches, by any suitable springs, as the one shown in fig. 5. A hasp, o , serves to hold the leg-stock attached to platform, by means of staples $G G$, as shown.

The neck-stock consists of the recessed block l , having the recessed piece i hinged thereto at n , on a staple m , passing through a slot in the piece i , which enables the said piece i to hold to the block l by a key or pin. The block l has a projection which fits in mortises $R R$ in the platform, as shown.

I desire to be understood as not limiting myself to the precise manner of suspending the shearing-comb, as above set forth, for it is not imperatively necessary that the crane-beam should have either lateral or vertical vibration, in order to do good work. The above arrangement only provides somewhat more freedom to the movement of the shearing-comb.

Again, the single upright, A , may be replaced by two uprights, or a gallows-frame, so called, and the pulley, belt, and drive-wheel may be arranged in several different and equally effective ways, still involving the principle of suspending the shearing-comb by the same device that communicates motion to its internal machinery.

In shearing sheep with the above machine, the animal is placed on the platform, as shown at fig. 3, and one side sheared by putting the machine in operation, and passing the comb along the surface of the body in the obvious manner. The neck-stock can be shifted to either end of the platform if desired, when the sheep is turned over on the shorn side to present the other for shearing.

This invention is simple, efficient, and desirable, and supplies a want long felt by those interested in wool-growing.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent—

The arrangement of the wheel J , slotted rod K , cutting-wheel V , pinion M , slotted bar N , and hooked plate Q , all operating as described, whereby a rotary motion is imparted to the wheel V , and a prehensive movement given to the hooked teeth r , as herein described, for the purpose specified.

HIRAM A. REID.

Witnesses:

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E. P. GOODHUE.