

UNITED STATES PATENT OFFICE.

CHARLES BURGON AND HARRY BURGON, OF MALIN BRIDGE, NEAR
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ANIMAL-SHEARS.

SPECIFICATION forming part of Letters Patent No. 480,997, dated August 16, 1892.

Application filed March 5, 1892. Serial No. 423,941. (No model.)

To all whom it may concern:

Be it known that we, CHARLES BURGON and HARRY BURGON, sheep-shear manufacturers, residing at Malin Bridge, near Sheffield, in the county of York, England, have invented an Improvement in Apparatus for Shearing or Clipping Sheep or other Animals, of which the following is a specification.

This invention relates to improvements in the instruments for shearing or clipping sheep or other animals, such as are described in the specification of a previous application for Letters Patent in the United States of America, dated the 24th day of April, 1891, Serial No. 390,252; and it has for its principal object to provide improved means for applying and adjusting the pressure of the upper cutters upon the lower cutters and to relieve the axis of the vibrating lever (by which the reciprocating motion is imparted to the upper cutters) as far as possible of all bending strain and to provide a spring-latch for retaining the axis of the swiveling cross-head of said lever in its socket, while permitting it to swivel freely and allowing of its easy insertion and removal.

The invention consists in the construction and combinations of parts hereinafter described, and specifically pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section, Fig. 2 a cross-section, and Fig. 3 a plan with the cover removed, of the machine, while Fig. 4 is a detail view.

The same letters of reference denote like parts in all the figures.

A is the lower stationary cutter-plate, having the usual comb-teeth a , acting as cutters in conjunction with the upper cutters b , which are formed on the upper cutter-plate B and reciprocated over the lower cutter-plate A by the vibrating lever C, which is pivoted on an axis D, formed by a screw-stud fixed in a rocking base-plate E, pivoted on a transverse axis f in the main frame F, the lever C being driven by a crank g , engaging in the grooved cross-head C' of lever C and rotated by a longitudinal shaft passing through the handle of the machine. The vibrating lever C has a

three-pronged cross-head c , which bears on the upper cutter-plate B, the cross-head c having a cylindrical shank c' , which is received in a longitudinal socket formed in the lever C, so that the cross-head can adjust itself as required, to maintain a uniformly-distributed pressure on the cutter-plate B. It is secured in this socket by a spring h , engaging, by its oppositely right-angled ends h' h^2 , in holes in the shank and socket, respectively, the spring lying in a groove in the shank, which permits of its end h^2 being forced inward to disengage it from its hole in the lever C. The cross-head c engages with the upper cutter-plate B by lugs c^3 on the former entering holes in the latter in the usual manner. The vibrating lever C is preferably provided with a circle of balls d within the socket of its axis D to take the upward pressure against the head of the stud, and a conical friction-roller i is mounted at the under side of the lever C, which rolls on a curved path on the tail end of the rocking base-plate E, so as to transmit the upward pressure directly from E to C.

The adjustment whereby the necessary pressure is applied through the vibrating lever C to the cutter-faces consists of a steel plate or stiff spring k , fixed beneath the tail end of plate E and formed with a tubular cross-head k' , connected by a cross-pin k^2 , with the arms l' l'' of a fork bridging over the lever C and provided with a screw-shank l , receiving a thumb-nut m , whose neck works in a socket in the top casing n , on which the head of the nut takes a bearing. In the under side of the head of the nut is a circle of holes m' , in one of which engages the rounded end of a pin o , carried by a spring p , fixed within the casing n , the pin projecting upward through the bearing of the nut-head on the top of the casing. The end of the pin o is rounded and the edges of the holes m' are chamfered off, so that by forcibly turning the nut m the pin o is caused to spring down out of the hole with which it may be engaged. By placing the adjusting-nut on top of the casing and providing a means of locking it, so that it cannot become slack in working, but can be readily turned by the finger and thumb, the adjustment can be made by the same hand of the operator as that in which the machine is

held when in work, so that it is not necessary to interrupt the shearing operation to make such adjustment, which is a very great convenience to the shearer, whose other hand
5 may be occupied in holding the animal being sheared.

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

1. In the herein-described shearing or clipping machine, the combination, with the vibrating lever C and with the rocking base-plate E, carrying the lever-axis D, of spring-plate *k*, forked adjusting-screw *l l'*, and nut
15 *m*, taking a bearing on the top of casing *n* for regulating the pressure of the cutters, substantially as specified.

2. In the herein-described shearing or clipping machine, the combination, with the vibrating lever C and with the rocking base-plate E, carrying the lever-axis D, of spring-plate *k*, forked adjusting-screw *l l'*, and nut
20 *m*, taking a bearing on the top of casing *n*,
25 and of the means for locking the adjusting-

nut, consisting of the spring-pin *o p*, mounted in casing *n* and adapted to engage with a circle of holes *m'* in the head of the nut *m*, the end of the pin being rounded, so as to be easily forced out of engagement, as specified. 30

3. In the herein-described shearing or clipping machine, the combination, with the vibrating lever C and with the rocking base-plate E, carrying the lever-axis D, and with the mechanism for adjusting the pressure of
35 said lever, as described, of the conical friction-roller *i*, mounted in the tail end of lever C and bearing on the tail end of plate E for transferring the upward pressure directly from E to C without causing a bending strain
40 of the axis D, as specified.

Dated this 11th day of February, 1892.

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Witnesses:

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