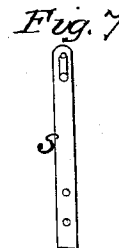
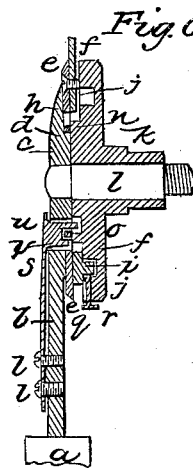
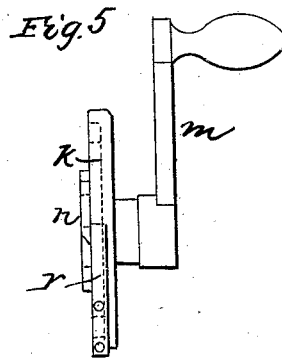
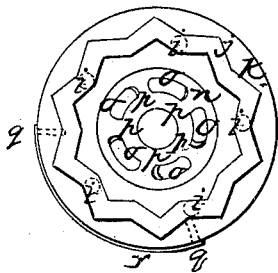
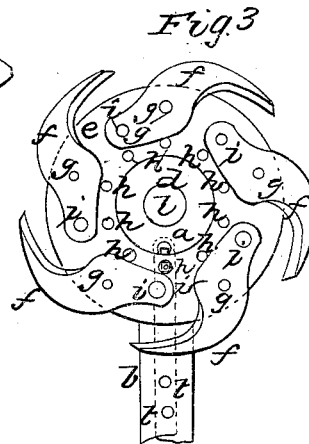
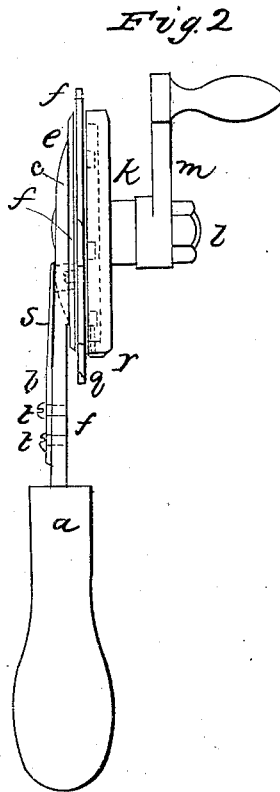
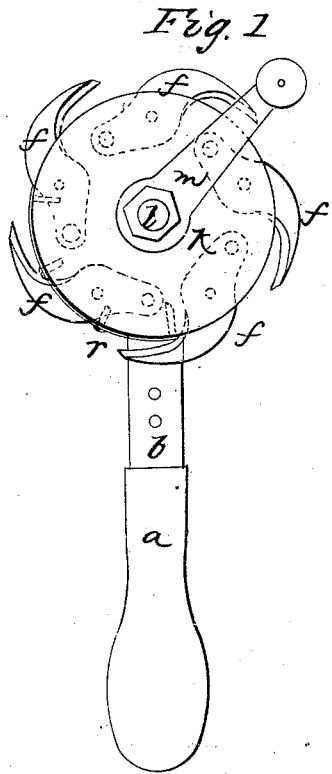


C. W. EMERY.  
Animal Shears.

No. 45,821.

Patented Jan. 10, 1865.



WITNESSES  
Chas. W. Hawkes  
M. M. Hawkes.

INVENTOR  
Chas. W. Emery.

# UNITED STATES PATENT OFFICE.

CHARLES W. EMERY, OF DORCHESTER, MASSACHUSETTS.

## MACHINE FOR CLIPPING HAIR OR WOOL FROM ANIMALS.

Specification forming part of Letters Patent No. 45,821, dated January 10, 1865.

*To all whom it may concern:*

Be it known that I, CHARLES W. EMERY, of Dorchester, in the county of Norfolk and Commonwealth of Massachusetts, have invented certain new and useful Improvements on a Machine for Clipping the Hair or Wool on Animals; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a plan. Fig. 2 is a side view. Fig. 3 is an inside view, showing the shear-blades, the circular cutting-plate, and the spring-catch for holding the plate. Figs. 4 and 5 represent the undulating path-cam, with slide-pins attached thereto. Fig. 6 is a section of the several parts, and Fig. 7 is a plan of the spring-catch.

Similar letters of reference in the several figures indicate corresponding parts.

The object of my invention is the production of a machine by means of which the hair or wool on animals may be expeditiously and uniformly clipped, thus saving a great amount of the labor required for such purpose when performed in the ordinary way.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawings *a* indicates the handle, attached to the staff *b*, by which the machine is held in its required position. The head of the staff at *c* is made in a circular form, broad and thin, and faced off on the upper side, leaving a circular projection or hub, *d*, around its center, and on this hub a circular cutting-plate, *e*, is fitted to revolve, as represented in Figs. 3 and 6. The outer edge of this circular cutting-plate is beveled off on the under side, forming a sharp cutting-edge all around on the upper side. A series of shear-blades, *f*, are attached to the cutting-plate by a pivot, *g*, on which they are made to vibrate, similar to the blade of a pair of shears, with their cutting-edges toward the cutting-edge of the circular cutting-plate. Inside of the shear-blades and near the hub *d* there is a series of holes, *h*, equidistant, made through the circular cutting-plate, two to every shear-blade. On the upper side of each shear-blade, back of

the pivot, there is a small stud or roll, *i*, attached thereto, and fitted to work in an undulating groove or path, *j*, formed in the cam *k*. This cam is made in a circular form and is fitted to revolve on a stud, *l*, set in the head of the staff in the center of the hub *d*, and has an undulating groove or path, *j*, cut in the under side, of a sufficient width and depth to receive the stud or roll *i*, and may be set in motion by means of a crank, *m*, or gears, attached to the hub of the cam. Around the center of the face of this cam and inside of the path *j* there is a circular projection, *n*, the height of which corresponds with the thickness of the shear-blades, and in the face of this projection there is a series of channels, *o*, equidistant from the center and all of an equal length and an equal space, *p*, between them, and each channel is chamfered off at the rear end to enable the prong of the spring-catch, hereinafter mentioned, to slide out freely. There are two slide-pins, *q q*, fitted to slide loosely in holes made in the periphery of the cam. These pins point toward the center of the cam and are held in position by a spring, *r*, attached to the periphery of the cam or any other convenient part. The point of these pins extend into the path *j* of the cam a short distance, for the purpose of obstructing the passage of the stud or roll *i* sufficient to turn the cutting-plate one degree. There is a spring-catch, *s*, attached by screws *t t* to the under side of the staff *b*. This spring-catch has two prongs, *u* and *v*, which extend through a hole in the head of the staff *c*. The prong *u*, being longer, extends through the hub *d* of the staff and into the channel *o*, formed in the circular projection on the cam. The shorter prong *v* is a little back of the former, and extends through the head of the staff and into one of the holes *h* in the cutting-plate, thereby locking the plate to prevent it from revolving while the cut is being performed.

Operation: This machine is designed to be held in one hand by the handle *a*; then by turning the crank *m*, with the other hand, the cam *k*, is made to revolve, and as the studs or rolls *i* on the shear-blades are actuated by playing in the undulating path *j* of the cam, the points or cutting-edge of the shear-blades are made to move to and from the cutting-edge of the cutting-plate *e*, and at every vibration the cutting-edge of the shear-blades

shuts down by the cutting-edge of the circular cutting-plate, thus producing a cut similar to that of a pair of shears. When the shear-blades are open and the cutting-plate turned to its proper position, the short prong *v* of the spring-catch enters one of the holes *h* in the cutting-plate and locks the plate and prevents it from revolving during the time the blades are shutting and opening. While the cutting-plate thus remains at rest, the long prong *u* of the spring catch is in one of the channels *o*, and as the cam continues to revolve the rear end of the channel where it is beveled off comes in contact with the long prong *u* and causes it to slide up onto the space *p*, between the channels, thereby withdrawing the short prong *v* from the hole *h* in the plate, and at this point one of the slide-pins *q*, extending into the path of the cam, strikes one of the studs or rolls *i* on the shear-blades, and causes the cutting-plate to revolve one degree. Then the long prong *u*, immediately drops into the next channel *o* and the short prong *v* drops into the next hole *h* in the plate and prevents it from revolving as before. As soon as the cutting-plate becomes locked, the stud or roll *i* presses the slide-pin *q* back as it passes, and allows the cam to

revolve freely, without the plate, to perform the next cut, and so on alternately through every vibration of the shear-blades.

By using this machine the hair or wool may be expeditiously and uniformly clipped over the entire surface of the animal.

Having thus fully described the construction and operation of my improved clipping-machine, I will now proceed to point out the parts which I claim as my invention and desire to secure by Letters Patent—

1. A series of shear-blades, attached by pivots to a circular cutting-plate, in combination with a circular undulating path-cam, formed in such a manner as to give a vibratory motion to the shear-blades, substantially in the manner and for the purpose herein described.

2. The device herein described for rotating the circular cutting-plate, and locking and unlocking it at proper intervals, so that it may remain at rest while the cut is being performed and again revolve while the blades are open, substantially as herein set forth.

CHAS. W. EMERY.

Witnesses:

CHAS. W. HAWKES,  
M. M. HAWKES.