(No Model.)

N. L. KING.

ANIMAL SHEARS.

No. 244,810. Patented July 26, 1881.

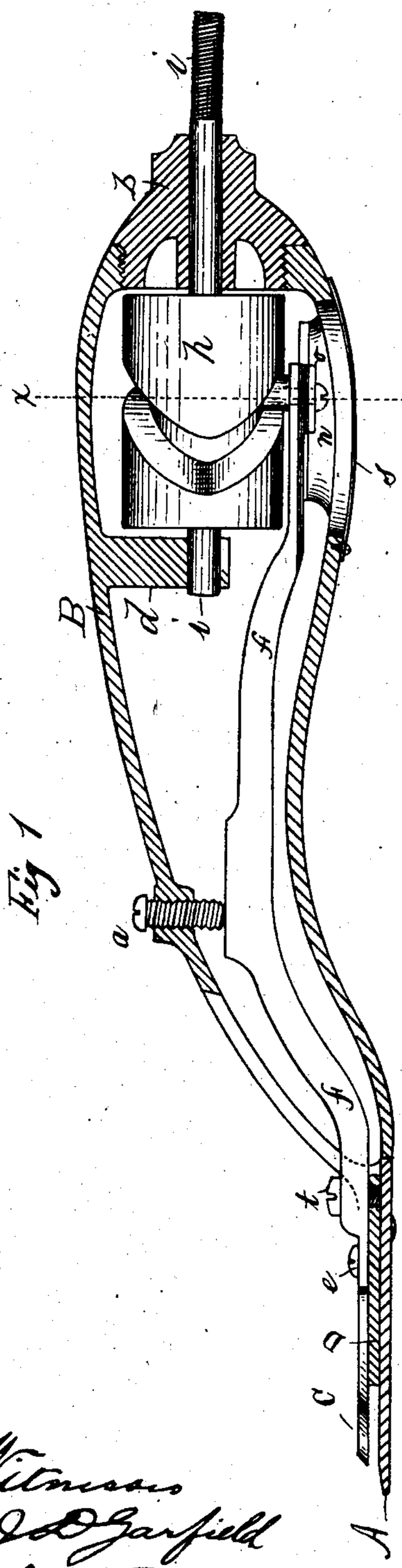

Fig 1

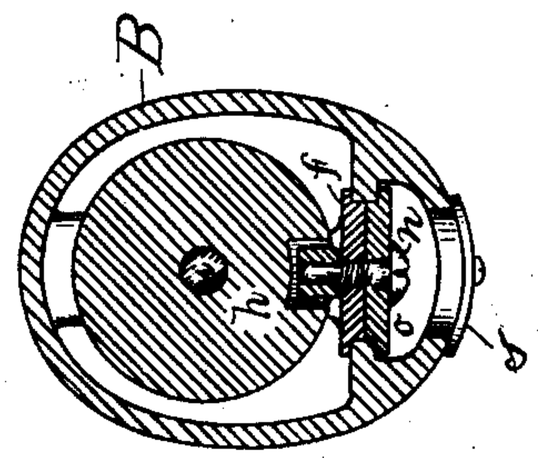

Fig 3

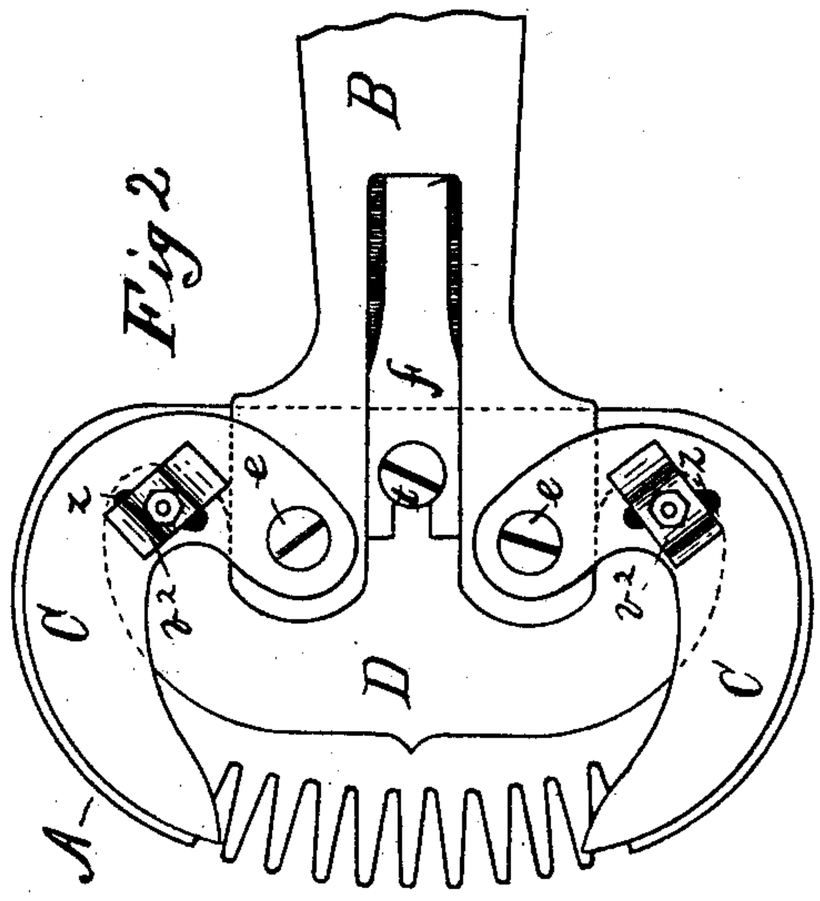

Fig 2

Witnesses
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UNITED STATES PATENT OFFICE.

NATHAN L. KING, OF CATSKILL, NEW YORK.

ANIMAL-SHEARS.

SPECIFICATION forming part of Letters Patent No. 244,810, dated July 26, 1881.

Application filed April 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, NATHAN L. KING, a citizen of the United States, residing at Catskill, in the county of Greene and State of New York, have invented new and useful Improvements in Shearing-Machines, of which the following is a specification.

This invention relates to the construction of an instrument or machine to be used for shearing and clipping animals, and is in the nature of an improvement upon my Patent of December 18, 1877, No. 198,303, the object being to hang the cutter-blades of the machine so that they will have an easier motion, and to increase the efficiency of the machine by combining with it certain devices, as hereinafter described, for producing the requisite reciprocating motion of the parts thereof which govern the motion of its cutting devices, whereby much greater rapidity of action is obtained.

In the drawings, forming part of this specification, Figure 1 is a side elevation, partly in section, of the shearing-machine embodying my improvements. Fig. 2 is a plan view of the shearing parts of the machine. Fig. 3 is a transverse section through the line *x x*, Fig. 1.

In the drawings, B is the handle. A is the toothed head attached to the handle. C C are two curved cutter-blades pivoted to handle B. D is a curved-edged plate, with cutting-edges, secured to bar *f*. *e* are screw-studs in the end of handle B, by which the ends of the cutter-blades C are pivoted to said handle. v^2 v^2 are studs in plate D, passing up through slots in the cutter-blades C C, as shown, and having nuts on their ends, and between the latter and said blades the spring-washers *z z*. *f* is a longitudinally-reciprocating bar in handle B. *a* is a pressure-screw. *d* is a shaft-support in said handle. *b* is a shaft-nut in the end of handle B. *i* is a shaft. *h* is a cam fixed on shaft *i*. *o* is a guide-plate. *n* is a screw-stud passing through plate *o* and bar *f*, its end entering the groove in cam *h*, and having the roller *v* thereon. *s* is a cover on the under side of handle B.

Like letters refer to like parts in the several figures.

The handle B of the machine is metallic, and made hollow to receive parts of the instrument which operate the cutting devices, and has the toothed head A secured thereto, as in my said patent. In the improved construction herein shown, however, the two curved cutter-blades C C are pivoted to the handle B, instead of to the head A, as in said patent, and the rear ends of said blades are pivoted to handle B by the screw-studs *e e*. This change in the manner of pivoting and operating said cutter-blades provides for dispensing with the slots in plate D of said patent, in which studs on the cutter-blades operated to give motion to the latter as said plate was moved back and forth, and the said studs are replaced herein with studs v^2, secured in plate D, projecting up through slots in said blades, and provided with nuts and spring-washers *z z*, whereby said blades can be adjusted to operate better in relation to the sharp edge of plate D, and the rapid movements of said cutter-blades are easily produced. The bar *f*, whose movements longitudinally in handle B are produced by the revolution of cam *h*, is secured to plate D by screw *t*.

Within handle B, under cam *h*, are formed two parallel ways, as seen in Fig. 3, to which the rear end of bar *f* is secured, and by which it is kept in line. The rear end of said lever lying on the top of said ways, and the guide-plate *o* lying up against the under side thereof, are each half-grooved, as shown, and together form a groove on each edge in which the edges of said ways project, and the end of said bar and said plate *o* are secured in said position by the screw-stud *n*, whose end is left smooth, and has a friction-roller, *v*, upon it, and said end of screw *n* with roller *v* enter the groove around cam *h*, as shown.

The shaft-support *d* in handle B is properly perforated to receive the end of shaft *i*, upon which cam *h* is fixed, and said shaft projects beyond the end of said handle and is screw-threaded, as shown, to provide for the attachment thereto of any convenient device for rotating it and cam *h*. The rear end of shaft *i* is supported by a perforated nut, *b*, which is screwed into the handle, as shown.

A pressure-screw, *a*, is placed in the upper side of handle B, over bar *f*, by which the proper pressure of plate D against the face of the head A is obtained.

Reciprocating longitudinal movements of bar *f* operate to produce the same results in the plate D, cutter-blades C, and head A, in

shearing and clipping animals, as are described in said patent, and said reciprocating movements of bar *f* are produced by the rotary motion of cam *h*, with which said bar is connected by stud *n*, the rear end of said bar being steadily guided, as heretofore described, by the ways in the handle to which it is secured.

A removable cover, *s*, is secured upon the under side of handle B, covering an opening through which access is had to the parts within said handle.

What I claim as my invention is—

1. The combination, with the handle B, and of the bar *f*, of the plate D, having the studs v^2 set therein and secured to said bar, and of the curved slotted cutter-blades C C, pivoted to said handle, substantially as set forth.

2. In combination, handle B, bar *f*, plate D, provided with the studs v^2, the curved slotted cutter-blades C C, and cam *h*, hung upon shaft *i*, within said handle, substantially as set forth.

NATHAN L. KING.

Witnesses:

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