

P Anderson.
Sheep Shearing Mach.
N^o 61700. Patented Feb. 5. 1867.

Fig. 1.

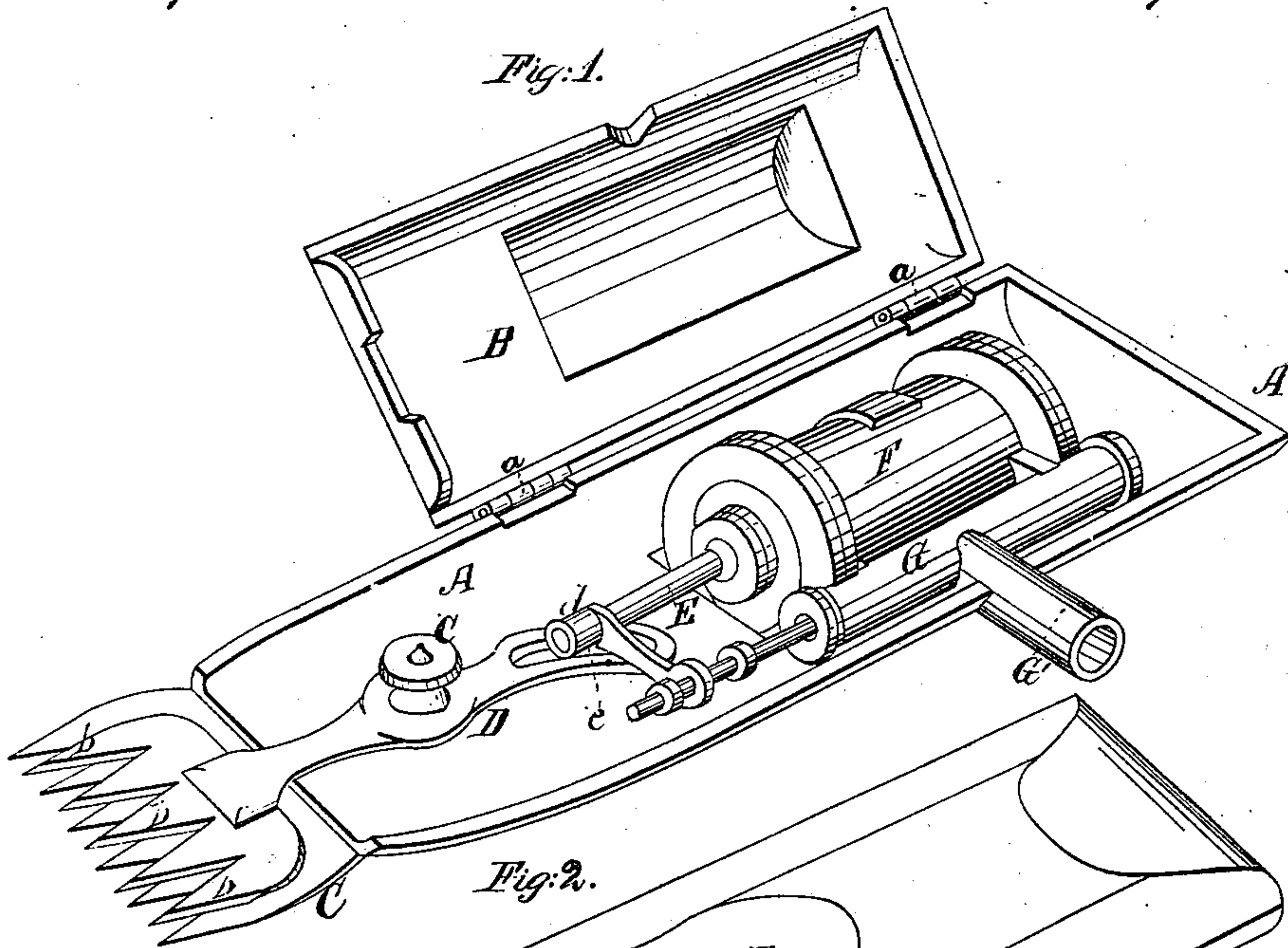


Fig. 2.

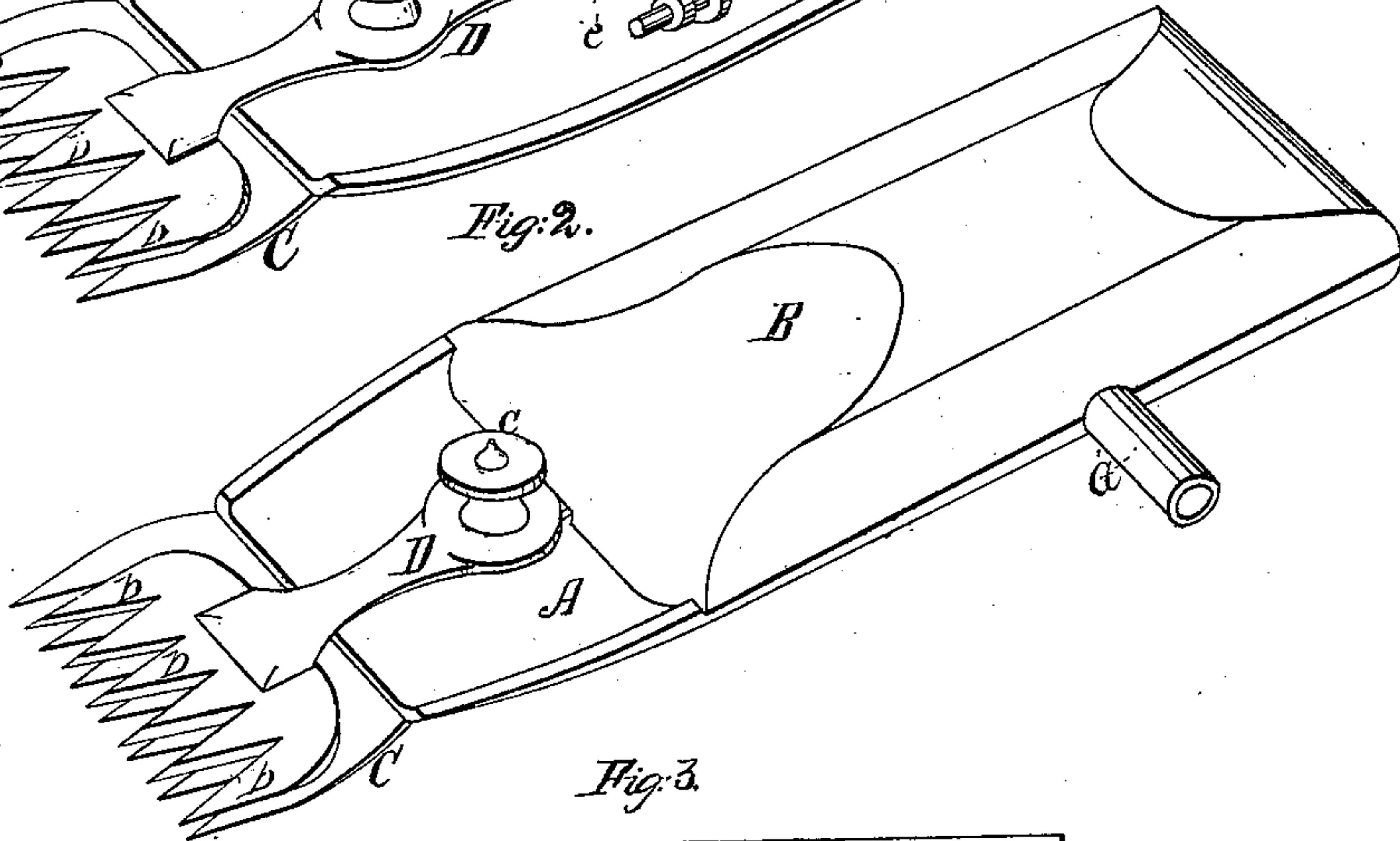


Fig. 3.

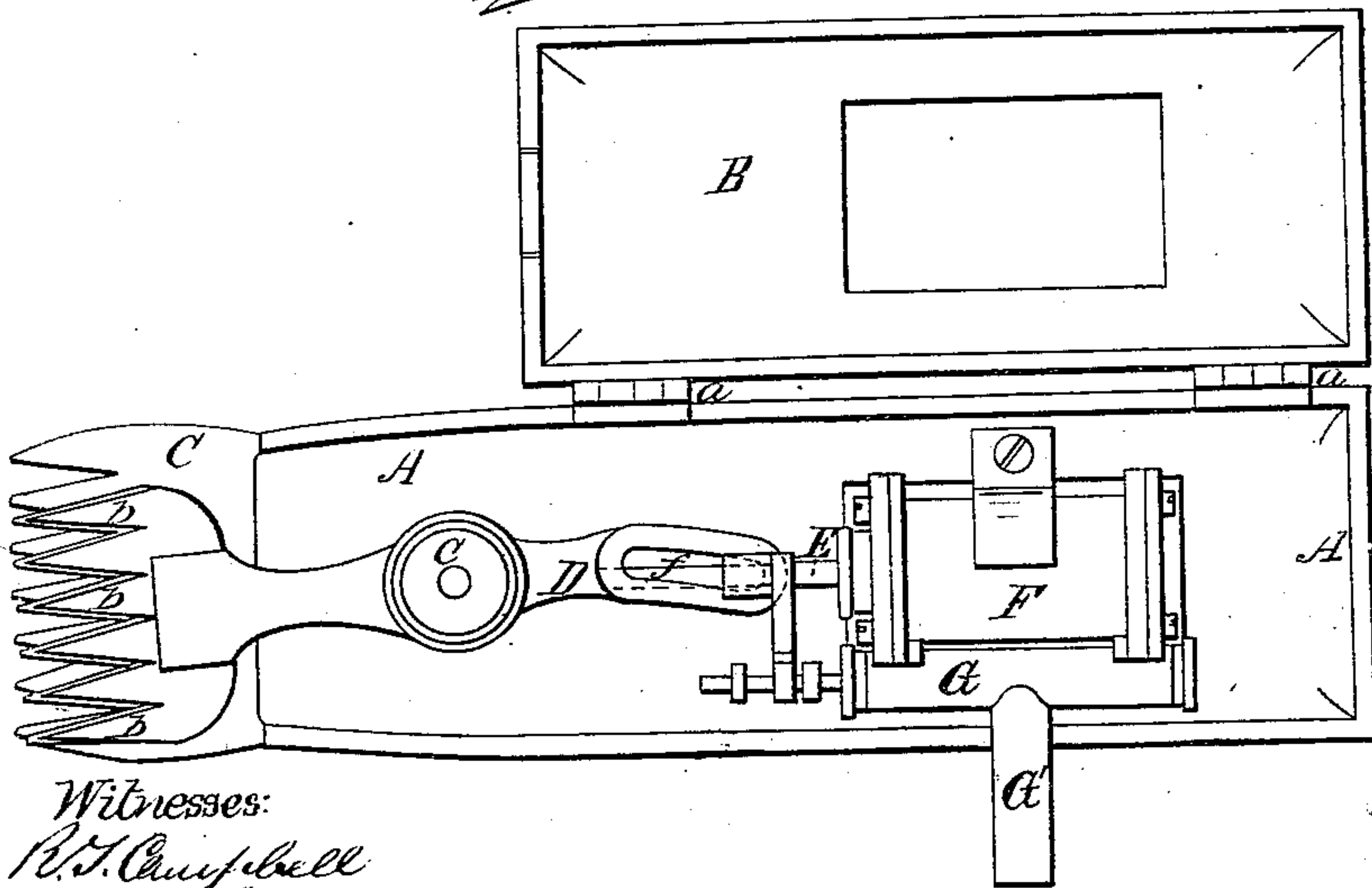
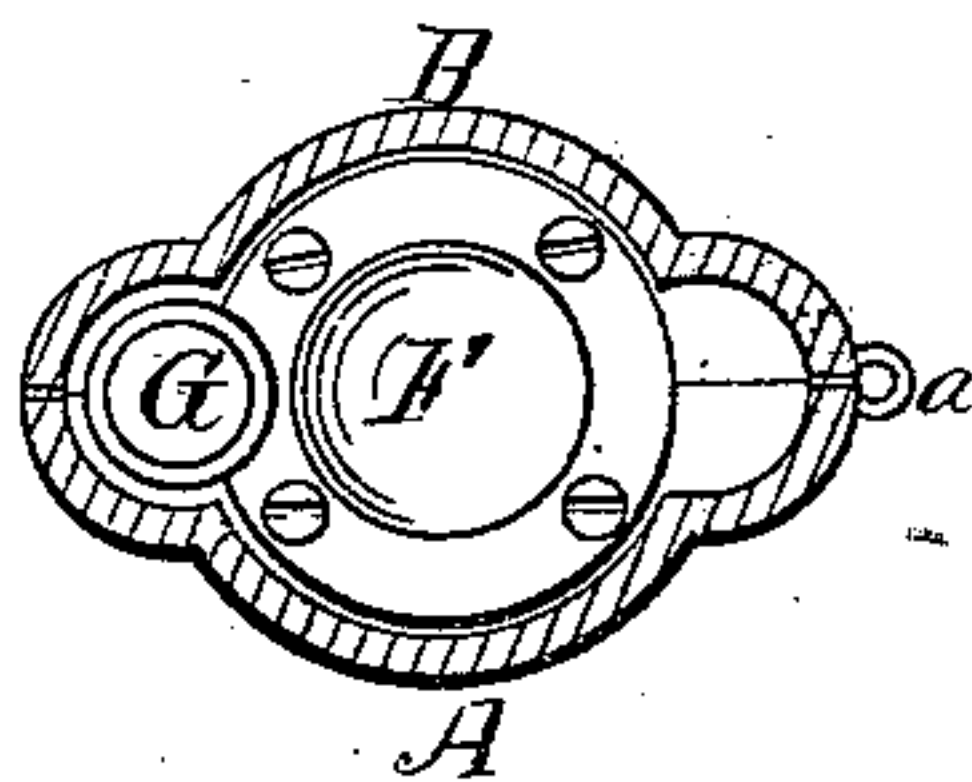


Fig. 4.



Witnesses:
R. S. Campbell
E. W. Schaefer

Inventor:
P. Anderson
by
M. W. Penick & Co.

UNITED STATES PATENT OFFICE.

PHILANDER ANDERSON, OF KALAMAZOO, MICHIGAN.

IMPROVEMENT IN SHEEP-SHEARING INSTRUMENTS.

Specification forming part of Letters Patent No. 61,700, dated February 5, 1867.

To all whom it may concern:

Be it known that I, PHILANDER ANDERSON, of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented an Improved Sheep-Shears; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the sheep-shears with the cover open. Fig. 2 is a similar view, with the cover closed. Fig. 3 is a top view with the cover open. Fig. 4 is a cross-section through the handle of the shears.

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

This invention relates to certain novel improvements on sheep-shears, the cutters of which have heretofore been operated by means of an engine, receiving steam from a boiler through a flexible pipe.

The use of steam for this purpose is found to be very objectionable, principally on account of the heat which is imparted to the instrument, rendering it necessary to have the engine on the end of a handle to protect the hands of the operator, which arrangement renders the shears more difficult to control with accuracy, and exposes the engine to injury and derangement.

The main object of my invention is to obviate the objections to the use of engines for sheep-shears by employing compressed air or gas instead of steam for operating the engine, as will be hereinafter described.

Another object of my invention is to so construct a sheep-shearing instrument, which is operated by an engine, which is inclosed within that portion of the instrument held in the hand, as will be hereinafter described.

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

A B represent two rectangular concavo-convex plates, which are hinged together at *a*, so as to constitute a handle for the shears, and contain an engine, as shown in Figs. 1 and 3. The bottom plate A is made somewhat larger than the top or cover B, and on the forward end of plate A a steel plate, C, is suitably secured, having a number of V-shaped cutting-teeth formed on it.

Above the plate C, and vibrating freely thereon, are the V-shaped shear-cutters *bb*, which are formed on the forward end of a lever, D. This lever D is pivoted to plate A in front of the cover B by means of a thumb-screw, *c*, which is tapped into plate A, so that by setting up this screw the cutting-edges of the fixed and stationary cutters or shears can be tightened at pleasure. The set-screw *c* will also admit of the removal of the lever D when it is desired to sharpen the cutting-edges.

The rear end of lever D is constructed with a curved slot through it, through which passes a slide, *e*, which projects from the cross-head *d* of the piston-rod E, and enters a longitudinal slot, *f*, in the plate A. By the reciprocating movement of the cross-head the lever D receives a vibrating motion laterally.

The cylinder F receives air or gas for moving the piston-rod from a valve-chamber, G, to which a pipe, G', is secured, which projects from the handle and receives a flexible tube upon its end.

The engine may be constructed in the manner shown in the drawings, or in any other suitable manner which will admit of its being inclosed or incased, as described.

That portion of the case or handle which receives the engine-cylinder F is made with recesses, as shown in Figs. 1 and 4.

The handle may be made cylindrical, elliptical, square, or of any other suitable shape.

Having thus applied the engine which actuates the cutting apparatus within that part of the instrument which is held in the hand, so that the working parts of the engine will not become clogged with wool or other foreign substance, I employ air or gas under pressure for operating the engine, thereby preventing the instrument from becoming heated and unsafe to handle, as it would be if steam was used as the moving agent.

By the application of compressed air to the instrument it will always remain sufficiently cool to be handled; the flexible pipe which connects the engine with a condenser or air-pump will not be injured as it would be by steam; there will be no moisture formed in the engine or upon its surface; the instrument can be grasped very near the cutters, so that it can be conveniently and safely used; and, finally, the use of air, as described, will be

much more convenient and economical than steam.

While I contemplate the use of air under pressure for driving the engine, I do not confine that part of my invention which relates to the inclosing of the engine within the handle of the instrument to the use of air, as by a proper non-conductor of heat applied around the handle steam may be used, however, as is relieved, with less efficiency than air.

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

1. The construction of a portable sheep-shearing instrument, whereby to be enabled to use air under pressure, so as to operate the engine and perform the functions, substantially as herein set forth.

2. The combination and arrangement of the

engine with the case and cutting device, substantially as described.

3. The combination of the cross-head of the piston-rod of the engine directly with the shear-lever D, so that this lever shall receive a vibrating motion from the piston-rod, substantially upon the principle and in the manner as herein set forth.

4. The shear-lever D, pivoted to the plate A by means of an adjusting-screw, C, located outside of the case or handle A B of the instrument, substantially as described.

5. The construction of a handle or case for a pair of sheep-shears of two concavo-convex parts, A B, substantially as described.

PHILANDER ANDERSON.

Witnesses:

R. T. CAMPBELL,
EDM. F. BROWN.