

(No Model.)

C. M. PALMER.
ANIMAL CLIPPER.

No. 432,433.

Patented July 15, 1890.

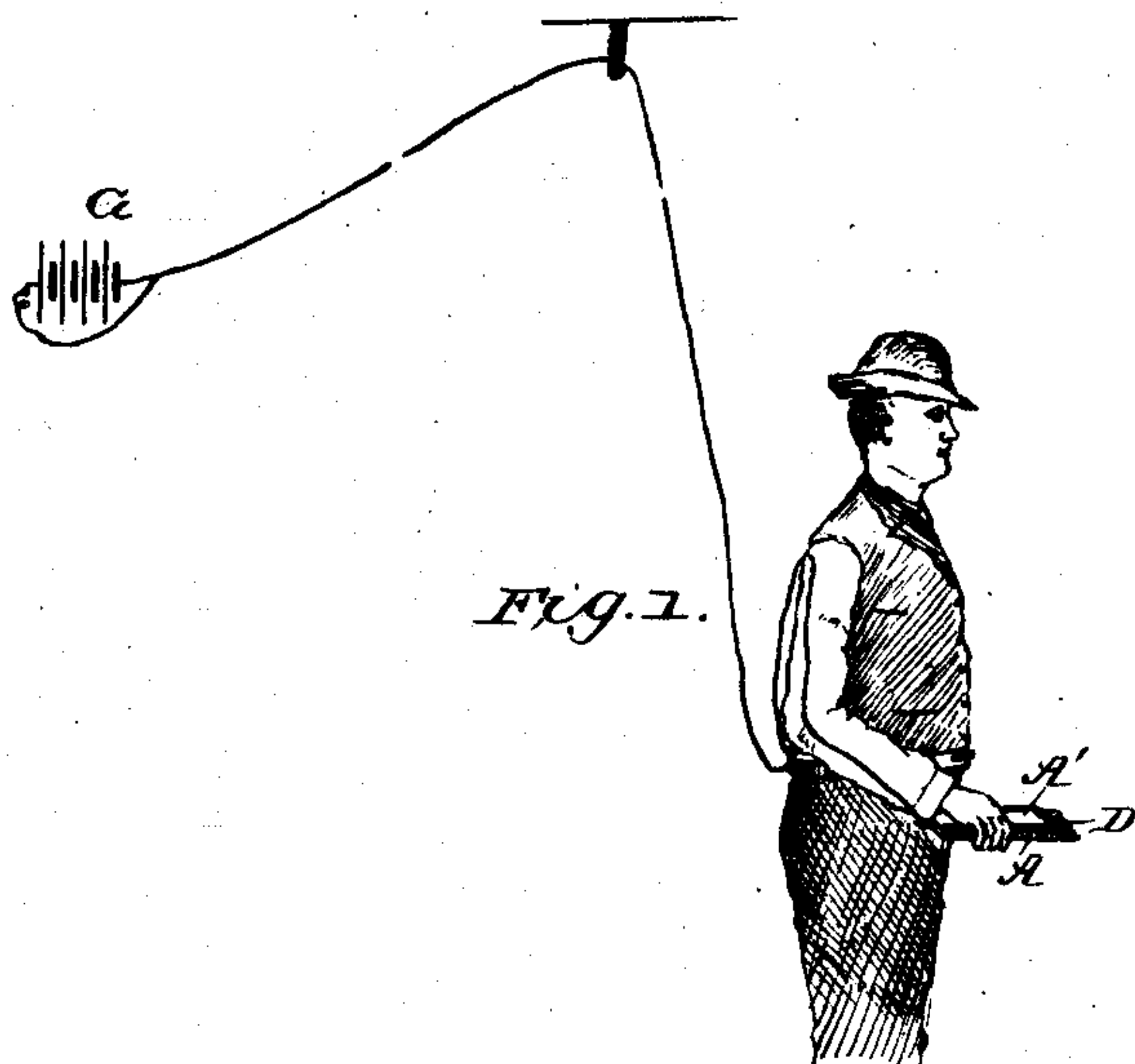


Fig. 1.

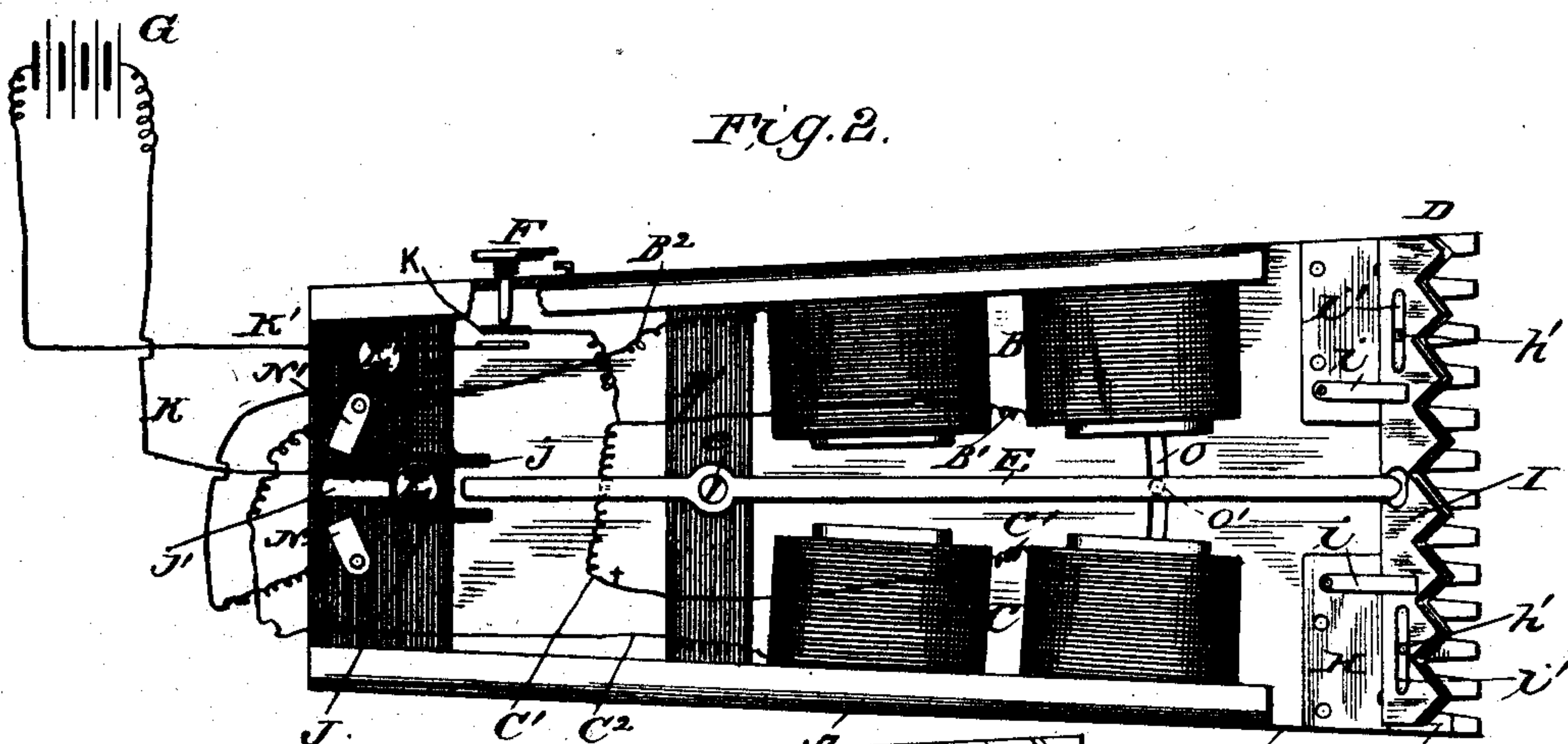


Fig. 2.

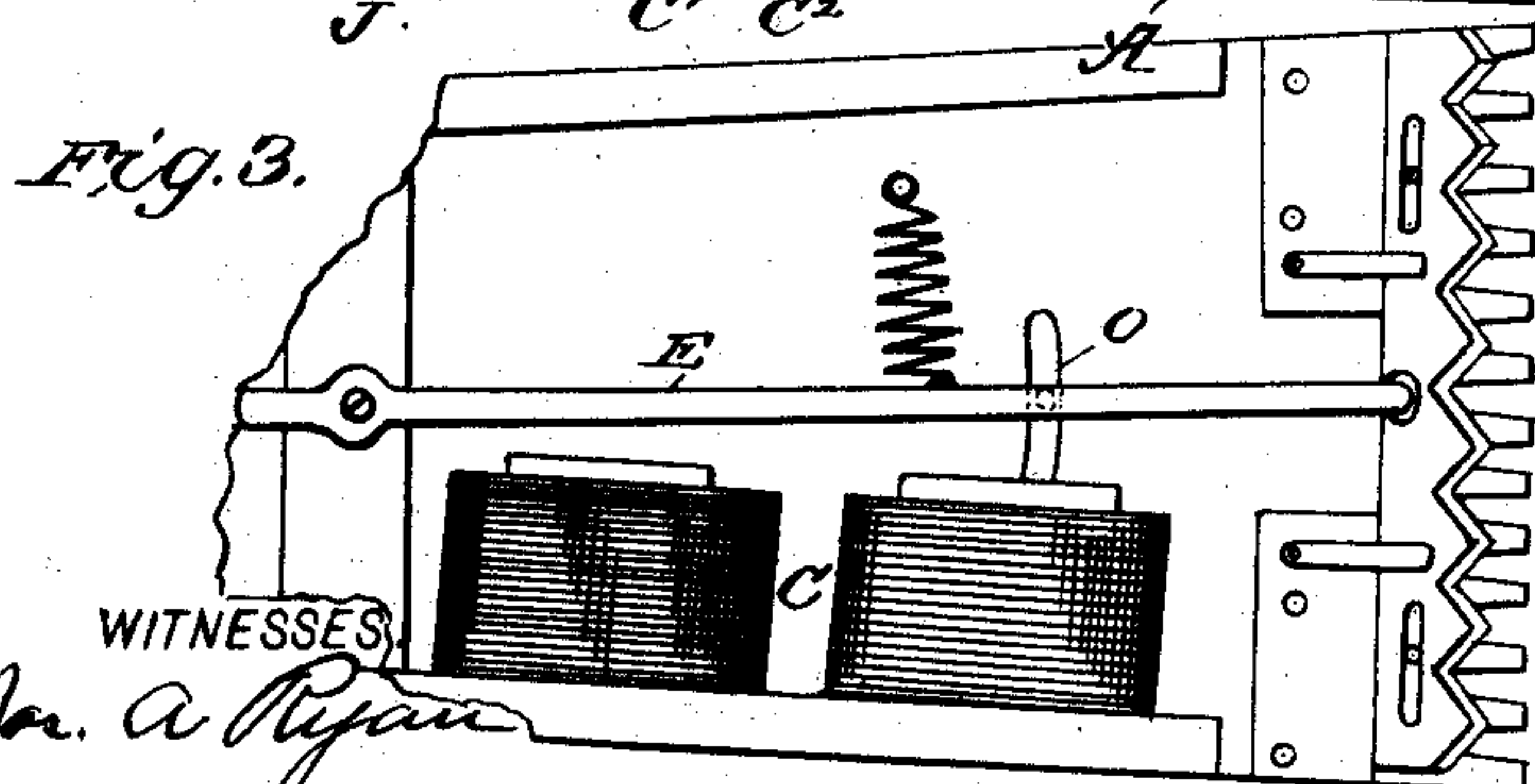
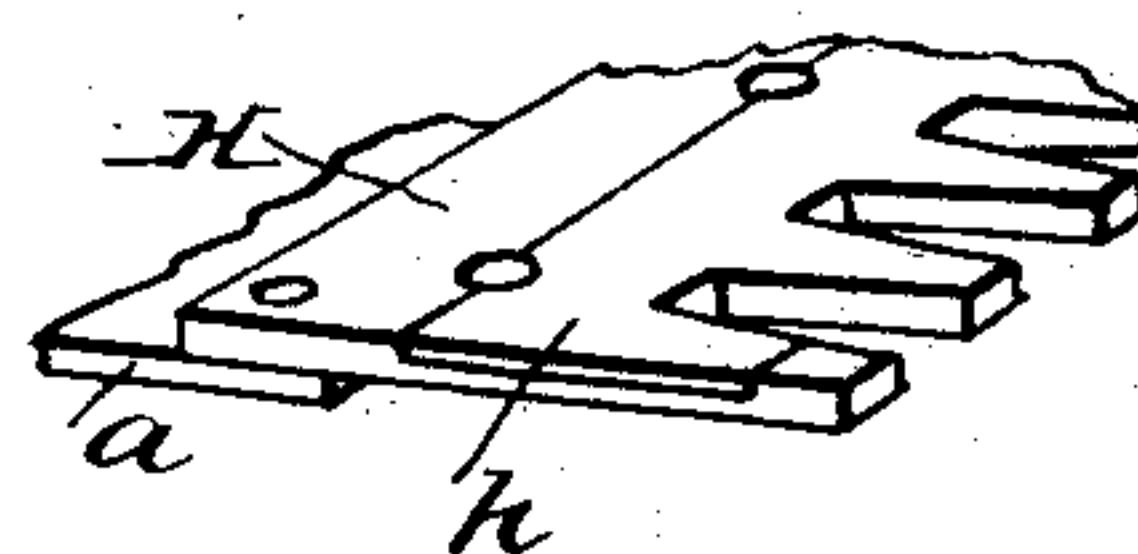


Fig. 3.



WITNESSES

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ANIMAL-CLIPPER.

SPECIFICATION forming part of Letters Patent No. 432,433, dated July 15, 1890.

Application filed January 3, 1890. Serial No. 335,819. (No model.)

To all whom it may concern:

Be it known that I, CHESTER M. PALMER, residing at Lamartine, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Animal-Clippers, of which the following is a specification.

This invention is an improvement in clippers, and especially in animal-clippers—that is to say, devices for clipping the wool or hair of animals, such as sheep, horses, and the like; and the invention consists in the novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 shows the device held ready for use. Fig. 2 is a plan view of the device, the top plate being removed; and Fig. 3 shows a somewhat-different construction.

The improved clipper consists of a suitable case or supporting-frame A, the electro-magnets B and C, the cutting devices D, comprising the guard-plate and the cutter-bar, the vibrating bar E, which operates the cutter-bar and extends between the magnets and is operated thereby, the automatic circuit-closer, the stopping and starting circuit-closer F, and the battery G, all of which will be more fully described.

The case A is preferably formed with a top plate A', which curves down to the front end of the clipper, and the said case is adapted to support the several operating parts of the device and to be conveniently grasped in the hand of the operator.

At the front end of the case I support the guard-plate H, which is fixed to the front extension a of the base-plate of the case and has a removable wear-plate h. On this guard-plate is supported the cutter-bar I, which has the blades or knives and slides longitudinally, being guided by pins h' on the guard-plate entering slots i' in the cutter-bar. Spring-plates i are secured at one end to the guard-plate and press down at their opposite ends on the cutter-bar.

The armature-bar E is pivoted between its ends at e, extends thence forward between the magnets B C, and is alternately attracted by the said magnets, so as to give the bar a vibratory movement, its forward end being

suitably connected with the cutter I, so as to reciprocate the same rapidly in the operation of the device.

By the described construction in connection with a source of electrical supply—such, for instance, as the battery G—the arm is caused to vibrate rapidly and properly operate the reciprocating cutter-bar.

It will be understood that a single magnet might be used to operate the armature-bar E in one direction and a spring be arranged to operate it in the opposite direction, as shown in Fig. 3; but I prefer to employ the two magnets and to arrange the same as shown, so that they will positively operate the vibrating bar in opposite directions. It will be noticed that the magnets act directly on the bar E, which may be constructed to form the armature, or suitable armatures may be secured to such bar, and to a certain extent such constructions may be regarded as equivalents of each other, and such bar E may be properly referred to as the “armature-bar.” The said bar E automatically operates the circuit making and breaking device, to which end I extend the bar E in rear of its pivot e and arrange for engagement by its rear end a forked circuit-closer J, the fork j of which is insulated and receives the end of bar E, and the arm j' of which is connected with the negative wire K, which leads to the battery G, a binding-post L being provided to facilitate such connection. I also provide a binding-post L', to which the positive wire K' is connected, such wire K' connecting with both magnets B and C by uniting the said wire K' with one of the positive wires B' C' of such magnets, which wires B' and C' are united, as shown. The circuit through wires K K' is normally open, a break being provided at k, and a closer F being provided, by which the operator as he grasps the clipper may close the circuit from the battery G. Manifestly this battery G may be of any suitable construction, or any other suitable source of electrical supply might be substituted for the battery, the device being suitably constructed for connection with the wires leading to the electrical supply. Contact-plates N N' are connected, respectively, with the negative wires B² C² of the magnets B C, such plates N N' being arranged for engagement by the

arm j' in its opposite positions. Manifestly the negative wires of both magnets might be connected with each other and the positive wires with the contacts $N N'$, and the wires
 5 $K K'$ be reversed with the same result as in the arrangement shown.

In operation the device is grasped by the hand of the operator, and the wires to the battery are preferably extended up along the
 10 arm of the operator, and then down to a suitable belt around the waist, and thence up to a tension or spring hanger on the ceiling by which to take up the slack, and thence to the battery or other supply, the extension of the
 15 wires up the arm, &c., serving to prevent the wires from becoming entangled and also disposing of such wires, so they will not interfere in any way with the use of the device.

When the current from the battery is on,
 20 the positive wire leads to both magnets $B C$ and the negative wire to the automatic circuit-breaker, and as the bar E is vibrated between the two magnets it opens and closes the circuits by its arm j' striking the con-
 25 tacts, so that the magnets are alternately energized and alternately attract the armature-bar.

Manifestly the automatic circuit-closing mechanism might be varied without departing from some of the broad principles of my
 30 invention. A curved slot may be formed at O through the base-plate of the case, and a pin O' may extend from the armature-bar thereinto to enable the sickle or cutter bar to
 35 be moved to any desired position when the device is not in use, such movement of the cutters being desirable to adjust it to proper position for sharpening.

I claim—

40 1. An animal-clipper comprising a case or frame, a cutter, a vibrating bar arranged to operate the cutter and provided with an ar-

mature, and an electro magnet or magnets by which to operate such armature-bar, substantially as set forth.

2. An animal-clipper comprising a case or frame, a cutter, a vibrating armature-bar connected with and operating the cutter, and electro-magnets arranged on opposite sides of such armature-bar, substantially as set forth.

3. An animal-clipper comprising a case or frame, a cutter, two electro-magnets, a circuit-closer by which such electro-magnets may be alternately energized, and the armature-bar extended between the magnets and
 55 arranged to be alternately operated thereby, such armature-bar being connected with the cutter and having an extension or portion by which to operate the circuit-closer, all substantially as set forth.

4. An animal-clipper having a case or frame, a reciprocating cutter, a pair of electro-magnets, circuit-closing devices by which the circuits of such magnets may be closed, and an armature-bar pivoted between its ends, having its front end arranged to operate the reciprocating cutter and its rear end arranged to operate the circuit-closer, the said armature-bar being extended between the magnets, substantially as set forth.

5. In an animal-clipper, substantially as described, the combination of the case or frame, the cutter, the vibrating armature-bar arranged to operate such cutter, the electro-magnets arranged on opposite sides of such
 75 armature-bar and adapted to operate the same, and the electrical connecting and circuit making and breaking devices, substantially as set forth.

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Witnesses:

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