

(No Model.)

J. M. BURTON.
ELECTRIC PROD POLE.

No. 427,549.

Patented May 13, 1890.

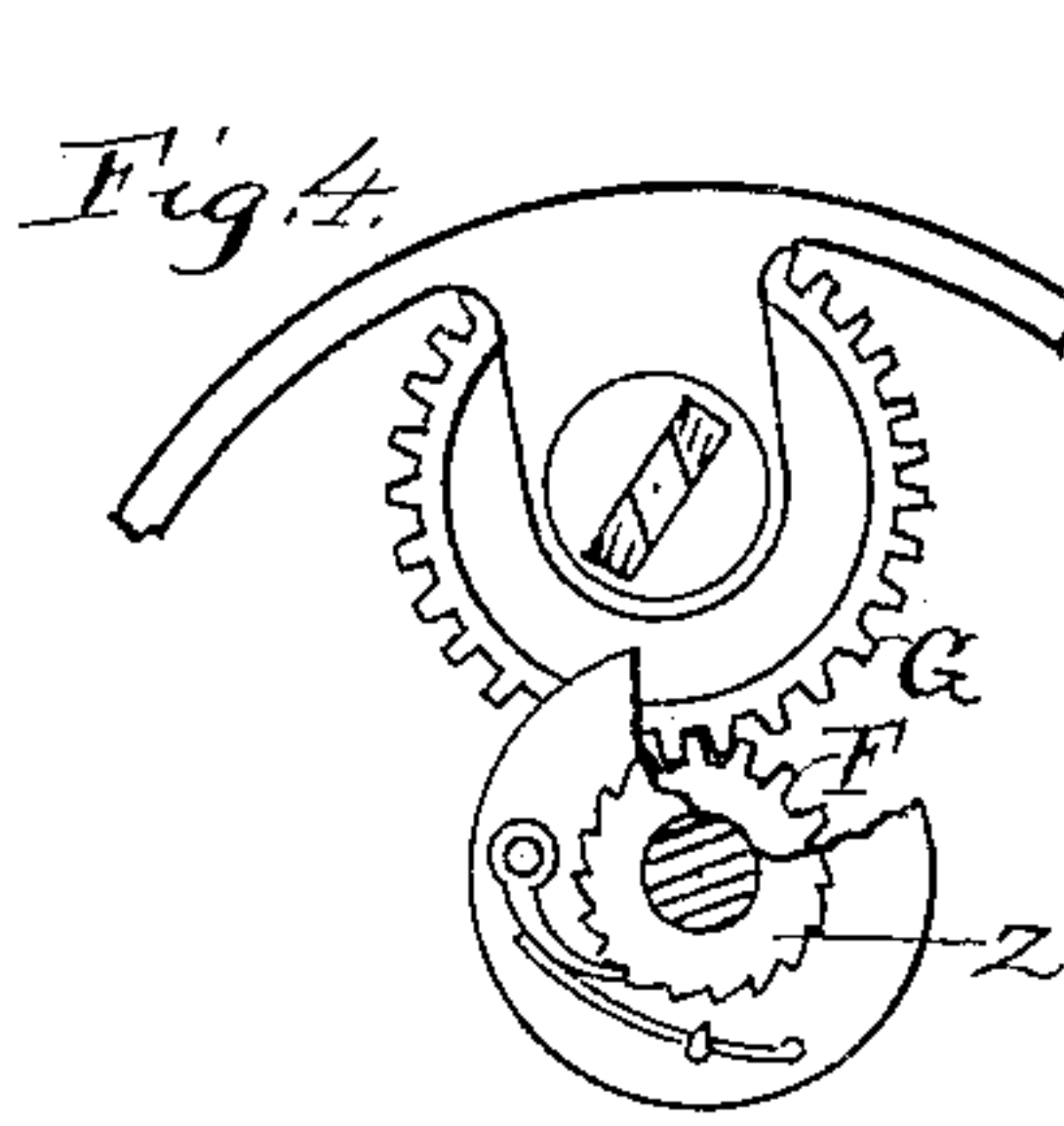
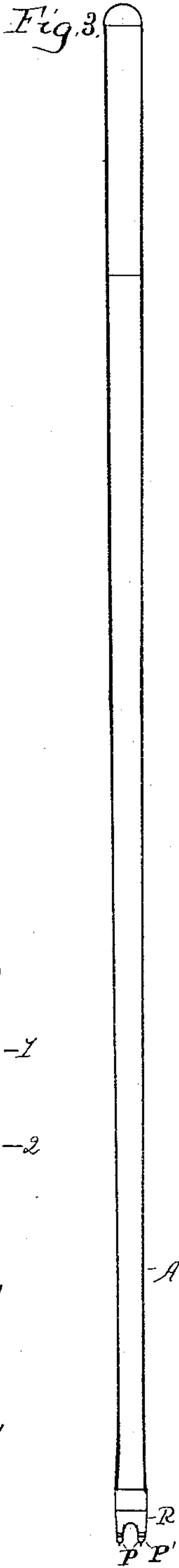
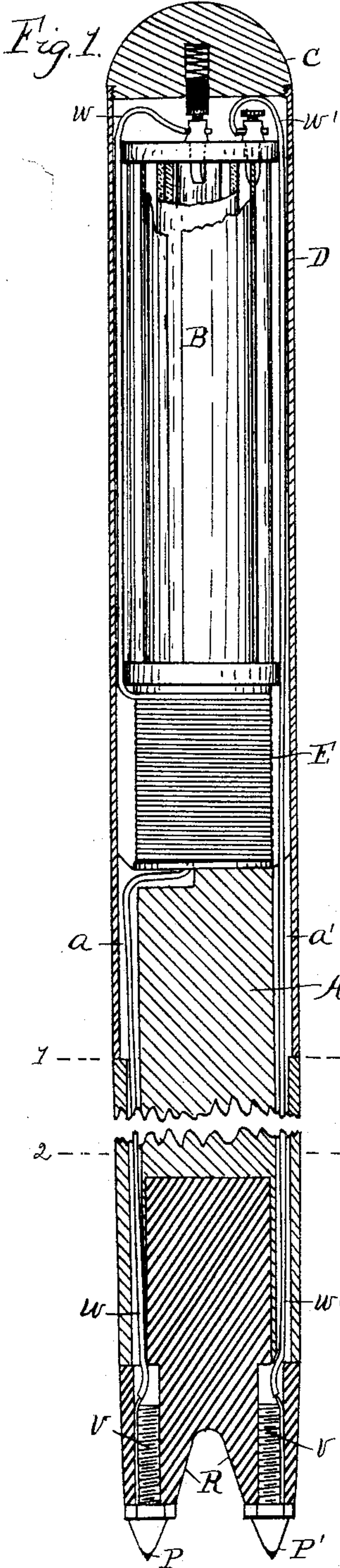


Fig. 5.

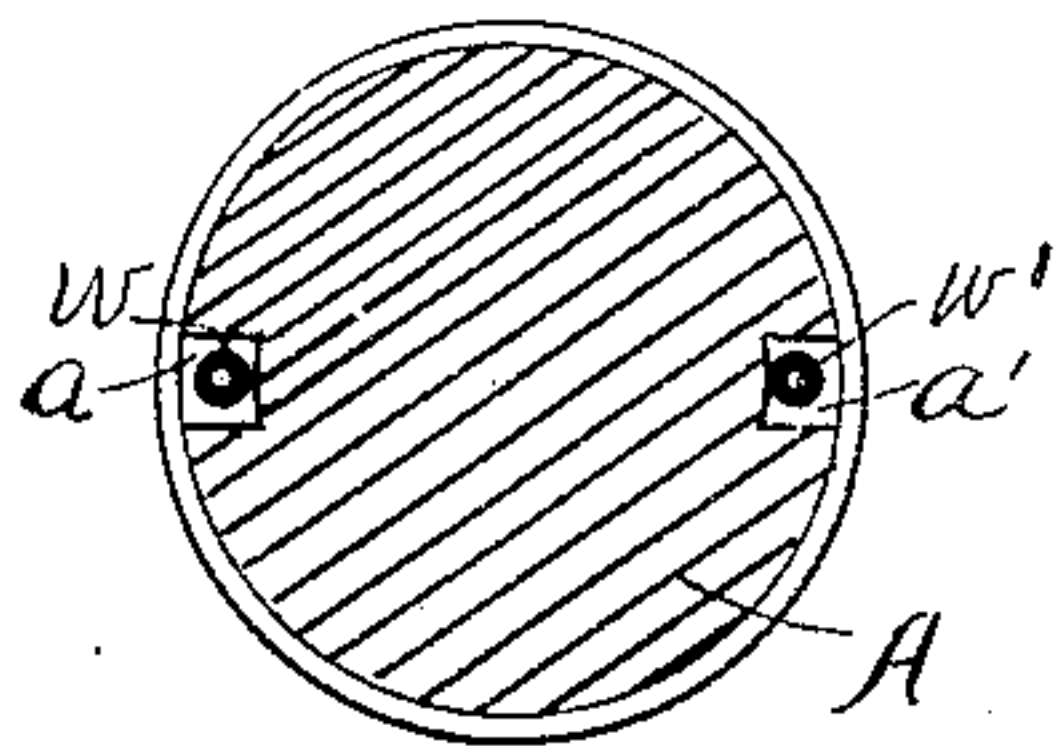


Fig. 6.

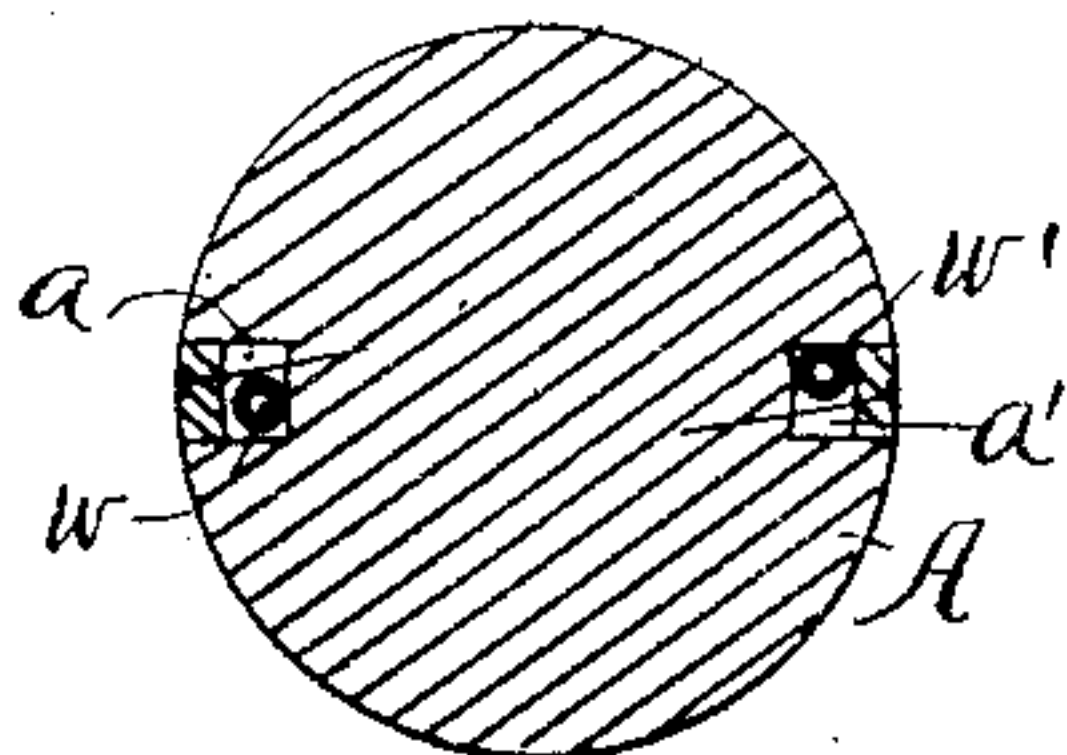
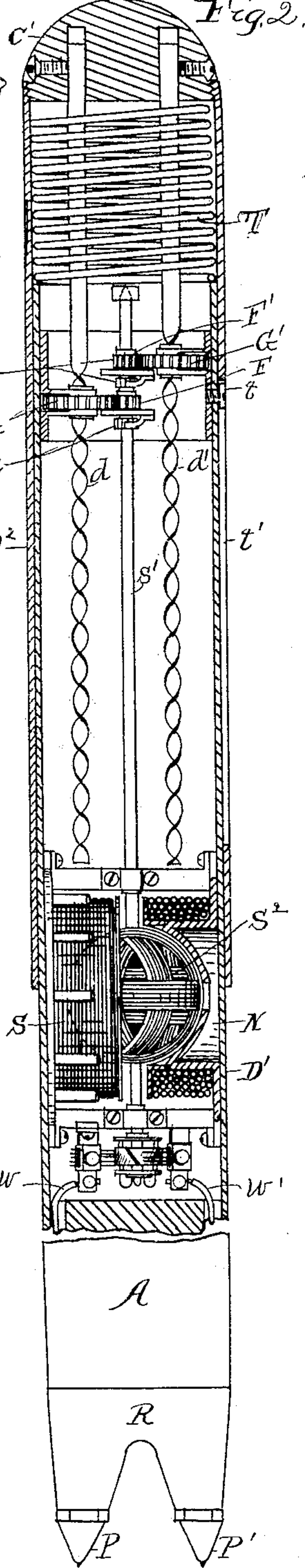
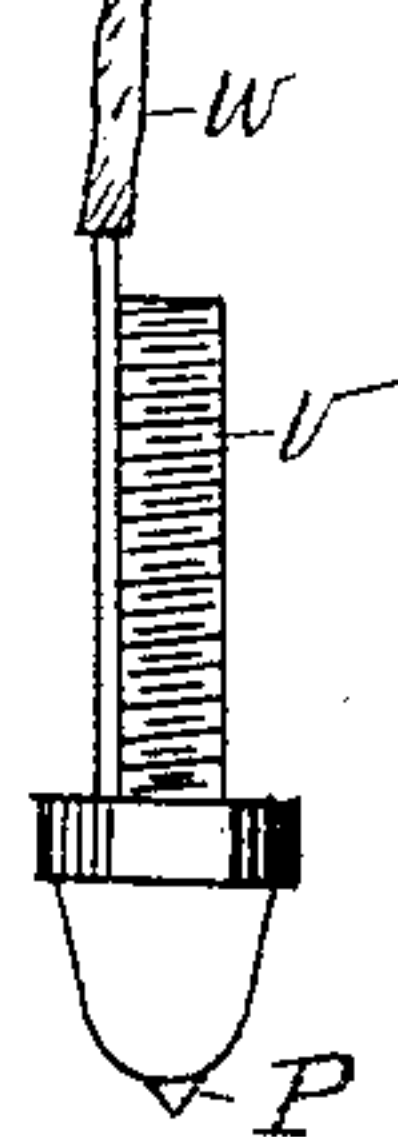


Fig. 7.



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ELECTRIC PROD-POLE.

SPECIFICATION forming part of Letters Patent No. 427,549, dated May 13, 1890.

Application filed March 18, 1890. Serial No. 344,280. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. BURTON, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Electric Prod-Poles, of which the following is a specification, reference being had therein to the accompanying drawings, and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 illustrates in longitudinal section an animal prod-pole (broken away at its body for the purpose of condensing the view) provided with an electro-galvanic apparatus. Fig. 2 is a similar illustration of a prod-pole provided with a dynamo-electric apparatus. Fig. 3 is an exterior illustration of a complete prod-pole. Fig. 4 is a detailed view showing a portion of the mechanism of the dynamo-electric apparatus illustrated in Fig. 2. Figs. 5 and 6 are cross-sectional views taken, respectively, on lines 1 and 2 of the prod-pole illustrated in Fig. 1; and Fig. 7 is a detailed side view of a contact-point of a prod-pole.

This invention relates to certain improvements in prod-poles—such as are used at ranches, stock-yards, and the like to excite cattle to cause them to move forward when loading a car with them; and it consists in providing the prod-poles with contact-points respectively connected through the medium of insulated wires with the positive and negative poles of an electric apparatus in such manner that when the poles are at rest the electric circuit will be broken, and when in use in contact with an animal the circuit will, through the medium of the animal, be connected and give an electric shock to the animal.

It is not the intention to confine this invention to any particular form or kind of electric apparatus; but for the purpose of conveying a practical knowledge to others skilled in the art I have illustrated two forms and kinds of apparatus, respectively, an apparatus wherein the electric current is generated by means of metals and acids, as shown in Fig. 1, and an apparatus wherein the electric current is generated by means of coils and magnets mechanically, as shown in Fig. 2.

In Fig. 1 the apparatus consists of an ele-

ment B, a storage-coil E, the points of contact P P', and the wires W W', which are arranged connecting the element with the points, the positive wire W of which has interposed in it the coil E. The prod-pole A has fixed to its upper end a section of metal tubing D, into which the element and the storage-coil are arranged and connected with the wires W W'. A cap C, screw-threaded into the end of the tubing D, serves as a means of closing the tube and holding in the apparatus. The lower end of the pole has secured to it a non-conducting section R, into which the contact-points P P' are turned in contact with the wires W W'. Channels *a* and *a'* are formed down the sides of the pole for the reception of the wires W W', and that portion of the channels not covered by the tube D is provided with an inlaid wood strip held by brads, as shown in Fig. 6.

In Fig. 2 the pole A is provided with a similar or like non-conductor R and points P P' and a similar tube D', which tube is fixed to form a chamber in the upper portion, into which is arranged a dynamo-electric apparatus, the dynamo consisting of the connected field-magnets N S, provided with coils, the armature S², its shaft S', and the commutator to which the wires W W' are bound, and as a means for imparting a rapid rotary motion in one direction to the armature its shaft S' is provided with a pair of like ratchet-wheels Z Z' fixed thereto, and a pair of spur-pinions F F' sleeved thereon adjacent their respective ratchets, and each pinion is provided with a disk and attached spring-pawl, (see Fig. 4,) with the pawls engaging the ratchets each in the same direction. Held by bearings in a frame are a pair of opposite gears G G', respectively in mesh with pinions F F'.

D² is a tube-section sleeved over tube-section D', and is provided with a side slot *t'*, into which a screw *t* is placed and turned into a screw-threaded hole in part D', which slot permits a limited telescopic movement of part D², arrested at each movement by the screw or stop *t*.

C' is a cap or head fitted into the upper end of part D², and has held therein by means of screws a pair of spiral bars *d d'*, the spirals of which turn in the opposite direction and are respectively arranged through corre-

spondingly-formed holes through the hubs of gears G G', and when part D² is reciprocated the spiral will operate the gears and thereby rotate the armature to generate the electric current. From the fact that the spirals are turned in the opposite direction the gears will be operated in reverse directions, one driving the armature while the other is slipping its ratchet, and at one movement of part D² one gear will operate to drive the armature, and at the reverse movement the fellow gear will operate for that purpose, thus imparting a continuous motion in one direction to the armature at either and each movement. A coil-spring T is interposed within part D² between part D' and cap C' for the purpose of forcing part D² upward its full limit, and thus motion is imparted by a downward pressure of the hand on cap C', and an upward pressure by the spring.

As a means of penetrating the hair of an animal and reaching the skin to insure perfect connections with the animal, the parts P P' are bluntly or obtusely pointed, but not sufficient to puncture the skin.

The ordinary prod-poles are provided with sharp awls for piercing the animals and thus exciting them, and the result is that by such practice vast quantities of hides are punctured each day, which not only injures the cattle and is cruel, but it ruins the hides to a great extent, causing many dollars loss.

This invention is designed to take the place of such sharp-pointed poles, and instead of piercing the cattle give them an electric shock, which will not injure their body or hide and will as surely excite them for the required purpose. In all instances it is not necessary that the prod-pole points shall touch the animal direct, but that when brought in closer relation to the animal, so that

the space surrounding the points through which the current of electricity flows comes in contact with the animal, an electric spark will be produced, which will produce a stinging sensation in the animal and thus excite it.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. An animal prod-pole provided with an electric-current system adapted when in contact with an animal to connect the electric circuit through the medium of the animal, for the purpose specified.

2. An animal prod-pole provided with an electric apparatus for generating an electric current, adapted when in contact with an animal to connect the electric circuit through the medium of the animal, for the purpose specified.

3. An animal prod-pole provided with an electric apparatus for generating an electric current, and with two points of contact, respectively communicating with the positive and negative poles of the apparatus, and adapted to have the electric circuit connected through the medium of an animal by bringing the said points in contact with the animal, substantially as and for the purpose specified.

4. An animal prod-pole provided with two insulated points of contact, respectively connected by means of insulated wires with the positive and negative poles of an electric apparatus, and adapted to have the electric circuit connected through the medium of an animal by bringing the said points in contact with the animal, for the purpose specified.

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