(No Model.)

L. A. GRAY.

ELECTRIC APPLIANCE FOR HORSES.

No. 576,053. Patented Jan. 26, 1897.

Fig. 1.

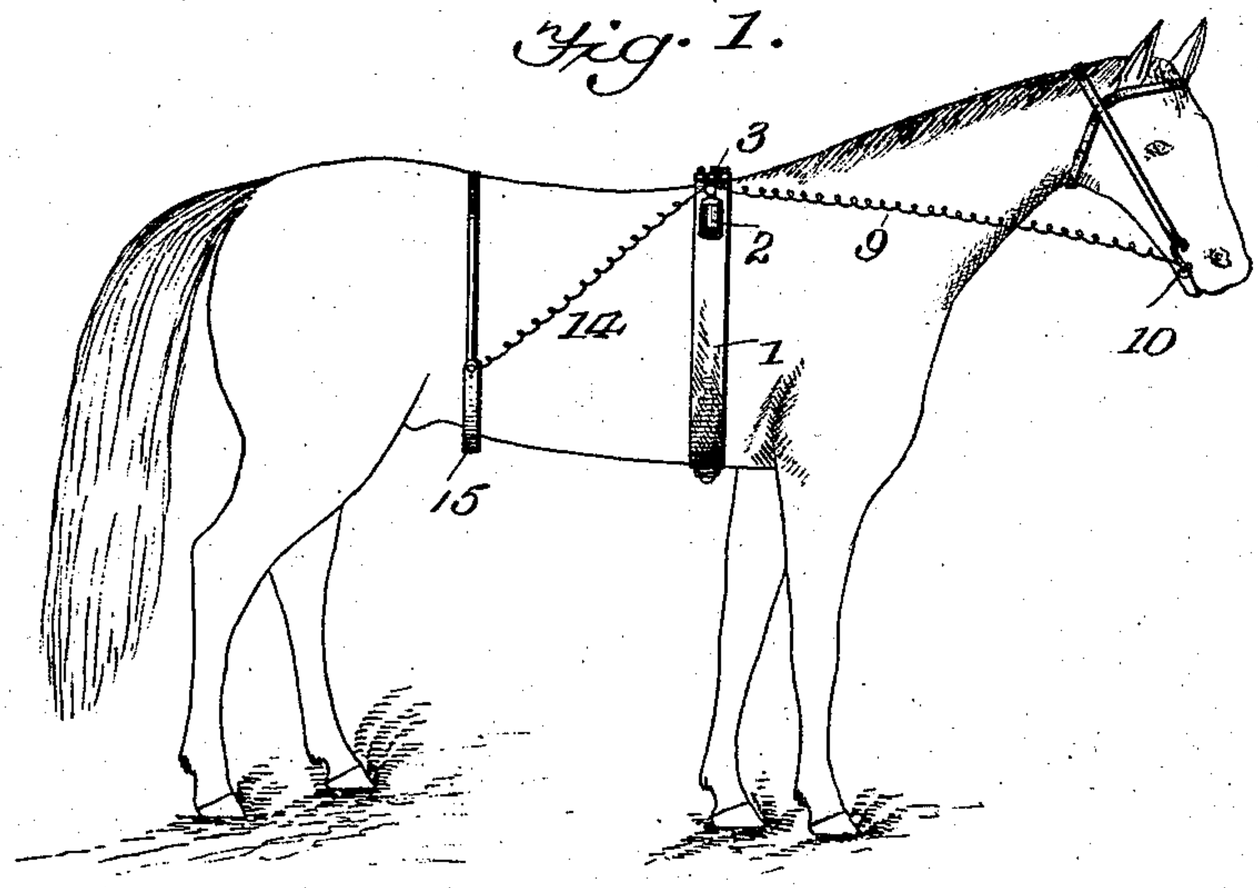
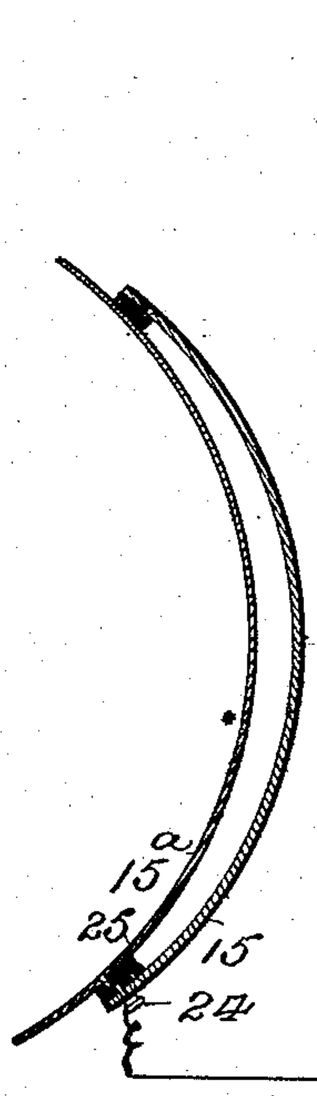


Fig. 2.



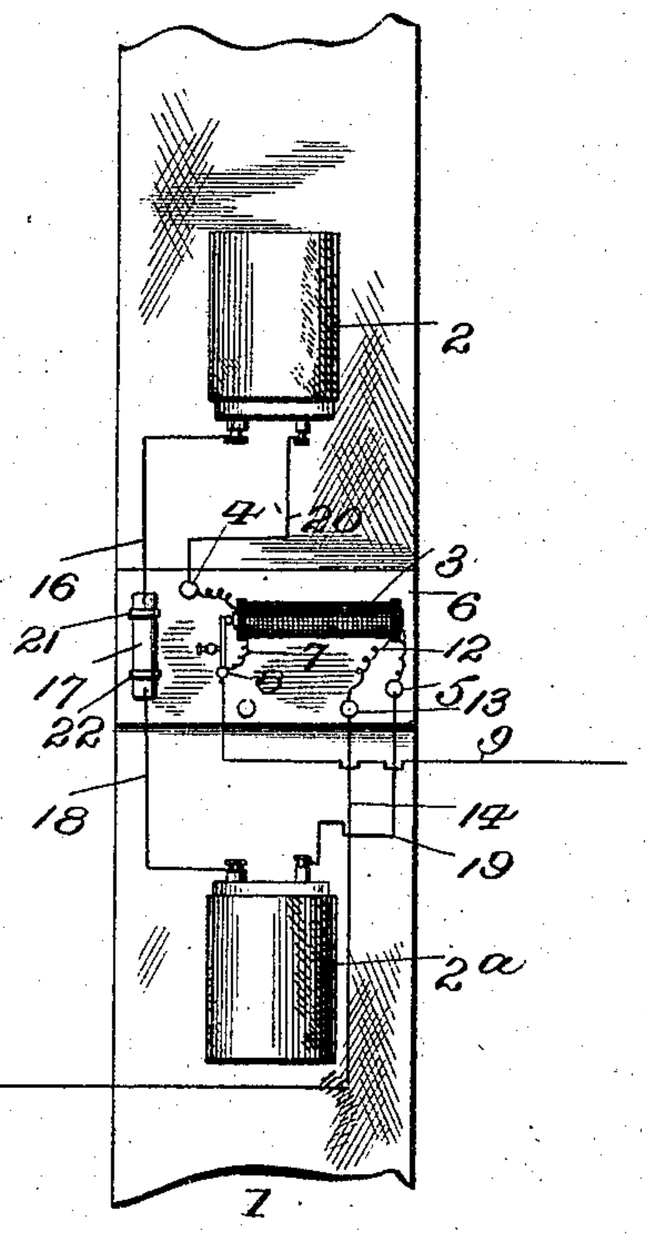
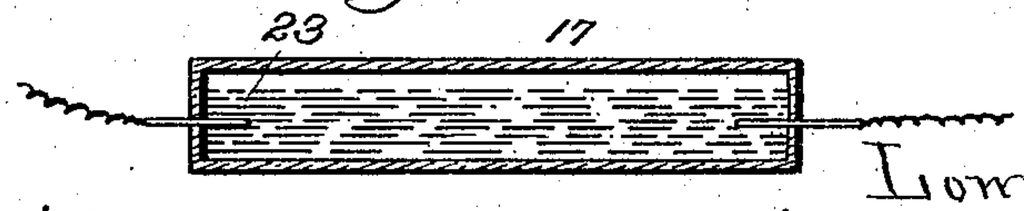


Fig. 3.



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ELECTRIC APPLIANCE FOR HORSES.

SPECIFICATION forming part of Letters Patent No. 576,053, dated January 26, 1897.

Application filed October 29, 1896. Serial No. 610,455. (No model.)

To all whom it may concern:

Be it known that I, LOWRY A. GRAY, a citizen of the United States, residing at Arlington, in the county of Baltimore and State of Maryland, have invented new and useful Improvements in Devices for Preventing Self-Abuse by Stallions, of which the following is a specification.

My invention relates to devices for preventing self-abuse by stallions, my object being to provide an extremely simple and comparatively economical apparatus whereby this injurious habit, which is common with all horses, may be effectually and easily prevented without any injury to the animal, without requiring attention upon the part of the person who cares for the horse, and free from liability to get out of order.

It is my purpose also to provide a device for the purpose specified in which electricity shall be the effective agent and to so organize the same that the circuit of the secondary coil of an induction-coil shall be completed through some portion of the body of the horse, including the organ of generation, whereby, upon erection, a continuous current will pass in contradistinction to the production of a single shock or discharge, or a number thereof, such, for example, as may be produced by a spark-coil. Such an application of the electric current is liable to injure an animal, besides being extremely startling and having a bad effect upon the nervous system, especially in the case of young, blooded, and sensitive horses.

It is a further purpose of my invention to provide an electrical apparatus of the character specified which shall normally remain upon an open circuit, whereby the generator will be prevented from waste by a continuous discharge. In this connection my invention includes the provision of a novel and simple form of automatic switch whereby the generator-circuit will be opened when the horse lies down and closed again upon his rising, and means whereby the act of the horse will close the electric circuit through the organ of generation and a portion of the body, which includes the secondary helix of the induction-coil, said circuit being automatically opened when the current has done its work.

My invention also comprises other novel features, all of which will be fully described hereinafter and then more particularly pointed out and defined in the claims which conclude this specification.

For the purposes of the following description reference will be had to the accompanying drawings, in which—

Figure 1 is a side elevation of a horse having my invention attached to the body. Fig. 2 is a view showing part of the surcingle upon which a primary battery or suitable source of electrical energy is shown with an induction-coil and circuit-closer, this figure also showing a diagram of the circuits.

The reference-numeral 1 in said drawings indicates a surcingle-girth or some similar means of attachment surrounding the body of the horse. Upon this girth I mount a battery, or preferably two cells 2 2^a, of any suitable type, a dry battery being well suited for the purpose. Between the two batteries 2 2^a is arranged an induction-coil 3, located at the center of the back where it will not be an obstacle to the horse lying down, or be injured by his assuming such a position. The primary of the induction-coil is connected to the opposite poles of the generator or generators of electricity, the connections being made through binding-posts 4 and 5 upon the insulating base-plate 6 of the induction-coil.

The secondary helix of the induction-coil has one terminal connected by a wire 7 to a binding-post 8 on the base-plate 6 of the induction-coil. From the post 8 a wire 9 goes to the bridle-bit 10, or to any other metallic part which is in constant contact with the body of the horse.

The second terminal of the secondary is connected by a wire 12 to a binding-post 13, and thence by a wire 14 to a circuit-closer 15. The latter consists of a thin plate of copper or other conducting metal mounted upon non-conducting headed studs 24 at the ends of a strap 15^a, and insulating-washers 25, of some non-conducting material, are interposed between the ends of the circuit-closer and the strap, the object being to prevent such contact between the circuit-closer and the abdomen as to complete the secondary circuit.

The primary or battery circuit consists of a

wire 20, from one element of battery 2 to the binding-post 4, to which one terminal of the primary helix is connected. The other terminal of the latter is connected by a wire 19 to an element of battery 2ª, and from the other element a wire 18 goes to a terminal of an automatic switch 17, located on the base-plate 6. From the other switch-terminal a wire 16 is taken to the second element of battery 2.

The switch 17 consists of a cylindrical receiver of non-conducting material, such as glass or hard rubber, the switch-terminals entering the ends of said receiver. Mercury 23 or any other suitable movable conducting material is placed in the receiver, and as the latter will be horizontal, or nearly so, when the horse is standing the mercury or movable conducting material will be in contact with both the switch-terminals and the battery-circuit will be closed. When the horse lies down, however, the receiver will be inclined and the mercury running to the lower end will be removed from contact with one of the switch-terminals only, so that the circuit will be broken and will remain open as long as the recumbent position is maintained.

The operation of the device is as follows: When the horse projects the organ of generation from its sheath, if excited it must come in contact with the circuit-closer 15, and as the secondary circuit is thereby closed current will flow from one terminal of the secondary helix to the circuit-closer, through the generative organ and body to the bit, or other point of contact of a piece of metal connected to the wire 9. The circuit is completed over this wire back to the other terminal of the secondary helix. This current is continuous and can be regulated to any required strength. It is needless to say that after the completion of the circuit the horse will turn his attention to other subjects. On the other hand, no obstacle is presented to the discharge of any natural function. If the animal discharges the bladder, no completion of the circuit will take place, as this act is not accompanied by any erection. If he lies down, the circuit-closer 10 may make contact with any part of the body without completion of the secondary circuit, as the inclination of the receiver 8 will break the primary or battery circuit and maintain it in this condition until the horse is again upon his feet.

I prefer to secure the batteries in pockets upon the girth 1, but they may be attached in any other suitable or preferred manner. I may also locate them elsewhere, and the circuit-closer may be secured to the body of the animal in any preferred manner.

What I claim is—

1. An apparatus of the character specified consisting of a girth having a source of electric energy and an induction-coil, a circuit-closer adapted to maintain an open circuit and to be secured upon the abdomen of the horse, a primary circuit, and a secondary circuit including the circuit-closer, a metal in electrical contact with the horse and the intervening portion of the body, substantially as described.

2. An apparatus of the character specified, comprising a source of electric energy, a circuit-closer adapted to lie against and be insulated from the abdomen of the horse, and an automatic switch consisting of a non-conducting receiver containing a suitable movable conducting material, the switch-terminals being within the receiver in such position as to be both in contact with the conducting material when the horse stands and to have but one terminal in contact when the horse is lying down, substantially as described.

3. An apparatus of the character specified, consisting of a source of electric energy and an induction-coil adapted to be secured upon the body of a horse, a circuit-closer forming part of the secondary circuit of the induction-coil and adapted to lie against and be insulated from the abdomen, an automatic switch arranged upon the base-plate of the induction-coil and consisting of a non-conducting receiver having terminals of the primary circuit entering the ends of said receiver, and a secondary circuit including the circuit-closer, a metal in electrical contact with the body, such as the bit, and the intervening portion of the body, substantially as described.

4. An apparatus of the character specified, consisting of an induction-coil secured to a girth so as to rest directly over the horse's back, two dry batteries one upon each side of the induction-coil and connected in the primary circuit, a circuit-closer consisting of a conducting-strip carried by and insulated from a strap adapted to be fastened to the abdomen, an automatic switch consisting of a cylindrical receiver on the base-plate of the induction-coil and having terminals of the battery-wires entering its ends, the receiver containing a body of mercury to make contact with both terminals when the horse stands and with but one when lying down, and a secondary circuit including the circuit-closer, the bridle-bit and the intervening part of the body, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LOWRY A. GRAY.

Witnesses:

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