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H. C. ROSE

2,185,950

ELECTRIC CONTACT DEVICE

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Fig. 1.

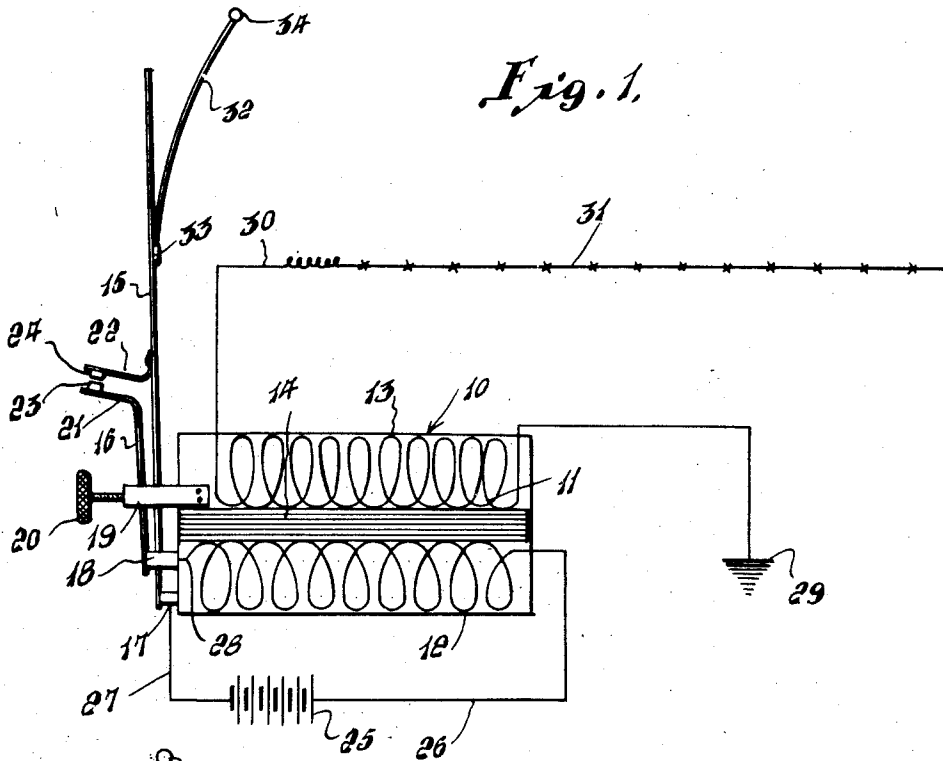


Fig. 2.

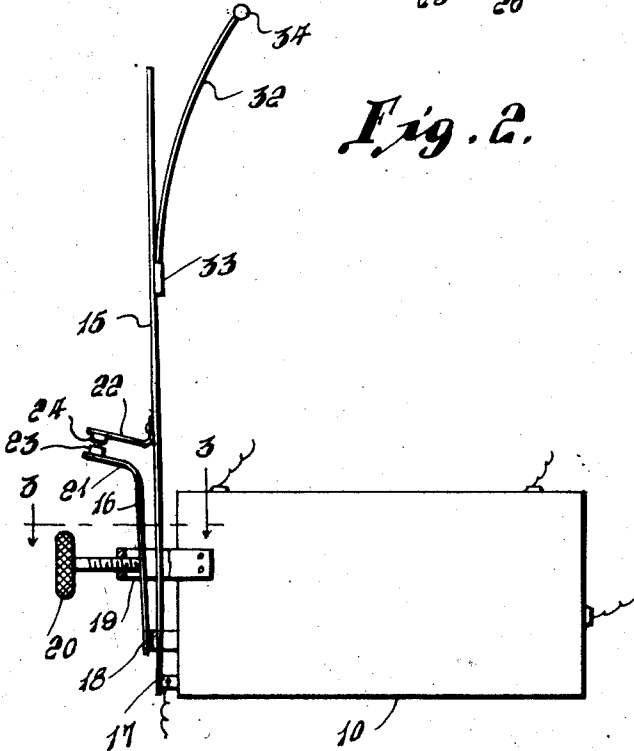
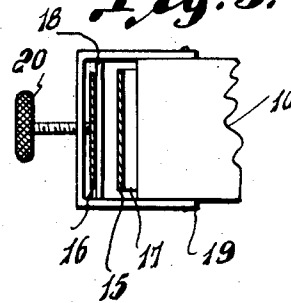


Fig. 3.



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ELECTRIC CONTACT DEVICE

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1 Claim. (Cl. 200-164)

This invention relates to a charging device particularly useful for energizing the wires or parts of metallic fences so that livestock endeavoring to pass through the same will receive a stinging shock and thus be thwarted in the effort.

It is particularly aimed to provide an exceedingly simple and relatively inexpensive structure essentially comprising a transformer, relay, and a means to delay the engagement of the contacts in order to minimize the amount of electricity used.

The more specific objects and advantages will become apparent from a consideration of the description following taken in connection with accompanying drawing illustrating an operative embodiment.

In said drawing:

Figure 1 is a view showing the invention in electrical diagram;

Figure 2 is a side elevation of the invention; and

Figure 3 is a detail horizontal section taken on the line 3-3 of Figure 2.

Referring specifically to the drawing wherein like reference characters designate like or similar parts, a unit or casing is provided at 10 which encloses a transformer 11. This transformer has a primary winding 12, a secondary winding 13, and a core 14.

At one end of the casing, a pair of fingers or bars 15 and 16 are disposed. These fingers 15 and 16 are of conducting metal and somewhat resilient. Finger 15 is connected to the casing 10 by a metallic connection at 17 and the finger 16 is connected to the casing by a metallic connection at 18. A bracket 19 of U-shape, is connected at its terminals to the casing 10 and surrounds the fingers 15 and 16 and screw threaded to the bracket is a tensioning screw 20 for said fingers.

The free end of the finger 16 is laterally offset as at 21. Finger 15 has an offset branch 22 of the same material as the finger 18 which is disposed substantially parallel to the offset portion 21. Said parts 21 and 22 have contacts 23 and 24 thereon. The tension of the fingers 16 and 15 is to normally urge the contacts 23 and 24 into engagement so as to establish an electric circuit from a source of electric energy 25, for instance a storage battery, primary battery, generator or the like having conductors 26 and 27, the former connected to one terminal of the primary coil 12 and the latter connected to the connection 17. The other terminal of the primary winding 12 is connected at 28 to the connection 18.

The secondary winding or coil 13 is grounded at one terminal as at 29 and its other terminal 30 is connected in any suitable manner to the fence wire or the equivalent as suggested at 31.

Normally the contacts 23 and 24, under the urgency of the finger 15, seek engagement. Such engagement closes the electrical circuit which energizes the core 14 and the latter thereupon attracts finger 15 accordingly disengaging the contacts 23 and 24. When the circuit is broken through such disengagement, the core will release the finger 15 which will again move into position closing the contacts 23 and 24. Thus the circuit is alternately closed and opened and current is supplied to the fence wire 31 or the equivalent in order to transmit a shock to cattle contacting the same, to thwart any efforts to pass through the fence.

In order to delay the closing of the contacts 23 and 24, following attraction of the finger 15 by the core 14, a somewhat lighter or more resilient finger or spring 32, than the finger or spring 15, is connected to the latter at 33, and provided with a weight 34 at its upper end. The spring 32 preferably is disposed on the opposite side of the finger 15 to the branch 22, and curves upwardly and away from the finger 15. This spring 32 and weight 34 will sway back farther on the back stroke of the finger 15, that is when the latter is attracted by the core 14, than on the other stroke, thereby making a very quick contact of elements 23 and 24 on the forward movement.

Various changes may be resorted to provided they fall within the spirit and scope of the invention.

I claim as my invention:

Switch means having a relatively long up-standing contact member adapted to be vibrated, a branch on said contact member extending at an angle away from the contact member midway of its ends, means to anchor the lower end of said contact member, a second contact, both of said contacts being conductors of electricity, said second contact extending in the same general direction as the first contact and having an outwardly offset portion coacting with the contact member, means to anchor the lower end of the second contact, guide means for the contacts surrounding them intermediate their anchored ends and said offset portion, means on the guide means, operable against the second mentioned contact to adjust the position thereof, and a weighted spring arm extending from the first mentioned contact adjacent the upper end thereof.

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