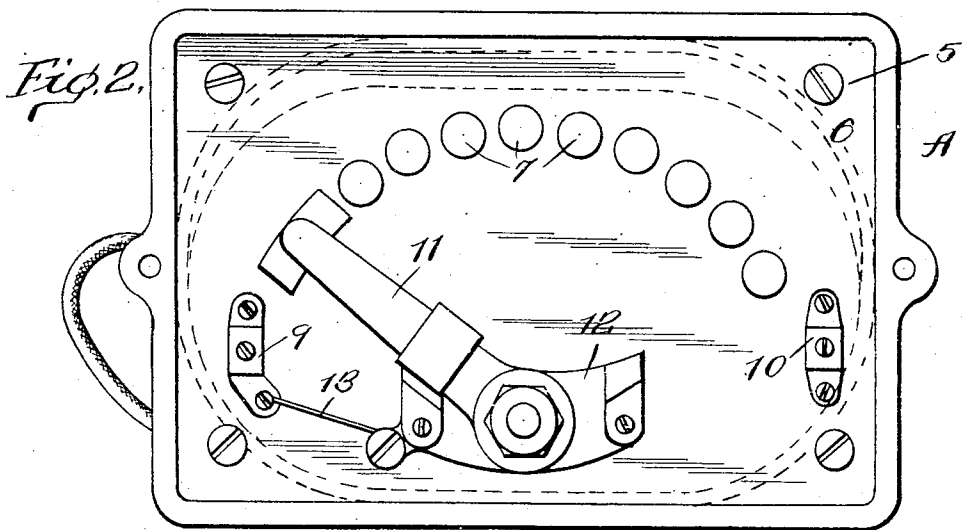
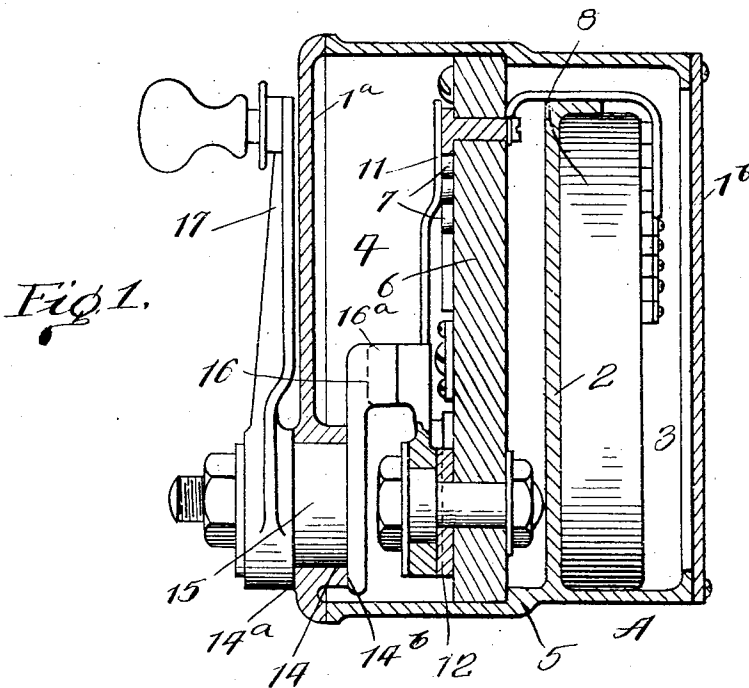


F. L. SESSIONS.
ELECTRICAL CONTROLLER.
APPLICATION FILED FEB. 5, 1909.

949,333.

Patented Feb. 15, 1910.



Inventor.

Frank L. Sessions

By

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UNITED STATES PATENT OFFICE.

FRANK L. SESSIONS, OF COLUMBUS, OHIO, ASSIGNOR TO THE JEFFREY MANUFACTURING COMPANY, A CORPORATION OF OHIO.

ELECTRICAL CONTROLLER.

949,333.

Specification of Letters Patent.

Patented Feb. 15, 1910.

Original application filed December 12, 1907, Serial No. 406,206. Divided and this application filed February 5, 1909. Serial No. 476,253.

To all whom it may concern:

Be it known that I, FRANK L. SESSIONS, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful Improvements in Electrical Controllers, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to improvements in electrical controllers such as are used for starting and controlling electric motors, and is especially adapted for use in mines.

In some mines explosive gases are met with and serious explosions result if there be any exposed flame or sparks in the region where gases collect. As is well known, electrical controllers, such as are commonly used, frequently cause sparks and flames of such nature that explosive gases of the kind met with in mines will be fired.

The object of this invention is to provide an electrical controller so constructed that there shall be no danger of explosive gases being fired.

In the drawings Figure 1 is a vertical longitudinal section of the controller. Fig. 2 is a face view of the controller with the cover and operating lever removed.

The main frame or casing of the controller is indicated by A. This frame or casing preferably has integral top, bottom and side walls.

1^a indicates the front closing plate or cover, and 1^b indicates the rear closing plate or cover. When the controller is mounted upon a motor the rear cover 1^b may be omitted, its place being supplied by the motor frame against which the controller is secured.

The interior of the box is divided by partition 2 into chambers 3 and 4, said partition extending from the bottom part way to the top. The rear or inner part of the box is preferably oval in outline, as indicated by the dotted lines of Fig. 2, while the other part is rectangular, there being corner wall sections at 5, where the rectangular and oval parts come together.

6 indicates an insulating plate or slab of slate, marble or the like which is secured to the corner sections 5 of the casting. To this plate are secured the contacts 7 with which are connected ends of the resistance coils 8,

which are placed in the chamber 3. The clamps 9 and 10 for the circuit terminals are also mounted on the plate 6.

11 is the contact lever pivoted to the plate 12 which is electrically connected, preferably by wire 13, with the clamp 9.

The cover 1^a is provided at a point in line with the axis of lever 11 with an aperture 14, bounded by bosses having finished faces at 14^a and 14^b. 15 is a stud shaft mounted in this aperture and formed at its inner end with a flange finished to fit the face 14^b, and extended to form a lever arm 16 with rearwardly projecting lugs 16^a which are adapted to embrace the lever 11. To the outer reduced end of stud shaft 15, a hand lever 17 is secured, said lever being provided at its pivotal end with a finished face to fit the finished face 14^a of the cover.

It will be seen that the movement of the hand lever is directly transmitted to the contact lever 11 and that the latter may be moved to start and control the motor in the usual manner. It is also clear that the construction described provides a flame-proof inclosure for the electrical parts within and prevents any sparks or flames that may be produced when the contact lever moves from one point to another from igniting any gas or dust outside of the box.

This application constitutes a division of my application filed December 12, 1907, Serial No. 406,206.

What I claim is:—

1. In an electrical controller, a flame-proof casing, a removable cover therefor, resistance coils, contact points connected thereto, a contact arm pivotally mounted within the casing and adapted to engage the contact points, and operating means for the contact arm mounted upon said removable cover, substantially as set forth.

2. In an electrical controller, a flame-proof casing, resistance coils and contact points therein, a contact arm pivotally mounted and adapted to engage the contact points, an operating lever pivotally mounted independently of the contact arm, and means whereby the operating lever may engage the contact arm, substantially as set forth.

3. In an electrical controller, a flame-proof casing having an aperture, an operating lever having a spindle which passes through the aperture with a flame-proof fit,

resistance coils and contact points within the casing, a contact arm adapted to engage the contact points, and mounted independently of the operating lever, and means
5 whereby the operating lever may engage the contact arm, substantially as set forth.

4. In an electrical controller, a flame-proof casing having a removable cover, resistance coils, contact points connected thereto, a contact arm pivotally mounted within
10 the casing, and operating means for the said contact arm mounted independently of the contact arm, substantially as set forth.

5. In an electrical controller, the combination of a flame-proof casing, resistance
15 coils and contact points therein, a contact arm pivotally mounted and adapted to engage the contact points, an operating lever

pivotally mounted in a wall of the casing, its pivotal axis being in a line with the
20 pivotal axis of the contact arm, and means whereby the operating lever may engage the contact arm, substantially as set forth.

6. In an electrical controller, a casing having one portion rectangular and another
25 portion approximately elliptical, and an insulating plate mounted on the shoulders formed between the two sections, substantially as set forth.

In testimony whereof I affix my signature, 30
in presence of two witnesses.

FRANK L. SESSIONS.

Witnesses:

G. B. NORRIS,
DUDLEY T. FISHER.