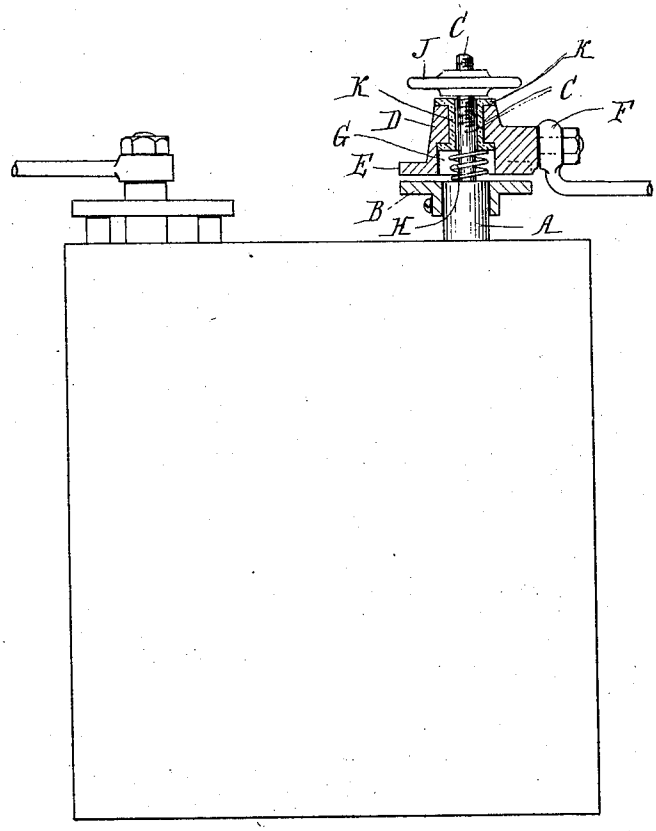
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R. J. LAIRD

POLE CONNECTER OF ELECTRIC BATTERIES

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UNITED STATES PATENT OFFICE.

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POLE CONNECTER OF ELECTRIC BATTERIES.

Application filed September 8, 1927, Serial No. 218,153, and in New Zealand July 12, 1927.

This invention relates more particularly to the storage batteries used in the ignition systems of motor vehicles and it has been devised with the object of providing a safeguard against possibility of trouble arising through a short circuiting of the battery controlled circuit when the vehicle is left standing or in storage.

This safeguard is provided by a special construction of the lead connecter of one of the battery poles (preferably the negative pole) and by means of which construction the said connecter may be electrically connected with or disconnected from the said pole by the operation of a thumb screw embodied therein.

The said means may, however, be used in any battery in which similar provision is desirable.

The invention consists in the construction of the connecter for the pole electrode in two parts one of which forms one with the electrode while the other is mounted loosely upon and insulated from the electrode and has the lead attached to it, and which parts are normally kept out of electric contact by means of a spring, and are forced into electric contact by a thumb nut.

A suitable manner of carrying out the invention is illustrated in the accompanying drawings, which shows the connecter in sectional elevation upon a battery cell.

In this construction of the invention, the pole electrode A is formed or provided with a flange B upon its top end and with a pin C projecting upward from the centre thereof. The top end of this pin is screw threaded.

The connecter collar D is made to slip over such pin and is shaped with a flange E projecting out from its lower end, that is adapted to engage face to face with the flange B and when in such engagement to make a full electric contact with the electrode. The lead wire F is secured to the collar in the usual way.

The underside of the collar E is formed with a recess G therein, and within such recess, a compression spring H is placed, the said spring surrounding the pin C. This spring serves to normally force the collar up so that the flanges E and B are apart. A thumb nut J is, however, screwed on to the top of the pin C for forcing the collar down to cause the flanges to make close electric contact for the ordinary use of the battery.

The collar proper is insulated from the pole pin C and the thumb nut J, as also from the spring H, by providing its bore with a sleeve K of suitable insulating material which sleeve at its ends covers the top surface with which the thumb nut engages and the top of the recess G with which the spring engages.

The collar is thus completely insulated from the electrode excepting through the contact effected between the flanges B and E. Consequently when such flanges are in contact the connecter is in working order. By loosening the thumb nut J the collar is allowed to be forced up on the pin thus breaking the connection of the flanges and placing the battery out of working order.

The said means may be varied in a number of ways in the details of their construction and without departing from the essential feature of the invention.

I claim:—

1. In electric batteries, a pole connecter formed in two parts one of which is made in one with the pole electrode while the other has the lead wire connected to it and is loosely mounted on such electrode and is normally held out of electric contact with the first part by means of a spring, and means whereby such second part may be forced into electric contact with the first part.

2. In electric batteries, the combination with a pole electrode constructed or provided with a flange on its upper end and with a pin projecting centrally therefrom, of a connecter collar loosely mounted upon such pin and insulated therefrom and constructed to form electric contact with the said flange, a spring normally forcing the said collar out of contact with the flange and means for forcing and locking it in contact with the flange, substantially for the purposes specified.

3. In electric batteries the combination with a pole electrode constructed or provided with a flange upon its upper end and

with a screw threaded pin projecting centrally from the flange, of a connecter collar loosely mounted upon and insulated from the said pin and having a portion adapted to make contact with the said flange, a spring interposed between the collar and the flange and serving to normally press the collar out of contact with the flange, and a thumb nut screwed on to the top of the said pin and engaging the collar, substantially as specified.

In testimony whereof, I affix my signature.

ROBERT JOSEPH LAIRD.