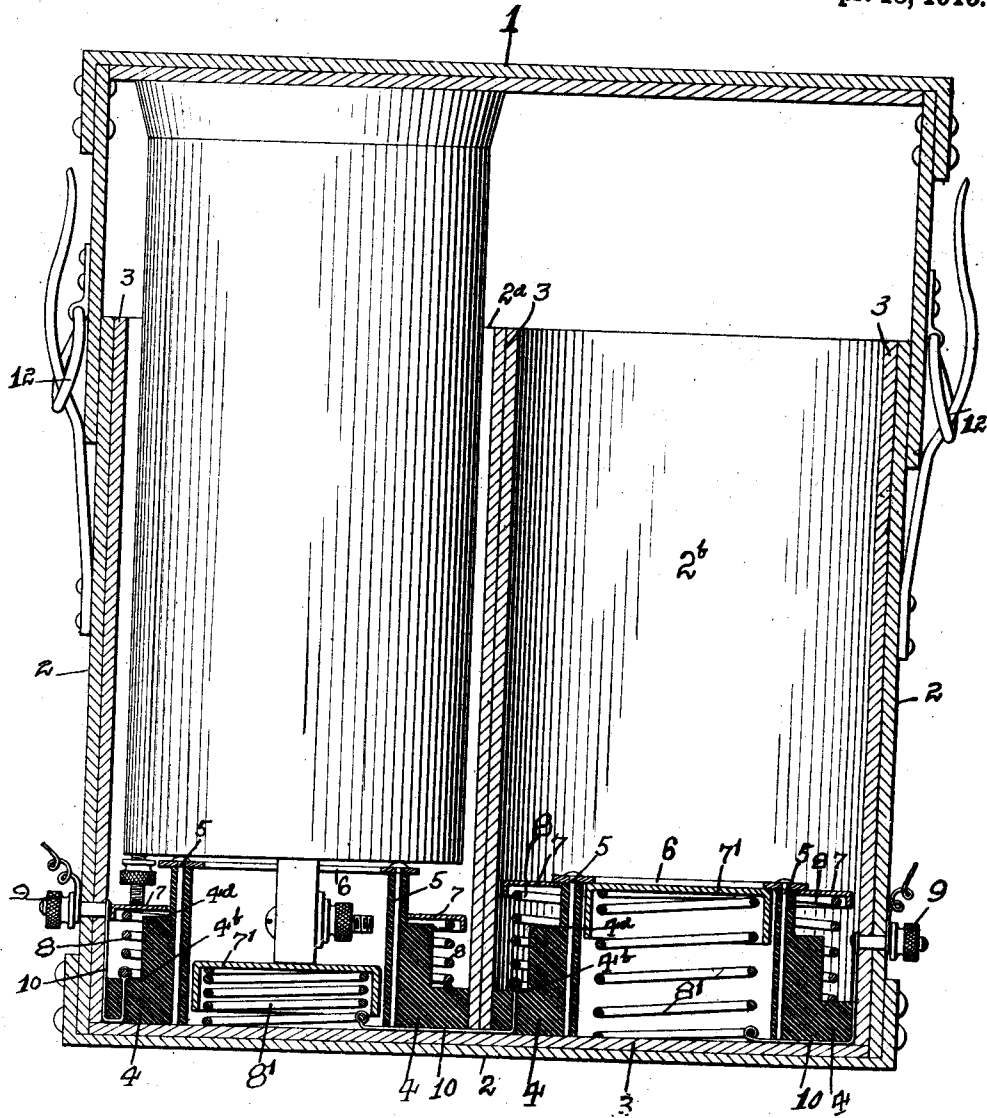


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BATTERY CONNECTOR AND RECEPTACLE.
APPLICATION FILED APR. 15, 1914.

1,135,580.

Patented Apr. 13, 1915.



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UNITED STATES PATENT OFFICE.

CHARLES H. HARRIS, OF KEOKUK, IOWA.

BATTERY CONNECTOR AND RECEPTACLE.

1,135,580.

Specification of Letters Patent.

Patented Apr. 13, 1917.

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To all whom it may concern:

Be it known that I, CHARLES H. HARRIS, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Battery Connectors and Receptacles, of which the following is a specification.

This invention relates to a battery receptacle and connector, preferably designed for use in combination with an ordinary commercial dry battery.

The first and primary object of the invention resides in the novel arrangement of the connection blocks and the adjustable holder, whereby the device is adaptable for use in combination with a battery of any standard size, form, or terminal equipment.

Another object is to construct the device in such a manner that a battery of the above type may be quickly connected for use without the use of tools or connecting wires.

With these and other objects in view the invention resides in an arrangement embodying the essential features of construction pointed out in the subjoined claims and explained by the illustrative embodiment fully set forth in the following description and accompanying drawing. Also in certain novel details of construction to be found in said illustrative embodiment as also pointed out in the claims.

In said drawing the figure is a vertical section of the device showing a dry battery applied thereto.

Referring to the drawing in detail, in which like parts are designated by like numerals, 1 and 2 represent a pair of vertically disposed telescoping members comprising the cover piece 1 and the holder 2. The holder 2 may be divided into separate cells 2^a and 2^b, by means of the insulating material 3, each cell comprising an independent holder for the battery.

4 represents connection blocks which are constructed of insulating material and positioned in the bottom portion of each cell. These connection blocks are also constructed with suitably stepped sides to provide shoulders 4^a and 4^b upon which the springs and contact plates rest (to be later described). The connection blocks are also held in place by means of vertical rods 5.

6 represents a circular flange which overlies the top portion of the connection blocks,

it being held in place by means of the vertical rods 5.

7 and 7' represent metal contact plates which provide circuit closures for the zinc and carbon of the battery respectively. These contact plates are supported by spiral springs 8 and 8', one of which is positioned within the connection block 4 and the other of which surrounds the connection blocks and is supported by the shoulder 4^b above referred to. The shoulder 4^a provides a stop for the outside contact plate 7 when the battery is placed in the cell.

9 represents an external connection and 10 represents an internal connecting wire attached to the springs 8 and 8' whereby the batteries may be connected either in series or in multiple. In operation the battery is placed in a cell as shown in 2^a where it will be firmly held in place by means of the straps 12 holding the cover 1 in telescopic relation with the holder 2. When the battery is withdrawn the tension of the springs 8 and 8' will cause the contact plates to raise and abut against the circular flange 6, whereby a through circuit is made to the adjacent cell.

It will be seen from the foregoing that one or more of the batteries may be removed from this receptacle without making the device inoperable. It is also to be understood that I do not limit the scope of my invention to a receptacle for holding two batteries as shown, as the device may be constructed to accommodate any number of batteries without departing from the nature of the invention.

I claim:—

1. A combined connector and receptacle for batteries comprising a pair of telescoping members providing a cover and holder for the battery, a plurality of cells provided in the holder, a connection block located in each cell, contact plates surrounded by and surrounding each of said connection blocks, a conductor connecting a contact plate of one cell with a contact plate of the adjacent cell, means provided on said cover and said holder for holding the battery terminals in contact with said contact plates and means carried by the connection blocks to cooperate with said contact plates to complete the circuit when the battery is withdrawn.

2. A combined receptacle and holder for batteries comprising a plurality of cells, con-

nection blocks located in all of said cells and contact plates surrounded by and surrounding said connection blocks, conductors connecting a contact plate of one cell with a contact plate of the adjacent cell, and means carried by said connection blocks to cooperate with said contact plates to close the circuit when one or more of the batteries are withdrawn.

3. A combined connector and receptacle for batteries comprising a pair of telescoping members providing a cover and holder for the battery, a plurality of cells provided in the holder, and connection blocks located in said cells, spring supported contact plates surrounded by and surrounding each of said connection blocks and a conductor connecting a contact plate of one cell with a contact plate of the adjacent cell, means provided on said cover and said holder for holding the battery terminals in contact with said contact plates and means carried by the connection blocks to cooperate with said contact plates to complete the circuit when the battery is withdrawn.

4. A combined receptacle and connector for batteries comprising a pair of telescoping members providing a cover and a holder for the battery, a plurality of cells constructed in said holder providing an independent compartment for each battery, connection blocks located in each cell and spring supported contact plates surrounded by and surrounding each connection block, a circuit connecting all of said cells, means provided on said cover and said holder for holding the battery in contact with said contact plates, and means provided on the side of each connection block affording a rest for one of the contact plates when the battery is inserted in the holder, and a circular flange carried by each connection block adapted to cooperate with said contact plates to close the circuit when the battery is withdrawn.

The foregoing specification signed at Keokuk, Iowa, this 25th day of March, 1914.

CHARLES H. HARRIS.

In presence of—

WALLACE S. HEALD,
HARVEY F. WAGNER.