H. T. HIPWELL.

BATTERY CELL.

APPLICATION FILED MAR. 6, 1918.

1,303,558.

Patented May 13, 1919.

Fig. 1.

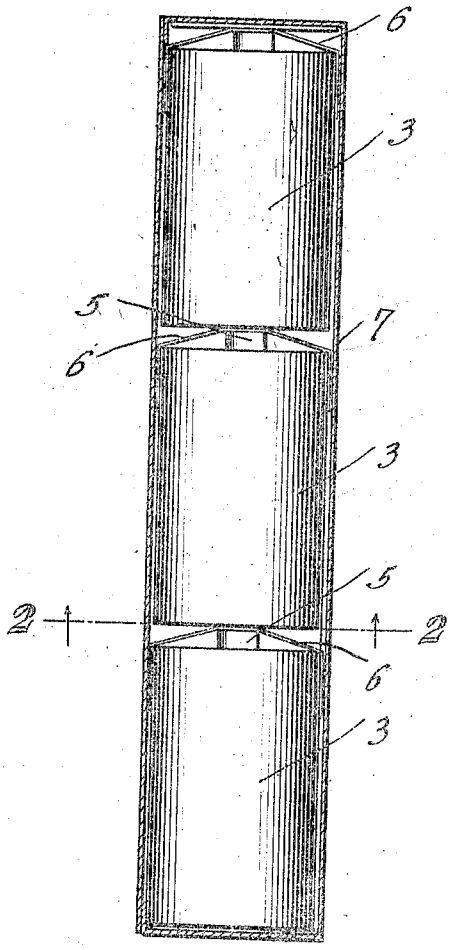


Fig. 2.

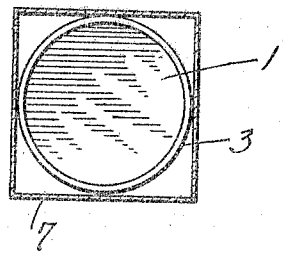
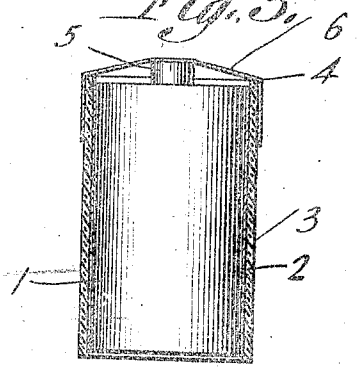


Fig. 3.



Witness

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UNITED STATES PATENT OFFICE.

HARRY T. HIPWELL, OF PITTSBURGH, PENNSYLVANIA.

BATTERY-CELL.

1,303,558. Specification of Letters Patent. Patented May 13, 1919.

Application filed March 6, 1913. Serial No. 220,791.

To all whom it may concern:

Be it known that I, HARRY T. HIPWELL, a citizen of the United States, residing at Pittsburgh, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Battery-Cell, of which the following is a specification.

This invention relates to cells for electric batteries and more particularly to cells of that type designed to be used in connection with flash lights.

It has been the practice heretofore to package the cells in series, placing two or more of them in a heavy paper tube which, in turn, has been housed in a suitable carton. The cells are thus sold to the trade. The purchaser has removed the carton and inserted the tube, with the cells therein, into the case of the flashlight, the tube being so proportioned as to fit snugly into the case. This method of packing the cells and of placing them in the case of the flash light has been found objectionable for several reasons. For example, when the tube is filled with cells at the factory a small piece of paper, excelsior or other material sometimes becomes lodged accidentally between two of the cells, thus breaking the contact with the result that, when the tube is inserted into the case of a lamp and the button is pressed the lamp will not be lighted. The customer thus usually returns the battery to his dealer who, ignorant of the cause of the trouble, ships the goods back to the factory. Obviously considerable dissatisfaction is thus caused. Another objection to the old method of shipping the cells is found in the fact that the cells are unsecured in the tube and do not, at all times, fit tightly therein. Consequently when the tube is removed from the carton by the purchaser, unless care is exercised, one or more of the cells will slip out of the tube and fall to the ground and, if the cell falls upon a hard surface, it is usually damaged beyond repair. A still further objection to the old way of packing the cells is found in the cost to the consumer. The cells are sold in series, each series fitting in a single tube, and if a lamp does not illuminate properly because of the weakness of one cell of its battery, it becomes necessary to purchase an entire battery, which renders the cost of maintenance excessive.

It is the object of the present invention to overcome all of the objectionable features above enumerated by so constructing the cells that they can be sold either in series or as units, the ordinary tubular container being dispensed with and each cell being provided with a jacket forming an integral part thereof whereby the cells can be separately inserted into the case of a lamp and will fit snugly therein without the use of the said tubular container. It is also designed to prevent or minimize injury to a cell when dropped, by providing each cell with an integral jacket which acts as a cushion to absorb the shock.

With the foregoing and other objects which will appear as the description proceeds, the invention consists of certain novel details of construction and combinations of parts which will be hereinafter more fully described and pointed out in the claim, it being understood that changes may be made in the arrangement and proportions of the parts without departing from the spirit of the invention as set forth in the appended claim.

In the accompanying drawings the preferred form of the invention has been shown.

In said drawings—

Figure 1 is a section through a carton containing a series of cells as sold to the trade.

Fig. 2 is a section on line 2—2, Fig. 1.

Fig. 3 is an elevation of one of the cells, the jacket and seal being shown in section.

Referring to the figures by characters of reference, 1 designates a dry cell of the usual form having a metal wall. Extending around the cell and secured thereto by a suitable adhesive 2, is a jacket 3 formed of heavy paper board. The ends of the jacket are extended slightly beyond the ends of the wall of the cell thus to form cushioning edges 4. The usual contact 5 extends from one end of the cell and a paper strip 6 is extended across the contact and secured at its ends to the jacket, thus to constitute a seal.

A cell such as described can be sold to the trade as a unit or, if preferred, a series of cells can be placed in a carton 7 to form a package. In the latter event the purchaser removes the cells from the carton and, after removing the seals from the cells inserts the cells into the case of the lamp

so that they will contact end to end. Should one of the cells fall while being handled, the jacket surrounding the cell will act as a cushion and thus protect the cell from injury. As it is necessary to separately remove the cells from the carton and separately place them in the lamp there is no danger of foreign substances becoming lodged between the cells and interfering with the operation of the lamp. The cells can be sold to the trade singly, each cell having its protecting jacket and its seal. Thus should one cell of a battery become weak, a single cell can be purchased and substituted therefor. By providing cells which can be sold singly, the goods are placed within reach of the 5¢ and 10¢ store trade.

What is claimed is:—

A dry cell having its wall formed of an inner thickness of metal and an outer thickness of paper forming a cushioning jacket and permanently attached to the metal, said jacket projecting beyond the ends of the metal portion.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

HARRY T. HIPWELL.

Witnesses:
W. H. LEINSOHN,
E. W. HIPWELL.