(No Model.)

C. G. ARMSTRONG.

BATTERY CARBON.

No. 418,837. Patented Jan. 7, 1890.

Fig. 1.

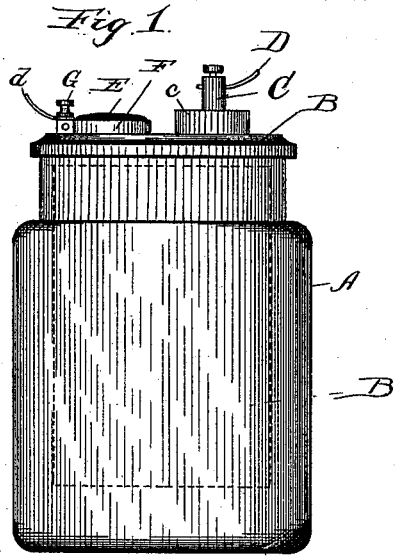


Fig. 3.

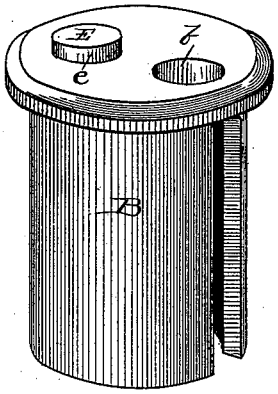


Fig. 2.

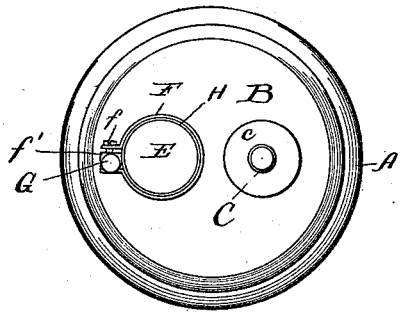


Fig. 4.

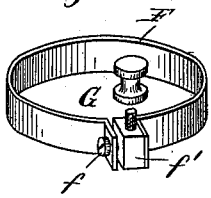
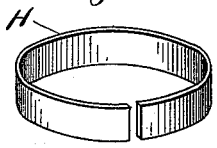


Fig. 5.



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BATTERY-CARBON.

SPECIFICATION forming part of Letters Patent No. 418,837, dated January 7, 1890.

Application filed September 19, 1889. Serial No. 324,399. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. ARMSTRONG, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Connections between Circuit-Wires and Battery-Carbons, of which the following is a specification.

This invention relates to the means for making the connection between the circuit-wire and the carbon in Leclanché and similar batteries. It is well-known that the fumes which arise from the battery-cell tend to destroy the end of the wire or any belts or metal strips which are used for making the connection between the carbon and the circuit-wire, and which may be exposed to such fumes. To obviate this evil is the purpose of the invention, and I accomplish the result by the following means: I form a knob or extension on the upper surface of the carbon, and which is not exposed to the fumes arising in the cell. This knob or extension is surrounded by a tight band or strip of metal, to which the circuit-wire is attached, the band having a close contact with the periphery of the knob and affording a large surface contact therewith, so that the current may pass freely to the wire.

The nature of my improvement is fully set forth below and in the accompanying drawings, in which—

Figure 1 is an elevation of a battery in which my improvement has been embodied. Fig. 2 is a plan of the same. Fig. 3 is a perspective of the carbon. Fig. 4 is a perspective of the clamping ring or band which surrounds the knob of the carbon, and Fig. 5 is a like view of a packing which may be inserted between the band and the knob. Figs. 4 and 5 are considerably enlarged.

In said drawings, A represents the usual glass jar, and B the carbon, consisting of a cup and cover formed in one integral piece, customarily employed in this class of batteries.

C is the zinc forming one pole of the battery, and extending down into the interior of the carbon in the usual manner, it being supported in the carbon at the opening *b* by the insulating-bushing *c*. One end of the circuit-wire D leads from this pole in the usual manner.

The other pole of the battery is formed as follows: A knob or extension E is formed upon the upper surface of and integral with the carbon B. This knob is preferably provided with a vertical periphery *e*, so that when surrounded by a flat band F it will present a considerable extent of surface for contact with said band. The band is placed around the knob and drawn tightly against the same by means of a screw *f* passing through one end of the band into a threaded engagement with the block *f'* upon the other end of the band. G is a binding-post secured to the block *f'*, and from this binding-post extends the other end *d* of the circuit-wire. I prefer to insert between the band and the extension upon the carbon a thin packing H, of conducting metal—such as tin or lead foil—the same serving also to prevent any corroding action of the carbon upon the brass or copper of the band.

It will be noticed that there is no unclosed opening in the top of the carbon through which the fumes generated in the cell may rise, so as to reach the wire or the metal connections between it and the carbon.

I claim—

1. The combination, with the circuit-wire and the carbon, consisting of a cup and a cover integral therewith, of the knob or extension on said carbon-cover and a surrounding band to which the circuit-wire is attached, substantially as set forth.

2. In a Leclanché or similar battery, a carbon provided with a knob or extension E upon its upper surface, a band surrounding said knob or extension and connected to the circuit-wire, and a packing H, interposed between the knob and the band, all combined and operating substantially as set forth.

3. In a Leclanché or similar battery, the combination, with a carbon and an annular contact-band, of an interposed packing H, of conducting metal, substantially as set forth.

CHARLES G. ARMSTRONG.

Witnesses:
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EMMA HACK.