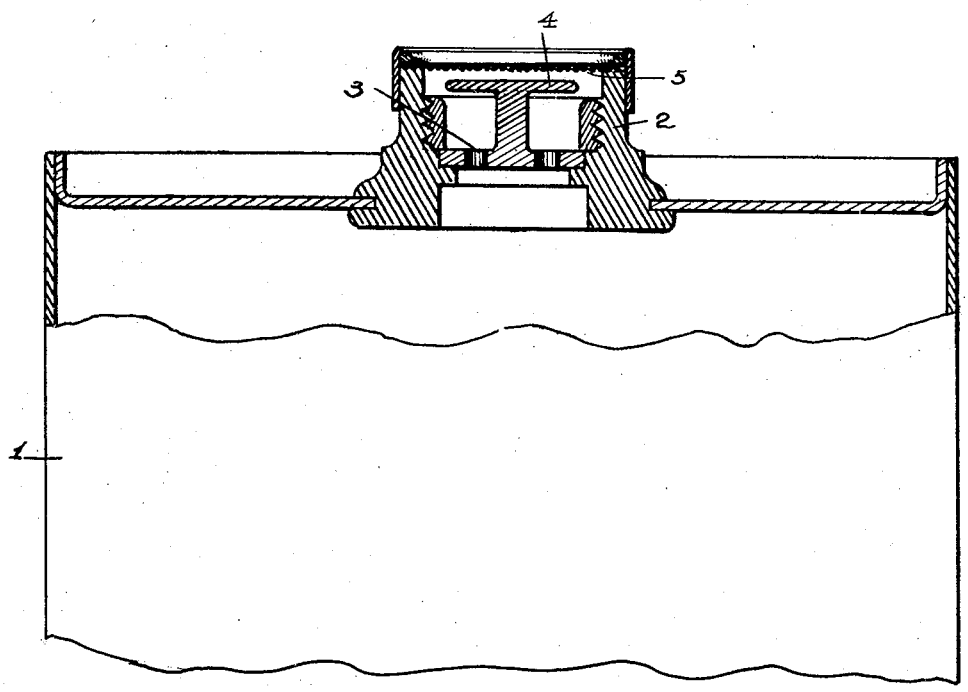
No. 767,554. PATENTED AUG. 16, 1904.

T. A. EDISON.

METHOD OF RENDERING STORAGE BATTERY GASES NON-EXPLOSIVE.

APPLICATION FILED JUNE 13, 1904.

NO MODEL.



WITNESSES:

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No. 767,554. Patented August 16, 1904.

UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF LLEWELLYN PARK, NEW JERSEY, ASSIGNOR TO EDISON STORAGE BATTERY COMPANY, OF ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

METHOD OF RENDERING STORAGE-BATTERY GASES NON-EXPLOSIVE.

SPECIFICATION forming part of Letters Patent No. 767,554, dated August 16, 1904.

Original application filed November 28, 1902, Serial No. 133,120. Divided and this application filed June 13, 1904. Serial No. 212,327. (No model.)

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, a citizen of the United States, residing at Llewellyn Park, Orange, Essex county, State of New Jersey, have invented a certain new and useful Improved Method of Rendering Storage-Battery Gases Non-Explosive, of which the following is a specification.

In an application for Letters Patent, filed November 28, 1902, Serial No. 133,120, (of which this is a division,) I have described an improved method of separating mechanically-entrained globules from gases generated in storage batteries, consisting generally in causing the gases as they escape from the receptacle to impinge with sufficient velocity against a liquid film as to result in the separation of the entrained globules. In the said application I also describe as a supplement to the special method of separating entrained globules the expedient of spreading the escaping gases and passing the same through a cooling medium in order to render them non-explosive. This supplementary method can be and in actual practice has been effectively carried out in connection with the special method, as described, of separating the entrained globules; but nevertheless it is capable of independent use, since the gases escaping from the receptacle can be attenuated and passed through a cooling medium without being subjected to a preliminary treatment for the removal of the entrained globules. The purpose of the present application is to describe and claim this supplementary process as a separate entity.

In order that the invention may be better understood, attention is directed to the accompanying drawing, forming part of this specification, and in which I illustrate a sectional view of one of my improved storage-battery cans provided with means for carrying the method into effect, but omitting the device for separating the mechanically-entrained globules.

The can 1, which is made of thin nickel-plated steel, is provided with a neck 2, having a perforated plug 3 therein, and carried by this plug is a deflecting-plate 4 for diffusing the gases escaping through the perforations. At the top of the neck 2 is a suitable cooling medium, through which the gases pass and illustrated as a wire-gauze 5. When the apparatus is not provided with special means for effecting the separation of the mechanically-entrained globules, the gases will escape continuously through the perforations in the plug 3; but if separating devices are employed the gases will escape intermittingly through these perforations, as I have described in my said application. The escaping gases will be deflected outwardly by the deflector 4, so as to be comparatively attenuated, and they will escape through the gauze 5 in a highly-rarefied condition. Even if they could ignite on the outside of the gauze the radiating capacity of the latter is sufficient to prevent its becoming hot enough to ignite the gas below it, so that no explosion can take place. This is especially true when the deflector is used, since otherwise there would be danger of a small stream of gas passing directly from each perforation through the gauze in a sufficiently concentrated condition as to result in the gauze being dangerously heated.

It will of course be understood that the invention is applicable for use in any type of storage battery, whether alkaline or acid and wherein gases are generated during use or during the charging operation.

Having now described my invention, what I claim as new therein, and desire to secure by Letters Patent, is as follows:

1. The process of rendering non-explosive, gases generated within the electrolyte of a storage battery, which consists in passing the gases through a contracted vent, and in thereafter spreading, diffusing and attenuating the gases, substantially as set forth.

2. The process of rendering non-explosive, gases generated within the electrolyte of a storage battery, which consists in passing the gases through a contracted vent, in thereafter spreading, diffusing and attenuating the gases,

and in finally passing the gases through a cooling medium, substantially as set forth.

3. The process of rendering non-explosive, gases generated within the electrolyte of a storage battery, which consists in passing the gases through a contracted vent, in thereafter spreading, diffusing, and attenuating the gases, and in finally passing the attenuating gases through a metallic gauze, substantially as set forth.

This specification signed and witnessed this 8th day of June, 1904.

THOS. A. EDISON.

Witnesses:

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