No. 709,157. Patented Sept. 16, 1902.

P. KENNEDY.

JAR FOR STORAGE BATTERIES.

(Application filed Jan. 6, 1902.)

(No Model.)

Fig. 1.

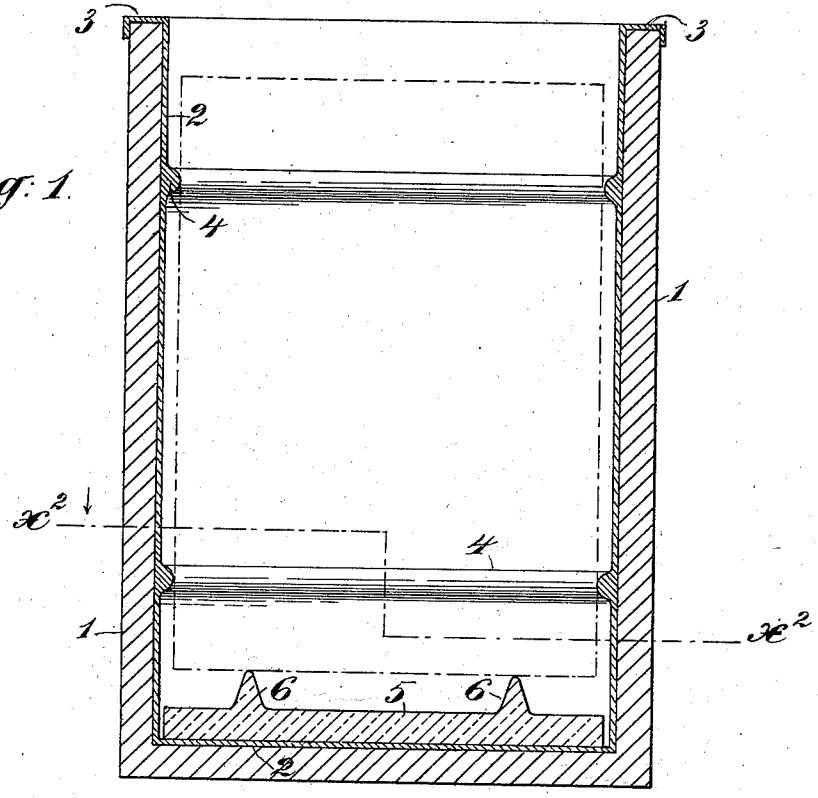
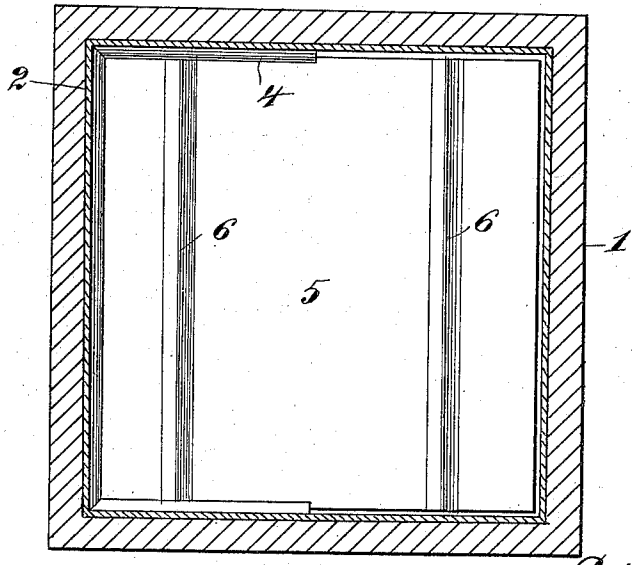


Fig. 2.



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JAR FOR STORAGE BATTERIES.

SPECIFICATION forming part of Letters Patent No. 709,157, dated September 16, 1902.

Application filed January 6, 1902. Serial No. 88,598. (No model.)

To all whom it may concern:

Be it known that I, PATRICK KENNEDY, a citizen of the United States, residing in the borough of Brooklyn, county of Kings, and city and State of New York, have invented certain new and useful Improvements in Jars for Storage Batteries, of which the following is a specification.

This invention relates to receptacles for the plates or elements of storage batteries or accumulators, commonly called "jars," and particularly to such jars when used in installations for the lighting of railway-cars.

In order that the present invention may be understood, it will be convenient to explain that in practice the jolts and shocks incident to the operation of railway-cars render it necessary in constructing jars for storage batteries for such use to provide cushioning devices of soft yielding material, such as soft vulcanized rubber, which will resist acids and protect the plates, as well as protect the lining of the jar from injury by the plates. It is found, however, in practice that the jolts and shocks incident to the operation of railway-cars render the use of such a brittle substance as hard rubber or "vulcanite," or indeed any of the kindred weak and brittle insulating materials, very unsuitable for the purpose. Moreover, hard rubber is a comparatively costly material for this use, partly because of its first cost and partly because of the large percentage of loss by breaking, due to the jolting to which the battery is subjected on the car.

In the accompanying drawings, which illustrate an embodiment of the invention, Figure 1 is a sectional elevation of a jar constructed according to the present invention, and Fig. 2 is a horizontal section of the same at the broken line x^2 in Fig. 1.

1 represents the outer or main receptacle, which will ordinarily be of wood. This outer receptacle has in it a closely-fitting and integrally-formed lining 2, of soft vulcanized rubber. This lining being thoroughly flexible will be molded and vulcanized separately and then fitted into the box or receptacle 1. The lining or inner covering 2 will have a top flange 3, which takes over and incloses the upper edge of the wooden receptacle, and one or more bead-like projecting guards 4, extending about its inner surface, two being preferred. These guards will be or may be integral with the lining 2, and they serve as buffers to keep the plates or elements from contact with the lining at the sides of the receptacle.

In the bottom of the receptacle and resting on the rubber lining is a plate 5, preferably of ceramic material and glazed. This plate may be removable and has on its upper surface two or more ribs 6, upon which the plates or elements of the battery are supported. These supports serve to distribute the weight of the elements evenly over the bottom of the receptacle and also elevate them, so as to leave a space below to catch and hold any substance that may fall from the elements.

In Fig. 1 a plate or element is indicated by dotted lines merely to show the position it occupies.

The jar will withstand the jolting and shocks to which it may be subjected on the car without rupture or cracking of the lining, and the guards 4 protect the plates or elements against injury from the same causes.

The ribbed bottom plate 5 is supported on the soft-rubber lining of the bottom and is thus cushioned. This plate may of course be made from any hard material which will not be acted upon by acids or other substances in the battery.

The jar may be of any desired dimensions; but a convenient size is about eight inches square by twelve inches deep.

By "soft rubber" as employed for the lining 2 is meant the soft elastic vulcanized rubber of commerce, which is usually a compound of rubber with other ingredients in varying proportions, such as talc, coloring-matter, and the like.

The jar herein described may be of any size or proportions best suited to the purpose, and the battery may be employed, of course, for any use to which a storage battery can be applied, as for stationary lighting and power plants, motor-vehicles where electricity is used as the propelling power, and the like.

Having thus described my invention, I claim—

1. A jar for a storage battery having side

guards of soft cushion-like material to serve as buffers to keep the plates or elements out of contact with sides of the receptacle.

2. A jar for a storage battery having a soft-rubber lining and having side guards of soft cushion-like material to serve as buffers to keep the plates or elements out of contact with said lining.

3. A jar for a storage battery having an integral, soft-rubber lining provided with side guards of the same material projecting from its inner surface, substantially as and for the purpose set forth.

4. A jar for a storage battery comprising an outer wooden receptacle, and an integral lining therein of soft rubber, said rubber lining having a top flange which extends over the top of said receptacle and guards 4 formed on its inner face at the sides, substantially as and for the purposes set forth.

5. A jar for a storage battery having a rubber lining, side guards of yielding material, and a ribbed plate of acid-resisting material set loosely in the bottom of the jar and fitting into the latter, substantially as set forth.

In witness whereof I have hereunto signed my name, this 24th day of December, 1901, in the presence of two subscribing witnesses.

PATRICK KENNEDY.

Witnesses:
PETER A. ROSS,
H. ALAN CONNETT.