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STORAGE BATTERY CONTAINER

Filed Sept. 27, 1922

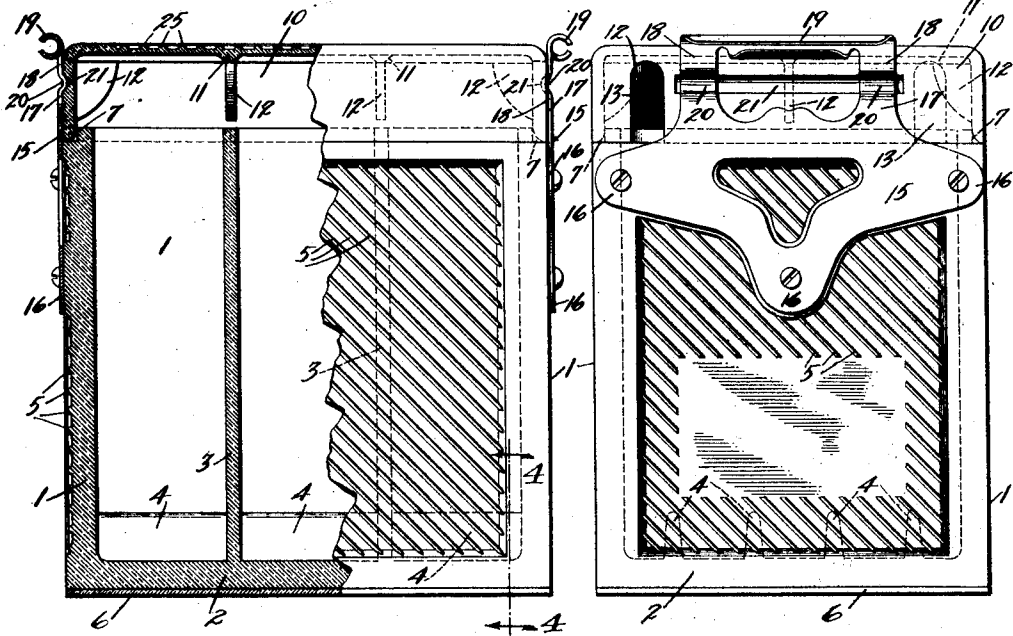


Fig. 1

Fig. 2

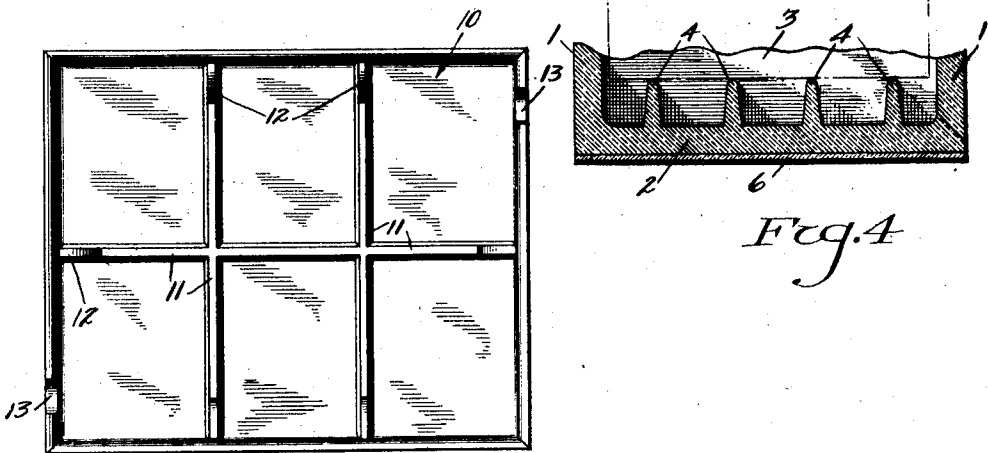


Fig. 3

Fig. 4

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STORAGE-BATTERY CONTAINER.

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This invention relates to storage battery containers and particularly to that class which is interiorly subdivided to provide a plurality of cells or compartments, with the container and cell or partition walls organized into an integral unitary structure.

An object of the invention is to provide a plural battery cell container of an impervious acid resisting material having outside containing walls, inner cell partition walls and grid supporting base ribs for each cell, moulded or cast to constitute an integral structure of sufficient strength and durability so as not to require additional casing, for use in automobile service.

Another object of the invention is to provide a cushion for the bottom of the container, as an exterior resilient base, formed by making the base of two different grades of rubber stock or compound or by applying a layer of resilient material to the base for yieldingly supporting the container.

Another object of the invention is to reduce the wall thickness of the container with a corresponding reduction of weight, retaining the wall rigidity, this object being accomplished by paneling the walls to reduce their thickness and weight and forming in such reduced or paneled areas diagonal ribs or flutes as reinforcing means, such ribs or flutes additionally giving ornamental characteristics to the container.

Another object of the invention is the provision of a reinforced cast cover for the container, designed to be snugly engaged over its top, the top wall of the cover, exteriorly, being paneled and provided in the panel area with integral reinforcing ribs or flutes, similar to the sides of the receptacle, and, interior of the cover, provided with ribs thickened at their ends, integrally attached to the top and side walls, and extending towards the open side of the cover, for reinforcing the side walls thereof.

Another object of the invention is the provision of a clip, adapted to be secured to the battery container, formed of a single piece of sheet metal, to serve as a handle for the container and a latch for securing a cover as a container closure, in position upon and locked to the container.

Other objects and certain advantages will be disclosed in a description of the drawings

forming a part of this application, and in said drawings:

Figure 1 is a sectional elevation of the container with the cover positioned thereon, illustrating the integral partition within the container, the reinforcing ribs of the cover, and the detailed structure of the combined latch and handle.

Figure 2 is an end view of the complete device.

Figure 3 is an interior plan of the cover.

Figure 4 is a detailed vertical section on line 4—4, of Figure 1, illustrating the grid supporting ribs at the bottom of the container.

The container comprises the outside or end walls 1, base 2, and cross partition walls 3 dividing the interior of the container into a plurality of cells, the number depending on the battery size for which the container is contemplated. The container and partition walls and base constitute an integral structure, formed or moulded into shape, of a material or compound furnishing impervious acid-resisting cells, and a durable and strong container for automobile storage battery service. As the material constituent or the method of making the integral body structure do not form a part of the present invention no detailed description thereof will be given herein, although the material may be referred to as a mouldable compound suitable for storage battery cells, as a hard rubber compound. A plurality of cross ribs 4 extend upwardly from the bottom in each cell, integral with the base and cell walls, providing spaced supports for the battery plates or grids, and separators within each cell. The outer sides or end walls of the receptacle or container are formed with recessed panels having diagonally extending reinforcing ribs, or flutes, 5, said ribbed reinforcing structure permitting a reduction of the thickness of the walls and weight without sacrificing their strength, and the edges and corners which receive the greatest strains of increased thickness over the intermediate portion of the sides. The ribs, aside from their mechanical value, possess ornamental characteristics giving æsthetic value to the structure and their diagonal disposition being a preferred selection, although the configuration may be changed.

The base 2 of the receptacle is provided with a layer sub-base 6 of material designed to serve as a cushion. This may represent a piece of resilient or pliable material cemented or otherwise secured to the base of the container, or it may be homogeneous with the base. This being rendered possible in forming the base of layer portions of two different grades of rubber compound, the inner of which will vulcanize or cure hard and the outer soft, and represents a preferred form as there is no opportunity for separation of the layers or unraveling of the resilient layer at its edges, the layers being permanently bonded together.

The resilient sub-base provides for yieldingly supporting the container within a cradle when mounted in an automobile or resting upon a floor, to relieve the container from jars or shocks which might otherwise fracture or injure the walls.

A groove 7 is formed at the upper edge of the container providing a seat for a cover 10. The cover is a cast or moulded member, preferably of the same material as the container, and is provided with interior cross reinforcing ribs 11, the cross ribs at their extremities being thickened and extended towards the open end of the cover to form additional reinforcing ribs 12 for the side walls. The diagonally opposite side walls of the cover are provided with slots 13 through which the battery leads (not shown) extend. A pair of clips 15 are respectively fixed to the upper end of two opposite sides of the container, each comprising a sheet metal stamping forming a catch or latch for engagement with the cover to lock the cover to the container, when the cover is applied and as a handle for the container when the cover is removed. The clips are the duplicate of each other and as a sheet metal stamping possess a body portion having a plurality of extending tangs 16

through which screws pass to secure the clip to a wall of the container. An apertured handle portion 17 extends from the body portion providing a pair of spaced limbs 18 connected by a cross bar 19 of tubular formation furnishing a handle hold, this being formed by laterally bending and curving the opposite edges of the cross bar portion. The handle extends beyond the upper edges of the container walls, and slightly above the top surface of the cover when the cover is applied to the container. The limbs 18 are impressed to provide curved lips 20 for engagement into a longitudinal groove or recess 21 formed in opposite side walls of the cover 10. The sides of the container are formed to receive the handle in a manner adding to the ornamental appearance of the structure, and provide for a minimum weight of material without appreciably jeopardizing strength. The handle portion is sufficiently resilient to yield for applying and removing the cover and to permit the lips or lugs 20 to automatically engage with the groove 21 in the cover, and the limbs to be expressed for removing the cover. The top of the cover is paneled and diagonally ribbed and reinforced, as at 25, in a manner similar to the sides of the receptacle.

Having described my invention, I claim:

1. A receptacle cover, of mouldable material, having interior reinforcing ribs integral therewith, the opposite ends of the ribs thickened and integral with the side walls of said cover.

2. A receptacle cover, composed of rubber material cast to form, having interior reinforcing ribs, the opposite ends of said ribs thickened, cast integral with the side walls and extending towards the open end of said cover.

In witness whereof, I hereunto subscribe my name.

LEON O. PERCY.