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2,318,792

HANDLE FOR STORAGE BATTERIES

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Fig. 1

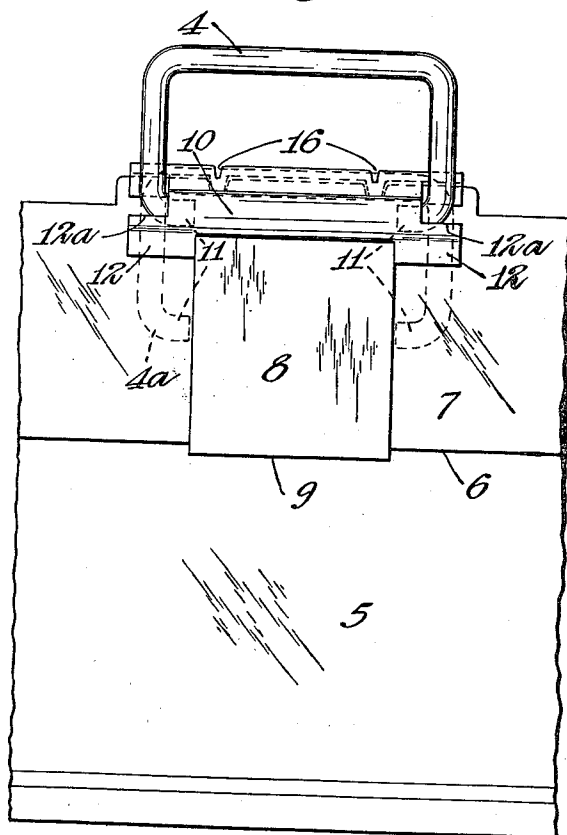


Fig. 2

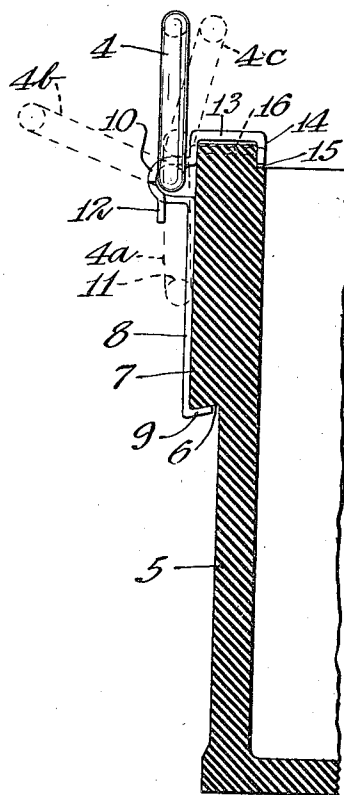
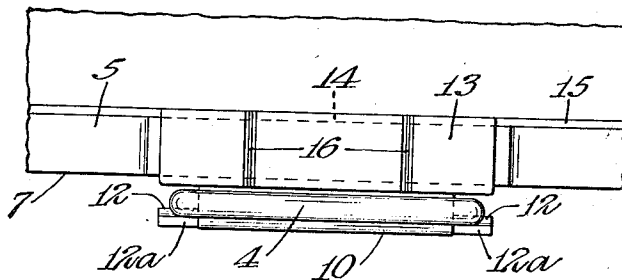


Fig. 3



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HANDLE FOR STORAGE BATTERIES

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2 Claims. (Cl. 16-115)

It is an object of this invention to provide a novel handle particularly although not exclusively designed for storage batteries of the large sizes ordinarily used for busses and other large vehicles.

A further object is to provide a handle of this class constructed from metal, adapted to be quickly and easily attached to and removed from containers formed to coact therewith and requiring no bolts or other threaded members for the connection with the container.

A particular object is to provide a novel attaching bracket adapted to be sprung into engagement with the container and an extensible and retractile grip member which when extended affords a large handle either projecting upwardly or at an end of the container and when retracted occupying a minimum of space, the device being adapted for use where the vehicle compartment for the battery is extremely restricted.

The invention will be understood by reference to the accompanying drawing in which:

Figure 1 is a side elevation of my improved handle in place on a battery container, a fragmentary portion of the latter being shown and the grip member being extended upwardly;

Fig. 2 is an end view of the handle with the wall of the container shown in vertical section, and

Fig. 3 is a plan view of the handle together with a fragmentary portion of the container to which it is attached.

My improved handle comprises a single integral attaching member and a bail-like grip member 4 in the form of a rectangular open loop adapted to project upward from the top of a container wall 5 or be pivoted to project laterally from the wall. From its upright position the member 4 may be moved bodily down to a retracted position parallel to the wall 5. Spaced downward from the top of the wall 5 is an undercut surface 6 extending across the wall at a slight incline from the outer face 7, inward and upward therefrom.

For attaching the member 4 to the container wall 5 I provide a heavy gauge sheet metal bracket which may comprise a 12-gauge cold drawn sheet steel stamping suitably plated to make it acid resistant. This bracket has a main rectangular panel 8 adapted to lie flat upon the outer face 7 of the container wall and formed with a flange 9 along its lower edge to fit and engage the undercut surface 6. Integral with the upper edge of the panel 8 is a bead 10 adapted to project from the container wall and to receive inwardly bent ends 11 formed on the grip member 4. Flanges

12 depend from the bead 10 and project laterally to a point beyond the side edges of the panel 8, leaving openings at the bottom of the bead to allow the ends 11 of the member 4 to pass downward out of the bead when the grip member is to be retracted. The upper edges 12a of the flanges 12 constitute stops for limiting swinging or pivotal movement of the member 4 outward from the wall 5. As indicated by the dotted line positions shown in Fig. 2, the range of pivotal movement is equal to approximately 90 degrees from an inner position 4c to an outer position 4b to facilitate lifting and pulling operations without imposing undue strain on the parts.

Above the bead 10 the bracket is formed with a top flange 13 adapted to extend horizontally along the top of the wall 5 and a downwardly bent flange 14 along the inner edge of the flange 13 is arranged to engage the inner surface of the wall 5, the latter being formed with a rabbeted edge 15 to receive the flange 14. A pair of spaced, parallel beads 16 are formed across the flange 13 to project from the bottom thereof into grooves formed in the top of the wall 5. These beads 16 increase the rigidity of the top flange and coact with the grooves in the wall 5 to confine the bracket against movement along the wall. By this arrangement the bracket is given great rigidity to resist forces such as those applied to the member 4 when extended outward from the end wall and in a direction tending to disengage the flanges 13 and 14 from the container wall.

The material from which the bracket is constructed is sufficiently resilient so that the flange 9 may be sprung into engagement with the container merely by striking the bead 10 at approximately its center point with a hammer after placing the rigid flanges 13 and 14 in engagement with the upper edge of the container wall. After the flange 9 has been sprung into engagement with the undercut surface 6, if it is desired to remove the handle from the container, this may be accomplished merely by inserting a tool, such as a screw driver, between the inner edge of the flange 9 and container wall and springing this flange outward.

Ordinarily a pair of my improved handles are used on each battery, the opposite end walls of the battery container being formed to receive the brackets. When the grip member 4 is not in use, it may be moved from its upwardly extended position to its retracted position 4a, illustrated in dotted lines in Fig. 2. When in the latter position it occupies a minimum of space and the horizontal grip portion rests on the top of the bead 10.

While the handle may be permitted to drop freely, it is preferred that the flanges 12, 12 be close enough to the container wall to assure a close fit of the handle and thereby hold it in its lower position without rattling. When the battery is to be carried, the handles are raised to the full line position shown in Figs. 1 and 2 in which position they afford large ball-like handles to facilitate the carrying of the battery.

It is sometimes desirable to slide a battery along a supporting surface and for this purpose the grip member 4 is raised and then swung outward from the end of the container as indicated in the dotted line position 4b shown in Fig. 2. The upper edges 12a of the flanges 12 limit the pivotal movement of the grip member when extended so that it cannot be misplaced or rendered inaccessible by turning it in a counterclockwise direction from the extended dotted line position 4b indicated in Fig. 2. The grip member is constructed from a stout rod which affords a well rounded and adequate gripping surface as well as ample strength and rigidity to carry batteries of the heavier type used in busses and other large vehicles.

Having described my invention, what I claim as new and desire to protect by Letters Patent is:

1. A handle for a battery container having an undercut surface on a side wall thereof, comprising: a bracket formed of resilient material and having a panel adapted to extend in contact with an outer surface of said wall, means upon the lower edge of said panel for engaging said undercut surface, a bead forming a continuation of the upper edge of said panel and projecting outwardly from the plane of said

panel, a grip member having inturned ends pivoted in said bead, and rigid flanges connected with said bead arranged to positively engage the top and inner surface of said container wall, said bead having upper and lower walls adapted to be spread apart to permit said engaging means to be forced beneath said undercut surface when said rigid flanges are engaged with said top and inner surface of said container wall.

2. A handle for a container, comprising: a bracket including a panel adapted to contact with an outer wall of said container; a bead at the upper edge of said panel extending outwardly from the plane of said panel and having ends projecting laterally beyond the vertical side edges of said panel and providing bearing portions for a grip member; a bail-like grip member in the form of a substantially rectangular open loop having inturned ends pivoted in said bearing portions, said bearing portions having laterally and downwardly projecting flanges arranged in substantially parallel, spaced relation to the plane of said panel, the upper edges of said flanges being adapted to be engaged by side portions of said grip member to limit the range of pivoting movement of said grip member in one direction, said bearing portions also having openings at the lower side thereof to allow said ends of said grip member to be passed downwardly out of said bearing portions, whereby said grip member can be lowered into a position where it rests upon the upper outer surface of said bead and lies in a plane substantially parallel with the plane of said panel; and means for attaching said bracket to said container.

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