July 9, 1935. W. S. YOUNG 2,007,320

QUICK CHANGE BATTERY HOLDER

Filed Oct. 30, 1934

FIG. 1.

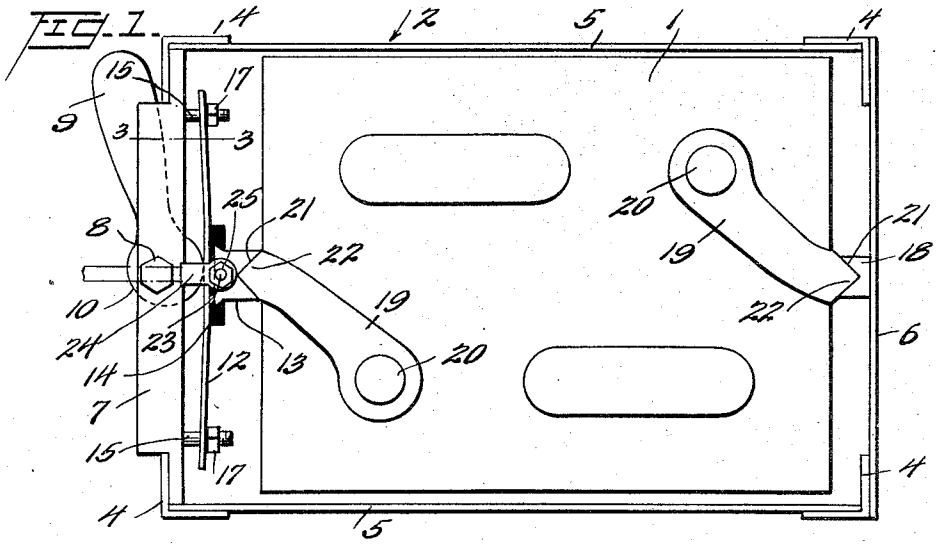


FIG. 2.

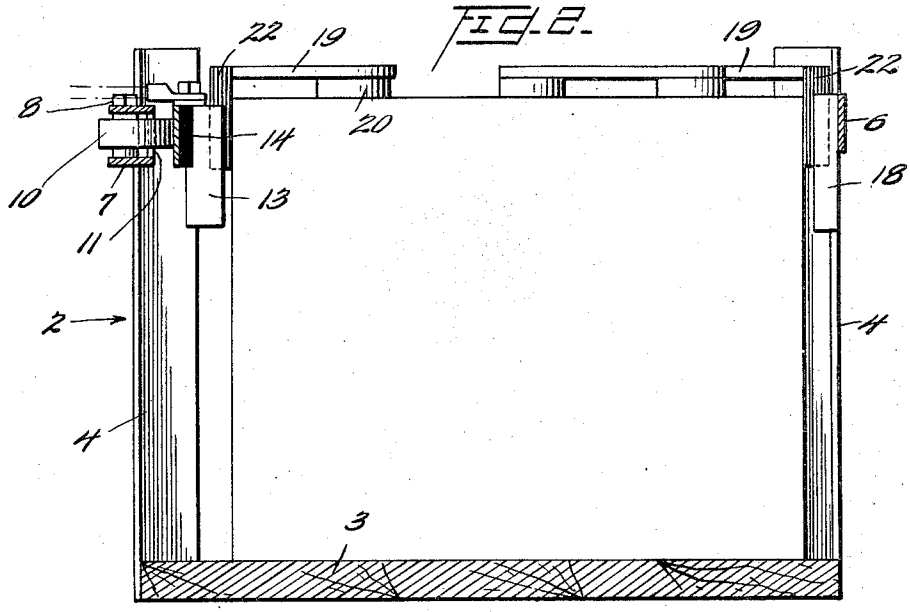


FIG. 3.

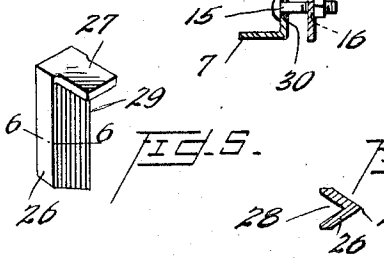


FIG. 4.

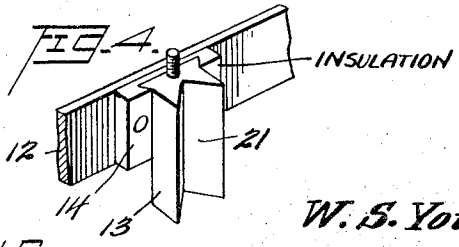


FIG. 5.

FIG. 6.

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QUICK CHANGE BATTERY HOLDER

William S. Young, Pittsburgh, Pa.

Application October 30, 1934, Serial No. 750,734

5 Claims. (Cl. 136—171)

My invention relates to a battery holder, such as is used on automobiles, and one of the objects is to provide such a holder, so that the battery can be installed and removed quickly and without the necessity of manipulating screws, nuts or similar fastening devices.

With the above and other objects in view, my invention consists in the combination, arrangement and details of construction disclosed in the drawing and specifications, and then more particularly pointed out in the claims.

Referring to the drawing for a more complete disclosure of the invention,

Fig. 1 is a top plan view of the battery holder with a storage battery in position,

Fig. 2 is a vertical longitudinal section on the line 2—2 of Fig. 1,

Fig. 3 is a detail section on the line 3—3 of Fig. 1,

Fig. 4 is a fragmentary detail view of one of the clamping sockets,

Fig. 5 is a perspective view of a spacing socket or shim for smaller batteries,

Fig. 6 is a section on the line 6—6 of Fig. 5.

The battery 1 is supported in the frame 2, carried by the frame of the car and consisting of a bottom 3, having secured thereto the vertical angle irons 4, connected at their upper ends by the longitudinal metal straps 5 and a transverse metal strap 6 at one end and a metal channel bar 7 at the other end.

Mounted in the channel bar 7 is a bolt 8, which serves as a pivot for the hand lever 9, that is provided with a cam 10, there being a cut away portion 11 in the vertical web of the channel bar 7, through which the cam can be operated by the hand lever.

Also carried by the channel bar 7 is a flexible metallic strip 12 which is engaged by the cam 10, and to which is rigidly secured the metal clamping socket 13, there being an electrically insulating plate 14 interposed between the strip 12 and socket 13. The strip 12 is loosely supported on the channel 7 by means of threaded bolts 15, the apertures 16 in the strip 12 and the apertures 30 in the channel bar being large enough to fit the bolts 15 loosely, and the nuts 17 being used for adjusting the position of the strip 12 relative to the channel 7.

Carried by the bar 6 is a metal socket 18 rigidly secured thereto and similar in design to the socket 13.

Rigidly secured to the posts 20 of the storage battery are the metallic conducting members 19 that have a wedge shaped end 22 that will fit in the angle 21 of the clamping sockets 14 and 18.

Secured to the socket 13 is the threaded post 23 to which is secured the lug 24, held in place by the nut 25, for connection with the wire leading to the various electrical accessories on the vehicle, such as the starter, headlights, etc. The opposite pole of the battery is grounded through the metallic frame 2 in the usual manner.

When the battery is much smaller than the frame 2, an additional metal socket, in the form of a shim 26, Fig. 5, may be inserted between the clamping sockets carried by the frame 2 and the wedge shaped end 22 of the arm 19. This shim has a lug 27 that will support it until tightened in place, by setting the cam up tight, and is also provided with a V-groove 28 for engaging with the wedge shaped end 22 of the member 19 and a wedge shaped side 29 for engaging with the angle 21 of the socket members.

The members 19 having been secured to the posts 22 of the battery, the battery is inserted in the supporting frame 2, so that the wedge shaped ends 22 thereof engage with the angles 21 of the metal sockets carried by the frame and then by merely setting up the cam lever 9, the battery will be held securely in position in the frame. The flexible metal strip 12 can be adjusted through the nuts 17, so that when the cam is set up tight, the strip 12 will bend sufficiently so that it will be tight up against the nuts 17. With a construction of this character, it will be seen that I can quickly change the battery in the car.

What I claim is:—

1. A battery holder comprising in combination, a battery provided with rigid conducting arms secured to the battery terminals, a frame for holding the battery, interengaging means at the top of the battery on the arms and frame and in alignment along the longitudinal axis of the battery for rigidly holding the battery in the frame and for conducting current and manually operated means for forcing the interengaging means tightly together.

2. A battery holder comprising in combination, a battery provided with rigid conducting arms secured to the battery terminals, a frame for holding the battery, metallic conducting members carried by the top of the frame and provided with a V-shaped slot, the conducting arms being provided with a wedge shaped end at the top of the battery and manually operated means for forcing the wedge shaped ends into tight contact with the V-shaped slots to rigidly hold the battery in the frame, the ends of the conducting arms

being in alignment along the longitudinal axis of the battery.

3. A battery holder comprising in combination, a frame for holding the battery, a contacting member carried by each end and at the top of the frame, a rigid conducting arm secured to each of the two battery terminals and provided with a part at the top of the battery for engaging the contacting members and manually operated means for moving one of the contacting members to clamp the conducting arms and contacting members into tight relationship to rigidly hold the battery in the frame.

4. A battery holder comprising a frame for holding the battery and comprising transverse bars at the ends and top of the frame, a rigid conducting arm secured to each of the two battery terminals, means carried by each of the transverse bars for engaging the ends of the conducting bars at the top of the frame and manually operated means carried by the frame for forcing the conducting bars into tight engagement with the engaging means on the transverse bars to rigidly hold the battery in the frame.

5. A battery holder comprising a frame for holding the battery and comprising transverse bars at the ends and top of the frame, a rigid conducting arm secured to each of the two battery terminals and provided with a wedge shaped end, the two ends being in alignment and along the longitudinal axis of the battery, a flexible metallic strip secured at its ends to one of the transverse bars and provided with a metallic conducting member provided with a V-shaped slot, another metallic conducting member with a V-shaped slot secured to the transverse bar at the opposite end, and a manually operated cam carried by the first transverse bar and engaging the flexible metallic strip to clamp the battery in position.

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