Oct. 21, 1930. E. J. RICHARDSON 1,779,291

BATTERY CARRIER

Filed Feb. 27, 1930

Fig. 1.

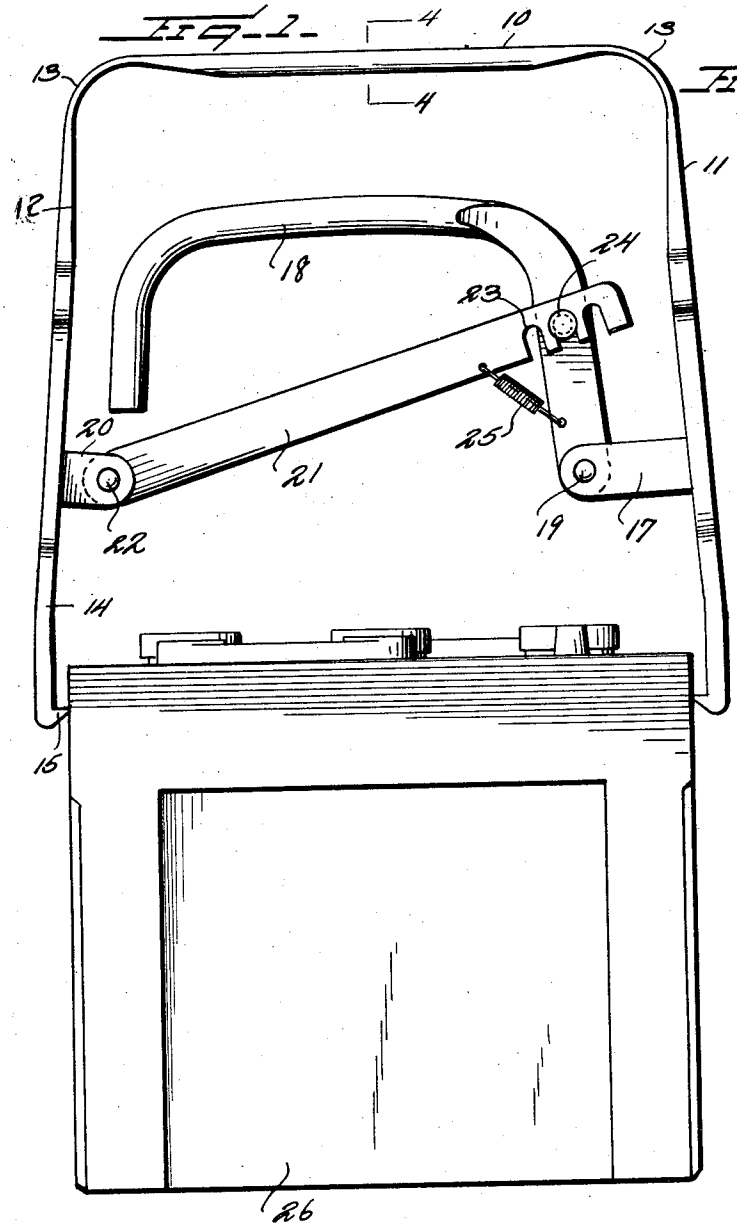


Fig. 2.

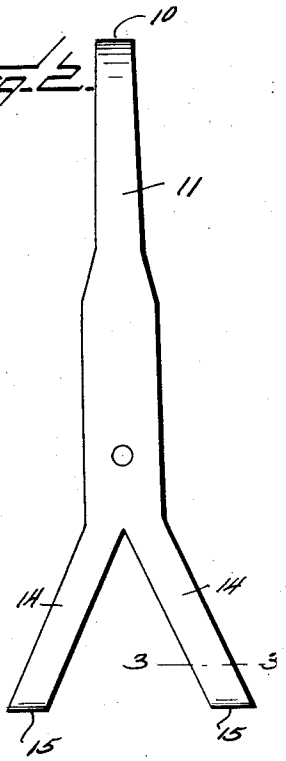


Fig. 3.

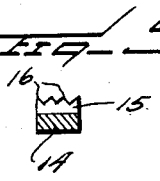


Fig. 4.



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UNITED STATES PATENT OFFICE

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BATTERY CARRIER

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The present invention relates to carrying devices and more particularly to devices adapted for use in the carrying of storage batteries or the like.

An object of this invention is to provide a removable structure which may be readily positioned about a storage battery and which will permit the ready lifting or carrying of the battery.

Another object of this invention is to provide a resilient handle structure which cooperates with the gripping members to firmly grip the battery upon the opposite ends thereof or on the opposite sides, the weight of the battery causing the resilient jaw members of the device to move inwardly whereby to obtain a firmer grip upon the object which is being carried.

A further object of this invention is to provide an adjustable handle structure by which batteries or objects of varying sizes may be lifted or moved from point to point.

A still further object of this invention is to provide a handle structure wherein the gripping jaw members are so constructed as to prevent swinging of the battery or object upon the carrier, thereby preventing spilling of any of the contents of the battery.

The above and various other objects and advantages of this invention will in part be described in and in part be understood from the following detailed description of the present preferred embodiment, the same being illustrated in the accompanying drawing wherein:—

Figure 1 is a detail side elevation of a device constructed according to the preferred embodiment of this invention showing the method of removably mounting the device on a battery;

Figure 2 is a detail end elevation of the device;

Figure 3 is a sectional view taken on the line 3—3 of Figure 2; and

Figure 4 is a sectional view taken on the line 4—4 of Figure 1.

Referring to the drawing wherein like numerals of reference designate corresponding parts throughout the several views, the numeral 10 designates a handle portion of elongated construction having the opposite end portions thereof bent downwardly so as to provide a pair of clamping or jaw members 11 and 12. The handle 10 and the jaw members 11 and 12 are preferably formed integrally, and the intermediate or curved portion 13 between the handle 10 and the depending jaw members 11 and 12 is preferably substantially restricted or considerably thinner than the body of the handle 10 or the thickness of the jaw members 11 and 12 so as to provide a substantially resilient or yieldable connection between the handle and the jaw members.

The handle 10 is preferably constructed in substantially oval or rounded cross sectional form, and the outer end portions of the handle are tapered so as to form the arcuate resilient portion 13. The restricted portion 13 is preferably substantially thinner than the thickness of the jaw members 11 and 12.

The jaw members 11 and 12 are preferably of similar construction having a forked or bifurcated lower end portion 14, and the lower ends of the bifurcated portion 14 are preferably turned inwardly as at 15 so as to provide a pair of gripping or clamping members for each of the jaw members. The inwardly extending lugs 15 may be of any desired length and are provided with a plurality of teeth 16 on the inner edge portions thereof, the teeth 16 being adapted to engage upon the opposite ends or the sides of the battery.

The jaw member 11 is provided with an inwardly extending lug or arm 17 spaced upwardly from the lower end portion thereof, and a swinging arcuately inclined compressing handle member 18 is secured at one end to the inwardly extending lug 17 as by bolts or rivets 19 or the like, the opposite end of the compressing member being free and positioned spaced inwardly from the opposite jaw member 12.

The jaw member 12 is provided with an inwardly extending lug 20 which is in substantial alignment with the lug member 17, and likewise positioned spaced upwardly from the lower end portion of the jaw member 12.

An adjustable link member 21 is swingingly mounted on the lug 20 by a bolt or the like 22, and the opposite end portion of the link

member 21 is provided with a plurality of notches 23 which preferably open through the lower edge portion of the link 21.

The compressing handle member 18 is provided with an outstanding headed pin or bolt 24 spaced upwardly from the pivoted end of the handle, and the link member 21 is adapted to be adjustably positioned upon the pin 24, the pin 24 engaging a selected notch 23 in the link 21.

A tensioning member or spring 25 is secured at one end to the compressing member 18 intermediate the pin 24 and the pivoted end 19, and is secured at the opposite end to the link member 21 spaced inwardly from the notched end therof.

In the use of this device, the jaw members 11 and 12 may be adjusted so that the space between the lug members 15 will be approximately the width or the length of the battery 26 whereupon the jaw members 11 and 12 may be positioned about the opposite ends of the battery 26, and the adjustable link member 21 positioned upon the pin 24 in the predetermined notch 23 thereof. When the lug members 15 are positioned below the upper edge portion of the battery 26, the compressible handle member 18 may be moved upwardly by the hand about the fixed handle member 10, whereupon the link member 21 will force the jaw members 11 and 12 inwardly so that the teeth 16 on the lugs 15 will firmly grip the opposite ends or sides of the battery 26.

It is, of course, understood that the casing of the battery 26 may be of any composition such as hard rubber, wood or the like, and that the teeth 16 will firmly grip the casing of the battery. If desired, the lug members 15 may be slightly elongated so that where a battery has a flange extending outwardly about the upper edge portion thereof, the lug member may grip the battery beneath the flange or any of the other outstanding portions of the battery.

The upward movement of the compressible member 18 will force the jaw members 11 and 12 inwardly against the tension of the resilient portions 13, and when the device is moved upwardly, the weight of the battery 26 will cooperate with the compressible member 18 so as to force the opposite jaw members 11 and 12 inwardly. The forked lower end portions 14 of the jaw members 11 and 12 will prevent the battery from swinging upon the jaw members so that none of the contents of the battery will be spilled.

It will be noted from the foregoing that a simple and efficient clamping structure has been devised by means of which a battery may be removed from a vehicle or the like without spilling any of the contents of the battery and injuring the upholstery or the like of the vehicle.

It is understood that in most cases, batteries for motor vehicles are constructed without any handle structure which would permit lifting of the battery with one hand, and while most batteries are constructed with handles on the opposite ends thereof, when it is desired to remove a battery from a vehicle, it is frequently necessary to hold a number of the connecting wires away from the battery and this is practically impossible for one person to do unless a device similar to the carrier structure herein disclosed is used.

It is, of course, understood that various changes and modifications may be made in the details of construction and design of the above specifically described embodiment of the invention without departing from the spirit thereof, such changes and modifications being restricted only by the scope of the following claims.

What is claimed is:—

1. A battery carrier of the character described comprising a handle, a pair of jaw members yieldably secured to said handle and depending therefrom, and rockable compressing means for said jaw members.

2. A battery carrier of the character described comprising an elongated handle, a pair of depending bifurcated jaw members, battery gripping means on said jaw members, and adjustable compressing means pivotally carried by one of said jaw members and engaging the other of said jaw members whereby to swing said jaw members inwardly and about the opposite end portions of a battery.

3. A battery carrier of the character described comprising a handle, a pair of bifurcated jaw members, resilient connecting means connecting said handle and said jaw members, toothed gripping lugs secured to said jaw members at the lower end portions thereof, and adjustable compressing means for said jaw members pivotally carried by one of said jaw members and engaging the other of said jaw members.

4. A battery carrier of the character described comprising a handle, a pair of jaw members having bifurcated lower end portions, resilient connecting means connecting said jaw members to said handle, inwardly extending lug members mounted on the lower end portions of said jaw members, and adjustable compressing means swingingly mounted between said jaw members and adapted to force said jaw members inwardly against the tension of said resilient connecting means.

5. A battery carrier of the character described comprising a handle, a pair of bifurcated jaw members, resilient connecting means connecting said jaw members to said handle, an inwardly extending lug secured to one of said jaw members spaced upwardly from the lower end portion thereof, a swinging compressing member swingingly mount-

ed on said lug, and adjustable means carried by the opposite jaw member and engaging said compressing member whereby to permit adjustment of said jaw members, one with respect to the other, said jaw members being adapted to be swung inwardly upon movement of said compressing member.

6. A battery of the character described comprising a handle, a pair of bifurcated jaw members, resilient connecting means connecting said handle and said jaw members, battery gripping means secured to the lower end portions of said jaw members and extending inwardly thereof, an inwardly extending lug secured to one of said jaw members spaced upwardly from the lower end portion thereof, an arcuately inclined compressing member swingingly mounted on said lug, a second inwardly extending lug secured to the opposite jaw member spaced upwardly from the lower end portion thereof and in substantial alignment with said first jaw member, a notched link swingingly mounted on said second lug, and an outstanding pin secured to said compressing member and adapted for engagement with a selected notch in said link whereby to adjustably position said jaw members about a battery.

7. A battery carrier of the character described comprising a handle, a pair of bifurcated jaw members, resilient means for securing said jaw members to said handle, said bifurcated portions of said jaw members having inwardly extending toothed portions whereby to engage the opposite end portions of the battery, an inwardly extending lug carried by each of said jaw members spaced upwardly from the lower end portion thereof, a compressing member swingingly mounted on one of said lugs, a notched link member swingingly mounted on the other of said lugs, an outstanding pin mounted on said compressing member and adapted for engagement with a selected notch in said link member, and yieldable means for holding said link member into engagement with said outstanding pin.

In testimony whereof I hereunto affix my signature.

EDWARD J. RICHARDSON.