May 5, 1925. 1,536,241

W. SROKA

STORAGE BATTERY LUG REMOVER

Filed July 22, 1921

Fig. 3.

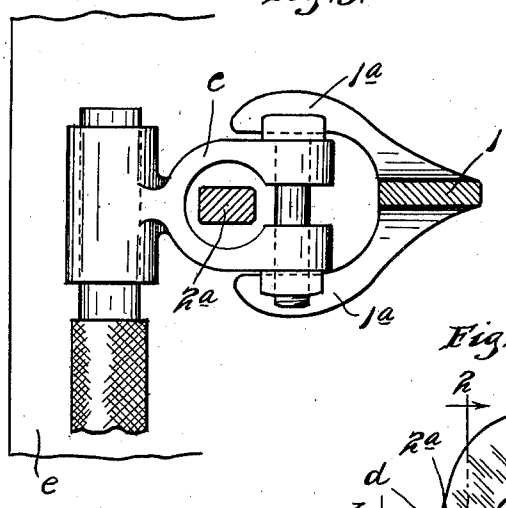
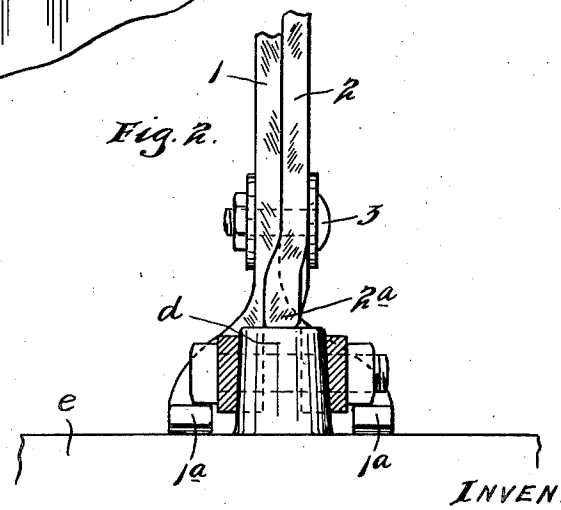


Fig. 1.

Fig. 2.



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UNITED STATES PATENT OFFICE.

WALTER SROKA, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR OF ONE-HALF TO JAMES F. WILLIAMSON, OF MINNEAPOLIS, MINNESOTA.

STORAGE-BATTERY-LUG REMOVER.

Application filed July 22, 1921. Serial No. 486,877.

To all whom it may concern:

Be it known that I, WALTER SROKA, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Storage-Battery-Lug Removers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an implement particularly designed for use in removing the conductor attaching lugs of storage batteries from the binding posts thereof. While the implement is particularly designed for this use, it is apparent that it could be used to remove any similar device from a post or other member to which it is secured or clamped.

It is an object of this invention to provide such an implement in the form of a pair of pliers, one member of which is formed to engage under the said lug at each side thereof and the other member of which is formed to engage the top of the post so that when the pliers are closed the lug will be forced upwardly along the post, said post constituting a base of reaction.

This and other objects and advantages of the invention will be apparent from the following description made in connection with the accompanying drawings in which like reference characters refer to the same parts throughout the different views, and in which

Fig. 1 is a view in side elevation of the device showing the method of its use;

Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1, looking in the direction of the arrows; and

Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1, looking in the direction of the arrows.

Referring to the drawings, the device is formed as a pair of pliers having handle portions 1 and 2, the extreme ends of these portions not being shown in the drawing. These portions are connected by the usual pivot member 3 and the member 1 beyond or beneath said pivot, is bent at substantially a right angle and formed with spaced jaw members 1^a of general semi-cylindrical shape, which members taper toward their front edges. The members 1^a thus enclose the slot having parallel sides joined by a rear curved portion. The center line between the jaw members is offset somewhat from the center line of the hande 1, as will be clearly observed in Figs. 2 and 3. The member 2 is bent at an angle somewhat greater than a right angle at its pivot portion to extend approximately to the end of the jaw member 1^a when it is again bent at a substantial right angle to form a short flat ended projection 2^a, the longitudinal axis of which is substantially normal to the plane of said jaws. It will thus be seen that when the members 1 and 2 are swung about the pivot 3, the projection 2^a will swing in an arc, the general direction of which is substantially normal to the plane of the jaws 1^a.

In operation, the device is used to remove a lug *c* clamped to a post *d* by a suitable headed and nutted bolt which post *d* extends from a battery casing *e*. In use, the jaws 1^a are inserted either under the lug *c* or under the head and nut of the clamping bolt, as shown in Figs. 2 and 3 and the projection 2^a brought into contact with the top of said post. As the members 1 and 2 are then swung together, the lug *c* will be moved upwardly along the post and loosened and removed therefrom, the post constituting a base of reaction, so that no twisting or breaking strain is applied thereto. These storage battery lugs become coated with the acid and constituents of the battery and usually adhere very tightly to the post. If an attempt is made to twist the same from the post, the posts are often twisted off. By the use of applicant's device, as described. the lugs can be quickly and easily removed without any danger of damage or breaking off the binding post.

From the above description it is seen that applicant has produced a simple and inexpensive tool which is very efficient for the purposes had in view. The tool has been thoroughly demonstrated in practice and has been very successfully used.

It will, of course be understood that various changes may be made in the form, details and proportions of the device without departing from the scope of applicant's invention, which, generally stated, consists in the matter shown and described and set forth in the appended claims.

What is claimed is:

1. A storage battery lug removing implement comprising a pair of pliers, one hav-

ing a bifurcated head disposed in a plane at right angles to its handle portion and the other having a flat ended head centrally alined with said bifurcation and adapted to swing in a plane substantially normal to said bifurcated head.

2. A storage battery lug removing implement comprising a pair of pliers, one of the same having adjacent their pivot beyond the handle portion a flat head having an open ended slot therein and the other plier having its end positioned to swing substantially normal to the plane of said head.

3. A pair of pliers, one of the same having its end bent to extend approximately in the plane of their swinging movement and then again bent at approximately a right angle in said plane ending in a flat ended projection, the other plier having its end formed with flat spaced jaws extending substantially normal to the longitudinal axis of said projection.

4. A device of the class described comprising a pair of plier members, one having a pair of spaced flat jaws at one end and the other a flat headed projection constructed and arranged to swing in a plane substantially normal to the plane of said jaws.

5. A storage battery lug removing implement comprising a pair of handled pliers, one having spaced tapered means adapted to extend under the sides of the lug, and the other plier having a flat end portion adapted to contact the top of the lug post and swing in a plane substantially parallel with the longitudinal axis thereof whereby when said pliers are operated, the lug will be moved up along the post, the latter serving as a base of reaction.

6. A device of the character described comprising a pair of elongated members pivoted adjacent their ends, one of said members having its end adjacent the pivot offset but extending substantially parallel to its length and adapted to engage the post of a storage battery and the other member having its adjacent end extending substantially at a right angle to its length and adapted to engage a lug on said post and to move the same substantially parallel to said post.

7. A tool for removing battery terminals from battery posts comprising a pair of handles having their forward portions pivotally connected and formed with jaws, one of the jaws being extended laterally from the tool and provided with a forwardly directed post contacting lug, the other jaw being formed with a laterally bifurcated branch adapted to straddle the post and to contact with the underside of the terminal member whereby to elevate the terminal member when the handles are drawn together.

8. A device of the character described comprising elongated elements pivotally connected intermediate their ends, one of said elements being bent angularly to one side and bifurcated and the other element being bent laterally to one side and having a portion thereon disposed in line with the bifurcation of the first mentioned element.

In testimony whereof I affix my signature.

WALTER SROKA.