June 5, 1934. W. C. BERRYMAN 1,961,955

BATTERY AND SIMILAR CONNECTION

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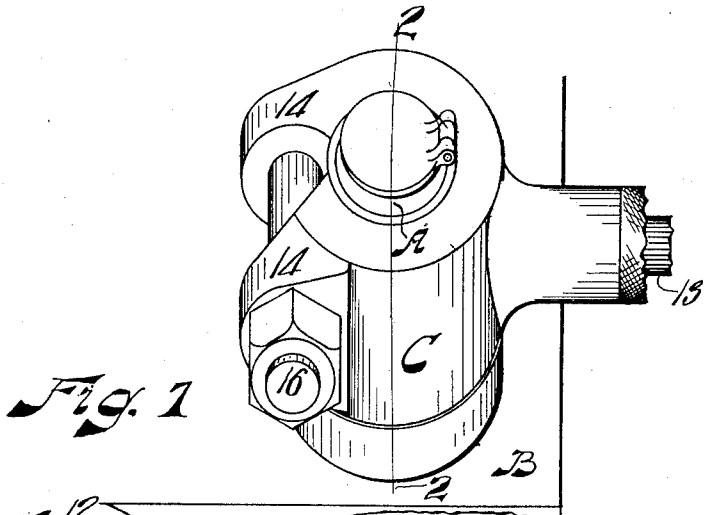


Fig. 1

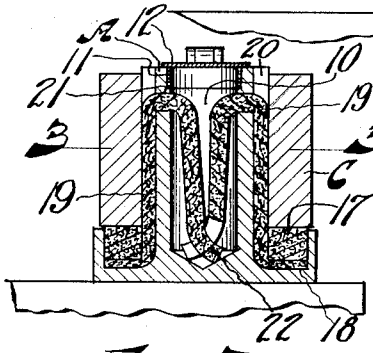


Fig. 2

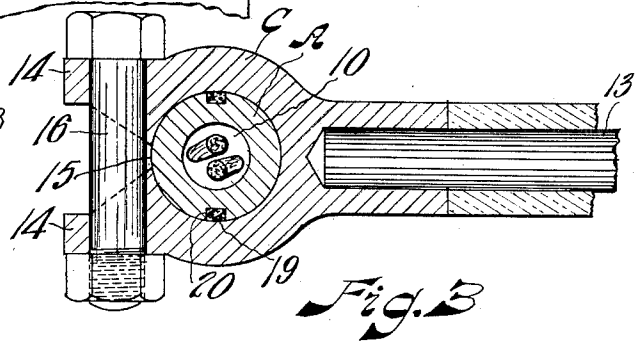


Fig. 3

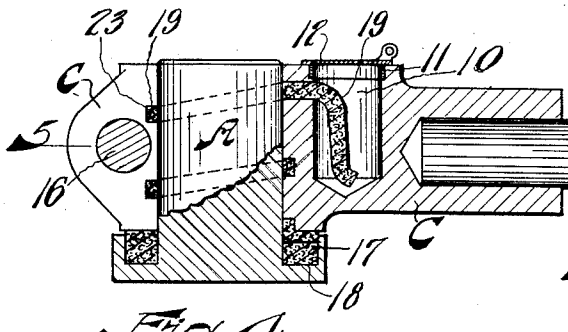


Fig. 4

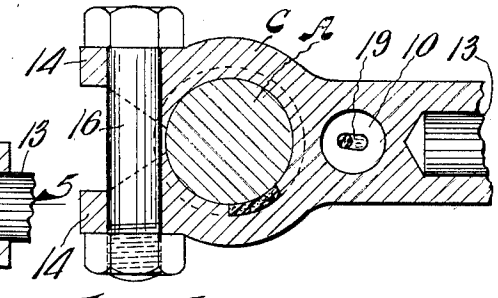


Fig. 5

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BATTERY AND SIMILAR CONNECTION

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Application February 11, 1932, Serial No. 592,211

11 Claims. (Cl. 173—259)

My invention relates to battery and similar connections and means for preventing corrosion thereof.

In battery and similar connections it is always found that a certain amount of corrosion takes place at the juncture of the connection of a lead wire to a battery or similar terminal and that such corrosion is not only injurious to the joint but also partly destroys the connecting parts and, in time, may destroy them entirely.

The object of my invention is to provide a means for battery or similar connection whereby the joint between the connecting member is lubricated or otherwise made corrosion proof either wholly or partly and wherein the corrosion preventing material is confined to the connection.

I attain my object by the mechanism illustratively shown in the accompanying drawing forming part of this specification in which drawing:

Fig. 1 is a perspective view of a battery connection embodying my invention.

Fig. 2 is a longitudinal section of the connection shown in Fig. 1 taken on the line 2—2.

Fig. 3 is a transverse section of the connection shown in Fig. 1 taken on the line 3—3 in Fig. 2.

Fig. 4 is a longitudinal section of the connection showing a modified application of the wick.

Figure 5 is a longitudinal section of the connection shown in Figure 4 taken on the line 5—5.

Similar reference characters refer to similar parts throughout the views.

Referring specifically to Figs. 1, 2 and 3. The battery post or member A, as shown, extends upwardly from the top of the battery B, has the hole 10 extending longitudinally into the end of the post to act as or form a reservoir for corrosion preventing material. The cover 11 is on the top of the battery terminal to protect the material in the reservoir against pollution and has the lid 12 hinged thereon for easy and convenient access to the reservoir.

It is obvious that a reservoir can be supplied in other manners, as an oil cup for instance, but a hole in the battery post, or in the wire lead connector is the most convenient and does not project very much outside of the usual connection members.

The lead wire terminal or member C, as shown, has the lead wire 13 therein and also has the central bore fitting over the battery terminal A and also has the ears 14 extending horizontally outwardly and on each side of the slit 15 with the bolt 16 through the ears to clamp the wire terminal C onto the battery terminal A as usual.

The washer 17, made of material described below, is located in the groove 18 of the battery terminal A but may be placed in a similar groove in the lead wire terminal C or may merely be placed in between the two terminals without a groove.

The two wicks 19, made of material for purposes described below, are sinuous by being placed into the corresponding grooves 20 provided in the terminal A and each extends through the hole 21 in the terminal A and one end 22 of each extends to or nearly to the bottom of or into the reservoir in the terminal A while the other end thereof extends through the hole 21 and the groove 19 and to the washer 17 and preferably to under the washer as shown.

It is to be noted that the groove 20 is open to the atmosphere at the top of the connection and above the top of the wick. This provides a vent means to prevent siphoning by and through the wick.

The wicks or the washer, or both, are preferably made of material which is quite absorbent and resiliently compressible and conductive of the material used in the reservoir so that it conveys the material from the reservoir to the washer due to capillary attraction and thereby saturates the washer with the material and at the same time conveys material to the joint between the battery and the lead wire terminals longitudinally of the joint. The corrosion preventing material is to creep along the entire joint and even over the outside of the connection members and to keep them in an unctuous condition and thereby prevents corrosion thereof.

The wicks and the washer are, preferably, made of material which is not affected detrimentally by the acid or acid fumes from the battery. I have found that wool or wool fabrics or some asbestos answers the purpose very well and are not affected very much by the acid or acid fumes and conducts the corrosion preventing material very well. I have also found that cotton material or cotton containing materials are not very good for such purposes since the acid or acid fumes do quickly destroy the cotton part thereof.

The material used in the reservoir 10 may conveniently be common machine oil although any other substance which can convey itself through the wick can be used. Such material may contain a substance which prevents corrosion more effectively than the oil alone. Ammonia, for instance, is such a substance and will readily mix with the oil. The object being to have the material of such a nature that it will creep along the joint of the terminals and over the outside of the

joint members to retain the same in an unctuous condition to prevent corrosion of the connection members.

Referring to Figs. 4 and 5. This device locates the one wick 19 in the wire lead terminal instead of the two wicks in the battery terminal of Figs. 1, 2 and 3.

The wick and washer and general principle of Figs. 1, 2, and 3 is followed in this modification. The wick 19 is placed into the spiral groove 23 in the wire lead terminals in this instance. The description for Figs. 1, 2 and 3 appears to be adequate for description of this modification.

A groove corresponding to the groove 19 can also be put into the battery post as well as into the lead wire terminal so that a diametrically larger wick can be used or the grooves made more shallow for the same size of wick although this structure will have some disadvantages in the assembly of the connection.

I am aware that structural and functional changes can be made in a device of the character described within the spirit and intent of my invention and of the appended claims; therefore, without limiting myself to the precise structure and arrangements as shown and described,

I claim:

1. A connection comprising connecting members having a joint between the same, a reservoir for corrosion preventing substance in the top of said connection, a groove in the joint of said members, and a wick having a part thereof extending into said reservoir and a part thereof extending out of said reservoir at the top thereof and a part thereof extending into said groove.

2. A connection comprising connecting members having a joint between the same, a reservoir for corrosion preventing substance in the top of one of said members, a groove in said joint, and a wick having one end thereof extending into said reservoir, the other end thereof extending into said groove, and a portion intermediate said ends extending from the top of said reservoir to the top of said groove.

3. A connection comprising connecting members having a joint between the same, a reservoir for corrosion preventing substance in one of said members, an absorbent washer between said members adjacent to said joint thereof, said washer being inclosed to retain corrosion preventing substance therein, and a wick leading from said reservoir to said washer.

4. A battery connection comprising a reservoir in the top of said connection and being open at the top, a cover for the open top of said reservoir, a transverse bore leading from said reservoir to the contact surface of said connection, a spiral groove in said contact surface and leading to said bore, and a wick extending from said reservoir and through said bore and into said groove.

5. In a connection, a connection post having a reservoir therein and a groove in the contacting surface thereof, a lead wire connection clamped onto said post, corrosion preventing material in said reservoir, and a wick having a part thereof extending into said reservoir and a part thereof extending into said groove to capillarly convey said material from said reservoir to said contacting surface.

6. In a connection, a connection post having a groove in the contacting surface thereof, a lead wire connection having a reservoir therein and being clamped onto said post, corrosion preventing material in said reservoir, an absorbent resiliently compressible washer between said post and said lead wire connection, and a wick having a part thereof extending into said reservoir and a part thereof extending through said groove and a part thereof extending to said washer to capillarly convey said material from said reservoir to said contacting surface and to said washer.

7. In a connection, a connection post, a lead wire connection having a reservoir thereon, a groove in the contacting surface thereof longitudinally of the joint thereof and being clamped onto said post, in the post contacting surface of said lead wire connection, corrosion preventing material in said reservoir, and a wick extending into said reservoir and into said groove to capillarly convey said material from said reservoir to said contacting surface.

8. In a connection, a connection post, a lead wire connection having a reservoir therein, a groove in the post contacting surface thereof, longitudinally of the joint thereof, and being clamped onto said post, corrosion preventing material in said reservoir, an absorbent resiliently compressible washer between said post and said lead wire connection, and a wick having one end thereof extending into said reservoir, the middle part thereof extending through said groove and the other end thereof extending to said washer to capillarly convey said material from said reservoir to said contacting surface and to said washer.

9. A battery having a terminal post and a reservoir therein and a groove in the exterior contacting surface thereof, corrosion preventing material in said reservoir, and a wick having one end thereof extending into said reservoir and a part thereof extending through said groove to capillarly convey said material from said reservoir to said contact surface.

10. A battery having a terminal post with an open top and a reservoir in the free end thereof and a groove in the contacting surface thereof, corrosion preventing material in said reservoir, a cover for said open top comprising a hinged lid, and a wick having one end thereof extending into said reservoir and a part thereof extending through said groove to capillarly convey said material from said reservoir to said contacting surface.

11. A battery having a terminal post, a reservoir axially therein and a contact surface thereon spaced from the reservoir, corrosion preventing material in said reservoir, an absorbent resiliently compressible washer at the bottom of said post, and a wick having one end thereof extending into said reservoir and the other end thereof in contact with said washer to capillarly convey said material from said reservoir to said washer.

WARREN C. BERRYMAN.