

April 18, 1933.

C. W. DOREMUS

1,903,808

ELECTRICAL TERMINAL

Filed June 3, 1929

2 Sheets-Sheet 1

FIG. 1

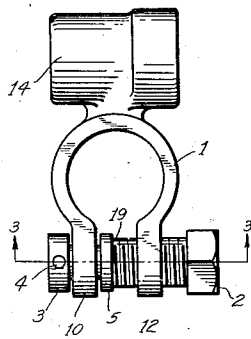


FIG. 2

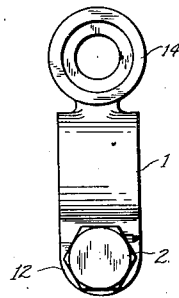


FIG. 3

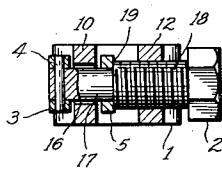
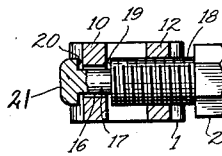


FIG. 4



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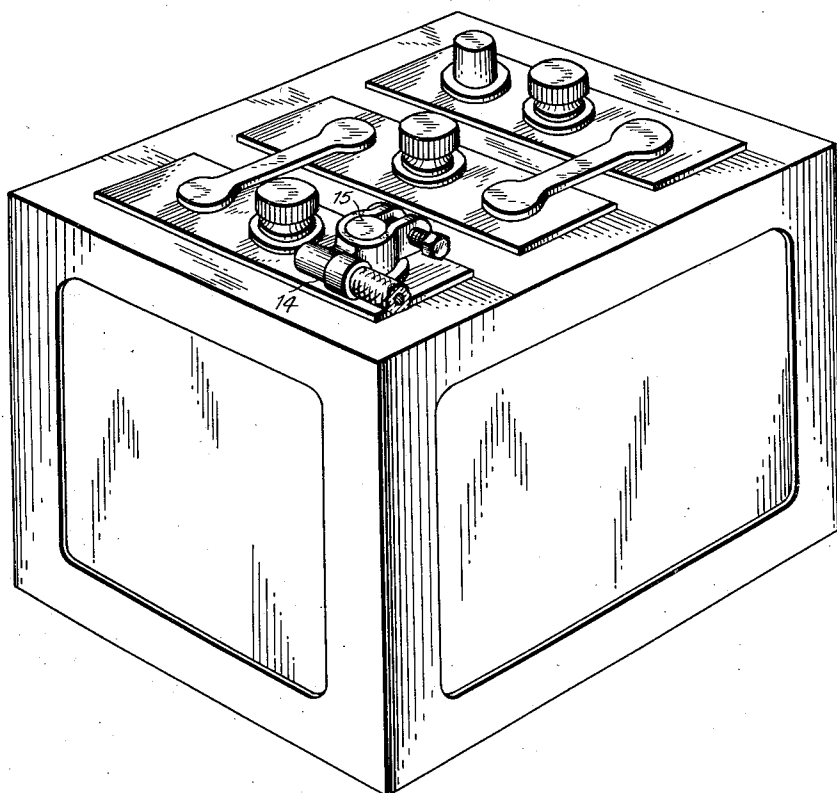
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2 Sheets-Sheet 2

FIG. 5



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UNITED STATES PATENT OFFICE

CORNELIUS W. DOREMUS, OF WASHINGTON, DISTRICT OF COLUMBIA

ELECTRICAL TERMINAL

Application filed June 3, 1929. Serial No. 367,956.

(GRANTED UNDER THE ACT OF MARCH 3, 1883, AS AMENDED APRIL 30, 1928; 370 O. G. 757)

My invention relates broadly to electric terminals, and more particularly to a clamping device for an electric terminal.

One of the objects of my invention is to provide a clamp for an electric terminal which may be readily adapted to or removed from a member constituting an electric conductor.

Another object of my invention is to provide a clamp for an electric conductor having means for positively moving parts of the clamp to a position to grip the conductor or to a position for readily removing the clamp from the conductor opposing any tendency of the clamp to adhere or cling to the conductor.

Still another object of my invention is to provide a construction of control device for a clamp constituting a part of an electric terminal which device is readily adaptable to forms of clamps of standard construction for imparting movement to the clamp in a manner to positively grip the terminal or positively remove the clamp from the terminal.

A further object of my invention is to provide a construction of clamping device for electric terminals where parts of the clamp may be moved to a position for gripping the electric terminal and moved in an opposite direction to permit the ready removal of the parts of the clamp from the terminals.

Other and further objects of my invention reside in the construction of adjusting devices for the clamps of electric terminals, as set forth more clearly in the specification hereinafter following and shown in the accompanying drawings, in which:

Figure 1 is a plan view showing the arrangement of clamp and control devices therefor embodying the principles of my invention; Fig. 2 is an end view of the clamp and control device illustrated in Fig. 1; Fig. 3 is a partial cross-section on line 3—3 of Fig. 1 with parts shown in side elevation; Fig. 4 is a cross-sectional view of a modified form of terminal clamp embodying my invention; and Fig. 5 is a perspective view illustrating the application of my invention

to the terminal post of a storage battery.

My invention is particularly applicable to terminals for storage batteries where the terminal is exposed to corrosive acid and can only be removed under great difficulty. I provide means where the control device which brings about the gripping function of the clamp about the storage battery posts may also be employed to positively separate the clamping means from the post by rotation of the control device in the opposite direction. The advantages of the device of my invention will be more fully appreciated when working under the difficulties which are encountered in corroded terminals of storage batteries. By reversing the direction of rotation of the control device in the clamp the clamping arms are positively separated for removing the clamp from the storage battery terminal.

Referring to the drawings in detail, reference character 1 designates a clamp having arms 10 and 12 projecting substantially parallel to each other. Clamp 1 which receives the terminal post 15 of a storage battery is integrally connected to a lug or socket 14 into which one end of a wire is secured, as shown more clearly in Fig. 5. The arm 10 is apertured as represented at 16 to permit the passage of the cylindrical portion 17 of screw threaded member 18 which engages screw threads interiorly formed in arm 12. The member 18 is provided with a gripping head 2 which may be engaged by a tool for applying the clamp to a conductor or removing the same therefrom. The cylindrical portion 17 of screw threaded member 18 projects through apertures 6 in arm 10. The cylindrical portion 17 carries a washer 5 about its inner end and at its outer end is provided with a rim member or collar 3 secured thereon by suitable means such as pin 4. The screw 18 has a shoulder 19 against which the washer 5, which fits about cylindrical portion 17, abuts.

When it is desired to apply the clamp to a conductor or post 15 a tool is fitted around head 2 of member 18 and the screw revolved in a direction to draw the arms 10 and 12. The ring 3 abuts against the outside face of

arm 10 in the process of drawing the arms together.

When it is desired to remove the clamp from a terminal post or conductor the head 2 is revolved in the opposite direction, thereby forcing member 5 against the inside face of arm 10 and under continuous movement spreading the arms 10 and 12 to that degree necessary to remove the clamp from the terminal post of the conductor.

In Fig. 4, I have shown a form of screw member for the clamp wherein one end of the cylindrical portion 17 is upset or keeled over as illustrated at 21 with the head provided with an annular abutment 20 which engages the outside face of the jaw 10 for drawing the jaws 10 and 11 together in the form of a clamp about the terminal post. In this form of construction, I find it unnecessary to employ a ring member 5 and I may employ the shoulder 19 at the junction of the cylindrical portion 17 and screw threaded portion 18 for abutting with the inner face of jaw 10 for forcing the jaws 10 and 11 apart when the terminal is to be removed from a storage battery.

I have found the device of my invention extremely practical in its construction and successful in operation. I have described a particular embodiment of my invention as applied to a storage battery terminal, but it will be understood that the same principles may be applied to a clamp for establishing connection with a ribbon or tubular conductor in the form of an inductance or bus.

While I have described a preferred embodiment of my invention, I desire that it be understood that modifications may be made and that no limitations upon my invention are intended other than are imposed by the scope of the appended claim.

The invention herein described may be manufactured and used by or for the Government of the United States of America for governmental purposes without the payment of any royalties thereon.

What I claim as new and desire to secure by Letters Patent of the United States is as follows:

50 An electric terminal clamp comprising means for establishing connection with an electric cable, a pair of jaws adapted to embrace opposite sides of a terminal post and having arms at their ends formed one with a threaded opening and the other with an unthreaded opening, an adjusting screw threaded through the arm having the threaded opening and having a tool engaging head at one end, the other end portion of said screw being reduced and unthreaded and freely engaged through the unthreaded opening of the other arm, a washer fitting loosely about the inner end of the reduced portion of said screw against a shoulder at the junction of the reduced portion of the screw with

the threaded portion thereof, and a collar encircling the outer end of the reduced portion of said screw and a pin extending through the reduced portion of said screw and through said collar at diametrically opposite positions in said collar, said washer being arranged to engage the inner face of the arm formed with the unthreaded opening when the screw is turned to spread the jaws and said collar being adapted to engage the outer face of the last mentioned arm when the screw is turned to draw the jaws towards each other.

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