(No Model.)

J. H. LEAKIN.

CLAMP FOR ELECTRIC BATTERY ZINCS.

No. 448,847. Patented Mar. 24, 1891.

Fig. 1.

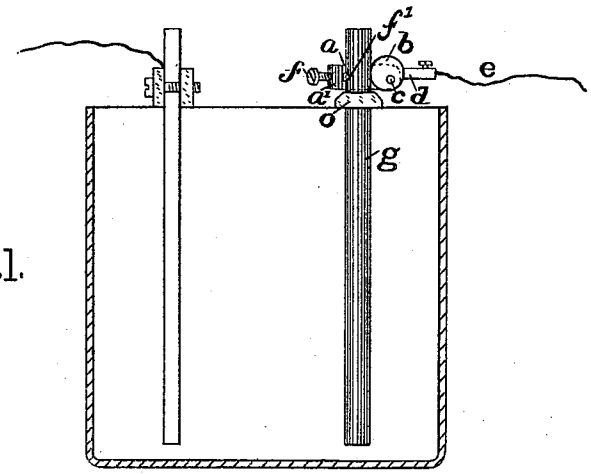


Fig. 2.

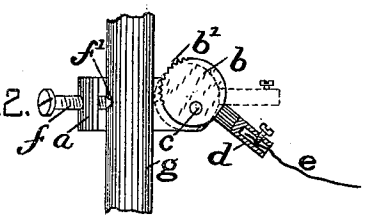


Fig. 3.

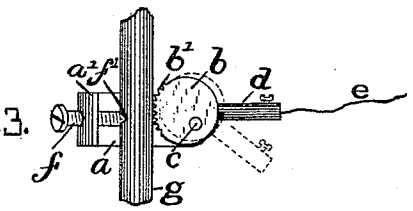
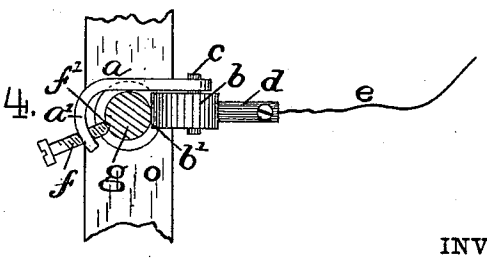


Fig. 4.



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CLAMP FOR ELECTRIC-BATTERY ZINCS.

SPECIFICATION forming part of Letters Patent No. 448,847, dated March 24, 1891.

Application filed December 24, 1890. Serial No. 375,658. (No model.)

To all whom it may concern.

Be it known that I, JAMES H. LEAKIN, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Clamps for Electric-Battery Zincs, of which the following is a specification.

This invention relates to clamps for holding zincs suspended in the cells of electric batteries; and the object is to provide an arrangement of parts whereby old zincs can be readily replaced by new ones and zincs reversed without disturbing the connecting-wire.

A further object is to embody in the clamp a connector which will take the place of a binding-post for the zinc.

With these ends in view my invention consists in the peculiar features of construction and combinations of parts described hereinafter, and pointed out in the claims.

In the accompanying drawings, illustrating the invention, Figure 1 shows a zinc held in place in a battery-cell by my improved clamp; Fig. 2, a side view of the clamp detached and open to receive the zinc; Fig. 3, a similar view showing the clamp adjusted for a smaller zinc, and Fig. 4 a top view of the clamp with the zinc in place.

My device comprises a collar *a*, consisting of a short brass bar bent over at one end to form a curved end piece *a'* for the collar, a clamping cam or eccentric *b* at the opposite end of the collar, consisting of a flat disk fitting against the latter and pivoted thereto by a rivet *c* and having a milled peripheral surface *b'*, the post *d* for the wire *e*, which post constitutes the shank or handle of the cam and is secured thereto near the pivot *c*, and a set-screw *f*, having a pointed end *f'* and extending through the curved end piece *a'* of the collar on such an angle that it points to the intersection of the inside surface of the collar and the milled surface of the cam.

The zinc is clamped between the cam and this adjustment-screw *f* as follows: The said screw is first adjusted to the size of zinc and the cam is turned back to the position shown in Fig. 2, with its wide part outside the pivot. The zinc *g* is now fitted between the screw and cam and the latter turned to bind upon said zinc and clamp it in place, at the same time pressing it against the pointed end of the screw and causing the latter to sink into said zinc, and thus hold it securely. It will be observed that, owing to the angle at which said screw is placed, the zinc will be forced straight against it, and hence the pointed end of the screw will take directly into the zinc. It will be obvious that by adjusting the screw *f* to different sizes of zincs the cam can be made to assume the same position in clamping each zinc and the post will always extend in the same direction. The screw will be so adjusted that the cam will bind upon the zinc when the post reaches a position at right angles to the latter. This is done in order that the wire may extend straight off from the zinc. The post is secured to the cam at such a point with relation to the pivot of said cam that when the post is brought to a horizontal position at right angles to the zinc the widest part of the cam will not yet have been brought to bear upon the zinc. Therefore an upward pull upon the wire would only act to tighten the cam against the zinc. It might also be stated in this connection that in clamping the zinc in the holder the handle of the cam is pulled up, and therefore the tendency of the zinc to drop will also act to tighten the cam. It will be observed that the holder can be adjusted to receive any size of zincs, and thus when a zinc has become eaten away at its lower end it can be reversed and said lower end clamped in the holder. Thus economy in the use of zincs is gained. Again, it will be seen that the adjustment of parts is effected without disturbing the wire and that as soon as the cam binds against the zinc connection is made between the latter and the wire. Thus a binding-post on the zinc may be dispensed with. It will be of course understood that when the clamp is suspending a zinc in the cell of a battery it rests upon the cross-piece *o* over the top of the cell, as shown in Fig. 1.

It is evident that many changes might be made in my invention without departing from its spirit and scope, and hence I do not wish to limit myself to the precise construction shown.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a clamp, the combination of a collar, a cam pivotally connected thereto, and an adjustment-screw extending through said collar and located in juxtaposition to said cam, substantially as described.

2. A clamp and wire-connector for electric-battery zincs, the same comprising a collar to contain the zinc, a cam pivoted to the collar in such position as to take against the zinc and clamp it in the collar, and means of connection between the cam and the connecting-wire.

3. A clamp and wire-connector for electric-battery zincs, the same comprising a collar to contain the zinc, a cam pivoted to the collar in such position as to take against the zinc, an adjustment-screw extending through said collar and adapted to take against the opposite side of the zinc, and means of connection between the cam and the connecting-wire.

In testimony whereof I affix my signature in the presence of two witnesses.

JAMES H. LEAKIN.

Witnesses:
RICHD. M. DUVALL,
JNO. T. MADDOX.