Dec. 28, 1926. 1,612,420

W. S. DAVIS

MEANS FOR PRECLUDING TAMPERING WITH ELECTRIC METERS

Filed June 8, 1923

Fig. 1.

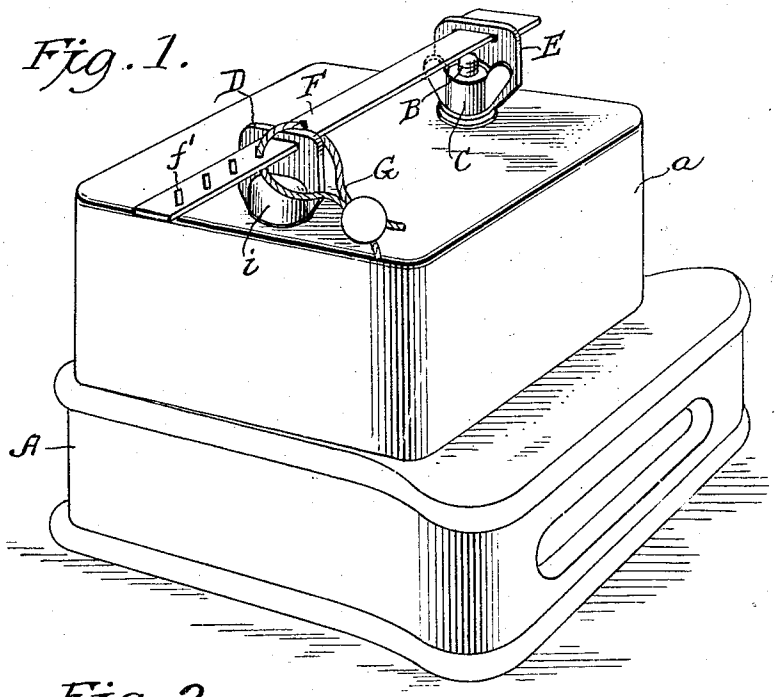


Fig. 2.

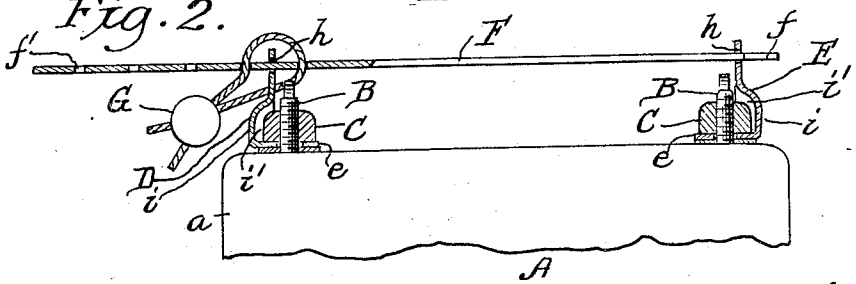
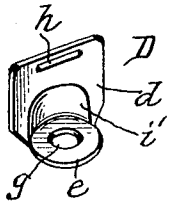




Fig. 3.

Fig. 4.



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UNITED STATES PATENT OFFICE.

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MEANS FOR PRECLUDING TAMPERING WITH ELECTRIC METERS.

Application filed June 8, 1923. Serial No. 644,089.

This invention pertains to means for precluding unauthorized persons from tampering with electric meters, and the object is to provide a construction which excludes access to the working parts of a meter, and at the same time is capable of use in conjunction with the various existing types of meters now in service by concerns engaged in supplying electric current to consumers.

As is well known, electric meters are closed against access by the use of a seal of one form or another applied in different ways to meters; but owing to the different styles and sizes of meters, the seals are applied in various ways. Standard makes of electric meters are commonly provided with threaded posts on which are screwed nuts that operate to confine a separable part of a meter casing, but these posts on the meters vary in the spaces separating them, as e. g. the threaded posts on a meter of one make will be separated by an interval of four inches, in another style of meter the posts are separated for six inches, and so on.

According to my invention, means are provided which utilize all the parts of standard meters and which means are capable of use in connection with the different styles of such meters, whereby a seal of one kind or another may be applied to said device for sealing the meter against access except by authorized inspectors.

The invention embodies a plurality of post-engaging members co-operable with the clamping nuts to preclude rotative movement thereof upon said posts, in combination with a seal-carrying member bridging the post-engaging members and operating to retain the same in fixed positions relatively to said posts.

In a preferred form, the post-engaging members are offset to partially receive the nuts and to thus co-operate therewith in retaining said nuts from turning on the posts; but in applying said post-engaging members to the posts, they are assembled with the nuts and are rotated therewith upon the posts until the nuts are screwed home, i. e. tightened sufficiently to hold the removable part of the outer casing. The seal-carrying member is in the form of a bridge bar headed or offset at one end and provided in the other end portion with a plurality of apertures or slots, said bar being engageable with the post-engaging members to retain them from rotation, a seal of one form or another being adapted to be threaded in one of the apertures or slots of said bridge bar.

Other functions and advantages of the invention will appear from the following description taken in connection with the drawings, wherein—

Figure 1 is a perspective view showing my seal-receiving attachment applied in an operative position to an electric meter.

Figure 2 is a sectional view of the attachment in position with reference to a meter, a part of the latter being shown.

Figure 3 is a plan view of the bridge bar, and

Figure 4 is a perspective view of one of the post-engaging members detached from the post and the nut thereof.

A meter, such as A in Figure 1, is provided with a plurality of threaded posts B on which are screwed a like number of clamping nuts C, the latter operating to confine a separable or removable part *a* of the meter in a fixed closed position. The posts B and nuts C are ordinary in the art, hence no further description thereof or of the meter is necessary.

My invention is in the nature of an attachment adapted for use in connection with standard forms of meters, said attachment embodying a plurality of post-engaging members D E and a bridge bar or rod F, the latter being adapted for the reception of a seal G.

Each post-engaging member D or E is composed of a single metal piece, either a casting or a stamping, and, as shown, the body portion *d* and base or foot *e*, are in one piece, said base or foot *e* being apertured at *g* to fit over one of the posts B. The member D or E is provided near its upper part with a slot *h*, and intermediate

this slot *f* and the base *e* the body portion *d* of the member is offset at *i*, thus producing a recess *i'* in one face of said member.

The bridge bar is composed of a single piece of stout metal of the required length and width, one end portion of the metal being fashioned to produce a head *f*, and said bridge bar being provided with a desired number of apertures or slots *f'*, see Figures 2 and 3. As shown, the slots extend diagonally so as to enable a relatively narrow bar to be used for the desired number of slots, and said slots are spaced apart far enough for the upper part of the member D or E to occupy a position intermediate any two of the slots, see Figure 2.

In the use of my device, the separable part *a* of the meter casing may be fitted in place by slipping it over the posts B as usual. Each nut C is assembled by placing it upon the foot *e* of one member D or E for the threaded hole of the nut to register with the aperture *g* and for the assembled nut to partly occupy the recess *i'* in said member, whereupon the assembled nut and member are positioned for the threaded end of one post B to pass through the aperture *g* of the member and for the end of the post to enter within the threaded hole of the nut, and then the assembled nut and member are rotated for the nut to be screwed upon the post. Each nut and its complemental member are fitted to one post in the manner described, and the two nuts C are screwed on the posts until they clamp the separable part of the meter firmly in position, the slots *h* of the members D E facing each other as in Figures 1 and 2. The bridge bar F is now thrust through the slots *h* of the two members, with the headed end *f* of said bar practically in contact with one member, as E, whereas the slotted end *f'* of said bar protrudes beyond the other member D, see Figure 1. A seal G of a desired form is threaded through one or more slots *f'* of the bridge bar, to restrain said bar from slidable movement with respect to the members D E, thus sealing the meter.

It is apparent that the members D E cooperate with the nuts C to restrain the latter from rotation upon the posts B except that the members D or E must rotate with their respective nuts, but such rotative movement of the members is prevented by the bridge bar F which passes through the members to restrain them from rotative movement. A meter inspector is authorized to break the seal G, thus permitting the bar F to be withdrawn and the nuts C with the members D E to be removed to obtain access to the meter; but the inspector must replace the parts C, D, E and F, and apply another seal G to the bar F, thus restoring the meter to the desired secure condition. Obviously the absence of a seal affords irrefutable evidence that the meter has been unwarrantably opened, thus affording means for detection of the attempt to tamper.

My attachment provides means for the application of seals to the different makes of meters, thus standardizing the sealing means, and, further, the attachment is applied in a manner to utilize the posts and nuts of the various styles of meters, thus saving annoyance, delay and expense of replacing any of the parts in the application of my attachment to meters.

A further utility of the attachment is that the seal-carrying bar affords a convenient handle for lifting and carrying the meter. To this end, the seal-carrying bar is made of such form and dimensions to secure the strength and stability requisite for the purpose of a handle in addition to its primary purpose of affording means for the attachment of a seal. Furthermore, the bar is supported at such a distance from the meter top that the hand can be placed below the bar in securing a firm hold thereon.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent is:

1. In a device of the class described, the combination with posts and nuts constituting separable parts for securing a meter, of a plurality of post-engaging members cooperable with said nuts for holding them against rotative movement on the posts, and a single seal-carrying member passing through said post-engaging members to retain the same from rotative movement with the nuts on said posts.

2. In a device of the class described, the combination with posts and nuts constituting separable parts for securing a meter, of a plurality of slotted and apertured post-engaging members recessed for the partial reception of said nuts and adapted for rotation therewith in applying the nuts and members to the posts or in dismounting the same, and a seal-receiving member passing through the slots in said post-engaging members to restrain the latter from rotative movement with the nuts upon said posts.

3. In a sealing device of the class described, the combination with a plurality of posts, and a plurality of nuts adapted to be screwed on said posts, of a plurality of nut-retaining members contacting individually with said nuts, said retaining members being rotatable with said nuts in applying or removing the same, and a seal-carrying bar spanning the space between said nut-engaging members and attached thereto for restraining positively the rotative movement of said retaining members and the nuts engageable therewith.

4. In a sealing device of the class described, the combination with a plurality of posts, and a plurality of winged nuts adapted

to be screwed on said posts, of a plurality of nut-retaining members having contact separately with said nuts, each retaining member being provided with an apertured base portion and with a recessed body portion in offstanding relation to the base portion, whereby said retaining member is engageable with a post and a nut, and a seal-carrying bar bridging the space between the retaining members and attached thereto for restraining positively the rotative movement of either retaining member and of the nut contacting therewith.

In testimony whereof I have hereto signed my name this 7th day of June, 1923.

WILLIAM S. DAVIS.