A. L. HARVEY.

CLAMPING DEVICE.

APPLICATION FILED SEPT. 16, 1918.

1,414,407. Patented May 2, 1922.

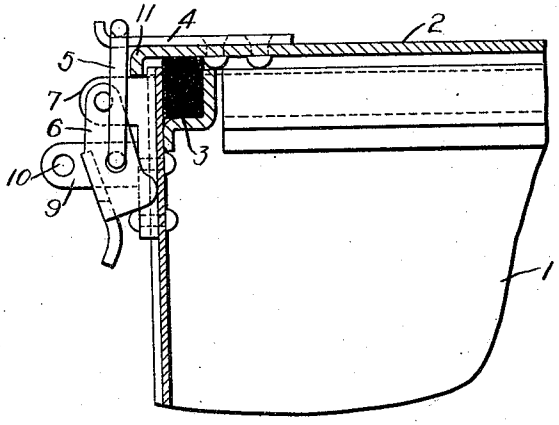


Fig. 1.

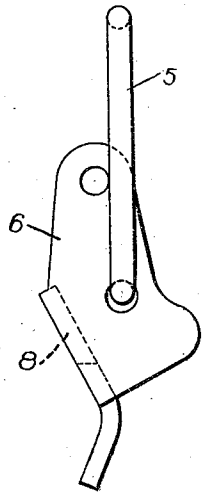


Fig. 2.

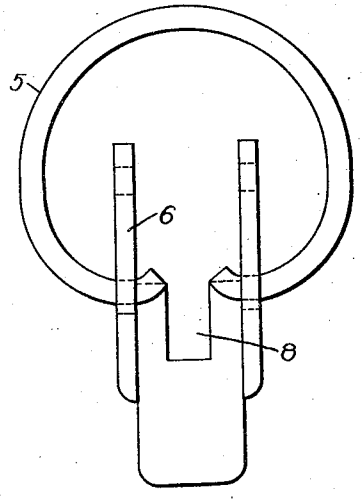


Fig. 3.

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CLAMPING DEVICE.

1,414,407. Specification of Letters Patent. Patented May 2, 1922.

Application filed September 16, 1918. Serial No. 254,311.

To all whom it may concern:

Be it known that I, ALBERT L. HARVEY, a citizen of the United States, and a resident of Braddock Township, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Clamping Devices, of which the following is a specification.

My invention relates to clamping devices, and particularly to such devices as are employed for clamping covers to the containers of electric motor-controllers, auto-starters, and the like, though of more general application.

The object of my invention is to provide a simple and efficient clamping device of the above indicated character.

A cover of the above-mentioned character is commonly clamped to the container or body member by a latching mechanism comprising a hook portion attached to one of the members and a ring or link pivotally carried by a finger piece which is itself pivotally mounted upon the other member. The cover is clamped to the container by placing the ring or link over the hook portion and actuating the finger piece to cause firm engagement of the hook portion with the ring. It has been found that this clamp is not entirely satisfactory because of the tendency of the finger piece to yield to a sidewise thrust, causing, if not a complete displacement of the cover, at least a sidewise movement thereof, which is especially objectionable in containers such as are commonly employed for motor-controller devices which are designed to exclude dust and moisture. There is, furthermore, danger of the cover becoming accidentally opened.

According to my invention, the finger piece is provided with a slot or recess within which is adapted to lie a rigidly secured projection, whereby the tendency to sidewise movement is eliminated. The projection is provided with an opening for the reception of a padlock to insure against an accidental or unauthorized opening of the cover.

My invention will be made plain by reference to the accompanying drawings in which Fig. 1 is a fragmentary view of a container having my invention applied thereto, and Figs. 2 and 3 are, respectively, a side and a front elevation of the principal parts of my clamping device.

The container 1 is provided with a cover 2, a felt or other packing ring 3 being provided between the two to prevent the entry of moisture or dust when the cover is clamped in its closed position. The cover 2 is provided with a hook 4 adapted to be engaged by a link or ring or other loop-shaped member 5, which is pivotally connected to a finger piece 6, the latter being pivotally mounted upon a bracket 7 secured to the side of the container 1. The parts may be interchanged, that is, the hook 4 may be carried by the container 1 and the other, co-operating parts by the cover 2.

I provide the finger piece 6 with a slot or recess 8 to receive a projection 9, that is rigidly secured to the container 1, when the parts are in the positions indicated in Fig. 1. Co-operation of the slot 8 and the projection 9 prevents sidewise movement of the finger piece 6 with respect to the cover 2, thereby eliminating possible sidewise movement of the cover with respect to the container. The projection 9 is provided with an opening 10 for receiving a padlock or other suitable locking device to prevent the accidental removal of the finger piece 6 from the illustrated position (Fig. 1), and the consequent opening of the cover 2.

I have shown the cover 2 as provided with a flange 11 which serves, in some degree, to prevent a relative sidewise movement of the container and the cover. The main purpose of the flange 11, however, is to stiffen the cover. The co-operation of the projection 9, with the slot 8, prevents all objectionable sidewise movement.

By means of the above-described arrangement of parts, I am enabled to securely clamp the cover 2 to the container 1 and to prevent the accidental opening of the cover by either a sidewise or a longitudinal thrust against the finger piece 6.

The cover of the container may be hinged on one side or it may be entirely removable. In case the latter arrangement is employed, opposite sides of the container will each be provided with a clamping device of the character described above.

Though I have illustrated my invention in a simple form, it will be understood that I desire not to be limited to the specific form shown, but that my invention, as expressed in the appended claims, is to be con-

strued as broadly as the nature of the prior art will permit.

I claim as my invention:

1. The combination with a structure comprising two separable members, each having a projection, of means pivotally mounted upon one of said members and co-operating with both of said projections to clamp said members together, said means comprising an element having side portions bent to form a stop member and having a hook portion integral with said side portions, and a link pivotally connected to said side portions.

2. The combination with relatively stationary and movable members each having a projection, of a finger piece pivotally mounted upon one of said members and having a recess, one of said projections being adapted to lie in said recess to prevent relative movement of said one projection and said finger piece, and means pivotally connected to said finger piece for engaging said other projection to clamp said members together.

3. The combination with a member having a hook, of a relatively movable member having a projection, a finger piece pivotally mounted upon said relatively movable member and having a recess, and a link pivotally mounted upon said finger piece and adapted to engage said hook to clamp said members together, said projection being adapted to lie in said recess to prevent relative movement of said link and said hook.

4. The combination with two relatively movable members, of means for clamping said members together, said means comprising an element pivotally connected to each of said members and having a portion constituting a stop and another portion provided with a slot, and a projection on one of said members cooperating with said slot for preventing relative sidewise movements of said members.

In testimony whereof, I have hereunto subscribed my name this 6th day of Sept., 1918.

ALBERT L. HARVEY.