F. CRESSALL.

CONTACT FOR THIEF ALARMS OR OTHER ELECTRICALLY OPERATED DEVICES.

APPLICATION FILED OCT. 15, 1920.

1,383,079.

Patented June 28, 1921.

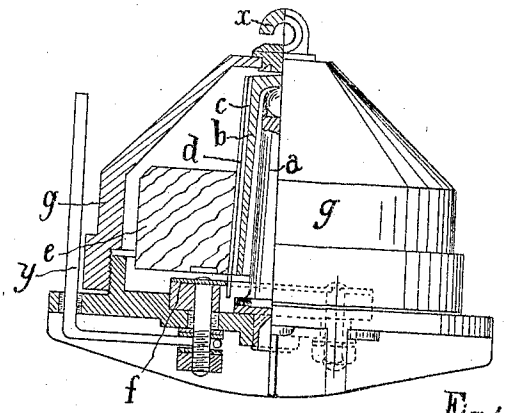


Fig. 1.

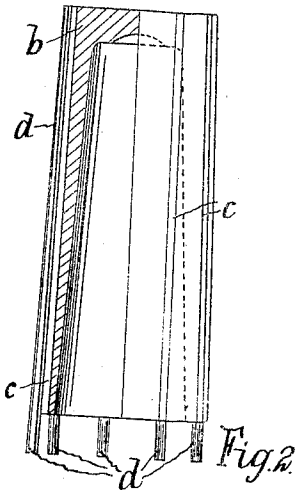


Fig. 2.

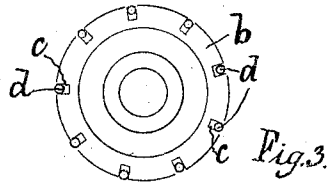


Fig. 3.

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UNITED STATES PATENT OFFICE.

FREDERICK CRESSALL, OF NEWPORT, ISLE-OF-WIGHT.

CONTACT FOR THIEF-ALARMS OR OTHER ELECTRICALLY-OPERATED DEVICES.

1,383,079. Specification of Letters Patent. **Patented June 28, 1921.**

Application filed October 15, 1920. Serial No. 417,263.

To all whom it may concern:

Be it known that I, FREDERICK CRESSALL, a subject of the King of Great Britain, residing in Newport, Isle-of-Wight, have invented certain new and useful Improvements in Contacts for Thief-Alarms or other Electrically-Operated Devices, for which I have filed an application in Great Britain, October 8, 1919, of which the following is a specification.

This invention relates to contacts for thief alarms or other electrically operated devices and it relates to a contact designed particularly for use in devices in which a circuit is closed by the relative angular movement of two bodies.

The present invention has for its object to provide a simple and efficient form of contact whereby the circuit may be closed on the angular movement of the respective parts a substantially long period of contact being secured whereby the operation of the device, a bell for example, either directly or indirectly by means of a relay, in insured, and also provides a rubbing contact.

A contact according to the present invention moreover presents the advantage that the resistance of the actual contact being low it does not materially lower the amperage of the current passing therethrough, owing to the large surface provided by the multi-wired contact.

A contact according to the present invention is particularly adapted for use with burglar or thief alarms such as form the subject of my application for Letters Patent No. 337,903, dated 14th November, 1920.

A contact according to this invention consists essentially of a member preferably of circular cross-sectional outline and which member is provided with a number of peripheral longitudinally disposed grooves or recesses. Secured at one end within each recess is a resilient body, hard drawn wire for example, the said wires being so arranged that at their free ends they may project somewhat beyond the outer periphery of the body to which they are attached or they may be of such length as to extend somewhat beyond the end of said member. The movement of the flexible bodies in an outward direction however being limited by a suitable stop which may be in the form of an annular member supported by the body to which the wires are secured. The inward movement of the flexible bodies is limited by a stop which may conveniently be formed by reducing the diameter of the fluted body for a convenient portion of its length at one end. As the ends of the wires project beyond the plane of the body carrying them it follows that they will contact with an approaching body and will remain in contact therewith for a short period as the second body recedes from the first, so that a comparatively long contact is secured.

As applied to a form of the device forming the subject of the aforementioned application for Letters Patent the pendulum is grooved longitudinally for the reception of the wires, the weight upon the pendulum forming the restraining means whereby the outward movement of the wires is limited.

Instead of employing a stop for the weight the pendulum may be conical externally the bore of the weight being correspondingly tapered so that said weight is wedged upon the pendulum.

In order that the invention may be the better understood drawings are appended in which:—

Figure 1 is a part sectional elevation showing an alarm embodying the present invention.

Fig. 2 is an elevation partly in section to a larger scale showing the contacts and the member carrying same.

Fig. 3 is a plan as seen from the lower end of Fig. 2.

Referring to the accompanying drawings in which a contact according to this invention is illustrated as applied to an alarm according to the prior application for Letters Patent before referred to *a* indicates the pivot for the pendulum *b* said pendulum having upon the exterior a number of longitudinal grooves or recesses *c* shown more clearly in Fig. 3. Secured in any suitable manner at their upper ends, for example by soldering them within the recesses *c*, are wires *d* which are so arranged that they incline from their point of attachment to pendulum *b* away from the bottom of the recesses *c* leaving the lower ends of said wires free to move inward under pressure. The outward movement of the wires is controlled by means of the weight *e* which is centrally bored to engage the pendulum, both the aperture in pendulum *b* and the pendulum itself being tapered so that the weight is wedged therein.

The suspending hook *x* forms one end of

an electric circuit and has connected to it a lead, not shown, the other terminal being formed by the insulated ring *f* mounted within the hollow body *g* and to which ring there is connected a lead *y*.

Instead of being channeled the supporting body for the resilient contacts may be plain and the contacts disposed at intervals around same.

Claims.

1. An apparatus comprising a closed hollow body having a hook at its upper end; an upright standard fixed in the lower part of said body; a conical tubular body movably disposed over said standard and provided with a series of longitudinal grooves in its outer face; an annular weight secured on said tubular body near the lower end thereof; contact wires mounted in said grooves and connected to said hook and projecting at the lower end of said tubular body; an insulated annular contact body mounted in said hollow body, surrounding and normally out of contact with said contact wires; and a conductor electrically connected to said annular contact body.

2. An apparatus comprising a suspended closed hollow body; a standard fixed in the lower part of said body; a weighted tubular body disposed over said standard and pivotally mounted on said standard and provided with exterior longituidnal grooves; contact members mounted in the grooves and projecting at the lower end of said tubular body; an insulated annular contact body mounted in said body and surrounding and normally out of contact with said contact members; and conductors electrically connected to said wires and insulated contact body respectively.

3. An apparatus comprising a suspended hollow body; a weighted body freely suspended in said body; longitudinal contact members secured to the lower part of said weighted body; an insulated annular contact body mounted in said body and surrounding and normally out of contact with said contact members; and conductors electrically connected to said contact body and members respectively.

4. An apparatus comprising a body; a movable supporting body; a weighted body movable in said body and provided with surface grooves; contact members secured in said grooves; a contact body mounted on said body normally out of contact with said contact members and adapted to contact the contact member when the weighted body and supporting body are relatively moved; and conductors electrically connected to said contact body and members respectively.

5. An apparatus comprising a movable element; a weighted body having grooves freely movably supported on said element; contact members mounted in the grooves; a contact body mounted on the movable element and normally out of contact with said contact members and adapted to engage said member when the weighted body and element are respectively moved; and electric operating means actuated by such engagement.

6. An apparatus comprising a movable element; a weighted body freely movable relative to said element and provided with a wire; a contact; and operating means actuated by engagement between said wire and contact.

7. A contact for thief alarms or other electrically operated devices comprising a contact member, and a pivotally mounted body having a number of resilient contacts arranged longitudinally thereon so arranged as to engage the contact member and close an electric circuit upon the relative movement of the body and said contact.

8. A contact according to claim 7 in which the pivotally mounted body is longitudinally grooved and is tapered from the point of support of the conductors outward toward the free ends of said conductors; means being provided for limiting the outward movement of the free ends of the said conductors and comprising an annular weight having an aperture therein coned to agree with the taper of the pivotally mounted body.

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

FREDERICK CRESSALL.

Witnesses:

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F. N. BRAUND.