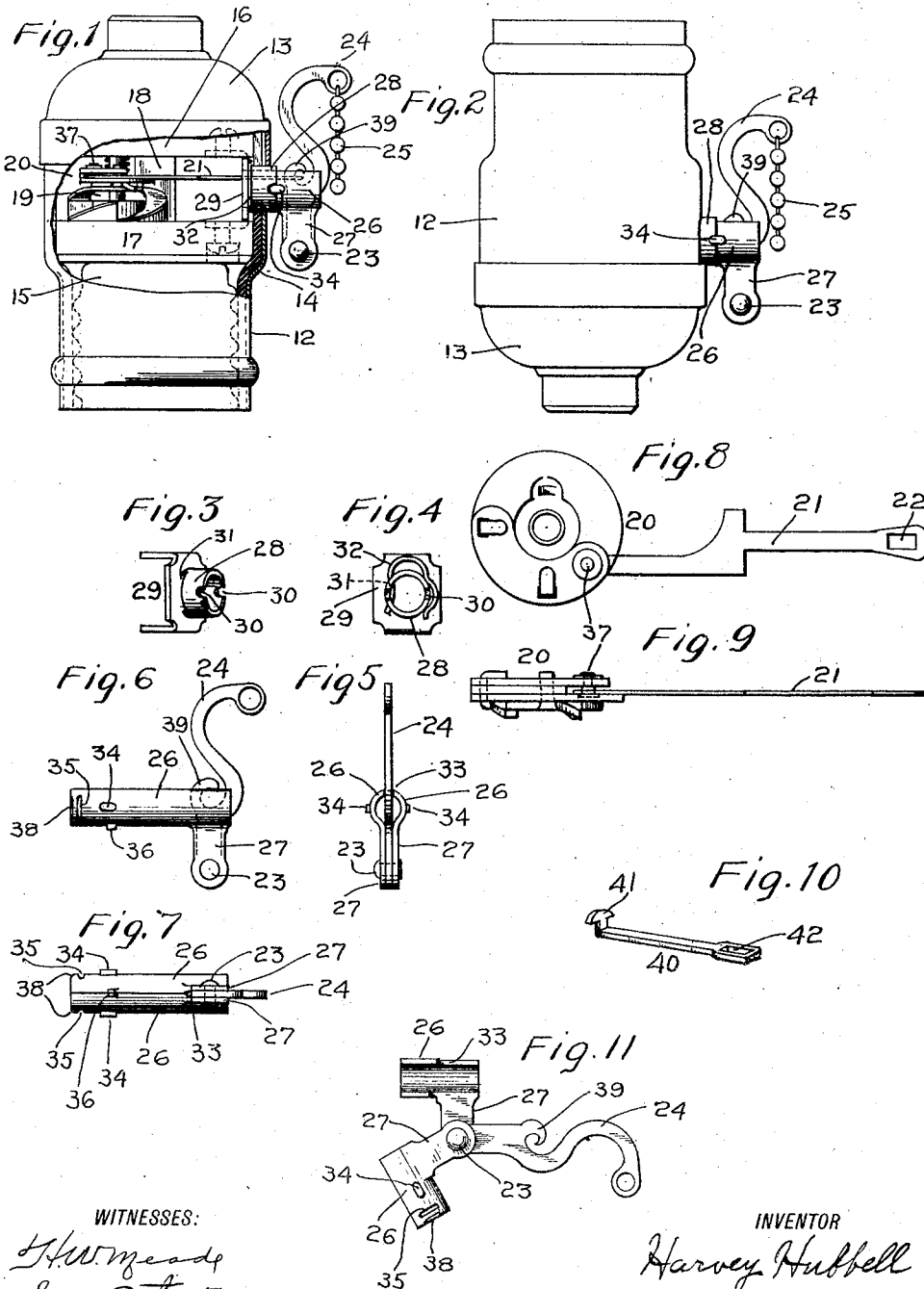


H. HUBBELL.
OPERATING MECHANISM FOR PULL SOCKETS.
APPLICATION FILED MAY 6, 1912.

1,053,178.

Patented Feb. 18, 1913.



WITNESSES:

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OPERATING MECHANISM FOR PULL-SOCKETS.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, HARVEY HUBBELL, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Operating Mechanism for Pull-Sockets, of which the following is a specification.

This invention relates to pull sockets for incandescent electric lamps and has for its object to provide operating mechanism therefor located externally to the shell, which shall dispense with the use of a chain within the shell, thus doing away with the part most likely to break and a frequent cause of trouble in pull sockets as ordinarily constructed, and which may be readily attached, detached, reversed and adjusted to place the pendant close to or at any required distance from the shell if used in connection with a globe, shade or husk, all changes and repairs being made without disturbing the switch mechanism, shell or cap.

With these and other objects in view, I have devised the novel switch operating mechanism of which the following description in connection with the accompanying drawing is a specification, reference characters being used to indicate the several parts:

Figure 1 is an elevation of a pull socket partly broken away to show a switch mechanism and showing the application thereto of my novel operating mechanism; Fig. 2, an elevation of a pull socket in a reversed position showing the manner in which the operating mechanism may be reversed; Fig. 3, a perspective of the hub and its bracket detached; Fig. 4, a front elevation of the hub and bracket with the locking spring in place; Fig. 5, an elevation of the two-part bracket and operating lever detached; Fig. 6, a side elevation of the two-part bracket and operating lever detached, the bracket being elongated; Fig. 7, a plan view corresponding therewith; Fig. 8, a plan view on an enlarged scale of the operating member and operating bar detached; Fig. 9, an edge view corresponding therewith; Fig. 10, a perspective also on an enlarged scale of an extension piece for the operating bar detached; and Fig. 11 is a detail view of the operating lever and the two-part bracket detached, showing the parts free to swing independently.

12 denotes the socket shell, 13 the cap, 14 the insulating lining, 15 the screw shell, 16 and 17 the insulating blocks, 18 one of the

current carrying brackets by which the insulating blocks are connected, 19 the switch mechanism, 20 an operating member therefor and 21 an operating bar which connects the operating member of the switch to the operating mechanism.

24 denotes the operating lever to which a pendant 25 is connected. This lever is carried by a two-part bracket comprising concavo-convex members indicated by 26, the members having depending arms between which the operating lever is pivoted as at 23. This bracket is detachably secured to a hub 28 which is itself secured to, or has formed integral therewith, a bracket 29 which is rigidly secured to the insulating blocks, so that the hub, two-part bracket and operating lever are independent of the shell and not in the circuit. The hub is provided in its outer face with recesses 30 and in one side with a slot 31 adapted to receive one arm of a U-shaped locking spring 32 as will be more fully explained. Bracket members 26 are cut away at their outer ends and inner sides at the top to form a recess 33 which receives the operating lever freely. The members are also provided with lugs 34 which are received in recesses 30 in the hub and with vertical grooves or slots 35, either of which is adapted to be engaged by the arm of the locking spring lying in slot 31 in the hub when the groove and slot are in alinement to detachably secure the two-part bracket to the hub. At the inner ends of the members are bevels 38 which make it easy to expand the spring when the bracket is forced into the hub after which the spring engages one of the grooves 35. When the two-part bracket is elongated as in Figs. 6 and 7, it is preferably additionally provided with a lug or lugs 36 which engage the face of the hub to give an additional bearing point and prevent tilting of the bracket. Where a short bracket is used, as in Figs. 1 and 2, the arms 27 of the bracket members are in engagement with the face of the hub and form an additional bearing for the bracket upon the hub.

The inner end of operating bar 21 is pivoted to the operating member, as at 37, and the outer end is detachably connected to the operating lever. In practice, I preferably use an insulating operating member which I will not now describe in detail as specifically it forms no portion of the present invention and is moreover described and claimed in

another application for Letters Patent. In the present instance I have shown the operating bar as provided with a slot 22 which is adapted to engage a hook 39 on the operating lever. In addition to the insulation of the operating bar from the switch mechanism by means of the insulating operating member, it should be understood that the operating bar passes freely through the hub and two-part bracket having no contact with either and that the hub and bracket are themselves insulated as they have no contact with any parts except the insulating blocks. Should it be required to use a pull socket in connection with a globe, shade or husk, and carry the pendant away from the shell, the only change required is to provide a two-part bracket of the required length and to use an extension piece 40 in connection with the operating bar. In Figs. 6 and 7, I have illustrated an elongated two-part bracket comprising two elongated bracket members formed as before with the addition of stop lug or lugs 36. The slot 22 at the outer end of the operating bar is adapted to be engaged by hook 39 on the operating lever or by a hook 41 on an extension piece 40 (see Fig. 10) which is itself provided with a slot 42 adapted to be engaged by the hook on the operating lever. It will, of course, be understood that extension pieces are provided of any required length to correspond with the additional length of the two-part brackets, that is, the elongation of the bracket members beyond the ordinary short form, shown in Figs. 1 and 2. If preferred, the extension pieces may be dispensed with and operating bars of varying lengths may be provided. To reverse the socket, that is, to change it from the position shown in Fig. 1 to that in Fig. 2, or vice versa, it being understood that the operating lever should always project upward, the operator takes hold of the two-part bracket and pulls it directly outward against the power of locking spring 32 and the operating spring of the switch. It should be understood that the locking spring retains the two-part bracket and operating lever securely in place under the ordinary conditions of use but its power may be readily overcome by direct pull outward upon the bracket. As soon as the bracket has been entirely disengaged from the hub the members will turn freely on pivot 23 as clearly shown in Fig. 11, which enables the operator to readily disengage the operating lever from the operating bar or from an extension piece. To reassemble, hook 39 of the operating lever is engaged with the operating bar, or an extension piece, the members of the two-part bracket are swung to place, as in Fig. 6, with the operating bar inclosed by the concavo-convex members and then the end of the bracket is pressed into the hub, the beveled end of one of the members act-

ing to expand the locking spring which an instant later snaps into the groove 35 in one of the bracket members, thus locking the bracket to the hub. It is unnecessary in making any of the ordinary changes and adjustments to interfere in any way with the shell or cap or any mechanism within the shell.

Having thus described my invention, I claim:

1. In a pull socket, the combination with a shell and switch mechanism, of a detachable two-part bracket independent of the shell, an operating lever pivoted to said bracket and an operating bar intermediate the switch mechanism and the operating lever.

2. In a pull socket, the combination with insulating blocks, switch mechanism and a hub secured to the insulating blocks, of a two part bracket detachably secured to the hub, an operating lever pivoted to said bracket and an operating bar intermediate the switch mechanism and the operating lever.

3. In a pull socket, the combination with an insulated hub, of a bracket detachably secured to said hub, said bracket comprising members having depending arms and an operating member pivoted between said arms.

4. In a pull socket, the combination with an insulated hub having recesses in its face, of a detachable bracket comprising members adapted to pass within the hub and provided with lugs engaging the recesses and an operating lever pivoted between the members.

5. In a pull socket, the combination with an insulated hub having recesses in its face, of a detachable bracket comprising members adapted to pass within the hub and provided with lugs engaging the recesses, an operating lever pivoted between the members and means for detachably securing the bracket to the hub.

6. In a pull socket, the combination with an insulated hub having recesses in its face and in one side a slot, of a bracket comprising members having lugs adapted to engage the recesses and grooves either of which is adapted to align with the slot in the hub and a U-shaped locking spring adapted to engage the slot and either of the grooves to detachably lock the bracket to the hub.

7. In a pull socket, the combination with an insulated hub, of a bracket comprising concavo-convex members adapted to pass within the hub and having depending arms, an operating lever loosely pivoted between the arms leaving the members free to swing independently when detached, an operating bar adapted to engage the operating lever and to be inclosed between the socket members and means for detachably locking the bracket to the hub.

8: In a pull socket, the combination with an insulated hub having recesses in its face and in one side a slot, of a bracket comprising concavo-convex members having depending arms, each member having a lug to engage one of the recesses and a groove, an operating lever loosely pivoted between the arms leaving the members free to swing independently when detached, an operating bar adapted to engage the operating lever and to be inclosed between the members and a U-shaped locking spring adapted to engage the slot and one of the grooves to detachably lock the bracket to the hub.

15 9. In a pull socket, the combination with an insulated hub, a bracket comprising concavo-convex members having depending arms, an operating lever loosely pivoted between the arms leaving the members free to swing independently when detached, an

operating bar adapted to engage the lever and to lie within the bracket and means for detachably securing the bracket to the hub.

10. In a pull socket, the combination with an insulated hub, of a bracket comprising 25 concavo-convex members having depending arms and a recess, an operating lever pivoted between the arms and provided with a hook and adapted to lie in the recess, an operating bar adapted to engage the hook 30 and to be inclosed by the members and means for detachably securing the bracket to the hub.

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

HARVEY HUBBELL.

Witnesses:

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H. W. MEADE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."