

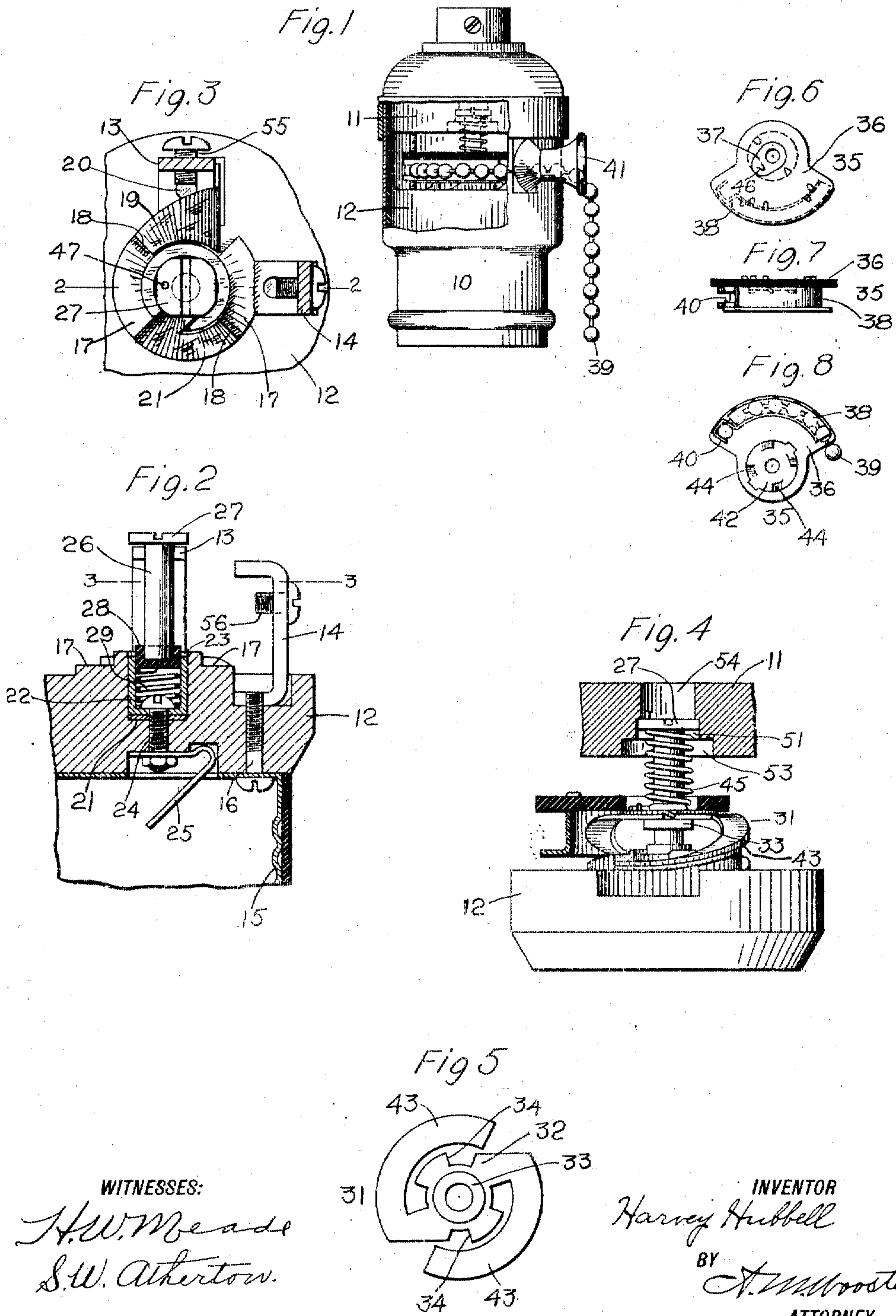
H. HUBBELL.

PULL SOCKET.

APPLICATION FILED JULY 21, 1910.

994,588.

Patented June 6, 1911.



UNITED STATES PATENT OFFICE.

HARVEY HUBBELL, OF BRIDGEPORT, CONNECTICUT.

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Specification of Letters Patent. Patented June 6, 1911.

Application filed July 21, 1910. Serial No. 572,257.

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 Pull-Sockets, of which the following is a specification.

This invention has for its object to simplify, cheapen and to generally improve the construction and mode of operation of electric pull sockets, and especially to provide a compact and ornamental pull socket which shall operate in such a manner as to break the circuit at two points simultaneously.

With this and other objects in view I have devised the novel structure hereinafter described and then particularly pointed out in the claims hereunto appended.

In the accompanying drawing forming a part of this specification: Figure 1 is an elevation of my novel socket partly broken away to show the operating mechanism; Fig. 2 is a detail sectional view, on an enlarged scale, on the line 2—2 in Fig. 3; Fig. 3 a plan view, the standard being in section on the line 3—3 in Fig. 2 looking in the direction of the arrows; Fig. 4 is a detail sectional view illustrating the mode of regulating the tension of the operating spring; Fig. 5 an inverted plan view of the contact plate detached; Figs. 6, 7 and 8 are respectively plan, edge and inverted plan views of the operating wheel.

10 denotes the socket shell, 11 and 12 the upper and lower insulating blocks which are held rigidly in place by standards 13 and 14, and 15 the screw shell held in place by a screw 16 which passes through the lower insulating block and engages standard 14. The upper surface of the lower insulating block is provided with four inclines 17, each terminating in an abrupt shoulder 18. 19 denotes a plate lying upon the surface of one of these inclines and having an extension which is turned under the base of standard 13 and is held in close engagement therewith by the screw 20 which secures said standard in place.

21 denotes a plate lying upon the surface of the incline diametrically opposite to the incline having plate 19, and having an extension which passes under a metallic cup 22 lying in a central socket 23 in the lower insulating block.

It will be noted that two of the inclines 17, diametrically opposite each other, are left

uncovered. These I term insulating inclines as will presently be described.

Cup 22 is secured in place by a screw bolt 24 which secures the center contact 25 in place, passes through the lower insulating block and the extension of plate 21 and the head of which lies in close engagement with the bottom of cup 22. The center contact shown is a spring contact of ordinary construction but any other form of center contact may be substituted if preferred.

26 denotes the center post which is provided with a slotted angular head 27 and the lower end of which is seated in an insulating block 28 which is adapted to slide in cup 22 and is held, and with it the center post, in a raised position by a spring 29 which bears against the bottom of the cup and against the insulating block, as will presently be fully explained.

31 denotes the contact plate which comprises a body 32 in which a central hub 33 is rigidly secured and which is provided with engaging walls 34 and with two downwardly extending springs arms 43 which are adapted to engage the inclines and shoulders on the lower insulating block. The contact plate engages and is adapted to rotate on the center post.

35 denotes the insulating operating wheel which comprises an insulating plate 36 having an opening 37 and a metal plate 42 covering said opening on one side and having an opening with a bearing flange which receives the center post on which the operating wheel oscillates. At the periphery of the operating wheel is a trough shaped chain holder 38 in which the operating chain 39 lies and which is provided at its inner end with a suitable catch 40 with which the end of the chain is detachably engaged. The chain is preferably of the ordinary ball construction and passes along the chain holder and out through a guide 41 which is rigidly secured in the socket shell.

The operating wheel lies over the contact plate as clearly shown in Fig. 4. Plate 42 on the operating wheel is provided with lugs 44 which are adapted to engage walls 34 on the contact plate to carry the latter forward when the operating wheel is oscillated by a pull upon the chain. The operating wheel is returned to its normal position after each actuation by an operating spring 45 one end of which engages a lug 46 on plate 42, the other end engaging a hole 47 in the

head of the center post. The upper insulating block is provided with an angular recess 51 which is adapted to receive the angular head of the center post loosely and retain it 5 against rotation.

Spring 29 acts to normally retain the head of the center post in engagement with the angular recess. An enlarged recess 53 in the underside of the upper insulating block extends up to the angular recess, and above the 10 angular recess is a hole 54 which extends through the block and permits the insertion of a screwdriver from above to engage the slotted head of the center post when it is 15 required to adjust the tension of the operating spring. To adjust this spring the operator presses the center post downward against the power of spring 29 until the angular head is out of engagement with the angular 20 recess when the center post may be rotated in either direction as may be required to adjust the tension of the operating spring. After adjustment of the operating spring the angular head of the center post is placed 25 in alinement with the angular recess and spring 29 will seat the head in the recess when the pressure upon the head is relieved.

Standard 13 is provided with a binding screw 55 and standard 14 with a binding 30 screw 56 to which conducting wires, not shown, are attached. The current passes from standard 13 to plate 19, to the contact plate, to plate 21 and through screw 24 to the center contact. Returning through the 35 lamp, not shown, the current passes to screw-shell 15 and through screw 16 to standard 14 and binding screw 56. It will be obvious,

therefore, that when the spring arms of the contact plate are in engagement with plates 19 and 21 the current will be on. An actua- 40 tion of the operating wheel, as already described, will carry the spring arms off from plates 19 and 21 said arms dropping over the abrupt shoulders and into engagement 45 with the insulating inclines thus breaking the current simultaneously in two places. The next actuation of the operating wheel carries the spring arms of the contact plate off from the insulating inclines and into en- 50 gagement with plates 19 and 21 thus closing the circuit again.

Having thus described my invention I claim:

1. In a pull socket, the combination with an insulating block, of a metallic cup sock- 55 eted in said block, a spring in said cup, an insulating block resting on the spring and a center post seated in the insulating block.

2. In a pull socket the combination with an insulating block having inclines and 60 plates on certain of said inclines and in the circuit, leaving insulating inclines between the plates, of a metallic cup socketed in the insulating block a spring in said cup an insulating block resting on the spring a center 65 post seated in the insulating block, a rotating contact plate mounted on the center post and electrical connections.

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

HARVEY HUBBELL

Witnesses:

A. M. WOOSTER,
ULAH L. COATES.