

C. T. McDONALD.
 MEANS FOR ATTACHING ELECTRIC WALL SOCKETS TO WALLS.
 APPLICATION FILED JULY 30, 1910.

992,971.

Patented May 23, 1911.

Fig. 1.

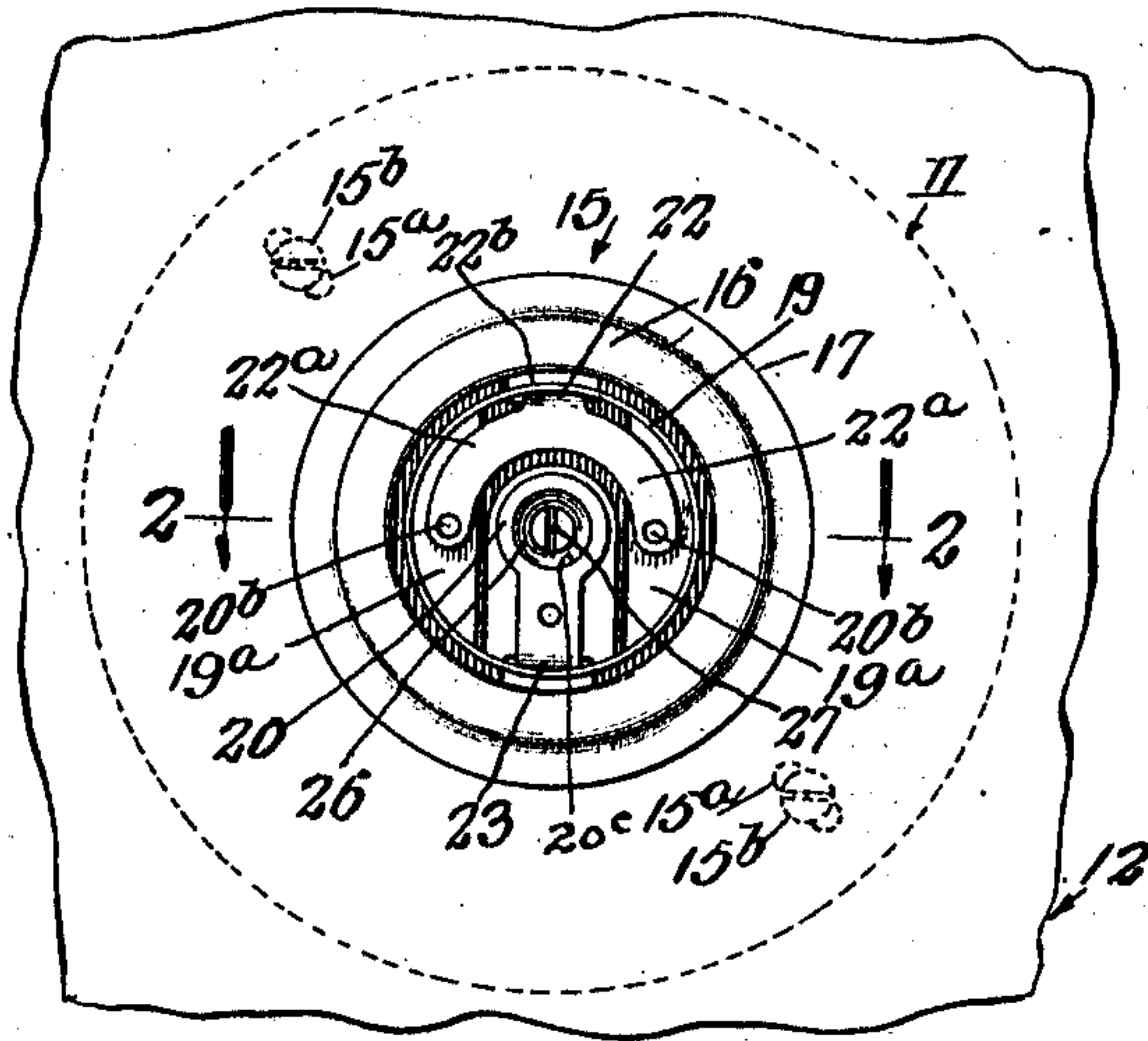


Fig. 2.

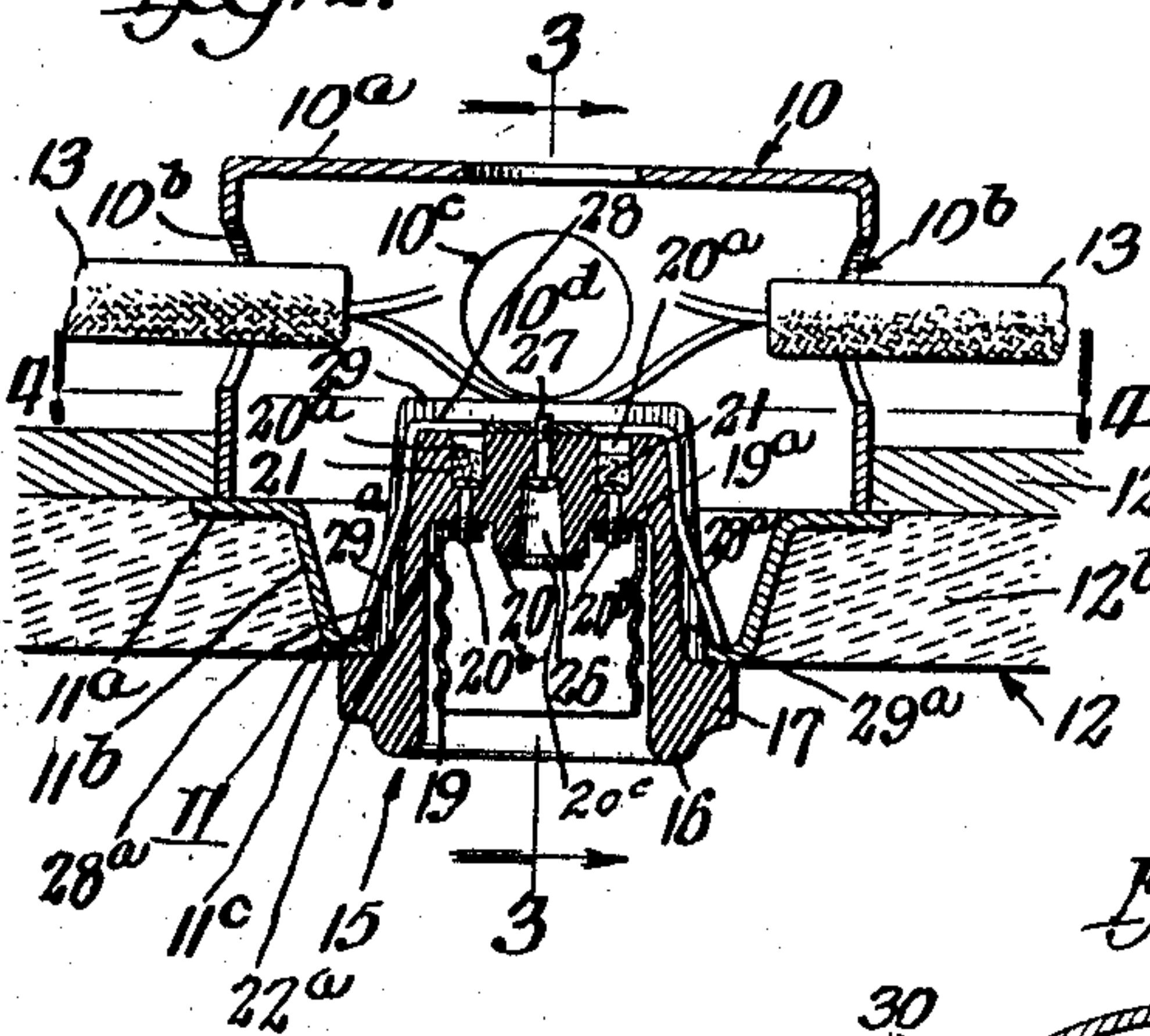


Fig. 3.

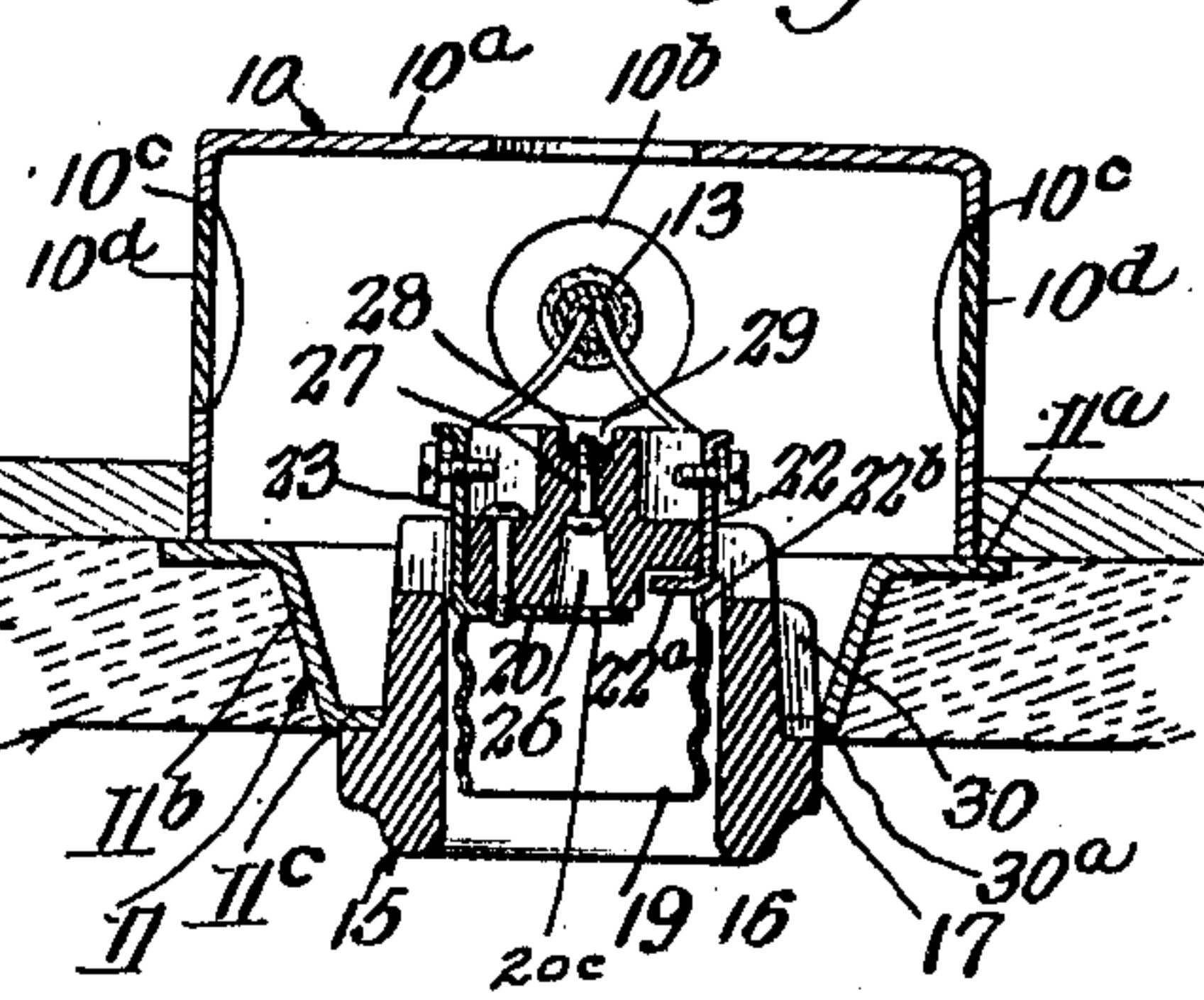


Fig. 4.

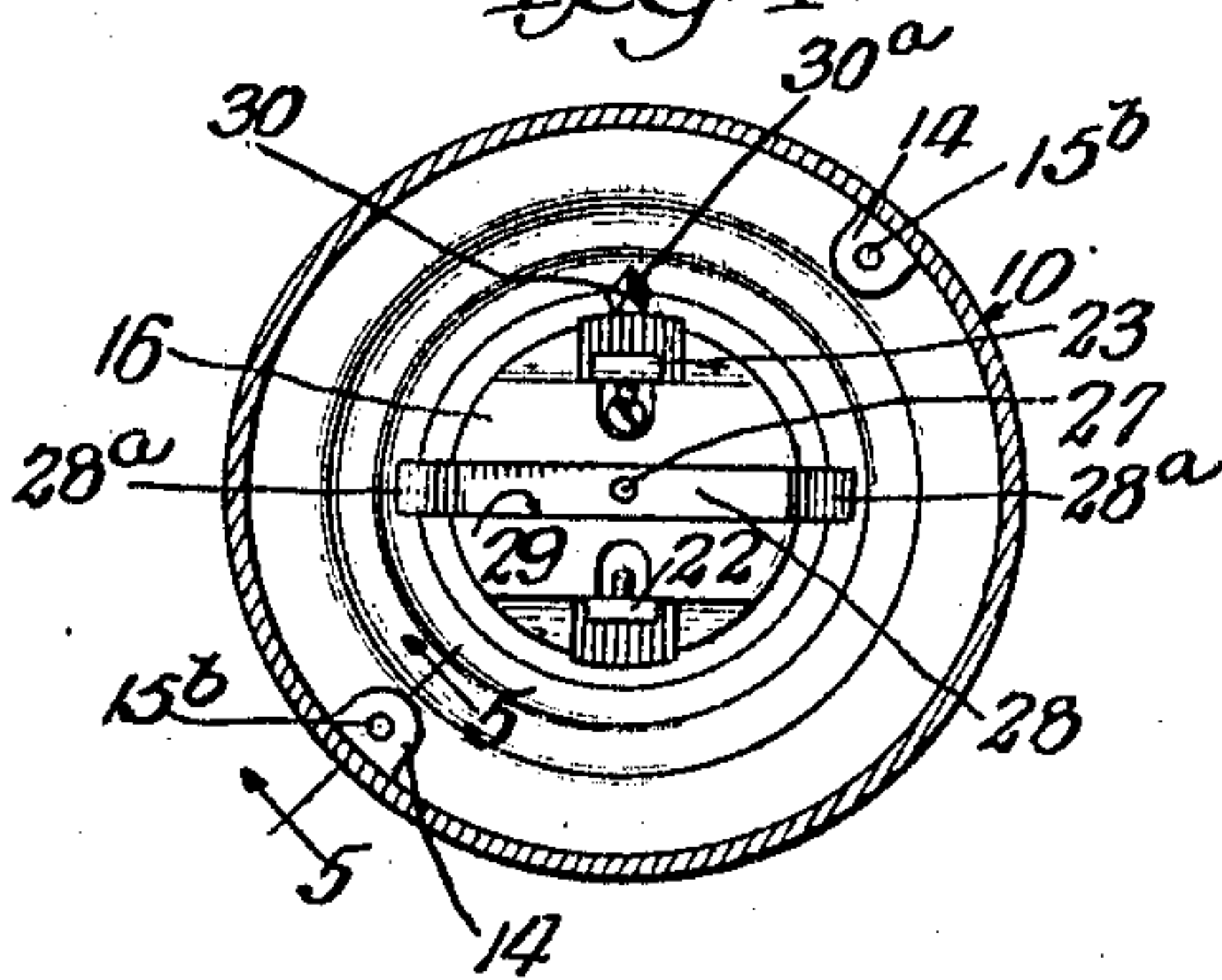


Fig. 5.

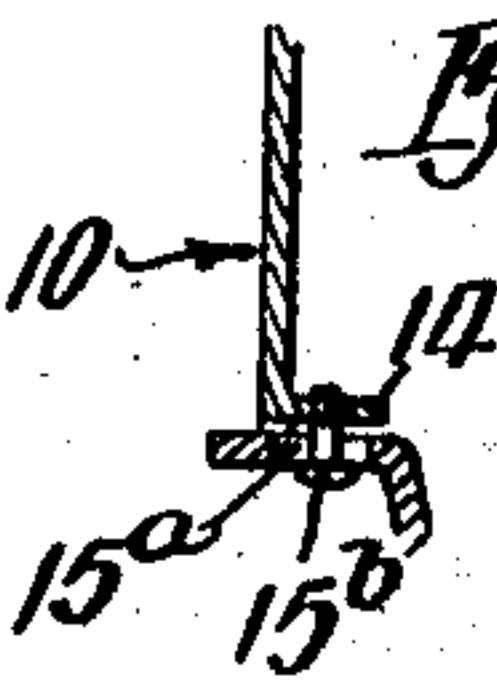
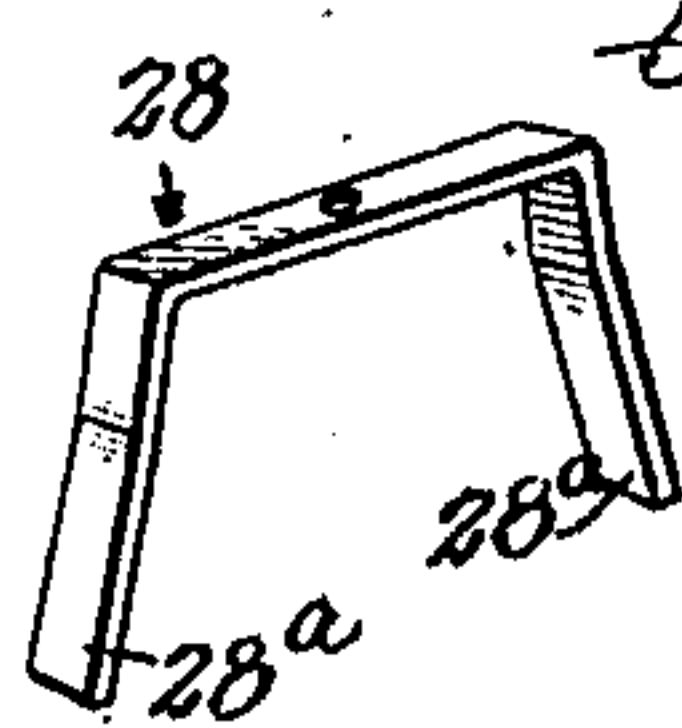


Fig. 6.



Witnesses:
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UNITED STATES PATENT OFFICE.

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MEANS FOR ATTACHING ELECTRIC WALL-SOCKETS TO WALLS.

992,971.

Specification of Letters Patent.

Patented May 23, 1911.

Application filed July 30, 1910. Serial No. 574,599.

To all whom it may concern:

Be it known that I, CLARENCE T. McDONALD, a citizen of the United States, and a resident of Oak Park, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Means for Attaching Electric Wall-Sockets to Walls; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to an improved attaching means for attaching lamp sockets to walls and the like and consists of the matters hereinafter described and more particularly pointed out in the appended claims.

In the drawings:—Figure 1 is a front elevation showing a socket attached to a wall by my improved attaching means. Fig. 2 is a cross-section through Fig. 1 on the line 2—2 thereof. Fig. 3 is a vertical section through Fig. 2 on the line 3—3 thereof. Fig. 4 is a transverse section through Fig. 2 on the line 4—4 thereof. Fig. 5 is a partial section through Fig. 4 on the line 5—5 thereof. Fig. 6 is a perspective view of the locking member.

My improved attaching means is shown herein as used in connection with a cup generally known as an "outlet box" closed on its front or outer side by an apertured cap which is adapted to receive the wall socket. The cup and cap are permanently secured within the wall when the wall is built and into said cup are led the mains which are intended to supply current to the socket. The socket is adapted to be inserted through the aperture of the cap and is provided with a shoulder which abuts against the outer face of the cap and which co-acts with a locking member projecting laterally from the socket body at the rear of said shoulder and being adapted to engage against the inner face of the cap after the socket is in place so as to lock the socket within said aperture, said locking member being constructed to yield toward the socket body

when the same is inserted through said aperture.

10 indicates the cup; 11, the cap; and 12, the wall comprising the lath 12^a and the plaster 12^b. The cup 10 is preferably cylindrical and has a rear wall 10^a. Diametrically opposed apertures 10^b are provided in the cylindrical wall of the cap for the passage of the mains 13. It is preferable to provide additional apertures 10^c which may be covered by disks or plates 10^d secured in place by solder or otherwise and adapted to be removed to open the apertures in case the wires run vertically instead of horizontally as illustrated.

The cap 11 has a flat base 11^a, a conical body 11^b, and a flange 11^c at the front which incloses the aperture 11^a through which the socket is inserted. The cup is provided with internally disposed lugs 14 to receive bolts 15^b by means of which the cap is secured to the cup. Said bolts pass through slots 15^a in the base of the cap. This construction permits a slight adjustment of the cap with reference to the cup. It is to be understood that the cap and cup are built into the wall with the mains 13 projecting into the cup, there being sufficient slack in the wires to draw them out and attach them to the socket, before the latter is inserted into the cup.

15 is a socket. It may be of any usual construction and in the example illustrated consists of a recessed plug 16 having a radially extending annular shoulder 17 adapted to engage against the flange 11^c of the cap and a substantially cylindrical body adapted to fit within the aperture of the cap. Within the recess of the plug is secured a contact shell 19 and a central contact 20. The contact shell 19 is provided with a flange 19^a at its base which is attached in place by means of screws 20^b which pass through recesses 20^a formed in the rear face of the block. Said recesses are preferably filled at the rear with cement or other material 21.

22 is a terminal which passes through an opening 22^b of the shell contact and is provided with a horse-shoe 22^a at its lower end,

engaging against the flange of said shell. The terminal is thus electrically connected to the shell.

23 is a second terminal diametrically opposite said shell terminal and is preferably made integral with the central contact 20. Suitable apertures are provided in the walls of the plug to permit the insertion of the terminals. These connections may be of any usual or convenient construction but those illustrated are preferable and are the simplest.

26 is an aperture in the base of the plug corresponding with a central aperture 20^c in the central contact. Said aperture is of two diameters, being larger at its outer end to receive the head of a screw 27 and smaller at its inner end to receive the shank of said screw.

28 is a locking member which is located in a transverse groove 29 formed in the rear end of the plug and having oppositely disposed longitudinal branches 29^a formed in the outer surface of the plug. Said locking member is of U-shape and is made of spring metal. It is secured in place by means of the screw 27. When the socket is properly fixed in the wall the ends 28^a of the locking member engage against the inner face of the flange 11^c of the cap 11. It is thus apparent that the locking member will co-act with the shoulder 17 to hold the lamp socket member in position within the cap.

To insert the socket and properly secure it in position the line wires are pulled out of the cup through the aperture 11^a of the cap and are connected to the terminals 22, 23 of the socket in the usual manner. The screw 27 is loosened so as to permit some play of the locking member 28 and the socket is then pushed into the recess in the cap, the spring ends 28^a of the locking member being sprung into their associated grooves so as to permit them to pass through the aperture in the cap. As soon as these ends pass the edge of the flange 11^c said spring ends spring outwardly and engage against the rear face of the cap. By means of a small screw-driver the screw 27 is then tightened which draws the ends of the locking member against the flange 11^c of the cap 11 and the flange 17 of the plug against the outer face of said flange. This secures the parts in position. In order to guide the socket plug into the recess in proper relation to the line wires it is preferable to provide on the body of the socket a longitudinal lug 30 which is adapted to engage a notch 30^a in the flange of the cap.

To withdraw the socket from the receptacle it is simply required to disengage the screw 27 from its connection with the transverse member of the locking device 28,

whereupon the socket 15 may be withdrawn through the aperture of the cap and the locking device itself, which is left in the cup when the socket is withdrawn, may be removed through the aperture in the cap 11.

I claim as my invention:

1. In combination with a supporting member provided with an aperture, a member to be supported having a body adapted to fit within said aperture, said body having a fixed part adapted to abut against an outwardly facing surface of said supporting member, means carried by said body adapted to abut against an inwardly facing surface of said supporting member when said body is in final position within said aperture, said means being constructed to yield laterally toward said body when the same is inserted through said aperture, and a member operable from the front of said body for securing said laterally yielding means to said receptacle.

2. In combination with an electric receptacle, a supporting plate provided with an aperture to receive said electric receptacle, said receptacle having a fixed part adapted to engage an outwardly facing surface of said plate, laterally movable means carried by said receptacle adapted to engage against a rearwardly facing surface of said plate when said receptacle is in position within said aperture, and a member operable from the front end of the receptacle for securing said laterally movable means to said receptacle.

3. In combination with a member to be supported having a body, a supporting cap or plate provided with an aperture adapted to receive said body, said body having a fixed part adapted to engage the outer surface of said cap or plate, a U-shaped locking member removably secured to said body, said locking member having free ends adapted to yield toward said body when the same is inserted in the aperture of said plate or cap and to engage the inner face of said cap to lock the body in position, and means operable from the front of said body adapted to secure said locking member to said body.

4. In combination with a socket, a cap provided with an aperture, said socket embracing a body adapted to fit within said aperture of the cap, a shoulder formed on said body adapted to abut against the outer face of said cap, said socket body having diametrically opposed longitudinal grooves in its outer surface and a transverse groove across its rear end connecting said longitudinal grooves, a locking device embracing a U-shaped spring bar, having a cross member located in the transverse groove of the socket body and longitudinal members adapted to

yield into said longitudinal grooves to permit said longitudinal members to pass through the aperture in said cap, and means operable from the front of the socket adapted to secure the cross member of said locking device to the socket body whereby its free ends are clamped against the inner face of said cap.

In testimony, that I, claim the foregoing as my invention I affix my signature in the presence of two witnesses, this 23rd day of July A. D. 1910.

CLARENCE T. McDONALD.

Witnesses:

GEO. R. WILKINS,
T. H. ALFREDS.