Oct. 27, 1931. M. M. ADLEMAN 1,829,207

ELECTRICAL SOCKET

Filed Aug. 22, 1930

Fig. 1.

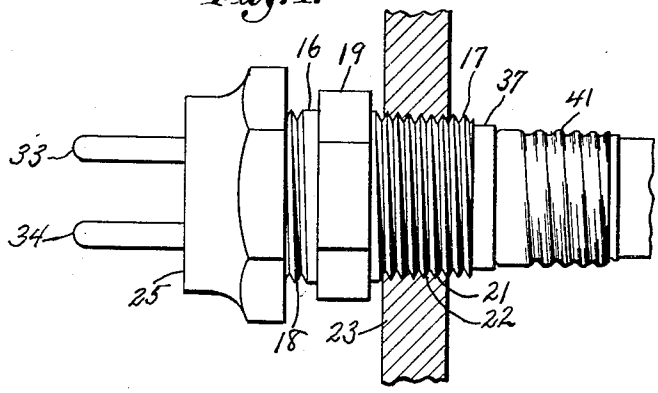


Fig. 2.

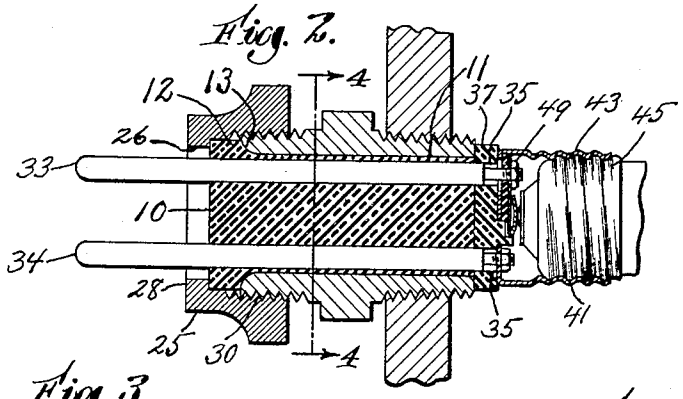


Fig. 3.

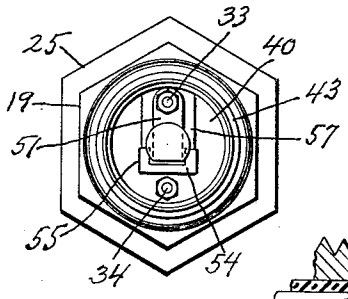


Fig. 4.

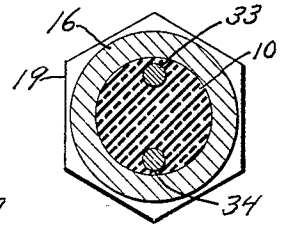
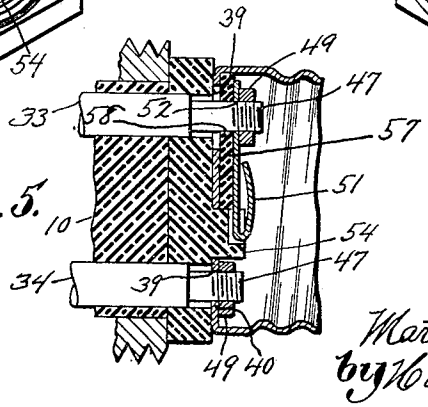


Fig. 5.



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UNITED STATES PATENT OFFICE

MARTIN M. ADLEMAN, OF PUTNAM, CONNECTICUT

ELECTRICAL SOCKET

Application filed August 22, 1930. Serial No. 476,932.

My invention relates to sockets for electric lamps, electric heating units, and the like.

The essential objects of my invention are to unite in a single structure the functions of both an electric socket and a plug; to enable a facile assemblage and disassemblage of the constituent parts; to insure that the assembled parts shall be air tight, water tight, and steam tight, and resistant to extreme pressure; and to attain these ends in a compact and inexpensive structure adaptable to successful and varied application and use both in air and under water.

To the above ends essentially my invention consists in such parts and in such combinations of parts as fall within the scope of the appended claims.

In the accompanying drawings which form a part of this specification,

Figure 1 is a side elevation of my novel electrical socket mounted in a wall or partition, including a fragmentary showing of an electric lamp or heating unit mounted in the socket,

Figure 2, a central longitudinal section of the same,

Figure 3, an end elevation of my device,

Figure 4, a section taken on line 4—4 of Figure 2, and

Figure 5, an enlarged fragmentary longitudinal section of a portion of my device.

Like reference characters indicate like parts throughout the views.

My device includes a porcelain core 10 comprising a cylindrical shank portion 11 and a diametrically enlarged or head portion 12, forming in conjunction with the shank portion a resultant shoulder 13. A detachable metallic attaching sleeve 16 is mounted on the core shank as a sliding fit, and is provided upon its forward and rear portions with exterior threads 17 and 18 respectively, and with a centrally disposed annularly arranged polygonal shoulder 19 for the application of a wrench located intermediate the threads. The attaching thread 17 is adapted to engage a thread 21 in a hole 22 in the wall 23 of a house, tank, or any other structure in which it is desired or convenient to mount my device. A clamping cap 25 rotatable on the core head 12, and enclosing the same, has a circular opening 26 in its relatively closed end forming a resultant retaining flange 28, and is provided with an interior screw thread 30 engaging the thread 18. By turning the cap 25 the surface 13 of the core head is drawn into tight engagement with the rear end of the sleeve 16.

Extending longitudinally through, and embedded or otherwise fixed in, the core 10 are two spaced electrical conduction rods or wires 33 and 34 extending as a sliding fit through holes 35 in a circular disk 37 of fiber or other insulating material. The latter is of greater diameter than that of the core shank 11 against whose forward end it abuts, and abuts also against the forward end of the sleeve 16. The rods extend loosely through perforations 39 in the base 40 of a conducting shell 41 of usual socket construction abutting against the disk, and whose screw thread side wall 43 is adapted to engage the usual threaded base 45 of an electric lamp or of a heating unit of any usual or preferred construction.

The forward end portions of the members 33 and 34 are of reduced diameter and are provided with threads 47 to receive nuts 49 located within the shell 41. By tightening these nuts the described assembled parts are still more intimately engaged.

A contact plate 51 provided with a perforation 52 for the passage of the threaded end of the member 33 is engaged by the nut on the latter and rests upon a rectangular lug 54 integral with the disk passing through an opening 55 in the base of the shell 41. The metallic contact plate is further insulated from the shell base by a strip 57 of insulating material behind the contact 51 provided with a perforation 58 to allow passage of the member 33 therethrough.

The rear ends of the members 33 and 34, in this instance, project beyond the core 10 to admit a socket plug of usual construction electrically connected through its cords with a source of electrical supply. This means of electrically connecting the rear ends of the members 33 and 34 to a source of electrical

supply, while novel and preferred, is not exclusive.

It will be observed that by applying a wrench to the shoulder 19 the attaching sleeve 6 is readily screwed into any opening located in a base, partition, panel or the like; that the sleeve 16, clamping cap 25, and core head 12 cooperate to insure an air and water tight device; that the device is resistant to extreme pressure; that few and simple constituent parts may be employed and quickly assembled whereby the cost of my device is reduced to a minimum.

While I have herein shown and described merely for illustrative purposes one specific embodiment of my invention, and have disclosed and discussed in detail the construction and arrangement incidental to such disclosure, it is to be distinctly understood that the invention is limited neither to the mere details or relative arrangement of parts nor to the specific application shown, but that extensive variations from the illustrations may be made without departing from the principles thereof.

I claim:—

1. In an article of the character described, an insulating core, a metal attaching sleeve surrounding a portion of the core, a clamping cap detachably engaging the sleeve and surrounding one end of the core, electrical conduction rods fast in the core longitudinally disposed therein, and a conduction shell supported upon the other end of the core.

2. In an article of the character described, a core of insulating material, a metallic sleeve surrounding a portion of the core provided with an exterior attaching thread, a clamping cap provided with an opening in its outer end detachably engaging the sleeve and enclosing one end of the core, electrical conduction rods fixed in the core and extending longitudinally therethrough, and a conduction shell insulated from the rods adjacent the other end of the core.

3. In an article of the character described, a core of insulating material comprising a shank and head, an attaching sleeve surrounding the shank and abutting against the head provided with an exterior attaching thread and with an exterior thread upon its rear end, a clamping cap enclosing the head and provided with a thread engaging the second mentioned thread, interspaced conduction rods extending longitudinally through the core, and a conduction shell supported by the rods adjacent the end of the core shank.

4. In an article of the character described, a metallic attaching sleeve provided with an exterior thread upon its rear end, a clamping cap provided with a thread engaging the first thread, a core of insulating material comprising a shank detachably mounted in the sleeve and a head in the cap abutting against the attaching sleeve, conduction rods in the core projecting beyond the forward end of the core, a conduction shell upon the projecting ends of the rods, and a disk of insulating material upon the rods intermediate the shell and core.

5. In an article of the character described, a metallic sleeve provided with an exterior attaching thread in its forward portion, a clamping cap detachably mounted upon the rear end of the sleeve including an opening in its relatively closed end, a core of insulating material comprising a shank in the sleeve, and a head in the cap, electrical conduction rods extending longitudinally through the core with their rear ends projecting through the opening, and a conduction shell supported by the forward ends of the rods.

6. In an article of the character described, a metallic attaching sleeve, a clamping cap in threaded engagement with the rear end of the sleeve, an insulating core detachably mounted in the sleeve and cap, an insulating disk adapted to abut against the forward end of the sleeve and provided with holes, a conduction shell abutting against the disk and provided with perforations registering with the holes, electrical conduction rods fixed in the core and passing loosely through the holes and perforations into the shell and provided with threads upon their forward ends, and nuts upon the threads within the shell.

In testimony whereof I have affixed my signature.

MARTIN M. ADLEMAN.