

F. J. RUSSELL.
ELECTRICAL RECEPTACLE.
APPLICATION FILED JUNE 17, 1909.

948,567.

Patented Feb. 8, 1910.

Fig. 1.

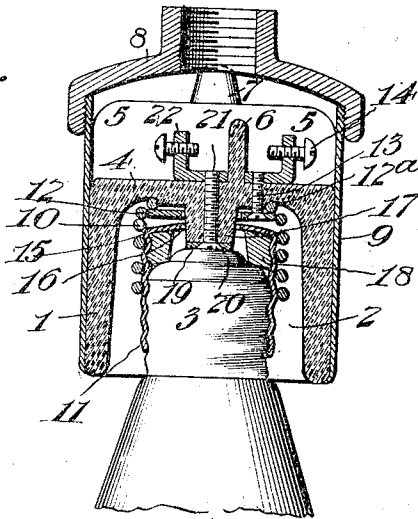


Fig. 2.

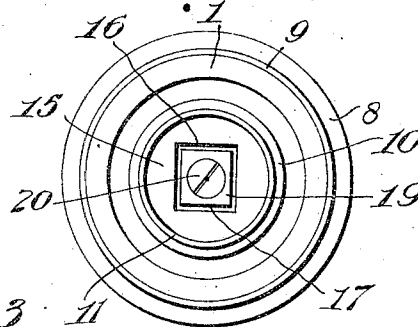


Fig. 3.

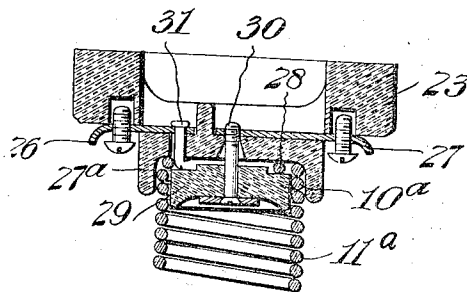
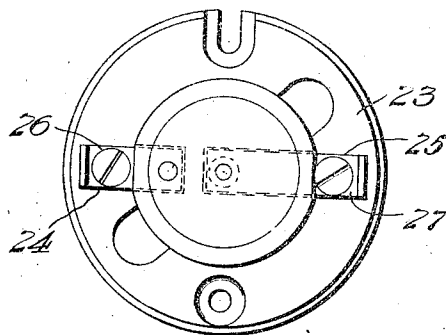


Fig. 4.



Witnesses

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ELECTRICAL RECEPTACLE.

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To all whom it may concern:

Be it known that I, FRANK J. RUSSELL, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Electrical Receptacles, of which the following is a specification.

This invention relates to the subject of electrical receptacles of the type adapted to receive and connect with the standard forms of electrical connecting plugs, and has particularly in view a novel mounting of the plug holder, commonly termed the lamp holder, of the receptacle.

To this end the invention primarily has in view what may be characterized as a flexibly mounted plug holder admitting of a minimum number of parts and joints in the construction of the receptacle and in the mounting of the two plug contacts and the two line wire terminals, while at the same time possessing special utility as a shock or vibration absorber. In this connection, that is, as a vibration absorber, the improved plug holder and plug holder mounting, forming the subject matter of the present application, is of special and practical importance in providing an electrical receptacle particularly adapted to the use of delicate lamps in places and locations subject to more or less constant, and sometimes heavy vibrations, such as in railway cars, ships, on bridges, in factories, and analogous locations.

A further object of the invention is to provide a flexibly mounted plug holder for electrical receptacles that can be advantageously housed in various forms of cups or shells without interfering in the least with the lamp being readily screwed into place or removed.

The improvements claimed herein are necessarily applicable to various types of receptacles, and also susceptible to embodiment in various forms of construction, but for illustrative purposes, certain preferred forms of the invention are shown in the accompanying drawings, in which:

Figure 1 is a central longitudinal sectional view of a weatherproof type of electrical receptacle equipped with a fitting embodying the present invention. Fig. 2 is a front end view of the form of the invention shown in Fig. 1. Fig. 3 is a sectional view of another form of electrical receptacle em-

bodying the invention. Fig. 4 is a plan view of the form of the invention shown in Fig. 3.

Like references designate corresponding parts in the several figures of the drawings.

In the embodiment of the invention suggested in Figs. 1 and 2 of the drawings, the receptacle shown is of a type embodying in its organization a porcelain or equivalent body 1 preferably formed of a single piece of porcelain or other insulating material and provided therein with the plug receiving socket 2 for the accommodation of the electrical connecting plug 3 carried by the incandescent lamp or other electrical fixture. Also, the said receptacle body is provided with an integral bottom portion 4 constituting a supporting base upon which is mounted and carried plug contacts and the wire terminals associated therewith. It will also be observed that the said bottom portion 4 is formed in its rear side with housing pockets 5 for the wire terminals and separated by an insulating bridge piece 6; and said bottom portion of the porcelain or receptacle body is provided with holding lugs 7 suitably interlocked with the cap part 8 of an outer protective casing or casing sleeve 9 which entirely houses therein the receptacle body.

As indicated, the present invention refers particularly to an improved flexible mounting for the plug or lamp holder of the receptacle, and in connection with the type of receptacle described, this plug holder mounting includes a flexible supporting section designated by the number 10 and the plug holder proper 11 carried by such section. As illustrated, the flexible supporting section preferably consists of a spirally coiled length of wire whose innermost convolution 12^a is of less diameter than the main part of the coil and may be termed an attaching base coil, the same being adapted to be clamped securely upon and against the bottom of the socket 2 by means of a suitable clamping washer 12 arranged inside of the section 10. The said clamping washer 12, in the form of the invention being described, has metallic contact with the flexible supporting section 10 and has a conducting screw connection 13 with one of the line wire terminals 14 held on the rear side of the porcelain in one of the pockets 5. The said plug holder proper 11 consists of a screw shell terminal tightly threaded inside

of the flexible supporting section 10 and provided with an inner end wall 15 which is pierced by a squared guard opening 16 which loosely engages over, but interlocks with, a squared holding stud 17 projected centrally from the bottom 4 of the body and extending into the plug receiving socket 2. This detail prevents turning of the plug holder when the plug 3 is being screwed in or out, in other words, obviates the sticking or pinching which sometimes interferes with a free running in and out of the lamp plug. In the construction described, there is also preferably seated within the bottom portion of the plug holder 11 an annular stop collar 18 against which the plug 3 comes in contact so that the latter is prevented from being screwed in so far as to draw the inner end 15 of the plug holder beyond the stud 17, and hence to a position where it could rotate. The holding stud 17 also supports the center plug contact consisting of the washer 19 and screw head 20, the latter being arranged at one end of the combined fastening and conducting screw 21 which passes centrally through the bottom of the porcelain and holds in place the other line wire terminal 22 arranged within the other pocket 5 of the porcelain.

In the form of the invention shown in Figs. 3 and 4 of the drawings, the receptacle includes a main base section 23 provided with suitable seats 24 and 25 for the separate line wire terminals 26 and 27 respectively. Also, the said main base section 23 has formed integrally therewith on its front side a porcelain receiving cup 27 within which is seated the flexible spiral wire supporting section 10^a corresponding in relative position and function to the flexible supporting section 10 previously referred to. In the modified structure shown in Figs. 3 and 4, the flexible supporting section 10^a forms an integral part of the plug holder proper designated by the number 11^a. In other words, the said plug holder 11^a and its flexible supporting section are a part of the same spirally coiled length of wire, but the said supporting section is provided with an attaching base coil 28 of less diameter than the other convolutions and tightly clamped upon the bottom of the cup 27^a, by means of an insulated clamping washer 29 subserving

the function of the washer 12 previously referred to. However, in the modification, the washer 29 is held in place by the center plug contact screw 30 which connects with the line wire terminal 27, while the opposite line wire terminal 26 is directly engaged by the inner deflected connecting terminal 31 of the coiled body of wire forming the plug holder 11^a and its flexible supporting section 10^a.

It will be observed that in both forms of construction, herein described, the point of attachment for the flexible supporting section is below or in rear of the plane of the center plug contact, thus insuring the carrying out of the functions hereinbefore referred to.

I claim:

1. In an electrical receptacle, a body, a plug holder including a flexible wire supporting section having a base coil of less diameter than the main portion fitted against the body, and means within the section for clamping said base coil against the body.

2. In an electrical receptacle, a body provided with an interior projecting angular holding stud supporting the center plug contact, a spiral wire supporting section, a clamping washer binding on the base coil of said section, and a screw shell plug holder fitted within said supporting section and provided in its base with a stop, said screw shell holder being furthermore provided in its bottom with an angular opening that engages over the stud.

3. In an electric receptacle, the body provided with an interior projecting squared holding stud supporting the center plug contact, a spiral wire supporting section, a clamping washer binding on the base coil of said section, and a screw shell plug holder fitted within said supporting section and provided in its base with a stop collar, said screw shell holder being further provided in its bottom with a squared opening loosely engaging over said stud.

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

FRANK J. RUSSELL.

Witnesses:

JOHN W. MYERS,
J. WIN SNADER.