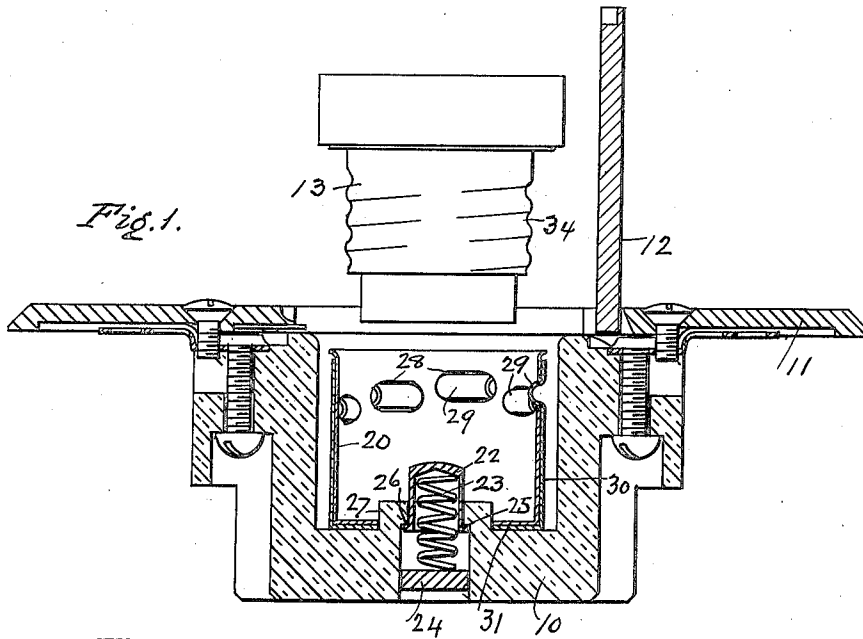
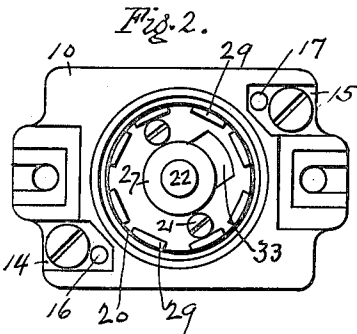
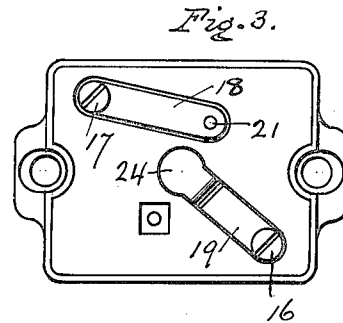
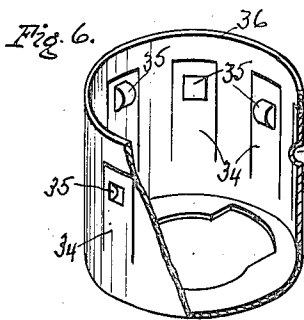
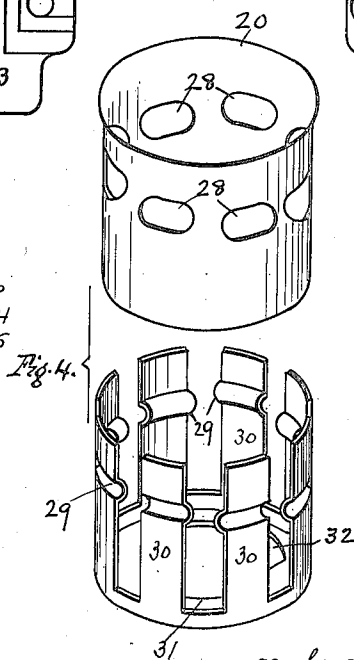
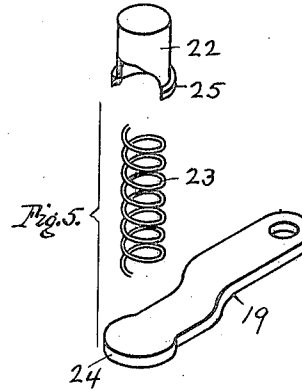


G. B. THOMAS.
ELECTRICAL RECEPTACLE.
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1,104,577.

Patented July 21, 1914.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE B. THOMAS, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE BRYANT ELECTRIC COMPANY, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

ELECTRICAL RECEPTACLE.

1,104,577.

Specification of Letters Patent.

Patented July 21, 1914.

Application filed June 14, 1913. Serial No. 773,693.

To all whom it may concern:

Be it known that I, GEORGE B. THOMAS, a citizen of the United States of America, and residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented a certain new and useful Improvement in Electrical Receptacles, of which the following is a specification.

My present invention relates to electrical receptacles and particularly to receptacles for attachment plugs, lamps and the like of the standard screw plug type, the object of my invention being to provide a receptacle into which the fitting may be plugged by a straight-in push without the usual rotation thereof to effect the engagement of the cooperating shell contacts of the receptacle and fitting.

In the accompanying drawing, Figure 1 is a longitudinal section through a receptacle in which my invention is embodied in one form; Fig. 2 is a plan thereof; Fig. 3 is an inverted plan thereof; Fig. 4 is a dropped perspective of the shell contact elements of the receptacle; Fig. 5 is a dropped perspective of the center contact elements; and Fig. 6 is a broken perspective of a shell contact of modified construction.

As shown in the accompanying illustrative drawing, my invention is embodied in a flush receptacle comprising, as usual, an insulating body 10 centrally recessed to form a well in which the receptacle contacts may be arranged. A cover plate 11 is mounted on the body 10 and is provided with a hinged door 12, here shown lifted to permit the entry of a standard attachment plug 13 into the receptacle. Wire terminals 14 and 15 located in recesses at opposite ends of the upper face of the body 10 are connected by screws 16 and 17 respectively to the straps 18 and 19 let into recesses in the lower face of the receptacle. The strap 18 is electrically connected with the shell contact 20 of the receptacle by the securing screw 21 which passes through the base flange of the shell and screws into a threaded perforation in one end of the strap 18. The other strap, 19, is electrically connected with the center contact 22 through the spring 23 which, in adjusted position, is confined at one end within the thimble which forms the center contact 22, and at the other end bears against the head 24 of the strap 19. A flange 25 at the lower end of the thimble bears against

the shoulder 26 surrounding the perforation in the boss 27 through which the thimble rises into the chamber of the receptacle. The shell contact 20 is here shown cylindrical with staggered perforations 28 in the upper portion thereof. Through these perforations project studs 29 formed in register therewith at the upper ends of spring arms 30, angled upward from the annulus 31, which forms a base common to the several spring arms 30. The studs 29 may be formed by merely off-setting a portion of the metal of each spring arm as shown, but this method of forming the studs may be varied in many ways. In order to secure the assembly of the spring arms in proper relation to the several perforations 28 in the shell 20, I provide both elements of the shell contact with some suitable positioning indication such as the registering slots 32, 33 in their respective bases. When these slots are in register, the studs 29 are in position to enter the proper apertures 28 in the shell 20.

The perforations and studs 28 and 29, respectively, while staggered around the upper portion of the shell do not conform to the standard pitch of the thread 34 on the attachment plug shell, but are so arranged that, irrespective of the depth of the insertion of the plug 13, certain of the studs 29 will be engaged in the bottoms of the threads 34 so as to exert a retaining action on the plug. In this position the remaining studs 29 are either on top or on the side of the thread. Thus although the plug may not be inserted sufficiently far to depress the center contact 22 the full extent of its play in the perforation of the boss 27, the plug is firmly held against withdrawal by these of the studs 29 which have entered the bottoms of the thread 34 on the plug.

By making the shell 20 cylindrical, it affords a rigid support for the plug which prevents the latter from tilting to any objectionable degree in the receptacle and at the same time protects the spring arms 30 against deformation through the careless insertion of the plug which might have the effect of bending the spring arms outward so far as to impair their resiliency.

Various modifications of the construction will readily suggest themselves. Thus in Fig. 6, I have shown the spring arms 34 struck from the metal of the shell itself and provided at their upper and free ends with

studs 35 which would engage the thread of the plug in precisely the same manner as in the construction described. The ring of metal 36 above the upper ends of the spring arms 34 affords rigidity to the structure of the shell and protects the spring arms 34 from undue deflection. The particular center contact shown need not be used with a shell construction of this type.

10 I claim as my invention:—

1. An electrical receptacle having a rigid shell contact open at its outer end, a base flange at its inner end and securing means engaging only said base flange to hold the same upon its support, in combination with inwardly-projecting spring-pressed studs spaced around said shell and adapted to engage the thread of an inserted screw plug, substantially as described.

20 2. An electrical receptacle having a rigid shell contact open at its outer end, a base flange at its inner end and securing means engaging only said base flange to hold the same upon its support, in combination with inwardly-projecting spring-pressed studs spaced around said shell below its upper edge and adapted to engage the thread of an inserted screw plug, substantially as described.

30 3. An electrical receptacle having a rigid shell contact and inwardly-projecting spring-pressed studs independent of said shell but spaced around the exterior of the latter and passing through said shell and

adapted to engage the thread of an inserted screw plug, substantially as described. 35

4. An electrical receptacle having a rigid cylindrical shell contact with staggered perforations spaced around the same, in combination with a series of springs arranged outside said shell and studs pressed through said perforations by said springs, substantially as described. 40

5. An electrical receptacle having a rigid cylindrical shell contact with staggered perforations spaced around the same, in combination with a ring underlying the base of the shell and provided with a series of upwardly-extending spring arms lying outside said shell and provided with studs passing through the perforations in the latter. 45 50

6. An electrical receptacle having a rigid shell contact and inwardly-projecting spring-pressed studs spaced around said shell and adapted to engage the thread of an inserted screw plug, said studs being arranged in such staggered relation to each other that a plurality thereof conform to the pitch of the thread of an inserted screw plug irrespective of the depth of its insertion. 55 60

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

GEORGE B. THOMAS.

Witnesses:

G. W. GOODRIDGE,
H. M. WICHERT.