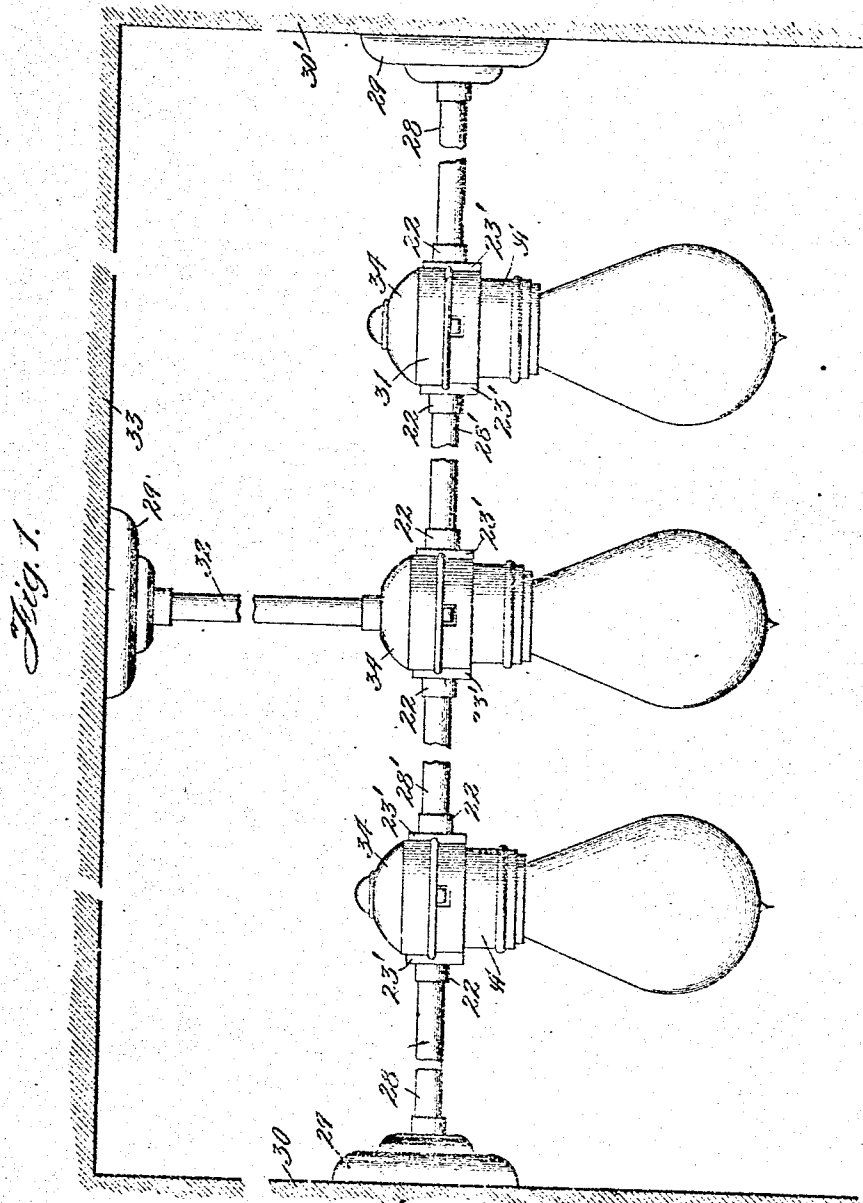


981,242.

Patented Jan. 10, 1911.

2 SHEETS-SHEET 1.



Witnesses:

Wm. B. Perry
A. A. Thomas

Inventor:

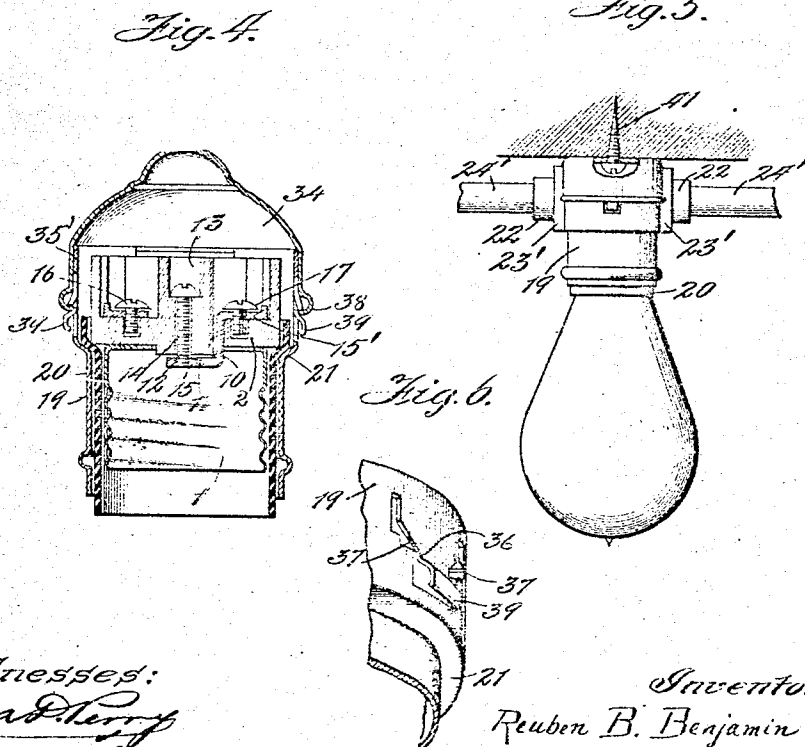
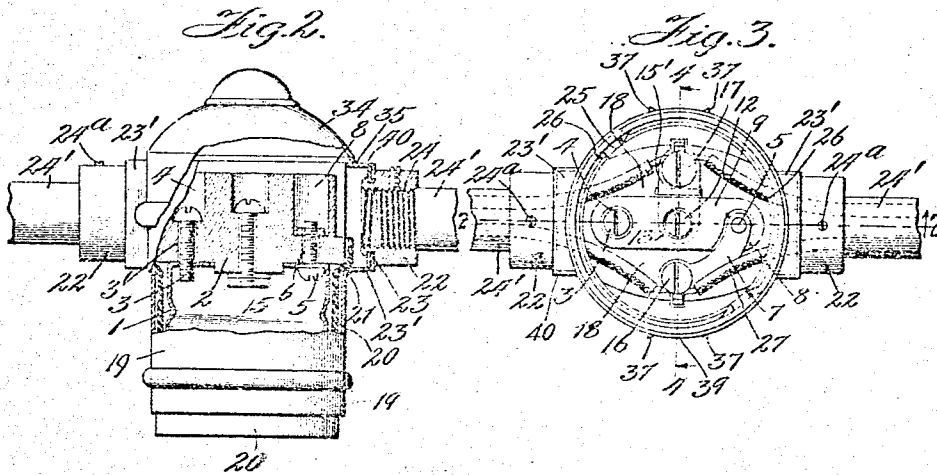
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2 SHEETS-SHEET 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

REUBEN B. BENJAMIN, OF CHICAGO, ILLINOIS, ASSIGNOR TO BENJAMIN ELECTRIC MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

ELECTRIC-LAMP SOCKET.

981,242.

Specification of Letters Patent.

Patented Jan. 10, 1911.

Application filed February 17, 1908. Serial No. 416,340.

To all whom it may concern:

Be it known that I, REUBEN B. BENJAMIN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Electric-Lamp Sockets, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

My invention relates to electric-lamp sockets, and has for its object an improvement in the structure of such sockets, whereby a series of lamps may be arranged in a row with pipe-connections between the adjacent sides of the sockets, so that all of the wiring will be excluded from view by being housed in said connections. I accomplish this by providing the casing of the socket with lateral hollow extensions through which the supply wires pass, and whereby it is supported. The insulating base that carries the lamp-engaging contacts has the binding screws located in channels across the top leading from one extension to the other when the base is in position on the casing. In this way the supply wires are led across the casing through the channels, thus making the connection between the binding screws and the wires a simple, easy matter. Furthermore, I provide a cap or cover for the casing, so shaped as to be firmly seated upon the casing and locked thereto preferably without the necessity of rotation.

Referring to the drawings: Figure 1 shows an arrangement of lamps, as in a show-case, made possible by the use of my improved socket; Fig. 2 is a partly cross-sectional view on line 2—2 of Fig. 3; Fig. 3 is a top view of the socket with the cap removed; Fig. 4 is a sectional view taken on line 4—4 of Fig. 3; Fig. 5 is a view, partly in section, of my socket having a modified form of cap whereby the socket may be directly secured to a support, such as a wall or ceiling; Fig. 6 is a fragmentary detail view showing a preferred form of locking device on the socket for securing the cap thereto.

The shell-contact 1 is secured to the base 2 of suitable insulating material (as porcelain for instance) by means of the screw 3 passing through the opening 3' in the base. The head of the screw rests in the circular recess 4. A screw 5 passes through the opening 6 in the opposite side of the base, engaging at

one end the shell-contact 1 and at its other end the conducting strip 7. A slotted recess 8 in the central ridge 9 permits engagement of the strip 7 with the screw 5, as shown in Fig. 3. A bent plate 10 of metal passes through the slot 11 and is held in place by the central screw 12 extending from the recess 13 through the opening 14, and engaging the transverse portion 15 of the plate 10. This transverse portion 15 forms the center contact of the socket. A pair of binding screws 16 and 17 are located in the channels 18, and connected, respectively, with the free end of the strip 7, and with the transverse portion 15' of the plate 10. In other words, binding screw 16 is electrically connected with shell-contact 1, while binding screw 17 is electrically connected with center contact 15.

I provide a casing 19 for the base, an insulating sleeve 20 being interposed to prevent accidental contact between the casing and the shell-terminal 1. As seen from Figs. 2 and 4, the base when in position on the casing rests upon the ridge or shoulder 21. The casing is furnished with a pair of lateral extensions, whereby it assumes what might be termed a T-shaped form. In the instance illustrated, these extensions consist of a pair of bushings 22 secured in each of the openings 23. For convenience of design and manufacture I prefer to make the openings in the rectangular shoulders or projections 23', although this is by no means essential. The bushings are shown as internally screw-threaded at 24, so that a pipe or conduit 24' may be screwed therein for supporting the socket. However, any method may be resorted to for effecting proper connection between the extensions and the pipes. Rotation of the pipes in the bushings may be prevented by set-screws 24'. Also, rotation of the base in the socket may be obviated in any suitable way, as, for instance, by providing on the base a lateral lug 25 which is held between a pair of inwardly bent projections 26 struck up on the casing. The supply wires 26 and 27 enter through one of the hollow extensions and are led out through the other. It will be observed that a pair of channels 18 cross the top of the base, so arranged that when the base is in position in the casing these channels lead from one of the extensions to the other; whereby the supply wires are accom-

modated in said channels, and readily connected to the binding screws 16 and 17 situated in the channels, as above described.

In Fig. 1 I have illustrated an arrangement of lamps suspended from my novel form of socket. One end of a pipe 28 is secured to a support 29 on the wall 30 (or, it might be the side of a show-case or display-window), while the other end of the pipe is secured in the adjacent extension 22 of the socket A. The other extension of the casing is connected by means of a second pipe 28' with the adjacent extension of the next socket,—and so on until a sufficient number of sockets has thus been linked together by direct rigid connections between adjacent extensions of consecutive sockets. The last of the sockets in the series is, of course, secured to the opposite wall 30', by means of a pipe. As an additional support for the fixture thus formed one may employ a pipe 32 secured to the ceiling 33. The supply wires may be led either through the supporting pipe 32, or through either of the end pipes secured to the walls. It will thus be seen that by the use of my improved socket exposed wires are obviated, whereby an appearance of pleasing neatness is imparted to the fixture, in addition to its firmness and stability. It is, of course, evident that various other arrangements of lamps may be effected with my new socket,—the illustration in Fig. 1 being given merely as an example. Thus, for instance: the sockets might be connected together in rectangular outline, in which case the corner sockets would have their extensions not oppositely disposed but at an angle of 90°. The channels on the base would, naturally, be modified accordingly. I would therefore have it understood that such a modified form of socket, that is, one with its extensions at 90°, is comprehended in certain of the appended claims.

The top of the casing is covered with a cap 34. In order that this cap may properly be placed upon the casing, I provide it with cut-away portions 35 in alinement with the hollow extensions and fitting snugly over the shoulders 23'. Although I have shown the cap as terminating about half-way on the cylindrical enlargement 35' of the casing, it is clear that this precise arrangement is purely a matter of design, and that the cap might as well extend a lesser distance over the casing, or completely embrace the sides of the shoulders 23'. In either case, the cap could encircle the casing in a plane intersecting the extensions.

Any desired form of locking scheme may be resorted to for securing the cap and casing together. Fig. 6 shows in perspective a locking device. The spring tongues 36, struck up from the casing upon opposite sides thereof by punching, are provided

with slightly turned-up corners 37. The cap has a hollow bead 38 at its opening, so that when the cap is forced down upon the casing the turned-up corners 37 will spring into the hollow of the bead, as shown in Fig. 4, thus preventing withdrawal of the cap. To remove the same, it is only necessary to press against the finger-pieces 39 on the tongues 36, whereby the projecting corners 37 are withdrawn from the hollow of the bead. If desired, the cut-away portions 35 on the cap may be made of sufficient width to permit substantial rotation of the cap on the casing, so that a locking contrivance in the form of a bayonet-slot might be used. However, I prefer to use a locking arrangement whereby the parts may be secured together by a direct thrust. In this way I can make the cut-away portions 35 fit snugly over the shoulders of the hollow extensions, thus giving an appearance of neatness and compactness to the structure. Also, I may use a filling piece 40 to cover up the space formed by the shoulders 23' and left exposed by the cap, as shown in Fig. 2.

Although I have shown the top of the cap as dome-shaped, any suitable contour may be given it. In certain instances it might be desirable to provide the cap with a flat top, as indicated in Fig. 5, in order that the socket might be directly secured to a support, such as a ceiling, by means of a screw 41 passing through the cap into the support.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is—

1. An electric lamp socket comprising a casing provided with a pair of lateral hollow extensions through which the supply wires may pass, a base, lamp-engaging contacts carried thereby, said base having a pair of channels on its upper side extending from one of said hollow extensions to the other, a binding terminal in each of said channels electrically connected with one of said lamp-engaging contacts, and a cap normally covering said channels and made removable to expose said binding terminals.

2. In an electric lamp socket, the combination with a casing provided with lateral hollow extensions through which the supply wires pass, of a cap for the top of said casing, having cut-away portions in alinement with said extensions to permit the cap to encircle the casing in a plane intersecting the extensions, and cooperating means on said cap and casing for locking the parts together.

3. In an electric lamp socket, the combination with a casing provided with lateral hollow extensions through which the supply wires pass, of a cap for the top of said casing having cut-away portions in alinement with said extensions to permit the cap to encircle the casing in a plane intersecting the exten-

sions, said cut-away portions fitting snugly over said extensions whereby substantial rotation of the cap on the casing is prevented, and spring-means for locking the cap to the casing when the cap is thrust down over the casing.

4. In an electric-lamp socket, the combination with a casing provided with lateral hollow extensions through which the supply wires pass, of a cap for the top of said casing having cut-away portions in alinement with said extensions to permit the cap to encircle the casing in a plane intersecting the extensions, cooperating means on said cap and casing for locking the parts together, a base in said casing, shell and center contacts carried by said base, and a pair of binding screws on the top of the base for connecting said contacts with the supply wires.

5. In an electric-lamp socket, the combination with a casing provided with lateral hollow extensions through which the supply wires pass, of a cap for the top of said casing having cut-away portions in alinement with said extensions to permit the cap to encircle the casing in a plane intersecting the extensions, cooperating means on said cap and casing for locking the parts together, a base in said casing having channels across the top thereof leading from one extension to the other, shell and center contacts carried by said base, and a pair of binding screws in said channels for connecting said contacts with the supply wires.

6. In an electric-lamp socket, the combination with a casing provided with lateral hollow extensions through which the supply wires pass, of a cap for the top of said casing having cut-away portions in alinement with said extensions to permit the cap to encircle the casing in a plane intersecting the extensions, said cut-away portions fitting snugly over said extensions whereby substantial rotation of the cap on the casing is prevented, spring-means for locking the cap to the casing when the cap is thrust down over the casing, a base in said casing, shell and center contacts carried by said base, and a pair of binding screws on the top of the base for connecting said contacts with the supply wires.

7. In an electric-lamp socket, the combination with a casing provided with lateral hollow extensions through which the supply

wires pass, of a cap for the top of said casing having cut-away portions in alinement with said extensions to permit the cap to encircle the casing in a plane intersecting the extensions, said cut-away portions fitting snugly over said extensions whereby substantial rotation of the cap on the casing is prevented, spring-means for locking the cap to the casing when the cap is thrust down over the casing, a base in said casing having channels across the top thereof leading from one extension to the other, shell and center contacts carried by said base, and a pair of binding screws in said channels for connecting said contacts with the supply wires.

8. An electric-lamp socket, comprising a casing provided with lateral openings, a bushing secured in each opening whereby the supply wires may enter the casing through one bushing and pass out through the other, a base in said casing, shell and center contacts carried by said base, a pair of binding screws on the top of the base for connecting said contacts with the supply wires, a cap for the top of said casing having cut-away portions in alinement with said bushings to permit the cap to encircle the casing in a plane intersecting the bushings, and cooperating means on said cap and casing for locking the parts together.

9. An electric-lamp socket, comprising a casing provided with lateral openings, a bushing secured in each opening whereby the supply wires may enter the casing through one bushing and pass out through the other, a base in said casing having channels in the top thereof leading from one of said lateral openings to the other, shell and center contacts carried by said base, a pair of binding screws on top of the base for connecting the contacts with the supply wires, a cap for the top of said casing having cut-away portions in alinement with said bushings to permit the cap to encircle the casing in a plane intersecting the bushings, and cooperating means on said cap and casing for locking the parts together.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.

REUBEN B. BENJAMIN.

Witnesses:

ARTHUR H. BOETTCHER,
C. L. HOPKINS.