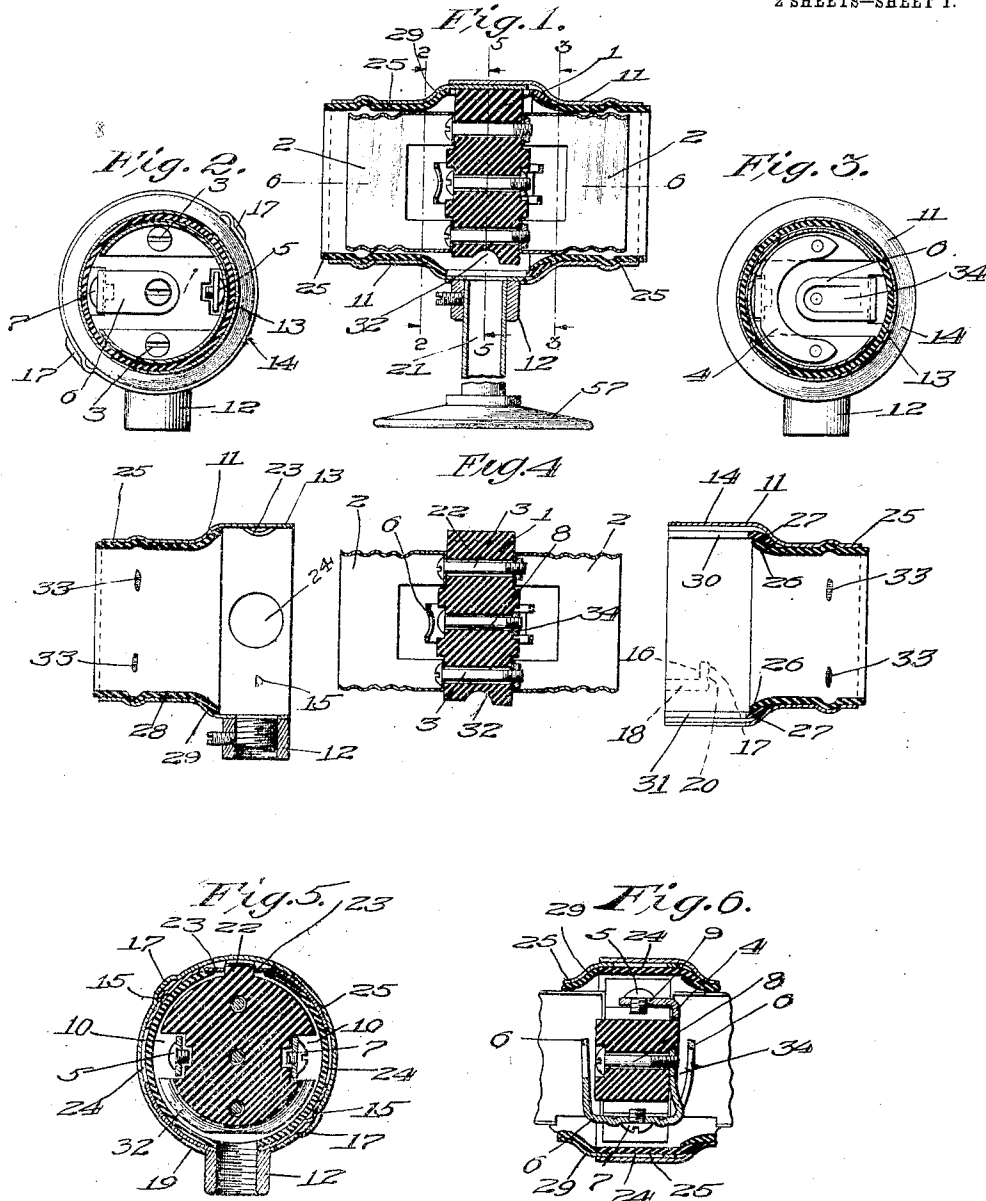


No. 852,490.

PATENTED MAY 7, 1907.

R. B. BENJAMIN.
TWIN LAMP SOCKET.
APPLICATION FILED FEB. 29, 1904.

2 SHEETS—SHEET 1.

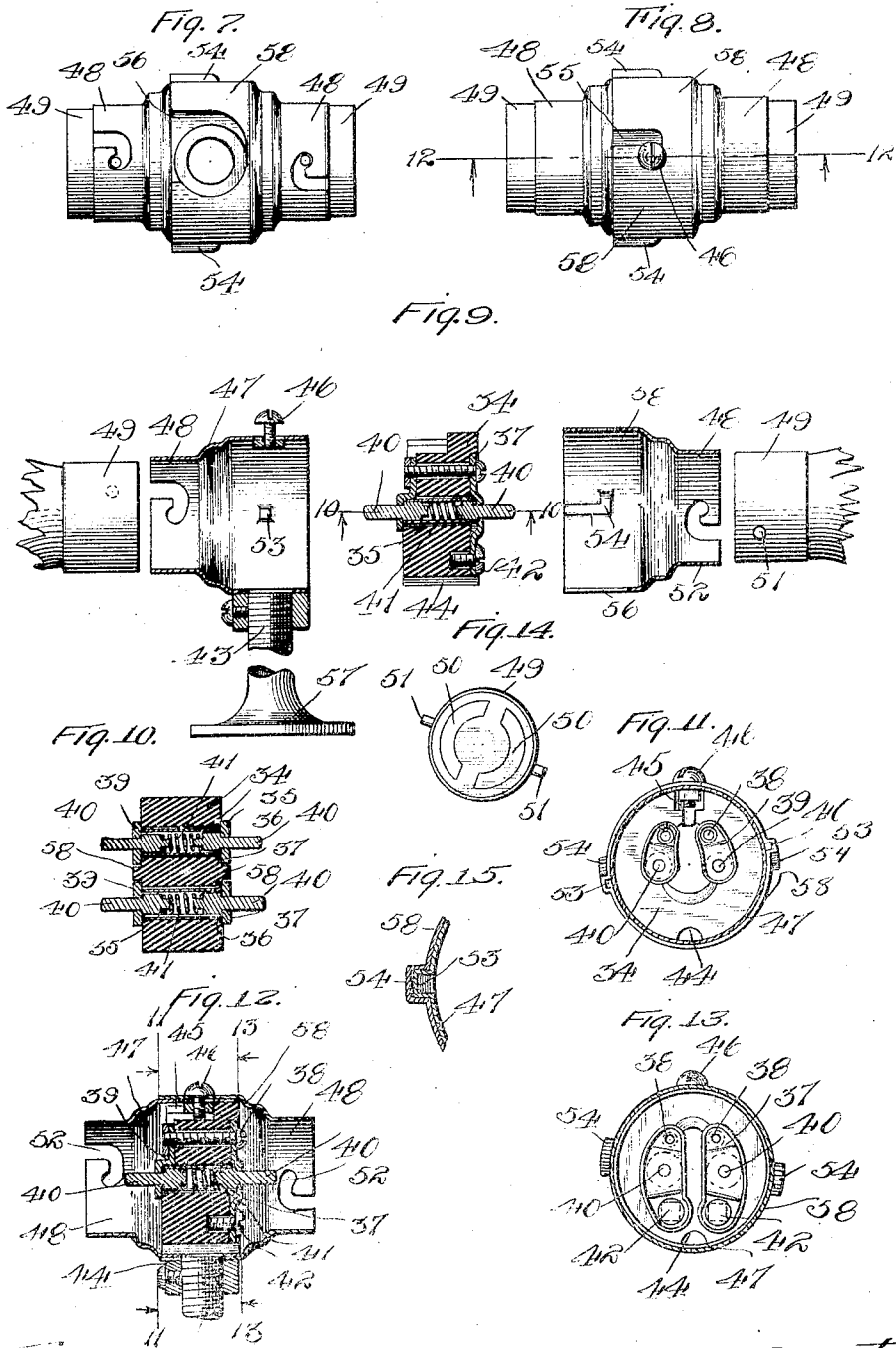


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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

REUBEN B. BENJAMIN, OF CHICAGO, ILLINOIS.

TWIN LAMP-SOCKET.

No. 852,490.

Specification of Letters Patent.

Patented May 7, 1907.

Application filed February 29, 1904. Serial No. 195,830.

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 Twin Lamp-Sockets, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates to cluster sockets for electric lamps, and has for its object the production of a socket of minimum transverse section that will support two electric lamps in an end to end position. It is desirable to mount electric lamps in this manner for use in display work in show cases and windows and in cornice and other similar work.

In an application for United States Letters Patent filed January 31st, 1903, Serial No. 141,262, I have described a species of my invention and have inserted generic claims therein. The present application is for another species of my invention, but it will be understood the present application is subsidiary to the generic application above referred to.

The other features of my invention will more fully appear from the accompanying drawings in which like reference characters indicate like parts throughout the several figures, and in which:

Figure 1 is a sectional elevation of my improved lamp socket; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; Fig. 3 is a sectional view on the line 3—3 of Fig. 1; Fig. 4 is a sectional view of the base and shells with the casing and insulation removed; Fig. 5 is a view on the line 5—5 of Fig. 1; Fig. 6 is a sectional view on the line 6—6 of Fig. 1; Fig. 7 is a bottom view of another form of my invention adapted to receive Edison lamp bases; Fig. 8 is a top view of the same; Fig. 9 is a sectional elevation thereof showing the casing removed; Fig. 10 is a sectional view of the insulating base on the line 10—10 of Fig. 9; Fig. 11 is a view on the line 11—11 of Fig. 12; Fig. 12 is a view on the line 12—12 of Fig. 8; Fig. 13 is a view on the line 13—13 of Fig. 12; Fig. 14 is an end view of a lamp base; and, Fig. 15 is a detailed view of the method of locking the casings together.

Referring to Figs. 1 to 6, inclusive, by reference characters, the base 1 is made of insulating material preferably in one piece and of

minimum transverse section, and has mounted upon opposite sides thereof, lamp receiving shells, 2, 2, which may be secured thereto in any suitable manner, as by bolts 3, 3, which mechanically secure the shells in position and electrically connect them one with the other. A U-shaped plate 4, engages the threaded ends of said bolts and has an extended portion 9, which carries the binding posts 5, for connecting the outer contacts of the lamps in circuit. A strip 6, carrying the binding posts 7, and having the ends thereof bent inwardly and arranged opposite the center of the base is preferably secured thereto by a bolt or screw 8, which passes through the base and engages a tongue or strip 34, struck up from one end of the strip 6, the ends of said strip standing a short distance from the face of the base 1, to form center spring contacts for the lamps.

An opening is provided in one end of the strip 6, to afford access to the screw 8. A portion of the shells 2, 2, is cut away as shown in Fig. 1, to permit the strip 6 to pass through the same. The extended portion 9, carrying the binding screw 5, and the strip 6, carrying the binding screw 7, are preferably disposed in recesses 10, 10, formed in the base 1, in order to permit the feed wires to be more readily attached thereto.

A metal casing or inclosing sheath 11, preferably made in two parts to afford access to the binding posts, is provided for the base 1 and shells 2, 2. A screw threaded collar or bushing 12 is attached to the casing 11, for making connection with a suitable standard or support 21, which also serves as a conduit for supply wires. The casing 11 is placed in position upon the base 1, from either end thereof, the part 13 of said casing being of a slightly smaller cross-section than the part 14 and adapted to telescope therewith, as shown in Figs. 1 and 6. A depression 15 is formed in the part 13 of said casing, preferably having the inner edge thereof sheared and bent outward, which co-acts with the sheared edge 16 formed in the part 14. From the sheared edge 16 an outwardly extending depression 17 is formed, having a depressed channel 18 leading thereto, which depression 15 is adapted to enter said channel as the casing 11 is placed in position, the inner sheared edge of the depression 15, co-acting with the sheared edge 16 of the depression 17, to retain the parts 13 and 14 of the casing 11 firmly in position on the base 1. A portion

19 of the part 14 of the casing is cut away, as shown in Fig. 5, to permit said part to be turned slightly to lock the parts thereof together as above described. The depressed channel or groove 18 is preferably formed with a slightly contracted portion 20, adapted to retain the depression 15 in the depression 17, the casing 11 giving sufficiently to permit the depression 15 to be "sprung" into position therein.

I am aware that other suitable means than those above described may be provided for locking the parts of said casing in position, without departing from the spirit of my invention. The base 1 has a shoulder or projection 22 formed thereon, engaged upon either side thereof by the sheared and inwardly depressed edges 23, 23, of the part 13 of the casing 11, to hold the base 1 in a fixed position therein. I prefer to form openings 24, 24, in the casing 11 to afford access to the binding posts 5 and 7 when the part 14 of said casing is removed.

Disposed between the casing 11 and the interior parts of said socket are suitable strips or rings 25 of insulating material adapted to insulate the lamp receiving shells and other contacts of the socket from said casing. Two strips or rings of insulating material are preferably disposed between the part 14 of said casing and the base 1 and lamp receiving shell 2, said strips or rings having outwardly and inwardly extending edges or flanges 26 and 27 respectively, adapted to co-act to lock said strips or rings of insulating material firmly together. A similar strip or ring 28 of insulating material is disposed between the part 12 of the casing and the other lamp receiving shell, the inner edge 29 of said strip or ring of insulating material being preferably turned outward to abut against or engage the edge of the strip or ring of insulating material disposed between the base 1 and the casing 11, when said casing is in position as shown in Fig. 6. The insulating strip or ring disposed between the base 1 and the casing 14 has a cut-out portion 30 adapted to accommodate the shoulder or projection 22 upon the base 1 and also has a cut-out portion 31 opposite the standard or conduit 21 to permit feed wires to pass from the standard 21 to the binding posts 5 and 7, a groove 32 being provided in the base 1 for said wires. The base 1 is preferably cut away on one side of the groove 32 to permit said base to be freely removed from the casing 13 without injury to the feed wires as shown in Figs. 1 and 4. To prevent the strips or rings 25, 25, of insulating material disposed between the shells 2, 2, and the casing 11 from rotating, I preferably form depressions 33, 33, in the casing 11 and corresponding depressions in the insulating strips or rings 25, 25, which co-act to hold axial strips or rings in a fixed position within said casing.

In order to attain the object before mentioned of producing a cluster socket of minimum transverse section, the casing 11 is positioned contiguous with the insulating strips 25 immediately surrounding the lamp shells.

Referring now to Figs. 7 to 15, inclusive, in which is illustrated a form of my invention adapted for use with Edison lamps, an insulating base 34 made of porcelain or other suitable insulating material has two transverse apertures formed therein, lined with thin metal sleeves 35, 35, having outwardly extending flanges 36 adapted to engage the contact plates 37. Pins or bolts 38, 38, passing through the base 34 engage the plates 37 and 39, a pair of said plates being disposed upon each side of the base 34, to retain said plates in position thereon. The plates retain in position within the sleeves 35, contact pins 40, 40, having shoulders and being held in contact therewith against the power of small coiled springs 41, 41. A slight raised portion 58 is preferably formed upon either side of the base 34 to insulate the contact plates from each other. The contact plates 37, 37, have extended portions carrying binding screws 42, 42 for attaching thereto the leading-in wires which pass through the conduit or support 43, if desired. A transverse groove 44 is formed in the bottom of the base 34 to permit the feed wires to readily pass to the binding screws 42, 42, said groove also permitting said base to be readily removed from the inclosing casing to be hereafter described, without detaching the leading-in wires, therefrom. An inclosing casing or shell 47 preferably formed in two parts, is adapted to fit over the base 34, the contracted ends 48 of said casing being adapted to receive the lamp bases 49, 49.

The contact plates 50 of the lamp bases make electrical contact with the pins 40 which also aid in securing the lamps in position, springs 41 being arranged behind said pins which tend to move the same to their outermost position, whereby the projections 51 carried on the lamp bases are securely held in the cut-out portions 52.

Formed upon one member 47 of the inclosing casing or shell is a standard or support 43, which is preferably hollow to adapt it to serve as a conduit for the leading-in wires, and is provided with a suitable base 57. Formed in opposite sides of the casing 47 are small projections 53, 53, adapted to enter longitudinal depressions 54, 54, formed in the other member 58 of said casing, when said members telescope each other, and lock therein when the casing carrying the longitudinal depression is turned slightly to the right. A longitudinal opening 55 is cut in the top of the casing 58, to receive a set screw 46 carried in the top of the casing 47 and adapted to be screwed home to lock said

casing in position after the members thereof have been snapped together as above described, the set screw 46 entering an aperture or cut-out portion 45 in the base 34 to retain the base in position. A portion of the casing 58 is cut away at 56, to receive the conduit or support 43, and is of such form as to permit said casing to be turned slightly to the right as shown in Fig. 1.

It will be noted that the inclosing casing or sheath lies close to the receiving shells and is of such length that the outer ends stop short of the flaring portion of the bulbs of the lamps when the latter are inserted in position in the sockets.

While I have described my improved lamp socket with particular reference to details of construction, I do not wish to be understood as limiting myself to said details, as many changes may be made therein, without departing from the spirit of my invention, and I claim the right to make all such changes as fairly fall within the scope of my invention.

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

1. In a two-light lamp cluster, the combination with a two-part inclosing sheath, of an insulating base within said sheath; lamp receiving shells associated therewith and disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement, said inclosing sheath lying close to the receiving shells and having unobstructed openings in the ends thereof to permit the insertion of lamps in said shells.

2. In a two-light lamp cluster, the combination with an inclosing sheath formed from two separable interlocking members, of lamp receiving shells disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement.

3. In a two-light lamp cluster, the combination with a two-part inclosing sheath, of a support therefor secured to one of said parts and constituting a conduit for the leading-in wires, and lamp shells disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement.

4. In a two-light electric lamp cluster, the combination with an inclosing sheath formed of two parts arranged to telescope upon one another, of lamp shells disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement.

5. In a two-light lamp cluster, the combination with a two part inclosing sheath, of an insulating base arranged therein, lamp receptacles supported by said base and disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement, said inclosing sheath lying close to the lamp receptacles and having unobstructed openings in the ends thereof to permit the insertion of lamps in said shells, and a pair of

binding posts common to said lamp receptacles and carried by said base.

6. In a two-light electric lamp cluster, the combination with a two-part separable inclosing sheath, of an insulating base arranged therein, lamp receptacles mounted upon said base and disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement, a pair of binding posts carried by said base and common to said lamp receptacles, and a transverse standard or support for said socket constituting a conduit for the supply wires.

7. In a two-light electric lamp cluster, the combination with an inclosing sheath formed of two sections, having a bayonet joint, of lamp receiving shells disposed within the opposite ends of said sheath and arranged to support the lamps in axial alinement.

8. In a two-light electric lamp cluster, the combination with a two-part inclosing sheath, of an insulating lining for said sheath, and lamp receptacles disposed within the opposite ends of said casing and arranged to support the lamps in axial alinement.

9. A two light electric lamp cluster comprising a central portion adapted to support two lamps in an end to end position, an inclosing casing or shell composed of two members, one of said members having an aperture formed therein, said aperture affording access to the interior of the cluster when the other of said members is removed.

10. A two light electric lamp cluster comprising a central portion adapted to support two lamps in an end to end position, an inclosing casing or shell composed of two members, and an insulating lining for said casing composed of two members, the contiguous edges of said members having inwardly and outwardly extending flanges formed therein, said flanges interlocking to form a unitary-insulated member.

11. In a two light electric lamp cluster, the combination with an insulating base, of lamp receptacles carried by said base and adapted to support the lamps substantially in axial alinement, a pair of binding posts common to said lamp receptacles, and a removable casing for said socket composed of two members, one of said members having an aperture or apertures formed therein, said aperture or apertures being closed when the other of said members is in position and affording access to the interior of the socket when said last mentioned member is removed.

12. In a two light electric lamp cluster, the combination with an insulating base, of lamp receptacles carried by said base and adapted to support the lamps substantially in axial alinement, a pair of binding posts common to said lamp receptacles, and a casing for said socket, said casing having a depression formed therein adapted to engage said base to retain said base in a fixed position.

13. In a two light electric lamp cluster, the combination with an insulating base, of lamp receptacles carried by said base and adapted to support the lamps substantially in axial
5 alinement, a pair of binding posts common to said lamp receptacles, a removable casing for said socket composed of two members, one of said members having a depression formed therein adapted to engage a projection carried
10 by said base to retain said base in a fixed position therein.

14. In a two light electric lamp cluster, the combination with an insulating base, of lamp receptacles carried by said base and adapted
15 to support the lamps substantially in axial alinement, a pair of binding posts common to said lamp receptacles, a removable casing for said socket, composed of two members, a strip or ring of insulating material for one of
20 said lamp receptacles disposed in one of said

members, and a pair of rings or strips of insulating material for said base and the other of said receptacles disposed in the other of said members, the contiguous ends of said pair of rings or strips of insulating material having
25 outwardly and inwardly extending flanges formed thereon, said flanges overlapping and co-acting to retain said pair of insulating rings or strips of material together, said first mentioned ring or strip of insulating material
30 co-operating with said pair of strips or rings of insulating material to form a continuous insulating lining for said socket.

In witness whereof, I have hereunto subscribed my name in the presence of two witnesses.
35

REUBEN B. BENJAMIN.

Witnesses:

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