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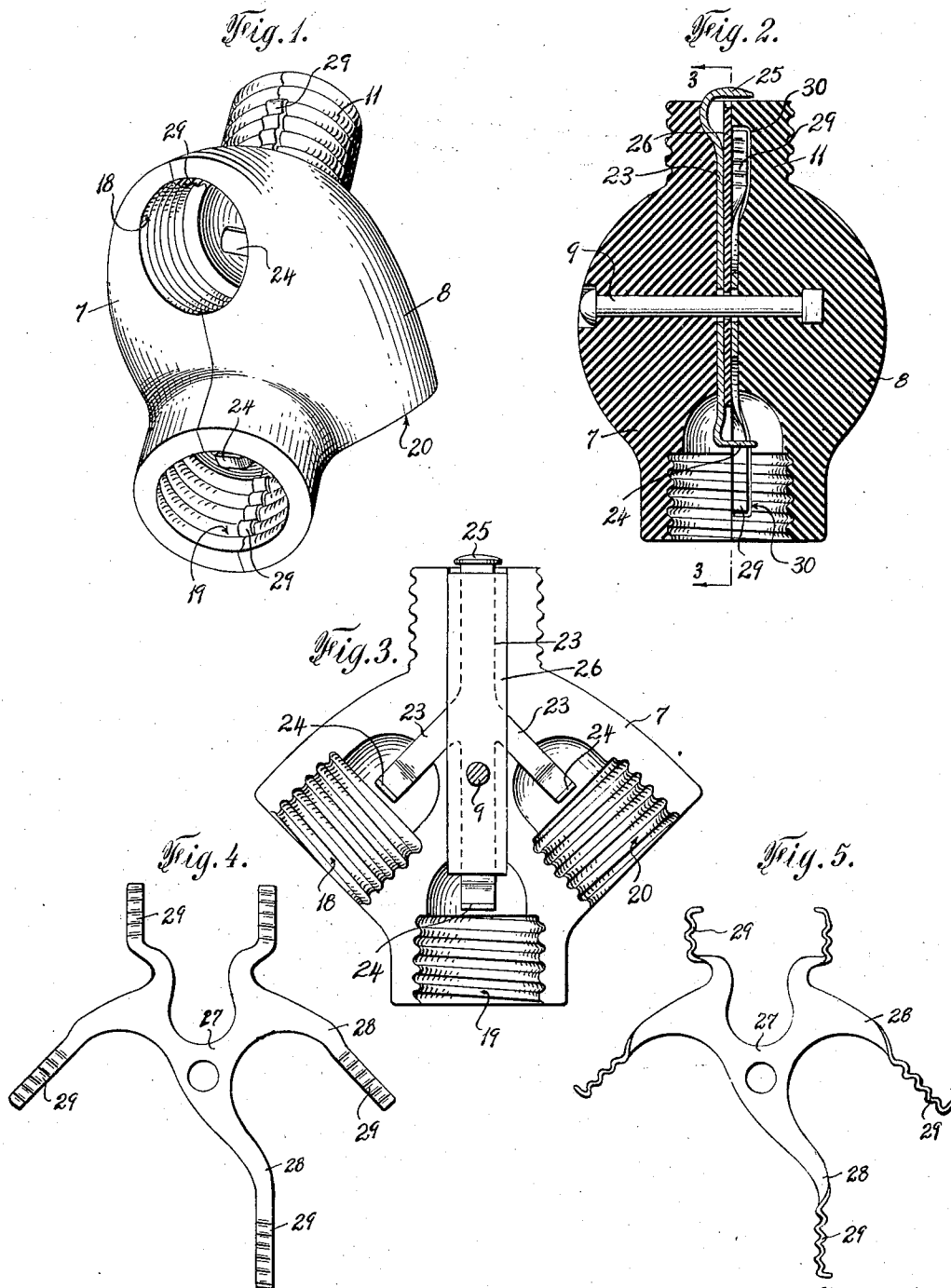
1,572,906

H. L. STRONGSON

ELECTRIC LIGHT GLOBE SOCKET

Filed June 23, 1921

2 Sheets-Sheet 1



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Fig. 6.

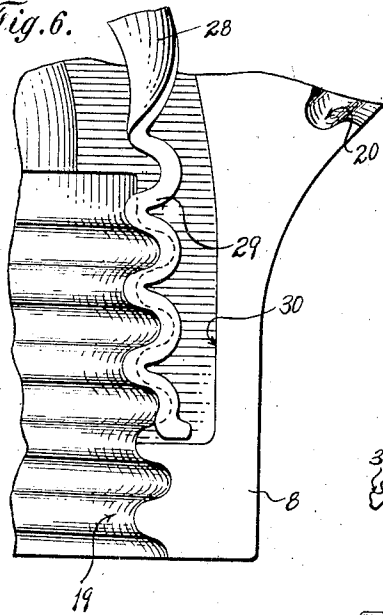


Fig. 7.

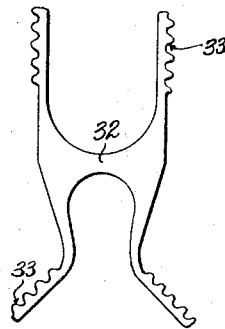


Fig. 10.

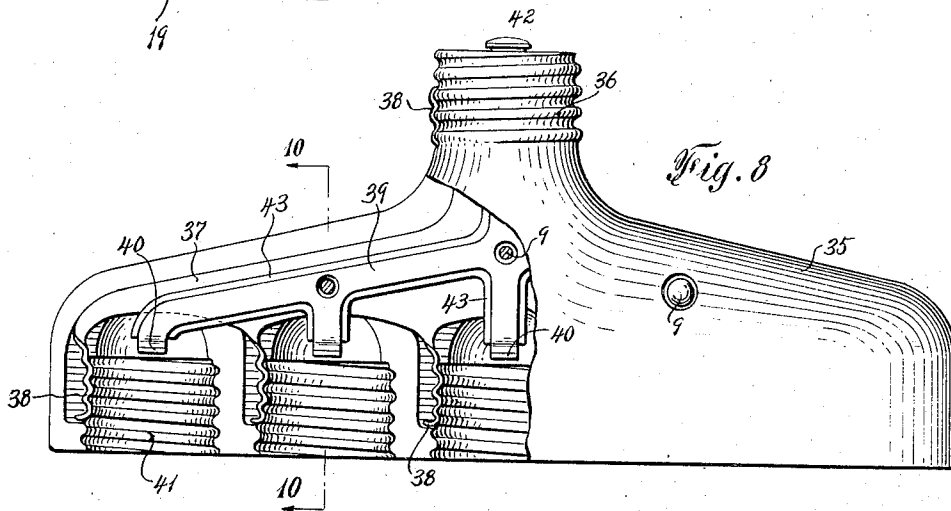
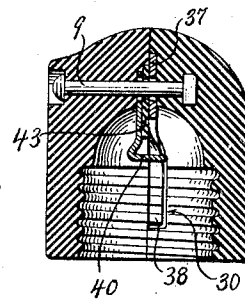
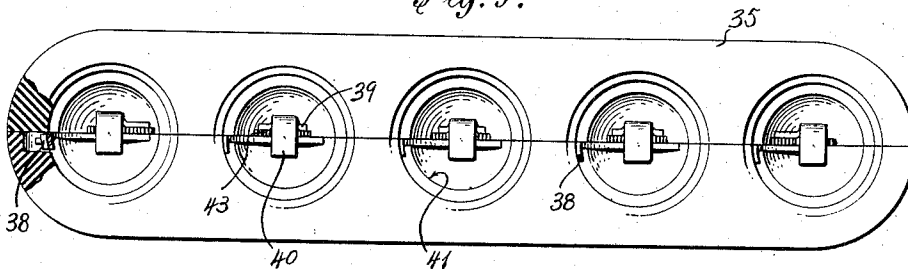


Fig. 9.



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UNITED STATES PATENT OFFICE.

HERMAN L. STRONGSON, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF TO
BERNARD D. COLEN, OF NEW YORK, N. Y.

ELECTRIC-LIGHT-GLOBE SOCKET.

Application filed June 23, 1921. Serial No. 479,804.

To all whom it may concern:

Be it known that I, HERMAN L. STRONGSON, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Electric-Light-Globe Sockets, of which the following is a specification.

This invention relates to electric fixtures and attachments, and especially to sockets for globes and other electrical appliances. More particularly it relates to improvements in electrical cluster globe sockets or multiple sockets such as are used to hold several electric light globes or other appliances.

An object of the present invention is to improve upon my former invention relating to electrical socket attachments as disclosed in an application filed in the United States Patent Office February 17, 1921, and identified by Serial Number 445,770; and more particularly it is my purpose to produce an improved contact means or blades which produce yieldable and positive electrical contact between the socket and current supply fixture and globes or other appliances held by the socket.

An additional object of the present invention is to improve socket construction and particularly to improve cluster sockets now on the market, and to produce a socket of such simplicity in design and construction as will materially reduce the cost of manufacture. Furthermore it is an object to produce an improved type of electrical socket consisting of few parts, which is simple to assemble and make ready for use and which is strong, durable and unlikely to get out of order.

An important feature of my invention resides in the novel construction and function of the socket with its conductor or contact parts which feed current from a single supply source out to one or more light globes or other appliances, because the construction thereof is new in that my contact parts are integral one piece continuous structures which extend from end to end of the device, and which require no screw-made or soldered connections whatsoever during the assembly thereof and the socket is new in function and utility because one and the same piece of metal is employed to establish

attachment to and electrical contact with a current supply fixture and current consuming appliances such as light globes.

The accompanying drawings show the principle of my invention and an embodiment thereof, and though a preferred and practical form of construction is illustrated herewith, I claim the right of protection as to such changes in form, structure or function as obviously come within the scope of this invention.

In the drawings, Figure 1 illustrates a perspective view of one form of my improved electrical socket attachments.

Figure 2 shows a longitudinal sectional view taken through Figure 1 to show the interior assembly of the attachment.

Figure 3 illustrates a face view of one section of the body or casing with one current conductor and insulating separator applied thereto. In this view, the companion body section is removed, and likewise one of the current conductors is removed to show the interior face construction of one-half section of the attachment.

Figures 4 and 5 show an improved spider or skeleton-like current conductor plate removed from the socket attachment to more comprehensively disclose the design and construction thereof. The first figure illustrates the current conductor stamped or blanked from a single piece of sheet metal with its terminals serrated or corrugated to simulate the screw threads on the socket; while Figure 5 shows the same part with the terminals or blades twisted over to expose the threads to the surface of the threads on the globe or appliance which screws into the socket.

Figure 6 shows a fragmentary view of a spring or yieldable contact plate disposed in an opening or depression formed in the insulating casing, and this view is enlarged.

Figure 7 shows an improved or modified form of spring or yieldable contact current conductor, which can be employed to advantage in the construction of this type of socket attachment.

Figure 8 shows a socket having the same principle of construction as the sockets shown in the first two figures, but this particular socket has a large number of receptacles made in an elongated casing to

receive globes or other appliances which draw current from a single plug which screws into a current supply fixture.

Figure 9 illustrates a bottom face view of the socket shown in Figure 8.

Figure 10 is a sectional view taken on the line 10—10 of Figure 8.

An electric light globe socket constructed in accordance with the plans of this invention, embodies a separable pair of body sections or casing parts made of any suitable dielectric material and anchored together with specially constructed current conductors concealed therein. The conductors feed the electrical current from a current supply fixture, such as a wall plug or other appliance, to the several socket receptacles which hold globes or other electrical current consuming apparatus. The conductor parts or contact making elements are of very simple construction, being stamped or blanked from spring sheet metal, and thus there is produced yieldable and positive contact members which are simple in construction and positive in action.

Referring now more particularly to the first seven figures of the drawings, there is shown a body or casing comprising parts or sections 7 and 8 which are similarly constructed and joined together by means of a screw or preferably a soft metal rivet 9. The rivet or brad 9 has one end thereof imbedded within one body section at the time the said section is cast or moulded, and in the assembly of the attachment, the rivet is passed through a hole in the other casing or body part, at which time the outer end of the rivet is peened or bradded over to firmly anchor the parts 7 and 8 together with the electrical contact elements confined therebetween.

The parts 7 and 8 are so moulded or cast that an externally threaded plug 11 is made when the two sections are matched and fitted together, and the body parts are made of non-conducting material. In the same manner the body parts are cast with semi-cylindrical screw threaded socket formations and after the two body parts are firmly anchored together, the threaded formations match up or register to produce the completed internal screw threaded socket receptacles 18, 19 and 20, as shown in Figures 1 and 3.

A current conductor 23 lies within a groove formed in the face of the body part 7, and is provided with branches leading to the several socket receptacles 18, 19 and 20. The current conductor and branches thereof terminate in contact heads 24 concentrically located with respect to the receptacles. In a similar manner the conductor 23 terminates in a contact head 25 at the end of the plug 11. The several contact heads 24 and 25 are formed by turning

down the ends of the branches of the conductor 23, and these heads are held comparatively rigidly in their respective positions. An insulating plate 26 is placed over the current conductor 23 to separate and insulate the two current conductors, as will be later seen.

Another current conductor 27 is provided, and this part lies contiguously with the insulator 26, and is held in position by the brad 9 which securely anchors all parts in fixed position. This conductor 27 is provided with a number of branches or arms 28, the outer ends of which are corrugated to simulate the threaded plug or socket receptacle with which the contact member is associated. The terminals 29 function as yieldable or flexible contact blades, and these blades are twisted as shown in Figure 3, so as to conform the threaded surface of the blades to the threaded surface of the plug 11 or socket receptacles 18, 19 and 20.

As shown in the drawings the contact blade 29 is confined within an opening or depression 30 made in the body. The opening 30 is sufficiently deep to permit the contact blade 29 to yield or spring back into the opening against the rubbing pressure of a globe which is screwed into one of the receptacles. The contact blades 29 are shown as exposed and slightly above the surface of the threaded sockets and plug, and being confined in openings to permit of slight relative movement when a socket or other appliance is screwed into the receptacle against the contact blade.

The current conductors 27 and 32 are constructed from suitable sheet metal having spring characteristics, and has its branches or arms terminating in threaded contact blades 33. The threads 33 are formed on the edge of the thin sheet metal blank, and this construction is possibly more practical for use than the other conductors, because it is very simple and inexpensive to produce in quantities. The screw threads 33 register with the threads made on the plug 11 in the socket receptacles in such a manner that the threads 33 stand slightly out or up from the threaded parts in order that positive pressure contact is effected between the conductor 32 and globe or other appliance. When the lamp socket has its plug 11 screwed into a current supply fixture, electrical contact is made through the head 25 and blade 29 or 33 which transmits current through the two conductors to feed the globes or appliances held in the socket receptacles.

Referring now more particularly to the last three figures of the drawing, an elongated casing 35 is made of two dielectric or insulating body sections anchored together in a manner similar to that heretofore described. A plug 36 is formed on the two joined body sections when they are an-

chored together, and is adapted to be screwed into a current supply fixture to feed the electric current to the several socket receptacles 41, contained in the elongated casing. The current conductor 37 has yieldable contact blades 38 disposed on the threaded surface of the sockets 41; and likewise the conductor 37 has a similar yieldable contact blade 38 exposed on the surface of the plug 36. This conductor 37 is similar in construction to the part having a similar function and heretofore described. Another conductor 39 has contact heads 40, which are concentrically disposed in the socket receptacles 41 of the elongated casing; and this conductor 39 has a contact head 42, located in the center of and at the end of the plug 36. The two current conductor parts 37 and 39 are separated and insulated one from the other by the interposed insulator 43.

The plug 36 when screwed into a current supply fixture, makes contact with the fixture through the head 42 and yieldable plate 38 which transmits current to electric light globes or other appliances carried within the sockets 41.

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

1. In an electric socket fixture comprising a body, said body provided with a suitable number of receptacles for receiving globes or other electric appliances, a plug made on the body by which the fixture is attached to a current supply fixture, the said receptacles having an internal wall made of non-conducting material, and the said plug made with its external surface formed of non-conducting material, and a pair of metallic contact parts within the body, one part being centrally exposed within each receptacle and centrally exposed on the end of the aforesaid plug, and the other part being exposed along the external surface of the plug and the internal surface of the receptacles.

2. In an electric light globe socket with receptacles having interior threaded walls of non-conducting material, a plug having an exterior threaded surface of non-conducting material, a single piece conductor concentrically exposed on the plug end and in the receptacles, and another single piece conductor disposed in the receptacles and on the plug.

3. In an electric light globe socket with receptacles having interior threaded walls of non-conducting material, a plug having an exterior threaded surface, a single piece conductor made of sheet metal centrally exposed on the plug end and in the receptacles, and another single piece conductor exposed in the receptacles and on the plug.

4. In electrical socket attachments and the like, a plug and socket receptacle of in-

ulating material, a conductor made from single one-piece material extending from the center and end of the plug with integral branches running to the socket receptacle, and a plate conductor to complete the circuit from the plug to the socket receptacle having edgewise contact fingers exposed along the plug and receptacle surfaces.

5. In electric socket attachments and the like, a threaded plug and interiorly threaded globe or appliance receptacles formed of insulating material, a conductor made from single one-piece material with corrugated fingers to match the plug and receptacle threads, and another conductor to complete the circuit from the plug to the receptacles.

6. In electric socket attachments for globes and the like, a body having receptacles made of insulation, a plug of insulation made on the body, the said receptacles and the plug being made of non-conducting material, and a pair of metal conductors in the body, the said conductors comprising integral one-piece stampings, both of the said conductors extending longitudinally through the attachment, terminals on one of the conductors exposed on the side of the plug and inside of the receptacles, and terminals on the other conductor disposed at the end of the plug and at the bottom of the receptacles.

7. In electric socket attachments for globes and the like, a body part; means for attaching the body part to a current supply fixture; means for holding electrical appliances such as lamp globes, connectors, adaptors and the like; a pair of sheet metal stampings possessing a plurality of integral fingers used as conductors and placed in parallel positions; and a sheet material insulation spacer to separate and insulate the conductors.

8. In electric socket attachments for globes, plug connectors, adaptors and the like, comprising a body part having receptacles, means for attaching the body to a current supply fixture, the said body having a groove or recess made therein, a pair of contact members disposed in the groove, an insulating sheet confined between the contact members, ends made on each member effecting an electrical contact with the current supply fixture, and the said contact plates having their other ends extending into the receptacles to form contact surfaces therein, and said members being solid one-piece structures extending from end to end of the body part, and means for holding the parts together.

9. In electrical sockets, connectors, adaptors, and the like comprising a separable two-part body having receptacles, a plug made on the body, a single piece plate-like contact disposed between the two body parts with the edges exposed on the plug and in

the receptacles, an insulating sheet applied against the contact element, a current conductor placed against the insulating sheet and having one end extending centrally through the plug and forming a contact head, branches made on the conductor and reaching out to the center of the receptacles, and means for holding the parts together.

10. In electric socket attachments for globes and the like, a socket body having globe receptacles, means for attaching the body to a current supply fixture, metal plates having contact ends, and parallel receptacle side contact arms made on one of the said plates.

11. In electric socket attachments for globes and the like, a body part, means for attaching the body to a current supply fixture, metal plates having contact ends mounted within the body part, contact arms made on one of the said plates, the said contact arms having serrated edges to simulate screw threads for screw engagement with lamp globes and the like and center contacts made on the other plate.

12. In electric socket attachments for globes and the like, a body composed of sections having abutting faces, said sections made with recesses, thin metal insulated contact members between the faces of the body parts and being disposed in the aforesaid recesses and being continuous in structure from end to end of the body part with ends made on the contact members projecting from the body part, and means to hold the parts together.

13. In lamp socket attachments and the like, comprising a pair of body sections provided with lamp receptacles and having grooves in their abutting faces, a pair of sheet metal conductors disposed in the grooves of the body sections and held thereby, an insulating spacer placed between the pair of conductors and similarly held in position by the grooves, ends made on the conductors projecting from the grooves into the receptacles and on the plug to form contacts.

14. In lamp socket attachments and the like, comprising a pair of body sections having receptacles and having abutting faces forming grooves, a plug integral with the body, said abutting faces comprising shoulders and extending through the aforesaid plug and to the receptacles, metal conductor contact parts confined between the abutting faces and against the shoulders, said metal parts projecting from the plug and into the receptacles and forming center and side contacts, and means to hold the body sections together.

15. A new article useful in the manufacture of electric lamp and globe sockets, comprising a stamped sheet metal conductor, a furcated contact member forming a

plug contact and being integral with the conductor, and a furcated contact member forming a receptacle contact and being integral with the conductor.

16. A conductor part useful in the manufacture of electric lamp globe sockets and the like, comprising a stamped sheet metal conductor, an externally corrugated member integral therewith and forming a plug contact, and an internally corrugated member integral with the blank forming a socket receptacle contact.

17. A conductor part useful in the manufacture of electric lamp globe sockets and the like, comprising a part punched from sheet metal, contact fingers in the nature of forks integral with the part, corrugations on the outside of one of the forks to make a threaded plug contact, and corrugations on the inside of the other forks to make threaded receptacle contacts.

18. A conductor useful in the manufacture of electric lamp globe sockets, comprising a sheet metal punching in the nature of a skeleton-like current conductor, forks integral with the punching embodying long tapered finger-like parts, one of the forks being designed as a plug contact and the other fork being designed as a receptacle contact.

19. Improvements in lamp globe sockets comprising a split body of insulation having globe holding receptacles, a plug made on the body, a groove formed on the outer surface of the plug and a groove formed on the inner surface of the receptacle which grooves extend substantially parallel to the respective plug and socket axes, a substantially thin sheet metal one-piece contact part carried within the grooves with the edges thereof exposed on the plug surface and within the receptacle surface, said body being further provided with an additional groove leading from the end of the plug and extending through the center of the bottom wall of the receptacle, and a single piece metal contact part carried within the last named groove.

20. In an electric socket attachment, a body part, means for attaching the body part to a current supply fixture, means for holding electrical appliances, said means provided with recesses, a pair of metal stampings used as contact elements and disposed in parallel positions, contact fingers integral with the contact elements and disposed in the recesses, a spacer stamped from sheet material to separate and insulate the contact elements.

21. In a device of the kind described, a main body of insulation material having a threaded male plug at one end and a plurality of threaded female sockets at its opposite end, a pair of one-piece metallic inserts fixed within said main body and insulated

thereby one from the other, one insert having longitudinally positioned exposed serrated contact means cooperating with the respective threaded portions of said plug and sockets to form corresponding electrical poles therefor, and the other insert having exposed center button contact means cooperating with the respective end walls of said plug and sockets to form corresponding opposite electrical poles therefor.

22. Contact parts useful in the manufacture of lamp sockets and the like, comprising metal blanks stamped from sheet material having a plurality of integral flexible spring fingers forming lamp socket side contacts and flexible spring finger plug contacts.

23. Contact parts useful in the manufacture of lamp sockets and the like, comprising a metal part with a plurality of spring contact fingers cut from sheet material and forming a single piece structure capable of use as socket side spring contacts against lamp screw bases and the like, and forming plug side spring contacts.

24. Contact or current conductors for use in the manufacture of electric light globe sockets, comprising a comparatively thin sheet metal blank with arms, the ends of the arms twisted to make receptacle contact blades, threads formed on the blades, and twisted threaded contact fingers integral with the stamping to form a plug contact.

25. An electric socket attachment for globes, appliances and the like, comprising a casing having a plurality of socket receptacles, a plug made on the casing, electric conductors concealed within the casing and adapted to supply current to globes or appliances, yieldable contact blades integral with one of the aforesaid conductors and exposed within the surface of the receptacles, and a yieldable contact blade integral with the same conductor and being exposed on the plug surface adapted to make contact with a current supply fixture.

26. Contact parts useful in the manufacture of lamp sockets and the like, comprising a metal stamping having spaced parallel spring-like contact fingers in the nature of a fork and said fork fingers being corrugated to simulate threads useful as a contact part in one end of a socket, and spring-like corrugated fingers made integral on the stamping useful as a contact part in the other end of a socket.

27. Contact parts useful in the manufacture of lamp sockets and the like, comprising a one piece metal part cut from sheet material, flexible spring contact fingers integrally formed with the metal part, internal corrugations to simulate screw-threads made on some of the spring fingers to form socket side spring contacts, and external corrugations to simulate screw-threads formed

on the other fingers to make plug side spring contacts.

28. Contact parts or metal conductors useful in the manufacture of lamp sockets of the kind having a plug and receptacles, a skeleton-like sheet metal punching formed with spring arms externally threaded to cooperate with the aforesaid plug and with spring arms internally threaded to cooperate with the aforesaid socket.

29. In electric globe socket attachments and the like, a body having receptacles, a plug on the body, a pair of insulated stamped sheet metal flat current conductors in the body with integral flexible ends extending thru the plug and with ends extending into the receptacles.

30. In lamp socket attachments and the like, a body member having receptacles, a plug made on the body, a pair of stamped sheet metal insulated current conductors disposed in the body with ends projecting through the plug and with flexible ends extending to the aforesaid receptacles.

31. In lamp socket attachments and the like, a socket body with receptacles, a plug made on the body, a pair of insulated stamped sheet metal flat current conductors carried within the body, one of which has flexible branch arms extending through the plug and to the receptacles, and the other conductor having substantially rigid arms projecting from the center and end of the plug and having arms extending into the bottom center of the receptacles.

32. In lamp socket attachments and the like, a body member having receptacles, a conductor in the body, an insulating sheet fitted against the conductor, another conductor disposed against the insulating sheet, branch contact arms integrally made on the conductors, and the branches of one conductor being flexible and the branches of the other conductor being substantially rigid, and means for securing all the parts in assembled relation.

33. In lamp socket attachments and the like, a body having socket receptacles and having a groove made therein which opens into the receptacles, a pair of conductors fitted into the groove and having contact ends projecting from the groove into the receptacles, and having ends which make connection with a current supply fixture, and said ends possessing a spring pressed ability to effect yieldable contact.

34. In lamp socket attachments and the like, a body member, a plug made on the body, said body having socket receptacles and a groove extending through the plug and opening into the receptacles, a pair of metal conductors fitted into the body and held in position by the said groove, an insulating sheet disposed between the conductors, ends of the conductors projecting

through the plug, ends of the conductors projecting into the receptacles, and one of the conductors being made of spring metal to produce positive yielding contact.

5 35. In lamp socket attachments and the like, a body having globe receptacles, a plug on the body, insulated spring contact stamped sheet metal flat parts in the body running from the end and side of the plug

thru the body and projecting into the re- 10
ceptacles and each part being a continuous one piece structure.

In testimony whereof I hereunto set my hand this 4th day of June, 1921, in the city of New York, borough of Manhattan, 15
State of New York.

HERMAN L. STRONGSON.