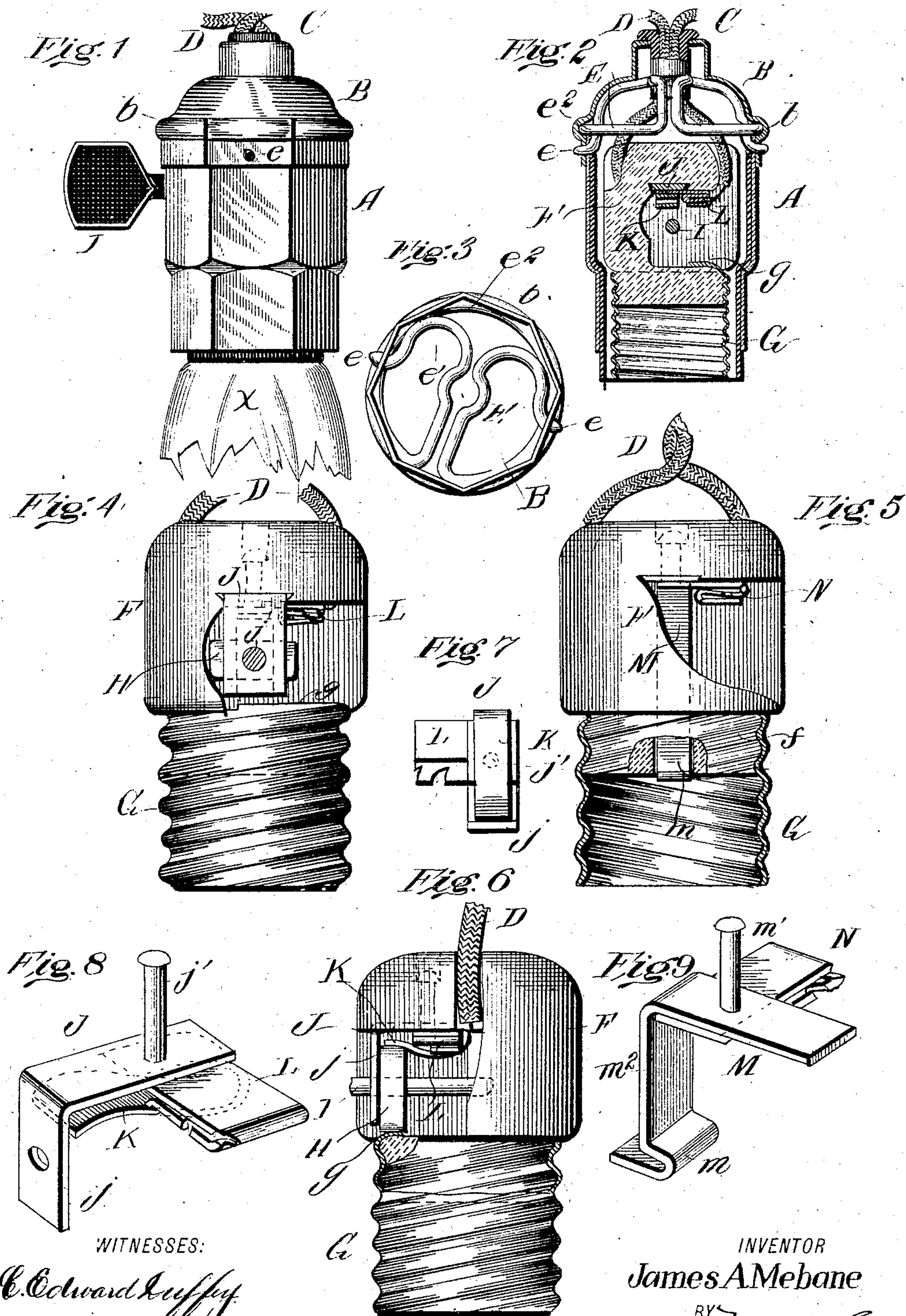


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J. A. MEBANE.  
 SOCKET FOR ELECTRIC LAMPS.  
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## SOCKET FOR ELECTRIC LAMPS.

SPECIFICATION forming part of Letters Patent No. 785,626, dated March 21, 1905.

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*To all whom it may concern:*

Be it known that I, JAMES A. MEBANE, a citizen of the United States, residing at South Boston, in the county of Halifax and State of Virginia, have made certain new and useful Improvements in Sockets for Electric Lamps, of which the following is a specification.

The object of my invention is to provide an improved socket for incandescent electric lamps in which socket-screws are wholly dispensed with, the separate parts being adapted to be easily and quickly connected and disconnected and the electrical connections being made in such manner that the socket may be produced at much less cost than those of the usual construction. The casing of the socket is likewise so constructed that its two parts are held together detachably by means of a spring-clamp without the aid of screws.

The details of construction, arrangement, and combination of parts are as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a side view of my improved socket and the casing therefor, together with a portion of an incandescent-lamp bulb. Fig. 2 is a central longitudinal section of the same, omitting the lamp-bulb. Fig. 3 is a plan view illustrating the arrangement of the spring-clamp whereby the two parts of the lamp-casing are held engaged. Fig. 4 is a side view of the socket proper. Fig. 5 is another side view of the socket with part in section. Fig. 6 is another side view with part in section. Figs. 7, 8, and 9 are views of the electrical connections forming attachments of the socket proper and which will be hereinafter fully described.

Referring in the first instance particularly to Figs. 1, 2, and 3, A indicates the body, and B the cap composing the sheet-metal casing of the lamp-socket proper. As shown, the body A and the connecting portion of the cap are made octagonal. Instead of securing these two parts together by means of screws in the usual way I employ a spring-clamp E, (see Fig. 3,) whose construction, arrangement, and operation are as follows: The said clamp is made of spring-brass wire, which is bent to

form a nearly complete circle, the terminal portions being bent upward, as shown in Fig. 2, and then curved downward and laterally, the ends *e* projecting through coincident openings in the parts A and B when adjusted together, as shown in Figs. 1 and 2. The circular portion *e*<sup>2</sup> (see Figs. 2 and 3) lies in a groove formed by a swell *b* of the cap B and is thus held firmly and at the same time detachably. The top portion of the clamp E at the point *e'*, Fig. 3, is so constructed as to adapt it to be engaged with the bushing C, which is provided, as shown in Fig. 2, with a circumferential groove to receive the parts *e'*. The latter are formed by lateral bends or curvatures of the wire, the curvatures being directly opposite each other, so as to form practically three-fourths of a circle. The lower end of the bushing C, with which lamp-sockets of this character are ordinarily provided, is rounded or beveled in such manner that when the cap B is placed upon the body A and forced downward it—to wit, the bushing—will pass between the jaws *e'* of the clamp E, and thus spread them sufficiently to allow them to slip into engagement with the groove of the bushing. In placing the cap B upon the body A the ends *e* of the clamp are placed inward as required to allow the body to pass between them and the cap, when the ends *e* instantly spring out into normal position, thus locking the two parts together, as indicated in Fig. 2. By this means I provide for firm engagement or locking together of the two parts A and B and at the same time adapt them to be disconnected by the application of due force. It is apparent that the connection and disconnection may be very quickly effected.

The block or head F of the socket (see Figs. 2, 4, 5 and 6) is bulbous in form and composed of porcelain or some other suitable non-conducting material. It has a screw-threaded shank *f*, as indicated in Fig. 5, which engages the screw-threaded socket proper, G, into which the correspondingly-threaded head of the lamp-bulb X screws in the usual way. As indicated in Fig. 6, this screw-socket G is provided at the top with a lip or flange *g*, the same pro-



jecting inward over a portion of the screw-threaded shank  $f$  of the block F. It will be understood that the said lip or flange  $g$  projects upward from the body of the socket before the latter is applied to the porcelain block or head and that when the socket G has been screwed on the threaded portion of the block the flange  $g$  will come opposite one of the lateral recesses in the block and that it is then bent inward by means of a suitable tool, so as to overlap the floor of the recess, as shown in Fig. 6. Thus said lip or flange not only serves as a means for permanently connecting the two parts F and G, but also as a point of contact for the switch H when the same is adjusted in the position indicated in Fig. 6. It will be understood that this switch is practically a block mounted upon a spindle or key I in the usual way and serving when adjusted in vertical position to establish electrical connection between the lamp and the wires D, as will be presently more fully explained. The key I projects from the body A of the casing, as shown in Fig. 1, and is manipulated in the usual way. The shaft of the key passes through a pendent flange  $j$ , forming a part of the electrical connection J, (see Figs. 4, 6, and 8,) and its inner end is journaled in a socket provided in the porcelain block F. The connection J is right angular in form, its horizontal portion being arranged in a socket or groove formed in the porcelain block F, and it is secured detachably by means of a screw  $j'$ , whose position is indicated in Figs. 4 and 8. The said screw passes also down through a spring K and a lateral wire clamp L, which form practically parts of the connection taken as a whole. The spring K is curved at its inner end, and the latter is interposed between the connection J and the clamp L. The free end of this spring is so arranged (see Fig. 6) as to come in contact with or bear upon the switch-block H when the same is adjusted in vertical position. One of the wires D is connected with the clamp L, and thus electrical connection is established through the wire, the clamp L, the spring K, the switch-block H, the lip  $g$  of the screw-socket G, and one of the terminals of the lamp-filaments. The return-circuit is provided through the connection M (see Figs. 5, 7, and 9) and the other wire D. As shown best in Figs. 5 and 9, the connection M consists of a rectangular plate whose vertical member is curved at its lower end  $m$  and a lateral wire clamp N, these two parts being held together by a screw  $m'$ , whose position is indicated in Figs. 5 and 9. The shank or vertical member  $m^2$  of the clamp M passes down through a central opening in the block F, and its lower end projects below the threaded portion  $f$  of the latter, where it is bent laterally, as indicated in Fig. 5. Such lateral bend  $m$  constitutes practically a spring-contact, which when the lamp-bulb X is screwed

into place forms one of the electrical contacts, as is well understood by those acquainted with the art.

As indicated in Figs. 7, 8, and 9, the wire clamps L and M are formed of narrow metal plates which are bent upon themselves, the under portion lying practically parallel and close to the upper one and being also provided with lateral notches adapted to receive the wires D. The latter pass between the two spring-jaws of the clamps thus formed and are then twisted around so as to pass through the notches before referred to. By this means the wires are securely held without injury to them, and yet they may be readily detached when occasion requires.

It will be seen that save the two screws  $j'$  and  $m'$ , employed for holding the wire connections K and M in place, all the attachments are made by other means, whereby a great economy is effected in manufacture, with the advantage of greater strength and durability of the socket as a whole. At the same time provision is made for more convenient attachment and detachment of the several parts.

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

1. In an electrical-lamp socket of the class described, the combination, with a casing formed of two separable parts and having lateral openings which are brought into coincidence when the parts are adjusted together, and a spring connecting device formed independently of the casing and held within one of its parts, its end portions being bent laterally and adapted to project through the openings in the casing so as to lock the two parts together substantially as described.

2. In an electrical-lamp socket, the improved casing comprising a body portion, and a cap, and a bushing inserted in the latter and provided with a groove as specified, a spring-clamp arranged and held within the cap and having jaws adapted to engage the bushing, its end portions being adapted to project through coincident openings in the body and cap, substantially as described.

3. The improved casing for the purpose specified, comprising two separable parts one of which is provided with a circumferential groove, and both having lateral openings adapted to be brought into coincidence and a spring-wire clamp having a circular portion adapted to lie in the aforesaid groove and its ends adapted to project through the coincident openings, substantially as described.

4. In a casing for an electrical lamp, the combination, with the body and cap, of a spring-wire clamp having jaws provided with opposite curved portions and a bushing inserted in the cap of the casing, and provided with lateral recesses adapted to receive the jaws of the clamp when the latter are duly separated in the manner described.



5. The improved casing for an electric-lamp socket, the same being formed of two separable parts, a bushing inserted in the cap portion, and a spring-wire clamp adapted to engage the bushing and hold the two parts together detachably, substantially as described.

6. In an electrical-lamp socket, the combination, with the non-conducting block having a screw-threaded shank provided with a lateral recess and an electrical connection arranged in said block, of the lamp-socket proper which is screw-threaded its entire length, to adapt it for attachment to the block and a lamp-bulb for connecting them, the said socket having a lip or flange adapted to be bent laterally into the recess in the block and thus embrace a portion of the latter whereby the block and socket are held immovably connected and an electrical connection is established through said flange, substantially as described.

7. The combination, with the non-conducting block, a line-wire, and a socket proper into which the lamp-bulb is screwed, of an electrical connection having a pendent portion which extends down through the block into contact with the lamp, and a lateral clamp formed of a spring-metal plate which is bent upon itself and provided with notches for holding the line-wire, the said connection being duly secured in the block, substantially as described.

8. In an electrical-lamp socket, the combination with the non-conducting block, and a screw-socket engaged therewith and having a

lip or flange inturned as specified, of the electrical connection including a switch-key journaled in the block, a lateral wire-holding clamp and a spring adapted to bear upon the switch when duly adjusted, and means for securing the said connection in the block, substantially as described.

9. In an electrical-lamp socket, the combination, with the non-conducting block, and the lamp-socket proper having a top flange or lip bent inward over a shoulder of the block, a wire connection comprising a pendent portion, a spring arranged beneath the horizontal portion and a lateral wire-clamp having notches for holding the wire, and a switch-key which is journaled at one end in the pendent portion of the said connection, and whose switch-block is arranged for contact with the aforesaid flange of the socket proper and the spring, substantially as described.

10. The electrical connection for electrical-lamp sockets comprising a rotatable switch-key a right-angular metal strip, a lateral wire-holding clamp, and a spring for contact with the adjustable switch, said clamp and spring being arranged with the body of the connection, and the parts secured together, substantially as described.

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