

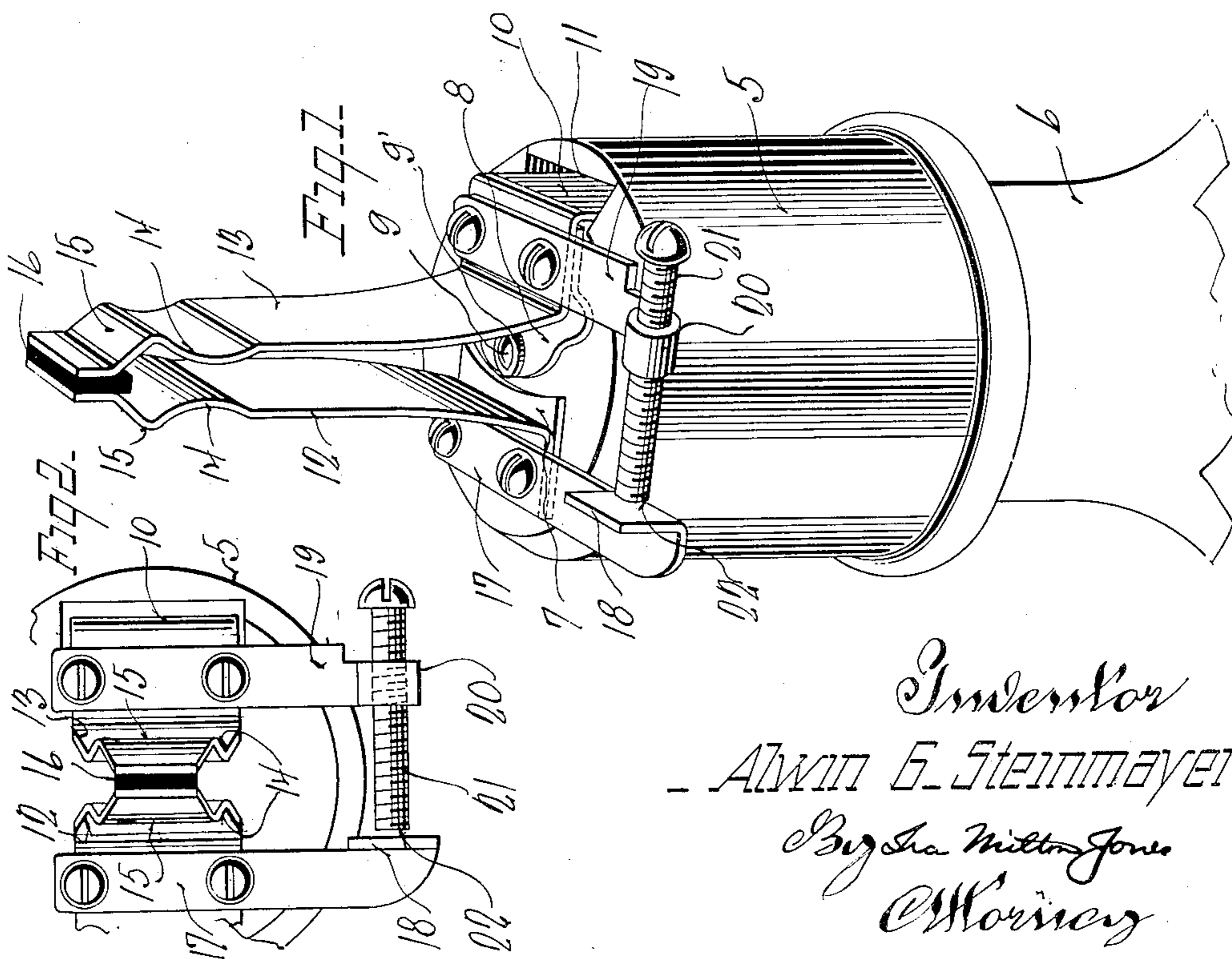
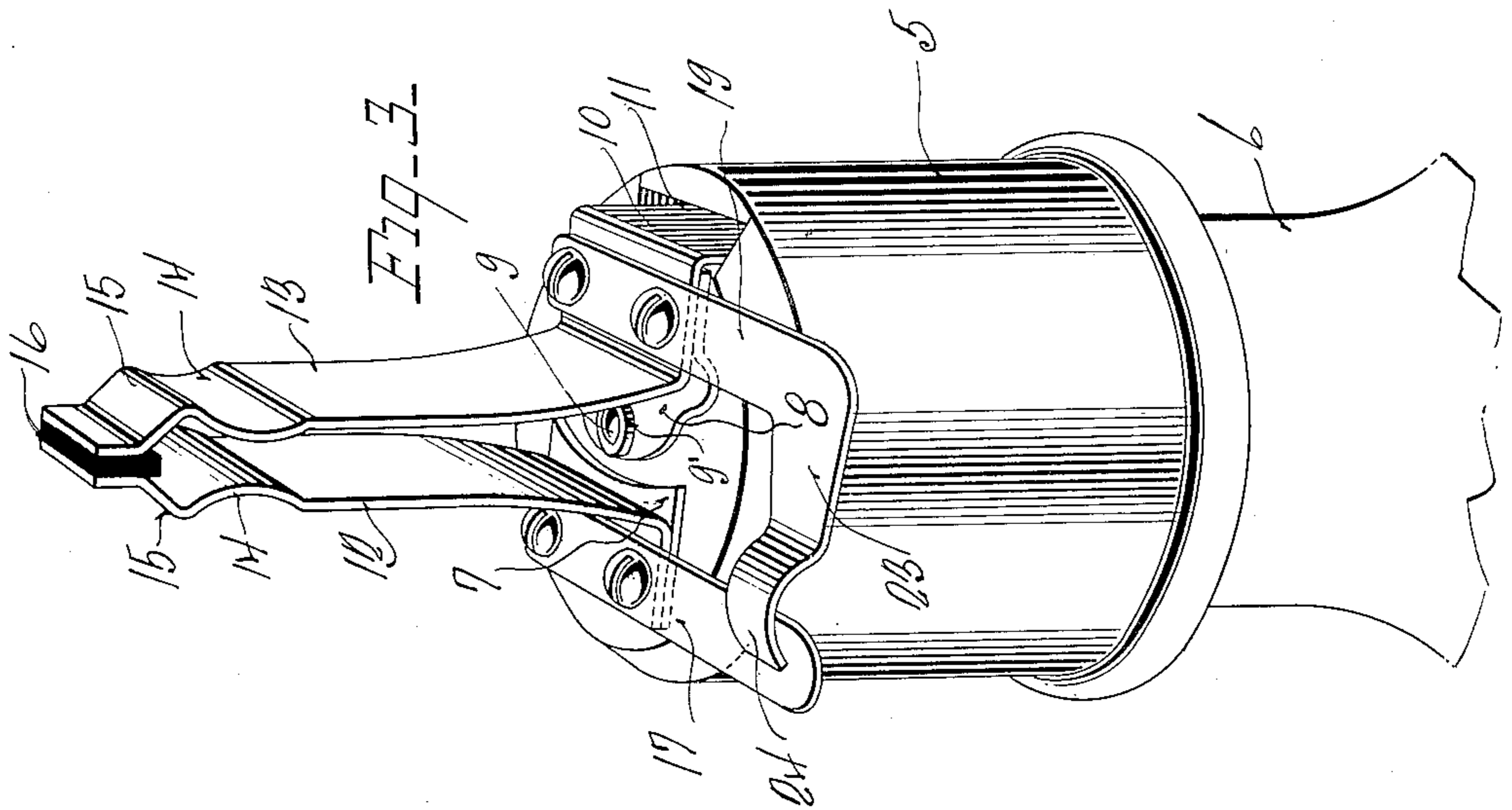
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LAMP SOCKET

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LAMP SOCKET

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This invention relates to certain new and useful improvements in lamp sockets and refers more particularly to street lighting fixture sockets of the series type.

5 Sockets of this type usually have upwardly extending adjacent contact arms known as bayonets, by which they are connected with their receptacles, and heretofore it has been customary to insert a thin film of insulating
10 material between the bayonets, which punctured upon failure of the lamp, to electrically connect the bayonets and maintain the continuity of the circuit; and while the insulating films usually served their purpose they
15 have been objectionable from various standpoints, and therefore this invention has as one of its objects to provide novel means for insuring continuity of a series circuit upon failure of a lamp which obviates the neces-
20 sity of an insulating film.

Another object of this invention resides in the provision of a socket of the character described having means for insuring the continuity of the circuit upon failure of its
25 lamp, which is not destroyed in operation and may be used again after being cleaned.

A more specific object of this invention resides in the provision of a socket of the character described having spaced members to
30 provide a small gap across which the current jumps, upon failure of the lamp, to fuse the metal of the members and thus maintain the continuity of the circuit.

And a further object of this invention resides in the provision of means for readily
35 adjusting the gap and whereby the fused connection across the gap may be readily broken.

With the above and other objects in view
40 which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the append-
45 ed claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawing, I have illus-
50 trated two complete examples of the physical

embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a series
55 street lighting fixture socket embodying my invention;

Figure 2 is a fragmentary plan view thereof; and

Figure 3 is a perspective view similar to
60 Figure 1 illustrating a slightly modified form of my invention.

Referring now more particularly to the accompanying drawing in which like numerals designate like parts throughout the
65 several views, the numeral 5 represents the body of a series street lighting socket which is formed of insulating material and is adapted to receive an incandescent lamp 6. Inasmuch as the internal construction of the
70 socket forms no part of this invention it has not been shown in detail and description will be directed to only those elements entering directly into the combination.

As is customary in sockets of this type,
75 a pair of terminal plates 7 and 8 are fixed to the upper face of the body, the plate 7 being connected with the center terminal of the incandescent lamp by a flexible conductor, not shown, connected with a plunger 9.
80 The terminal plate 8 has a downwardly extending portion 10 which projects into the interior of the socket through an aperture 11 to engage the usual threaded portion of the lamp, not shown, which comprises its other
85 terminal and the plunger 9 is yieldably urged to engage its upper head 9' with the plate 8 through which it extends, when a lamp is not in the socket, the insertion of the lamp moving the plunger 9 upwardly
90 and breaking the electrical connection its engagement with the plate affords between the terminals 7 and 8.

Extended upwardly from the terminal plates 7 and 8 and electrically connected
95 therewith are bayonet arms 12 and 13, respectively, whose upper ends are provided with inwardly curved portions 14 and outwardly struck ribs 15 to releasably engage the clips of a receptacle, not shown. A block
100

of insulating material 16 held between the ends of the bayonet arms by their normal spring tension insulates them from each other whereby the terminals of the lamp
5 are connected with the receptacle, not shown, and hence with the source of electrical energy.

As it is essential that continuity of a series circuit be maintained at all times and
10 to insure such continuity in the event of failure of any of the lamps in the circuit, the insulating material 16 between the bayonet arms of each socket has heretofore consisted of a thin film of material which was
15 punctured at approximately 300 to 700 volts to which the current builds up upon failure of the lamp. This method, while insuring continuity of the circuit, had several objections and the present invention contemplates
20 the elimination of the objectionable insulating film by providing a novel means of procuring an air gap across which an arc jumps in the event of failure of the lamp, to fuse the metal of the members forming the gap.

To this end, an arm 17 is extended from
25 the attaching end of the bayonet arm 12 or the plate 7, whose outermost end is provided with an upturned lip 18 and a second arm 19 is similarly fixed to the attaching end of
30 the bayonet arm 13 at the terminal plate 8. The outermost end of the arm 19 is curled or looped, as at 20, and internally threaded to receive a screw 21. The end 22 of the screw is spaced slightly from the up-turned
35 lip 18 of the arm 17, to provide a gap across which the current jumps upon failure of the lamp and the consequent current surge, to slightly fuse the metals of the screw and the lip 18 and thus bridge the terminals 7
40 and 8 to insure continuity of the circuit independent of the lamp. The arms 17 and 19 may be formed of any suitable metal, but it is desirable that the arm 19, and especially its looped end, have sufficient resiliency to
45 maintain the screw 21 in any desired position of adjustment.

When the lamp fails and the screw end 22 is fused to the lip 18 it is only necessary for a lineman to back the screw out of the
50 looped end, the turning of the screw readily breaking the fused connection and when it has been withdrawn, its end and the face of the lip 18 may be easily refinished with a file or the like.

In the modification of the invention illustrated in Figure 3, the screw 21 is eliminated and the arm 19 is provided with a lateral extension 23 whose outermost end is curved upwardly and downwardly, as at 24, to terminate slightly above the surface of the arm
60 17 from which the lip 18 is omitted. This construction obtains the desired result but makes re-facing of the contacts and readjustment of the gap slightly more inconvenient.
65 ent.

From the foregoing description, taken in connection with the accompanying drawing, it will be readily apparent to those skilled in the art to which an invention of the character described appertains, that I provide a
70 novel means of insuring continuity of circuit in a series street lighting socket which obviates the necessity of the usual film of insulating material and thus generally improves the construction of such sockets and
75 reduces the cost of maintenance.

What I claim as my invention is:

1. In combination with a lamp socket for series street lighting systems having bayonet arms normally electrically bridged by a
80 lamp secured in the socket and adapted to connect the socket and the lamp carried thereby with a source of electrical energy, a member formed of insulating material mounted between said arms and constantly
85 preventing the direct passage of electricity therebetween, lateral arms extended from the socket, common means for attaching the bayonet arms and the lateral arms to the socket whereby the lateral arms have direct
90 contact with the bayonet arms, and means at the ends of the lateral arms providing terminals of an air gap across which current jumps upon failure of the lamp to maintain the bayonet arms electrically connected.
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2. In combination with a lamp socket for series street lighting systems having bayonet arms normally electrically bridged by a
100 lamp secured in the socket and adapted to connect the socket and the lamp with a source of electrical energy, a member formed of insulating material mounted between said arms and constantly preventing the direct
105 passage of electricity therebetween, lateral arms extended from the socket, common means for securing the lateral arms and the bayonet arms to the socket whereby the lateral arms are in direct contact with the bayonet arms, means carried by the ends of the
110 lateral arms forming terminals of an air gap across which the current jumps upon failure of the lamp to maintain the bayonet arms electrically bridged, and means whereby said air gap may be readily adjusted.
115

3. The combination with a series street
120 lighting fixture socket adapted to receive an electric lamp and including bayonet arms for conducting electrical energy to the lamp whereby the bayonet arms are normally electrically bridged by the lamp, a member formed of insulating material mounted between said arms and constantly preventing the direct passage of electricity therebetween, means extending laterally from the bayonet
125 arms to one side of the socket and spaced from each other a slight distance to provide an air gap across which the current jumps upon failure of the lamp said means fusing as the current jumps the gap, to provide a
130 metallic bridge across the gap to maintain

the bayonet arms electrically connected independent of the lamp, and means for readily breaking the fuse connection and readjusting the gap.

5 4. A socket of the character described comprising terminal members adapted to be normally bridged by an electric lamp, bayonet arms electrically connected with the terminal members for conducting electrical energy to the terminal members, a member
10 formed of insulating material mounted between said arms for constantly preventing the direct passage of electricity therebetween, lateral arms secured to the bayonet arms with
15 their outer ends extended to one side of the socket and spaced from each other to provide an air gap across which the current jumps to fuse said means and maintain the terminal members electrically bridged independent of the lamp, and means whereby the
20 fused connection may be readily broken and the gap between said means readily re-adjusted, adjustment of the gap being facilitated by the extended position of the lateral arms.

5. The combination with a series street lighting fixture socket adapted to receive an electric lamp and including bayonet arms, a member formed of insulating material
20 mounted between said arms for constantly preventing the direct passage of electricity therebetween, means electrically connected with the bayonet arms and forming an air gap across which the current jumps upon
35 failure of the lamp to electrically bridge the bayonet arms, and common means for mounting the bayonet arms and said means forming the air gap from the socket.

6. In a device of the character described,
40 a pair of terminal members, arms connected with the terminal members, one of said arms being formed of spring metal and having a portion thereof curled to provide a loop, and a screw threaded in said loop with its end
45 adjacent to but spaced from the other arm to provide an air gap, the length of the gap being adjustable by turning of the screw, and the screw being maintained in any position of adjustment by the inherent resilience of
50 the metal forming the loop in which it is threaded.

7. A device of the character described comprising, a cup shaped lamp socket adapted to mount an incandescent lamp, a pair of
55 electrically insulated bayonet arms extending from the closed end wall of the cup shaped socket for engagement with a proper receptacle to support the socket and electrically connect the lamp carried thereby with
60 a source of electrical energy, a first lateral arm having one end portion mounted from the closed end wall of the socket and in direct contact with one bayonet arm and its other end portion projecting beyond the side
65 of the socket to provide a terminal, a second

lateral arm mounted from the closed end wall of the socket with one end portion thereof in direct contact with the other bayonet arm and with its other end portion projecting beyond the side of the socket, and means
70 carried by said second lateral arm and extending toward the terminal means of the first lateral arm but spaced therefrom a short distance to form a fuse gap across
75 which current jumps to electrically connect the bayonet arms upon failure of the lamp.

In testimony whereof I have hereunto affixed my signature.

ALWIN G. STEINMAYER.

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