A. COOPER.

ELECTRIC SOCKET BOX.

APPLICATION FILED APR. 7, 1919.

1,366,246. Patented Jan. 18, 1921.

Fig. 1.

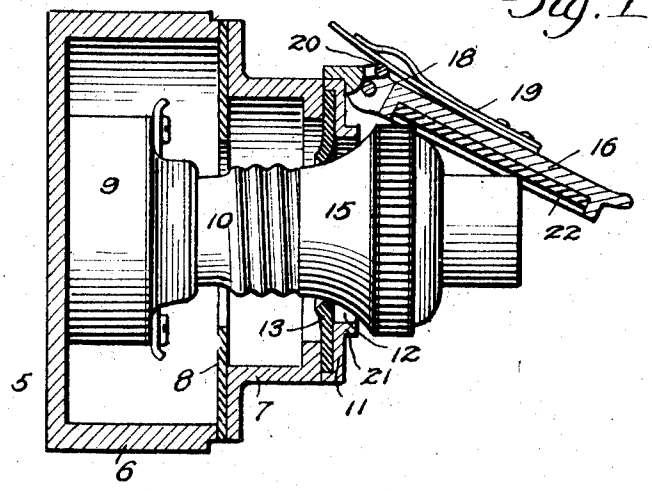


Fig. 2.

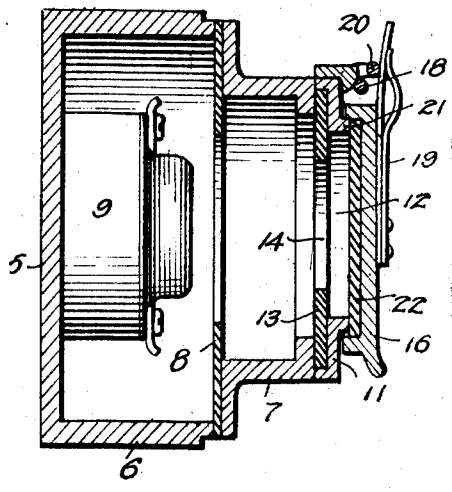
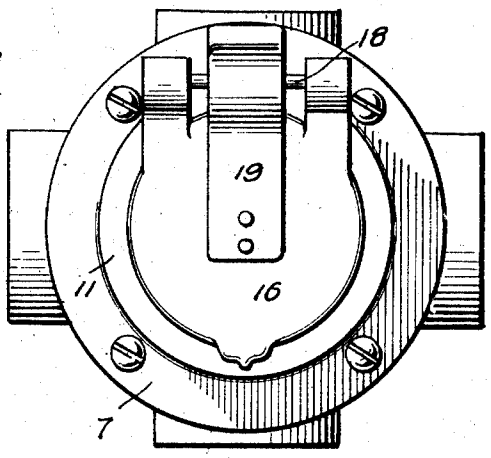


Fig. 3.



INVENTOR

Abraham Cooper,

BY Victor J. Evans

ATTY.

UNITED STATES PATENT OFFICE.

ABRAHAM COOPER, OF BROOKLYN, NEW YORK.

ELECTRIC SOCKET-BOX.

1,366,246. Specification of Letters Patent. Patented Jan. 18, 1921.

Application filed April 7, 1919. Serial No. 288,030.

To all whom it may concern:

Be it known that I, ABRAHAM COOPER, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Electric Socket-Boxes, of which the following is a specification.

This invention relates to junction boxes and particularly to the kind designed for use in connection with locomotives or the like that are adapted to receive what are known as classification plugs, markers and signal lamps.

An object of the invention is to provide a device of this character in which the plug receiving opening in the socket receptacle can be satisfactorily closed at all times to establish a weather proof connection between the parts regardless of whether the plug is applied or removed.

With the above and other objects in view which will appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangements of parts which will hereinafter be fully described and particularly pointed out in the claims.

In the accompanying drawings, has been illustrated, a single and preferred form of the invention, it being, however, understood that no limitations are necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the claims may be resorted to when desired.

Figure 1 is a vertical section through the box showing the plug applied.

Fig. 2 is a similar view with the plug removed.

Fig. 3 is a front elevation of the box.

In carrying the invention into practice, use is made of a receptacle box 5 consisting of sections 6 and 7 with a gasket 8 interposed between said sections. The section 6 is provided with the usual form of socket 9 for the reception of the marker or lamp plug 10.

The section 7 is provided with a flanged portion 11 having a plug receiving opening 12 therein. Between the outer end of the section 7 and the flange 11 is arranged an elastic gasket 13, preferably formed of rubber. This gasket extends in the direction of the center of the opening 12 in order that it may be flexed or canted in a manner and for the purpose which will presently appear. The plug 10 is adapted to be inserted through the opening 14 in said elastic gasket 13 whereby the flared walls 15 of the plug may be brought into impingement with the gasket to establish sealing contact therewith and prevent the outside elements from passing through the opening 12 where they might damage the interior parts of the structure and affect the circuit.

In order to effectually seal the interior of the receptacle 5 against entrance of the outside elements when the plug is removed, I provide a closure plate 16 having pivotal connection at 18 with the portion 11 of the section 7. A flat leaf spring 19 on the closure plate is arranged in operative engagement with a co-acting surface 20 of the portion 11 so that spring pressure can be applied to the cover section. The portion 11 is provided with a flanged seat 21 and under the action of the spring 19 the gasket 22 of the closure plate will be advanced against the seat and thereby establish an effective seal when the plug is removed.

The device is exceedingly simple of construction, it may be manufactured at a comparatively low cost and in operation its parts may be adjusted to expeditiously permit of application of plug to its socket or a removal therefrom as the occasion demands.

What is claimed as new is:

1. In apparatus of the class described, in combination with a receptacle and a plug receiving socket, a gasket extending over one end of the receptacle in line with the socket, the gasket having an opening therein whose walls are adapted for sealing contact with the shell of a plug, a seat formed on the receptacle outwardly of the gasket, and a closure movable against said seat.

2. In apparatus of the class described, in combination with a receptacle and a plug receiving socket, a gasket extending over one end of the receptacle in line with the socket, the gasket having an opening therein whose walls are adapted for sealing contact with the shell of a plug, a seat formed on the receptacle outwardly of the gasket, and a closure movable against said seat, and a gasket carried by the closure and co-acting with the seat to seal the receptacle when the plug is removed, the first gasket serving to seal the open end of the receptacle when the plug is applied.

3. In a device of the class described, the combination of a receptacle provided with a plug receiving socket, a gasket disposed in

line with said socket and adapted to coöperate with a plug for sealing said receptacle when said plug is inserted in said socket, a spring pressed cover, a gasket supported by said cover and operable to seal said receptacle when said plug is not in said socket, and a member formed so as to co-act with the first said gasket to maintain it in position with relation to said socket, and so as to provide a seat to co-act with the second said gasket for sealing said receptacle when said plug is not in said socket.

4. In a device of the class described, the combination of a receptacle, a gasket adapted to coöperate with a plug for sealing said receptacle when said plug is inserted in said receptacle, a member formed to co-act with the said gasket to maintain it in position with relation to said receptacle and to provide an exterior seat, and a cover to coöperate with said seat.

5. In a device of the class described, the combination of a receptacle, a gasket adapted to coöperate with a plug for sealing said receptacle when said plug is inserted in said receptacle, and a member formed to co-act with the said gasket to maintain it in position with relation to said receptacle and to provide an exterior seat, with a spring-pressed cover carried by said member to cooperate with the seat of the member when the plug is not in the receptacle.

In testimony whereof I affix my signature.

ABRAHAM COOPER.