

Aug. 11, 1931.

J. R. TOWNSEND

1,818,177

JUNCTION BOX

Filed Aug. 30, 1928

2 Sheets-Sheet 1

Fig. 1.

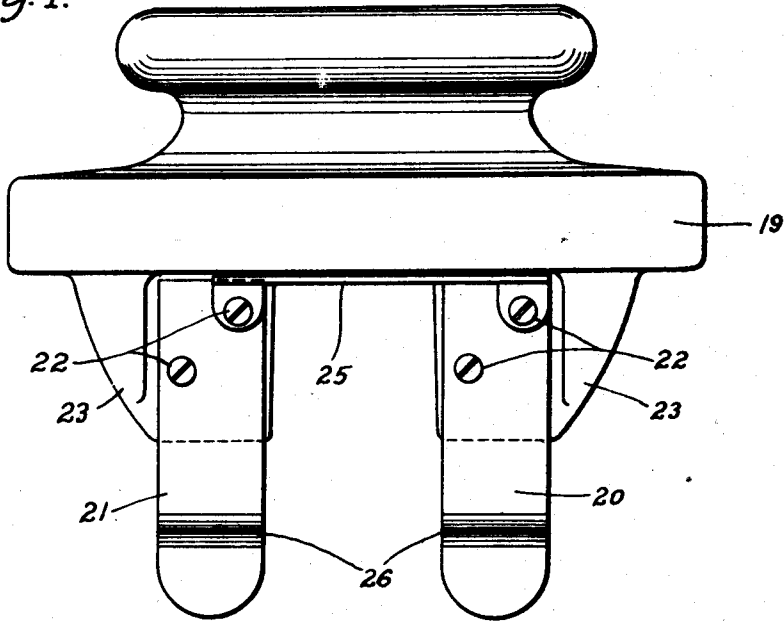
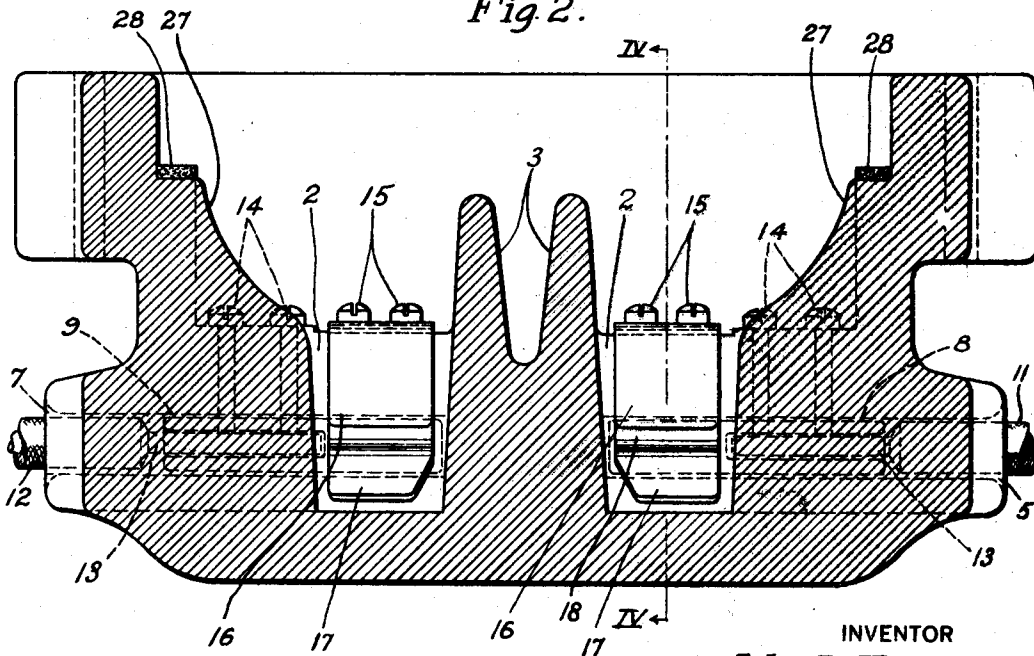


Fig. 2.



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Fig. 3.

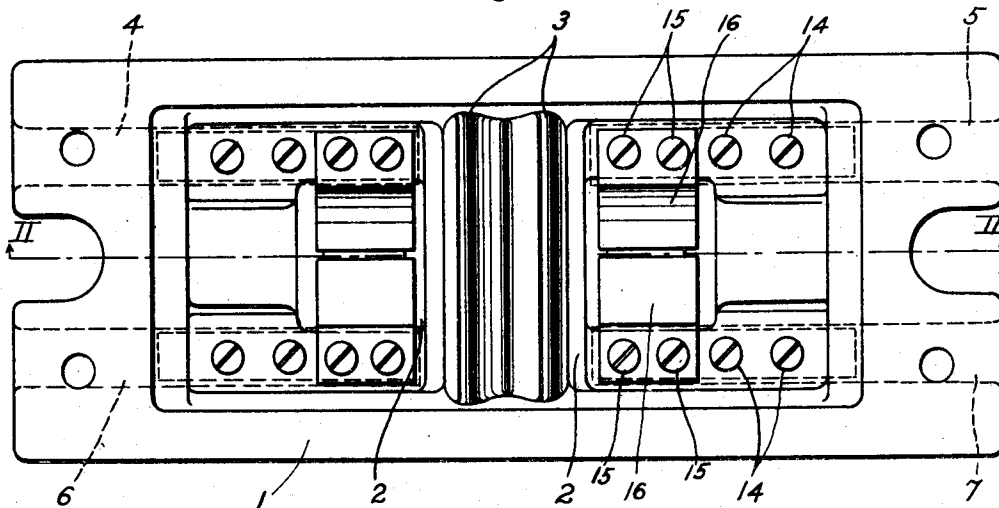
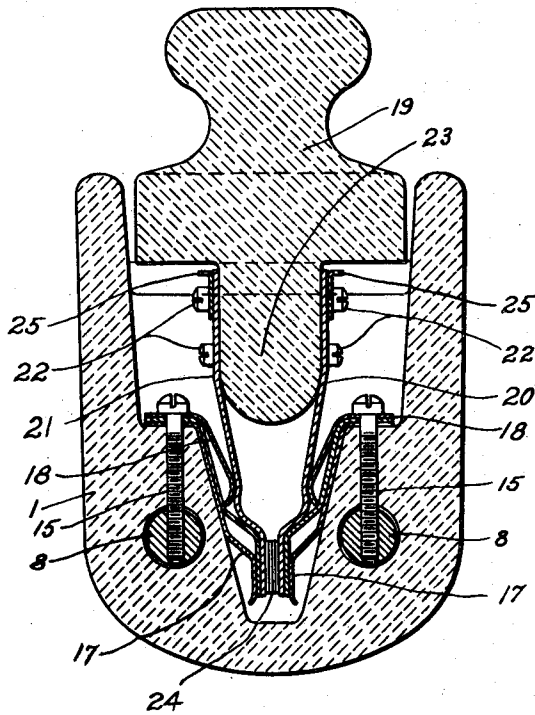


Fig. 4.



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JUNCTION BOX

Application filed August 30, 1928. Serial No. 302,944.

This invention relates to current translating devices and has particular relation to cable terminal junction boxes.

An object of the invention is to provide a cable terminal junction box particularly adapted for short circuiting the cable terminals by the removal of a portion of the cable terminal junction box.

Another object of the invention is to provide a device of the above description particularly suitable for high-voltage use.

A still further object of the invention is to provide an inexpensive, durable unit.

Referring to the drawings, in which like figures indicate like parts:

Figure 1 is a side elevational view of the removable portion of the cable terminal junction box;

Fig. 2 is a sectional view of the cable terminal junction box body taken along the line II—II of Fig. 3;

Fig. 3 is a top elevational view of the junction box, and

Fig. 4 is a sectional view of the box with the removable portion in position taken along the line IV—IV of Fig. 2.

It is desirable in street lighting circuits and the like that a cable terminal be placed at the point where the cables of the main circuit enter the lighting standards. These cable terminals must be constructed so that the branch circuit leading to the lighting unit may be deenergized when desired. It is desirable further that the secondary or auxiliary circuits be short circuited in order to prevent any stray potential thereon.

Most of the lighting circuits are of the series type so that if one lighting unit is disconnected, the other lighting units in series with it would be extinguished. Therefore, it is desirable that means be provided so that when one lighting unit is disconnected an automatic cutout is brought into operation and the lighting current shunted through this connection to keep the remaining lights burning.

In accomplishing the objects of the invention, a receptacle or base 1 is provided of porcelain or other suitable insulating material. A plurality of recesses or wells 2

are provided in the inside of the receptacle and these wells are separated by an insulating barrier 3. Two pairs of recesses 4, 5, 6 and 7 extend from the lower outer wall of the receptacle into the lower portion of the receptacle and metallic terminals or bushings 8 and 9 are adapted to be located therein, the purpose of the terminals being to make electrical connection with the cables 11 and 12 of the main and branch circuits. The recesses 4, 5, 6 and 7 do not connect directly with the wells 2 but terminate on each side of the wells. Sockets 13 are provided in the bushings and the wires of the cables 11 may be inserted therein and clamped into place by means of the screws 14. Other screws 15 are threaded into the terminal bushings 8 and extend through the receptacle into the inner recesses where they make contact with contact members 16 which extend downwardly into the lower portion of the wells. The contact members 16 of the base and cap 19 are of the usual well known series cutout type and comprise two sets of springs 17 and 18, the shorter spring 18 being adapted for engaging the prongs 21 of the cap.

The cap or plug member 19 is provided with four downwardly extending prongs 20 and 21 which are fastened by means of screws 22 to downwardly extending portions 23 of the porcelain plug. These prongs are provided in pairs and are inwardly curved so that they normally make contact with one another. However, the prongs are separated by means of a film cutout 24 of the type well known to the art or by other insulating members which are disposed between the prongs and are held by reason of the resiliency of the prong members. The pairs of prongs are connected by connectors 25. The prongs are provided with a shoulder portion 26 adapted to be engaged by the spring 18 hereinbefore mentioned for the purpose of holding the plug in place on the receptacle. A ledge 27 is provided on the inside of the receptacle having a resilient facing 28 disposed thereon for resiliently engaging the plug when it is in place in the receptacle.

It is apparent that when the plug is in

place in the receptacle, electrical connection is made with the cable terminals 11 by means of terminals 8, screws 15, and contacts 16 in the base, through prong 20, connector 25 and prong 21 of the plug member, through
5 contacts 16, screws 15 and bushing 9 to cable terminal 12.

When the plug is removed, the contacts 16 of the base make contact with each other and
10 short circuit the cable terminals 11 and 12, respectively, thereby electrically connecting the main circuit conductors and short circuiting the branch circuit.

It may readily be understood that this invention provides a structure which is particularly well constructed electrically by reason of the closed or non-communicating
15 recesses 5, wells 2, barrier 3 and cap 19. The recesses 5 may readily be sealed with insulating compound. The connectors are
20 so arranged that the connectors have ample current carrying capacity and the device will function under severe operating conditions.

Although a specific modification of the device has been described, it is apparent that other modifications may be made by those skilled in the art and such modifications may be made without departing from the spirit
25 and scope of the invention as set forth in the appended claims.

I claim as my invention:

1. A cable terminal comprising a body portion and a cap, said body portion being
35 disposed to provide a plurality of wells and ledges in each of the wells, contacts fastened in the ledges and extending downwardly into said wells, said cap being provided with a longitudinally disposed depending insulating portion, a plurality of pairs of downwardly extending contact members fastened
40 to the insulating portion and bars of conducting material connecting corresponding contact members.

2. A cable terminal comprising a body portion, said body portion being disposed to provide a plurality of wells, ledges on opposite walls of each of the wells, the ledges being disposed to provide recesses in which
45 holding screws are located, contacts fastened to the holding screws and extending downwardly into the wells, and a cap provided with coacting contact members for making contact with the contacts in the base.

50 In testimony whereof, I have hereunto subscribed my name this 14th day of August, 1927.

JOHN R. TOWNSEND.