

Sept. 21, 1937.

C. A. HICKMAN ET AL

2,093,677

CONTINUOUS ELECTRICAL OUTLET

Filed April 2, 1936

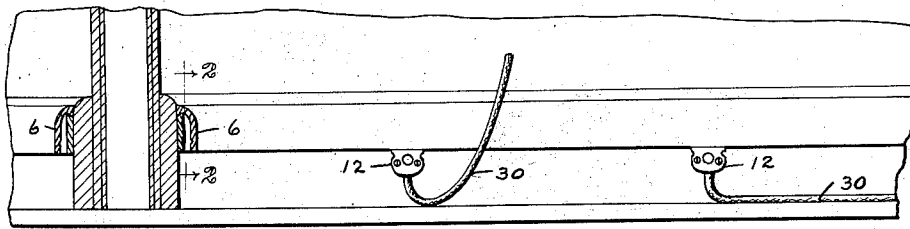


FIG. 1.

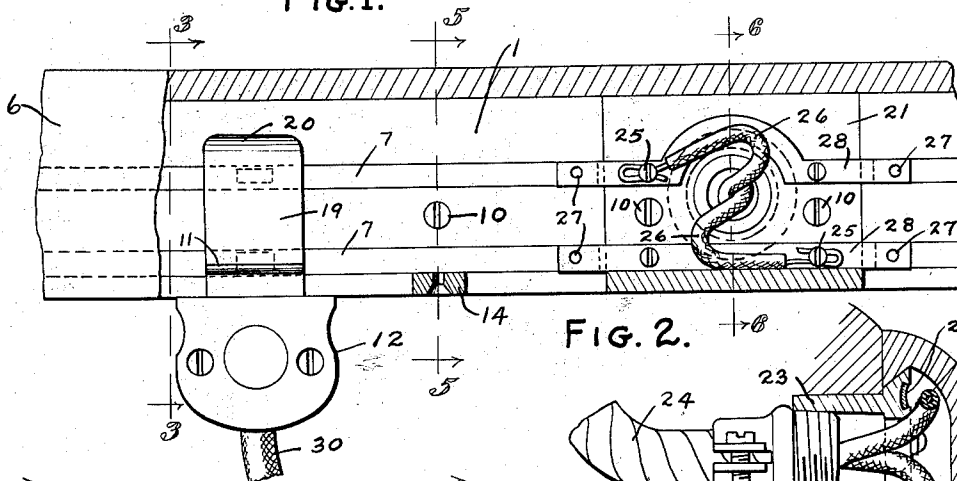


FIG. 2.

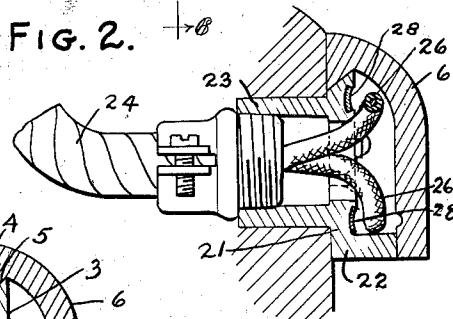


FIG. 6.

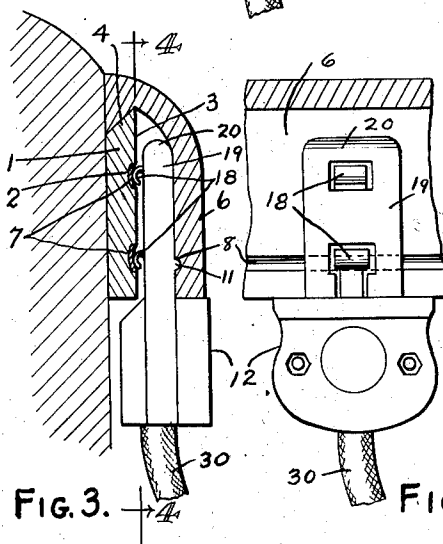


FIG. 3.

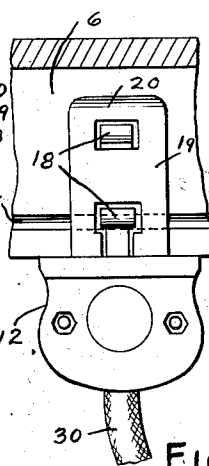


FIG. 4.

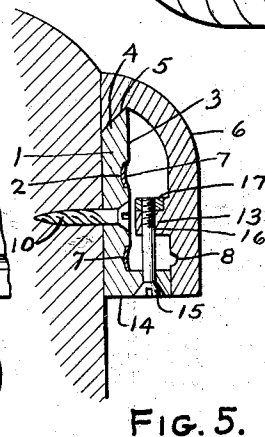


FIG. 5.

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2,093,677

CONTINUOUS ELECTRICAL OUTLET

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Application April 2, 1936, Serial No. 72,424

1 Claim. (Cl. 247—3)

This invention refers to electrical equipment and more particularly to devices of the plug-in nature for electric lighting and other purposes. The device is termed a continuous outlet, and its purpose is to provide an infinite number of locations for the convenient plug-in of an attachment connection for taking off the electrical current. An object of this invention is to have construction of this continuous outlet such that the attachment plug will be securely held in place at any location selected for plugging-in. Another object is to make the construction such that it will be practically self-holding, as well as amply protecting the "live parts" from accidental crossing or short-circuiting. Other objects are to make the device applicable for household use at the base-boards or mouldings and all around the room; such that plugs may be conveniently and quickly inserted, that will be held in place with a catch in addition to any frictional hold that may be had by the parts, and adapted to be readily fed from a supplying electrical circuit. Other objects will become apparent as the invention is more fully set forth.

This device consists of a continuous set of bus-bars that are mounted in strips on a suitable insulating backing. They are recessed back so as to be out of the way of accidental contact. A covering is mounted on the backing and catches on same in such a manner as to be held and aligned thereon. The attachment plug used with the device is inserted from underneath and extends in an open space provided in between the backing and covering and has spring contacts that slip into the recesses provided by the bus-bars and lock therein.

In the construction shown in the drawing:

Figure 1 is a front view of a continuous outlet embodying this invention, and mounted on the conventional base-board of a room,

Figure 2 is a sectional view taken along the line 2—2 of Figure 1 on an enlarged scale,

Figure 3 is a sectional view taken along the line 3—3 of Figure 2, showing the plug in position and locked in place,

Figure 4 is a front view of the attachment plug shown in Figure 3 with the backing removed or cut off in section,

Figure 5 is a sectional view on line 5—5 of Figure 2 showing a method of locking the covering to the backing, and

Figure 6 is a detail along the line 6—6 of Figure 2 showing the circuit feed to the device.

Similar reference characters refer to similar parts throughout the drawing.

The continuous outlet is provided with a backing 1 of suitable insulating material, which has longitudinal grooves 2 on its front face 3 spaced apart to prevent any electrical leakage or arcing. The upper edge 4 of the backing is bevelled backwardly and downwardly as indicated to provide a recess for a tapered edge 5 of a covering 6 to engage and lock upon. Bus-bars 7 are formed to set back in the recesses 2 and run continuously along the backing. The backing is made in suitable lengths or sections and may be fastened in place in any conventional manner 10 and to suit the usual conditions met with. The ends of the lengths may have the busses and the longitudinal grooves so arranged that alternate pieces may be connected with each other readily without causing the bus-bars to project beyond the face 3 of the backing. The covering 6 is preferably of the form shown in the drawing, providing a space between it and the backing. The covering is of suitable insulating material and formed to cover the entire front of the backing. It has a locking groove 8 running its length which serves to permit a catch 11 in the attachment plug 12 to engage with and lock the same in place.

At predetermined spacings, internal projections 13 on the covering, align with flange members 14 extending from the backing. A machine screw 15 passes through holes 16 in the members and threads into tapped holes 17 in the projections 13. This arrangement serves to pull the covering down on the backing and make its tapered or bevelled edge 5 lock more securely in the recess 4, and prevent its coming out of same or being knocked out of place. This method of attachment also avoids the use of screws on the face of the covering where they might look conspicuous.

The attachment plug 12 is made with metal spring contacts 18 mounted on a stem 19 which is preferably flat with a slightly tapered wedge end portion 20.

These contacts are rounded to make contact to conform with the shape of the bus-bars and to slide easily on same. The electric connections pass into the plug in a conventional manner and attach to the contacts, and a handle of convenient form is provided to permit the plug to be easily and safely handled.

At properly spaced intervals, connection blocks 21, having insulating backings 22 to cooperate with that originally mentioned, are arranged. This backing is made with an outlet box 23 into which conduit 24 is secured. The wiring 26 passes through the conduit and outlet box and connects

to binding posts 25 to supply the electrical current thereto. Bus-bars 28 are arranged to connect with the bus-bars 7 of the sections of the continuous outlet without projecting beyond the face of the insulating material holding same, and may be secured positively into contact by screws 27.

In the use of the device, the attachment is simply pushed into place under the continuous outlet, until the contacts 18 are in contact with the bus-bars 7, while the catch 11 engages in the groove 8 and locks the plug in place sufficiently to hold it securely, but not enough to prevent its being removed when desired by the user. The connecting cord 30 of the attachment plug connects the light, motor, radio, or other object which it is intended for. The plug may be inserted at any convenient spot in its length excepting where the lock pieces 14 and the blocks 21 are located.

While but one form of the invention is shown in the drawing, it is not desired to limit this application for patent to this particular form of construction, otherwise than limited by the prior art, as it is appreciated that other forms of construction could be used that would employ the same principles and come within the scope of the appended claim.

Having thus described the invention, what is claimed is:

A continuous outlet for electrical purposes comprising in combination, a backing of insulating material with its upper edge portion bevelled downwardly from the front to rear face thereof and with spaced longitudinal recesses in the front face portion, bus-bars fitted in the recesses with their rear surfaces against the bottom of the recesses and their front faces exposed, a covering for the backing of insulating material with its main wall portion disposed parallel to the backing and spaced therefrom having its upper portion fitting over the bevel surface of same, the internal face portion of the covering being provided with a locking groove running longitudinally therein, a flange member extending from the face of the backing to space the wall of the covering rigidly from the backing, a member on the covering aligned with the flange member, means acting between the latter members and parallel to the face of the backing to draw the covering and bevelled edge of the backing together, and an attachment plug for the outlet having spaced contacts on the same side thereof for contact with the said bus-bars and provided with a projection for registering with the groove in the cover.

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