

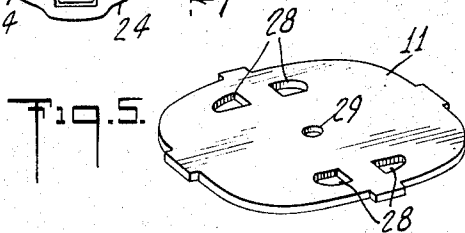
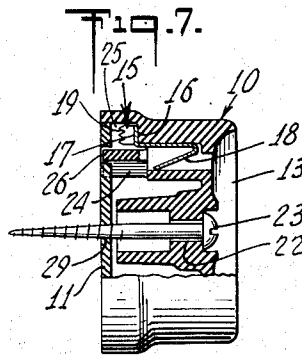
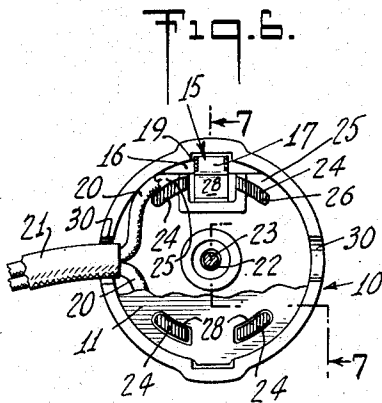
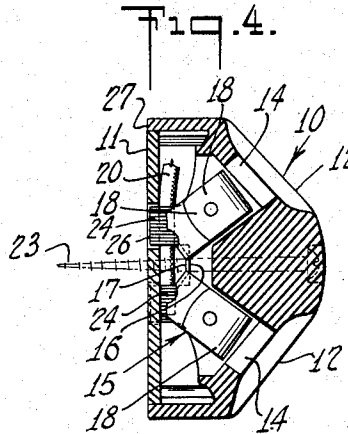
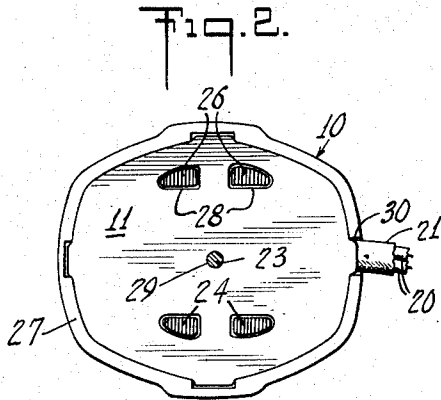
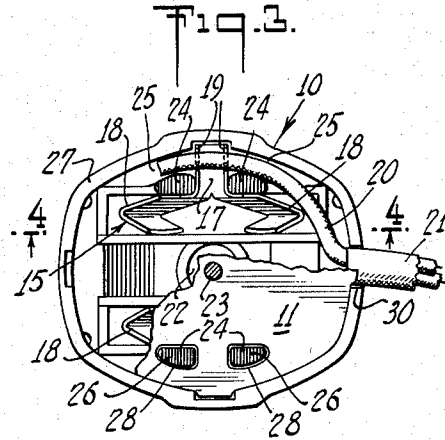
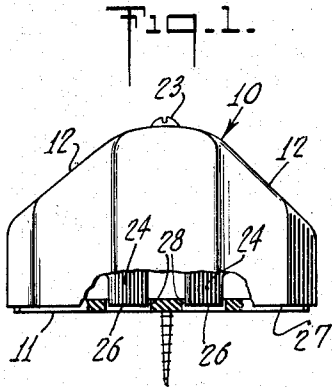
April 13, 1943.

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2,316,167

ELECTRICAL OUTLET

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2,316,167

ELECTRICAL OUTLET

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4 Claims. (Cl. 173—338)

This invention relates to electrical outlets, and particularly to those of the type known to the trade as "convenience" outlets.

Such outlets are adapted for attachment to the wires of an electrical conductor, and to be secured to a baseboard or other support by means of a screw that passes through the outlet and also serves to fasten the parts together. The outlets provide a convenient attachment for connection of lamps or other electrical devices to the conductor.

The outlet comprises generally a housing of insulating material containing the contact members, and an insulating cover plate. Examples of such outlets are disclosed in my Patents Nos. 1,818,804 and 2,248,675 and the Benjamin Patent No. 1,618,909.

The present invention relates specifically to certain improvements in this type of outlet, hereinafter described and claimed.

One object of the invention is to provide a construction whereby the wires of an electrical conductor may be readily and easily connected to the outlet.

Another object is to provide the outlet with guideways that facilitate proper placement of the wires, prevent accidental displacement thereof, and provide an efficient strain relief therefor.

A further object is to provide a construction in which the insulating cover plate presses on the wires to confine them securely in the guideways and to effect good contact with the contact members.

Other objects and advantages of the invention will appear from the following description thereof, reference being had to the accompanying drawing, in which:

Figure 1 is a side elevation of a double convenience outlet embodying the invention, with the housing partly broken away;

Fig. 2 is a bottom plan view thereof;

Fig. 3 is a view similar to Fig. 2 with the cover plate partly broken away;

Fig. 4 is a sectional elevation on the line 4—4 of Fig. 3;

Fig. 5 is a perspective view of the cover plate;

Fig. 6 is a bottom view of a single convenience outlet, with the cover plate partly broken away; and

Fig. 7 is a sectional elevation on the line 7—7 of Fig. 6.

The invention may be applied either to a multiple convenience outlet, or to a single convenience outlet. In Figs. 1 to 4, inclusive, I have illustrated the invention as embodied in a double

convenience outlet and in Figs. 6 and 7 it is shown as applied to a single convenience outlet. Similar numerals refer to similar parts throughout the several views.

The outlet comprises a housing 10 of molded insulating material, and an insulating cover plate 11, such as a flat fiber disc or washer, configured to fit into and close the bottom opening of the housing. Each of the upper inclined walls 12 of the housing of the double convenience outlet (Fig. 4), or the top wall 13 of the single convenience outlet (Fig. 7), is provided with the usual openings 14 for insertion of the blades of standard plugs (not shown) to make contact with the contact members 15 seated on the shoulders 16 in the housing. Each contact member comprises a terminal portion 17 and one or more spring contact portions 18. The terminal portions are preferably provided with teeth 19 to effect pin point contact with the separate insulated wires 20 of the duplex electrical conductor 21, although terminal or binding screws may be used. The housing has a central opening 22 for passage of the fastening screw 23, or its equivalent, which screw fastens the outlet to its support.

The housing 10 is also provided with guideposts or bosses 24, of any suitable shape, one at each side of the terminal portions 17 of the contact members, which posts are preferably somewhat elongated in cross-section and molded integral with the housing. They are spaced from the inner surface of the housing wall to provide guideways 25 for proper placement of the wires 20, as shown in Figs. 3 and 6. The posts 24 are of such height that their outer or bottom ends 26 will lie in, or only slightly below, the plane of the bottom face 27 of the housing wall, as best seen in Figs. 1, 4 and 7, to afford guideways of sufficient depth to hold the wires against accidental displacement, and for the purposes hereinafter described.

The cover plate 11 has openings 28 that are spaced and shaped to receive the ends 26 of the guideposts 24. It also has a substantially central opening 29 for passage of the screw 23. The openings 28 do not have to extend entirely through the cover plate since it is merely necessary that they be deep enough, depending on the thickness of the cover plate, to permit the latter to slide in and out on the ends 26 of the guideposts, as will be seen on comparison of Figs. 1 and 4, an extent sufficient that the cover plate may be pressed tightly against the wires, particularly when the fastening screw is screwed home.

It will be apparent from the foregoing description that when the wires are laid in the guideways, and the cover plate is pressed against them, they will be confined securely in place.

The improved construction serves not only effectively to bind or hold the wires securely in place but it also affords an efficient relief for the strain to which the wires might be subjected by undue pulling of the conductor or outlet relatively to each other. Furthermore, since the ends of the guide-posts extending into the openings in the cover plate, the height of the outlet housing may be reduced with a consequent saving in material and improvement in utility and appearance.

In using the device, the electrical conductor 21 is placed in the opening 30 in the side of the housing and the two wires 20 are laid in the respective guideways 25 with their ends lying on, and preferably extending beyond, the terminal portions of the contact members 15. Where the terminal portions are formed with teeth 9, it will not be necessary to bare the wires since the teeth will penetrate the insulation and effect good electrical contact. After the wires have been placed in the guideways, and contact has been made with the contact members, the cover-plate is set in the bottom opening of the housing and pressed against the wires. The outlet is then fastened to the baseboard or support by means of the screw 23. The lower face of the cover plate may initially extend just a little below the bottom face of the housing, as indicated in Fig. 1, so that as the outlet is screwed home on its support, the cover plate will be pressed tightly against the wires, as seen in Fig. 4. One or more of these outlets may be connected to the same conductor as desired.

Various modifications in the details of construction herein described may be made within the scope of the invention.

What I claim is:

1. In an electrical outlet, a housing having an exterior wall open at one end, contacts having terminal portions seated in the housing, a post adjacent each terminal portion spaced inwardly from the inner surface of the housing wall to form a guideway for confining a conductor wire therebetween positioned on the terminal portion of a contact, the ends of said posts being substantially flush with the end of the housing wall,

and a detachable cover-plate closing the open end of the housing and having openings in which the ends of the posts are received to permit of pressing the cover-plate tightly against the wires.

2. In an electrical outlet, a housing having an exterior wall open at one end, contacts having terminal portions seated in the housing, a post adjacent each terminal portion spaced inwardly from the inner surface of the housing wall to form a guideway for confining a conductor wire therebetween positioned on the terminal portion of a contact, said posts extending a substantial distance beyond the terminal portions, and a detachable cover-plate closing the open end of the housing and having openings in which the ends of the posts are received to permit of pressing the cover-plate tightly against the wires.

3. In an electrical outlet, a housing having an exterior wall open at one end, an opening in the side of the wall for reception of a duplex conductor, contacts having terminal portions seated in the housing, a post adjacent each terminal portion spaced inwardly from the inner surface of the housing wall to form a guideway for confining a wire of the conductor therebetween positioned on the terminal portion of a contact, said posts being out of line with the opening in the side of the housing wall and having their ends substantially flush with the end of said wall, and a detachable cover-plate closing the open end of the housing and having openings for receiving the ends of the posts to permit of pressing the cover-plate inward tightly against the wires.

4. In an electrical outlet, a housing having an exterior wall open at one end, contacts having terminal portions seated in the housing, a post adjacent each terminal spaced inwardly from the inner surface of the housing wall to form a guideway for confining a conductor wire therebetween positioned on the terminal portion of a contact, said posts extending a substantial distance beyond the terminal portions, a detachable cover-plate fitting into the open end of the housing and having openings in which the ends of the posts are received, and a screw passing through the housing and cover-plate to fasten the outlet to a support and to press the cover-plate inward tightly against the wires.

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