

Sept. 16, 1947.

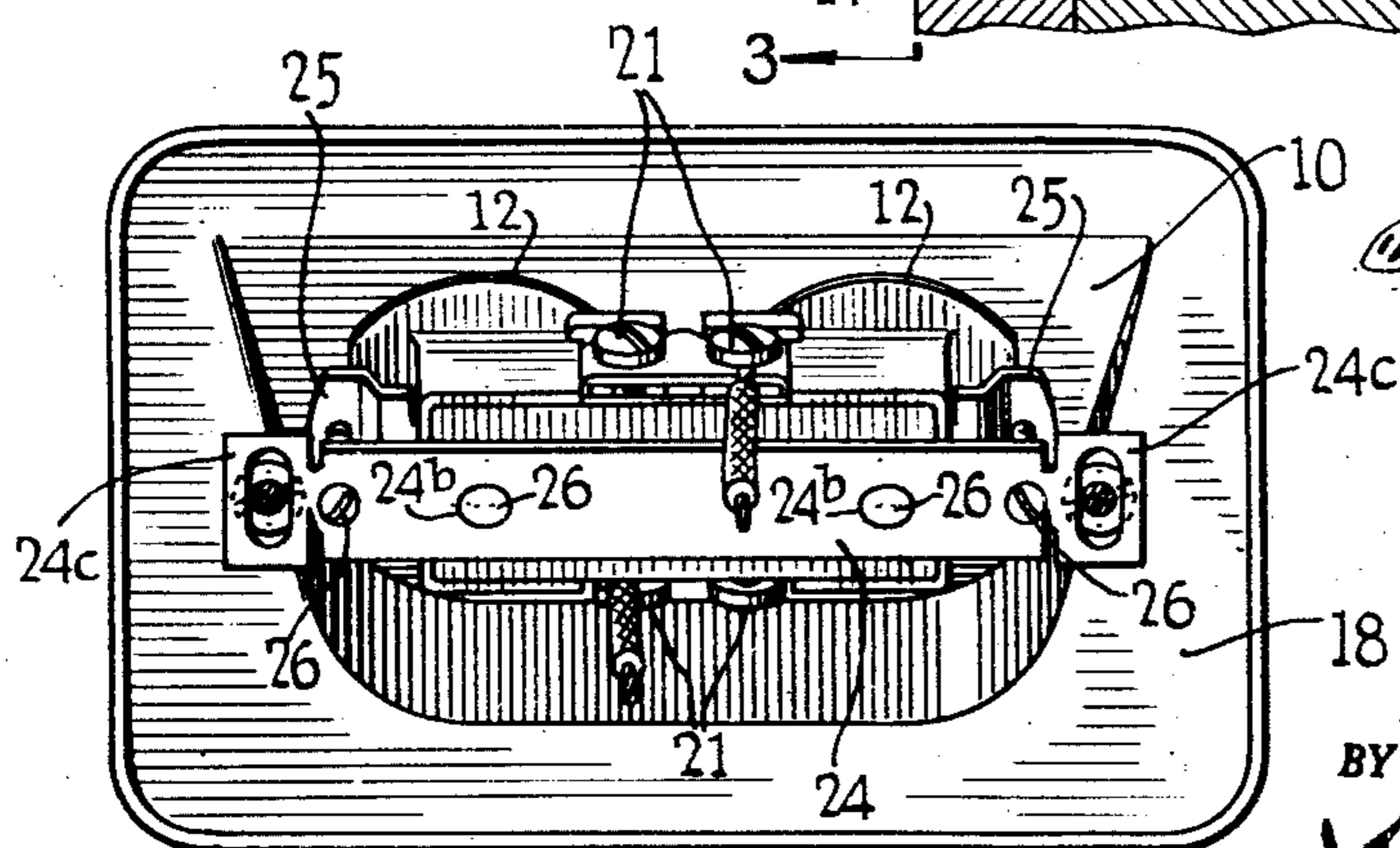
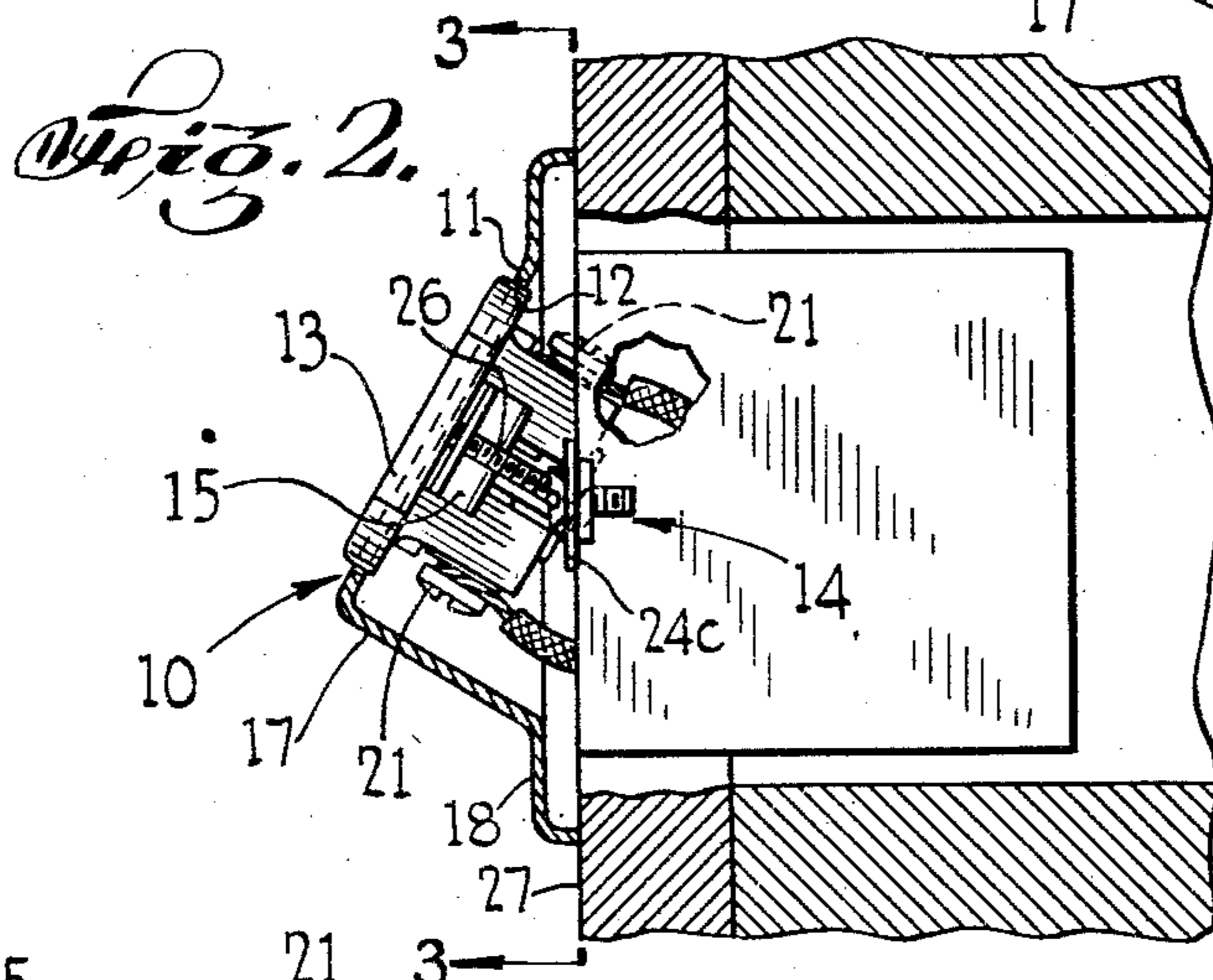
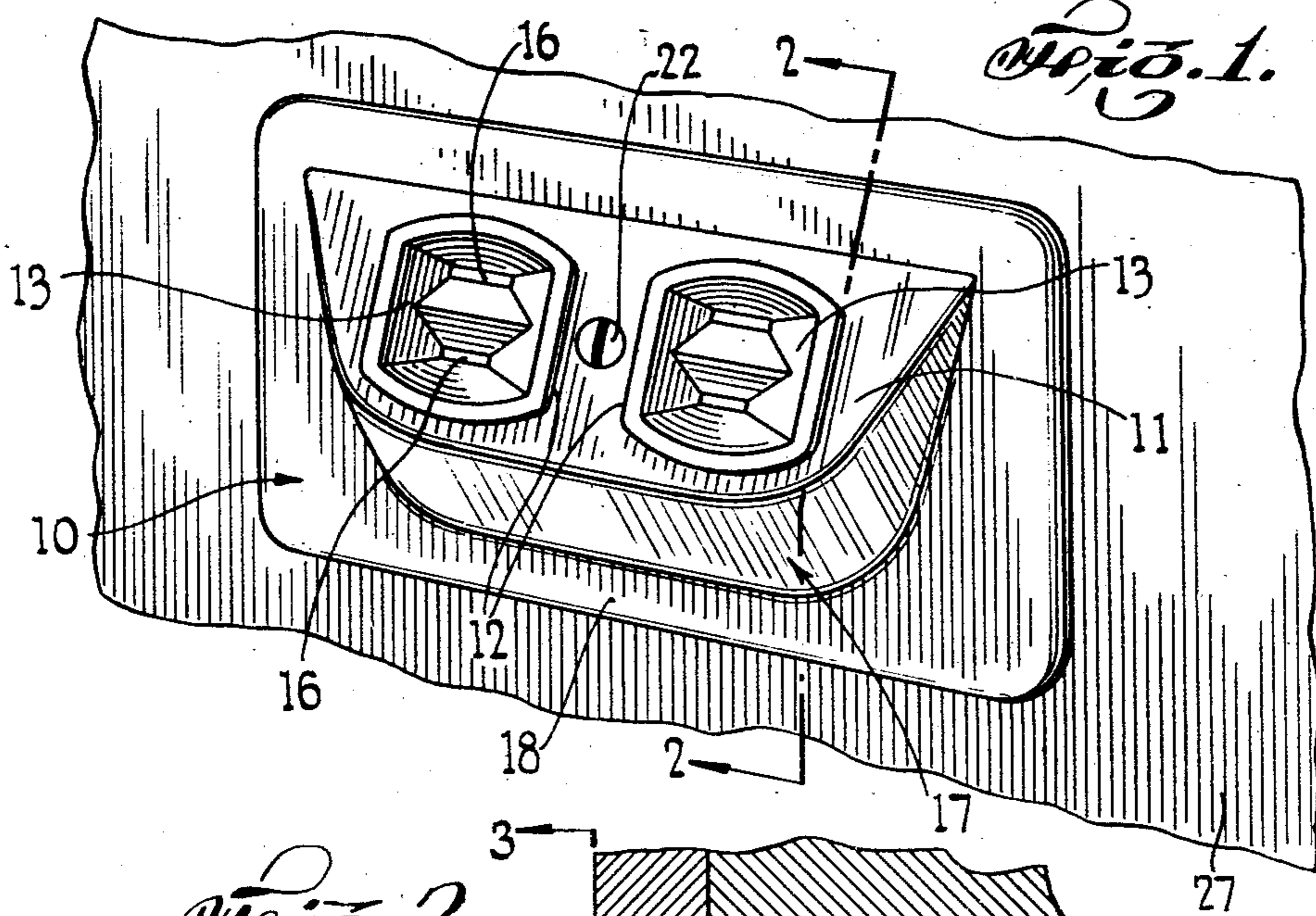
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2,427,349

ELECTRICAL RECEPTACLE

Filed Nov. 16, 1944

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

Fig. 4.

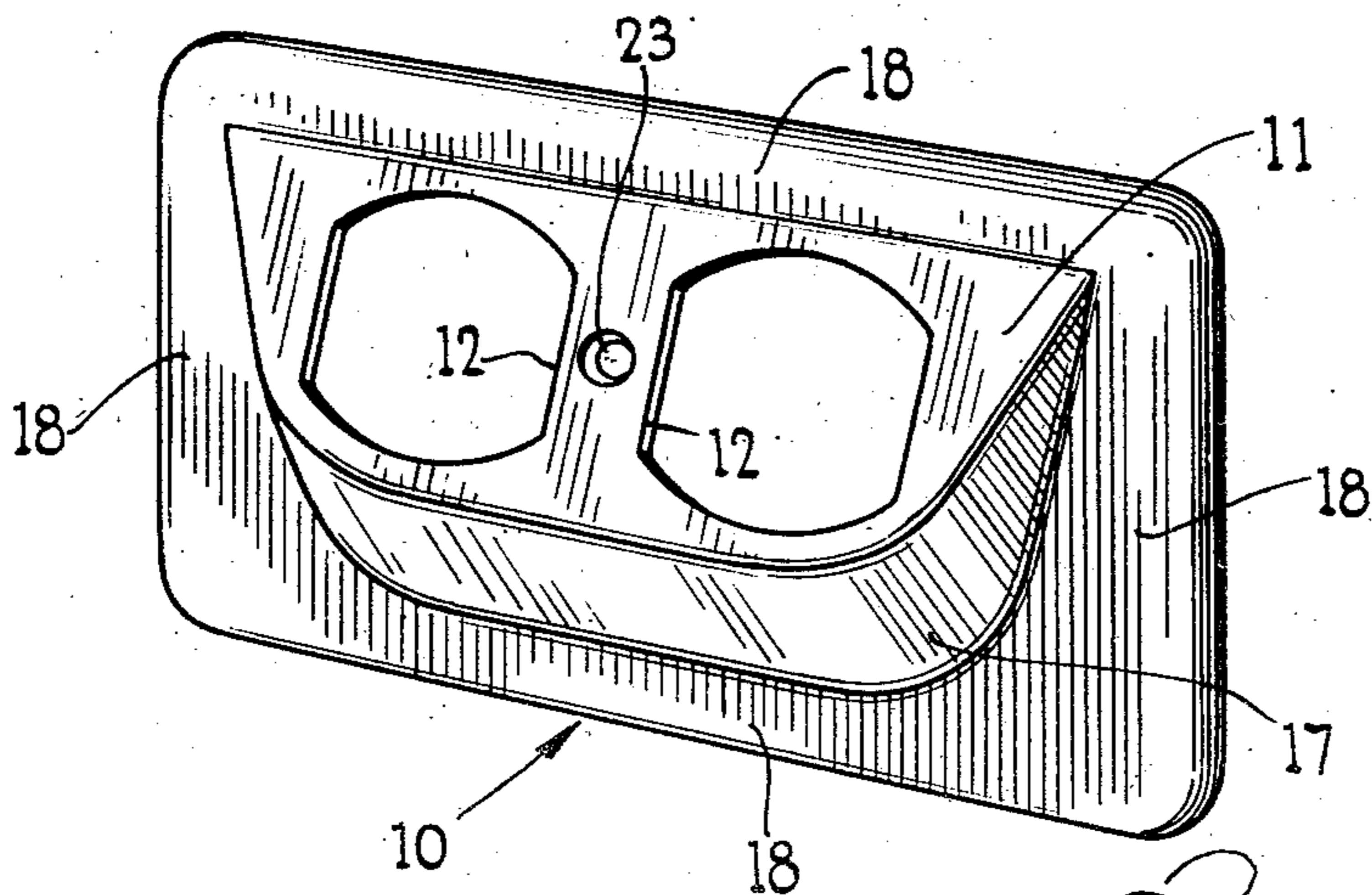


Fig. 6.

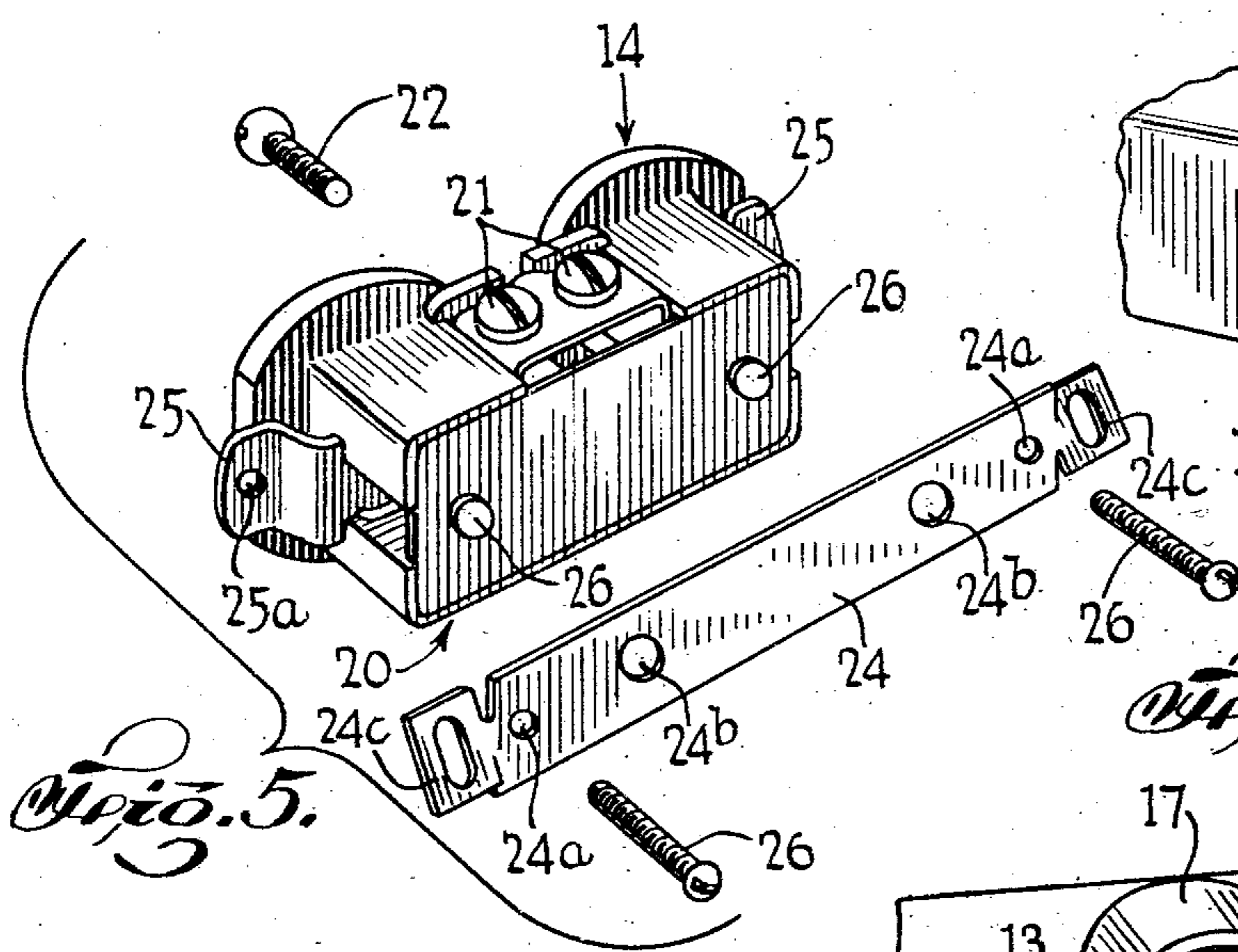
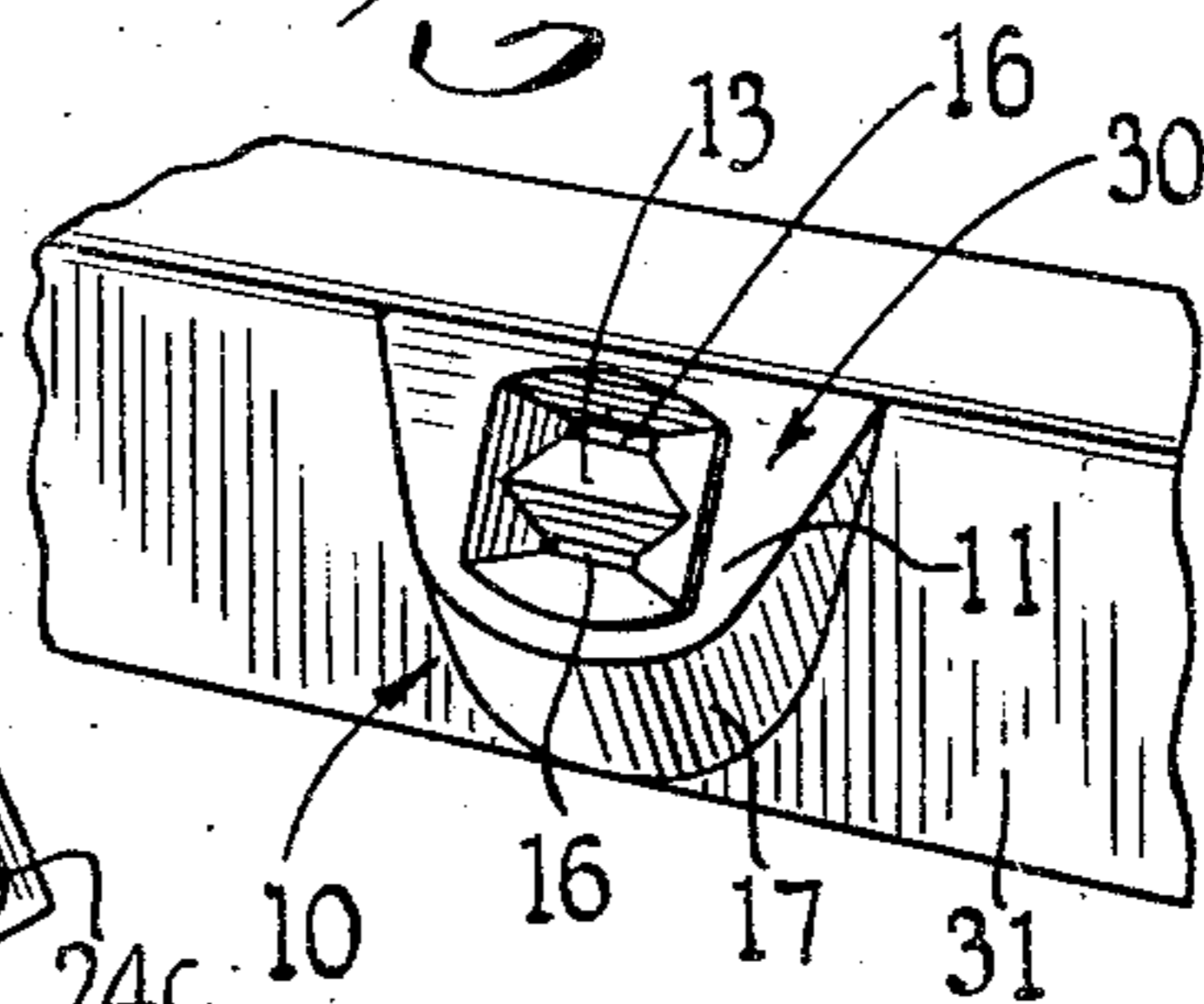
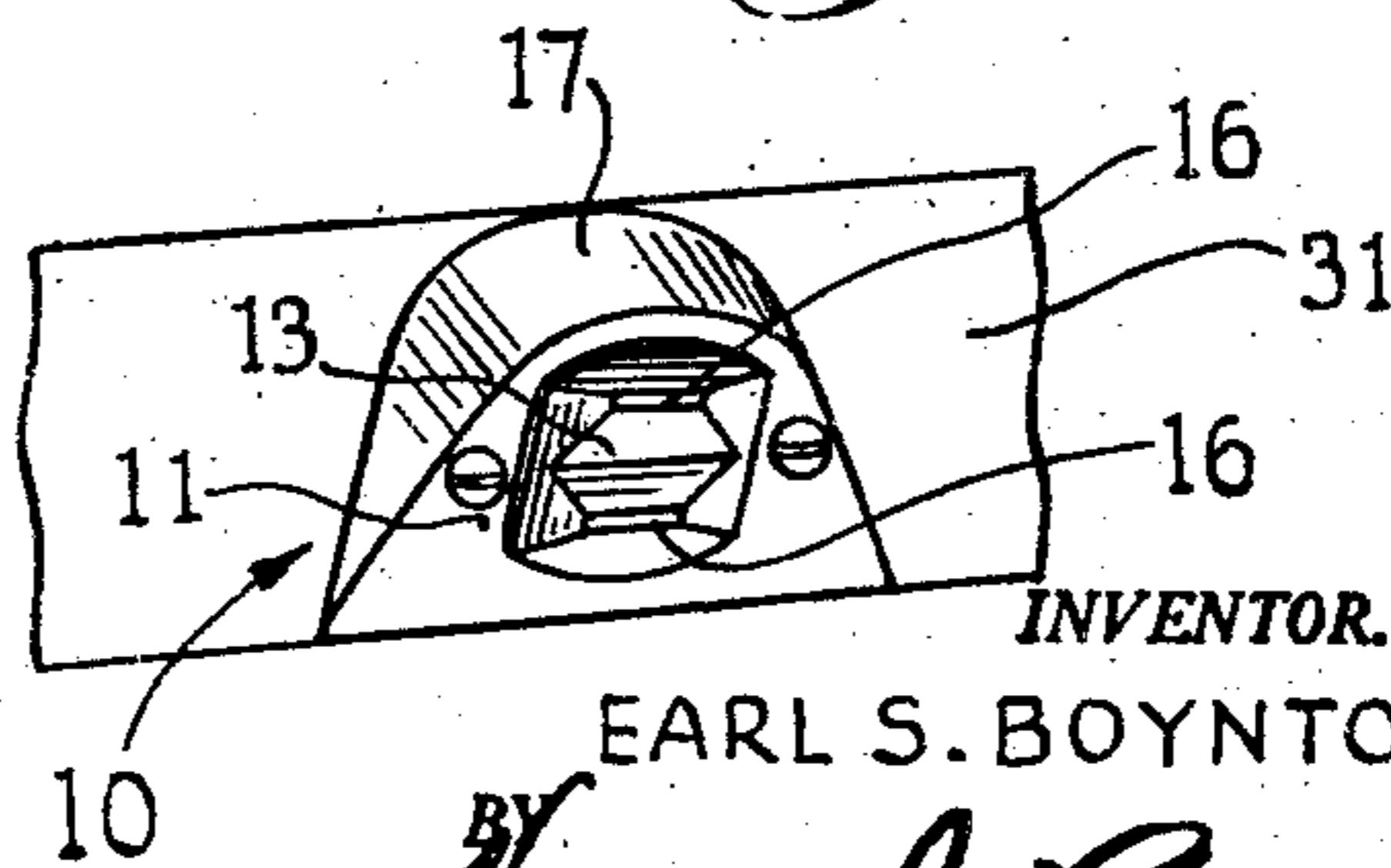


Fig. 7.



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2,427,349

ELECTRICAL RECEPTACLE

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Application November 16, 1944, Serial No. 563,757

3 Claims. (Cl. 173—330)

1

The present invention relates to electrical receptacles.

Pursuant to conventional practice, the apertured face of an electrical receptacle is disposed substantially vertically, affording the introduction of the blades of an electrical plug into its apertures in a substantially horizontal plane of movement. Under conditions of darkness or low visibility, such arrangement entails the disadvantages of difficulty of definitely locating the apertures of the receptacle and the proper registering of the plug blades with such apertures for securement therein.

Pursuant to the invention, the face or face plate of the electrical receptacle is located at an angle to the vertical, and particularly at an angle to present such face or face plate in slanting upward direction, affording even under poor lighting conditions clear visibility of the location of such face plate and of its plug-receiving apertures.

In conventional outlet-provided electrical conduit systems, it has been the practice to have the apertured face of the outlet component of the system of the same color as the face of the conduit, thus entailing visual difficulty of locating the outlet apertures for the purpose of inserting the plug blades therein.

Pursuant to preferred forms of my invention, I provide further the face or face plate of the electrical receptacle of a color or with a coating thereon, which color is in contrast to the color of the face of the receptacle per se. Desirably, such contrasting color of the face or face plate of my electrical receptacle is of lighter tone, and most preferably white or substantially white, thus affording maximum visual apperception of the location of the apertured face or plate and of the positions of the respective apertures.

When the improved electrical receptacle is embodied in an outlet-provided electrical conduit system, like features of construction and arrangement effect enhanced accessibility and visibility of the aperture-provided face or face plate of the outlet and of its plug blade receiving apertures.

In preferred embodiments of the invention, and assuming the apertured face of the receptacle or of the outlet component of an electrical conduit system slants in upward direction, the outlet electrical contact elements are arranged with respect to the apertures to receive the blades of a plug or the like in a downwardly slanting direction. This is advantageous in that the user seeking to insert the plug blades need stoop but partially and the downward direction of movement for effecting insertion of the plug blades adds greater

2

convenience. Such arrangement affords the further advantage in the circumstance of ill advisedly removing the blades of an electrical plug from connection with the contact elements of the outlet by grasping and pulling the electrical cord, of minimizing the strain upon the cord and the connections of its wiring with the binding screws.

Embodiments of the invention either as a separate receptacle or as an outlet component of an electrical conduit system may also be employed to advantage in situations where moisture or water or other liquids may be present with the possibility of entry of the same into the apertures and thence to the electrical contact elements. In such situation the receptacle or outlet is arranged so that its face or face plate is presented downwardly at an angle to the vertical and thus disposed to shed moisture, water or other liquid and thereby safeguard against entry of the same into the apertures or to the contact elements.

To attain the above and other objects of the invention, simplified embodiments of the improved receptacle or outlet component of an electrical conduit system are provided with face plate or cover means comprising a relatively flat face portion arranged to be secured to a support, and further an apertured face portion merging at its upper margin with an upper portion of said relatively flat face portion and extending therefrom at an angle, usually less than a right angle, and further a face portion, of arcuate formation, merging lowerly with a lower portion of such relatively flat face portion and upwardly with the lower margin of such apertured face portion respectively, the outlet means being mounted to dispose its electrical contact means in alignment with the apertures of such apertured face portion, to afford insertion of the blades of a conventional or other approved electrical plug.

Further features and objects of the invention will be more fully understood from the following detailed description of the accompanying drawings, in which:

Fig. 1 is a perspective view of one preferred embodiment of the invention, having its face plate tilted upwardly. The illustrated embodiment is shown of a duplex outlet type.

Fig. 2 is a detailed sectional view on line 2—2 of Fig. 1. This view is also illustrative of a single receptacle or outlet.

Fig. 3 is a rear elevational view of the embodiment shown in Fig. 1.

Fig. 4 is a detailed perspective view of one form of applicable face plate of the improved receptacle, such as shown in Fig. 1.

Fig. 5 is an exploded perspective view of the body of the outlet unit per se and elective parts for mounting the unit.

Fig. 6 is a perspective view of a single outlet type arranged to have its face plate tilted upwardly; this figure illustrates also the invention as embodied in an electrical conduit system.

Fig. 7 is a perspective view of another embodiment of the invention shown having its face plate in downward tilted position. This view illustrates also a manner of incorporating the invention in an electrical conduit system.

Referring to Figs. 1 through 5, with respect to a preferred embodiment of the invention, the face plate of the therein illustrated electrical receptacle is designated generally 10. Such face plate comprises a face portion which is denoted 11. As shown in Fig. 1 and in detail in Fig. 4, such face portion is arranged at an angle to the vertical so as to face upwardly. Such face plate 10 is shown provided with openings 12 (compare Fig. 4 with Fig. 1) which are each contoured and arranged to receive an aperture-provided face portion 13 of an electrical outlet. The electrical outlet illustrated in Figs. 1 and 3 is of the duplex type and each individual outlet is designated generally 14.

Whereas the illustrated receptacle is shown of the duplex type, it is apparent that a description of the specific parts of but one individual outlet will serve to set forth the essential features thereof.

Such outlet 14, per se, may be of any conventional or other approved construction, embodying essentially electrical contact elements 15, which are respectively arranged in proper register with the outlet apertures 16 of the face portion 13. As illustrated in Figs. 1, 3, 4, and 5 of the drawings, each individual outlet is of the two-pole type, and accordingly each face portion 13 has two apertures 16. For any type of three or greater polarity of electrical outlet, a corresponding number of apertures is provided, as will be understood by those skilled in the art.

Such tilted or slanting relation of the face portion 11 to the normal i. e., less than a right angle, projects the same forwardly and gives rise to the protruding formation designated generally 17. Such protruding formation 17 may serve to ascertain the particular location of the face plate of the outlet or receptacle, advantageous under conditions of poor lighting or even darkness.

For simplicity of construction, it is desirable, but not essential, to form the stated face portions 11, 13 and 17 of the face plate 10 integral or integrated with their surrounding or peripheral portion 18, which last named portion 18 may extend in a vertical plane.

It will be observed that the apertured face portion 11, as shown in the illustrated embodiments, is relatively flat and extends at an angle less than a right angle, relative to the face portion 13, and that the face portion 17 is of general arcuate crescent formation and merges at its upper marginal portions with the apertured face portion 11 and at its lower marginal portions with the relatively flat face portion.

Such face plate 10 and its inclined face portion 11 including the protruding formation 17, and also the peripheral portion 18 may be of any suitable material; if of plastic or the like, such parts may be formed by suitable molding procedure; if of metal, they may be produced by suitable stamping or other forming procedure.

Reference is now made to the duplex outlet,

designated generally 20, shown in Figs. 1 and 3 and in the exploded view Fig. 5, which last named figure indicates mounting the duplex outlet, as in a conventional outlet box. The electrical terminals are designated 21, 21, which are suitably insulatedly mounted and suitably electrically connected to the respective electrical contact elements 15. The set screw 22 may be employed to secure such duplex outlet assembly 20 in proper relation to the face plate 10, as by passing such set screw 22 through the hole 23 in the face portion 11.

Any suitable means may be employed for mounting the duplex outlet or other unit, as in a conventional outlet box. The mounting means indicated in Fig. 5 comprises the strap 24 cooperating with the ears 25, 25, of the outlet unit, as by means of set screws 26, 26, passing through the holes 24a of the strap 24 and the holes 25a of such ears. Fig. 5 shows also recesses 24b in the strap 24 for embracing the studs 25, which project rearwardly of the outlet unit 20.

It will be observed that the strap 24 has its body portion at an angle with respect to its end portions 24c, such angle corresponding to the angle to the vertical of the face portion 11 and corresponding angle to the normal. The slotted openings of these end portions 24c serve to attach the strap 24 and therewith the outlet unit 20 to suitable parts of a conventional outlet box or equivalent.

Fig. 6 shows a single outlet unit 30 as a component of the housing 31 of an electrical conduit system. Such systems frequently and preferably are formed of unit lengths assembled mechanically and electrically in seriatim. Its face plate, designated generally 10, may comprise the face portion 11 and protruding formation 17, similarly as described with reference to the embodiment shown in Figs. 1 and 3, that is to say, as an individual unit or may be molded or formed unitarily with the material of the front wall of the housing 31. As shown in Fig. 6, the apertured face of the outlet component of the conduit system may be tilted upwardly similarly as in Fig. 1.

The embodiment illustrated in Fig. 7 incorporates the outlet component 10 in an electrical conduit system similarly as shown in Fig. 6; however, in this arrangement the outlet component has been located to position its apertured face portion 11 to tilt downwardly. Such application of use is of advantage under conditions giving rise to moisture or water or other liquid which may be formed or applied in proximity of the outlet apertures. In such circumstances the projecting portion 17 serves to shed the flow of such liquid, and particularly, as shown, when the surface of such projecting portion 17 is of arcuate formation.

From the foregoing it is apparent that the invention is characterized by the apertured face portion of the receptacle or outlet being arranged at an angle to the normal, thereby presenting the apertured face slantingly with respect to the vertical in conventional arrangements wherein the housing of the receptacle or outlet component of an electrical conduit system extends substantially horizontally.

Combined with the aforesaid advantages is that of contrasting color or coating, and particularly of lighter shade and most desirably of or upon the face or face portion at or closely adjacent to the outlet or plug-blade-receiving apertures, whereby such contrasting and particularly lighter color demarkation serves to definitely locate such

5

apertures and enable definite orientation of the plug blades in facilitating entry of the same into the outlet apertures. The extent of such demarking color or coating at or about the outlet apertures may be as desired, which may be of limited area such as narrow bands surrounding the respective outlet apertures.

I claim:

1. An electrical receptacle comprising plate means including a relatively flat face portion arranged to be secured to a support, said plate means further including an apertured face portion merging at its upper margin with an upper portion of said first-named face portion and extending at an angle relative to said first-named face portion, said plate means further including an arcuate crescent-shaped face portion merging at its lower margin with said first-named face portion and at its upper margin with the outer margin of said second-named face portion; and electrical outlet means having its contact elements disposed in operative alignment with the apertures of said apertured face portion.

2. An electrical receptacle comprising plate means including a relatively flat face portion arranged to be secured to a support, said plate means further including an apertured relatively flat face portion merging at its upper margin with an upper portion of said first-named face portion and extending at an angle relative to said first-named face portion, said plate means further including a face portion merging at its lower margin with said first-named face portion and at its upper margin with the outer margin of said second-named face portion; and electrical outlet means having its contact elements disposed in operative alignment with the apertures of said apertured face portion.

6

3. An electrical receptacle comprising plate means including a relatively flat face portion arranged to be secured to a support, said plate means further including an apertured face portion merging at its upper margin with an upper portion of said first-named face portion and extending at an angle relative to said first-named face portion, said plate means further including a face portion merging at its lower margin with said first-named face portion and at its upper margin with the outer margin of said second-named face portion; electrical outlet means; and means for mounting said electrical outlet means to dispose its contact elements in alignment with the apertures of said apertured face portion, said mounting means including strap means having its body portion extending at an angle to its opposite end portions respectively.

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