Aug. 22, 1961 R. C. KINSMAN 2,997,520

WEATHERPROOF COVERING FOR AN OUTLET BOX

Filed Dec. 16, 1957 3 Sheets-Sheet 1

Fig. 1.

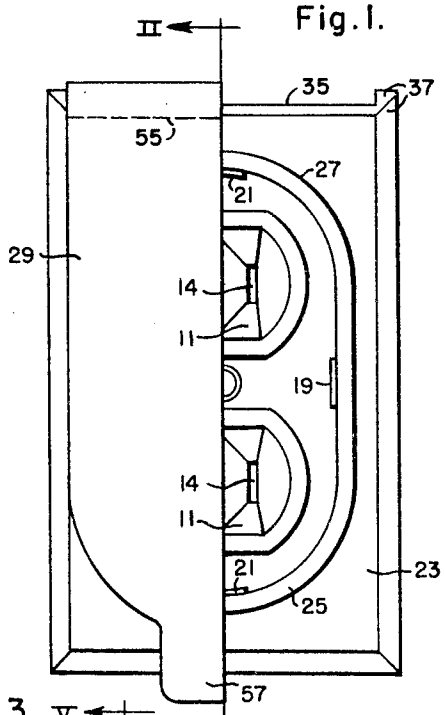


Fig. 2.

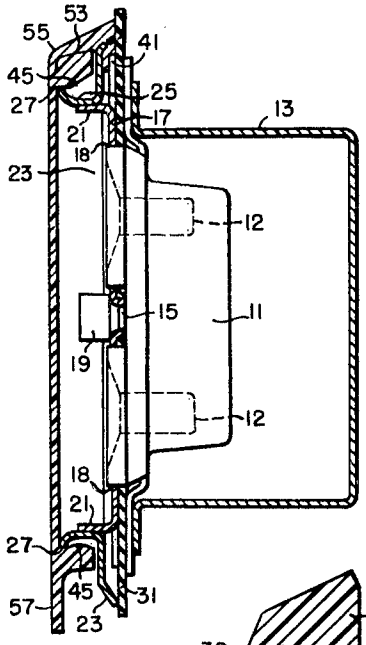


Fig. 3.

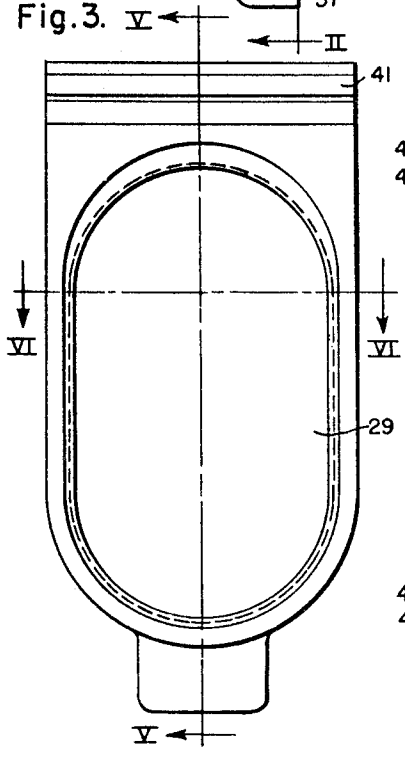


Fig. 5.

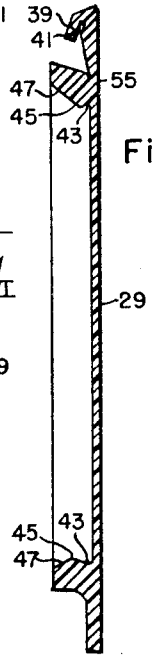


Fig. 4.

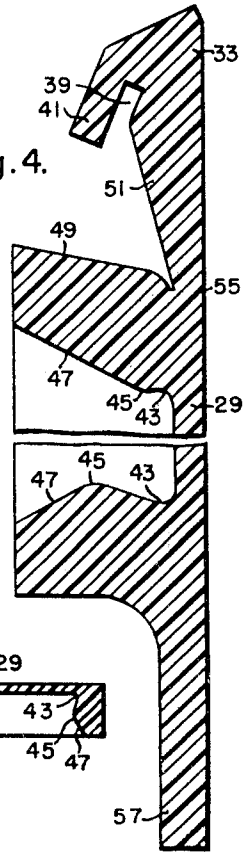
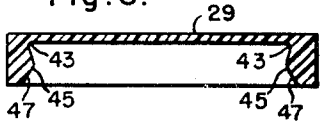


Fig. 6.



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WEATHERPROOF COVERING FOR AN OUTLET BOX

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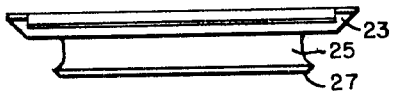


Fig.9.

Fig.10.

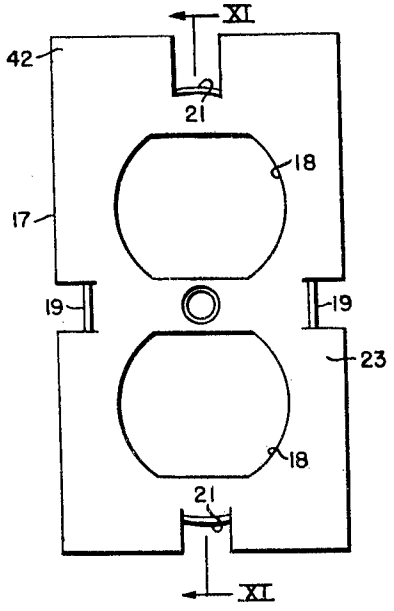


Fig.7.

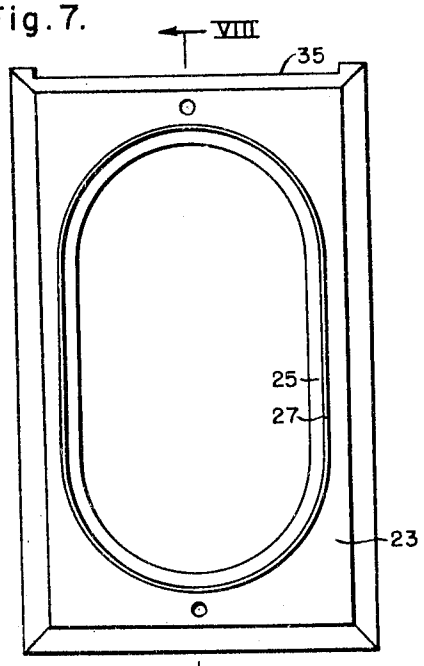




Fig.8.

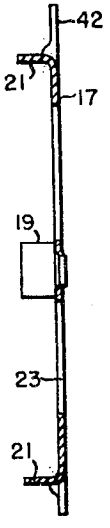


Fig.11.

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WEATHERPROOF COVERING FOR AN OUTLET BOX

Filed Dec. 16, 1957 3 Sheets-Sheet 3

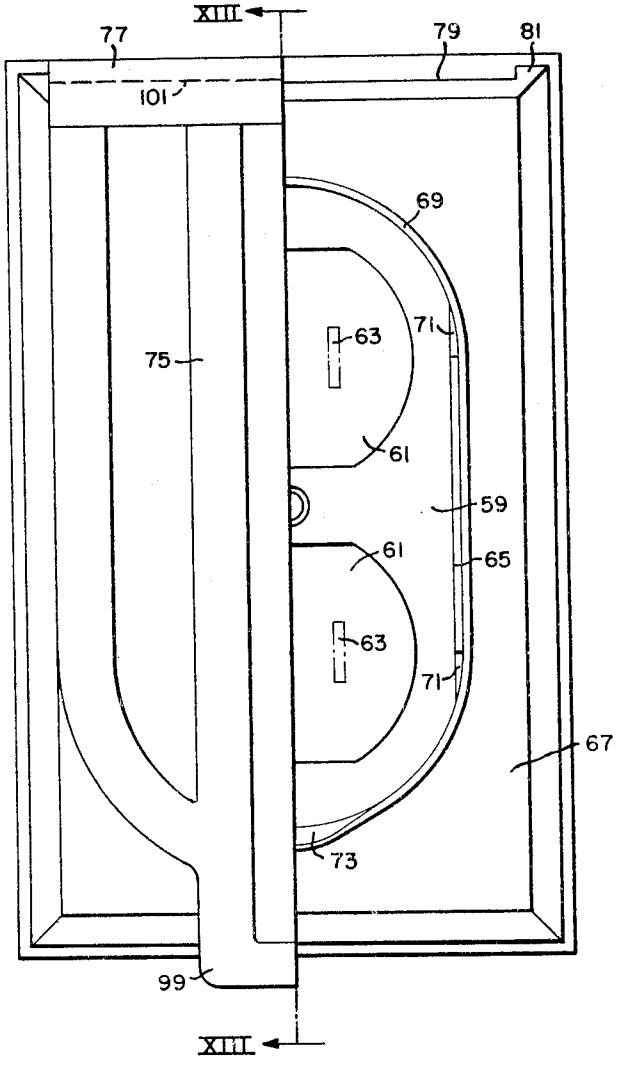


Fig. 12.

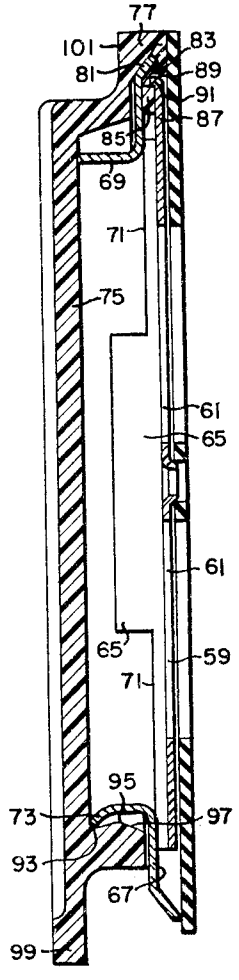


Fig. 13.

United States Patent Office 2,997,520 Patented Aug. 22, 1961

2,997,520 WEATHERPROOF COVERING FOR AN OUTLET BOX

Russell C. Kinsman, Bridgeport, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Filed Dec. 16, 1957, Ser. No. 703,130
6 Claims. (Cl. 174—67)

This invention relates to electrical apparatus and more particularly to weatherproof outlets.

An object of the invention is to provide a flexible cover for an electrical outlet receptacle.

Another object of the invention is to provide a flexible cover for an electrical outlet box having an integral hinge.

Another object of the invention is to provide a flexible cover for an electrical outlet box that is dustproof and weatherproof.

The invention both as to structure and operation, together with additional objects and advantages thereof, will be best understood from the following detailed description, when read in conjunction with the accompanying drawings.

In said drawings:

FIGURE 1 is a front elevational view of an outlet box having a receptacle mounted therein and showing the flexible weatherproof cover in place, the cover being shown partly broken away for clearness.

FIG. 2 is a central longitudinal sectional view taken on line II—II of FIG. 1.

FIG. 3 is a rear elevational view of the flexible cover.

FIG. 4 is an enlarged sectional view of the upper and lower portions of the flexible cover showing details of its construction.

FIG. 5 is a central sectional view taken lengthwise of the cover along the line V—V of FIG. 3.

FIG. 6 is an intermediate transverse sectional view of the cover taken along the line VI—VI of FIG. 3.

FIG. 7 is a front elevational view of the cover plate for retaining the flexible cover in place and for cooperating with the latter to hold it closed.

FIG. 8 is a longitudinal sectional view taken on line VIII—VIII of FIG. 7.

FIG. 9 is an elevation view of the upper end of the plate shown in FIG. 7.

FIG. 10 is a plan view of the back plate to which the cover plate shown in FIG. 7 is attached.

FIG. 11 is a longitudinal sectional view of the back plate taken on line XI—XI of FIG. 10.

FIG. 12 is a front elevational view showing a modification of the weatherproof cover of FIG. 1.

FIG. 13 is a longitudinal sectional view taken on line XIII—XIII of FIG. 12.

Referring to FIGS. 1 and 2 of the drawings, a receptacle **11** is mounted in and secured to an outlet box **13** in the usual manner. The receptacle **11** may be of any well-known type, such as those disclosed in the patents to Smith No. 2,773,248 or Littman No. 2,735,-080 assigned to the same assignee as this invention. Generally the receptacle **11** will include electrical contacts **12** mounted within the receptacle **11** to which access may be had by way of openings **14**, for example by contact prongs on an attachment plug (not shown). As illustrated, the receptacle **11** is of the duplex type having two spaced sets of contacts **12** and openings **14**. Mounted on the receptacle **11** by means of a center screw **15** is a back cover plate **17** shown in detail in FIGS. 10 and 11. The back plate **17** is provided with spaced apertures **18** for the receptacle to permit access to the contact openings **14**, and has four tags **19** and **21** at opposite sides and ends, respectively, struck out therefrom to which is

welded or otherwise suitably secured a plate **23** (FIGS. 1, 7, 8 and 9) having an integral flange **25** about a large oval shaped opening therethrough. The flange **25** has a flared portion **27** for receiving and retaining a flexible and resilient cover **29** in position to seal the receptacle from the weather and dust and the tabs **19** and **21** are welded to the inner side of the flange **25**. The cover may be made of a flexible and resilient material such as natural or synthetic rubber. A sealing gasket **31** (FIG. 2) is disposed between the back plate **17** and the outlet box **13** or mounting surface.

The upper end **33** of the cover is rectangular in shape and is formed to fit within a recessed portion **35** in the upper portion of a beveled flange **37** on the plate **23**. The upper end **33** of the cover **29** is provided with a notch **39** at its inner side which is passed over the bevel **37** in the recess **35** and an outer projection **41** is firmly clamped under pressure between the plate **23** and the adjacent end portion **42** of the back plate **17** to firmly hold the cover **29** in position along its upper end by the assembly of the back plate **17** to the plate **23**.

Referring to FIGS. 3, 4, 5 and 6, the cover **29** has molded on the inside thereof an undercut or channel **43** formed by a rib or ridge **45**, having an inner beveled side portion **47**, all of which extend from the upper end around the remainder of the inner periphery of the cover.

In the closed position of the cover **29** (FIG. 2) the undercut **43** fits snugly against the sides and lower end of the outer periphery of the flared portion **27** of the flange **25** on the plate **23**. Also in the closed position, a surface **49** (FIG. 4) on the cover engages a surface **51** also on the cover forming a sealing seam indicated at **53** in FIG. 2. When the cover is opened it hingedly flexes substantially along a line indicated at **55** (FIGS. 1 and 2).

In order to open the cover **29** it is only necessary to grasp a tab or extension **57** (FIGS. 1 and 2) and pull downwardly and outwardly. This distorts and stretches the flexible cover, in particular the ridge **45** to cause it to slip over the flare **27** of the flange **25** of the plate **17**. The cover is then moved to its open position by hinging or flexing along the line **55**. The cover is closed by pulling downwardly on the tab **57** and then pressing the cover into the position shown in FIG. 2.

According to the modification of the device shown in FIGS. 12 and 13, a back plate **59** is secured by means of a center screw (not shown) to a receptacle similar to that shown in FIG. 2. The back plate **59** is provided with spaced apertures **61** for the receptacle to permit access to the contact openings **63**. Opposite vertical edges of the plate **59** are formed outwardly to provide elongated portions **65** to which are welded a plate **67** having an integral flange **69** about a large oval-shaped opening therein. The portions **65** of the plate **59** are welded to the inside of the vertical portions of the flange **69**, and the plate **67** rests against out turned edges **71** at the sides of the plate **59**. The flange **69** extends generally at substantially right angles to the plate **67** except for a portion at the bottom thereof which is formed downwardly as at **73** to provide a latch for engaging and holding a flexible and resilient cover **75** in position to seal the receptacle from the weather and dust.

The upper end **77** of the cover **75** is rectangular in shape and is formed to fit within a recessed portion **79** in the upper portion of a beveled flange **81** on the plate **67**. The upper end **77** of the cover **75** is provided with a notch **83** at its inner side which is passed over the beveled flange **81** in the recess **79** and an inner projection **85** is firmly clamped between the plate **67** and the adjacent end portion **87** of the back plate **59**. The projection **85** of the cover has an opening **89** therein into which a formed over projection **91** on the upper end **87** of the

plate **59** extends to firmly hold the cover **75** in position along its upper edge by the assembly of the back plate **59** to the plate **67**.

The inside of the cover **75** adjacent the latch portion **73** of the plate **67** has an undercut portion **93** formed by a short rib or ridge **95** having an inner beveled portion **97**. In the closed position of the cover **75** the latch portion **73** of the plate **67** engages firmly in the undercut **93** and holds the cover closed with the flange **69** in contact with the inside of the cover.

In order to open the cover **75** it is only necessary to grasp a tab or extension **99** (FIGS. 12 and 13) and pull downwardly and outwardly. This distorts and stretches the flexible cover particularly the ridge **95** to cause it to slip over the latch portion **73** at the lower end of the flange **69**. The cover is then moved to its open position by hinging or flexing substantially along a line **101** at its upper end. The cover is closed by pulling downward on the tab **99** and then pressing the ridge **95** over the latch portion **73**.

It will be noted that the front and back plates of both modifications can be molded as a single piece and a small clamping plate provided to secure the cover thereto.

The invention provides a cover for an electrical outlet that is weatherproof and dustproof, of flexible, resilient molded material that is simple in construction, inexpensive to make and easy to operate.

While the invention has been disclosed in accordance with the provisions of the patent statutes, it is to be understood that various changes and modifications may be made in the structural details without departing from the spirit of the invention.

I claim as my invention:

1. In a weatherproof electrical apparatus including an outlet box having a wiring device mounted therein, the combination of an elongated apertured back plate secured to said wiring device, an elongated front plate being affixed to said back plate and having an access opening aligned with an aperture in said back plate and surrounded by an outwardly extended and flanged portion of said front plate, an elongated cover of a molded flexible material having an edge portion fixedly clamped between and against portions of said plates, said plate portions being spaced along the solid planes of said plates from said front plate flanged portion, said cover edge portion being limited in perimetrical extent relative to the perimeter of said access opening, said cover including an inwardly facing recess and a rib extending into said recess for receiving said front plate flanged portion so as to hold securely said cover in a closed position and substantially to seal resiliently said access opening from the exterior.

2. In a weatherproof electrical apparatus including an outlet box having a wiring device mounted therein, the combination of an elongated apertured back plate secured to said wiring device, an elongated front plate being affixed to said back plate and having an access opening aligned with an aperture in said back plate and surrounded by an outwardly extended and flanged portion of said front plate, an elongated cover of a molded resilient material having an edge portion fixedly clamped between and against portions of said plates, said plate portions being spaced along the solid planes of said plates from said front plate flanged portion, said cover edge portion being limited in perimetrical extent relative to the perimeter of said access opening, a section of said cover edge portion enabling resilient pivotal movement of said cover about said cover edge portion, and said cover including an inwardly facing recess and a rib extending into said recess for receiving said front plate flanged portion so as to hold securely said cover in a closed position and substantially to seal resiliently said access opening from the exterior.

3. In a weatherproof electrical apparatus including an outlet box having a wiring device mounted therein, the combination of an elongated apertured back plate secured to said wiring device, an elongated front plate being affixed to said back plate and having an access opening aligned with an aperture in said back plate and surrounded by an outwardly extended and flanged portion of said front plate, an elongated cover of a molded flexible material having an edge portion fixedly clamped between and against portions of said plates, said plate portions being spaced along the solid plane of said plates from said front plate flange portion, said cover edge portion being limited in perimetrical extent relative to the perimeter of said access opening, a section of said cover edge portion enabling resilient pivotal movement of said cover about said cover edge portion, said cover including an inwardly facing recess and a rib extending into said recess for receiving said front plate flanged portion so as to hold securely said cover in a closed position and substantially to seal resiliently said access opening from the exterior, and an integral tab on the other end of said cover for manually opening said cover.

4. In a weatherproof electrical apparatus including an outlet box and a wiring device mounted therein, the combination of an elongated apertured back plate secured to said wiring device and having forwardly extending portions thereon, an elongated front plate having an access opening aligned with an aperture in said back plate and surrounded by an outwardly extended and flanged portion of said front plate, said front plate being rigidly secured to said forwardly extending portions of said back plate, an elongated cover of a molded flexible material having an edge portion fixedly clamped between and against adjacent portions of said plates, said plate portions being spaced along the solid plane of said plates from said front plate flanged portion, said cover edge portion being limited in perimetrical extent relative to the perimeter of said access opening, said cover including an inwardly facing recess and a rib extending into said recess for receiving said front plate flanged portion so as to hold securely said cover in a closed position and substantially to seal resiliently said access opening from the exterior, and an integral tab on the other end of said cover by which said cover can be flexed to free it from said front plate flanged portion.

5. In a weatherproof electrical apparatus including an outlet box and a wiring device mounted therein, the combination of an elongated apertured back plate secured to said wiring device and having forwardly extending portions thereon, a sealing gasket disposed between said outlet box and said apertured back plate, an elongated front plate having an access opening aligned with an aperture in said back plate and surrounded by a flanged portion of said front plate, said front plate being rigidly secured to said forwardly extending portions of said back plate, an elongated cover of a molded flexible material having an edge portion fixedly clamped between and against adjacent portions of said plates, said plate portions being spaced along the solid plane of said plates from said front plate flanged portion, said cover edge portion being limited in perimetrical extent relative to the perimeter of said access opening, said cover including an inwardly facing recess and a rib extending into said recess for receiving said flanged portion of said front plate so as to hold securely said cover in a closed position and substantially to seal resiliently said access opening from the exterior, an extension on the other end of said cover by which said cover can be flexed to free it from said front plate flanged portion, and a section of said cover edge portion enabling pivotal movement of said cover about said cover edge portion so as to permit said cover to be opened.

6. In a weatherproof electrical apparatus including an outlet box having a wiring device mounted therein, the

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if said plates being secured to said wiring device, said
ront plate being affixed to said back plate and having an
ıccess opening surrounded by an outwardly extended and
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)late portions being spaced along the solid planes of said
)lates from said front plate flanged portion, said cover in-
:luding means for receiving said front plate flanged por-
ion so as to hold securely said cover in a closed position
ınd substantially to seal resiliently said access opening
from the exterior.

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