Jan. 16, 1951 M. B. AUSTIN, JR 2,538,614

ELECTRIC-CABLE FITTING

Filed Sept. 29, 1949

Fig. 1

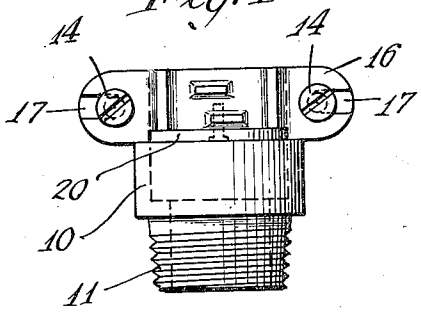


Fig. 7

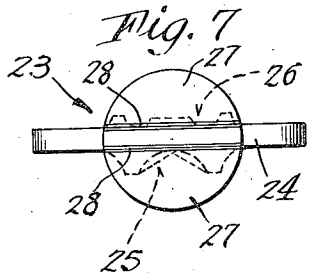


Fig. 2

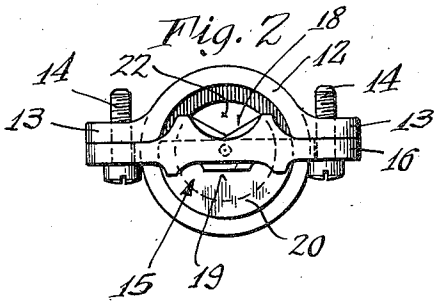


Fig. 8

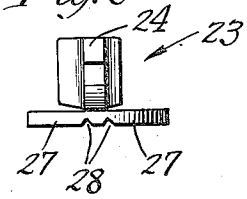


Fig. 3

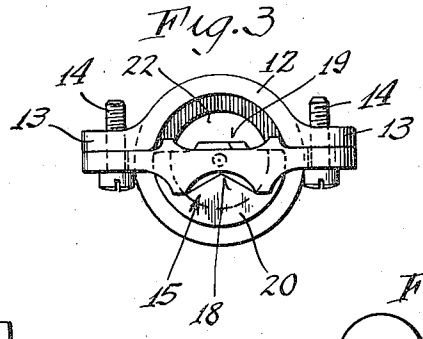


Fig. 4

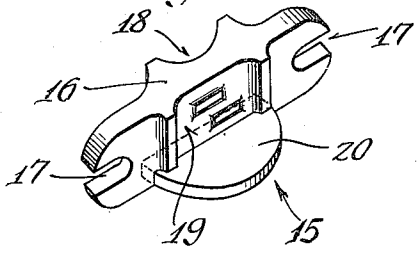


Fig. 5

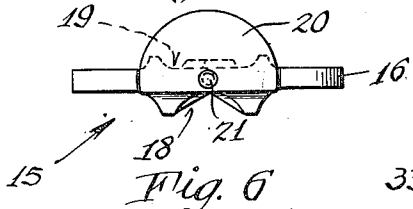


Fig. 6

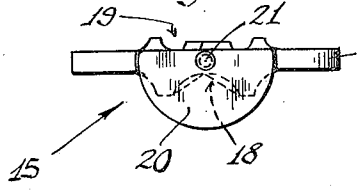


Fig. 9

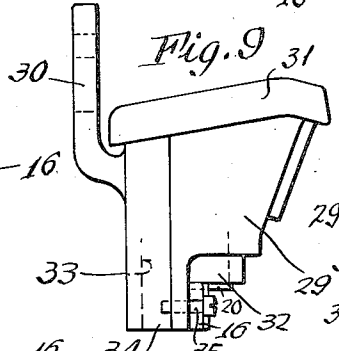
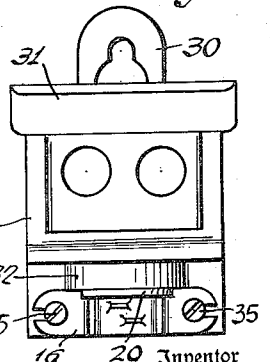


Fig. 10



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ELECTRIC-CABLE FITTING

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6 Claims. (Cl. 285—6.5)

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This invention relates to electric-cable fittings for use with outlet boxes, junction boxes, entrance heads and the like.

An object of the invention is to provide an improved and simplified electric-cable fitting for outlet boxes, junction boxes, entrance heads and the like, which fitting is adapted to clamp cables of different sizes in both large and small categories by virtue of reversibility of a clamping strip, the said fitting having simple and advantageous, novel means adapted to be easily arranged by a user for fully closing the unused part of the opening or hole for the cable adjacent the clamping strip, regardless of the clamping position of the strip.

Another object of the invention is to provide an improved electrical connector as set forth above, which is simple and economical to fabricate while at the same time being easy to operate and reliable in use.

Heretofore a number of different cable clamping means have been employed in electric-cable fittings, as for example wedging or binding screws, bendable strips having apertured lugs or ears for receiving a clamping screw, and cooperable jaws one of which was in the form of a clamping strip carrying screws at its ends while the other was in the form of a recessed portion or seat made integral with a connector sleeve or casing part. These prior fittings have been limited as to the size of cables which they were able to accommodate; moreover they presented a problem in that the unused part of the opening for the cable would be left exposed and not properly closed over, thereby enabling access to the interior of the casing, box or housing to be had.

According to the present invention I overcome the objections and disadvantages of these prior devices by the provision of a novel, improved clamping or jaw-type fitting for boxes, casings, entrance heads etc. having a clamping strip provided with both large and small seat portions, respectively disposed on its opposite sides. The clamping strip is mounted for reversibility so that either one seat or the other may be presented to the opposite seat portion of the fitting. Intermediate the ends of the clamping strip I provide simple, advantageous means for closing the unused part of the opening for the cable, which remains when the strip is mounted in clamping relation, with either of its seats opposite to the seat portion of the fitting.

In one embodiment of my invention, illustrated herein, this closure means comprises a semicircular plate pivoted to the clamping strip and

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adapted to be swung to either of opposite positions whereby it may act as a closure regardless of how the clamping strip is mounted when in clamping position. In another illustrated embodiment of the invention there are integral tabs or ears, which are joined to the clamping strip along lines of weakness whereby either tab may be readily broken away from the strip. Thus either one tab or the other may be left remaining, depending on which position the clamping strip is mounted in, to block off the unused part of the cable opening.

In each case the proper positioning of the closure to accomplish this purpose is chosen by the user, after determination of the position the strip is to be used in to enable it to clamp either large or small cables.

Other features and advantages will hereinafter appear.

In the accompanying drawings:

Figure 1 is a top or plan view of the improved cable-clamping fitting of the present invention, embodied in a connector.

Fig. 2 is an outer end view of the connector of Fig. 1, with the clamping strip shown in position to accommodate a relatively small cable, the unused part of the sleeve opening being blocked off by the closure means of the invention.

Fig. 3 is a view like Fig. 2 but showing the clamping strip in position to fasten a large cable, the unused part of the sleeve opening being again blocked off.

Fig. 4 is a perspective view of the reversible clamping and closure means of the fitting.

Fig. 5 is a side view of the clamping and closure means of Fig. 4, with the closure plate disposed in one position.

Fig. 6 is a view like Fig. 5, but with the closure plate disposed in its other position.

Fig. 7 is a side view of a modified form of clamping and closure means.

Fig. 8 is an end view of the clamping and closure means of Fig. 7.

Fig. 9 is a side elevational view of an entrance head having the clamping and closure means of the invention, and

Fig. 10 is a front elevational view of the entrance head of Fig. 9.

Referring to Figs. 1 and 2, the connector embodying the improved cable clamp and closure means of this invention comprises a sleeve 10 having a threaded end 11 adapted to be inserted in the hole of an outlet box or the like (not shown), the sleeve having at its other or outer end a semi-cylindrical seat portion 12 provided

with ears 13 threaded to receive clamping screws 14.

In accordance with the invention an improved clamping and closure means 15 is provided, for securement to the seat portion 13 of the sleeve 10 to clamp a cable passing through the sleeve 10. The clamping and closure means 15 is shown per se in Figs. 4, 5 and 6 and comprises an elongate body or bar 16 having slots 17 at its ends for receiving the clamping screws 14. Intermediate its ends the body 16 on one side has a seat 18 adapted to accommodate relatively small diameter cables, and on its opposite side has a second seat 19 adapted to accommodate larger diameter cables.

I provide a semicircular closure plate 20 as shown in Figs. 1 through 6, which is pivotally secured to the bar 16 at a point intermediate its ends by a pivot pin 21, the plate 20 being so arranged that it may be swung to one position, shown in Fig. 5, wherein it blocks off the space alongside the large seat 19, or to another position shown in Fig. 6, wherein it blocks off the space alongside the small seat 18.

These positions are also respectively shown in Figs. 2 and 3, wherein the clamping strip 16 is mounted in reverse positions on the seat portion 12 of the connector sleeve 10. In Fig. 2, a cable (not shown) passing through the space 22 will be clamped and held secure by the clamping strip 16; in Fig. 3 a larger cable passing through space 22 will be clamped and held secure by the clamping strip.

In each case the closure plate 20 may be swung to a position, as shown in Figs. 2 and 3, wherein it blocks off or closes the unused part of the opening in the sleeve 10.

A modification of the invention is shown in Figs. 7 and 8, wherein there is illustrated a clamping and closure means 23 in the form of a strip 24 having a small seat 25 to accommodate small cables and a large seat 26 to accommodate large cables.

The strip 24 is provided with a pair of semicircular tabs or ears 27, preferably formed integral with the strip and joined thereto along lines of weakness 28 whereby either tab may be readily broken away from the strip. Thus at the choice of a user, one or the other of the tabs 27 may be easily removed from the strip, allowing the other tab to remain to close over the unused part of the opening in the connector sleeve 10. The tab 27 which is removed is chosen in accordance with whether the small seat 25 or the large seat 26 is to be used to clamp the cable passing through the connector sleeve.

Another embodiment of the invention is shown in Figs. 9 and 10 wherein the present improved clamping and closure means is used with an entrance-head type of electric fitting.

This entrance-head type of fitting comprises a housing 29 having an upstanding arm 30 at its rear, apertured to receive a mounting screw whereby the fitting may be secured to a supporting wall surface. The housing 29 includes a removable cap 31, and at its bottom has a sleeve portion 32 provided with an opening 33 through which an electric cable may pass. Below the sleeve portion 32 the housing has a depending extension 34 constituting a seat portion, having threaded apertures for carrying clamping screws 35.

The improved clamping and closure means 15 of the invention is mounted on the seat portion 34 of the housing by means of the screws 35, and

the clamping strip 16 may obviously be reversibly positioned with respect to said seat portion in the manner clearly described above in connection with Figs. 1 through 6, whereby the closure plate 20 may be disposed to cover the unused part of the opening in the sleeve portion 32.

Obviously the clamping and closure means 23 shown in Figs. 7 and 8 may also be used in the entrance head of Figs. 9 and 10, in place of the means 15.

In both of the embodiments of the invention described above, the combined clamping and closure means is extremely simple and economical to fabricate, and may be quickly and conveniently operated by the user to effect a secure clamping of a cable passing to an outlet box or entrance head or the like and at the same time close the opening which remains after the clamping has been effected.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A fitting for electric cables, comprising a structure having a cable opening in it and a partially tubular seat portion for receiving a cable; a relatively rigid clamping strip and means mounting the strip over the seat portion of the structure and across the cable opening to form two smaller openings thereby, said mounting providing for reverse positioning of the strip to reverse its sides and said strip having two different seats on two opposites of said sides respectively, the said seats being sized and shaped to each accommodate a different diameter cable and being so disposed intermediate the ends of the strip that one seat or the other faces the seat portion of the structure to clamp a cable passing through one of said smaller openings; and means carried by said strip intermediate its ends for closing the other of said openings when the strip is mounted to present either of its seats opposite the seat portion of the structure.

2. As a new article of manufacture, a combined clamp and closure means for use with an electric-cable fitting provided with a cable opening, comprising a relatively rigid clamping strip for positioning across said opening, said strip having two different seats on two of its opposite sides respectively, the said seats being sized and shaped to each accommodate a different-diameter cable and being disposed intermediate the ends of the strip; and means carried by said strip intermediate its ends and adapted to be selectively arranged by a user, for obstructing a space at one side or the other of the strip adjacent the seats thereof and clearing an opposite space at the remaining side of the strip according to the choice of the user, so that the strip may be installed across the said opening in either of two reversed clamping positions to present either seat for engagement with a cable passing through said opening to cause the unused part of the opening to be closed by said obstructing means.

3. As a new article of manufacture, a combined clamp and closure means for use with an electric-cable fitting provided with a cable opening, comprising a relatively rigid clamping strip for positioning across said opening, said strip having two different seats on two of its opposite sides respectively, the said seats being sized and shaped to each accommodate a different-diameter cable and being disposed intermediate the ends of the strip; and means comprising a pivoted tab carried by said strip intermediate its ends and adapt-

ed to be selectively arranged by a user, for obstructing a space at one side or the other of the strip adjacent the seats thereof and clearing an opposite space at the remaining side of the strip according to the choice of the user, so that the strip may be installed across the said opening in either of two reversed clamping positions to present either seat for engagement with a cable passing through said opening to cause the unused part of the opening to be closed by said obstructing means.

4. As a new article of manufacture, a combined clamp and closure means for use with an electric-cable fitting provided with a cable opening, comprising a relatively rigid clamping strip for positioning across said opening, said strip having two different seats on two of its opposite sides respectively, the said seats being sized and shaped to each accommodate a different-diameter cable and being disposed intermediate the ends of the strip; and means comprising a pair of oppositely-extended, fracturably mounted tabs carried by said strip intermediate its ends and adapted to be selectively arranged by a user, for obstructing a space at one side or the other of the strip adjacent the seats thereof and clearing an opposite space at the remaining side of the strip according to the choice of the user, so that the strip may be installed across the said opening in either of two reversed clamping positions to present either seat for engagement with a cable passing through said opening to cause the unused part of the opening to be closed by said obstructing means.

5. A fitting for electric cables, comprising a structure having a cable opening in it and a partially tubular seat portion for receiving a cable; a relatively rigid clamping strip and means mounting the strip over the seat portion of the structure and across the cable opening to form two smaller openings thereby, said mounting providing for reverse positioning of the strip to reverse its sides and said strip having two different seats on two opposites of said sides respectively,

the said seats being sized and shaped to each accommodate a different diameter cable and being so disposed intermediate the ends of the strip that one seat or the other faces the seat portion of the structure to clamp a cable passing through one of said smaller openings; and means comprising a plate pivotally carried by said strip intermediate its ends and swingable to either of two opposite positions for closing the other of said openings when the strip is mounted to present either of its seats opposite the seat portion of the structure.

6. A fitting for electric cables, comprising a structure having a cable opening in it and a partially tubular seat portion for receiving a cable; a relatively rigid clamping strip and means mounting the strip over the seat portion of the structure and across the cable opening to form two smaller openings thereby, said mounting providing for reverse positioning of the strip to reverse its sides and said strip having two different seats on two opposites of said sides respectively, the said seats being sized and shaped to each accommodate a different diameter cable and being so disposed intermediate the ends of the strip that one seat or the other faces the seat portion of the structure to clamp a cable passing through one of said smaller openings; and means carried by said strip intermediate its ends and comprising oppositely extended tabs integral with and joined to the strip along lines of weakness and breakable from the strip for closing the other of said openings when the strip is mounted to present either of its seats opposite the seat portion of the structure.

MERRITT BARTLETT AUSTIN, JR.

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