Dec. 3, 1935. J. KNELL 2,023,083

OUTLET BOX AND HANGER BAR

Filed Oct. 27, 1930

FIG. 1.

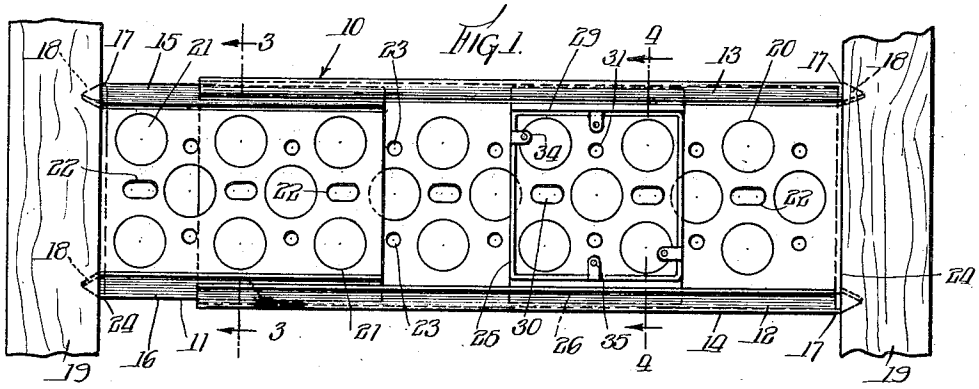


FIG. 2.

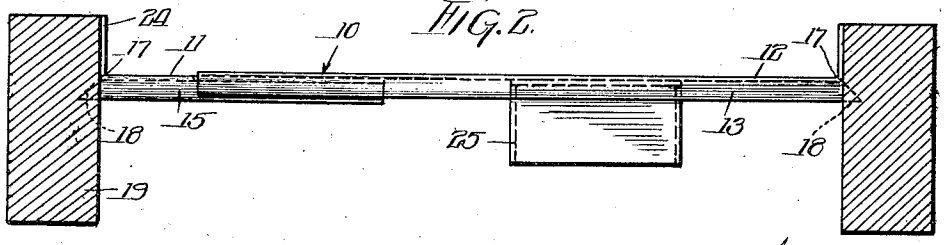


FIG. 3.

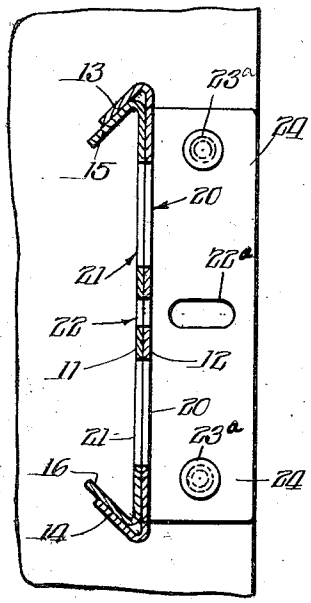


FIG. 4.

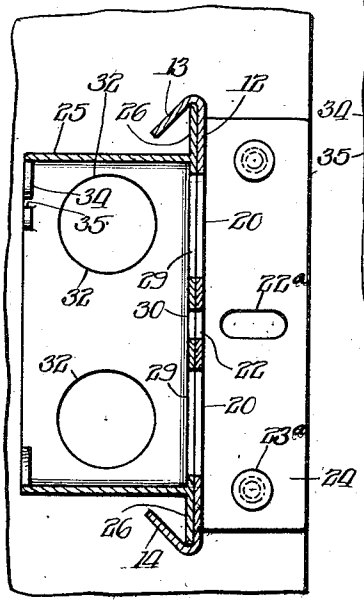


FIG. 5.

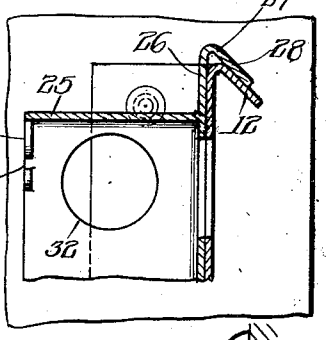


FIG. 6.

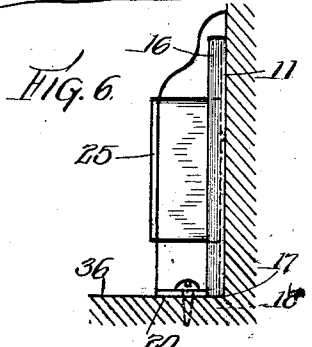
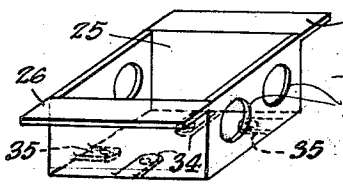


FIG. 7.



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OUTLET BOX AND HANGER BAR

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Application October 27, 1930, Serial No. 491,443

9 Claims. (Cl. 247—22)

This invention relates to outlet boxes and hanger bars and particularly to hanger bars having means for receiving or holding an outlet box.

The primary object of the invention is to provide an improved telescoping hanger bar provided with means whereby an outlet box may be connected to the hanger bar.

Other important objects are to provide a two-piece hanger bar, one of which telescopes with the other and which is provided with novel means whereby the hanger bar may engage a rafter or a stud for temporarily holding it in place, the provision of means for permanently securing the two pieces of the hanger bar to a support, the provision of interfitting complementary means whereby the outlet box may be made to slidingly engage the hanger bar, the provision of means whereby a part of the hanger bar may be adapted for various uses and purposes, and the provision of a hanger bar which has sufficient width to permit the placing of holes therein to correspond with the holes in the back of the outlet box, whereby the conduit connections and the mounting of the box may be easily made.

The invention comprises in general, a two-piece hanger bar, one of which slidingly engages the other. One part of the bar is provided with a turned over flange to provide a guideway or slide for the other part of the hanger. The outer end of each of the pieces is bent over to provide a ledge whereby the various pieces of the hanger may be fastened in place such as to a rafter, stud, or other like member. The turned flange at the end of each piece is cut away at a point where the ledge is bent over from the body of the hanger and is provided with a sharp pointed surfaces whereby the hanger may be jabbed into a member and be temporarily self-supporting. Fastening means such as nails, screws, and the like, extend through holes provided in the ledges for permanently holding the hanger in position. Each member of the adjustable hanger bar is provided with a plurality of knockouts or holes through which a conduit may extend for making the connection to the outlet box. A plurality of apertures or other openings are also provided in each member of the adjustable hanger bar for permanently fastening the hanger bar in position on a flat surface. An outlet box is provided with knockouts or holes therein to coincide with the holes in the hanger bar so that the conduit may extend directly through the hanger bar and into the outlet box, the hanger bar being of a width equal to or larger than the size of the outlet box so that the holes or knockouts in the outlet box will coincide with the knockouts or holes in the hanger. Other apertures are also provided in the outlet box which correspond with the apertures in the hanger bar to receive fastening means for fastening both of the members in position. The outlet box is provided with means for slidingly engaging the hanger bar and this means may either constitute a flange which slides within the hanger bar or it may constitute an overhanging edge which slidingly embraces the outside of the hanger bar. One part of the hanger bar is made to fulfill numerous purposes to cooperate with the other part of the hanger bar or to be used by itself as an independent member.

The accompanying drawing illustrates a selected embodiment of the invention and the views therein are as follows:

Figure 1 is a detail top, plan view of the improved hanger bar and outlet box showing the same arranged between rafters or studding.

Figure 2 is a detail elevation of the device shown in Figure 1.

Figure 3 is a detail sectional view on the line 3—3 of Figure 1.

Figure 4 is a similar view on the line 4—4 of Figure 1.

Figure 5 is a detail sectional view showing the outlet box engageable with the hanger bar, in a modified form.

Figure 6 is a detail elevation showing a separate and independent use for one part of the adjustable hanger bar.

Fig. 7 is a detail perspective view of a bottomless outlet box which is adapted to be used in connection with the invention.

Referring to the drawing, 10 designates a hanger bar generally comprising a pair of members 11 and 12. The member 12 is provided with inturned flanges 13 and 14 which receive the inturned flanges 15 and 16 on the member 11. The flanges 13 to 16 inclusive are preferably discontinued at 17 and have a sharp pointed protruding portion 18 which is adapted to be pressed into wooden members 19 such as studdings, rafters, or the like.

The member 12 is provided with a plurality of knockouts or holes 20 through which the electric conduit may extend. These knockouts or holes are adapted to coincide with other knockouts or holes 21 provided in the member 11. The two members are telescopically arranged one with reference to the other so that the length of the hanger bar can be adjusted to suit various needs and purposes. Each member of the hanger bar

may also be provided with elongated slots 22 for receiving fastening means such as nails, screws, or the like. The elongation of these holes permits slidable movement of each of the members relative to the fastening means, and apertures 23 may also be provided in each of the members to receive fastening means for fixedly securing both members of the hanger bar in position. The elongated slots 22 and the apertures 23 are provided in each member so that they may coincide with each other as the parts are slid inwardly or outwardly.

Each member is also provided with a ledge 24 also having elongated slots 22a and apertures 23a for receiving fastening means to fasten the hanger bar in position.

An outlet box 25 is adapted to cooperate with the hanger bar and may be provided with an extension 26 which fits within the turned flanges 13 and 14 as shown in Figure 4. The extension 26 may be elongated and bent over at 27 to provide the flange 28 to engage the outside of the flanges 13 and 14 as clearly shown in Figure 5. This outlet box may be of the usual standard size and is provided with knockouts or holes 29 to coincide with the knockouts or holes in the hanger bar, the hanger bar being made sufficiently wide to accommodate this standard outlet box. Elongated slots 30 and apertures 31 may also be provided in the bottom of the outlet box and positioned to coincide with the elongated slots 22 and the aptrtures 23 in the hanger bar. Instead of providing the knockouts or holes in the bottom of the box as shown, the entire bottom inwardly of the extensions 26 may be entirely omitted, as shown in Fig. 7. The outlet box 25 is also provided with side knockouts or holes 32 as shown in Figures 4 and 5.

Inturned integrally extending lugs 34 (Figures 1 and 4), having holes 35 are provided at the top of the outlet box for receiving fastening means to fasten a plate or cap to the top of the outlet box.

A part of a hanger bar, particularly the member 11 thereof, the member 11 preferably being shorter than the member 12, may be fastened to a floor or other base 36, Figure 6, the main body portion of the member 11 being placed flush against the wall or other member. In the latter embodiment the outlet box 25 is slidingly positioned in the member 11 and maintained in fixed position by fastening means passing through the slots or apertures in the outlet box and the member 11. In the embodiment shown in Figure 6, the member 11 provides convenient means for providing outlets in the floor baseboard.

The invention provides a hanger bar which is made up of a pair of complementary members, one sliding within the other. The hanger bar is extensible and is made in such proportions as to be received within or about rafters or studding which are generally spaced from sixteen inches to twenty inches on centers. The points at the ends of the flanges provide convenient means for temporarily supporting a hanger bar in position until the electrician or other person installing the box obtains the fastening means for fixedly securing the hanger in place. In other words, the points temporarily hold the hanger bar in position until the operator can reach for a nail or a screw to permanently fasten the hanger bar. The hanger bar is of a width great enough to accommodate the usual standard outlet box, the outlet box being preferably provided with means for having sliding engagement with the hanger bar.

Changes may be made in the form, construction and arrangement of the parts without departing from the spirit of the invention or sacrificing any of its advantages, and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

The invention is hereby claimed as follows:

1. An extensible hanger bar comprising a pair of members, one of said members being provided with integral turned flanges to provide means for slidingly supporting the other member, ledges turned from each member to provide means for fastening the bar to a support, sharp pointed projections extending from the ends of said flanges, and an outlet box slidingly engaging one of said members, said members and said box being provided with knockouts or holes adapted to come into alinement during sliding movement thereof.

2. In combination an extensible hanger bar comprising a pair of members, one of said members being provided with flanges for slidingly supporting the other member, and an outlet box having means engageable with the flanges on one of said members, both of said members and said box being provided with knockouts and holes which are adapted to be brought into registration upon sliding movement of one member or box.

3. An extensible hanger bar comprising telescoping members, turned flanges on each of said members, the turned flanges of one member lying within the turned flanges of another member to permit telescopic movement between said two members, an outlet box for said hanger bar, and flanges on said outlet box and adapted for complementary engagement with the turned flanges on a said member to permit slidable movement of the outlet box relative to the hanger bar, said members and box being provided with conduit receiving means whereby the conduit receiving means in the box may be brought into alinement with the conduit receiving means on a member by slidable movement of the box.

4. In a combination a hanger bar comprising a pair of plates, the plates having flanged side edges forming guideways, the flanged side edges of one plate receiving the flanged side edges of another plate whereby one plate telescopes with another plate and is slidably mounted in respect thereto, an outlet box, and extensions on the outlet box fitting into the guideways of one of said plates whereby the outlet box is slidably mounted in respect to the plates.

5. A hanger bar comprising a pair of plates, the plates having flanged side edges, the flanged side edges of one plate receiving the flanged side edges of another plate whereby one plate telescopes with another plate and is slidably mounted in respect thereto, an outlet box carried by said hanger bar, said outlet box having extensions thereon interfitting with the flanges of one of said plates whereby the outlet box is slidably mounted in respect to the hanger bar, and knockout openings in a plate and the box and adapted to be brought into registration whereby a conduit may be inserted through the alined openings.

6. An extensible hanger bar comprising a pair of telescoping members, an outlet box slidably mounted on the hanger bar, said hanger bar and outlet box having knock-out openings provided therein which are adapted to be brought into

alinement whereby a conduit may be inserted through alined knock-out openings.

7. In a combination a hanger bar comprising a pair of telescoping members, each telescoping member having spaced apart legs interfitting and slidingly engaging each other and forming guideways, an outlet box, and extensions on the outlet box fitting into the guideways of one of the plates and having slidable connection therewith, whereby the outlet box may be freely slid on the hanger bar at any position intermediate the ends of the hanger bar.

8. A hanger bar comprising a pair of telescoping members, each telescoping member having spaced apart legs interfitting and slidingly engaging each other, an outlet box, means on the outlet box and having slidable interfitting engagement with the hanger bar, whereby the outlet box may be freely slid on the hanger bar at any position intermediate the ends of the hanger bar, said hanger bar and outlet box having knock-outs provided therein adapted to be brought into alinement whereby alined openings for the reception of a cable are provided through the hanger bar and outlet box.

9. In combination an extensible hanger bar comprising a pair of members, one of said members being provided with flanges for slidingly supporting the other member, a pair of pointed projections on the free end of each member whereby the hanger bar may be attached to supports by a sliding extensible movement of the said members, an outlet box, and projections on the outlet box interfitting the said flanges for sliding movement thereon.

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