May 25, 1965 A. I. APPLETON 3,185,418

HANGER FOR PIPE AND CONDUIT

Filed Nov. 24, 1961

Fig. 1

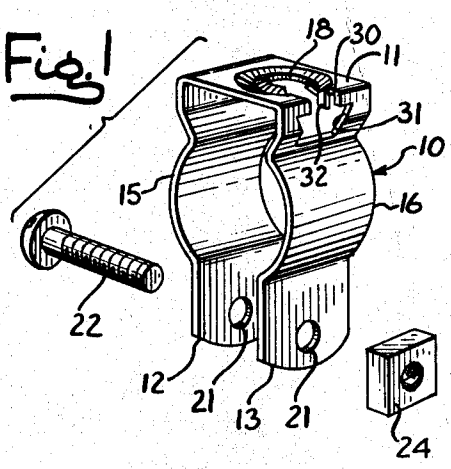



Fig. 2

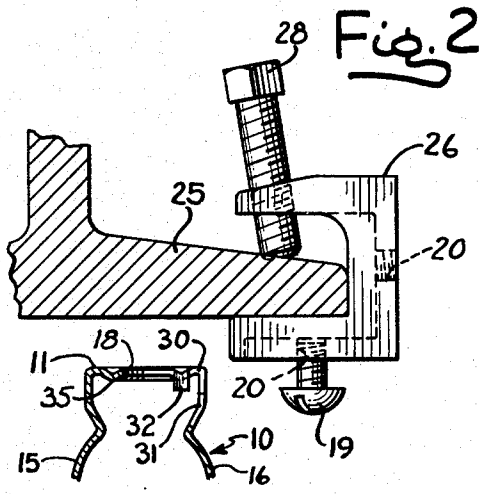



Fig. 3

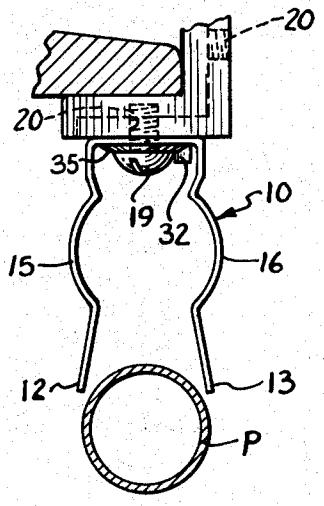



Fig. 4

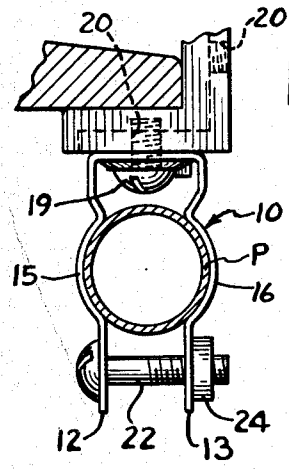
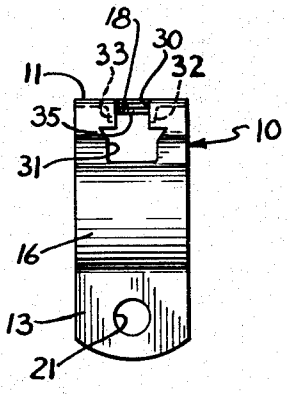



Fig. 5




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# HANGER FOR PIPE AND CONDUIT

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The present invention relates to devices for attaching pipe, conduit, tubing and the like to fixed supports such as overhead beams or other structural members. The invention finds particular, but not necessarily exclusive, utility as a hanger for both thin wall and heavy wall electrical conduit.

One object of the present invention is to provide an improved hanger for pipe, conduit or tubing capable of being conveniently and quickly applied to a support member having a hanger mounting screw previously mounted thereon and in position for immediate tightening.

Another object of the present invention is to provide an improved hanger of the foregoing type which, when engaged with the support is retained in place and is held against accidental release until it is tightly fastened to the support.

A further object of the present invention is to provide an improved hanger for pipe, conduit or tubing, of the character set forth and fabricated of light, inexpensive material capable of being mass produced on an economical basis.

Other objects and advantages of the present invention will become apparent as the following description proceeds taken in connection with the accompanying drawing wherein:

FIGURE 1 is a perspective view of an improved pipe or conduit hanger illustratively embodying the present invention.

FIG. 2 is a fragmentary elevation view of the hanger shown in FIG. 1 as it is being mounted in place on a support.

FIG. 3 is a view similar to FIG. 2 but showing the hanger fixed to the support and in position for receiving a pipe or conduit.

FIG. 4 is a view similar to FIG. 3 but showing the pipe or conduit clamped in place.

FIG. 5 is a front elevation view of the hanger shown in FIG. 1.

While the invention is susceptible of various modifications and alternative constructions, a certain illustrative embodiment has been shown in the drawing and will be described below in considerable detail. It should be understood, however, that there is no intention to limit the invention to the specific form disclosed, but on the contrary, the intention is to cover all modifications, alternative constructions, equivalents and uses falling within the spirit and scope of the invention as expressed in the appended claims.

Referring more specifically to the drawing, the invention is there exemplified in an illustrative hanger **10** adapted in the present instance to secure a section P of pipe, conduit tubing or the like to a rigid support. In general, the hanger is fabricated as a relatively light but strong sheet metal stamping which comprises a generally U-shaped strap formed by a web **11** having a pair of spaced legs **12, 13** depending from opposite edges thereof. The legs **12, 13** are formed intermediate their ends with bowed portions **15, 16**, these portions being convex outwardly so that the concave portions of the legs face each other for receiving a pipe or conduit P as shown in FIG. 4. The web is provided with an aperture **18** for receiving a mounting screw **19** which is threaded into a tapped hole **20** in the support for fastening the hanger to the support. For clamping the conduit P the free ends



of the legs **12, 13** are each provided with a clamping screw aperture **21** through which a threaded clamping screw **22** is passed, after the conduit has been inserted into the hanger as shown in FIGS. 3 and 4. When the conduit is inserted in place and the clamping screw **22** is passed through the apertures **21**, a nut **24** is threadably mounted on the screw and tightened so as to draw the legs **12, 13** together to securely clamp the pipe or conduit P in the hanger. In the present instance the rigid support shown happens to be the lower flange **25** of an overhead I-beam and a substantially C-shaped beam clip **26**, of malleable iron or the like, is secured to the beam flange **25** by means of a set screw **28**.

Provision is made for quickly attaching the hanger **10** to the clip **26** by a simple lateral motion. For this purpose the clamping screw **19** is first threaded into a tapped hole **20** in the C-shaped beam clip **26**. This can be done either before or after the beam clip **26** is secured to the I-beam **25** by the set screw **28**. In the present instance, the hanger **10** is formed with a slot **30** in the web for receiving the shank of the fastening screw **19**. In order to mount the hanger on the screw, this slot opens into the aperture **18** for passing the shank of the screw **19**, and in order to pass the head of the screw, one leg **13** is provided with an enlarged T-shaped slot **31** opening into the narrower slot **30**. As illustrated in FIGS. 1 and 5, the slot **31** is of inverted general T-shape with a laterally enlarged portion of sufficient dimensions to pass the head of the screw **19**.

In order to prevent the hanger from accidentally slipping laterally or sidewise off of the screw **19** before the latter can be tightened, abutment means are provided for engaging the head of the screw **19**. One illustrative abutment means embodying the invention is shown in the drawings and comprises a depending tongue or lug **32** integrally formed on one side edge of the slot **30** and depending downwardly at substantially a right angle to the web **11**. If desired, a similar tongue or lug **33** can be provided at the opposite side of the slot **30** as shown in FIG. 5 so that a pair of lugs depend from the web intermediate and generally parallel to the clamping legs **12, 13**. By lifting the hanger and thereby passing the head of the screw underneath the depending tongues or lugs **32, 33**, and then allowing the hanger to drop so that the web **11** rests on the screw head **19**, the head will be trapped between the pair of lugs and one leg of the hanger. Should the hanger shift laterally, the lugs will engage the screw head and thereby prevent the hanger from accidentally dropping or slipping off of the screw before the screw can be tightened. The lugs further serve to guide the hanger and center it on the screw as the screw is tightened. It will also be observed that the lugs **32, 33** are sufficiently short to permit the head of the mounting screw **19** to pass through the laterally enlarged portion of the slot **31** upon installation of the hanger, and also to avoid getting in the way of the pipe or conduit which is to be mounted in the hanger. When the hanger has been tightened in place, a pipe or conduit can be inserted between the legs **12, 13** and clamped into place by means of the clamping screw **22** and nut **24**.

In order to strengthen the engagement between the hanger **10** and the screw **19** notwithstanding the slot **30**, the hanger is desirably formed with a strengthening rib **35** surrounding the hole **18** which receives the clamping screw **19**. One form of such rib as shown in the drawings comprises a downwardly embossed ridge having a diameter slightly smaller than the head of the clamping screw formed in the web surrounding the hole. This rib can be conveniently formed at the time the hanger is shaped and the hole **18** and slot **30** are punched out. As the screw is tightened in the hanger, the rib metal is deformed

to the shape of the screw head thereby increasing the grip of the screw on the hanger.

It will be appreciated that hangers embodying the present invention as described above and claimed in the appended claim, while simple and easy to use, afford the substantial advantages of ease of mounting and a safe installation in that the hanger is prevented from slipping off of the clamping screw when the screw is loose.

I claim as my invention:

A hanger for sections of pipe, conduit, tubing and the like, adapted for attachment to a rigid support by a headed mounting screw threaded in said support, said hanger comprising, in combination, a generally U-shaped strap adapted for engagement with the section to be supported, said strap having a web portion joining a pair of legs adapted to grippingly support said section, means defining an aperture through said web for receiving said mounting screw, a rim surrounding said aperture for engagement by the head of said mounting screw when the same is tightened against said web, means defining a slot of inverted general T-shape in one of said legs with a laterally enlarged portion adapted to pas the head of said mounting screw, said slot extending into said web and



opening into said screw aperture for passing the shank of said headed mounting screw, and a pair of spaced abutment lugs integral with said web and depending therefrom one on each side of said slot intermediate said legs, said lugs being sufficiently short to permit the head of the mounting screw to pass through the laterally enlarged portion of said slot on installation of said hanger, said lugs being of sufficient length to engage the head of said mounting screw when the latter has been positioned in said aperture whereby accidental disengagement of said hanger from said mounting screw before said screw is tightened into the rigid support is prevented.

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