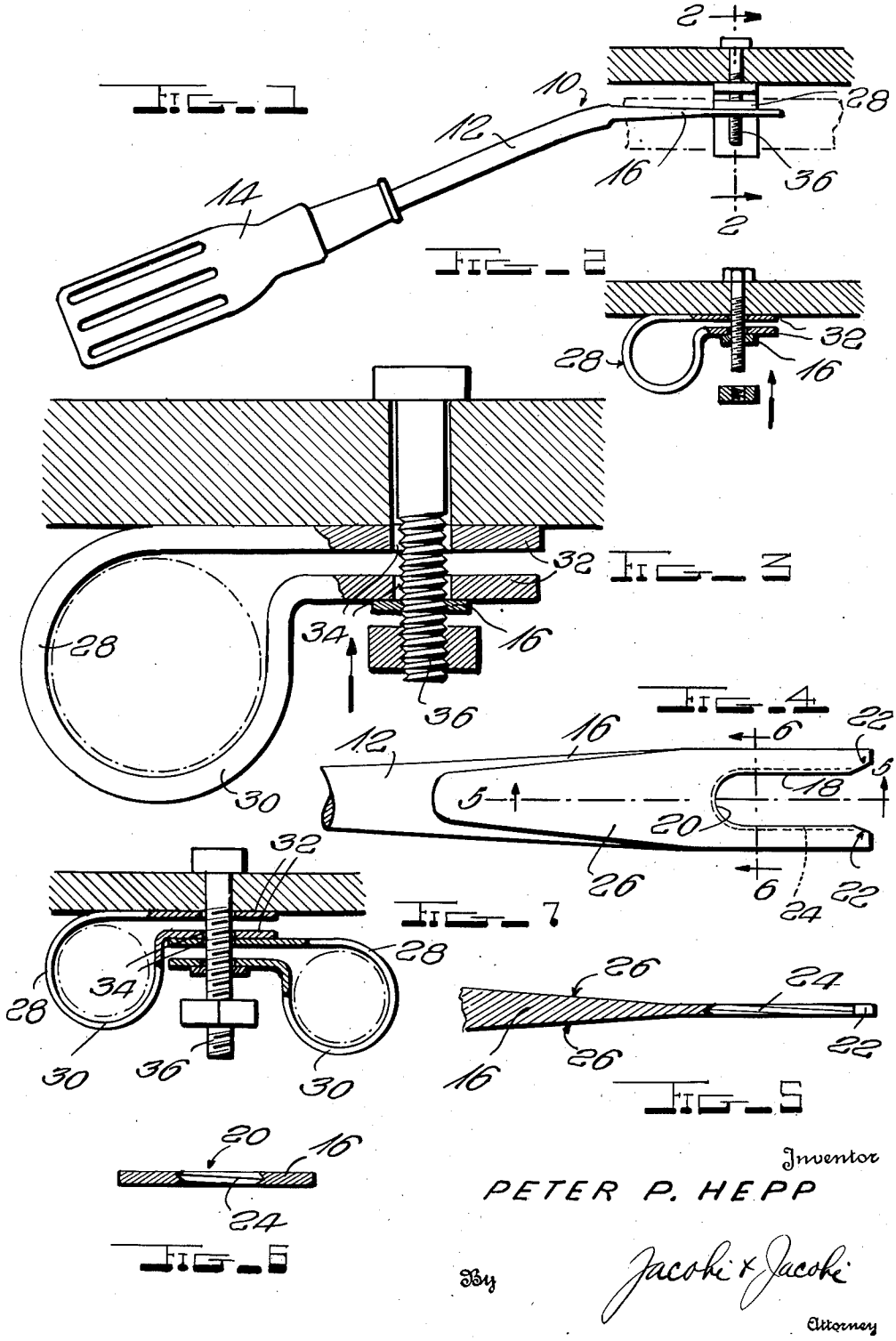
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CLIP RETAINING TOOL

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CLIP RETAINING TOOL

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1

The present invention relates to a clip retaining tool.

The mounting of clips and similar elements for the installation of conductors, conduits and the like has, heretofore, been a rather slow process due to the difficulty involved in holding the clip and conductor in position while applying the nut to the supporting bolt.

It is, accordingly, a primary object of the present invention to provide a tool which will greatly facilitate the mounting of such elements.

Another object of the invention is to provide a tool which can be readily disposed to engage a clip supporting element so as to retain the clip in position while applying the fastening nut.

A further object of the invention is to provide a tool of the aforesaid character which is relatively simple and inexpensive in construction and highly efficient in use.

Other objects and advantages of the invention will become apparent as the description progresses.

In the drawing accompanying and forming a part of this application, I have illustrated a preferred embodiment of my invention, although it will be understood that many modifications in matters of detail could be made without departing from the scope of my invention or avoiding the object of its use.

In this drawing:

Figure 1 is a side elevational view showing the tool in clip retaining position.

Figure 2 is a section taken on section 2—2 of Figure 1.

Figure 3 is an enlarged view similar to Figure 2 showing the nut applied to the bolt.

Figure 4 is an enlarged fragmentary plan view of the bolt engaging portion of the tool.

Figure 5 is a longitudinal section taken on line 5—5 of Figure 4.

Figure 6 is an enlarged transverse section taken on line 6—6 of Figure 4.

Figure 7 is a sectional view showing application of the tool to a mounting involving a pair of the clips upon a single bolt.

Referring to the drawing, wherein like reference characters designate corresponding parts throughout, the numeral 10 designates the tool body which may be formed of a bar of metal or equivalent material shaped to provide an elongated, round shank 12, having fixed on one end thereof a handle grip 14. At the opposite end the tool body is shaped to provide a holder engaging portion or claw generally indicated at 16 and constituting a flattened part directed at an

2

oblique angle from the shank 12. In the outer end of part 16 is provided a longitudinally directed elongated slot 18, having parallel side walls joining an arcuate bight 20. At their outer extremities the side walls of the slot have bevelled faces 22 diverging outwardly of the claw. This construction provides a bifurcation having a thickness substantially less than the diameter of the shank 12 but having sufficient thickness for the formation, within the side and end curved walls of the slot, of screw threads 24. From the end of the shank 12, to the slotted or bifurcated part, the portion 16 has outwardly converging oppositely disposed bevelled faces 26 for convenient application of the tool.

The tool is particularly adapted for use in connection with the mounting of clips for supporting cables, conduits and the like and more especially with what are known as "Adel" clips, commonly used in the installation of electrical and similar equipment on instrument panels and the like. Such clips, generally indicated at 28, embody a substantially circular loop 30 and parallel arms 32, provided with apertures 34 for slidable mounting with reference to a threaded support element such as the bolt 36.

The mounting of such clips has, heretofore, involved substantial difficulties since it has been necessary for the worker to hold the clip together with the supporting cable in proper position upon the bolt while applying the nut in fastening position thereon.

The present invention greatly simplifies this operation and substantially reduces the time required therein as it it enables the worker to initially dispose the clip in proper position on the bolt and retain it thereon by sliding the claw transversely of the bolt immediately outward of the outermost clip arm, the threaded walls 24 of the claw slot engaging the threads of the bolt to positively prevent axial movement of the tool claw and clip, enabling the worker to conveniently apply and thread the nut into clip fastening position. This is clearly illustrated in Figure 3 of the drawing.

While the tool is highly advantageous in single clip installations, as shown in Figures 1 to 3, inclusive, it has even greater utility in installations where two or more clips are mounted on a single bolt, as shown at Figure 7, due to the greater difficulty in holding such mountings in position.

From the foregoing description of my improved tool, the construction thereof and its application to use will be readily understood, and it

will be seen that I have provided a simple, inexpensive, and efficient means for carrying out the various objects of the invention.

While I have particularly described the elements best adapted to perform the functions set forth, it is apparent that various changes in form, proportion, and in the minor details of construction may be resorted to, without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described the invention, what I claim is:

1. A clip retaining tool comprising a shank, and a claw at one end of said shank having transversely spaced arms threaded along their inner side edges for gripping engagement with threaded element to hold the clip against axial displacement on the latter.

2. A clip retaining tool comprising a shank, a handle on one end of said shank, and a flat claw at the opposite end of said shank extending obliquely from the shank and formed with an outwardly opening substantially U-shaped slot, the walls of said slot being screw threaded.

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