

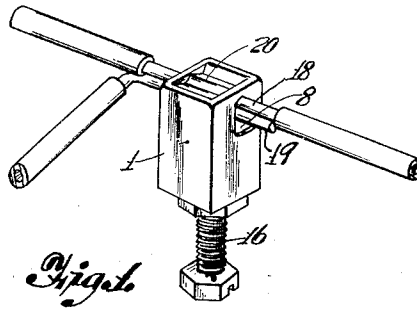
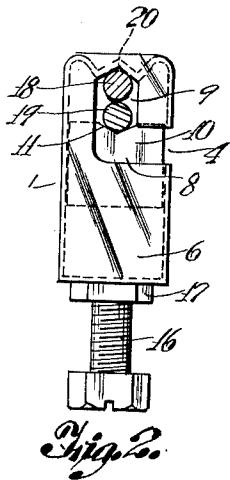
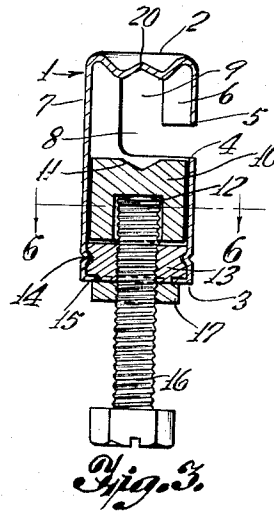
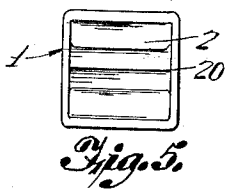
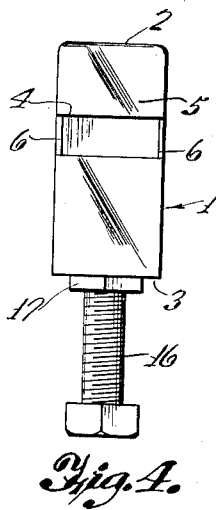
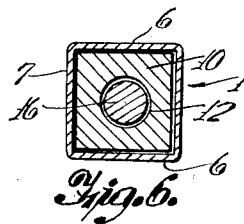
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FRictional WIRE CONNECTER

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UNITED STATES PATENT OFFICE

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FRICTIONAL WIRE CONNECTER

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2 Claims. (Cl. 173—273)

This invention relates to connectors for connecting branch or tap lines to the main line wires of systems supplying electrical energy for any required purpose, such as for operating telephone 5 or telegraph instruments, electric lights, or the like.

An important object of my invention is to provide a frictional connector of the kind referred to which may be easily and quickly operated and 10 installed by a lineman through the use of one hand only, thereby leaving the other hand free for supporting himself in what is often a difficult or precarious position.

Another object is to provide such connector 15 in a form which is at once relatively simple, strong, efficient and practical.

Another object is to provide such connector of a form enabling its ready installation and use in its unitary and assembled shape and without 20 disassembling same.

With these and such other objects and advantages in view as may appear in the course of the following specification, attention is called to the accompanying drawing as illustrating a preferred 25 embodiment of my invention, and wherein

Figure 1 is an assembled view in perspective of my improved connector as employed for joining a branch line to a main line.

Figure 2 is an enlarged side elevation of the 30 connector in use, the connected wires being shown in section.

Figure 3 is a longitudinal section through the assembled elements constituting the connector, the set screw however being shown in full lines.

35 Figure 4 is a front elevation, similar to the view of Figure 2, but taken at an angle of ninety degrees, and no showing of the wires being made.

Figure 5 is a plan view of the assembly shown in Figure 1.

40 Figure 6 is a section on the line 6—6 of Figure 3.

In practising this invention, I provide a hollow shell or tubular housing 1 of any suitably strong material for the purpose. It is found in practise that this shell may be cheaply drawn from a thin 45 plate of copper, but as stated, the housing may be made of any other desired material and by any other method. The housing 1 is somewhat elongated as shown and is preferably square in cross section. One end 2 of the housing is closed while 50 the opposite end 3 is open as the shell is originally formed. Adjacent its closed end 2 this shell or housing is provided with a wire slot 4 opening out through one side 5 which may be referred to as its front side, which slot is extended back 55 transversely into or through sides 6 of the shell

cutting the sides perpendicularly to the rear side 7, as shown at 8, and is then directed longitudinally towards the said closed end, as shown at 9, whereby the slot upon each of the sides 6 becomes right angled or L-shaped. A pillow block 10 is slidably mounted within the shell through 60 the open end 3. This block is square in cross section to prevent its rotation, and is formed concave across its end facing the closed end of the shell so as to provide a wire engaging groove 11. 65 A screw socket 12 is formed longitudinally into the opposite end of the block 10. A nut or tapped plug or end block 13 is anchored in the open end 3 of the shell by pinching the skirt of the shell down into a groove 14 formed around the sides 70 of the end block and by turning in the margins of the open end of the shell over it, as shown at 15. A set screw 16, upon which is mounted a lock nut 17, is then passed up through the tapped plug 13 in threaded engagement therewith, longi- 75 tudinally into the housing, the inner end of the screw 16 seating itself within the socket 12, and thus the assembly of the device is completed. The wire slots 4—8—9 are, of course, of a width sufficient to receive the main wire 18 upon which 80 it is to be installed, and the branch slot 9 is additionally of a length sufficient to enable it to receive along with the main wire the branch or tap wire 19. The closed end 2 of the housing may be crimped or fluted across in a direction 85 parallel with the sides 5 and 7, as shown in Figures 1, 2, 3 and 5, the central flute 20 thereof being pressed or formed outwardly as shown, so as to provide at its inner side a wire engaging groove aligned oppositely to the groove 11 of 90 the block 10, for firmly holding the wires 18 and 19 positioned therein between. Thus the stamped or drawn structure of the housing 1, including the end fluting 20, and the sides 5, 6 and 7, provide 95 both a very light and strong formation, and at the same time a central wire groove across the closed end of the housing adapted to co-act with the grooved block 10 for the purposes specified.

In use the lineman may take up the connector by one hand, loosening the screw 16 until the 100 block 10 drops below the front slot 4, and may then with the same hand hook this slotted end over the bare main wire 18 and then pass the bare end of the tap wire 19 endwise through the branch slots 9 alongside the wire 18. Then by 105 turning up the set screw 16, the two wires are jammed frictionally together under the pressure of the block 10, in electrical connection. By then turning up the lock nut 17, the assembly is permanently locked together and rendered immune 110

to loosening through vibration. When the block 10 is fully seated, the wires are crowded fully into the branch slot 9 and the front slot 4 is closed by the margin of the block 10, thereby guarding against any possibility of the wires escaping through said front slot. Inasmuch as the strain imparted to the assembly through turning up the screw 16 is exerted longitudinally of the housing, the structure here shown provides a very strong and efficient one for the purpose intended.

While I have herein described a certain specific manner and method of constructing and assembling the elements of my invention, it is understood that I may vary from the same in minor details, not departing from the spirit of my invention, so as best to construct a practical device for the purpose intended, as defined in the appended claims.

I claim:

1. In a device of the kind described, an elongated housing square in cross section, having one end closed and the opposite end open, and having an angular wire slot formed transversely through each opposite side and an intermediate

side, adjacent the closed end, a square pillow block slidably mounted within the housing, the same having a screw bearing socket formed at one end, a tapped end plug anchored in the open end of the housing, and a set screw passed through said tapped end plug with its inner end seated in said screw bearing socket of the pillow block.

2. In a device of the kind described, an elongated housing having one end closed and the opposite end open and having a wire slot formed thereinto near the closed end and opening out through one side, a pillow block slidably mounted in the housing for longitudinal movement, means for locking the block against lateral rotation, the said block having its end face adjacent the closed end of the housing grooved in alignment with the said wire slot of the housing and having a screw bearing socket formed in its opposite end, a nut anchored in the open end of the housing, a set screw threadedly seated through said nut with its inner end adapted to engage said screw bearing socket of the pillow block, and a lock nut mounted upon the set screw.

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