July 8, 1924. 1,500,641

G. O. SABOURIN

ELECTRICAL CONNECTER

Filed Oct. 1, 1920

Fig. 1

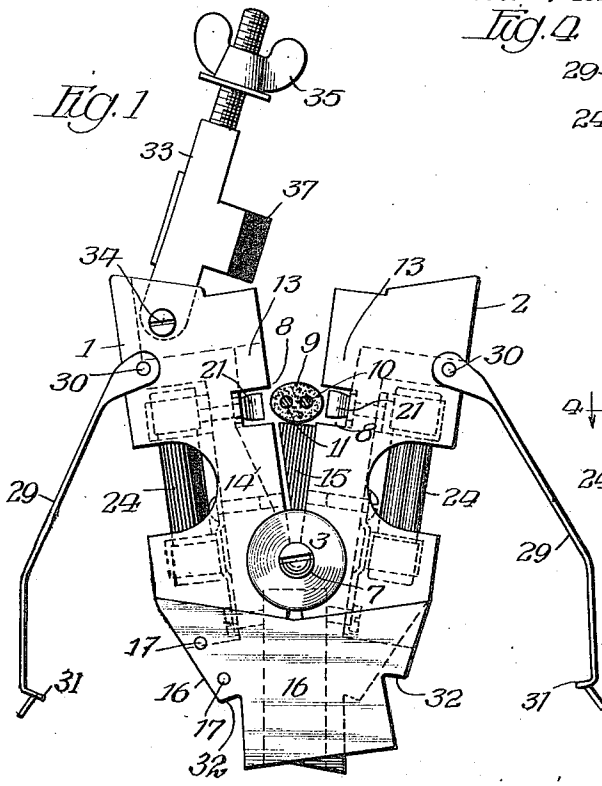


Fig. 4

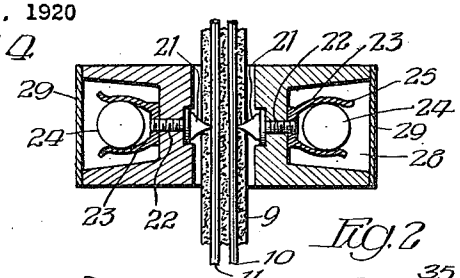


Fig. 2

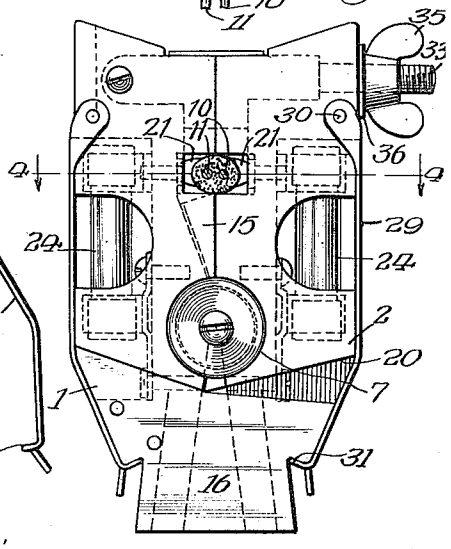


Fig. 3

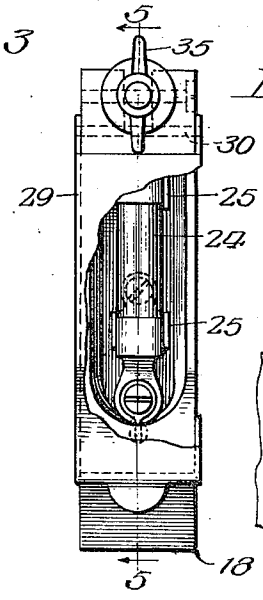


Fig. 6

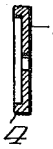


Fig. 7

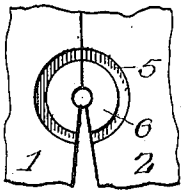
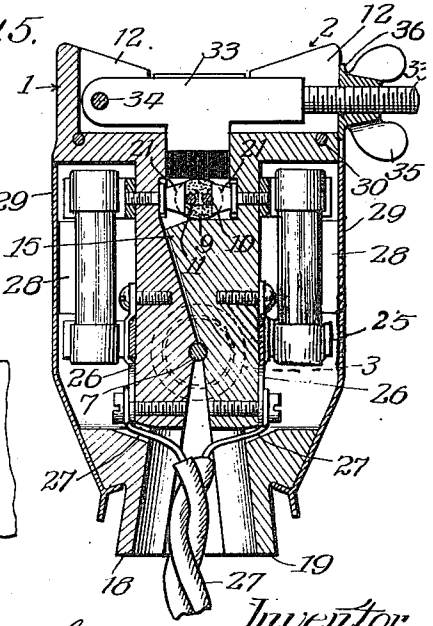


Fig. 5.



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UNITED STATES PATENT OFFICE.

GUY O. SABOURIN, OF WEST BRIGHTON, NEW YORK, ASSIGNOR TO CHICAGO PNEUMATIC TOOL COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

ELECTRICAL CONNECTER.

Application filed October 1, 1920. Serial No. 413,992.

To all whom it may concern:

Be it known that I, GUY O. SABOURIN, a a citizen of the United States, residing at West Brighton, in the county of Richmond and State of New York, have invented certain new and useful Improvements in Electrical Connecters, of which the following is a specification.

My invention relates to an electrical connecter intended more particularly to be used for making temporary and emergency connections to duplex wire for the operation of lamps, portable electric tools, etc. Such wire or conductor is ordinarily used in temporary wiring of ships under construction as well as new buildings, and the connecter embodying my invention is intended for application to wiring of this temporary character. Speaking in general terms, my connecter consists of a device capable of being readily applied to the wire or cable and to cut through the insulation by knife contacts with only a slight abrasion or alteration of the insulation and without injury to the copper wire conductors. The various features of advantage and utility in my connecter will be apparent from the description hereinafter given.

In the drawing Fig. 1 is a side elevation of my connecter with the various means thereof shown thrown to open position and with the conductor or cable shown in section; Fig. 2 is an elevation of my connecter shown in closed position and applied to the cable; Fig. 3 is an end elevation of the conductor with a portion broken away; Fig. 4 is a section on the line 4—4 of Fig. 2; Fig. 5 is a section on the line 5—5 of Fig. 3; Fig. 6 is a detail of one of the discs pivotally connecting the two main members of the connecter, and Fig. 7 is a detailed view of the pivoted portions of such members.

Referring to the particular embodiment of my invention as herein shown, my connecter includes two main portions or blocks 1 and 2 which are pivoted upon each other towards their lower ends in simple manner, and which are made of suitable insulating material. In the present instance the pivotal connection between these two blocks is obtained by the two circular discs 3 which have inturned flanges 4 adapted to engage in the circular grooves 5 at the bottom of the circular sockets 6 formed on opposite sides of the two blocks, each block bearing one-half of the sockets and grooves. These two discs are held in place by means of the transverse screw 7 engaging both of the discs and thereby holding them in connection with said blocks.

The blocks are provided on their inner adjacent sides with registering slots 8 forming a transverse opening to receive the cable 9 which is provided with the two copper wires or conductors 10 and 11, placed side by side but separated a short distance and surrounded by insulation in the usual way as illustrated in Figs. 1 and 4. The blocks are also provided with top longitudinal slots 12 registering with each other and communicating at their inner ends with the slots 8 by means of vertical slots 13. The block 1 is also provided on its inner face with a slot or recess 14 triangular in section and running upwardly to communicate with the slot 8 of such block. The block 2 is provided on its inner face with a triangular shaped projection 15 adapted to fit in the slot or recess 14 and to form with its upper edge a support for the cable when the blocks are in closed position and applied to the cable.

The lower ends of the blocks are provided on opposite sides with suitable plates serving to hold the blocks in position in addition to the pivoting means, and also to limit the pivotal movement or swing of the blocks. These plates 16 are similar but oppositely arranged, and in the present instance they are both secured to the member 1 by means of the screw 17. They are of a shape to fit upon the side of the lower projecting portions 18 and 19 of the members 1 and 2 and the same are inset into the sides of such members or blocks. In addition the block 2 is recessed upwardly to the inclined line 20 above the edge of the right hand half of the plate 16, as shown in Fig. 2. As a result the contact of the upper end 20 of the recess in the block 2 against the top edge of the plate 16 limits the swinging movement of the blocks, as shown in Fig. 1.

Two opposed knife contacts 21 are arranged in the inner ends of the slots or recesses 8 in position to engage the cable and cut through the insulation to the conducting wires when the blocks are brought and clamped together, as shown in Fig. 2. Each

knife contact has a screw threaded stem 22 screwing into the base of a holder 23 for holding a fuse 24. This fuse is held yieldingly at its lower end by a similar fuse holder 25 which holder in turn is connected with the connecter 26 for the wires 27—27 running to the lamps or electric tools, or other place or instrument of use. The fuses and their holders are arranged in slots 28 in the outer sides of the blocks 1 and 2 and the same are held closed on such sides by means of the pivoted plates 29, pivoted at their upper ends 30 and each having at its lower end a spring lip 31 adapted to engage under the shoulder 32 of its block.

A clamping bolt 33 is pivoted to the block 1 on the pin 34. This bolt is received within the top slots 12 and is provided at its outer end with a thumb nut 35 having a collar or washer 36 which is here integral with the nut and adapted to bear against the outer side of the block 2 when in a clamping position, as shown in Figs. 2 and 5.

Describing the application of the connecter to a cable, the blocks 1 and 2 and the clamping bolt are opened to the position shown in Fig. 1 and inserted upon the cable 9 as shown therein. The blocks are thereupon swung closed and the clamping bolt is swung to operative position and the thumb nut tightened whereupon the knife contacts bite into the insulation and come into contact with cable wires 10 and 11 thereby making connection with such cable. At this time the cable is supported upon the top of the projections 15 and is held from bulging upwardly by means of the downwardly projecting portion 37 of the clamping bolt. The extreme lower portion is preferably a block of insulating material.

I claim:

1. An electrical connecter comprising two blocks which are pivoted upon each other and which when open present an opening to receive and align a cable comprising two conductors, and two opposed knife contacts arranged in the blocks in position to cut into the cable and connect with the conductors thereof respectively when such blocks are brought together.

2. An electrical connecter comprising two blocks which are pivoted upon each other and which when open present an opening to receive and align a cable comprising two conductors, two opposed knife contacts arranged in the blocks in position to cut into the cable and connect with the conductors thereof respectively when such blocks are brought together, and means for bringing the blocks together with pressure.

3. An electrical connecter comprising two blocks which are pivoted upon each other and which when open permits the entrance of a cable between them, the inner adjacent sides of such blocks having registering slots, and two opposed knife contacts in such slots in position to cut into the cable and connect with the conductors thereof respectively when such blocks are brought together, one of the blocks having a recess below its slot and the other block having a projection received by such recess and forming a support for the cable.

4. An electrical connecter comprising two blocks which are pivoted upon each other and which when open present an opening to receive a cable, two opposed knife contacts arranged in the blocks in position to cut into the cable and connect with the conductors thereof respectively, when such blocks are brought together, and means for bringing the blocks together with pressure consisting of a swinging clamping bolt pivotally connected with one block and engaging the other black, such bolt having a depending portion adapted to bear upon the cable while being operated upon.

5. An electrical connecter comprising two blocks which are pivoted upon each other and which when open present an opening to receive a cable, two opposed knife contacts arranged in the blocks in position to cut into the cable and connect with the conductors thereof respectively when such blocks are brought together, and means for bringing the blocks together with pressure consisting of a swinging clamping bolt pivotally connected with one block and engaging the other block, such bolt having a depending portion adapted to bear upon the cable while being operated upon, and one of the blocks having a portion acting as a support for such cable.

6. An electrical connecter comprising two blocks which are pivoted upon each other and which when open present an opening to receive a cable, two opposed knife contacts arranged in the blocks in position to cut into the cable and connect with the conductors thereof respectively when such blocks are brought together, said blocks having on opposite sides circular grooves, one half in each block, discs arranged on such opposite sides and having circular flanges engaging such grooves, and a bolt securing such discs in place.

7. An electrical connecter comprising two blocks which are pivoted upon each other and which, when open present an opening to receive a cable, two opposed knife contacts arranged in the blocks is position to cut into the cable and connect with the conducting means thereof when such blocks are brought together, and plates secured to the sides of one end of one of the blocks and adapted to engage shoulders on the other block to limit the swinging movements of the blocks.

8. An electrical connecter comprising two blocks which are pivoted upon each other

and which when open present an opening to receive a cable, two opposed knife contacts arranged in the blocks in position to cut into the cable and contact with the conducting means thereof when such blocks are brought together, said blocks having on opposite sides circular grooves, one-half in each block, discs arranged on such opposite sides having circular flanges engaging the walls of such grooves and plates arranged on opposite sides of said blocks and secured to one and adapted to engage shoulders on the other to limit the swinging movement of the blocks.

GUY O. SABOURIN.

Witness:
LOUIS HEYMANN.