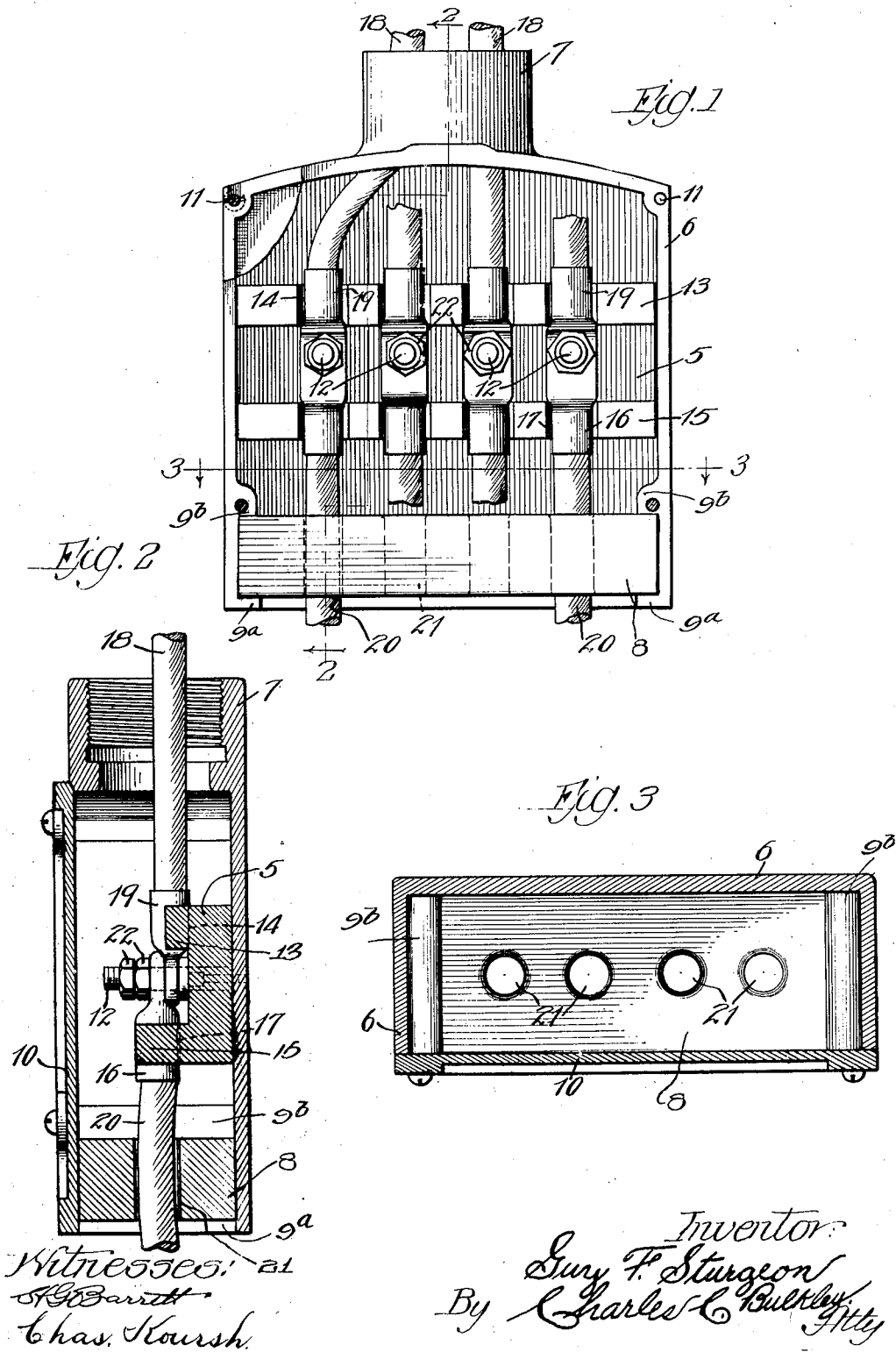


G. F. STURGEON.
JUNCTION TERMINAL BLOCK.
APPLICATION FILED FEB. 10, 1915.

1,260,592.

Patented Mar. 26, 1918.



UNITED STATES PATENT OFFICE.

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JUNCTION TERMINAL-BLOCK.

1,260,592.

Specification of Letters Patent.

Patented Mar. 26, 1918.

Application filed February 10, 1915. Serial No. 7,217.

To all whom it may concern:

Be it known that I, GUY F. STURGEON, a citizen of the United States of America, and resident of Chicago, Cook county, Illinois, have invented a certain new and useful Improvement in Junction Terminal-Blocks, of which the following is a specification.

My invention relates to improvements in junction terminal blocks, and has for its provision the construction of a terminal block which is mounted in a water-proof insulating casing, and one in which the connections are so arranged that there is no danger of any short circuiting occurring. Furthermore, when connections have once been established through this junction terminal block, the connections can then be readily disconnected and again connected without any possibility of establishing wrong connections.

My invention will be more clearly understood by having reference to the accompanying drawings, in which is illustrated one specific embodiment of my invention. Figure 1 is a front view, with the front plate removed in order to show the interior construction.

Fig. 2 is a sectional view on the line 2—2 in Fig. 1, looking in the direction of the arrows.

Fig. 3 is a sectional view taken on the line 3—3 in Fig. 1, looking in the direction of the arrows.

The terminal block 5, which may be made of porcelain, wood or other insulating material, is mounted within the inclosed casing 6. This casing is provided with a threaded circular extension 7 by which it may be connected to a conduit, and at its opposite ends is closed by means of a removable insulating block 8. This casing is likewise provided with a readily removable front plate 10, suitably fastened to the casing by means of screws adapted to engage in the holes 11.

The terminal block 5 is provided with a series of binding posts 12, and on the upper side thereof is provided with a flange 13 in which there is a series of grooves 14 corresponding to the binding posts 12. On the lower side of the terminal block there is a second flange 15 which is preferably slightly higher than the flange 13, and likewise provided with a series of grooves 16, which correspond to the binding posts 12, the bottom of these grooves being a short distance

above the block 5, as indicated at 17 in Fig. 2.

With this construction the wires or leads 18 can be brought in through the opening 7 of the casing and the lead terminals 19 connected to the several binding posts 12. These leads rest in the grooves 14 on the terminal block, and are thus positively held in separated position and all danger of short-circuiting is prevented. Likewise connected to these binding posts 12 are a second series of leads 20, which leads rest in the grooves 16 and are thus positively held in proper relationship whereby all danger of short-circuiting is eliminated. These leads 20 pass through openings 21 in the insulating separator block 8, which openings are preferably of such size as to prevent the terminal ends of these leads being drawn through the block. The lead terminals are firmly secured in place on the binding post by means of the lock nuts 22. After the connections are made in this manner, the front plate 10 is secured in place and the terminal block is thus fully housed and protected.

The open end of the casing is closed by the separator block 8. This block or member, however, is positioned in guide slots or channels in the side walls of the casing near the open end thereof. These channels are formed by the casing flanges 9^a and by the instanding projections or guides 9^b, as shown clearly in Fig. 1. These channels are open at their upper ends so that the separator block may be conveniently removed or replaced, the separator wall or member being removable and replaceable in a plane transverse to that in which the cover on the bottom of the casing lies, hence when the separator is in place it is held by the cover plate 10.

If at any time it is necessary to inspect these connections or to disconnect them, it is merely necessary to remove the front plate 10, at which time the leads 20 can be disconnected from the binding post, and the insulating separating plate 8 removed or disconnected from the casing, and the leads thus disconnected from the binding posts without altering their location with respect to this separating plate 8—that is, the leads although removed from the binding post still project through their respective openings 21 in this separating plate. When it is

desired to again connect these terminals, it is merely necessary to place this block 8 back into its position at the end of the casing 7, and then the leads are in proper position to be connected to the respective binding posts. With this construction it is practically impossible for anybody making these connections at this time to connect one of the leads 20, to the wrong binding post, as this separator block holds these leads separated and in their proper positions.

It will thus be seen that I have devised a very efficient terminal block in which the danger of short-circuiting and the making of wrong connections is reduced to a minimum. I find that this terminal block is particularly useful in connection with a car lighting system in which the leads 20 are connected to an axle generator, two of these leads being connected to the armature and two to the field, while the leads 18 connect with a conduit system under the car. With such a connection, it will be readily seen that it is of utmost importance that the leads 20 be connected to their proper binding post. My invention, however, is capable of use in many other connections, and, furthermore, its construction can be varied to a certain extent without departing from the spirit of my invention.

What I claim as my invention is:

1. A terminal block of insulated material

having a series of binding posts located on the central portion thereof, and a flange provided with a series of grooves on each side of said binding posts, there being a groove at each flange corresponding to each binding post, the bottom of the grooves of one series being located in a different plane from the bottom of the grooves in the other series.

2. A terminal block of insulated material having a series of binding posts located on the central portion thereof, a flange provided with a series of grooves on each side of said binding posts, there being a groove at each flange corresponding to each binding post, the bottom of the grooves of one series being located in a different plane from the bottom of the grooves in the other series, and an inclosing casing for said block, said casing having a removable block closing one end thereof, said removable block being provided with an opening individual to each of said leads whereby said leads are maintained in proper relative position with said binding post.

Signed by me at Chicago, Illinois, this 3rd day of February, 1915.

GUY F. STURGEON.

Witnesses:

E. H. CLEGG,
M. HAMILTON.