April 19, 1927. 1,625,485

O. H. MAURER

TERMINAL FOR ELECTRIC CONDUCTORS

Filed April 29, 1926

Fig. 1.

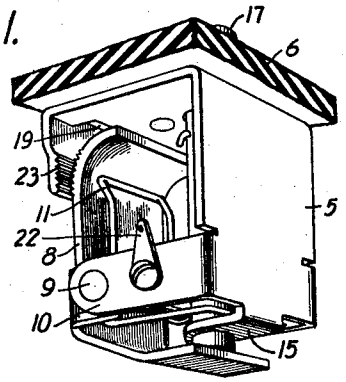


Fig. 2.

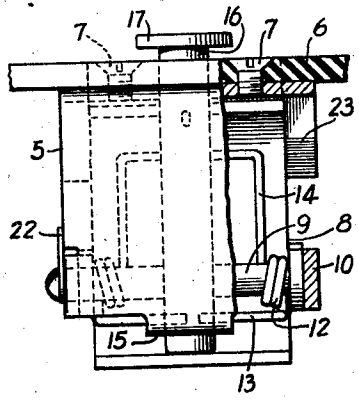
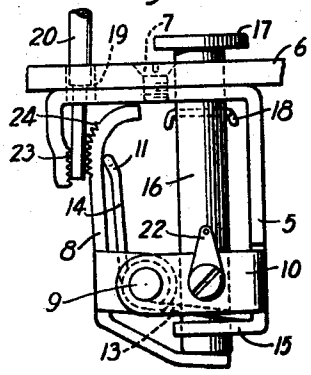


Fig. 3.



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UNITED STATES PATENT OFFICE.

OSWALD H. MAURER, OF FLUSHING, NEW YORK, ASSIGNOR TO WESTERN ELECTRIC COMPANY, INCORPORATED, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

TERMINAL FOR ELECTRIC CONDUCTORS.

Application filed April 29, 1926. Serial No. 105,385.

This invention relates to terminals for electrical conductors and particularly to the type which serves as a connector for two or more conductors.

An object of the invention is to provide an improved terminal which is simple in operation, of few parts, and economical to construct.

In accordance with one embodiment of the invention, herein shown and described, there is provided a clamping means comprising a stationary member or frame and a movable member, said members having oppositely disposed clamping surfaces. The movable member is connected with the stationary member by means of a shaft and the clamping surfaces are normally held in the clamped position by a spring. A push rod is provided to transmit applied pressures to the lower end of the movable member which causes the latter to move about the shaft and thereby separate the two clamping surfaces. The relative distances through which the lower and upper portions of the movable member move can be controlled by correctly proportioning the distances between the pivoting point and the end portions of the movable member.

The invention may be more clearly understood by referring to the drawing in which Fig. 1 is a perspective view of the device, Fig. 2 is a front view with a portion of the frame removed, and Fig. 3 is a side view.

In the drawing the metallic stationary member or frame 5 is secured to the panel 6 by means of machine screws 7—7. The movable member 8, preferably of conducting material, is mounted on a shaft 9 which passes through the projections 10 of the frame 5. The wire spring 11 consists of two spiral portions 12 positioned about the shaft 9 and the extended portions 13 and 14 which bear respectively against the projection 15 of the frame 5 and against the top of the movable member 8. In assembling, the spring 11 is inserted under tension so as to exert a pressure against the movable member 8. The rod 16, which can be depressed by applying pressure to the button 17, passes through holes in the insulating panel 6, the top of the frame 5 and the projecting portion 15 and bears against the lower portion of the movable member 8. A pin 18 is passed through a hole in the push rod 16 so as to prevent the push rod from falling out when the device is inverted. The rectangular shaped opening 19 through panel 6 and the stationary member is adapted to receive one or more conductors 20, which are to be connected together or to a conductor which is soldered or otherwise connected to lug 22, secured to the frame 5. The clamping surfaces 23 and 24 of the frame 5 and the movable member 8, respectively, are knurled or otherwise roughened so as to form a gripping surface.

In operation, when the button 17 is depressed the rod 16 transmits a pressure to the lower portion of the movable member 8, which is thereby caused to rotate about the shaft 9 and separate the gripping surface 24 of the movable member 8 from the oppositely disposed gripping surface 23 of the frame 5. The conductors 20, which are to be connected, are then inserted through the opening 19 after which the button is released, thereby permitting the spring 13 to exert a pressure against the upper portion of the movable member 8. The conductors 20 are thus firmly gripped between the surfaces 23 and 24 and are thereby electrically connected through the metallic frame to the lug 22.

What is claimed is:

1. In combination with an apparatus mounting panel, a terminal for electric conductors, said terminal comprising a stationary conducting member and a movable member, said members having oppositely disposed clamping surfaces, means for pivotally mounting said movable member upon said stationary member, a spring for normally holding said clamping surfaces in engagement, means for mounting said terminal upon the back of said panel with the clamping surfaces substantially perpendicular to the face of said panel and means passing through an opening in said panel and operable from the front thereof to separate said clamping surfaces.

2. A terminal for electric conductors, comprising a pair of conducting members having oppositely disposed clamping surfaces, a spring for normally holding said clamping surfaces in engagement and means loosely impinging against one of said members to separate said clamping surfaces against the tension of said spring.

3. A terminal for electric conductors comprising a substantially U-shaped stationary

member of sheet metal having a serrated portion near one end and laterally projecting portions near the other end, a movable L-shaped member of sheet metal having a serrated portion near one end and laterally projecting portions between the ends thereof, a shaft passing through all of said laterally projecting portions to pivotally mount said L-shaped member upon said U-shaped member, said serrated portions cooperating to form a clamping means, and a spring to force the clamping surfaces of said L-shaped member toward that of said U-shaped member.

4. A terminal for electric conductors comprising a stationary member of metal having a serrated portion near one end and projecting portions near the other end, a movable member of metal having a serrated portion near one end and projecting portions suitably distant from its other end, said serrated portions cooperating to form a clamping means, a shaft passing through said projecting portions to connect said movable member to said stationary member, a spring to force the serrated portion of said movable member toward the oppositely disposed serrated portion of said stationary member, a rod, a portion of said movable member to move said movable member against the tension of said spring, a panel upon which said stationary member is supported having an opening in alignment with the serrated portions of said stationary and movable members, and a second opening through which said rod passes.

In witness whereof, I hereunto subscribe my name this 28th day of April A. D., 1926.

OSWALD H. MAURER.