

July 30, 1929.

W. H. RAY

1,722,353

CONNECTING TERMINAL FOR ELECTRICAL CONDUCTORS

Filed Dec. 7, 1925

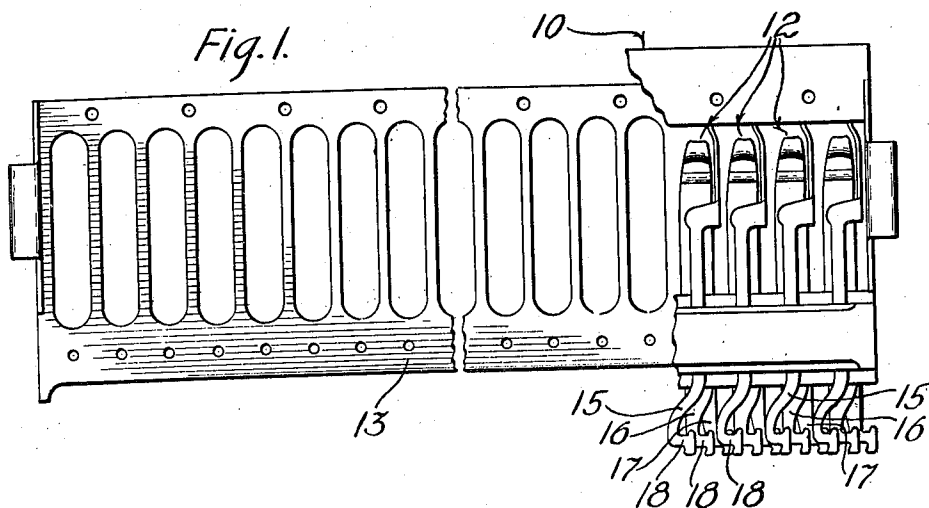


Fig. 2.

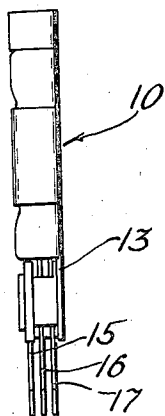


Fig. 3.

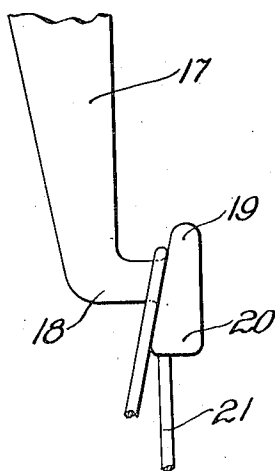


Fig. 4.

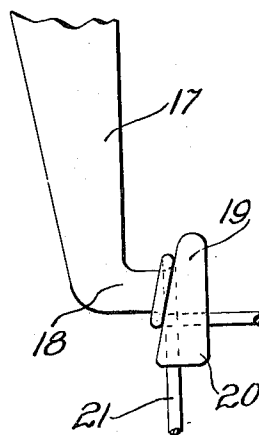
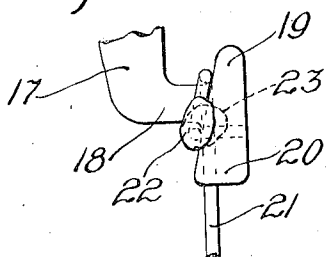


Fig. 5.



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UNITED STATES PATENT OFFICE.

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CONNECTING TERMINAL FOR ELECTRICAL CONDUCTORS.

Application filed December 7, 1925. Serial No. 73,579.

This invention relates to connecting terminals for electrical conductors, and more particularly to an electrical connecting terminal for telephone jacks.

The principal object of the invention is to provide a simple and inexpensive terminal to which an electrical conductor may be readily and securely connected.

In accordance with the general features of the invention, there is provided, in one embodiment thereof, a telephone jack having a plurality of differently shaped connecting terminals arranged in a vertical row. Each terminal is formed with a hook portion of reduced cross section having oppositely disposed outwardly projecting portions which cooperate to properly position and prevent displacement of a conductor connected thereto. The hook portions are so relatively disposed as to be readily accessible.

Other features and advantages of the invention will become apparent in the following detailed description, reference being had to the accompanying drawing, wherein

Fig. 1 is a fragmentary plan view of a strip of jacks each having a plurality of connecting terminals embodying the features of the present invention;

Fig. 2 is an end view thereof, and

Figs. 3, 4 and 5 are enlarged fragmentary detail views of one of the improved terminals showing a preferred method of connecting a conductor thereto.

The invention is herein illustrated and described in connection with a telephone jack, such as is commonly employed in switchboards of telephone exchanges for interconnecting telephone lines. It should be understood, however, that a connecting terminal embodying the features of this invention is capable of other applications and the novel features thereof should be limited only by the scope of the appended claims.

Referring now to the drawing in detail, the numeral 10 indicates, generally, a jack mounting of a well known type commonly used in telephone exchanges, and comprises a plurality of jacks 12 supported by a plate 13. The jacks are adapted to be electrically connected to and disconnected from plugs (not shown) which cooperate with the jack to control telephone circuits within which they are connected. The general construction of the jack mounting may be of any well known

type, and since the present invention is not particularly concerned therewith, a further detailed description thereof is believed to be unnecessary.

The jacks 12 are each provided with a plurality of connecting terminals 15, 16 and 17 which are preferably arranged in a vertical row and differently shaped to permit ready access to each terminal for connecting an electrical conductor thereto. Angularly disposed hook portions 18 of reduced cross section are formed at the ends of the body portions of the terminals 15, 16 and 17 and each hook portion is provided at its end with outwardly projecting oppositely disposed portions 19 and 20 (Figs. 3, 4 and 5) forming an enlarged head which cooperate to properly position and prevent displacement of an electrical conductor 21 connected thereto.

A preferred method of connecting a conductor to the improved terminal is illustrated in Figs. 3, 4 and 5 of the accompanying drawing. The end of the conductor is looped around the neck of the hook portion 18 from underneath and terminating thereabove as shown in Fig. 3. The end of the conductor is then bent substantially at right angles and extended across the bottom face of the terminal between the portion 20 thereof and the conductor 21 (Fig. 4). The conductor is then soldered to the terminal as indicated at 22, and the end portion of the conductor is severed even with the gauging edge of the terminal, as shown in Fig. 5. Some of the solder passes underneath the portion 20, as shown by the dotted line 23 (Fig. 5), thereby insuring a secure connection.

The above described connecting terminals may be manufactured from sheet metal by one operation and are therefore comparatively inexpensive. Furthermore, electrical conductors may be readily and securely attached to terminals embodying this invention without the use of any particular skill or experience. Also, the particular form of bends that a conductor is subjected to when fastened to a terminal of this type materially aids in rendering the soldered connection permanent.

What is claimed is:

1. In a telephone jack, a connecting terminal consisting of a piece of metal of tapering width, the narrower portion of which is substantially at right angles thereto, said por-

tion having opposite projections at the end and in the same plane thereof, and being substantially at right angles to the portion.

2. In a telephone jack, a connecting terminal for electrical conductors having a hook portion for receiving a conductor therein, and an enlarged head portion formed at the end of said hook portion having oppositely disposed projections in the same plane to prevent displacement of the conductor.

3. In a telephone jack, a connecting terminal for electrical conductors, comprising a member having a hook portion and outwardly projecting portions formed at the end thereof in the same plane as the hook portion and designed to position and prevent displacement of a conductor held in the hook portion.

4. In a telephone jack, a connecting terminal for electrical conductors, comprising a member having a body portion, a hook portion of reduced cross-section extending at an angle therefrom for receiving a conductor therein, and an enlarged head portion formed at the end of the hook portion having oppositely disposed projections in the same plane as the hook portion to prevent displacement of the conductor, said head portion terminating in a gauging surface for positioning the end of the conductor.

5. In a telephone jack, a connecting terminal for electrical conductors having an elongated body portion, a hook portion of reduced cross-section extending at an angle therefrom and an enlarged head portion formed at the end of and having projections

extending transversely of the hook portion and in the same plane therewith to prevent displacement of a conductor from the hook portion, said projections forming a continuous gauging surface substantially parallel with the longitudinal axis of the body portion for positioning the end of the conductor.

6. In a telephone jack, a connecting terminal for electrical conductors having a body portion, a hook portion for receiving a conductor and a head portion having a projection extending transversely from the end thereof and in the same plane as the hook portion to prevent displacement of a conductor from the hook portion, one of the projections presenting an edge angularly disposed relative to the hook portion to deflect the end portion of a conductor away from the remainder thereof during the looping of the conductor around the hook portion.

7. In a telephone jack, a tapering terminal, a conductor longitudinal of the terminal, a hook portion on the terminal to receive the conductor, two opposite projections of the end of the hook portion in the same plane as the hook portion to prevent displacement of the conductor from the hook portion, the end of the conductor being positioned after one revolution around the hook portion between one of the aforementioned projections and the main portion of the conductor.

In witness whereof, I hereunto subscribe my name this 20th day of November, A. D. 1925.

WILLIAM HARRY RAY.