H. B. SHERMAN.

TERMINAL.

APPLICATION FILED MAY 29, 1915.

1,175,311. Patented Mar. 14, 1916.

Fig. 1.

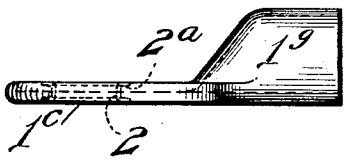


Fig. 2.

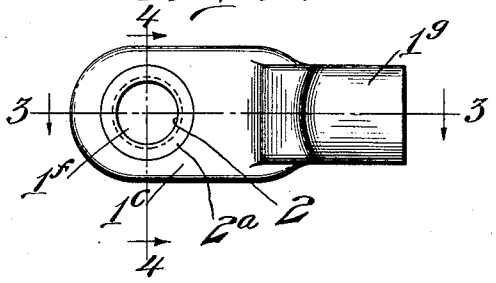


Fig. 3.

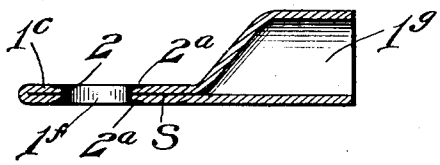


Fig. 4.

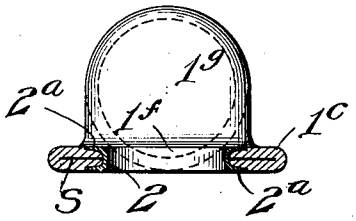
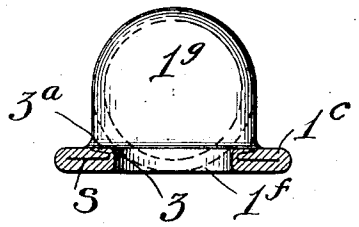


Fig. 5.



Witnesses

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TERMINAL.

1,175,311. Specification of Letters Patent. Patented Mar. 14, 1916.

Application filed May 29, 1915. Serial No. 31,198.

To all whom it may concern:

Be it known that I, HOWARD B. SHERMAN, a citizen of the United States, residing at Battle Creek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Terminals; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to so called "terminals" attached to the end of a bunch of wires or a wire cable, to facilitate making electrical connections therewith, and in particular is an improvement upon the terminals shown in the application of Herbert B. Andrews filed April 19, 1915, Serial No. 22,446, but is also useful in connection with other terminals formed of metal tubing or sheet metal and having one end flattened to form a shank.

The objects of my invention are to insure a good connection between the flattened portions or walls of the shank; to prevent solder or other metal used in sweating an electric cable end into the terminal socket escaping through the opening in the shank of the terminal; to prevent moisture entering the shank at such opening and to make and maintain a better electrical connection between the walls of the shank.

I will describe the invention as applied to terminals such as shown in said Andrews's application and summarize the invention in the claim.

In the drawings:—Figure 1 is a side view of an "Andrews" terminal as improved by and embodying my invention. Fig. 2 is a top plan view thereof. Fig. 3 is a longitudinal section on line 3—3 Fig. 2. Fig. 4 is an enlarged transverse section on line 4—4 Fig. 2. Fig. 5 is an enlarged transverse section, illustrating a modification of the construction.

The terminals are preferably made from a metallic cartridge having an internal diameter corresponding to that desired for the socket of the finished terminal, and the closed end of the cartridge being flattened by compressing the walls thereof by any suitable means, such flattened portion as indicated in Figs. 1 and 3 forming the shank 1^e of the finished terminal and the unflattened tubular portion thereof forming the socket 1^g thereof, said shank and socket being integral. When formed from a cartridge as described the shank portion has its outer end rounded as indicated in Fig. 2. The shank 1^e has an opening indicated at 1^f for engagement with a retainer, such, for instance, as a binding post, or any suitable fastening or supporting device. Such terminals are usually secured to the cable by soldering or sweating the terminal thereon in the usual manner. If solder should exude into the opening 1^f it would clog said opening, and have to be removed before the terminal could be properly attached to the retainer, thus causing considerable annoyance and delay.

It will be observed by reference to Fig. 3 that if the socket 1^g was filled with hot solder such solder might pass through the shank to the opening 1^f, particularly if the upper and lower collapsed walls of the shank should be slightly sprung apart, as might happen in forcing the end of a cable into the socket.

To prevent solder escaping into or clogging the opening 1^f, or moisture entering the socket or shank through such opening, the space between the upper and lower walls of the shank indicated by the line S is hermetically closed around the periphery of the opening preferably by inserting a ferrule 2 in said opening and flanging the upper and lower edges of this ferrule over the top and bottom walls of the shank as shown in Figs. 3 and 4, by suitable tools, preferably using sufficient pressure to embed the flanges 2^a of the said ferrule into the upper and lower faces of the shank so as to keep the shank smooth surfaced.

In some instances I may form the ferrule integral with one wall of the shank, as indicated in Fig. 5, by protruding metal from such member through and around the edges of the opening in the opposite member of the shank, as indicated at 3 in Fig. 5, and spreading or flanging the upper edge of this protruding portion over the other member as indicated at 3^a in Fig. 5; preferably compressing the same so that the shank will be smooth surfaced.

While I propose to apply the invention particularly to the Andrews's terminal as above stated, it could also be applied to other terminals made from short sections of pipe each having one end flattened, or from sheet metal bent into proper form. The invention also serves as a means for more

firmly uniting the walls of the shank together at and around the opening, and prevents separating of the shank when a cable end is forced into the terminal and makes or maintains a better electrical connection between the walls of the shank and the retainer.

What I claim is:

A terminal consisting of a metallic cartridge open at one end and closed at its other end, the open end forming a socket and the closed end being flattened to form a double walled shank, said shank having an opening therethrough for connection with a retainer, and an annular ferrule inserted in said opening and having its ends flanged over the walls of the shank around the opening to prevent the passage of matter into or from the shank at said opening, substantially as described.

In testimony that I claim the foregoing as my own, I affix my signature in presence of two witnesses.

HOWARD B. SHERMAN.

Witnesses:

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