P. WINDMAN.

GROUND CLAMP.

APPLICATION FILED JAN. 20, 1920.

1,368,083. Patented Feb. 8, 1921.

Fig. 1.

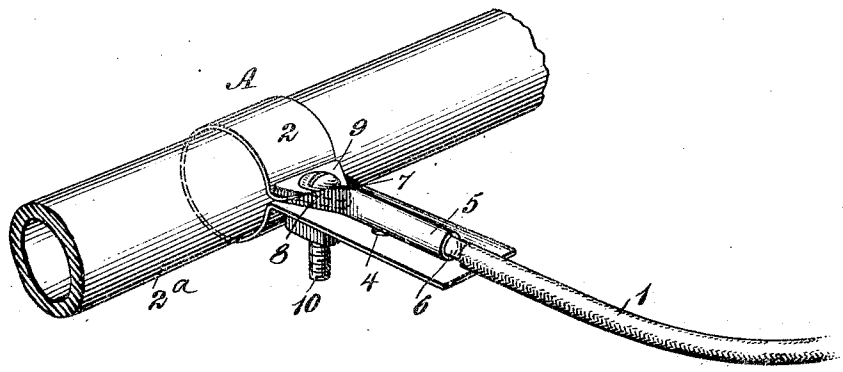


Fig. 2.

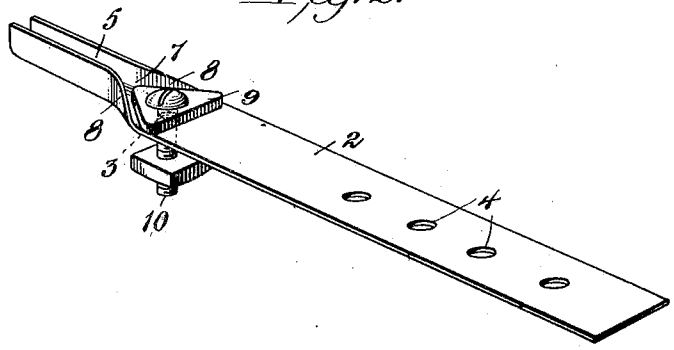
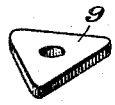


Fig. 3.



WITNESSES

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GROUND-CLAMP.

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To all whom it may concern:

Be it known that I, PHILIP WINDMAN, a citizen of Russia, and a resident of Perth Amboy, in the county of Middlesex and State of New Jersey, have invented a new and Improved Ground-Clamp, of which the following is a full, clear, and exact description.

This invention relates to a ground clamp for the purpose of grounding an electric conductor on a pipe or equivalent grounded element.

The invention has for its general objects to improve and simplify the construction of devices of this character so as to be reliable and efficient in use, comparatively simple and inexpensive to manufacture, and so designed as to have maximum durability.

A more specific object of the invention is the provision of a ground clamp of that type formed of a strip of metal which is adapted to be clamped around a pipe, one extremity of the strip being shaped into a novel form of socket for receiving the electric conductor, the point of juncture of the socket with the flat portion of the strip being so shaped and reinforced by a novel form of washer as to give the desired rigidity to the socket to which the electric conductor is anchored.

With such objects in view, and others which will appear as the description proceeds, the invention comprises various novel features of construction and arrangement of parts which will be set forth with particularity in the following description and claims appended hereto.

In the accompanying drawing, which illustrates one embodiment of the invention and wherein similar characters of reference indicate corresponding parts in all the views,

Figure 1 is a perspective view of the ground clamp in use;

Fig. 2 is a perspective view of the clamping strip before being applied to a pipe and before the conductor is soldered to the strip; and

Fig. 3 is a perspective view of the reinforcing washer of the clamping bolt.

Referring to the drawing, 1 designates an electric conductor, and 2^a the pipe on which the conductor is grounded by the ground clamp A. This clamp comprises a strip of metal 2 which has an aperture 3 adjacent one end, and a series of apertures 4 adjacent the opposite end, whereby the strip or band can be applied around pipes of different diameters, and a clamping bolt is inserted through the aperture 3 and that one of the series of apertures 4 that registers therewith.

The extremity of the strip beyond the opening 3 is formed into a longitudinal socket 5, by bending the opposite longitudinal edges upwardly, as shown in Fig. 1. The bared end 6 of the conductor 1 is placed in this trough-like formation, and then the upstanding edges are curled inwardly toward each other in close embracing relation to the wire 6 of the conductor. To make a better electrical connection solder is run into the socket by being placed in the converging mouth 7 formed by the upstanding flanges 8 between the socket and the flat part of the band. In this triangular mouth or recess formed by the flanges is arranged a triangular reinforcing washer 9 which is held in place by the bolt 10, which clamps the ends of the band together. This washer coöperates with the flanges to materially stiffen the clamp at a point where the greatest strain is brought to bear by lateral strains imparted to the clamp by the conductor. A clamp of this character is easily and quickly applied to a pipe, and also the conductor can be easily, quickly and securely anchored on the clamp.

From the foregoing description taken in connection with the accompanying drawing, the advantages of the construction and method of operation will be readily understood by those skilled in the art to which the invention appertains, and while I have described the principle of operation, together with the device which I now consider to be the best embodiment thereof, I desire to have it understood that the device shown is merely illustrative and that such changes may be made when desired as fall within the scope of the appended claims.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A ground clamp comprising a metal strip having apertures adapted to be brought into register when the strip embraces a grounding element, a bolt passing through the apertures, a triangular washer on the bolt, the edges of the strip at one end being formed into a socket having flanges extending from its inner end to the edges of the strip at points adjacent the washer, whereby the flanges and washer serve to reinforce the portion of the strip lying between the grounding element and the socket.

2. A ground clamp comprising a strip of

material having the opposite side edges of one extremity bent inwardly to form a socket for the reception of a conductor wire the juncture of said edges with the flat body portion of the strip constituting converging flanges, said strip having an opening therethrough disposed between the flanges, the opposite end of said strip having a plurality of apertures adapted to selectively register with said opening, a bolt adapted to pass therethrough, and a triangular washer on said bolt adapted to lie between the flanges and co-act therewith to reinforce the strip adjacent the flanges.

3. A ground clamp constructed of a strip of material having the opposite side edges of one extremity bent inwardly to provide a socket, the portion of the edges at the juncture of the socket with the remainder of the strip forming converging flanges, said strip having an opening therethrough located between the flanges, and a plurality of apertures at its opposite end adapted to be selectively registered with the opening when the strip embraces a grounding element, a bolt adapted to pass through said alined openings for securing the clamp in place on the grounding element, and a triangular washer on said bolt adapted to lie between the flanges and co-act therewith to reinforce the strip adjacent said flanges.

PHILIP WINDMAN.