W. H. BLOOD, Jr.

GROUND TERMINAL CONNECTION FOR ELECTRIC CONDUCTORS.

APPLICATION FILED JULY 9, 1915.

1,191,940. Patented July 25, 1916.

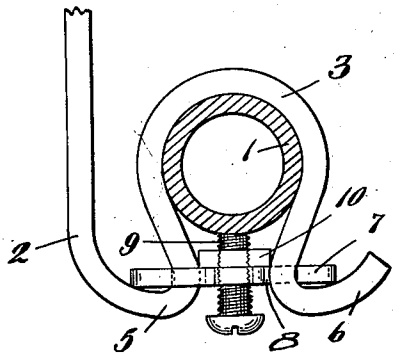


Fig. 1.

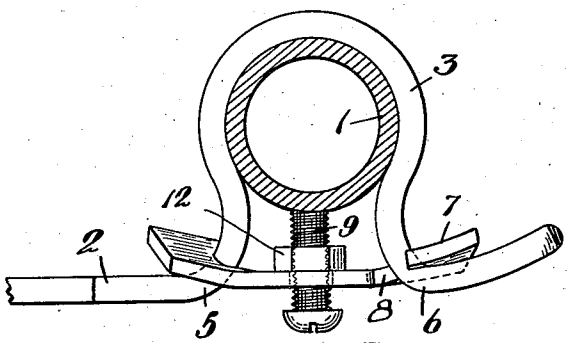


Fig. 3.

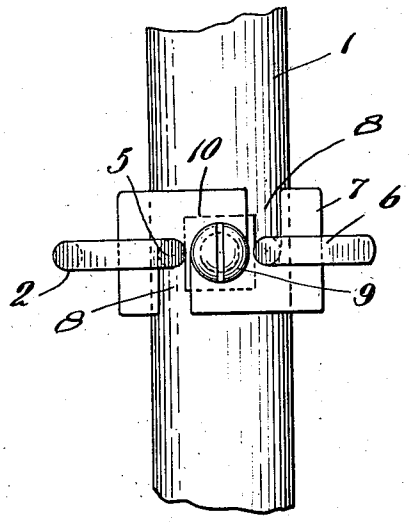


Fig. 2.

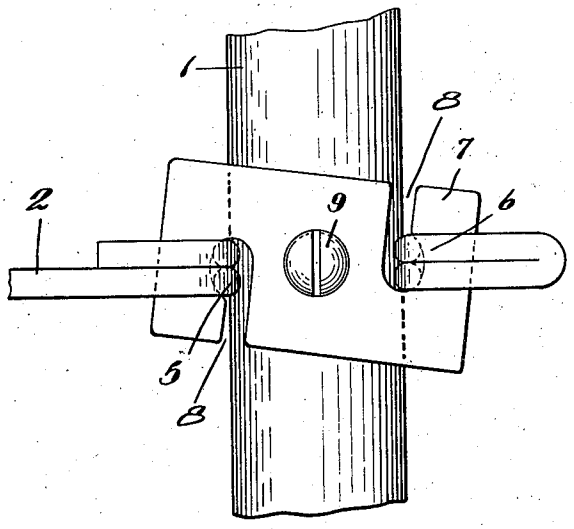


Fig. 4.

Witness:
H. B. Davis.

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UNITED STATES PATENT OFFICE.

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GROUND-TERMINAL CONNECTION FOR ELECTRIC CONDUCTORS.

1,191,940. Specification of Letters Patent. Patented July 25, 1916.

Application filed July 9, 1915. Serial No. 38,983.

To all whom it may concern:

Be it known that I, WILLIAM H. BLOOD, Jr., a citizen of the United States, residing at Wellesley, in the county of Norfolk and State of Massachusetts, have invented an Improvement in Ground-Terminal Connections for Electric Conductors, of which the following is a specification.

In grounding electric conductors it is a common expedient to use a water pipe or other pipe as the terminal, and to attach the conductor thereto. Safety demands that the connections shall be efficient and permanent, and the underwriters so require. Heretofore it has been common to solder the conductor to a specially made terminal-clamp arranged for engagement with the pipe. Other expedients also have been employed, such as winding the conductor tightly around the pipe without soldering, which has been found to be unreliable owing to the coiled end-portion uncoiling and loosening its grip on the pipe, or breaking by reason of the weakening from over-strain.

My invention embodies a new form of ground connection consisting of a novel combination including the end-portion of an electric conductor, bared if the conductor is covered with insulation, and bent to form a circular embracing portion for the pipe with a loop-like formation at each end thereof, a connecting-plate or member arranged to engage the loop-like ends of said embracing portion, and means to exert upon said connecting-plate a strain or pressure in an outward direction, substantially radial to the embracing-portion thus to cause the embracing-portion to tightly engage the pipe or other terminal. The electric conductor employed should be of heavy or stiff wire.

Figure 1, is a side elevation of a ground terminal connection embodying this invention. Fig. 2, is a bottom plan view of the same. Fig. 3, is a side elevation of a modified form of my invention, and, Fig. 4, is a bottom plan view of the same.

In the embodiment of my invention shown in Figs. 1 and 2, wherein a simple form is shown for illustration, 1 represents the pipe, and 2 the end-portion of the electric-conductor, which is bared if the conductor is covered with insulation. This conductor is composed of quite heavy or stiff wire. Said end-portion of the conductor is bent to form a circular embracing-portion 3 of a diameter to snugly engage or fit the pipe, and loop-like portions at the ends of said embracing-portion, designated at 5 and 6. A connecting-plate or equivalent member 7 is provided, having slots, recesses or holes, 8, which may be cut inward from its opposite edges. A bolt is provided as a means for exerting upon said connecting-plate an outward thrust, thereby to cause the embracing-portion to tightly engage the pipe, and, as here shown, the shank 9 of said bolt is extended through a hole in the plate 7, which may or may not be threaded, and its end brought into engagement with the pipe, and a nut 10, is or may be arranged on the threaded shank-portion between the plate and pipe, which nut is also arranged between the loop-like portions and thereby held by said portions against turning while the bolt is turned. Turning of the bolt acts to move the nut in an outward direction on the shank and against the plate, to thereby move said plate in an outward direction and draw the embracing-portion into firm engagement with the pipe. The nut may be held against turning by any suitable means.

In the embodiment of the invention as shown in Figs. 3 and 4, the nut 12 is made smaller and does not engage the loop-like portions of the wire, but instead is adapted to be moved along on the shank of the bolt against the connecting-plate, thereby exerting a strain on said connecting-plate in an outward direction to cause the embracing-portion to firmly engage the pipe. In this instance the nut will be held by a wrench and the screw turned or vice versa. Furthermore, in the modification here shown the end-portion of the wire is reflexed and the two strands are both bent to form an embracing-portion with loop-like ends.

The ground-terminal device here shown may be arranged and applied by an unskilled workman, and is simple and easy to manufacture.

I claim:—

1. A grounding-device for electric conductors, consisting of a wire conductor bent to form an embracing-portion for embracing the ground terminal, and having loop-like ends, a connecting-plate having slots extended inward from its opposite edges to receive the wire at the loop-like ends of the embracing-portion, and means to engage the ground

terminal and to exert upon said plate an outward thrust to cause the embracing-portion to tightly engage the terminal.

2. A grounding-device for electric-conductors, consisting of a wire conductor bent to form an embracing-portion for embracing the ground terminal, and having loop-like ends, a connecting-plate having slots extended inward from its opposite edges to receive the wire at the loop-like ends of the embracing-portion, and a bolt associated with said plate, its screw extending through a hole in the plate and engaging the terminal and its nut arranged for engagement with the inside of the plate.

3. A grounding-device for electric-conductors, consisting of a wire conductor bent to form an embracing-portion for embracing the ground terminal, and having loop-like ends, a connecting-plate arranged for engagement with the wire at the loop-like ends of the embracing-portion, a bolt associated with said plate, its screw extending through a hole in the plate and engaging the terminal, and its nut arranged on the threaded shank of the screw at the inside of the plate, which nut is held from turning by engaging the loop-like ends of the embracing-portion.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM H. BLOOD, JR.

Witnesses:
B. J. NOYES,
H. B. DAVIS.