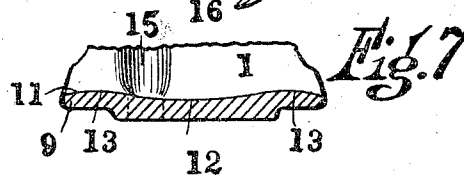
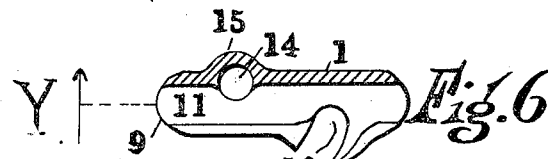
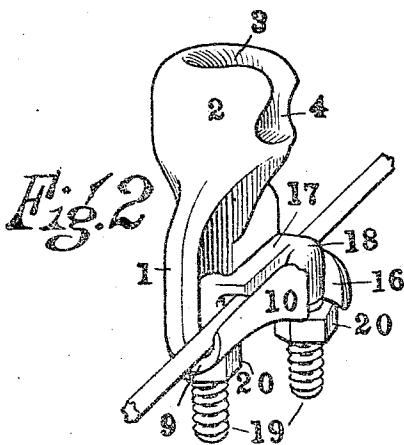
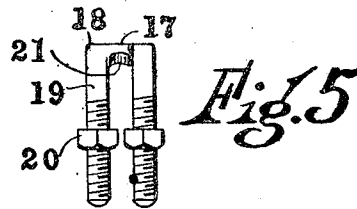
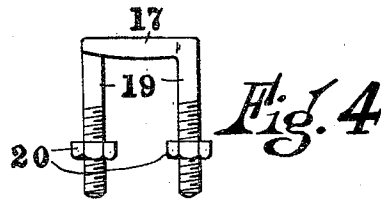
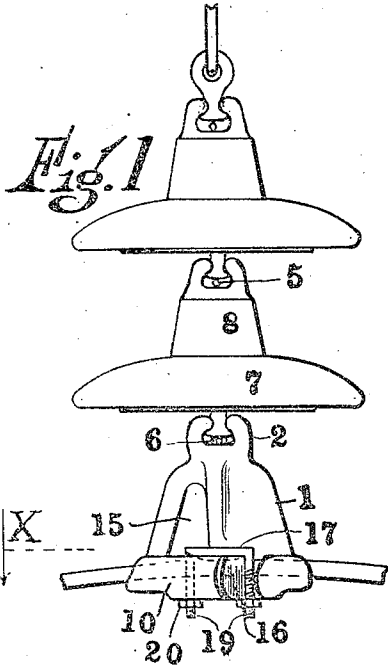


A. O. AUSTIN.
SUSPENSION CLAMP.
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951,298.

Patented Mar. 8, 1910.



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SUSPENSION-CLAMP.

951,298.

Specification of Letters Patent.

Patented Mar. 8, 1910.

Application filed December 9, 1909. Serial No. 532,274.

To all whom it may concern:

Be it known that I, ARTHUR O. AUSTIN, a citizen of the United States, residing at Barberton, in the county of Summit and State of Ohio, have invented new and useful Improvements in Suspension-Clamps, of which the following is a specification.

This invention relates to suspension clamps for supporting cables or wires, especially those used for conducting high tension electric currents.

The object of the invention is to provide a device of the character named adapted to be suspended from an insulator and provided with a movable clamping member constructed to firmly grasp a cable or wire, and which may be employed when said cable or wire is under tension without dismantling the clamp.

The invention contemplates providing a device of the class named comprising a body portion having a grooved flange extending laterally with respect thereto to receive and support the wire or cable, and a movable clamping element cooperating with said body portion for firmly grasping the cable or wire and so arranged as to be employed without removing any portion of the clamp.

A further object of the invention is to form a portion of the body of the device in such a manner as to be capable of receiving a coupling member for connecting the clamp to an insulator so as to permit a reasonable amount of movement of the clamp, but so limiting the movement thereof as to prevent the clamp from striking the insulator, thus eliminating all danger of damage to the latter should the cable or wire break on one side of the clamp, and the clamp itself may be so proportioned that when swung in any direction it will not come in contact with the insulator from which it is suspended.

A further object of the invention is to construct the movable clamping member with a seat to accommodate or receive a portion of the cable or wire and cooperate with the grooved flange of the body portion to obtain a firm grasp upon the wire or cable.

With the foregoing and other objects in view, the invention consists in the novel construction, combination and arrangement of parts constituting the invention to be hereinafter specifically described and illustrated in the accompanying drawings which form a part hereof wherein is shown the preferred

embodiment of the invention, but it is to be understood that changes, variations and modifications can be resorted to which come within the scope of the claims hereunto appended.

In the drawings in which similar reference numerals indicate like parts in the different figures: Figure 1 is a view in side elevation of a clamp embodying this invention, showing the same suitably supported by a plurality of insulators. Fig. 2 is a perspective view of the clamp shown in Fig. 1. Figs. 3, 4 and 5 are top, side and end elevations, respectively, of the movable clamping member. Fig. 6 is a sectional view of the clamp on line X of Fig. 1; and, Fig. 7 is a section of Fig. 6 on line Y.

My improved clamp embodies a body portion 1, preferably having a greater width than thickness and provided at its top with a head 2 having therein a recess 3 provided with a contracted, inverted T-shaped mouth 4 and with a contracted opening narrower than the body of said recess extending upwardly through the top of said head. This recess is further preferably formed with curvilinear sides and is adapted to receive the headed end of a pin 6 depending from an insulator unit 7. The head is seated in the recess by being passed laterally through the T-shaped mouth 4. When the head of the pin 6 is seated in the recess, the shank of the pin will extend upwardly through the upwardly-extending contracted opening in the head 2. The size of the head of the pin 6 is such as to permit a limited movement of the two members with respect to each other, and when the pin is raised upwardly within the recess, the head portion thereof locks within the contracted portion of the recess 3. The head is further provided with a transversely-extending opening 5 communicating with the recess through which a locking key may be inserted for preventing a descent of the head of the pin and the consequent withdrawal of the latter.

Each of the insulator units is preferably provided with a cap 8 having the upper end formed in the same manner as the head 2 of the clamp, and as it is customary to use a plurality of these insulators, they will all be preferably connected in the same manner as the clamp is connected to the lowermost of these units. It will be obvious of course that any number of insulator units may be

employed as may be necessary to effect a perfect insulation of the clamp.

The lower part of the body portion 1 is provided with a lateral flange 9 having an upturned marginal edge 10 to form a channel or groove 11 between it and the face of the body portion 1. The floor of the groove 11 is formed upon curvilinear lines with the ends thereof downwardly-turned and with the central portion concaved at 12, on either side of which are convexed portions 13, 13. (See Fig. 7.) Adjacent the groove 11 is an aperture 14, the wall of the body portion being outwardly-bent to form a recess 15 immediately above this aperture. The upturned marginal edge 10 is provided with projecting members forming between them a recess 16 extending into the groove 11, as shown in Figs. 2 and 6, for a purpose to be later described.

The movable member of the clamp comprises a head 17 having integral lugs 18 at both ends thereof extending in opposite directions and on opposite sides of the head 17. Preferably formed integral with each of the lugs 18 are depending, parallel threaded studs 19 each carrying a nut 20. The under face of the head 17 is convexed and provided with a groove or channel 21 approximately conforming in contour to the groove 11 in the flange 9.

The clamp is set up by removing the nuts 20 from the studs 19 and then inserting one of the studs in the aperture 14 and the other one in the recess 16 of the body portion, so that the head 17 of the movable member will be received in the channel or groove 11, after which the nuts are replaced on the studs 19.

In placing a wire or cable under tension in the clamp, the nuts are loosened sufficiently to permit the head 17 of the movable member, when raised slightly, to clear the upturned edge 10 of the flange 9, and the stud which is positioned in the recess 16 is swung outwardly, with the stud in the aperture 14 constituting a pivot until the cable or wire can be passed upwardly and placed in the groove 11, after which the movable member is swung to its original position with one of the studs in the recess 16, and by tightening the nuts 20 the movable member firmly clamps the cable or wire against the floor of the groove 11.

The head 17 of the movable member is positioned immediately over the concaved portion of the groove 11, so that when the nuts are tightened it forces the cable or wire downwardly into this portion, thereby more firmly engaging the same and causing a more secure connection of the clamp with the cable, and at the same time the outer ends of the groove being slightly downwardly-turned, they are less liable to injure the wire which ordinarily sags considerably between the supporting clamps.

It will be noted that it is not necessary to remove the movable member from the clamp at any time for the placement or removal of the cable, but all that is necessary is to loosen the bolts and swing this member outwardly and the cable may be readily released or replaced.

It will be obvious of course that any other preferred form may be employed for connecting the upper end of the clamp with the insulator unit than that shown, but the form shown is the preferred one.

I claim:

1. A suspension clamp comprising a body portion the upper portion of which is provided with means for attachment to a coupling member, the lower part provided with a laterally-extending flange having a groove to receive a cable or wire, said flange further provided with an aperture disposed on one side of said groove and an open recess formed in the outer face thereof on the opposite side of said groove and a movable clamping member provided with a body portion having depending threaded studs disposed on opposite sides of and at the ends of its body portion, said studs adapted to be passed through said aperture and into said recess for co-acting with said groove for clamping a cable or wire.

2. A suspension clamp comprising a body portion the upper portion of which is provided with a recess having an inverted T-shaped opening adapted to receive a headed coupling member for supporting said device, the lower part of the body portion of said device provided with a laterally-extending flange having a groove to receive a cable or wire, said flange further provided with an aperture disposed on one side of said groove and an open recess formed in the outer face thereof on the opposite side of said groove and a movable clamping member provided with a body portion having depending threaded studs disposed on opposite sides of and at the ends of its body portion, said studs adapted to be passed through said aperture and into said recess for co-acting with said groove for clamping a cable or wire.

3. A suspension clamp comprising a body portion provided with a head, said head provided with a recess having a T-shaped opening communicating therewith adapted to receive a headed coupling member for supporting said device, the lower part of said body portion provided with a laterally-extending flange having an upturned marginal edge forming a groove to receive a cable or wire, said body portion further provided with an upwardly-extending aperture on one side of said groove, said upwardly-extending marginal edge provided with a pair of spaced lugs to form a recess between them extending to the opposite side

of said groove and a clamping member comprising a body portion with oppositely-turned ends, said body portion adapted to engage the upper portion of a cable or wire mounted in said groove with the oppositely-turned ends thereof disposed respectively over said aperture and said recess and means for clamping said body portion onto said wire or cable.

- 10 4. A suspension clamp comprising a head provided with means for connecting the same to a supporting medium, said head provided with a recess having a T-shaped opening communicating therewith to receive a
15 headed coupling member for supporting said device, the lower part of said body portion provided with a laterally-extending flange having an upturned marginal edge forming a groove to receive a cable or wire,
20 said body portion further provided with an upwardly-extending aperture on one side of said groove, said upwardly-extending marginal edge provided with a pair of spaced lugs to form a recess between them
25 extending to the opposite side of said groove and a clamping member comprising a body portion with oppositely-turned ends, said body portion adapted to engage the upper portion of a cable or wire mounted in said
30 groove with the oppositely-turned ends thereof disposed respectively over said aperture and said recess and means for clamping said body portion onto said wire or cable.
- 35 5. A suspension clamp comprising a body portion having a head provided with means for connecting the same to a supporting coupling member, the lower part of said body portion provided with a laterally-projecting grooved flange, the outer portion of
40 which is upturned to constitute a marginal edge, said marginal edge provided with spaced lugs forming a recess therebetween extending to the grooved portion of said flange, said flange further provided on the
45 opposite side of the groove with an up-

wardly-extending aperture, a clamping member comprising a body portion having the under face thereof downwardly-convexed and shaped to fit a wire or cable positioned in said groove and with its ends
50 turned in opposite directions to register with said aperture and said recess and means extending through said aperture and recess for clamping said body portion onto
55 said cable or wire.

6. A suspension clamp comprising a body portion having a head provided with means for connecting the same to a supporting coupling member, the lower part of said
60 body portion provided with a laterally-projecting grooved flange, the floor of said flange formed upon curvilinear lines with the central portion thereof concave and with the adjacent portion convex and with the
65 ends thereof downwardly-turned, the outer portion of said flange upturned to constitute a marginal edge, said marginal edge provided with spaced lugs forming a recess between them extending to the groove in
70 said flange, said flange further provided on the opposite side of said groove with an upwardly-extending aperture, a clamping member comprising a body portion having the under face thereof downwardly-convexed and shaped to fit a wire or cable positioned in said groove and positioned with its ends turned in opposite directions to register with said aperture and recess and with its medial convex portion immediately
75 above the concave portion of the floor of said groove and means extending through said aperture and recess for clamping said body portion onto said cable or wire.

In testimony whereof I have hereunto set
85 my hand in presence of two subscribing witnesses.

ARTHUR O. AUSTIN.

Witnesses:

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C. E. HUMPHREY.