G. S. GARDNER.

CABLE CLAMP.

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1,266,933.

Patented May 21, 1918.

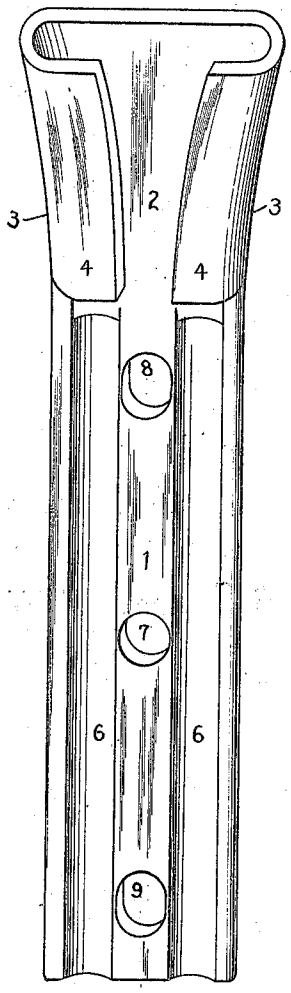


Fig. 1

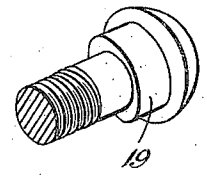


Fig. 4.

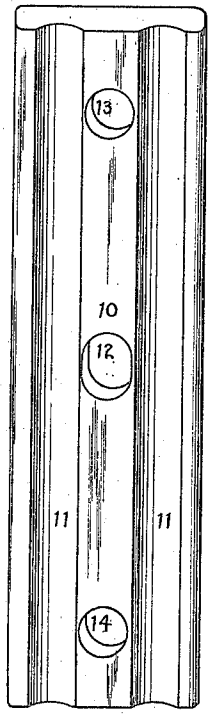


Fig. 2

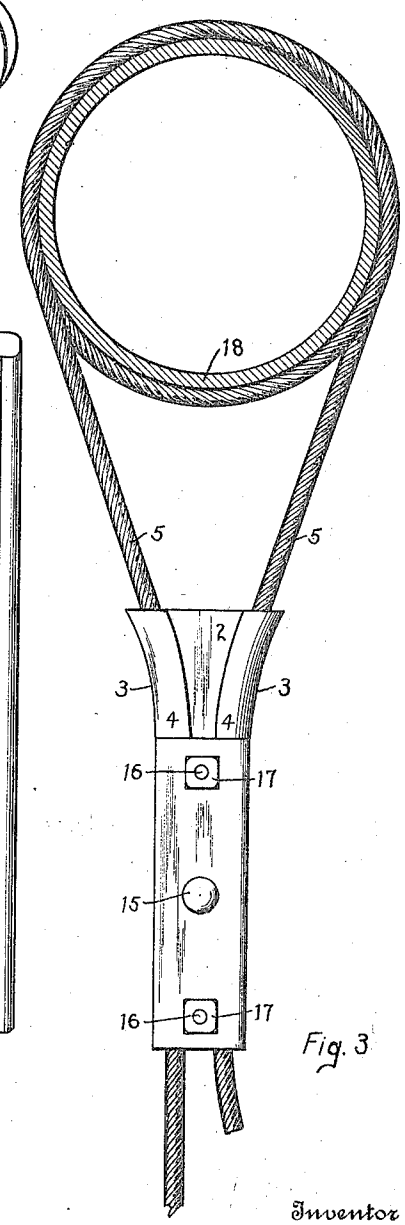


Fig. 3

Witnesses

C. G. Caull

E. T. Austen

Inventor

George Stafford Gardner

By Howard P. Smith

His Attorney

UNITED STATES PATENT OFFICE.

GEORGE STAFFORD GARDNER, OF COLUMBUS, OHIO, ASSIGNOR TO JOHN RANDOLPH FLETCHER, OF DAYTON, OHIO.

CABLE-CLAMP.

1,266,933. Specification of Letters Patent. Patented May 21, 1918.

Application filed October 5, 1915. Serial No. 54,268.

To all whom it may concern:

Be it known that I, GEORGE STAFFORD GARDNER, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a new and useful Improvement in Cable-Clamps, of which the following is a specification.

This invention relates to new and useful improvements in cable clamps.

The principal object of the invention is to provide novel means for joining two parts of a rope, wire or other cable in parallel, in a simple, efficient and expeditious manner. My improved cable clamp overcomes the difficulties that have been heretofore encountered in uniting the strands of wire and other cables, in that it may be readily applied thereto by one man instead of two or more, and does not have a tendency to pinch or cut the wire, or destroy its galvanized coating, when driven forward to take up any slack that may exist therein. Other important and incidental objects will be set forth in the following specification, and particularly pointed out in the subjoined claims.

The preferred form of embodiment of my invention is illustrated in the accompanying drawings, of which Figure 1 is a perspective view of the back plate, showing its outwardly flaring mouth portion, and the V shaped opening therein, for receiving the cable strands. Fig. 2 is a perspective view of the front plate, showing its longitudinal channel portions and the holes therebetween for receiving the connecting bolts. Fig. 3 is a top plan view of the clamp as applied to a guy cable for a pole and Fig. 4 a perspective view of what is known as a "track" bolt.

Throughout the specification and drawings, like reference characters denote corresponding parts.

Referring now to the drawings for a detailed description of the preferred form of embodiment of my invention, the numeral 1 designates an elongated back plate preferably constructed of malleable iron, steel or other resilient metal, so that it may be driven or hammered without injury. This back plate 1 terminates at one end in an outwardly flaring portion 2. Preferably integral with, and curving outwardly and inwardly toward each other from the tapered side edges 3—3 of the outwardly flaring portion 2 of the back plate 1, are two inclosing walls 4—4 respectively, adapted to firmly receive two cable strands 5—5. This structure constitutes a strand directing device. The adjacent edges of the walls 4—4 are cut or otherwise formed to diverge from each other, from their inner to their outer ends, whereby there is provided between them a V shaped opening through which the said cable strands may be passed by one man with ease, to positions beneath their respective inclosing walls 4—4. These walls curve outwardly in the directions their respective cable strands take toward the pole, with the result that when the clamp is driven up tight to take up the slack in the wire, the latter will not be injured in any way.

Formed in the upper face of that part of the back plate 1 which extends below its tapered portion 2, in positions to receive the cable strands 5—5 from the inclosing walls 4—4, are two longitudinal shallow channels 6—6. Extending through the middle portion of the back plate 1, between the longitudinal channels 6—6, is a round bolt hole 7, while between the upper and lower ends of said channels there extend through the back plate 1, oblong track bolts 8 and 9 respectively. (See Fig. 1.)

Referring to Fig. 2, the numeral 10 designates an elongated front plate preferably constructed of malleable iron, steel or other resilient metal, and having approximately the same length, width and thickness as that part of the back plate 1 which lies below its tapered portion 2. Formed in the lower face of the front plate 10 are two longitudinal shallow channels 11—11 which are similar to, and are adapted to register with, the channels 6—6 in the back plate 1.

Extending through the middle part of the front plate 10, at a place corresponding to that occupied by the bolt hole 7 in the back plate 1, is an oblong track bolt slot 12. On each side of the slot 12, at places corresponding to those occupied by the slots 8 and 9 in the back plate 1, there extend through the front plate 10 bolt holes 13 and 14 respectively. Accordingly, when the front plate 10 is applied to the back plate 1, a track bolt 15 inserted in the slot 12, may be passed through the hole 7, and track bolts 16 inserted in the slots 8 and 9, may be passed through the holes 13 and 14 respec-

tively. By means of nuts 17 applied to the ends of these bolts, the plates 1 and 10 may be driven toward each other to firmly grip between them the cable strands 5—5 which extend outwardly from their channel portions 6—6, and under the inclosing walls 4—4, to a pole 18 which they serve to brace. A form of track bolt used in this connection is illustrated in Fig. 4. Each bolt is provided beneath its head with an oblong portion 19 adapted to fit in the oblong slots of the clamping members and the ends of the bolts are cylindrical to fit the holes. The shape of the holes, slots and bolts above described insures the elimination of torque and relative movement of the parts and they cannot loosen under the stress of the wind and as a result of weather conditions. The arrangement also prevents the bolt from rotating and the nuts will not drop off. It will be noticed that the bolts are inserted in opposite directions through the clamping plates, whereby they may be placed closer together without interfering with the removal of the nuts or the application of the nuts by means of a wrench. By thus placing the bolts closer together the length of the clamps may be shortened, reducing the cost of manufacture.

In operation, when it is desired to clamp together two strands of wire or other cable, the lineman in a simple and expeditious manner passes the said strands through the V-shaped opening between the adjacent side edges of the inclosing walls 4—4 of the back plate 1, adjusting the lower portions of said strands in the longitudinal channels 6—6 of said plate. Where it was formerly necessary for one lineman to hold the strands together with a pair of connectors while another adjusted the clamp, now by reason of the fact that the inclosing walls above described are so formed as to hold the strands while the front plate 10 is being applied, one man may accomplish the work.

After the cable strands have been placed under the said inclosing walls 4—4, and in the channel portions 6—6, of the back plate 1, the front plate 10 is applied to said first named plate in such a manner that the said strands will enter the former's channel portions 11—11, whereupon the track bolts 15 and 16 are passed through their respective slots and holes in the said plates and the nuts 17 applied. By tightening these nuts, the two plates will be drawn toward each other to compress between them the cable strands which are to be clamped.

The clamp is now ready to be driven toward the pole to take up any slack that may exist in the wire. Heretofore this operation has invariably resulted in the messenger wire being pinched or cut by the rough edges of the clamp, permitting the same to oxidize or rust when exposed to the elements. And even when a galvanized coating has been applied to the wire, that has also been scraped with the same results when the clamp has been driven forward. On the other hand, by reason of the outwardly flaring mouth portion of my clamp, the wire will in no way be harmed during the above operation. Furthermore, after the clamp has been adjusted, the wires will not work away from its flaring end, but will be held in place by it, thereby permitting the nuts to remain in a tight position at all times.

From the above description it will be observed that my combination clamp is neat-appearing, simple and efficient, and may be expeditiously applied with no resulting injury to the wire.

I do not wish to be limited to the details of construction and arrangement herein shown and described, as the same may be varied within the scope of the subjoined claims.

Having described my invention, I claim:

1. In a device of the character described, a pair of cable strands converging from an attaching point and extending thence substantially parallel to each other, clamping means acting to grip said extending portions and hold them substantially parallel, and a device on said converging portion of the strands interposed between the attaching point and said clamping means for directing the strands into such parallelism and for taking up the slack between the clamping means and attaching point.

2. In a device of the character described, a pair of cable strands converging from an attaching point and extending thence substantially parallel to each other, a clamping device having like parallel seats for said extended portions of said strands to secure them in such parallelism, and a device on said converging portion of said strands interposed between the attaching point and said clamping device for directing the strands into such parallelism and for taking up the slack between the clamping device and attaching point.

3. In a device of the character described, a pair of cable strands converging from an attaching point and extending thence substantially parallel to each other, a clamping device having like parallel seats for said extending portions of said strands to secure them in such parallelism, and a device on said converging portions of said strands interposed between the attaching point and clamping device for directing the strands into such parallelism and for taking up the slack between the clamping means and attaching device, said device on said converging portion of the strands comprising a flared base with converging side portions turned upwardly and inwardly to form with the base a structure having an enlarged ori-

fice at one end and a reduced orifice at the other through which structure the converging strands extend.

4. In a clamp, a pair of members each provided with an oblong hole and a round hole, the round hole of one member being in alinement with the oblong hole of the other member, and bolts passing through the alined holes and provided with portions fitting the oblong holes and passing in opposite directions therethrough.

5. In a device of the character described, a pair of cable strands converging from an attaching point, clamping members for clamping said strands together in parallelism, one of said members having an oblong hole the other having a round hole, a track bolt having an oblong portion fitting in said oblong hole and passing through said round hole, a nut for said bolt, and a device on said converging portion of said strand interposed between the attaching point and clamping members for directing the strand into parallelism to be clamped and for taking up the slack between the clamping members and the attaching point.

In testimony whereof I have hereunto set my hand this 2nd day of October, 1915.

GEORGE STAFFORD GARDNER.

Witnesses:
W. V. VAN SEIBEL,
S. D. KILLIAN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."