J. PARK.

ROPE AND WIRE CLAMP.

APPLICATION FILED APR. 27, 1911.

1,066,751. Patented July 8, 1913.

FIG 1.

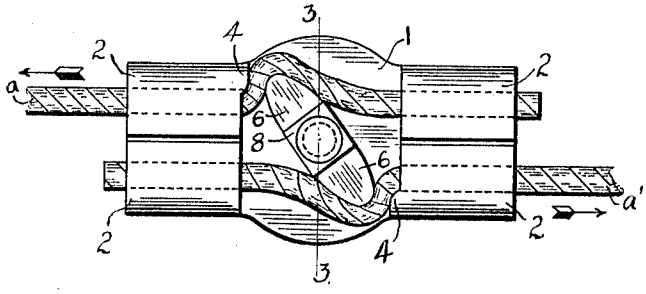


FIG 3.

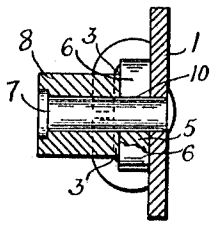


FIG 2.

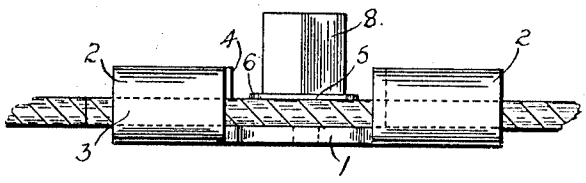


FIG 4.

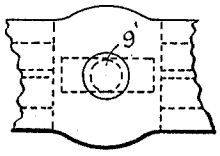
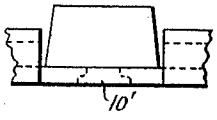


FIG 5.



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ROPE AND WIRE CLAMP.

1,066,751. Specification of Letters Patent. Patented July 8, 1913.

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To all whom it may concern:

Be it known that I, JOHN PARK, a citizen of the United States, residing at Montreal, Canada, have invented certain new and useful Improvements in Rope and Wire Clamps, fully described and represented in the following specification and the accompanying drawings, forming a part thereof.

The object of my invention is to provide a clamp for rope or wire, which is simple in construction and operation and particularly advantageous in making connections between sections of wires or cables where it is required to draw the part tightly and securely together after such connection has been made.

A further object is to provide a clamp which has a minimum of parts wherein the operable features are always in place and ready for action.

The invention consists of a clamping device substantially as shown, and pointed out in the claim.

In the accompanying drawings forming a part of this specification, Figures 1 and 2 are respectively plan and side views of my preferred form of clamp: Fig. 3 is a sectional view on line 3—3 of Fig. 1: Figs. 4 and 5 are partial detail views.

Referring to the drawings illustrating a preferred embodiment of my invention, 1 represents the body portion of the clamp which may be made from sheet metal formed to permit the end portions 2 to be turned over, loop fashion as shown in Fig. 3, to furnish convenient grooves 3 for receiving the parts to be united. These recessed portions 2, in alinement on opposite sides of the clamp, supply two continuous grooves for receiving the respective ends of the rope or wire to be gripped by the clamp; and, loosely pivoted upon the body piece 1 and centrally located between the four grooved portions 2 and between the portions of wire or cable being acted upon, is the gripping member 5 having the two jaws 6 on opposite sides thereof. As the gripper 5 turns upon its pivotal bearing 7 its jaws 6 approach the rounded edges forming abutments 4 of the grooved portions 2, in such manner that the two ropes or sections of wire lying within the grooves, automatically draw the detents of the swivel piece into gripping relation with a force that increases directly in proportion to the tension on the cables.

The curvature of the abutments 4, to be more particularly described, is tangential relative to the circular path of the swivel jaw 6 so that as the jaw 6 approaches the abutment 4 the intervening distance narrows to less than the diameter of the wire or rope to be clamped.

It will be observed also that owing to the oppositely disposed gripping jaws 6 constituting a single piece whatever stress is exerted by either wire upon its contiguous jaw 6 tends to tighten the grip of the other jaw with the result that the respective grips of the two jaws are thereby equalized or balanced, and consequently neither will let go while the other side is in contact with a wire under tension.

The gripper 5 has the rectangular head 8 extending outwardly from the clamp to admit of the use of an ordinary wrench, when required for tightening or loosening the clamp, independently of the action of the wire or cable itself in the manner explained.

The means employed to secure the gripper 5 to the body portion in the form illustrated, is a shouldered stud preferably riveted into the aperture 10 through the body piece 1. In clamps used for smaller gages of wire a simpler form of construction would suffice in which a pivot extension 9^1 of the vertical axis of the gripper 5 as shown in Fig. 4 may be employed. A slightly sunken counterbore 10^1 in such case would accommodate the enlarged head or upset on the end of the pivot 7 as a means for holding the part in place.

While the body portion 1 for clamps adapted to the uses of wire of smaller gages may be more economically manufactured from sheet metal as described above, it is obvious that that portion of my clamp may be as effectually made in various other forms and methods, as for example, from castings or drop forgings, or it may be conveniently machined from a solid block of metal, or otherwise as desired, and it is therefore not intended to limit my application to any such forms of construction.

In operating my device, the two ends of rope or wire to be united are drawn from opposite directions and inserted into the grooves 3 of the clamp as shown in Figs. 1 and 2 so that the wire with stress tending in the direction of the arrow at *a* is pushed first through the grooves 3 having an abutment 4, then over one end of the gripper

5 and into the other groove 3 in alinement with the first, while the end of the wire a^1 pulling in the opposite direction is similarly run through the other grooves 3 and over the opposite end of the gripper. The wires are then drawn to the limit of their tension and released by the operator so that as they tend to return, both acting together, set the gripper jaws 6 firmly against the surface of the wire ends which are in turn firmly pressed against the corresponding fixed abutments 4 on the grooved portions 2, the actions of the jaws tending to indent the surface of the wire or other medium acted upon thereby more firmly fixing its hold thereupon. But if it be desired to lock the clamping device more securely this may be accomplished by aid of a wrench applied to the nut like extension 8 and turning the swivel member so that its jaws 6 will further indent the wire surface being clamped.

What I claim is:—

A wire or cable clamp comprising a body piece having opposite longitudinally extending grooves at each end there being an open space between the ends, and an elongated gripping member pivoted at the central point of said open space the outer walls of two diagonally opposite grooves being extended to form abutments, whereby the distance from the pivotal point to such abutments is less than the distance from the pivotal point to the walls of the other grooves, whereby wires or cables passed through the grooves may be clamped between the abutments and the ends of the gripping member and will have space for passage between the gripping member and the other grooves.

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

JOHN PARK.

Witnesses:
WM. TAYLOR,
H. D. MORRIS.

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