

S. B. DERBY.

CLAMP.

APPLICATION FILED OCT. 23, 1908.

917,718.

Patented Apr. 6, 1909

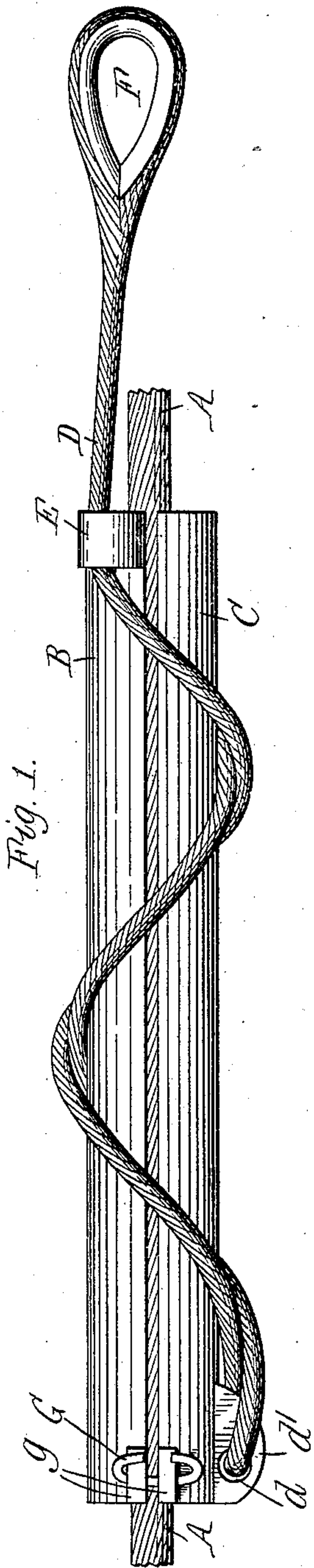


Fig. 1.

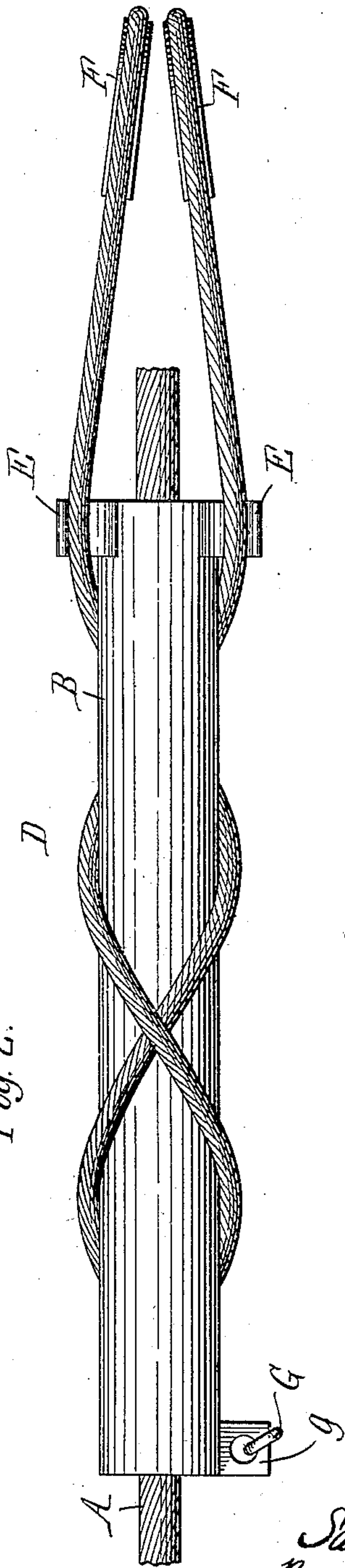


Fig. 2.

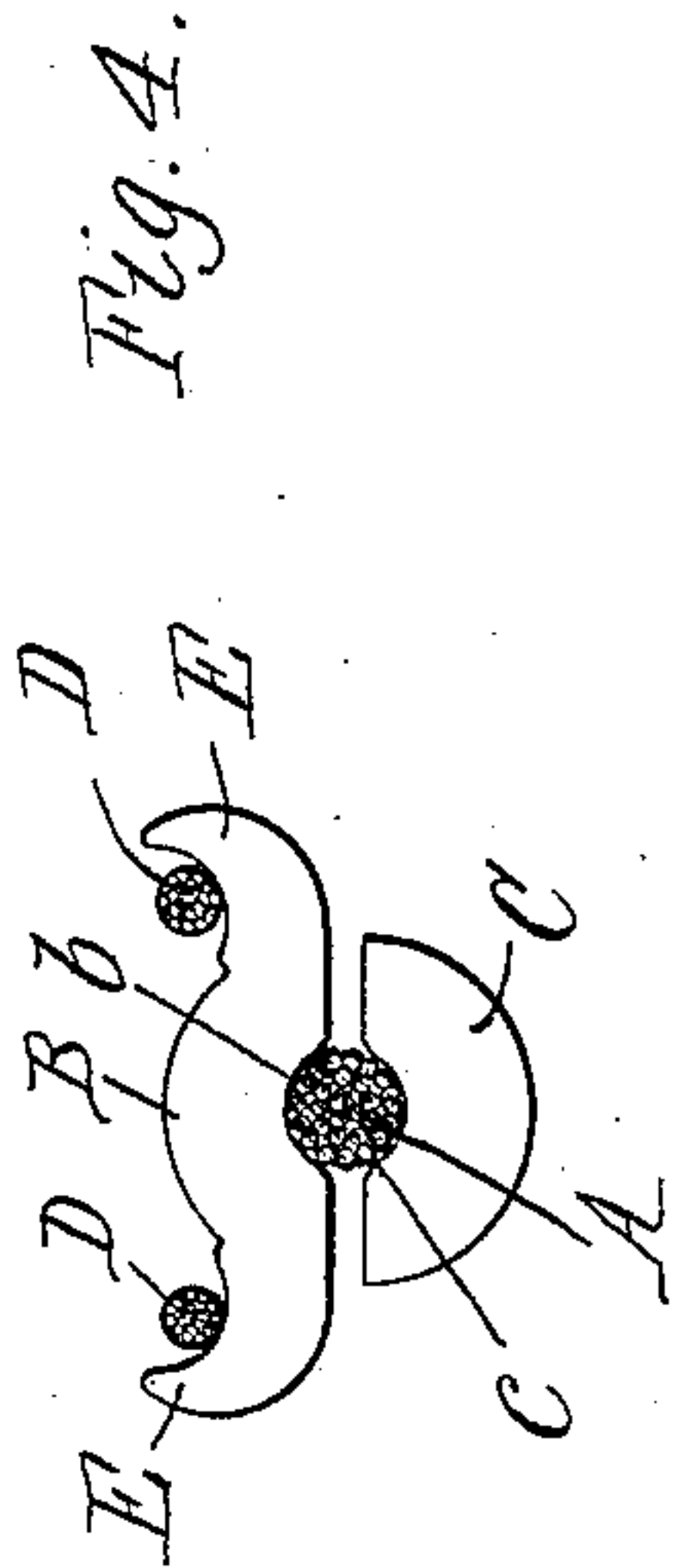


Fig. 3.

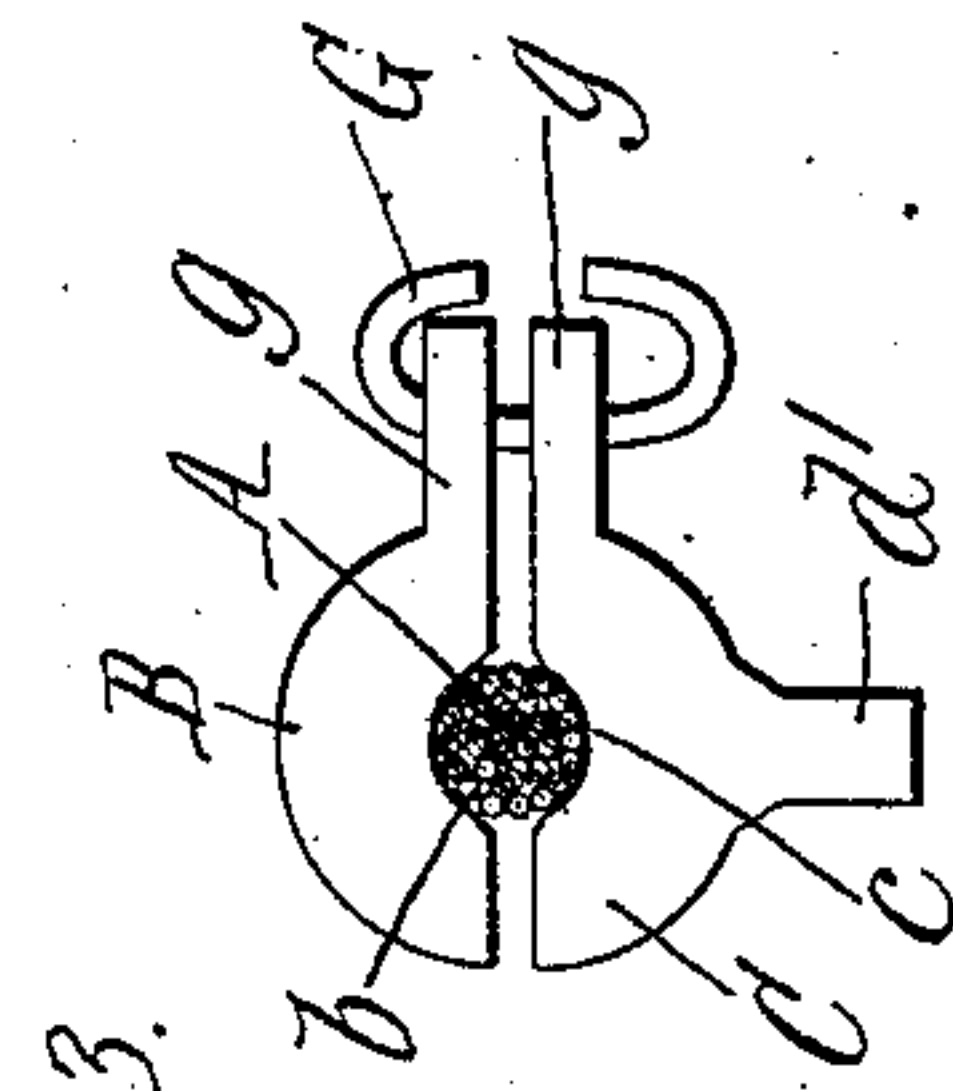


Fig. 4.

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UNITED STATES PATENT OFFICE.

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CLAMP.

No. 917,718.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed October 23, 1908. Serial No. 459,249.

To all whom it may concern:

Be it known that I, SAMUEL B. DERBY, a citizen of the United States, residing at North Tonawanda, in the county of Niagara and State of New York, have invented a new and useful Improvement in Clamps, of which the following is a specification.

This invention relates to improvements in clamps in which parallel opposing clamping members are employed which are adapted to engage a cable, or other article to which they are applied, on opposite sides thereof and clamp the same between them.

The object of this invention is to provide a clamp of this character of simple construction, which will firmly and securely clamp the cable without bending or unduly compressing any part thereof, and in which the force applied for drawing the clamping members together into clamping engagement with the cable, is exerted equally upon both members, and there is no endwise movement of either member relative to the other along the cable during the clamping operation, thus preventing any disarrangement of the parts of the cable by the clamping members.

In the accompanying drawings: Figure 1 is a side elevation of a clamp embodying the invention. Fig. 2 is a plan view thereof. Fig. 3 is an elevation of the rear end of the clamp. Fig. 4 is a similar view of the front end thereof.

Like letters of reference refer to like parts in the several figures.

A represents a cable, and B and C the opposing members of a clamp therefor which extend lengthwise of the cable and engage the same on opposite sides thereof. For the sake of clearness in description, the members B and C will be termed herein the upper and lower clamping members, respectively, as they are shown in the drawings in this position, but it is obvious that these members may be arranged in any other suitable position about the cable, as may be desired. These clamping members are preferably semi-cylindrical in cross-section and are arranged with their inner flat faces adjacent to each other, these faces being provided with central longitudinal grooves or channels *b* and *c* which are adapted to receive and partially embrace the cable for holding the same in position between the clamping members.

The clamping members are drawn toward

each other for clamping and tightening the cable by a flexible clamping rope D which passes centrally through an eye *d* in a lug *d'* on the under side of the lower clamping member C at its rear end, and has its ends wound in opposite directions around the clamping members, crossing each other on opposite sides of the clamp. The ends of the clamping rope extend beyond the front end of the clamp, passing over and supported by laterally-extending ears E formed on opposite sides of the upper clamping member B at its forward end, and terminate in eyes F which are adapted to be connected with the source of power which is to be applied to the clamp.

The clamping rope is preferably crossed adjacent to the lug *d'* to give the rope a better grip upon the clamping members and prevent it from slipping in the eye *d*, but this arrangement is not necessary. Further, the rope may be wound a greater number of times about the clamping members than is shown in the drawings without departing from the invention, and in the place of the single-clamping ropes, two ropes may be substituted if desired, having their inner ends attached to the eye *d* of the lower clamping member and wound about the clamp in opposite directions, similar to the single rope.

When the tightening strain is applied to the outer ends of the clamping rope, this strain is communicated by the rope equally to the outer faces of both the upper and lower clamping members and draws these members toward each other into clamping engagement with the cable without moving either member relatively to the other member lengthwise of the cable, and the greater the strain, the more firmly do the clamping members grip the cable.

The clamp is especially intended for use upon electric power cables which generally consist of a plurality of small conducting wires which are wound in different directions about a central core. On cables of this character, the clamps heretofore used either engage only a short length of cable and tend to kink or bend the cable under strain, causing the wires of the outer winding to separate and forcing the inner wires outwardly between the same, or permit of endwise movement of one clamping member relative to the other along the cable and

thus cause a displacement and disarrangement of the wires of the outer winding. When once forced apart and disarranged, it is practically impossible to return the wires of the cable to their original position and straighten the cable, and as these clamps are generally applied to cables intermediate of their ends, such disarrangement of the wires and bending of the cable is very undesirable. 5
10 The present construction overcomes these difficulties by engaging a sufficient length of cable to prevent kinking or bending thereof, and by communicating the strain equally to both clamping members so that there will be 15 no endwise movement of either member relative to the other.

To release and remove the clamp from the cable, it is only necessary to unwind the clamping rope when the members may be 20 separated and removed. For convenience in holding the two members together in handling the clamp when not in use, they are preferably connected on one side by a link G which passes loosely through lugs or 25 ears g on adjacent sides of the upper and lower clamping members, but any other connection which does not interfere with the clamping movement of the members may be used for this purpose, or such connection 30 may be dispensed with altogether if desired.

I claim as my invention:

1. A clamp comprising longitudinal clamping members adapted to engage opposite sides of a cable, and flexible connecting and 35 tightening means connected with said clamp and extending along and around said clamping members and adapted, under strain, to draw said members toward each other and against the cable, substantially as set forth.

40 2. A clamp comprising longitudinal clamping members adapted to engage opposite sides of a cable, and flexible connecting and tightening means composed of two lengths of rope which are connected with said clamp

and extend along both clamping members 45 and around the same in opposite directions, substantially as set forth.

3. A clamp comprising longitudinal clamping members adapted to engage opposite sides of a cable, flexible connecting and 50 tightening means composed of two lengths of rope which are connected with said clamp and extend along both clamping members and around the same in opposite directions, and means on said clamping members for 55 holding said rope in position thereon, substantially as set forth.

4. In a clamp, the combination of longitudinal clamping members adapted to engage opposite sides of a cable, one of said mem- 60 bers being provided at one end with attaching means and the other member at the opposite end with supporting means, of two lengths of rope which are attached to said attaching means on one of said members and 65 extend along both members and in opposite directions around the same and bear with their free end portions upon said supporting means of the other member, substantially as set forth. 70

5. In a clamp, the combination of longitudinal clamping members adapted to engage opposite sides of a cable, one of said members being provided at one end with an attaching 75 lug and the other member being provided at the opposite end with laterally-projecting supporting ears, of two lengths of rope which are attached to said lug and extend along both members and around the same and bear with their free end portions upon said ears, 80 substantially as set forth.

Witness my hand this 17th day of October, 1908.

SAMUEL B. DERBY.

Witnesses:

E. C. HARD,
C. B. HORNBECK.