No. 851,822. PATENTED APR. 30, 1907.

A. H. MEECH.

CABLE CLAMP.

APPLICATION FILED NOV. 24, 1905.

3 SHEETS—SHEET 1.

Fig. 1.

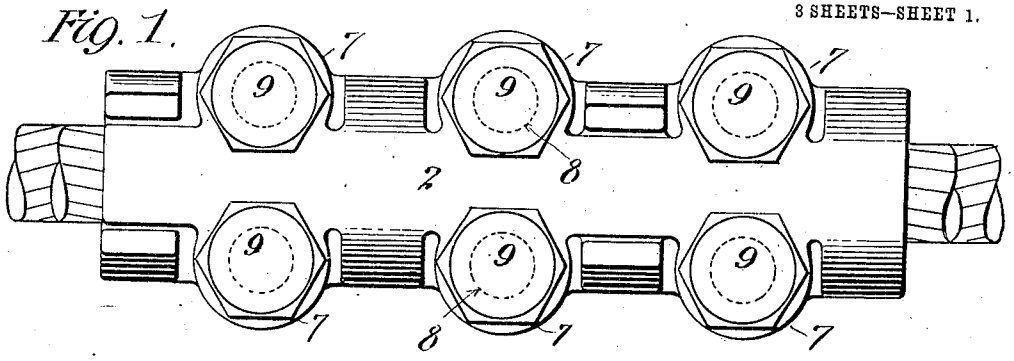


Fig. 2.

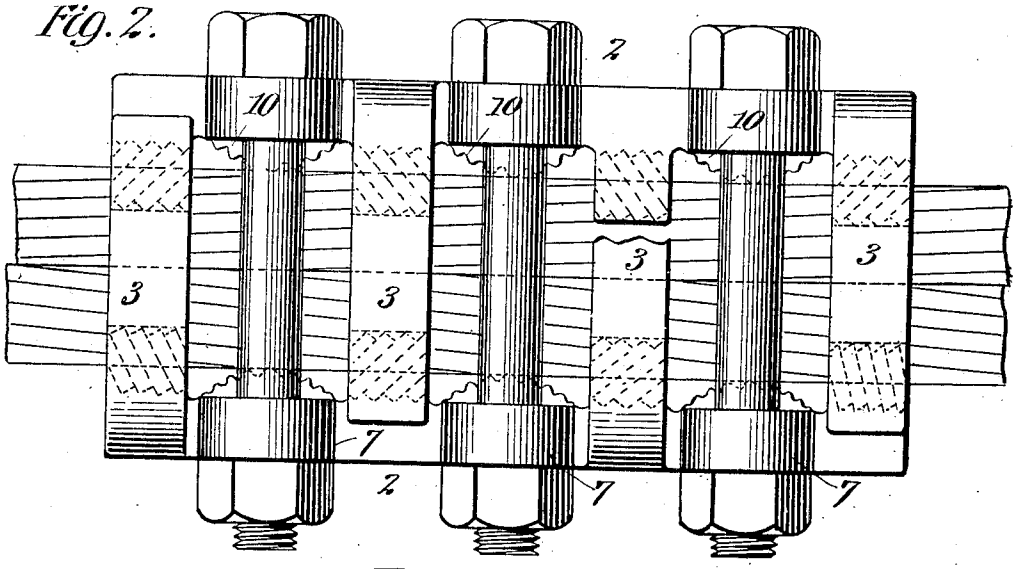
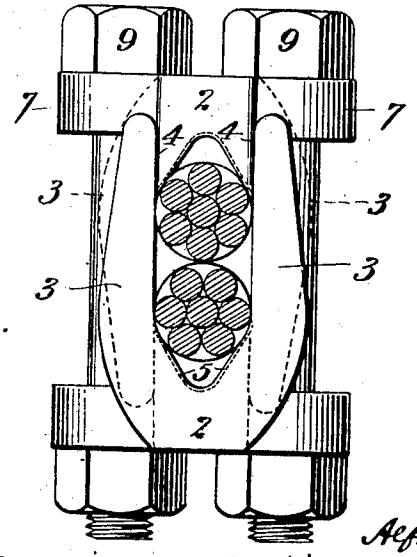


Fig. 3.



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3 SHEETS—SHEET 2.

Fig. 4.

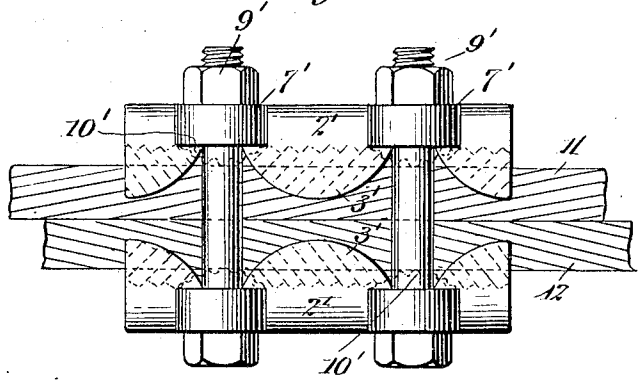


Fig. 5.

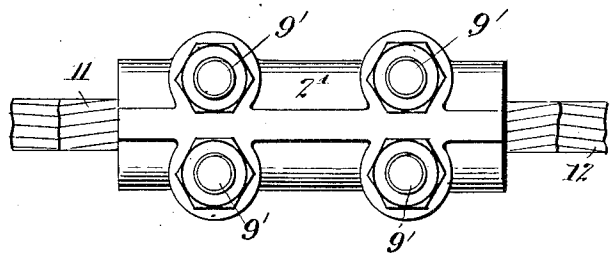


Fig. 6.

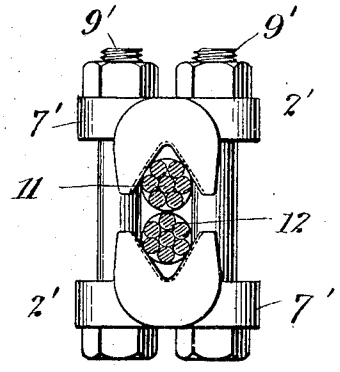
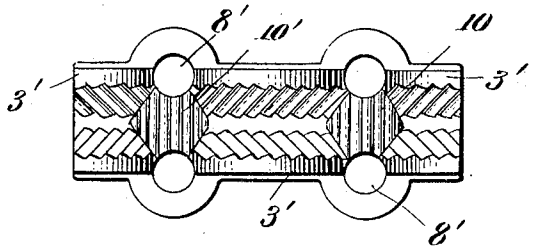


Fig. 7.



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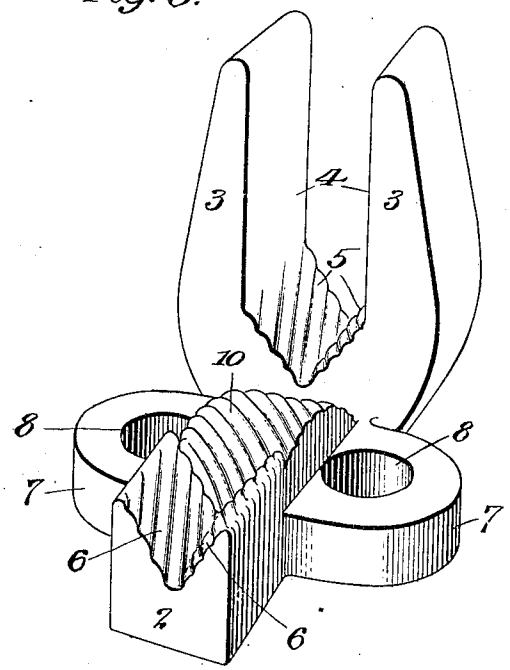
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3 SHEETS—SHEET 3.

Fig. 8.



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UNITED STATES PATENT OFFICE.

ALFRED H. MEECH, OF CHATHAM, NEW YORK.

CABLE-CLAMP.

No. 851,822. Specification of Letters Patent. Patented April 30, 1907.

Application filed November 24, 1905. Serial No. 288,881.

To all whom it may concern:

Be it known that I, ALFRED H. MEECH, a citizen of the United States, residing at Chatham, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Cable-Clamps, of which the following is a full, clear, and exact description.

My invention relates to cable clamps.

The principal object of the invention is to provide a clamp which grips the cable in a series of transverse planes, so that the exterior strands thereof are slightly deflected out of their normal form, and an increased gripping action secured to prevent slipping.

A further object of the invention is to provide a clamp having two similar or identical sections which may be assembled together by ordinary bolts or screws to secure the effects above noted.

With these and other objects in view, my invention consists in the construction, combination, in the location, and in the arrangement of parts, as hereinafter set forth and shown, and finally particularly pointed out in the appended claims.

In the drawings, Figure 1 is a top view showing a cable clamp embodying the principles of my invention; Fig. 2 is a side view of the same, one of the legs being broken off; Fig. 3 is an end view; Fig. 4 is a side view showing a slightly modified construction; Fig. 5 is a top view of the same; Fig. 6 is an end view; Fig. 7 is a bottom face view of one of the members; Fig. 8 is a perspective view of a single clamping member constructed like the modification of Figs. 1, 2 and 3, except that only a single pair of legs is provided.

In order to splice together two sections of wire cable, or attach an end to the body portion of the cable as in making an eye, it is desirable to use means which do not rely upon mere surface friction of the cable material. If it can be arranged to deflect the strands of which the cable is composed into a series of alternate swellings and restrictions, this object is accomplished, and a cable grip produced which is practically positive or interlocking in the nature of its engagement. In carrying out my invention I secure this result by imparting pressure to the cable at spaced points along its length in planes transverse to the axis thereof. In this way the strands are deflected into alternate enlargements and restrictions. I further arrange the clamping means to impart pressure, first in a horizontal, and then in a vertical direction successively in said transverse planes.

Referring particularly to Figs. 1, 2 and 3 and to Fig. 8, 2 indicates the back or central support of each of a pair of cable clamping members. I prefer to make the two members exactly identical in practice, they being in fact cast from the same patterns, and interchangeably supplied upon the market. A description of one of the members will, therefore, suffice for both in describing the complete clamp. The essential characteristic of the clamping members is the provision of spaced surfaces adapted to impart compression strains to the cable along successive planes thereof. Another important feature lies in the means by which the cable is supported or stiffened at each such plane against expansion at right angles to such pressure. The back 2 has symmetrical pairs of legs 3 projecting therefrom with inside parallel walls 4, separated a distance equal to the diameter of the cable to be clamped. The legs, at their bases or junction with the back are inclined toward one another, as shown at 5, the surfaces at such inclined portions being corrugated in my practical construction. In addition to the legs 3 I arrange at another point of the back a V-shaped groove with divergent faces 6, which also is corrugated. The arrangement is such that the faces 6 lie in the plane of the corresponding divergent faces 5 and are generally similar thereto in form and relative position. The planes of the faces 5 and 6 make a definite acute angle with relation to each other, in other words, the faces are inclined to one another at a fixed angle which is preferably acute. Between the cable engaging faces 5 and 6, I provide a pair of bolt holes 8, in lugs 7 at either side of the back 2. 9 indicate bolts adapted to be received in the holes 8 for securing the clamping members together. I make the size and proportions of the various parts in a special way, so that two identical clamping members may be assembled together upon the cable. For this purpose the various pairs of legs 3 of each clamping member are separated equal distances from the intermediate divergent faces 6. The width of the back 2 opposite said faces 6 is also made equal to the separation of the faces 4 of the various pairs of legs. In this way it is always possible to assemble two clamping members with the legs of each inclosing the divergent faces 6 of the other member. In this rela-

tion the corrugated divergent faces 5 lie directly opposite the inclined faces 6 of the opposed member, so that pressure is exerted on the contained cables in transverse planes corresponding to such faces. The bolt holes 8 of each clamping member may be disposed in any way so as to come opposite or in alinement with one another when the members are assembled. This can be accomplished by disposing them half-way between the divergent faces 5 and 6 along the length of each member. The distance of separation of the bolt holes is made just enough so that their contained bolts when inserted will closely embrace the cables. In this way a retaining wall is created to prevent displacement of the cables in addition to the wall formed by the wall 4.

A feature of my invention resides in the provision of a hump 10 rounded in a direction transverse to the lengths of the cables. This surface is corrugated, and in order that the corrugations may be more effective, I make them, together with those of the faces 5 and 6, somewhat inclined, so as to register more or less with the twisted strands of the ordinary wire cable.

The operation is as follows: The cable sections to be joined are placed side by side, and between the legs of one of the clamping members, in which relation one of the cables will be engaged by the inclined divergent faces 5, 6 and 10. A second clamping member is then placed so that its legs lie opposite the divergent gripping faces 6, and its own divergent faces 6 opposite the legs of the other member, whereupon the other cable will be engaged by the divergent faces 5, 6 and 10 of the second clamping member. The bolts being inserted, it will be evident that gripping pressure is imparted to the cable in a series of planes transverse thereto, and that the pressure opposite the gripping faces 5 and 6 has a tendency to distort the strands of the cable in a different direction from the pressure at the intermediate planes where the cables are engaged by the humps 10 and the sides of the bolts.

In Figs. 4, 5, 6 and 7, a slight modification is illustrated in which a pair of clamping members 2′ have wings 3′ in place of the legs 3 of the previous modification. In this construction the wings 3′ are placed along the length of the members and between the various transverse planes occupied by the bolts 9′. 8′ (Fig. 7) shows the relation of the bolt holes through the lugs 7′, and 10′ indicates the corrugated humps which lie opposite the bolt holes. The inside surfaces of the various wings 3′ are divergent from one another and are corrugated so as to take the place of the faces 5 and 6 of the previous modification. In this case the cables 11 and 12 are gripped between the various divergent faces of the wings 3′, and also by the corrugated humps 10′.

What I claim, is:—

1. In a cable clamp, two members each having a pair of projecting legs with inside parallel faces, and each having a pair of inclined gripping surfaces 5 disposed at a definite acute angle with relation to each other and co-operating with each other and with said faces to grip the cable, and means for drawing the two members toward one another.

2. In a cable clamp two members each having a plurality of pairs of projecting legs with inside parallel faces, and each member having a plurality of pairs of inclined gripping surfaces 5, disposed at the bases of said legs and making a definite acute angle with relation to one another and co-operating with each other and with said faces to grip the cable in a series of spaced transverse planes along the length thereof, and means for drawing the two members toward one another.

3. In a cable clamp, a pair of similar members each having inclined gripping faces and intermediate humps, said faces and humps respectively being arranged to lie opposite one another when the members are assembled together, whereby the cable is clamped in a series of spaced transverse planes, and means for drawing the two members toward one another.

4. In a cable clamp, a pair of similar members each having inclined corrugated gripping faces arranged to grip the cable in a series of spaced transverse planes, and bolts for connecting said members and arranged to contact with the cable at intermediate points or planes.

5. In a cable clamp, a pair of similar members each having inclined corrugated gripping faces, rounded humps intermediate said faces, and bolts at the sides of said humps and arranged to draw the members together upon a cable or cables to be clamped, said humps being intermediate said bolts.

6. In a cable clamp, a pair of similar clamping members each having a series of inclined gripping faces, rounded protuberances having corrugations intermediate said faces, and bolts for drawing the members together and separated a distance equal to the diameter of the cable or cables to be clamped.

7. In a cable clamp, a pair of similar clamping members each having a pair of legs separated on their inside faces a distance equal to the diameter of the cable or cables to be clamped, and having divergent gripping faces arranged to lie between the legs of the opposite clamping member, and bolts for connecting said members, said bolts arranged to constitute a containing wall to closely embrace or support the cable or cables to be clamped.

8. A cable clamp comprising a pair of similar members each having a series of inclined gripping faces along its length, whereby the

cable is gripped in a series of spaced transverse planes, humps intermediate said faces and arranged to engage the cable in a different direction therefrom, and bolts for drawing the members upon a cable or cables, whereby said faces and humps are brought into engaging relation therewith.

In witness whereof, I subscribe my signature, in the presence of two witnesses.

ALFRED H. MEECH.

Witnesses:
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WILLIAM DORMAN, Jr.