July 14, 1942. F. J. MORAN 2,289,378

CABLE CLAMP

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Fig. 1

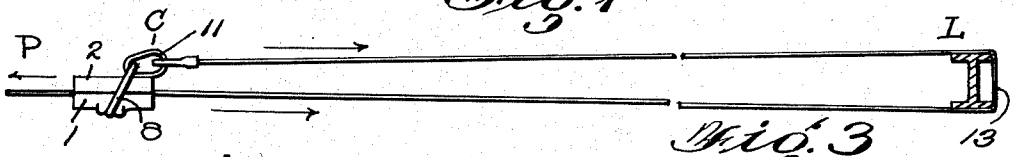


Fig. 3

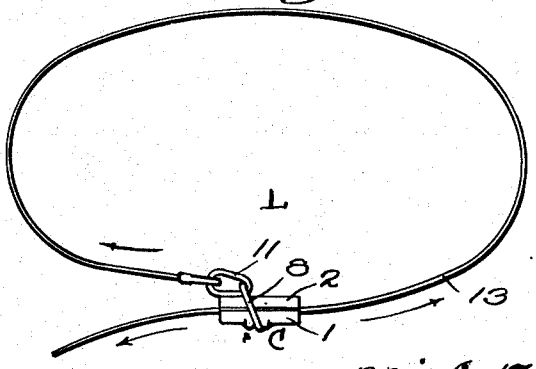


Fig. 2

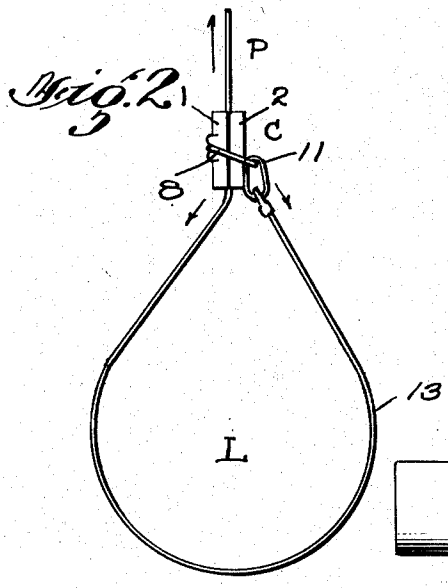


Fig. 5

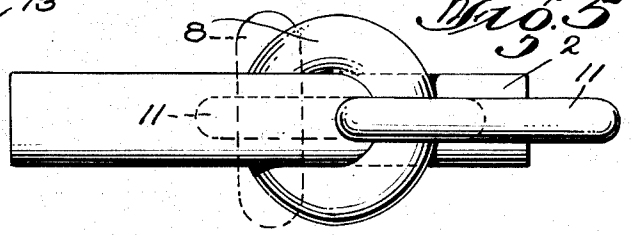


Fig. 4

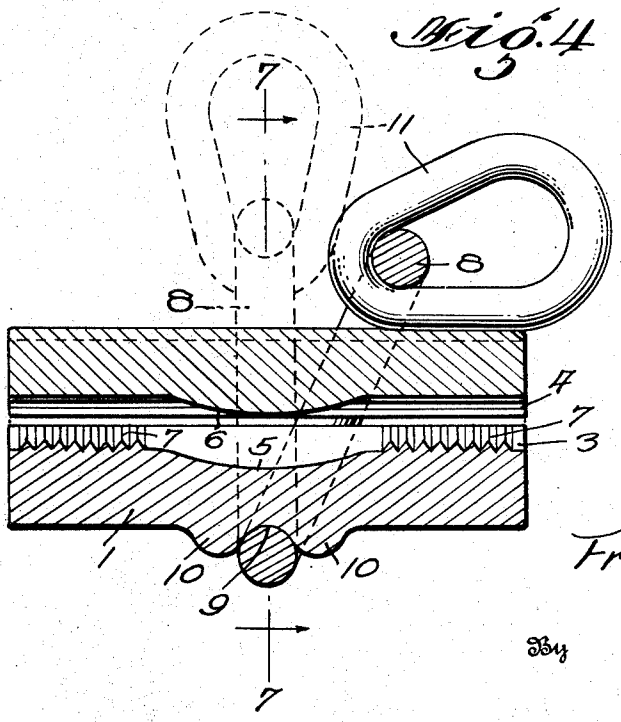
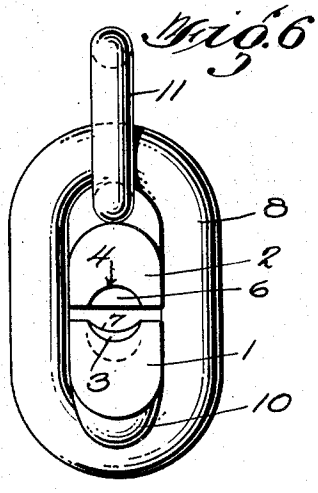


Fig. 6



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Fig. 7

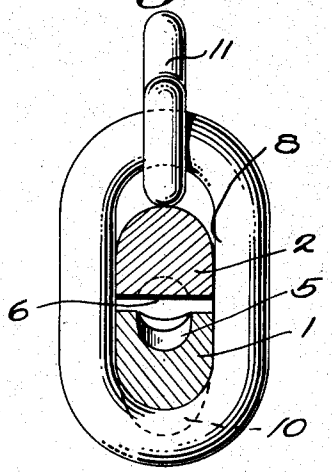


Fig. 8

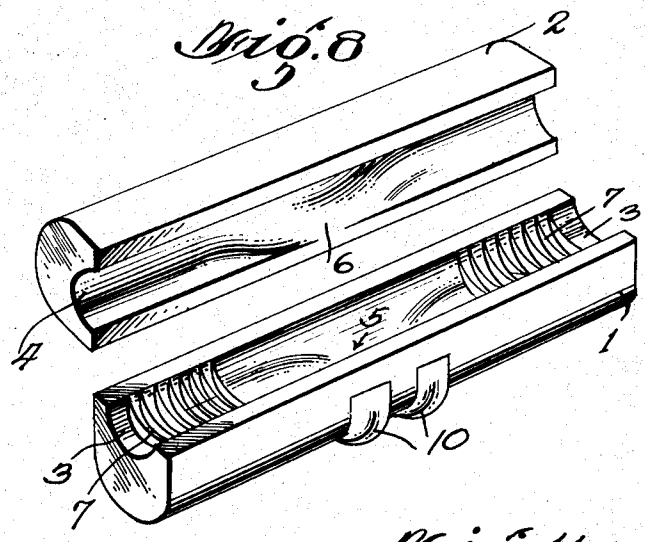


Fig. 9

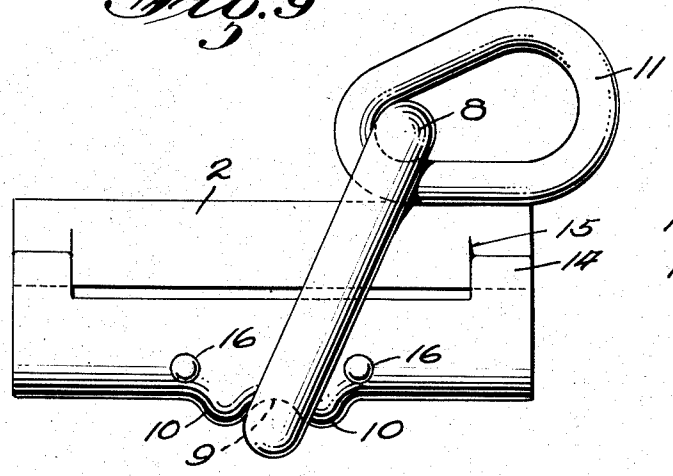


Fig. 11

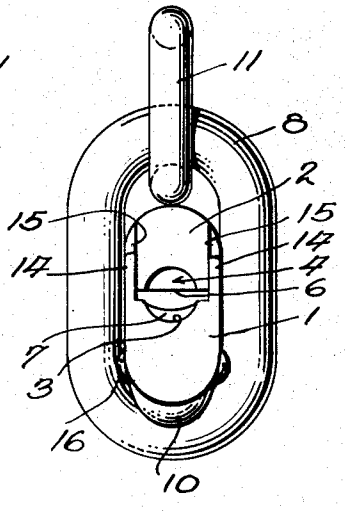
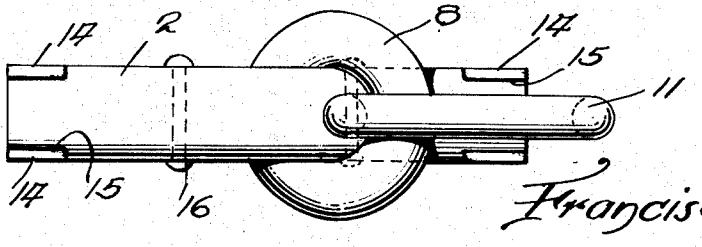


Fig. 10



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UNITED STATES PATENT OFFICE

2,289,378

CABLE CLAMP

Francis J. Moran, United States Army,
Washington, D. C.

Application February 9, 1942, Serial No. 430,160

7 Claims. (Cl. 294—74)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein, if patented, may be manufactured and used by or for the Government for governmental purposes, without the payment to me of any royalty thereon.

This invention relates to an improved cable clamp, and more particularly to a clamp adapted to be quickly adjusted on a cable to the desired position and form an immovable anchorage thereon, automatically locked in position by connecting a free end of the cable, after engagement with a load, to the clamp.

The objects of this invention are to provide a simple, durable and inexpensive device of the class described; simple in construction and operation, wherein the use of the device will be apparent at a glance, there being no complication of parts to confuse its proper operation by those of practically no mechanical skill; durable, due to its sturdy construction along the lines of its greatest strains, without unnecessary metal where not needed, and inexpensive, due to the above and the methods required in its production, namely, forging of the parts that may be accomplished at a very high rate with comparatively low cost machines.

The above and other objects and advantages of this invention will appear in the following description and be finally pointed out in the claims.

A preferred embodiment of the invention is shown, but it will be understood that slight changes in form and minor details in construction may be resorted to without departing from the spirit of the invention, or fall beyond the scope of the claims.

Similar numerals indicate corresponding parts in all the figures of the drawings in which,

Fig. 1 is a view showing a manner of using the improved clamp, the parts being shown diagrammatically.

Fig. 2 is a similar view showing the clamp in a different position with relation to the load and power.

Fig. 3 is a similar view showing the tension of the cable on the clamp in opposite directions.

Fig. 4 is an enlarged longitudinal section of the clamp with parts in dotted positions.

Fig. 5 is an enlarged plan view.

Fig. 6 is an end view.

Fig. 7 is a transverse section on line 7—7 of Fig. 4.

Fig. 8 shows perspective views of the adjacent faces of the clamping jaws.

Figs. 9, 10, and 11 are side, top, and end views, respectively, of a slight modification of the clamp.

Reference now being had to the drawings by numerals: 1 and 2 indicate respectively, lower and upper cable-clamping jaws, provided with longitudinal grooves 3 and 4, said jaws are arranged in parallel relation with the cable resting therebetween in their respective grooves.

The lower jaw 1 is provided preferably at a position intermediate of the ends of its groove with a cutaway or depressed portion 5 adapted in cooperation with a projecting or ridge portion 6 in the groove of the upper jaw to cause a slight bend in the cable as the jaws are drawn toward each other, and thus add to the gripping effect of the clamp on the cable. The lower jaw is further provided, if preferred, with serrations or transverse teeth 7 in the face of its groove to act as further means for anchoring the clamp to the cable.

A jaw-clamping loop 8 surrounds the jaws transversely at approximately their centers, is mounted on the lower face of the lower jaw in a seat 9 formed between projections 10—10.

The loop 8 snugly fits around the jaws, is mounted for swinging movement at its lower end in the seat 9, and extends a short distance above the upper jaw, the distance the loop 8 extends above the upper jaw is important and will be referred to more fully later.

Connected to the jaw-clamping loop is a link 11 adapted to swing the loop 8 to one side or the other of a transverse position directly across the jaws in either of which positions the link will be brought into contact with the upper face of the upper jaw in such a manner as to exert a very powerful pressure on the jaws toward each other, with the result of firmly securing the cable 12 between the jaws and securely connecting the clamp to the cable and cause the clamp to provide a firm anchorage for the free end of the cable after it has pressed through the clamp, around the load 13 and thence back, and is connected to the link 11.

It will be noted that the distance between the top of the upper jaw and the link 11, when the loop 8 is resting directly across the jaws, is slightly less than the depth of seat 9 at the lower end of the loop 8, thus permitting free adjustment of the clamp on the cable, but preventing the loop leaving its seat prior to tension being applied to the link.

To insure against the separation of the parts of the clamp and should, for instance, it is desired to store the clamp and cable separately,

or for other reasons to separate the cable and clamp, a slight modification of the clamp as shown in Figs. 9, 10, and 11 may be provided wherein lugs 14 extending from the ends of one of the jaws, adapted to operate in cutout portions 15 in the end of the other jaw are adapted to prevent relative transverse or longitudinal movement of the jaws.

There may also be provided buttons 16 formed by riveting pins through the lower jaw on opposite sides of the clamping loop which will entirely eliminate the accidental separation of the four elements of the clamp, namely, the jaws, the clamping loop, and the clamping loop operating link.

While the free end of the cable, after passing around the load, may be secured to link 11 in any preferred manner, for the purpose of accomplishing the prompt and effective connection of said parts, a hook 17 securely mounted at the end of the cable is provided.

The operation of the clamp is obvious and provides clamping jaws between which the cable is extended, a free end of the cable may then extend around the load and back to the link of the clamp. When power is applied to the other free end of the cable, tension will be applied to the parts in such a manner as to swing the loop diagonally across the jaws and close them on the cable, thus effecting a firm anchorage of the clamp on the cable and maintain the loop as originally adjusted. On the other hand should, for any reason, slack in the loop of the cable develop, the tension on the link will be diminished, the power will draw the cable through the clamp, the slack about the load will be taken up and the jaws will at once again grip the cable.

I claim:

1. The combination with a cable of a cable clamp comprising, cable-clamping jaws adapted to receive the cable therebetween, a jaw-clamping loop surrounding the jaws and a link connected with the loop adapted when connected to a free end of the cable to rock the loop, draw the jaws toward each other, and clamp the cable.

2. The combination with a cable of a cable clamp comprising, cable-clamping jaws adapted to receive the cable therebetween, a jaw-clamping loop surrounding the jaws mounted on the lower jaw adjacent to the center thereof, and a link connected with the loop adapted when connected to the cable to rock the loop in either direction to draw the jaws toward each other and clamp the cable.

3. The combination with a cable of a cable clamp comprising, cable-clamping jaws having longitudinal grooves, the cable adapted to be mounted between the jaws and extend in opposite directions from the clamp, a jaw-clamping loop surrounding the jaws and mounted on one of the jaws, and a link connected with the loop adapted to rock the loop, draw the jaws toward each other, and clamp the cable.

4. The combination with a cable of a cable clamp comprising, cable-clamping jaws having grooves, a cable adapted to be mounted in the grooves, said grooves provided with means for forming a slight bend in the cable, a jaw-clamping loop surrounding the jaws and a link connected with the loop adapted to rock the loop, draw the jaws toward each other, and clamp the cable.

5. The combination with a cable of a cable clamp comprising, cable-clamping jaws having grooves provided with a depression and an extension in the grooves adapted to coact to form a slight bend in the cable and more firmly grip the cable, a jaw-clamping loop surrounding the jaws and a link connected with the loop adapted when connected, to a free end of the cable after extending around a load to rock the loop, draw the jaws toward each other, and clamp the cable.

6. In a cable clamp, the combination of opposed jaws, a centrally located jaw-clamping loop loosely seated at its end on one of the jaws, and extending transversely around and beyond the opposed jaw, a clamping loop operating link mounted in the extended end of the loop adapted to operate the clamping loop to either side or directly transverse of the jaws and secure the clamp to a cable after the cable has passed through the loop around a load, and is secured to said loop operating link.

7. A cable clamp comprising, opposed cable-clamping jaws adapted to adjustably receive a cable therebetween, a jaw-clamping loop centrally and transversely surrounding the jaws adapted when rocked into a position from a line directly around the jaws to draw the jaws toward each other and clamp the cable, and a link mounted in the loop adapted to be connected with a free end of the cable after it has passed around a load and is attached to said link to securely retain the cable in its adjusted position on the cable.

FRANCIS J. MORAN.