No. 835,090. PATENTED NOV. 6, 1906.

J. H. WINTERS.

CLAMP.

APPLICATION FILED OCT. 6, 1905.

Fig. 1.

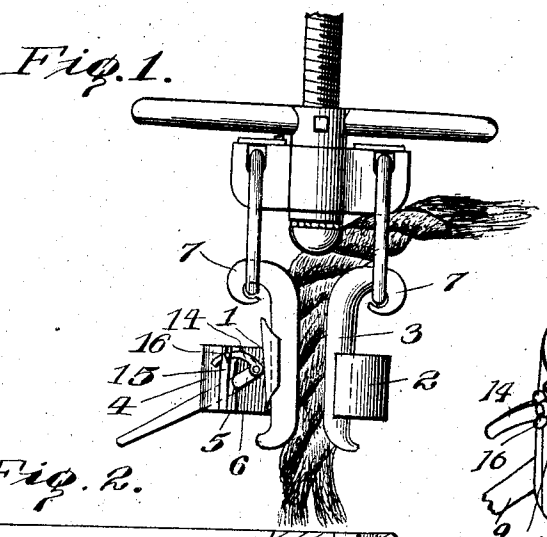


Fig. 4.

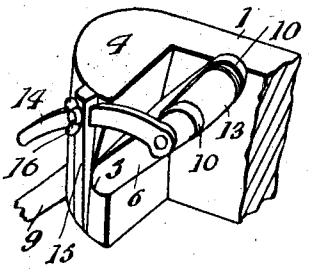


Fig. 2.

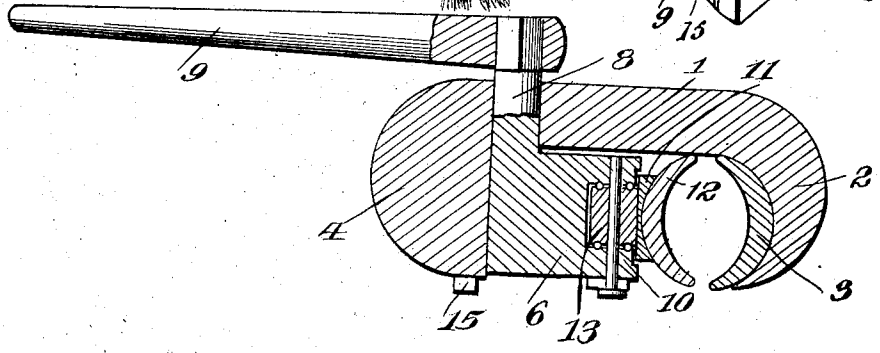
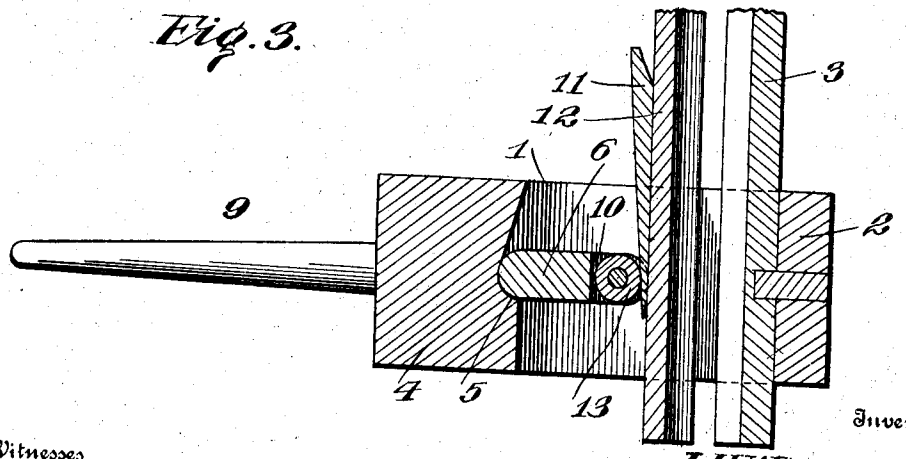


Fig. 3.



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Witnesses

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UNITED STATES PATENT OFFICE.

JOHN H. WINTERS, OF RED FORK, INDIAN TERRITORY.

CLAMP.

No. 835,090. Specification of Letters Patent. Patented Nov. 6, 1906.

Application filed October 6, 1905. Serial No. 281,697.

To all whom it may concern:

Be it known that I, JOHN H. WINTERS, a citizen of the United States, residing at Red Fork, District 8, Indian Territory, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

This invention relates to an improved rope or cable clamp, and while it is especially designed to be employed in connection with well-drilling tools employing the cable system it can be used with equal facility wherever a similar device is required.

The object of the invention is to provide a device of the character mentioned in which the various parts mutually coöperate to obtain a secure grip upon the cable and to prevent any accidental slipping thereof.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a front view showing my improved form of clamp as suspended from the temper-screw of a well-drilling tool. Fig. 2 is an enlarged horizontal sectional view showing the operation of the clamping members, and Fig. 3 is an enlarged vertical sectional view. Fig. 4 is a perspective view of the portion of the body or stack having the clamping members connected thereto.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The numeral 1 designates the stock or body of the clamp, which is provided with shoulders or projections at each end thereof, one of which, 2, is formed with a depression on its inner face against which the fixed jaw 3 of the clamp is secured, while the opposite shoulder 4 has a transverse groove or recess 5, which serves as a bearing for the clamping member 6. The upper ends of the two jaws of the clamp are provided with rings 7, by means of which they are suspended from the temper-screw of the well-drilling tool. The clamping member 6 is provided at one end with a transversely-extended pin 8, which passes through an opening in the stock 1 in alinement with the recess 5 in the shoulder 4. The extremity of the pin 8 is made square, and the handle 9 is secured thereto, by means of which the clamp is operated. The engaging end of the clamping member 6 is bifurcated to form arms 10, which fit upon both sides of the wedge-shaped block 11, secured to the movable jaw 12 of the clamp, and prevent any lateral displacement thereof. The portion of the clamping member 6 coming into contact with the block 11 is provided with a friction-roller 13, which is preferably mounted upon ball-bearings and which enables a very large percentage of the energy expended upon the handle 10 to be directly concentrated in forcing the two jaws of the clamp into a close engagement with the cable. An arm 14 is pivotally connected to the outer end of the clamping member 6 and passes through an opening in a bracket 15, secured to the shoulder 4. This bracket is provided with a set-screw 16, which bears directly against the arm 14 and is adapted to clamp the same against longitudinal movement, and thereby hold the various members of the clamp in a fixed position. It will be observed that the friction-roller 13 and the arm 14 are mounted upon the same pin, and this adds to the simplicity and consequent durability of the present construction. Attention is also directed to the fact that the small end of the wedge-block 11 upon the movable jaw 12 is pointed downwardly, which has the result of giving the device an increased clamping power, since it will be apparent that the clamping member will be compelled to move through a greater arc in order to force the movable jaw of the clamp inward through a given space than would be the case were the thicker portion of the wedge-shaped block pointed downwardly.

In the operation of the device it is suspended from the temper-screw of a well-drill in the usual manner and the cable passed through the jaws of the clamp while the same are in an open position. The handle 9 is then turned so as to force the jaws of the clamp into a close engagement with the cable and the entire device locked in a fixed position by tightening the set-screw 16 upon the arm 14.

Having thus described the invention, what is claimed as new is—

1. In a device of the character described, the combination of a body or stock, a movable clamping-jaw, a fixed clamping-jaw, a swinging clamping member, one end of which is pivotally mounted upon the body while the opposite end is adapted to swing around so as to force the movable jaw toward the fixed jaw, the latter-mentioned end of the clamp-

ing member being provided with a friction-roller and also with means for preventing any lateral displacement of the movable clamping-jaw.

2. In a device of the character described, the combination of a body or stock, a movable clamping-jaw, a fixed clamping-jaw, a wedge-shaped block upon the movable jaw, and a clamping member pivotally mounted upon the body, one end of the clamping member being bifurcated to form arms which project on both sides of the wedge-shaped block and prevent any lateral displacement of the movable jaw.

3. In a device of the character described, the combination of a body or stock having a projection thereon which forms a shoulder, said shoulder having a transverse groove therein and said body having an opening in alinement with the groove, a movable clamping-jaw, a fixed clamping-jaw located opposite to the before-mentioned shoulder, a swinging clamping member one end of which fits within the transverse groove in the shoulder while the opposite end is adapted to swing so as to force the movable jaw toward the fixed jaw, and a laterally-extending pin projecting from one end of the clamping member and passing through the opening in the body which is in alinement with the before-mentioned groove upon the shoulder.

4. In a device of the character described, the combination of a body or stock having a projection thereon which forms a shoulder, a movable clamping-jaw, a fixed clamping-jaw located opposite to the shoulder, a swinging clamping member one end of which fits against the before-mentioned shoulder and engages a transverse groove therein while the opposite end is adapted to swing around so as to force the movable jaw toward the fixed jaw, an arm connected to the clamping member, and means for engaging the arm to lock the clamping member at any desired position.

5. In a device of the character described, the combination of a body or stock, a movable clamping-jaw, a fixed clamping-jaw, a swinging clamping member pivoted upon the body and adapted to swing around so as to force the movable jaw toward the fixed jaw, a friction-roller at one end of the clamp member, an arm pivotally connected to the clamping member, said arm and said friction-roller being mounted upon the same pin, and means for engaging the arm to prevent a swinging movement of the clamping member.

6. In a device of the character described, the combination of a body having a shoulder at each end thereof, a movable clamping-jaw, a fixed clamping-jaw, the latter being secured to one of the shoulders, a swinging clamping member, one end of which fits within a transverse groove on the shoulder opposite to the first-mentioned shoulder and is provided with a pin which passes through an opening in the body in alinement with the transverse groove while the opposite end of the clamping member is adapted to swing around so as to force the movable jaw toward the fixed jaw and is bifurcated to form arms which prevent any lateral displacement of said movable jaw, an operating-lever secured to the portion of the pin projecting through the opening in the body, an arm connected to the swinging clamping member, and means for engaging the arm to prevent a swinging movement of the clamping member.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. WINTERS. [L. S.]

Witnesses:
HARRY CUNNINGHAM,
J. C. MILLER.