S. BULLUM.

COMBINATION CLAMP.

APPLICATION FILED NOV. 27, 1916.

1,229,408. Patented June 12, 1917.

Fig. 1.

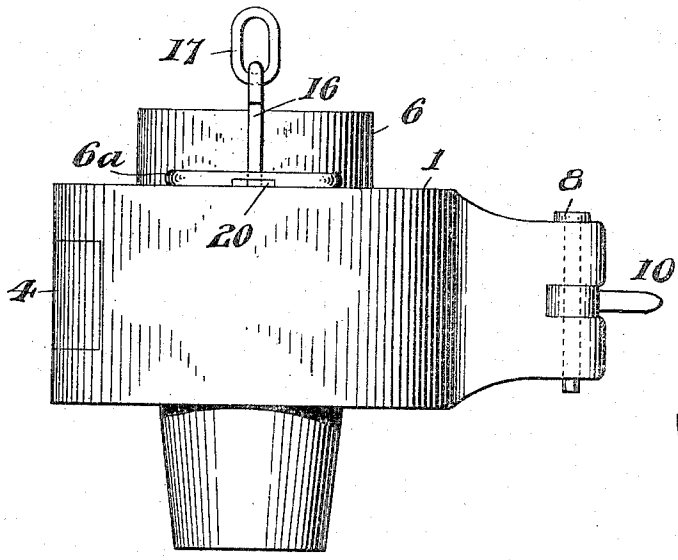


Fig. 3.

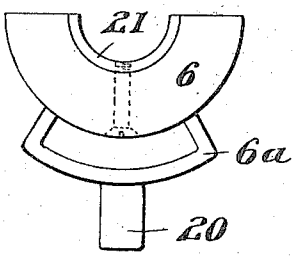


Fig. 4.

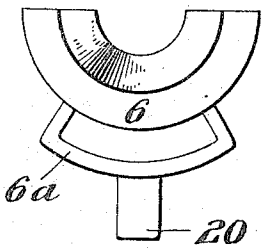


Fig. 2.

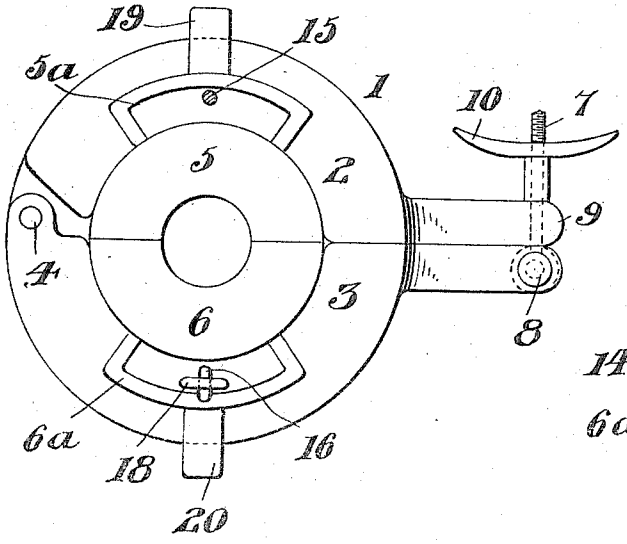
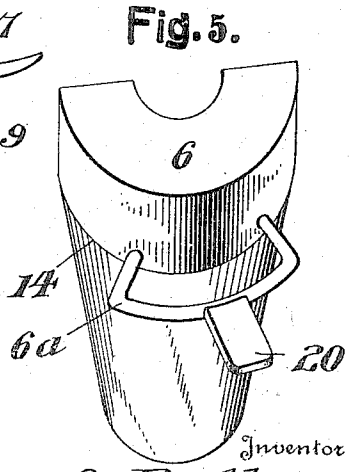


Fig. 5.



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COMBINATION-CLAMP.

1,229,408. Specification of Letters Patent. Patented June 12, 1917.

Application filed November 27, 1916. Serial No. 133,676.

To all whom it may concern:

Be it known that I, STEVE BULLUM, a citizen of the United States, a resident of Tulsa, in the county of Tulsa, State of Oklahoma, have invented certain new and useful Improvements in Combination-Clamps, of which the following is a specification.

This invention relates to that class of clamps used for connecting the cable or rope to the rocking arm of a drilling machine.

The object of this invention is to provide a clamp of this character of such construction as to enable the use of interchangeable slips, whereby it is possible to utilize the same clamp for either steel cable or Manila rope, by substituting suitable slips.

Another object of this invention is to provide slips or gripping members with means for permitting their adjustment either axially or vertically to permit ready interchange of cable or rope.

Reference will be had to the accompanying drawings forming a part of this specification and wherein like numerals of reference designate corresponding parts throughout the several views, in which,

Figure 1 is a side view of the device.

Fig. 2 is a top plan view.

Fig. 3 and Fig. 4 are both top plan views of the various forms of slips or gripping members.

Fig. 5 is a perspective view of one of the gripping members.

Reference numeral 1 indicates a conventional clamp consisting of two jaws 2 and 3 suitably hinged together as shown at 4. The gripping faces of these clamp members are semi-circular in cross section and are beveled inwardly to correspond to the tapering slips or gripping members 5 and 6. A hinged screw threaded bolt 7 is secured to one of the jaws by means of pin 8 and is adapted to engage a slot 9 in the opposite jaw. The thumb screw 10 is provided to engage said threaded bolt 7 for locking the jaws together.

The gripping members or slips 5 and 6 are adapted to be arranged within the jaws 2 and 3 of the clamp and are of semi-circular cross section and gradually taper downwardly and inwardly to form when in their relative normal positions a truncated cone shaped unit. The upper extremities of the slips are provided with shoulders 14 for engagement with the upper faces of the clamp jaws.

To permit axial movement of the slips and to limit such movement the following arrangement is provided: Two bolts 15 and 16 provided with hooked upper extremities are arranged in the upper faces of the clamp jaws 2 and 3. Links 17 and 18 are arranged to engage said hooks and connect with the operating lever by any suitable or conventional means. Two elongated U-shaped guideways 5^a and 6^a are formed just above the shoulder 14 and through which the said bolts 15 and 16 pass. These guideways may be formed integrally with the said slips by casting or may be constructed of suitable metal and afterward attached. In either instance they are provided with radiating extensions 19 and 20 which form handles adapted to be engaged by the operator in placing or replacing a cable or rope.

Various sizes of slips or gripping members may be provided for engaging either Manila rope or steel cable. In instances where it is desired to use steel cable, because of the varying sizes of such cable it will be necessary to utilize a lining of steel or other suitable metal such as indicated by reference character 21 in Fig. 3. This lining will be secured in position by means of suitable screws.

In use, as previously set out, this clamp is attached by proper connection to the operating lever and grips the drilling cable or rope. The slips or gripping jaws, which will be selected according to the size and type of rope or cable used are arranged in position, *i. e.*, are swung from open to closed position by virtue of their guideways and attendant bolts. These slips are then lifted vertically to permit the clamp jaws to be closed, and when the latter are closed the slips are permitted to drop and because of their tapering outer faces and corresponding inner jaw faces quickly and firmly grip and bind the cable or rope. When the cable is to be released the jaws are unlocked and opened and the slips are swung on their guideways backwardly toward the hinge of the clamp jaws. The cable or rope is then free to be readily and easily removed. Particular attention is called to the quickness and exactness with which a cable or rope may be placed or removed or adjusted and also to the exceptional gripping capacity of the clamping device because of the novel construction and arrangement of parts.

Various changes in the details of construc-

tion and arrangement of parts may be made without departing from the spirit of the invention or the scope of the claim hereto annexed.

What I claim as new and useful and desire to secure by Letters Patent, is:—

A clamp of the type described, including a pair of hinged jaws, with means for the retention thereof in clamping position, gripping members positioned within said jaws and having guide-ways projecting laterally therefrom, bolts extending from said jaws through said guide-ways, said gripping members being provided with shoulders engaging the ends of said jaws.

STEVE BULLUM.

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