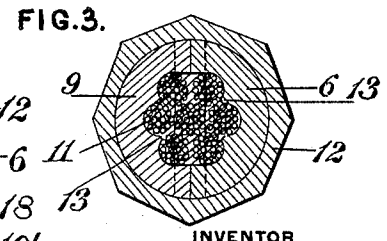
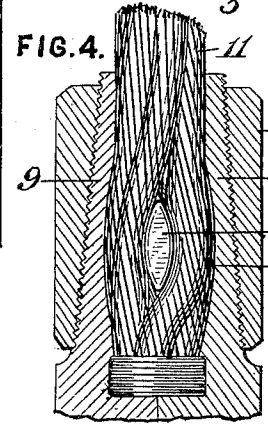
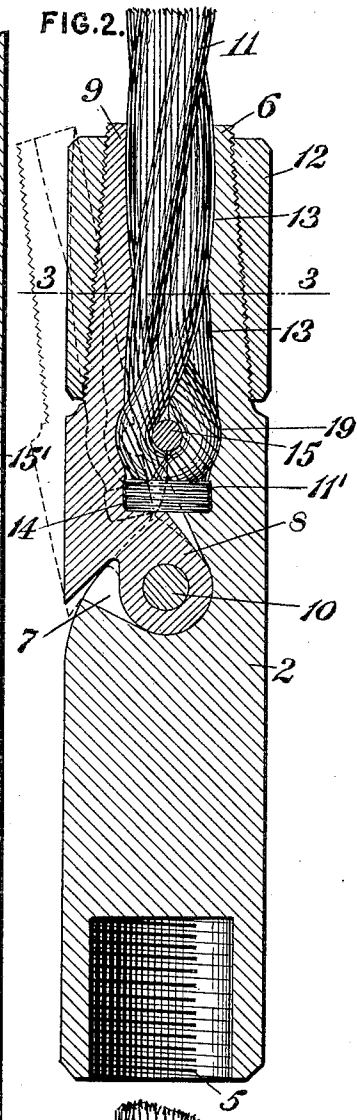
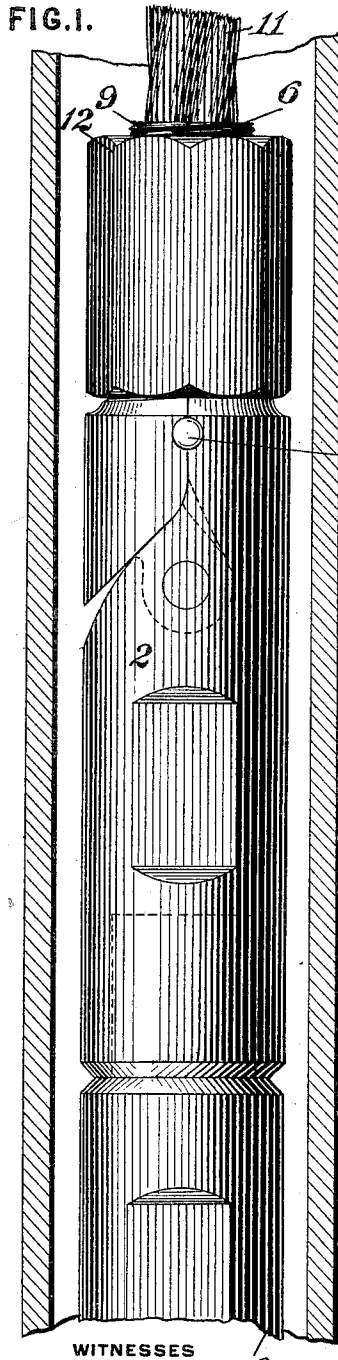


C. M. HEETER.
 ROPE SOCKET.
 APPLICATION FILED JULY 14, 1910.

1,051,226.

Patented Jan. 21, 1913.



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ROPE-SOCKET.

1,051,226.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed July 14, 1910. Serial No. 571,954.

To all whom it may concern:

Be it known that I, CHARLES M. HEETER, a resident of Butler, in the county of Butler and State of Pennsylvania, have invented certain new and useful Improvements in Rope-Sockets, of which the following is a specification.

The primary object of this invention is to provide a rope socket which may be quickly and conveniently manipulated for either securing or releasing the rope.

In operating a pump with a wire rope or cable, the latter having largely superseded sucker rods, it is frequently necessary to connect and disconnect the cable and its socket, particularly when the cable works through an oil saver.

The socket herein proposed provides for quickly releasing the cable, and for securely holding it when in place.

In the accompanying drawings, Figure 1 is an elevation of the improved socket shown in position in a well tube. Fig. 2 is a longitudinal section of the socket, and Fig. 3 is a cross-section on line 3—3 of Fig. 2. Fig. 4 is a longitudinal sectional view of a portion of the clamp illustrating a cross key or pin of modified construction.

Referring to the drawings, 2 designates the body of the rope socket, provided with means at its lower end for attaching any suitable tool 3, such as a sinker bar, jars, or a pump. The attaching means at the lower end of the body may consist of a threaded box 5.

A fixed rope-clamping jaw 6 is provided by extending one side of the body upwardly as shown, the body being recessed at 7 at the base of this extension to receive hinge arm 8 on the lower end of movable jaw 9, the hinge arm mounted on pin 10, and the parts so shaped that jaw 9 may turn outward to position shown in dotted lines, Fig. 2, for releasing or admitting the cable 11.

Jaws 6 and 9 are threaded externally to receive the jaw-clamping nut 12, and they are preferably tapered upwardly, forming a truncated cone when closed together, the bore of nut 12 being correspondingly tapered, thereby clamping or wedging the cable when the nut is tightened.

In the preferred construction, a pin 15 is driven through the cable above extremity

winding 11'. The length of the pin corresponds to the diameter of body 2, and the extremities 15' thereof are confined in half-round cavities in the faces of the jaws, so that when the jaws are closed the pin extremities are locked. While the hold might be sufficient without this cross pin, it makes the connection absolutely secure. The bulge in the cable formed by the pin is received in enlargement 19 of the socket. In Fig. 4 a key 18, corresponding in length to the diameter of the cable, forms a bulge in the cable which is received in cavity enlargement 19' of the jaws.

The inner or cable holding faces of the jaws may be variously formed. In Figs. 2, 3, and 4 they are indented or recessed, as indicated at 13, to conform to the spiral surface of the cable, the base 14 of the recess being slightly enlarged to receive the cable winding.

In each adaptation the rope is securely and positively held when clamped between the jaws, yet is readily removable when the nut is loosened and the movable jaw turned outward as in Fig. 2.

I claim:

1. The combination with the separable jaws of a rope socket forming a cable space therebetween with the meeting faces of the jaws recessed to form a closed pin passage when the jaws are fitted together, and means for clamping the jaws on the cable, of a cable consisting of strands twisted together with their extremities wrapped with a binding, and a pin extending through the cable adjacent to the binding and laterally enlarging the cable into the space between the jaws with the ends of the pin projecting from opposite sides of the cable and into the pin passage formed in the meeting faces of the jaws.

2. In a rope socket for well drilling, the combination of a socket body adapted at its lower end to connect with a well tool and its upper end shaped to form a jaw, a movable jaw adapted to cooperate with the body-jaw, a cable, the inner faces of the jaws shaped to embrace the cable, the adjacent faces of the jaws recessed to form pin passages at opposite sides of the cable space with a portion of each passage in each jaw, a transverse pin secured to and projecting

from opposite sides of the cable, the cable and the pin carried thereby being entered between the jaws, when open with the pin in the plane of the pin passages in the jaws, and means for clamping the jaws on the cable with the pin recesses in the jaws closing around the projecting ends of said pin.

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

CHARLES M. HEETER.

Witnesses:

J. M. NESBIT,
F. E. GAITHER.

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