(No Model.)

W. C. MOBLEY.

ROPE CLAMP.

No. 427,782. Patented May 13, 1890.

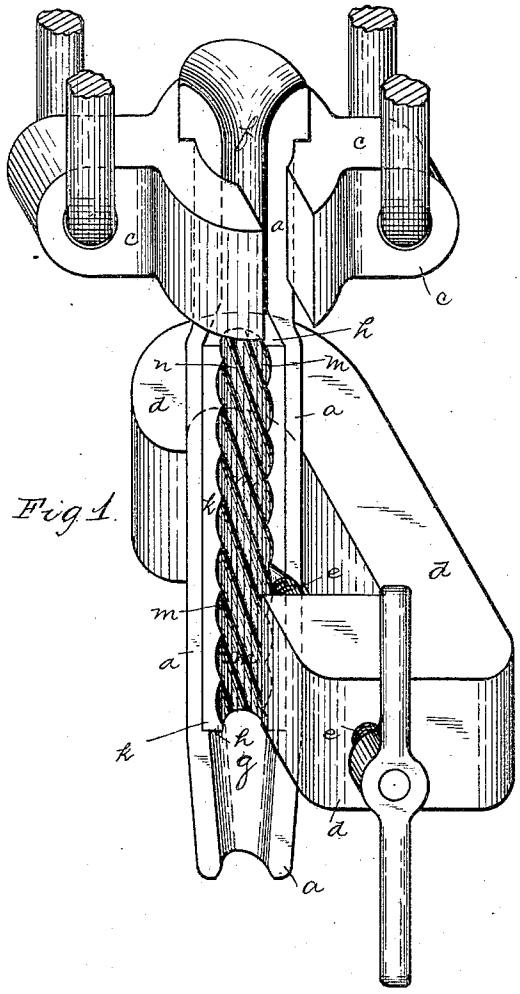


Fig. 1.

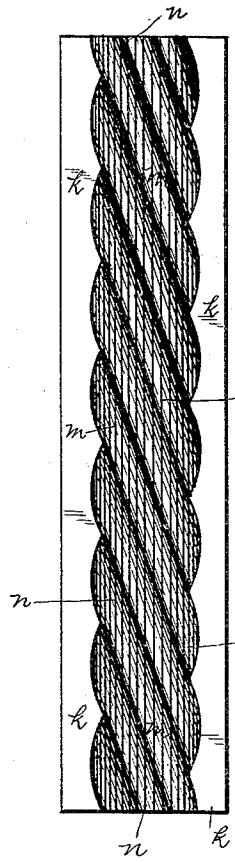


Fig. 3

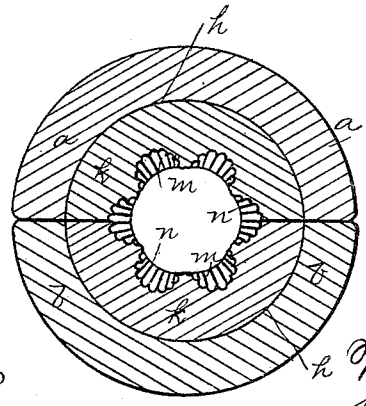


Fig. 2

Witnesses:
J. R. Cooke
Robt. D. Totten

Inventor.
Watson C. Mobley
By James J. Ray
Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WATSON C. MOBLEY, OF ALLEGHENY, PENNSYLVANIA.

ROPE-CLAMP.

SPECIFICATION forming part of Letters Patent No. 427,782, dated May 13, 1890.

Application filed July 19, 1889. Serial No. 318,059. (No model.)

To all whom it may concern:

Be it known that I, WATSON C. MOBLEY, a resident of Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Rope-Clamps; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to rope-clamps for Artesian-well drilling, cable roads, and other like purposes. In the drilling of Artesian wells by the use of wire ropes it is found desirable to clamp and hold the rope as firmly as possible, and the usual means employed for clamping the Manila rope usually employed for well-drilling, consisting in wrapping the body of the rope at the part passing through the clamp and clamping the same with plain-faced clamps, is not found to give sufficient hold upon the rope, especially in view of the increased weight thereof and the hard body of the wire rope.

My invention has reference more particularly to providing a means for holding the wire ropes employed for well-drilling, though the clamp embodying my invention may be used to advantage in connection with Manila ropes as well as either wire or Manila ropes for traction and like purposes.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a perspective view of a clamp for an Artesian well, showing the same open and one of the clamping-pieces removed to show the clamping-face thereof. Fig. 2 is an enlarged cross-section of the clamp, and Fig. 3 is an enlarged face view of one of the linings of the clamp containing the corrugated face embodying my invention.

Like letters of reference indicate like parts in each of the figures.

I have illustrated my invention in connection with a rope-clamp for Artesian wells embodying the improvements set forth in Letters Patent of the United States No. 392,627, granted to me November 13, 1888, this clamp being especially applicable in connection with wire rope and having the clamping-pieces *a b* hung from the swivel *c*, secured to the temper-screw or adjusting device, the swivel having a vertical slot therein to permit the entrance of the free clamping-piece *b*. The clamping-piece *a* has secured thereto the arm *d*, through which the clamping-screw *e* passes.

In forming a clamp embodying my invention I may either cast or forge the clamping-faces on the clamping-pieces, forming them integral with the clamping-pieces, or may form them separate therefrom, linings of cast-iron, Babbitt metal, copper, or hard rubber, or other suitable material being employed; and I have illustrated my invention specially in connection with detachable linings fitting within the clamping-pieces, as I find this the preferable construction, it enabling me to employ for the clamping-faces the material best suited for the purpose, and to replace the clamping-faces when necessary. Each clamping-piece has the groove *f* at the upper end and the groove *g* at the lower end, of proper size to permit the rope to pass through the same and permit the clamping-pieces to be forced close to each other, and between said grooves *f g*, I form the recess *h*, to receive the detachable clamping-face *k*, the outer part of which corresponds in shape to the recess *h*, the clamping-face being secured in the clamping-piece by any suitable means. The bearing-surface of each clamping-face is formed spirally corrugated, as at *m*, the corrugations corresponding in pitch, size, and shape to the strands of the rope to be grasped thereby. The clamping-faces can be easily and rapidly formed, especially with wire rope, by casting them against a short section of rope secured along one side of the mold in which the clamping-faces are cast, though, if desired, the side of the mold forming the corrugations in the clamping-face may be formed corresponding to the strands of the rope, this, of course, being necessary in forming a clamp for Manila ropes. The corrugations *m* of the clamping-face have also slight ridges *n* extending across the same, these ridges preferably corresponding to the wires forming the strands of the rope or corresponding to the finer strands composing the main strands of the rope, and these ridges *n*, by fitting between the wires or finer strands composing the main strands of the rope, prevent the sliding of the rope spirally through the clamp or being

forced into the body of the wire rope, and so increasing the hold of the clamping-faces thereon.

When my improved rope-clamp is in use, when employed with Artesian wells, the rope is adjusted over the crown-pulley and is then passed through the swivel *c* and against the clamping-piece *a*, and the clamping-piece *b* is then inserted through the swivel and adjusted in proper position, and by means of the clamping-screw *e* the clamping-piece *c* is forced against the clamping-piece *a*, so clamping the rope and forcing the clamping-faces *k* against or into the body of the rope. As the clamping-faces are forced to place, the corrugations *m* fit around the strands of the rope, entering between the strands in such way as to obtain an exceedingly firm hold thereon, and the ridges *n* in the corrugations enter between the wires or the small strands of the rope, and so increase the hold of the clamping-faces thereon. When the clamp is used with Manila rope, it acts the same way, the corrugations being made of proper size and fitting around the strands in the same manner, and being forced into the body of the rope, and so obtaining the desirable hold thereon, it being unnecessary to wind or cover the rope at the point engaged by the clamp, and the time and labor usually required with the ordinary clamps for this purpose being saved. During the drilling operation as the rope is raised and lowered by the walking-beam the clamp holds so firmly upon the rope as to prevent its slipping through the same, and all liability of the rope slipping spirally through the clamp under the heavy strain brought upon it is prevented by the binding of the corrugations upon the strands of the rope, and, in addition to this, by the ridges *n* in said corrugations, which enter between the wires or small strands of the rope, it being practically proven that the clamp will hold under exceedingly heavy strain.

When my improved clamp is employed in connection with cable roads or for other traction purposes, its action is practically the same, the spirally-corrugated faces entering between the strands of the rope and holding firmly upon the same, so that there is practically no liability of the slipping of the rope through the clamp, and for cable and like roads it may be employed to advantage in connection with a second or auxiliary grip, which may be employed to engage with the cable in case of the slipping of the rope through the ordinary grip.

What I claim as my invention, and desire to secure by Letters Patent, is—

A rope-clamp having the clamp face or faces corrugated spirally corresponding to the strands of the rope and having ridges within the corrugations, substantially as and for the purposes set forth.

In testimony whereof I, the said WATSON C. MOBLEY, have hereunto set my hand.

WATSON C. MOBLEY.

Witnesses:

ROBT. D. TOTTEN,

J. N. COOKE.