

T. THORNTON.  
TUBING CLUTCH.

No. 179,973.

Patented July 18, 1876.

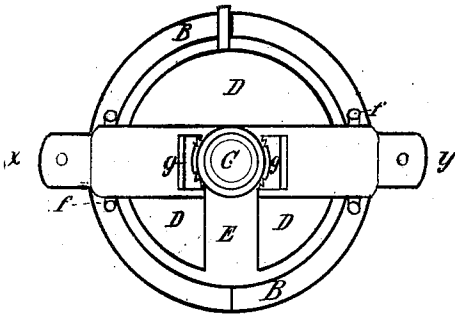


Fig. 1.

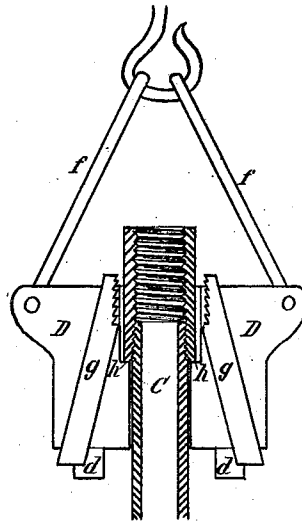


Fig. 3.

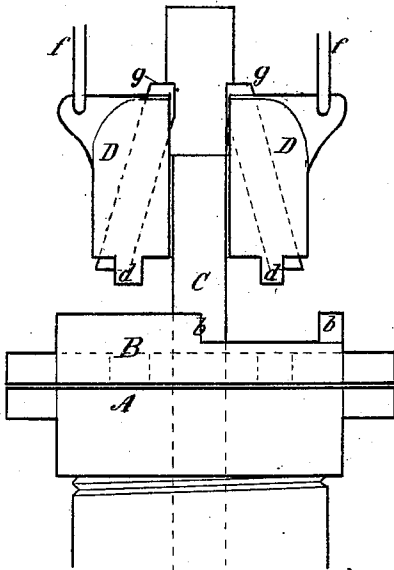


Fig. 2.

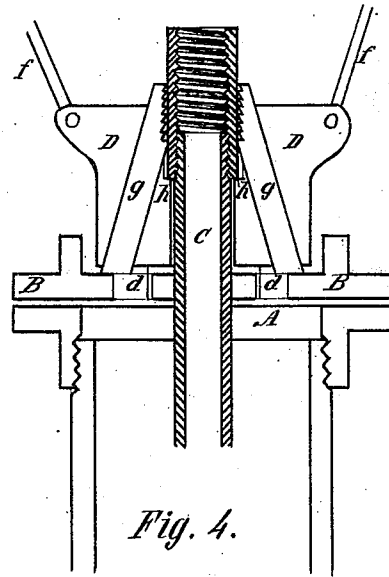


Fig. 4.

J. M. Henderson  
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Thomas Thornton,  
By his attorney  
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# UNITED STATES PATENT OFFICE.

THOMAS THORNTON, OF TIDIOUTE, PENNSYLVANIA.

## IMPROVEMENT IN TUBING-CLUTCHES.

Specification forming part of Letters Patent No. **179,973**, dated July 18, 1876; application filed May 15, 1876.

*To all whom it may concern:*

Be it known that I, THOMAS THORNTON, of Tidioute, Warren county, Pennsylvania, have invented an Improved Tubing-Clutch, of which the following is a specification:

My invention is designed to be used in drawing the tubing from or putting it into artesian wells, the tubing being in sections of various lengths, requiring to be firmly screwed together as it is run into the well.

The object is to furnish a clutch which can readily be applied to each section as it is drawn up; will hold the tubing fast while the section above is being unscrewed, and be used as an elevator to draw the remaining portion from the well.

By my invention all these several objects are attained, the clutch being so constructed that when resting on the top of the casing of the well it clamps the tubing fast and prevents it from turning.

In the drawing, Figure 1 shows a plan, and Fig. 2 an elevation, with the clutch lifted from the top of the casing; Fig. 3, a section of the clutch as it is used in drawing the tubing, and Fig. 4 a section as it rests on the top of the casing, and is holding the tubing from turning. (Figs. 3 and 4 are the sections on line *x y* in the plan.)

A represents the top of the casing of the well; B, a cap placed over the casing, and secured to it by bolts or otherwise. This cap has an opening in the center sufficiently large to allow the tubing to pass through; the alternate quarter-sections of the circumference or rim of the cap B being raised so as to form the shoulders *b b*.

D is the clutch, made from cast-iron or other metal. On the bottom are four projections or feet, *d d*, made to fit into corresponding depressions or holes in the cap B, indicated by the dotted lines.

E is a slot to allow the clutch to be placed around the tubing C, and is made just wide enough to admit the tubing below the collar. *ff* are wires or handles, to which the rope is attached to raise the tubing. *g g* are sliding

clamps or jaws, made of cast-steel, and are so constructed that when the clutch D is suspended, or when the feet *d d* rest on the cap B, they slide downward and back from the tubing, but when the clutch is lowered, so that the feet *d d* drop into the corresponding holes in the cap B, the weight of the clutch and of the tubing rests on the bottom of the jaws *g g*, which are then forced upward and against the collar on the tubing. The upper face against the tubing being sharply serrated, it thus firmly holds the tubing and prevents it from turning. *h h* are shoulders in the slot E, on which the collar on the tubing rests.

The jaws *g g* are so formed that when they are dropped back or open, they will allow the collar on the tubing to descend to the shoulder *h*, but will not allow it to pass out horizontally, thus preventing the tubing slipping from the clutch while raising or lowering.

The operation is as follows: The tubing being raised sufficiently for the clutch to be placed around it below the collar, it is again lowered till the clutch rests upon the cap B, and the collar upon the shoulder *h*. The clutch is then turned till the feet *d d* drop into the holes in the cap B, when the clutch drops till its weight and the weight of the tubing rest on the bottom of the jaws *g g*, which are thus forced up and against the collar of the tubing, holding it firmly in place. The upper joint is then unscrewed and removed, the rope attached by a hook to the handles *ff*, and the clutch, with the tubing, drawn from the well, till a second section is exposed, the jaws *g g* dropping back and releasing their hold on the collar.

What I claim as my invention is—

The clutch D, provided with the feet *d d* and jaws *g g*, in combination with the casing-cap B, substantially as and for the purposes set forth.

THOMAS THORNTON.

Witnesses:

L. R. KLUMPH,  
J. M. HENDERSON.