T. Lowry,

Tube Clamp.

No. 51,842. Patented Jan. 2, 1866.

Fig. 3

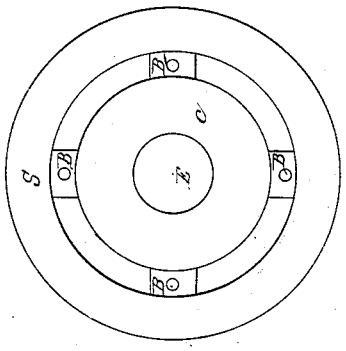


Fig. 4

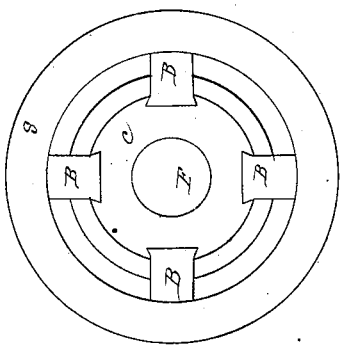


Fig. 2

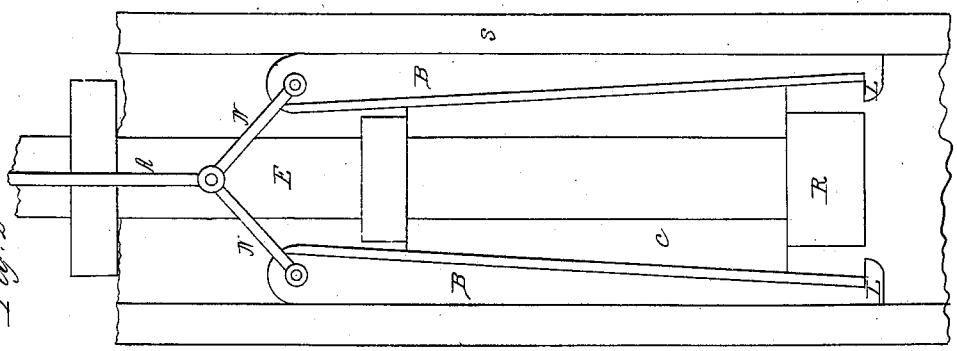
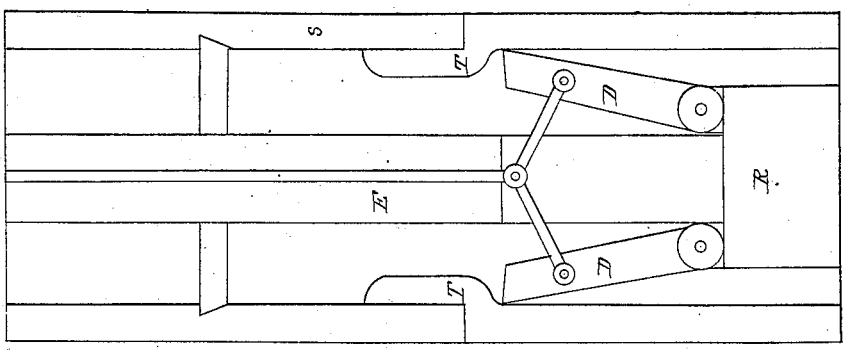


Fig. 1



Witnesses:
Eb Williams Jr
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UNITED STATES PATENT OFFICE.

THOMAS LOWRY, OF PITTSBURG, PENNSYLVANIA.

IMPROVED APPARATUS FOR DRAWING PIPES FROM WELLS.

Specification forming part of Letters Patent No. **51,842**, dated January 2, 1866.

To all whom it may concern:

Be it known that I, THOMAS LOWRY, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Apparatus for Drawing Pipes from Wells; and I hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

The nature of my invention consists in attaching to the end of a draw-rod a number of pawls or wedges in such a manner and in such relation to the rod as that on being inserted in the pipe of a well the wedges are drawn in by a small rope or otherwise, so as to admit of easy descent, when on releasing the pawls or wedges and attempting to withdraw the rod the wedges or pawls will be pressed laterally against the inside of the pipe with sufficient force to hold and draw the pipe out on the rod being lifted by power applied for that purpose.

To enable others to understand and make my invention, I will proceed to describe its construction by reference to the accompanying drawings, wherein—

Figure 1 represents a vertical section of a pipe, showing the manner in which the pawls catch under the enlargement formed by a joint. Fig. 2 represents a vertical section of a smooth portion of the pipe, and showing the method of expanding the wedges. Fig. 3 is a cross-section of the pipe and rod at the upper end of the wedges. Fig. 4 is a cross-section of the same at the lower end of the wedges.

All the drawings are lettered, and similar letters denote corresponding parts in the several views.

I construct my apparatus by enlarging the end R of the draw-rod E sufficient to support a conical sleeve, C, having several dovetailed grooves cut longitudinally therein. In each of these grooves is slipped a long wedge, B, placed in reverse position to the taper of the cone C. The upper ends of these wedges are connected together by a short link, N, extending from each, and to which is attached a rope or wire, A, to enable the operator to draw them up in the grooves until the hooks L L on the small ends catch against the base of the cone C, which prevents their being drawn out of place by drawing on the rope or wire A. The wedges B, by reason of the dovetailed grooves, are made to approach each other sufficiently to admit of their easy descent in the pipe S, when on releasing the wedges and drawing on the rod E, the cone C will, by its upward movement, cause the wedges to expand or separate, so as to press them against the inside of the pipe S with sufficient force to enable it to be drawn out.

To prevent the slipping of the wedges against the pipe and increase the certainty of their hold, the outside edge of each wedge may be serrated or furnished with teeth, which will insure their perfect operation.

Where the pipe is jointed, as represented by Fig. 1, the wedges are not absolutely necessary; but the lower end, R, of the rod E may be furnished with pawls D, hinged so as to allow the upper end of each to fall outward and catch under the enlargement formed by the joint T, which will answer the purpose in this case fully as well as the wedges.

Having thus briefly described my invention, what I claim is—

The employment and use of expanding wedges or pawls, or their mechanical equivalent, operated by a draw-rod, in the manner described, for the purpose of drawing pipes from oil-wells, as hereinbefore stated.

THOS. LOWRY.

Witnesses:

EB. WILLIAMS, Jr.,

C. S. AMMOND.