J. S. BISHOP.

Oil-Well Drilling Apparatus.

No. 203,403. Patented May 7, 1878.

Fig. 1.

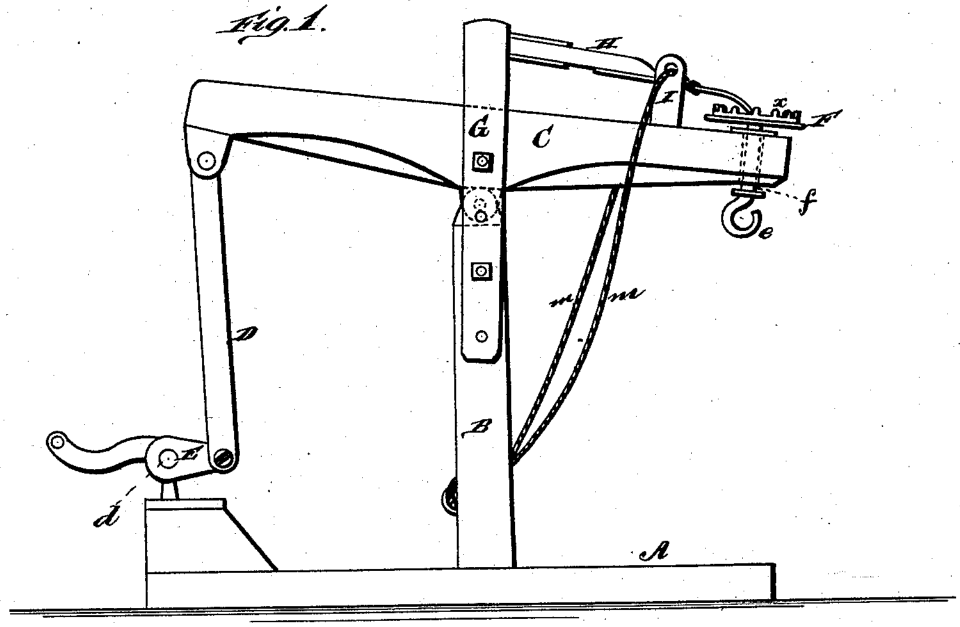
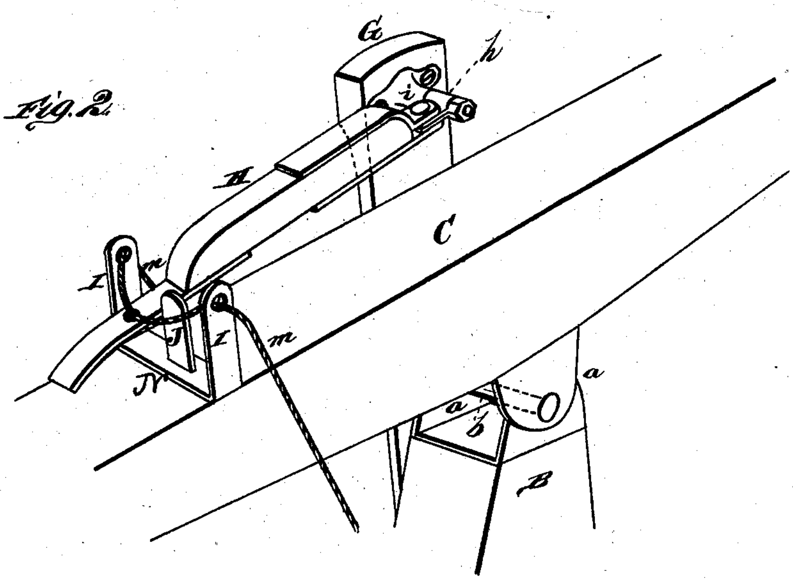


Fig. 2.



WITNESSES

Robert Everett.

Jas. J. Sheehy

INVENTOR.

Jason S. Bishop.

Gilmore, Smith & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JASON S. BISHOP, OF FILLMORE, NEW YORK.

IMPROVEMENT IN OIL-WELL-DRILLING APPARATUS.

Specification forming part of Letters Patent No. **203,403**, dated May 7, 1878; application filed February 23, 1878.

To all whom it may concern:

Be it known that I, JASON S. BISHOP, of Fillmore, in the county of Allegany and State of New York, have invented a new and valuable Improvement in Apparatus for Drilling Oil-Wells; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a side view of my apparatus for drilling oil-wells, and Fig. 2 is a perspective view of a portion thereof.

This invention relates to that class of apparatus for drilling oil-wells which gives the drill a rotary motion, as shown in Letters Patent granted to R. S. Torrey, December 18, 1866, No. 60,595, and N. Pontion, April 2, 1867, No. 63,557; and the novelty consists in certain improvements, as will be hereinafter more fully set forth, and pointed out in the claims.

The annexed drawing, to which reference is made, fully illustrates my invention.

A represents the bed or platform of the machine, from which rises a post or standard, B; and at the upper end of said post or standard is a walking-beam, C, pivoted between two plates or arms, *a a*, as shown, by a pin or bolt, *b*. One end of the walking-beam C is, by a pitman, D, connected with a crank-wheel, E, which wheel is secured to a shaft, *d*, placed in suitable bearings on the bed A, and to which shaft the power is applied by means of a crank or otherwise, as may be desired.

Through the other end of the walking-beam C is passed a short shaft, *f*, on the upper end of which is secured a disk or wheel, F. This wheel lies on top of the walking-beam C, and has a regular series of cogs, pins, or teeth, *x x*, on its upper side. The lower end of the short shaft *f* forms a large eye or hook, *e*, for the attachment of the drill.

To the side of the post or standard B is secured an arm, G, which extends a suitable distance above the walking-beam, and from the upper end of said arm projects a stud, *i*, over the walking-beam. On the stud *i* is placed a clip, *h*, between the ends of which is pivoted one end of a pawl, H. This pawl extends forward over the beam, and its free end rests upon the wheel F, to engage with the cogs or teeth *x* thereon.

During each revolution of the crank-wheel E the walking-beam C rocks once backward and forward, or, in other words, the front end of said beam obtains an upward and downward movement.

The fulcrum of the pawl H being above the fulcrum of the walking-beam, it will readily be seen that as the front end of the beam rises the wheel F will be turned by means of the pawl H, while as said end of the beam descends the end of the pawl will ride over the cogs on said wheel to engage with another one.

The amount of revolution of the wheel F for each stroke of the beam can easily be regulated, as desired, by adjusting the arm G up or down on the standard B.

The object of thus rotating the wheel F is to rotate the drill, so that the same will make a round hole.

The pawl H passes between two arms, I I, of the standard N on the walking-beam, and between said arms is a shorter arm, J, over which the pawl may be thrown from one side to the other to make its free end engage with either side of the wheel F, and thus change the direction of the rotation of the drill.

In the upper ends of the arms I are to be pulleys, over which cords or chains *m m* pass, attached to the pawl to be operated from the platform or any other suitable point, so as to change the pawl as desired.

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

1. In an apparatus for drilling oil and other wells, the pivoted pawl H, standard N, with arms I I J, and the cords or chains *m m*, in combination with the cogged wheel F and shaft *f*, substantially as and for the purposes set forth.

2. In apparatus for drilling oil and other wells, the combination of the adjustable arm G, stud *i*, clip *h*, and pivoted pawl H, whereby said pawl can be turned laterally, for the purposes herein set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

JASON S. BISHOP.

Witnesses:
HENRY CLARK,
CHARLES F. PORTER.