

No. 855,626.

PATENTED JUNE 4, 1907.

O. O. FURRU.
PUMP JACK.

APPLICATION FILED MAR. 21, 1905.

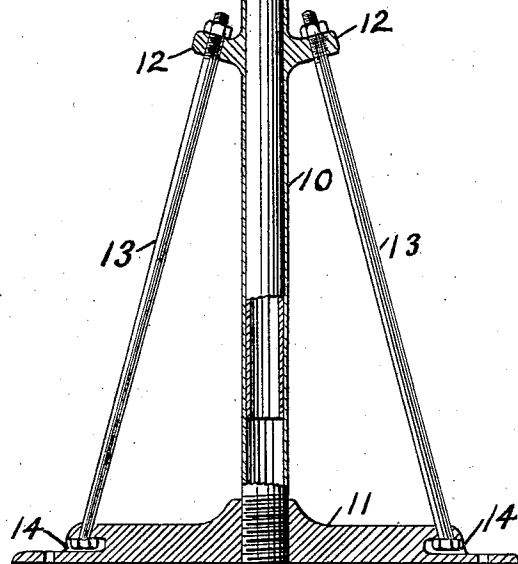
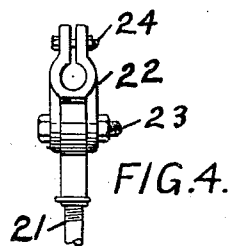
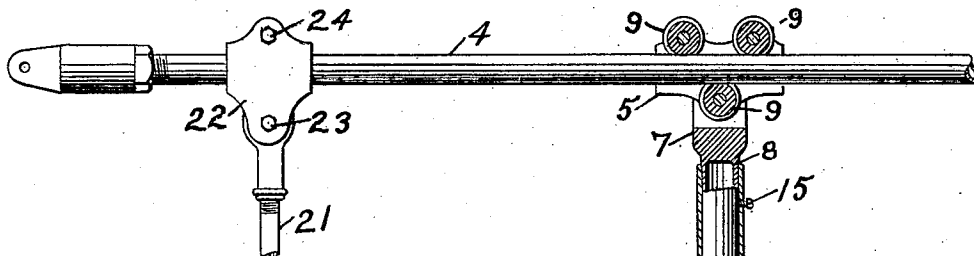


FIG. 1.

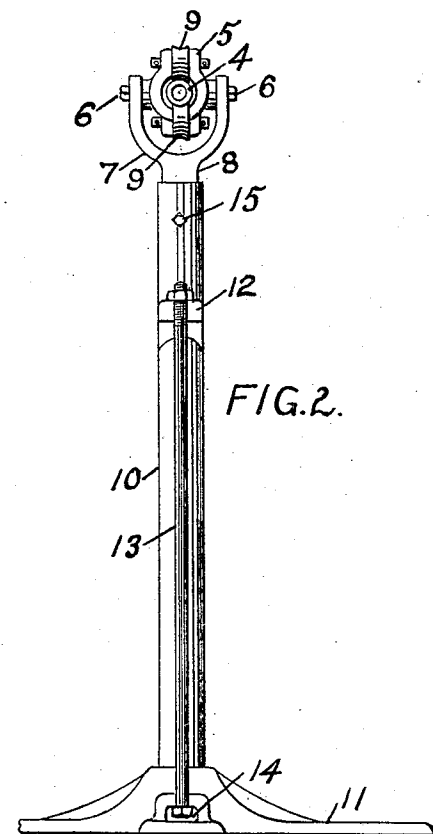


FIG. 2.

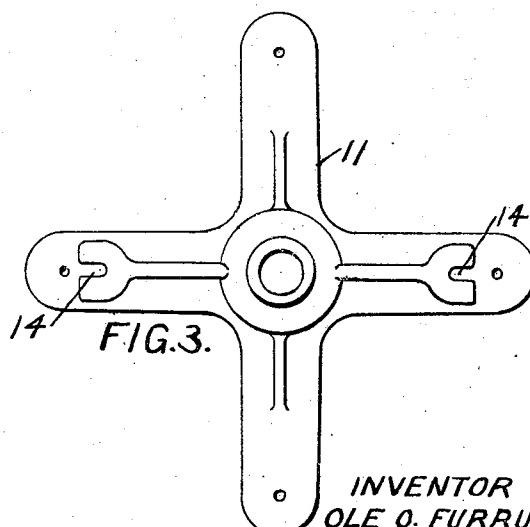


FIG. 3.

WITNESSES
F. O. Tanner.
C. Macnamara

INVENTOR
OLE O. FURRU
BY *Paul & Paul*
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UNITED STATES PATENT OFFICE.

OLE O. FURRU, OF ST. PAUL, MINNESOTA, ASSIGNOR OF ONE-HALF TO ELIAS CRONSTEDT, OF ST. PAUL, MINNESOTA.

PUMP-JACK.

No. 855,626.

Specification of Letters Patent.

Patented June 4, 1907.

Application filed March 21, 1905. Serial No. 251,213.

To all whom it may concern:

Be it known that I, OLE O. FURRU, of St. Paul, Ramsey county, Minnesota, have invented certain new and useful Improvements in Pump-Jacks, of which the following is a specification.

My invention relates to apparatus designed particularly for operating a pump rod and actuated from a suitable source of power such as a gasoline engine, and the object of my present invention is to improve the apparatus shown and described in Letters Patent of the United States issued to me July 12, 1904, No. 764,573.

My invention consists generally in providing means for adapting the jack to pump standards of different height.

Further, the invention consists in providing an oscillating anti-friction bearing for the reciprocating rod through which power is transmitted to the pump rod.

Further, the invention consists in various constructions and combinations, all as hereinafter described and particularly pointed out in the claims.

In the accompanying drawings forming part of this specification, Figure 1 is a vertical section through the standard that supports the horizontally reciprocating rod. Fig. 2 is an elevation of the standard looking toward the end of the rod and its anti-friction bearing. Fig. 3 is a plan view of the base for the standard that supports said horizontal rod. Fig. 4 is a detail of the clamp device that connects the pitman to the horizontal rod.

In the drawing 4 represents a rod having a connection at one end for the pump rod (not shown). This rod 4 normally occupies a substantially horizontal position and is slidably supported in a block 5 that is centrally pivoted at 6 in a fork 7 on the upper end of the rod 8. Anti-friction bearing wheels or rollers 9 are mounted in the block 5, there being preferably two of these wheels above the rod 4 and one below, and the rod slides freely between them, the block oscillating on its pivot to accommodate itself to the different positions assumed by the rod

in the stroke of the pump rod. The rod 8 is preferably arranged within a vertical hollow standard 10 that is mounted on a base 11 and provided with lugs 12 adjustably connected by rods 13 with slots 14 provided in said base. By loosening the nuts on these rods and slipping them out of said slots the hollow standard can be detached from the base. The rod 8 is adapted to slide vertically within the hollow standard being secured at different elevations therein by means of a set screw 15. By adjusting the rod 8 I am able to raise or lower the oscillating block 5 to adjust it to the different heights of pumps.

A pitman rod 21 operated from a suitable source of power (not shown) has a pivotal connection at 23 with a clamp 22. The clamp is split on one side and incloses the rod 4, the split portions being connected by a bolt 24 which when tightened draws the clamp firmly about the rod 4 and secures it thereon. The rod 4 is rigidly held while the pitman is free to oscillate back and forth.

This apparatus can be applied to pumps of different height and the anti-friction bearing provided at the top of the rod 8 insures perfect freedom of movement of the rod 4 at all points of its stroke.

I claim as my invention:

1. The combination, with a rod 8 having a fork at its upper end, of a block pivoted in said fork and provided with a series of anti-friction wheels, there being two of said wheels on substantially the same level in the upper part of said block, and one of said wheels in the lower part of said block and between said upper wheels, a horizontal rod having means at one end for attachment to a pump rod and slidably supported upon said lower anti-friction wheel and guided by said upper wheels, and a pitman having a pivotal connection with said horizontal rod.

2. The combination, with a hollow standard 10 having a base 11 and brace rods 13, of a rod 8 vertically adjustable in said standard, a block 5 pivotally supported on said rod 8 and provided with a series of anti-friction wheels 9, two of said wheels being

mounted in the upper part of said block and
one of them in the lower part of said block, a
horizontal rod having means at one end for
attachment to a pump rod and slidably sup-
ported upon the lower anti-friction wheel
and guided by the upper wheels, and a pit-
man pivotally connected to said rod.

In witness whereof, I have hereunto set
my hand this 11th day of March 1905.

OLE O. FURRU.

Witnesses:

RICHARD PAUL,
C. MACNAMARA.