

(No Model.)

W. C. SHEANFELD.
PUMPING JACK.

No. 546,626.

Patented Sept. 17, 1895.

Fig. 1.

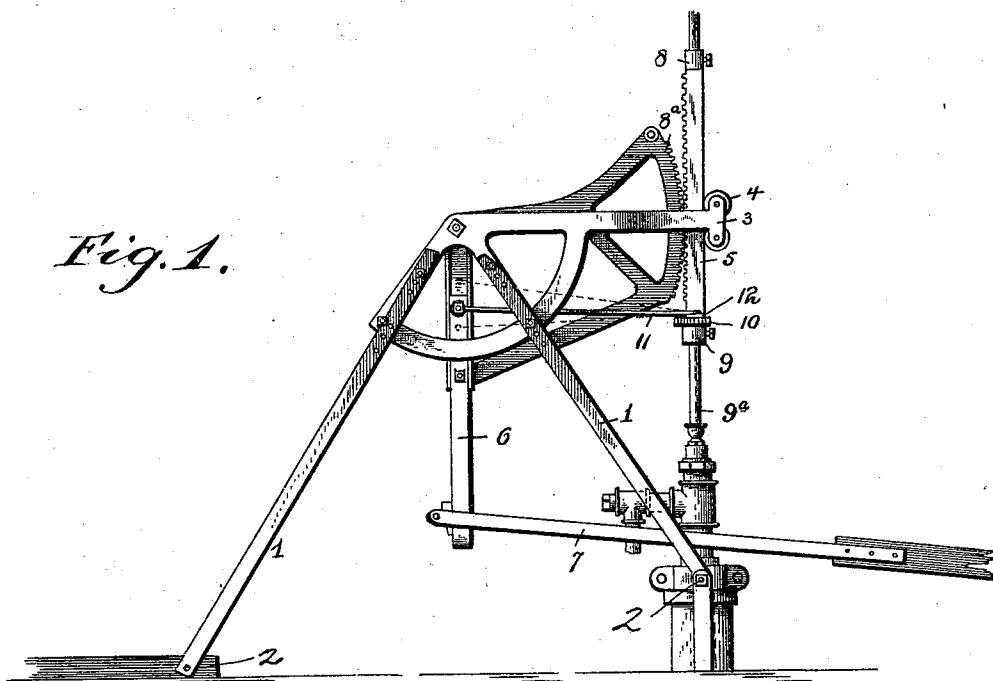


Fig. 3.

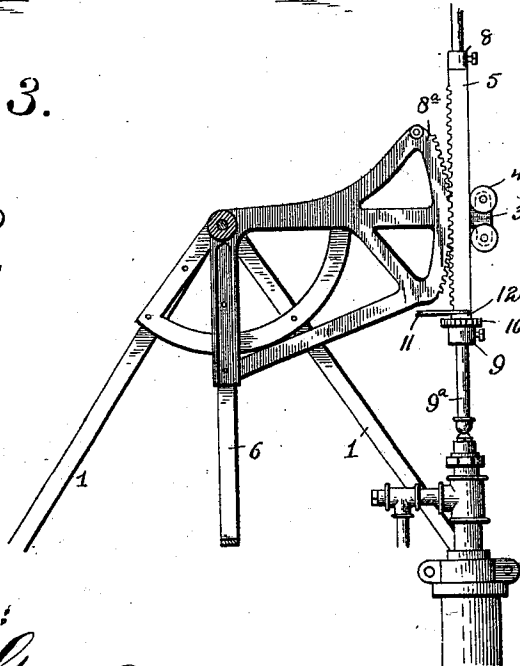
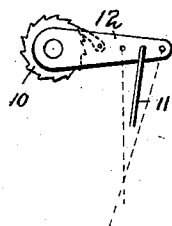


Fig. 2.

Witnesses:

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Inventor:

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by Frank G. Appleman
att'y

UNITED STATES PATENT OFFICE.

WILLIAM C. SHEANFELD, OF FREMONT, OHIO, ASSIGNOR OF ONE-HALF TO
NICHOLAS P. LEHR AND JOSEPH W. LEHR, OF SAME PLACE.

PUMPING-JACK.

SPECIFICATION forming part of Letters Patent No. 546,626, dated September 17, 1895.

Application filed June 15, 1895. Serial No. 552,890. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. SHEANFELD, a citizen of the United States of America, residing at Fremont, in the county of Sandusky and State of Ohio, have invented certain new and useful Improvements in Pumping-Jacks, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The object of this invention is to produce a pumping-jack which will impart a positive perpendicular motion to the polish-rod and give it an upward and downward movement, each of which have equal force or power.

15 The object of the invention is, furthermore, the provision of novel means for turning the polish-rod to prevent gumming with paraffin or the like, thereby obviating loss of time and annoyance in repacking the stuffing-box, cleaning the polish-rod, &c. A further object
20 in having the rod constantly turned is to prevent the sucker-rod from getting loose from the polish-rod. This advantage will be appreciated by those having practical knowledge of
25 the working of a pump of this character.

Finally, the object of the invention is to so form the pumping-jack mechanism that it will prove efficient and satisfactory in use, strong and durable, and at the same time comparatively inexpensive to manufacture.

30 With these and other objects in view the invention consists in the novel details of construction and arrangement and combination of parts to be hereinafter more fully set forth and specifically claimed.

35 In describing the invention in detail reference is had to the accompanying drawings, forming part of this specification, wherein like numerals denote corresponding parts in the several views, in which—

40 Figure 1 is a view in side elevation of my invention. Fig. 2 is a longitudinal vertical sectional view of the same. Fig. 3 is a plan view of the ratchet-arm.

45 In the drawings, 1 1 1 indicate the bracket or support, anchored at 2 2 in any well-known manner. The bracket is provided with arms 3, carrying friction-rollers 4, on which the back of the rack-bar 5 rides, as illustrated,
50 the arms serving also as a guide for the segmental gear, to be hereinafter referred to.

Pivoted to the support is a right-angular rocking arm 6, the lower end of which is suitably connected with a pitman 7, and by its motion is imparted. The opposite end of the arm is provided with a segmental gear 8^a, meshing with the rack-bar 5 and communicating thereto a reciprocating motion as the pitman operates the lower portion of the arm.

The polish-rod 9^a is free to rotate in the rack-bar, collars 8 and 9 being secured to the said rod above and below the rack-bar, respectively, so that the said rod will be carried with the rack-bar in its upward and downward course. A ratchet 10 is interposed between the collar and the lower end of the rack-bar and is so connected with the polish-rod as to give it a partial turn at each forward and backward swing of the arm, it being understood that the ratchet-wheel may be so applied as to turn the rod in the direction desired, the connection between the ratchet and arm being made by a rod 11; and it will be seen that the action of the ratchet may be varied by connecting the rod 11 higher up or lower down on the downward-extending rocker-arm or by inserting the end of the rod 11 in another aperture of the ratchet-arm 12, as shown by dotted lines, Figs. 1 and 3.

In view of the foregoing, the construction, operation, and advantages will be apparent, and it is particularly noted that various changes in the proportions and other details of construction may be resorted to and yet the spirit of my invention will not be departed from.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a pumping jack, in combination with a support, an arm pivoted thereto, said arm having angular extremities, the lower being connected with a pitman, and the opposite extremity having an integral segmental gear, a rack bar meshing with said gear, a polish rod passing loosely through the center of the rack bar, collars secured to the rod above and below the rack bar, a ratchet connected with the polish rod, and means for operating the ratchet and arm in unison, as and for the purpose described.

2. A pumping jack in combination with a

bracket or support, an angular arm pivoted thereto and having at one end a segmental gear, a rack bar meshing therewith, a polish rod free to rotate in the rack bar and taking motion therefrom and means for rotating the polish rod, for the purpose described.

3. A pumping jack in combination with a suitable bracket, a lever, a rack bar operated thereby, a polish rod rotatable in the rack bar, and receiving a vertical motion therefrom and means for turning said rod for the purpose described.

4. A pumping jack in combination with a bracket, an angular arm pivoted thereto and having at one end a segmental gear, a rack bar meshing therewith, a polish rod free to rotate in the rack bar, collars secured to the rod, above and below the rack bar, a ratchet wheel secured to the rod, an arm carrying a pawl engaging the wheel and a connection between the arm carrying the pawl and the angular swinging arm, for the purpose described.

5. In a pumping jack, a suitable support, an angular arm pivoted to the support, and

having on its end an integral segmental gear, means for operating the rod, in combination with a rack bar, a polish rod free to rotate in the rack bar, and taking vertical motion therefrom, a ratchet wheel secured to the rod, an arm carrying a pawl engaging the wheel, and a connecting rod between the arm of the pawl and the swinging arm, as and for the purpose described.

6. In a pumping jack, a suitable frame having its forward legs secured on either side of the well casing, an arm pivoted to the frame and carrying a segmental gear, means for operating the arm, a rack bar meshing therewith, a polish rod free to rotate in the rack bar and taking motion therefrom, in combination with means for turning the rod, as and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM C. SHEANFELD.

Witnesses:

CHAS. HENSEL,
LOLA FISHER.