Sept. 14, 1926. 1,599,463

W. B. FLYNN

PUMP JACK

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Fig. 1.

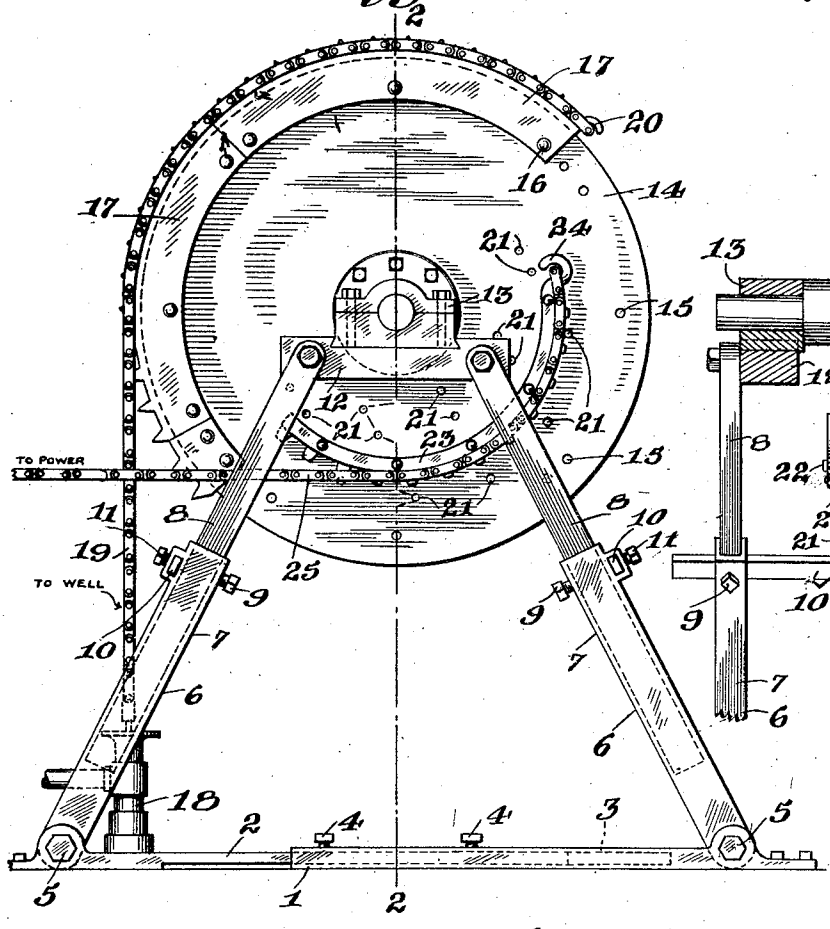


Fig. 2.

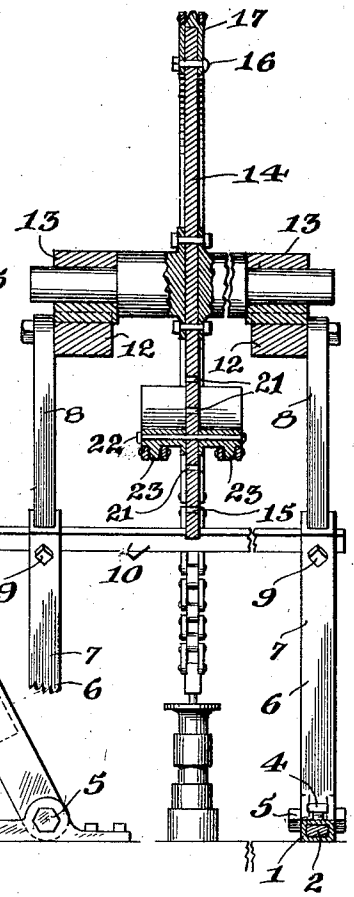
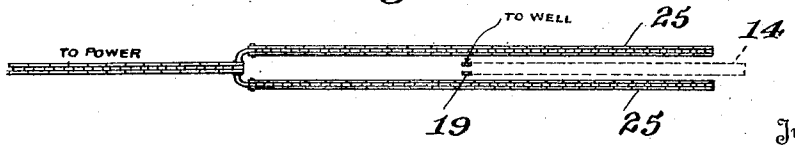


Fig. 3.



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PUMP JACK.

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This invention relates to pump jacks and has for its purpose to generally improve such construction, as well as to provide a structure by which the power is applied in a direct line with the bore of the well.

A further object of the invention resides in the provision of a pump jack including a sprocket wheel composed of a disc or wheel on the rim of which a series of teeth are demountably secured, the teeth being adapted to extend around all or a part of the periphery of the disc.

Another object of the invention consists in providing a radially adjustable connection for the source of power whereby the stroke of the pump may be varied to suit the well with which it is in operation.

A further object of the invention resides in the provision of a framework for the pump jack which is adjustable both vertically and horizontally so as to provide proper adjustment of the working parts of the jack to the well.

Other objects and advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings; in which—

Figure 1 is a side elevation of the jack in operative association with a well.

Figure 2 is a fragmentary vertical section taken on line 2—2 of Figure 1; and

Figure 3 is a detail plan view of the chain to the source of power.

Referring to said drawings more in detail the numeral 1 indicates a pair of base members which are formed of extensible sections 2 and 3 which are rendered adjustable by means of the set screws 4. These base members 1 are placed above the well structure and have pivoted to the ends thereof as indicated by the numeral 5 the upwardly inclined beams 6 which are composed of the extensible sections 7 and 8 which may be secured in adjusted position by means of set screws 9. The beams 6 on the adjacent ends of the base members 1 are connected by means of the horizontally disposed rods 10 which are adjustably attached to the beams by means of set screws 11. Bearing blocks 12, which form supports for the bearings 13 of the gear wheel about to be described, are carried on the upper ends of the beams 6 as clearly disclosed on Figure 1 of the drawings.

The wheel 14 which forms an essential part of the invention may be made of wood or other suitable material, and may be in the form of an ordinary wheel or in the form of a disc. In the present embodiment of the invention oscillating member 14 is depicted as a disc and is provided with a plurality of bolt holes 15 adjacent its periphery for the reception of bolts 16 which detachably secure the toothed segments 17 to the periphery of the disc. These segments are placed in series on the disc 14 and may extend entirely around the periphery thereof or only so far as deemed necessary. Obviously, the segments 17 instead of overlapping the disc as shown might have a web thereof inserted in a groove in the periphery of the disc, or secured in any other desirable manner.

The well with which the pump jack is connected is indicated by the numeral 18, and the pump rod thereof is attached to one end of a chain 19, the opposite portion of the chain meshing with the teeth of the segments 17 and having its free end engaged over the hook 20 formed on the remote end of the upper segment 17.

In a mechanism for operating a pump rod it is desirable that adjustments be available whereby the stroke of the rod may be varied to suit the particular well. To this end I have provided the disc 14 with a plurality of bolt holes 21 which receive the bolts 22 shown in Figure 2 and which rigidly clamp the toothed segments 23 to the opposite sides of the disc 14. Only a single segment 23 is attached to each side of the disc, and the ends of the segments remote from the source of power are provided with hooks 24 which receive the free ends of the double operating chain 25, the adjacent portion of the chain meshing with teeth of segment 23 and the remote end thereof being associated with a source of power (not shown). To vary the throw of the disc 14 and consequently the stroke of the pump rod it will be apparent that the segments 23 may be moved toward or from the periphery of the disc as may be necessary.

From the foregoing description taken in connection with the accompanying drawings it will be seen that I have devised a rather simple and inexpensive construction of pump jack which may be adjustably mounted with respect to the well, and which may be adjusted as to throw so as to produce the proper stroke of the pump rod.

In accordance with the patent statutes I have described what I now believe to be the

best embodiment of the invention, but I do not wish to be understood thereby as limiting myself or the scope of the invention, as many changes and modifications may be made without departing from the spirit of the invention; all such I aim to include in the scope of the appended claims.

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

1. A pump jack for wells including a wheel supported over a well, means operatively connecting said wheel with the well pump, a radially adjustable toothed segment mounted on the wheel, a hook on one end of said segment, and a chain engaging said hook and toothed segment and connected to a source of power.

2. A pump jack for wells including a disc supported over a well, a plurality of toothed segments detachably secured to the periphery of said disc, a hook on one end of one of said segments, a chain engaging said hook and the toothed segments, and means for oscillating said disc.

3. A pump jack for wells including a disc supported over a well, a plurality of toothed segments detachably secured to the periphery of said disc, a hook on one end of one of said segments, another toothed segment adjustably mounted on a face of said disc, a hook on one end of said last-named segment, and chains engaging each of said hooks and segments and associated with a source of power and the pump rod.

4. A pump jack including a wheel and means for supporting the same above a well, said means comprising a pair of horizontal base members formed of extensible sections, upwardly inclined beams pivoted to the ends of said base members, each beam formed of extensible sections, and bearings attached to the upper ends of said beams.

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