

No. 612,184.

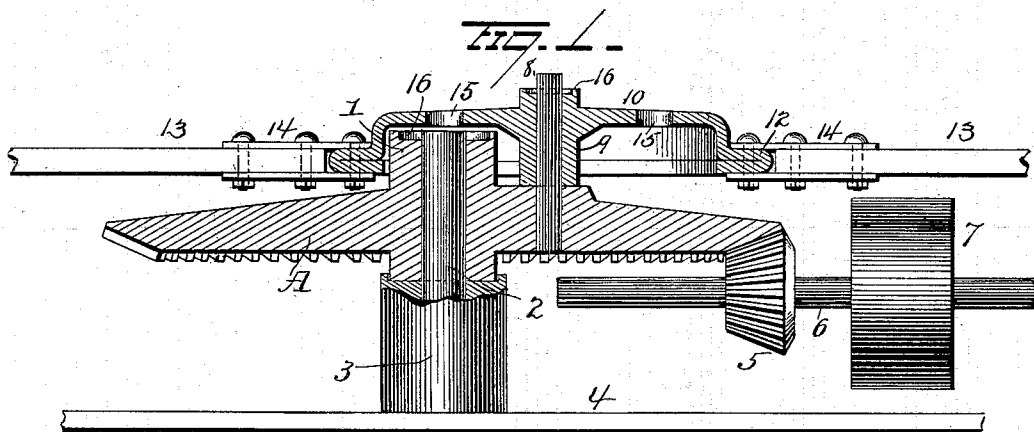
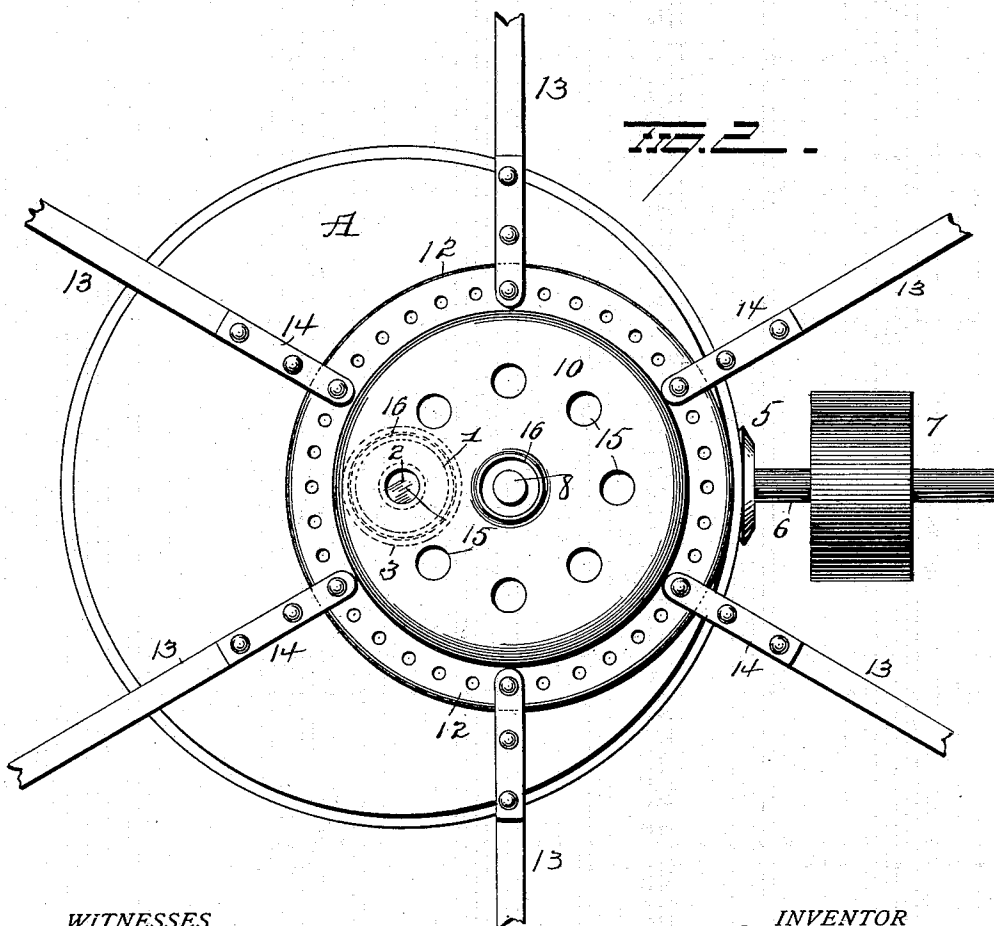
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APPARATUS FOR PUMPING WELLS.

(Application filed Jan. 13, 1898.)

(No Model.)



WITNESSES
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR PUMPING WELLS.

SPECIFICATION forming part of Letters Patent No. 612,184, dated October 11, 1898.

Application filed January 13, 1898. Serial No. 666,564. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ALLEN, of Franklin, in the county of Venango and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Pumping Wells; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in apparatus for operating oil or Artesian wells, the object of the invention being to provide means whereby to reduce the strain on the shaft and hub of the large driving gear-wheel of the apparatus to a minimum by causing the pull of the rods to come directly against the shaft.

With this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical sectional view illustrating my invention. Fig. 2 is a plan view.

It has been found in practice that when the pull-rods, by means of which the driving or operating apparatus is connected with the pumps of the wells, are so connected with the actuating wheel or disk of the apparatus that their plane will be above the shaft and hub of the large driving-gear a leverage will be exerted which will increase the friction of the hub of said driving-gear on its shaft and tend to cause the shaft and hub to wear away at the top. The result will be that in a short time the large driving-gear will wobble and be rendered useless. In order to overcome this defect, I propose to so construct the apparatus that the draft of the pull-rods will be below the top of the hub and shaft and the strain be thus brought directly against the shaft instead of above it. To arrive at this end, the large driving-gear A is provided with a hub 1, which projects above the same. The hub 1 is mounted on a shaft 2, which is secured to or made integral with an enlargement 3 on a bed-plate 4. A pinion 5 is employed to transmit motion to the gear A, and the shaft 6, on which this pinion is mounted, is provided with a pulley 7 for the accommo-

dation of a strap from any suitable or convenient source of power. A wrist-pin 8 is secured to the large gear-wheel A and is of sufficient length to project above the upper end of the hub 1 of the gear A. The hub 9 of a disk 10 is mounted on the wrist-pin 8, said disk being so disposed on its hub as to project over the hub 1 of the gear A, and at its periphery is bent downwardly, as at 11, so that its peripheral edge 12 will be disposed in a plane below the upper end of the hub 1 of the large gear-wheel. To the peripheral edge 12 the pull-rods 13, which operate the well-pumps, are connected by means of suitable couplings 14. Thus it will be seen that the line of draft will be below the upper end of the hub of the large gear and the shaft on which it is mounted and the strain will be brought directly against said hub 1 and the shaft on which it is mounted.

The driving-disk 10 is provided with a series of holes 15, one of which will always be over the upper end of the hub 1 when the apparatus is at rest to facilitate the oiling of said hub. To prevent the escape of the oil, the upper end of each hub 1 and 9 is provided with an annular flange 16.

My improvements are simple in construction and effectual in all respects in the performance of their functions.

Slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details herein shown and described.

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

1. In an apparatus for operating oil-wells, the combination with a main driving-wheel having a wrist secured thereto, and means for applying power to the driving-wheel for rotating it positively, of a disk centered on the wrist, and pull-rods pivotally connected with the disk and radiating in all directions therefrom whereby the disk is steadied at all sides.

2. In an apparatus for operating wells, the combination with a main driving-wheel and a hub and shaft for said wheel projecting beyond the face thereof, of a wrist or crank pin

attached to the driving-wheel and projecting beyond the hub and shaft of the driving-wheel, a disk mounted on said wrist or crank pin and adapted to project over the end of the hub and shaft of the driving-wheel, the periphery of said disk being disposed in a plane below that of the upper end of the hub and shaft of the driving-wheel, pull-rods and connections between said pull-rods and the periphery of said disk, substantially as set forth.

3. In an apparatus for operating wells, the combination with a driving-wheel, of a wrist-

pin mounted thereon, a disk mounted on the wrist-pin and adapted to project over the hub and shaft of the driving-wheel, said disk having a series of holes to facilitate the oiling of the hub and shaft of the driving-wheel, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE ALLEN.

Witnesses:

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