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J. KERLIN.

ROTARY SUPPORT FOR PULL RODS.

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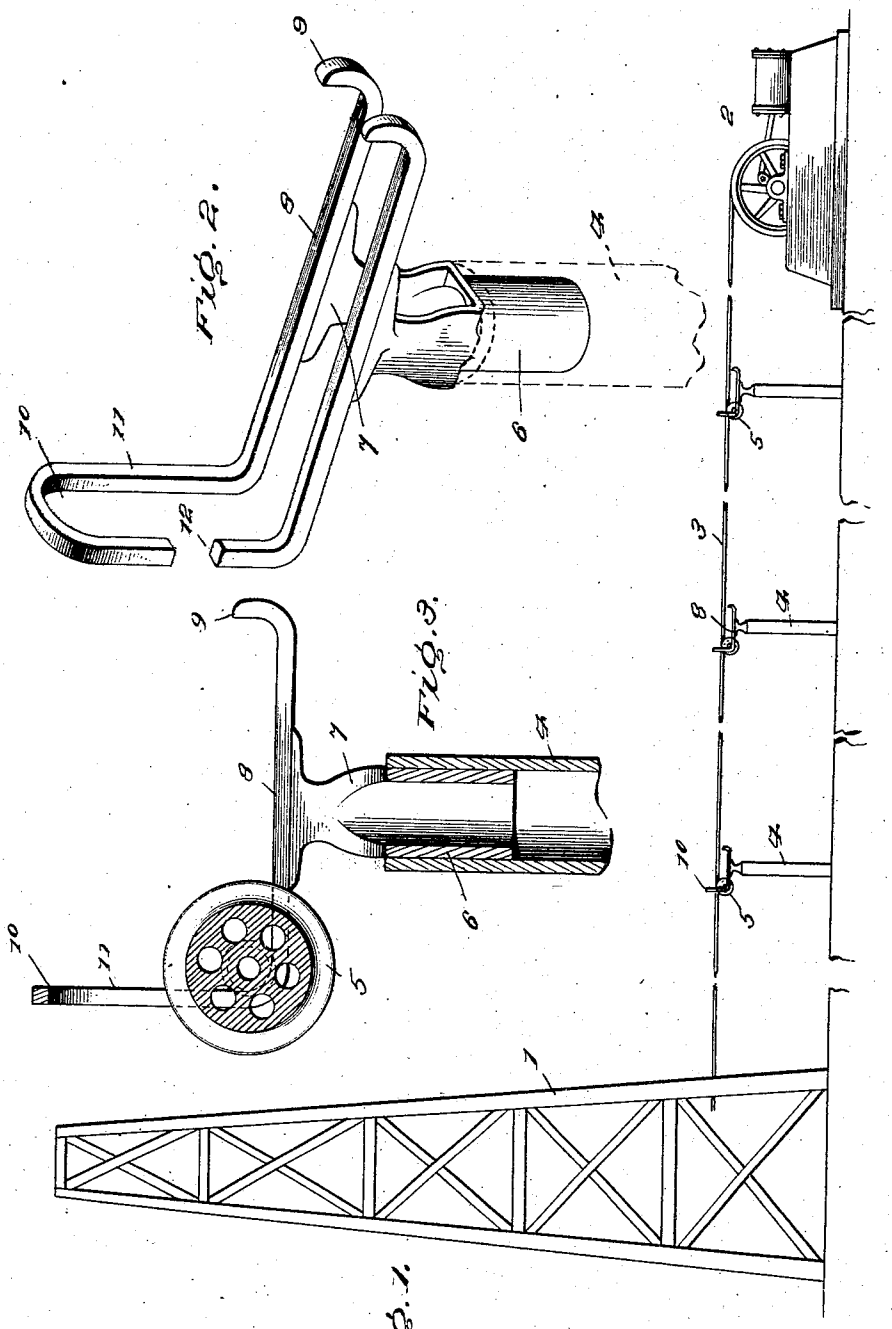

Fig. 2.

Fig. 3.

Fig. 1.

Witnesses

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By

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No. 787,625. Patented April 18, 1905.

UNITED STATES PATENT OFFICE.

JOHN KERLIN, OF MONTPELIER, INDIANA.

ROTARY SUPPORT FOR PULL-RODS.

SPECIFICATION forming part of Letters Patent No. 787,625, dated April 18, 1905.

Application filed August 15, 1904. Serial No. 220,825.

To all whom it may concern:

Be it known that I, JOHN KERLIN, a citizen of the United States, residing at Montpelier, in the county of Blackford and State of Indiana, have invented certain new and useful Improvements in Rotary Supports for Pull-Rods, of which the following is a specification.

In drilling operations in oil districts it is common to utilize a single motor or engine for operation of the drilling apparatus located at different wells. In other words, the engine is usually located in a central situation and connected with the well apparatus of the surrounding wells by means of power-transmitting devices in the form of pull-rods. The invention comprises a support for a pulley, over which the pull-rod moves, and the primary feature of the invention is to reduce to a minimum the friction of the pulley as regards the mounting of the same upon the post. In its practical embodiment quite a number of supporting-posts are utilized to carry the pull-rods leading off to the different wells from the engine, each of said posts being provided with a pulley, and the special construction of post comprising my invention has been found to give greater power, since the friction of the pulleys has been so reduced as to greatly increase the stroke upon the rod-lines.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a view in elevation, showing a derrick, an engine, a number of supporting-posts embodying my invention, and the power-transmitting device carried by pulleys upon said posts. Fig. 2 is a perspective view showing the upper portion of a post having a support embodying the invention applied thereto. Fig. 3 is a vertical sectional view of the support, a pulley being shown thereon.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In the drawings the numeral 1 indicates a derrick designed to have the usual drilling apparatus, and at a distance from the derrick is situated an engine 2, operably connected with the drilling apparatus of the derrick 1 by means of the usual pull-rod 3. A number of supporting-posts 4 are used, and said posts may be of any suitable substantial structure adapted to carry the support for the pull-rod 3. Each of the posts 4 is provided at its upper end with a pulley 5, grooved to receive the pull-rod 3 in the peripheral portion thereof, and this pulley 5 is directly carried by the support which forms the essential feature of the invention.

The support comprises a shank or stem 6 and is bifurcated at its upper portion, as shown at 7. The posts 4 are preferably tubular at the upper ends thereof, so that the shanks 6 of the several supporting devices may be received in the tubular portions aforesaid, and said mounting will admit of a certain degree of rotary play of the shank 6 upon the post, desirable in order to allow movement of the support laterally. At the upper end of each bifurcated member 7 of the support is formed a horizontal bar 8, upon which the pulley 5 directly obtains a bearing. The bars 8 of the support are spaced from each other, and the trunnions of the pulley 5 rest directly upon said bars, being designed to travel longitudinally thereof in the operation of the part 3. The pulley 5 thus moves horizontally upon the members 8, at the same time having its customary rotary movement as the power-transmitting device 3 is actuated. The mounting of the pulley 5 is such that the friction consequent to the rotary movement only of said pulley in the usual type of bearings is gradually reduced. At corresponding ends of the bars 8 are located stops 9, which constitute upwardly-bent end portions of the bars, and these members limit the longitudinal or horizontal movement of the pulley in one direction. At the opposite ends of the bars 8 is located a connecting-loop 10, and the latter

forms a guide through which the pull-rod 3 passes and by which said pull-rod is prevented from displacement from the grooved portion of the pulley. The loop 10 extends upwardly from the adjacent ends of the bars 8 and is of such a width that the spaced side bars 11 of said loop effectively prevent any lateral movement of the pull-rod, which under ordinary conditions would cause same to jump from the pulley over which it operates. One side bar 11 of the loop 10 is cut away, as shown at 12, this being necessary in order to admit of convenient displacement of the pull-rod upon the pulley 5 without passing same longitudinally through the loop. The part 12 is advantageous when it is considered that rod-lines are usually from one thousand to two thousand feet long. The bars 8 constitute spaced or horizontal elements over which the pulley 5 travels, and during the operation of the drilling apparatus the pulley will move from the loop 10 toward the opposite ends of the bars 8, being of course limited in its movement by pivoted loops and the stops 9.

Having thus described the invention, what is claimed as new is—

1. In a support for pull-rods, the combination of a post, a support carried by said post and provided with spaced horizontal bars, a pulley having its trunnions mounted upon said bars and movable longitudinally thereof, and stop means at the ends of said bars for limiting the movement of the pulley therealong.

2. In a support for pull-rods, the combination of a support comprising spaced bars horizontally disposed, a pulley having its trunnions mounted upon said bars and movable longitudinally thereof, stops at corresponding ends of the bars, and a guide-loop projected upwardly from the one end of the bars.

3. In a support for pull-rods, the combination of a support comprising spaced bars horizontally disposed, a pulley having its trunnions mounted upon said bars and movable longitudinally thereof, stops at corresponding ends of the bars, and a guide-loop projected upwardly from the one end of the bars, one of the sides of said guide-loop being cut away for the purpose specified.

4. In combination, a post, a support carried by said post and comprising a shank and bifurcated portion at the upper end thereof, horizontal bars at the upper extremities of the bifurcated portions, and a pulley mounted upon the support and movable longitudinally of the bars aforesaid.

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

JOHN KERLIN. [L. S.]

Witnesses:
PATRICK C. CONNORS,
BERNADETTE MCMAHON.