Sept. 21, 1943. A. M. KIZZIAR 2,329,913

OIL WELL PUMP

Original Filed Aug. 1, 1939 2 Sheets-Sheet 1

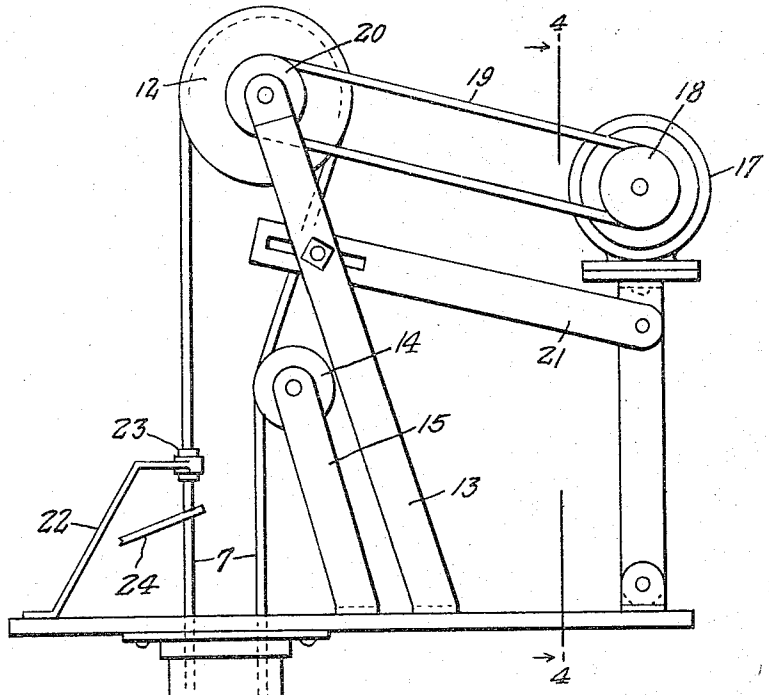


Fig. 1.

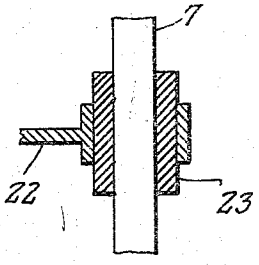
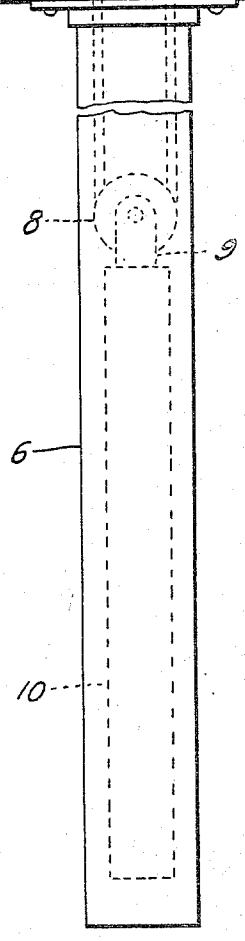


Fig. 7.



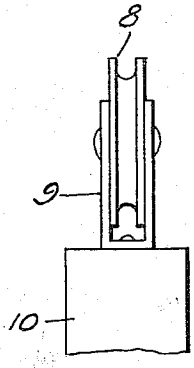


Fig. 5.

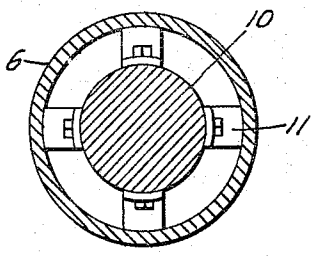


Fig. 6.

Inventor

Alvin M. Kizziar.

By Clarence A. O'Brien and Hyman Berman

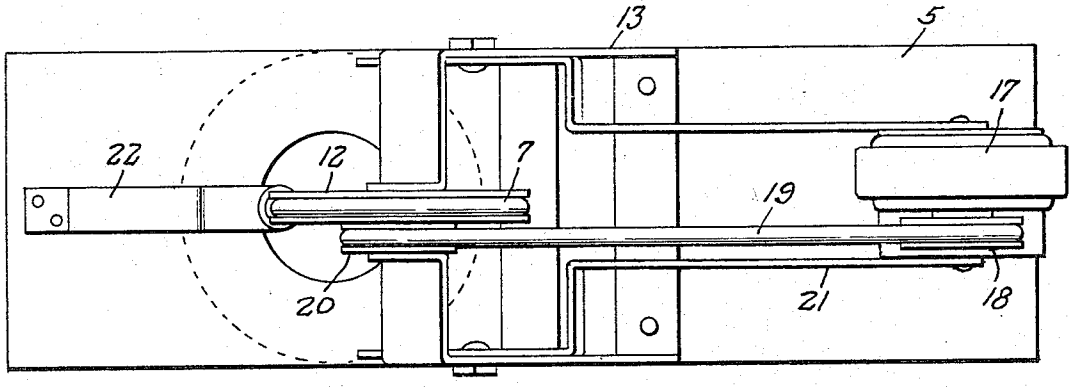
Attorneys

Sept. 21, 1943. A. M. KIZZIAR 2,329,913

OIL WELL PUMP

Original Filed Aug. 1, 1939 2 Sheets-Sheet 2

Fig. 2.



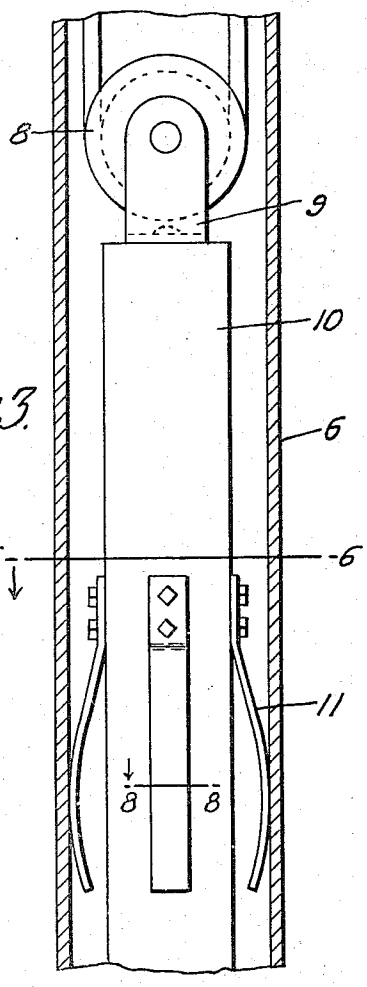


Fig. 3.

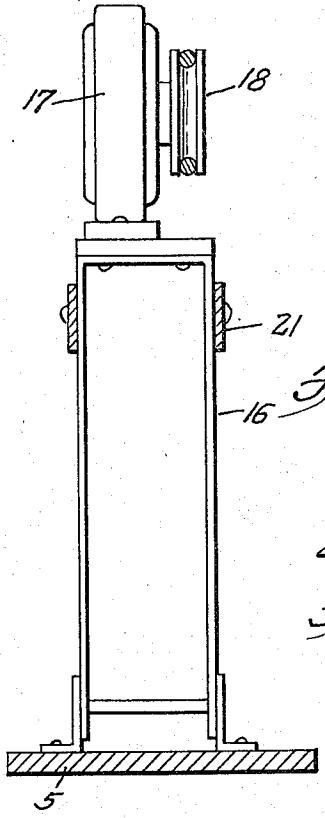


Fig. 4.



Fig. 8.

Inventor

Alvin M. Kizziar.

By Clarence O'Brien and Hyman Berman

Attorneys

Patented Sept. 21, 1943

2,329,913

UNITED STATES PATENT OFFICE

2,329,913

OIL WELL PUMP

Alvin Martin Kizziar, Alhambra, Calif.

Substituted for abandoned application Serial No. 287,824, August 1, 1939. This application May 7, 1943, Serial No. 486,069

1 Claim. (Cl. 103—72)

This invention relates to an oil well pump of the type featured in my abandoned application Serial No. 287,824, for which the instant application is a substitute, and the invention has for the primary object the provision of a device of this character which is extremely easy to install in a well and when the flow therefrom is sluggish or has become dormant will efficiently elevate the oil with a minimum water content and with a minimum expenditure of motive power.

With these and other objects in view, the invention consists in certain novel features of constructions, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation illustrating an oil well pump constructed in accordance with my invention.

Figure 2 is a top plan view illustrating the same.

Figure 3 is a fragmentary vertical sectional view illustrating a cable anchor forming a part of the present invention and showing the application thereof to a well casing.

Figure 4 is a sectional view taken on the line 4—4 of Figure 1.

Figure 5 is a detail view illustrating a pulley for guiding the movement of the endless cable.

Figure 6 is a sectional view taken on the line 6—6 of Figure 3.

Figure 7 is a detail sectional view illustrating a cable wiper.

Fig. 8 is a detail sectional view of a spring element.

Referring in detail to the drawings, the numeral 5 indicates a platform which may be readily bolted onto the upper end of a well casing 6 as clearly shown in Figure 1 and has an opening therein arranged in alignment with the well casing to permit an endless metallic cable 7 forming a part of the present invention to pass freely through the platform into the well casing and has mounted thereon a pulley 8. The pulley is journaled on a bracket 9 secured to an anchor element 10 which includes a plurality of leaf-type spring elements 11, having an arcuate curvature thereto, as clearly shown in Figure 3 and which are adapted to tightly engage the walls of the well casing for holding the anchor element 10 in proper place. It is preferable that the spring elements 11 have their edges sharpened so as to bite into the walls of the well casing to prevent the anchor element from rotating within the well casing and thereby prevent the endless cable from twisting during its travel from the pulley 8 over a master pulley 12 located above the platform and journaled on a supporting bracket 13 carried by the platform. The pulley 12 is so arranged that one run of the cable passes in a straight line from the well casing while the other cable is guided into the well casing by a pulley 14 journaled on a bracket 15 carried by the platform. As will be seen, the anchor element 10 functions as weighted means holding the cable 7 taut to prevent the same from becoming slack.

A motor bracket 16 is pivotally mounted on the platform and supports an electric motor 17. The electric motor is equipped with a belt pulley 18 over which is trained an endless belt 19. A belt pulley 20 is secured on the pulley 12 and has the endless belt 19 trained thereover. Braces 21 are suitably connected with the motor bracket 16 and are pivotally and adjustably connected to the bracket 13 whereby the motor bracket may be swung on its pivots in opposite directions for the purpose of tightening and loosening the belt 19.

A bracket 22 is mounted in the platform and supports a wiper 23 through which one of the runs of the endless cable 7 passes on its upward movement or its upward travel from the well casing so that the oil adhering to the cable will be caused to pass therefrom into a trough 24 from which it may be collected.

A pump of the character described and shown in the drawings is portable so that it can be easily moved from one well to another and may be readily installed on a well casing with the anchor element thereof positioned at a desired distance downwardly in the well casing so that the runs of the endless cable 7 pass into the oil of the well. With the motor 17 in operation, the endless cable 7 is caused to travel so that one run thereof passing upwardly from the well casing will carry therewith oil by the oil adhering thereto. As this run of the endless cable passes through the wiper 23 the oil is caused to pass therefrom into the drain trough 24. The anchor element being prevented from rotating or sliding within the well casing will prevent the endless cable from twisting during its operation. A pump of this kind can be operated with a minimum amount of power and will efficiently elevate oil from the well with a minimum amount of water contents.

It is believed that the foregoing description, when taken in connection with the drawings, will fully set forth the construction and advantages of this invention to those skilled in the art to which such device relates, so that further detailed description will not be required.

Having thus described my invention, what I claim is:

An oil well pump comprising an elongated platform having an opening disposed over and in alignment with a well, a bracket mounted on the platform and extending upwardly at an inclination with the upper end terminating over the opening of said platform, a master pulley journaled on the upper end of said bracket, an endless cable trained over said pulley and having the runs thereof extending downwardly in the well to contact the contents of said well with one of said runs supported vertically for free movement out of the well by said pulley, a second bracket mounted on the platform adjacent the first bracket and paralleling the latter and of a shorter length than the length of the first bracket, an idler pulley supported on the second bracket to engage the other run of the cable to guide the latter away from the walls of the well to permit the movement thereof freely downwardly in the well, a weighted means in the well and connected to said endless cable, a third bracket on the platform and including an eye with the upward traveling run of the endless cable extending freely therethrough, a yieldable wiper sleeve mounted in the eye with the latter-named run of the endless cable passing therethrough with wiping contact therewith, collection means arranged under said wiper sleeve, and a motor bracket pivoted on the platform, a motor carried by said motor bracket, means connecting the motor to the master pulley, and a brace pivoted to said motor bracket and adjustably connected to the first bracket below the master pulley.

ALVIN MARTIN KIZZIAR.