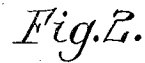


APPLICATION FILED MAR. 22, 1910. RENEWED AUG. 24, 1911.

Patented Feb. 20, 1912.



Witnesses:
C. J. Williams
Jas M. Doakam.

Inventor,
Irving Carl.
By Samuel G. Wells,
Attorney.

UNITED STATES PATENT OFFICE.

IRVING CARL, OF BAKERSFIELD, CALIFORNIA.

OIL-WELL PUMP.

1,017,847.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed March 22, 1910, Serial No. 550,956. Renewed August 24, 1911. Serial No. 645,714.

To all whom it may concern:

Be it known that I, IRVING CARL, a citizen of the United States, residing at Bakersfield, California, have invented a new and useful Oil-Well Pump, of which the following is a specification.

My object is to construct an oil well pump which will raise oil at a high rate of speed and leave the water in the well, and my invention consists of the novel features herein shown, described and claimed.

In the drawings: Figure 1 is a vertical sectional detail of an oil well with my oil well pump in use. Fig. 2 is a fragmental view of the lower end of the oil well pump as seen looking in the direction of the arrow 2 in Fig. 1.

Referring to the drawing in detail the oil well and casing 1 is of the ordinary construction. The lower sheave housing 2 is preferably formed in two pieces flanged and bolted together so as to form bearings for the sheave shaft 3 upon which the sheave 4 is mounted. The neck 5 of the housing has inlet openings 6 and a rope opening 7. A section of pump tubing 8 is screwed into the neck 5 and a coupling 9 is screwed upon the upper end of this section of tubing. An inverted funnel 10 is formed integral with the section of pump tubing 11, and the line of pump tubing 12 is secured to the section 11 by a coupling 13. A spout 14 extends laterally from the upper end of the line of pump tubing 12 and a trough 15 is placed in position to catch the oil as it overflows from the pump tubing 12 from the spout 14. An endless rope 16 of wire or fiber is prepared and passes from the power pulley 17 downwardly over the idler 18 and then downwardly outside of the line of pump tubing and inside the well casing through the opening 7 around the sheave 4 and upwardly in the central position through the funnel 10, then upwardly out of the top of the line of pump tubing and over the tightener pulley 19 to the power pulley 17. The tightener pulley 19 is mounted upon the hand lever 20 which is controlled by a pawl and rack 21, so that the tension of the rope may be adjusted by manipulating the lever 20. Brushes or wipers 22 are mounted in position above the spout 14 to scrape or wipe the oil from the rope as the rope passes upwardly in the direction indicated by the arrow 23.

When the oil well has been equipped the power mechanism is started to drive the power pulley 17, the rope travels at a high rate of speed upwardly through the line of pump tubing and the oil is carried upwardly by friction with the rope, the funnel 10 serves to form a restricted opening through which the oil passes upwardly and the pressure of the oil in the line of pump tubing above the funnel compresses the oil as it tends to pass downwardly through the neck of the funnel, thereby compressing the oil against the rope. The rope may be run continuously at a high rate of speed causing the oil to flow upwardly through the line of pump tubing and overflow through the spout 14.

I find in actual practice that the heavy oils of California may be rapidly pumped with a great deal less power by the use of my improved oil pump, and that the larger part of the water remains in the well. Any desired number of the funnels 10 may be used.

I claim:

1. An oil well pump, comprising a line of pump tubing, means forming a restricted opening in the pump tubing and an endless rope mounted to pass downwardly outside of the tubing and upwardly through the tubing, and through the restricted opening.

2. An oil well pump, comprising a line of pump tubing, means forming a restricted opening in the pump tubing, means for leading oil from the upper end of the pump tubing, brushes above the upper end of the pump tubing and an endless rope mounted to pass downwardly outside of the tubing and upwardly through the tubing, through the restricted opening and through the brushes.

3. An oil well pump, comprising a line of pump tubing, inverted funnels mounted in the lower end of the pump tubing and forming restricted openings, and an endless rope mounted to pass downwardly outside of the tubing and upwardly through the tubing and through the restricted openings.

IRVING CARL.

Witnesses:

GEO. H. WILLIAMS,
J. C. VAN BEBBER.