W. T. BELL.

OIL SAVER.

APPLICATION FILED OCT. 13, 1917.

1,252,652. Patented Jan. 8, 1918.

Fig. 1.

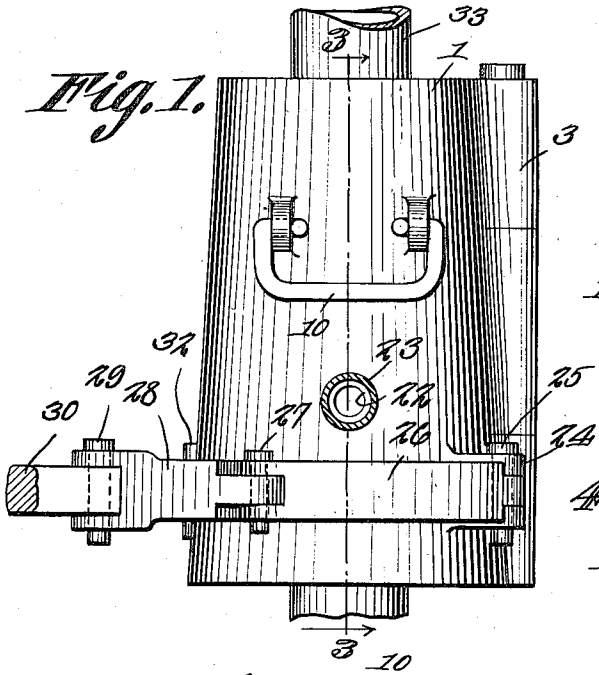
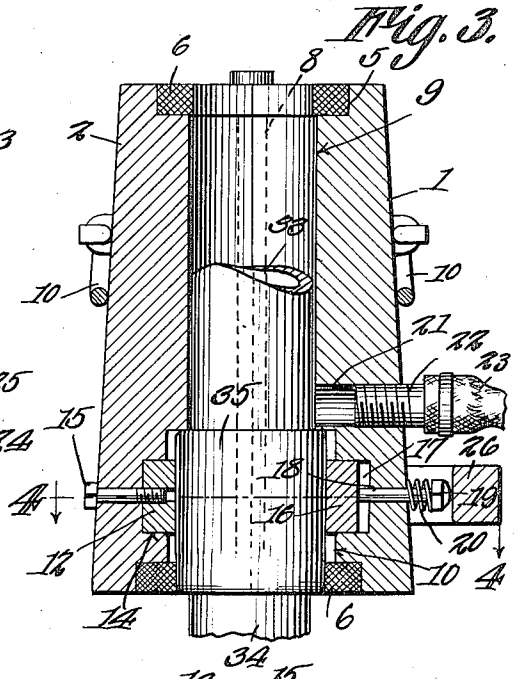


Fig. 3.



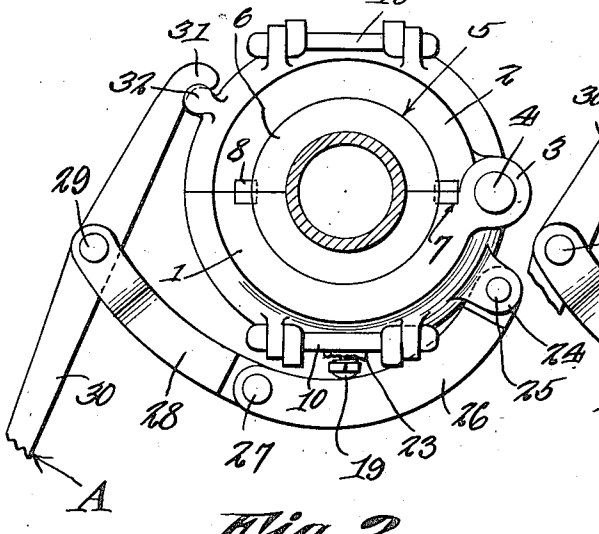


Fig. 2.

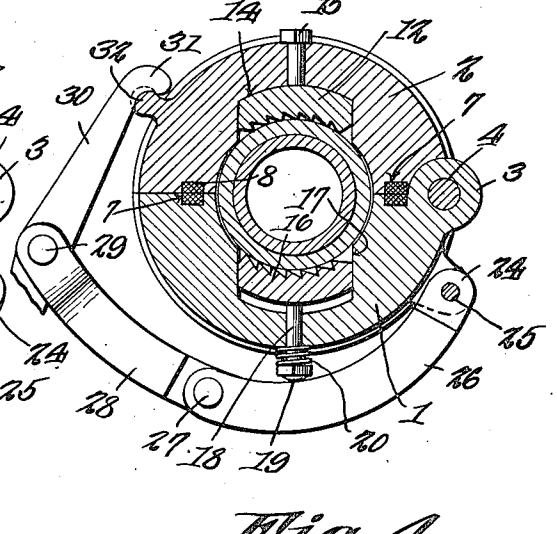


Fig. 4.

Witness

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UNITED STATES PATENT OFFICE.

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OIL-SAVER.

1,252,652. Specification of Letters Patent. Patented Jan. 8, 1918.

Application filed October 13, 1917. Serial No. 196,546.

To all whom it may concern:

Be it known that I, WILLIAM T. BELL, a citizen of the United States, residing at Vivian, in the parish of Caddo and State of Louisiana, have invented a new and useful Oil-Saver, of which the following is a specification.

By way of explanation it may be stated that when the tubing of an oil well is being withdrawn from the earth, one section after another of the tubing is detached, as such section appears above the surface of the soil, the detached section being of considerable extent and frequently including three lengths of tubing. The tubing is full of oil, the oil being held by the foot valve. When an upper section of tubing is detached from the ground engaged portion of the tubing, the oil in the upper section flows away at the point of disconnection, and is lost. Thus, in pulling a two and one-half inch tubing, as much as twelve barrels of oil is lost.

In view of the foregoing, one object of the present invention is to provide a means whereby, when an upper section of tubing is disconnected from a lower section of tubing, the oil in the upper section of tubing may be conducted away and saved.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type hereinafter described.

The drawings show a preferred form of the invention merely, and it is to be understood that, within the scope of what is claimed, changes falling within the skill of a mechanic may be made without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in side elevation, an oil saver constructed in accordance with the invention, parts being broken away;

Fig. 2 is a top plan view of the device delineated in Fig. 1;

Fig. 3 is a longitudinal section taken approximately on the line 3—3 of Fig. 1, a portion of the well tubing appearing in elevation;

Fig. 4 is a cross section taken approximately on the line 4—4 of Fig. 3.

The oil saver herein disclosed preferably is made of metal throughout, saving for packing washers and the like, and includes a pair of body members 1 and 2, each of trough shape. The body members 1 and 2 are provided with coöperating knuckles 3 receiving a pivot pin 4, the construction being such that the body members may be opened and closed together. In their upper and lower ends, the body members 1 and 2 are supplied with recesses 5 in which resilient washers 6 of rubber or the like are placed, the washers comprising semi-circular elements carried by the respective body members 1 and 2. In their meeting longitudinal edges, the body members 1 and 2 are equipped with longitudinal grooves 7 in which are located resilient packing strips 8 extended between the washers 6. The cylindrical bore of the body members 1 and 2 is denoted by the numeral 9 and at the lower end of this bore, the body members are provided with enlargements forming a chamber 10 of greater diameter than the bore 9. In order that the structure may be carried about readily, handles 11 of any desired sort are mounted on the body members 1 and 2.

The numeral 12 denotes a fixed jaw cooperating with the chamber 10 and mounted in a recess 14 fashioned in the body member 2, the jaw being held in place by a lag screw 15 or otherwise. A movable jaw 16 is disposed opposite to the fixed jaw 12, the movable jaw being mounted in a recess 17 formed in the body member 1. The movable jaw 16 has a stem 18 slidably received in the body member 1. An adjusting nut 19 is carried by the outer end of the stem 18 and constitutes, in effect, a part thereof. A compression spring 20 surrounds the exposed end of the stem 18, one end of the spring abutting against the member 1, and the other end of the spring abutting against the nut 19. A transverse passage 21 is formed in the body member 1 above the chamber 10 and in the passage is mounted a nipple 22 with which may be connected a hose or other delivery pipe 23.

The body member 1 is supplied, near to its lower end, with ears 24 carrying a pivot pin 25 on which a first link 26 is mounted to swing. The outer end of the link 26 is pivoted at 27 to one end of a second link 28, the other end of which is pivoted at 29 to the intermediate portion of a lever 30 of any desired length. At one end of the lever 30 there is a hook 31 adapted to engage a boss 32 on the body member 2.

In Fig. 3 of the drawings, the numeral 33 denotes an upper section of well tubing, the numeral 34 marks a lower section of well

tubing, and the numeral 35 designates a coupling into which the ends of the elements 33 and 34 are threaded.

The practical operation of the structure is as follows: The body members 1 and 2 are swung open on the pivot pin 4, the upper pipe section 33 being received in the bore 9, the coupling 35 passing through the lower washer 6, and the coupling 35 being received in the chamber 10. The body members 1 and 2 are closed together and, in operation, a pull is generally imparted to the free end of the lever 30 in the direction of the arrow A, by an anchor rope, or otherwise. The link 26 engages the stem 18 and advances the movable jaw 16, the coupling 35 being gripped between the jaws 16 and 12. In this way the lower pipe section 30 is held against rotation. It is to be observed that the coupling 35 is gripped closely by the lower washer 6, the upper pipe section 33 being gripped closely by the upper washer 6, and the packing strips 8 on the longitudinal edges of the body members 1 and 2 being pressed tightly together. The juncture between the upper pipe section 33 and coupling 35 is, therefore, sealed against leakage. The upper pipe section 33 may now be rotated to free it from the coupling 35, the upper pipe section being raised, preferably, until its lower end lies above the passage 21. The oil in the upper pipe section will thereupon flow away through the passage 21, the nipple 22 and the delivery pipe 23, the oil being saved, in this way. When the link 26 is out of engagement with the nut 19 on the stem 18, the spring 20 constitutes a means for retracting the movable jaw 16.

Having thus described the invention, what is claimed is:

1. A device for draining a detached section of a well tubing, comprising relatively movable body members; a tubing grip movable in one body member; and means for holding the body members together, said means coacting with the grip to advance the grip.

2. A device for draining a detached section of well tubing, comprising a body including relatively movable members, one of which is provided with an outlet, the body having a cylindrical bore enlarged adjacent its lower end to form a chamber, there being oppositely disposed recesses in the interior of the body intermediate the ends of the chamber, and there being a second enlarged recess in the lower end of the body at the lower end of the chamber; removable jaws in the first specified recesses; a washer in the second recess and disposed at the lower end of the body; and means for holding the relatively movable members of the body together.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM THOMAS BELL.

Witnesses:

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O. B. WELLBORN.