(No Model.)

B. F. WALKER.

Clasp Packer for Well Tubing Joints.

No. 234,825. Patented Nov. 23, 1880.

Fig. 1.

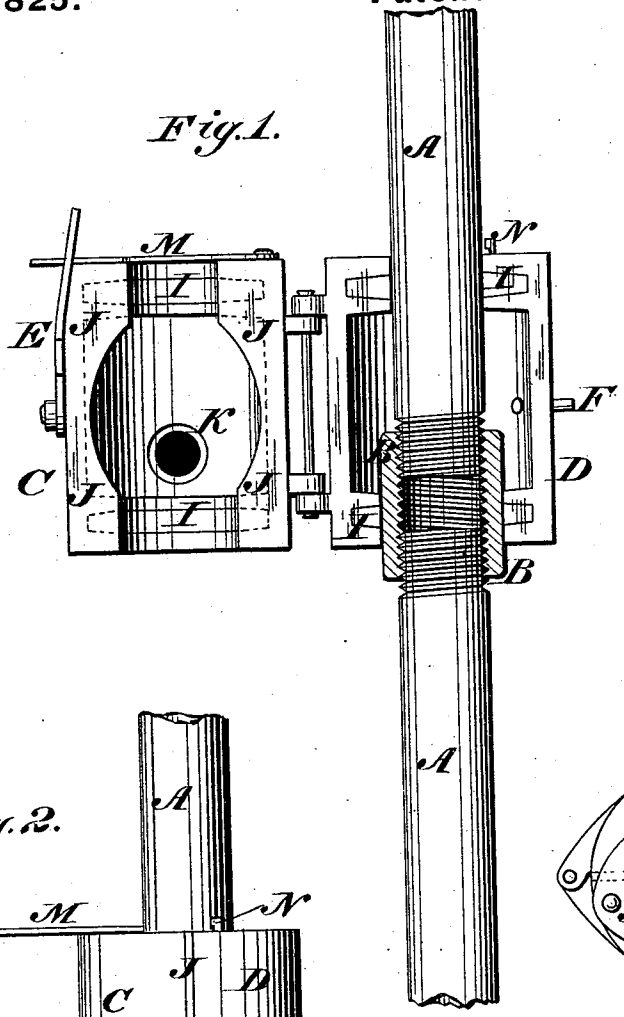


Fig. 2.

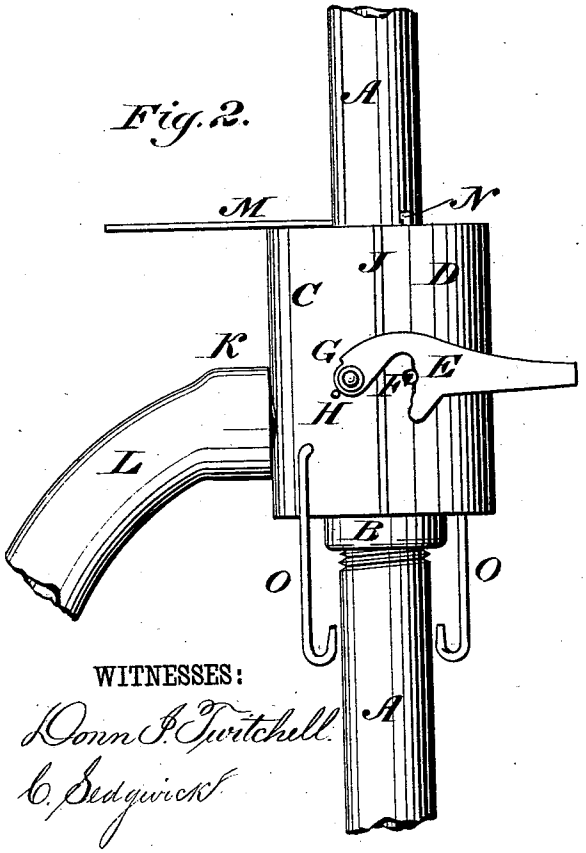
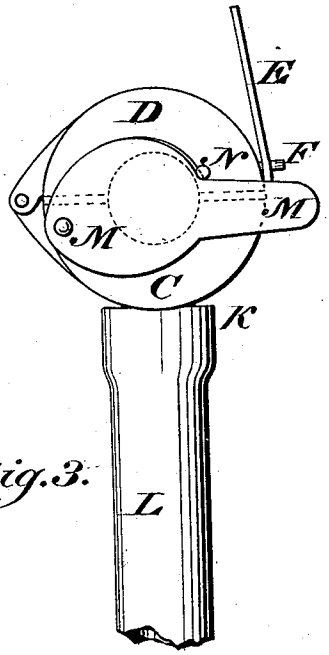


Fig. 3.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. WALKER, OF DERRICK CITY, PENNSYLVANIA.

CLASP-PACKER FOR WELL-TUBING JOINTS.

SPECIFICATION forming part of Letters Patent No. 234,825, dated November 23, 1880.

Application filed October 8, 1880. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN FRANKLIN WALKER, of Derrick City, in the county of McKean and State of Pennsylvania, have invented a new and useful Improvement in Clasp-Packers for Well-Tubing Joints, of which the following is a specification.

Figure 1 is a side elevation of the improvement opened. Fig. 2 is a side elevation of the improvement closed. Fig. 3 is a plan view.

The object of this invention is to furnish clasp-packers for well-tubing joints, to prevent the waste of oil when removing tubing from oil-wells.

The invention consists in constructing a clasp-packer for well-tubing joints of two semi-cylindrical parts, hinged to each other at one side edge and fastened at the other side edges with a hook and pin, and provided with packing at its ends and side edges to adapt it to be clasped around the tubing at its joint, and having a side opening and hose to carry the oil to a receiver; also, in the combination, with the parts of the packer, of a stop-plate to prevent flowing oil from escaping at the said upper end; and, also, in the combination, with the parts of the packer, of hooks to hook upon the elevator and prevent the said packer from being pushed off by the pressure of flowing oil, as will be hereinafter fully described.

Similar letters of reference indicate corresponding parts.

The tubing for oil-wells is generally made in lengths or sections, A, twenty feet long, which lengths are connected by a screw collar or coupling, B, into which the adjacent ends of the said lengths are screwed.

In removing or pulling the tubing from the wells it is drawn out until three lengths or sixty feet of the tubing project. These three lengths are then unscrewed from the coupling B at their lower end and removed.

The tubing when raised is generally full of oil, which oil, when the tubing is unscrewed, flows out and is wasted; and in the case of flowing wells, should a flow occur while the tubing is being raised, the oil spouts from the upper end of the tubing, spreads out, falls to the ground, and in addition to being wasted covers the derrick and the men with oil. To remedy this difficulty and prevent the waste of oil, I have invented a clasp-packer, the construction and use of which I will now describe.

The body of the packer is formed of two semi-cylindrical parts, C D, which are hinged to each other at one side edge, as shown in Figs. 1 and 3, and which are fastened together at the other edge when closed upon the tubing A B by a lever-hook, E, pivoted to one part, as C, and hooking upon a pin, F, attached to the other part, D. The inner or engaging edge of the hook E is notched or roughened, as shown in Fig. 2, to prevent it from slipping off the pin F. The hook E has a shoulder, G, formed upon the upper side of its pivoted end, to strike against a stop-pin, H, attached to the part C, to prevent the lever-hook E from being turned back into an inconvenient position.

The upper part of the cavity of the packer is made of such a size as to fit upon the tubing A, and the lower part of the said cavity is made of such a size as to fit upon the coupling B. The middle part of the packing is enlarged to furnish a free passage-way for the oil around the tubing A and coupling B.

In the inner surface of the ends of the packer are formed grooves, in which are inserted packings I, of rubber or other suitable material, to bear against the tubing A and the coupling B to prevent oil from escaping at the ends of the packer. The side edges of the parts C D are also provided with packings J, to prevent oil from escaping between the said side edges. The packings I J of each of the parts C D may be made in one piece.

In an opening in the lower part of one of the parts, as C, is secured a nozzle or short tube, K, to which is attached a hose, L, to conduct the oil to a receiver.

In using the packer the tubing is raised to the desired height and the packer is secured to the coupling B and the tubing A above the said coupling at the joint to be disconnected. The tubing is then unscrewed from the coupling, and the oil from the disconnected part of the tubing flows down into the packer and out through the hose L to the receiver. The disconnected tubing is then removed, the packer is detached, and the tubing again raised.

In the case of flowing wells, should the flow

begin after the projecting section has been disconnected but not removed, the oil will flow out through the hose L. Should the flow begin after the disconnected section has been removed, a stop-plate, M, is swung over the opening in the upper end of the packer to prevent the oil from escaping from the said upper end and cause it to flow out through the hose L. The stop-plate M is pivoted at one end to the upper end on one of the parts of the packer to keep it in place ready for use.

N is a pin attached to the end of the other part of the packer, for the stop-plate M to strike against to stop the said plate in proper position.

To the lower parts of the parts C D of the packer are attached hooks O, to be hooked upon the elevator in the case of flowing wells to prevent the packer from being forced off by the pressure of the flowing oil.

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

1. A clasp-packer for well-tubing joints constructed substantially as herein shown and described, consisting of the two semi-cylindrical parts C D, hinged to each other at one side edge and fastened at the other side edge by a hook, E, and pin F, and provided with packing I J and the discharge-hose L, substantially as herein shown and described.

2. In a clasp-packer for well-tubing, the combination, with the coupling B and tubing A, of the packer, made in two parts, C D, hinged to each other at one side edge and fastened together at the other side edges by a hook, E, and pin F, and provided with packing I J and hose L, substantially as herein shown and described, whereby the oil from the disconnected section of tubing will be discharged into a receiver, as set forth.

3. In a clasp-packer for well-tubing, the combination, with the parts C D of the packer, of a stop-plate, M, substantially as herein shown and described, whereby the oil from a flowing well will be kept from flowing out at the upper end of the packer and made to pass through the hose L to a receiver, as set forth.

4. In a clasp-packer for well-tubing, the combination, with the parts C D of the packer, of hooks O, substantially as herein shown and described, to hook upon the elevator and prevent the packer from being forced off by the pressure of flowing oil, as set forth.

BENJAMIN FRANKLIN WALKER.

Witnesses:

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