

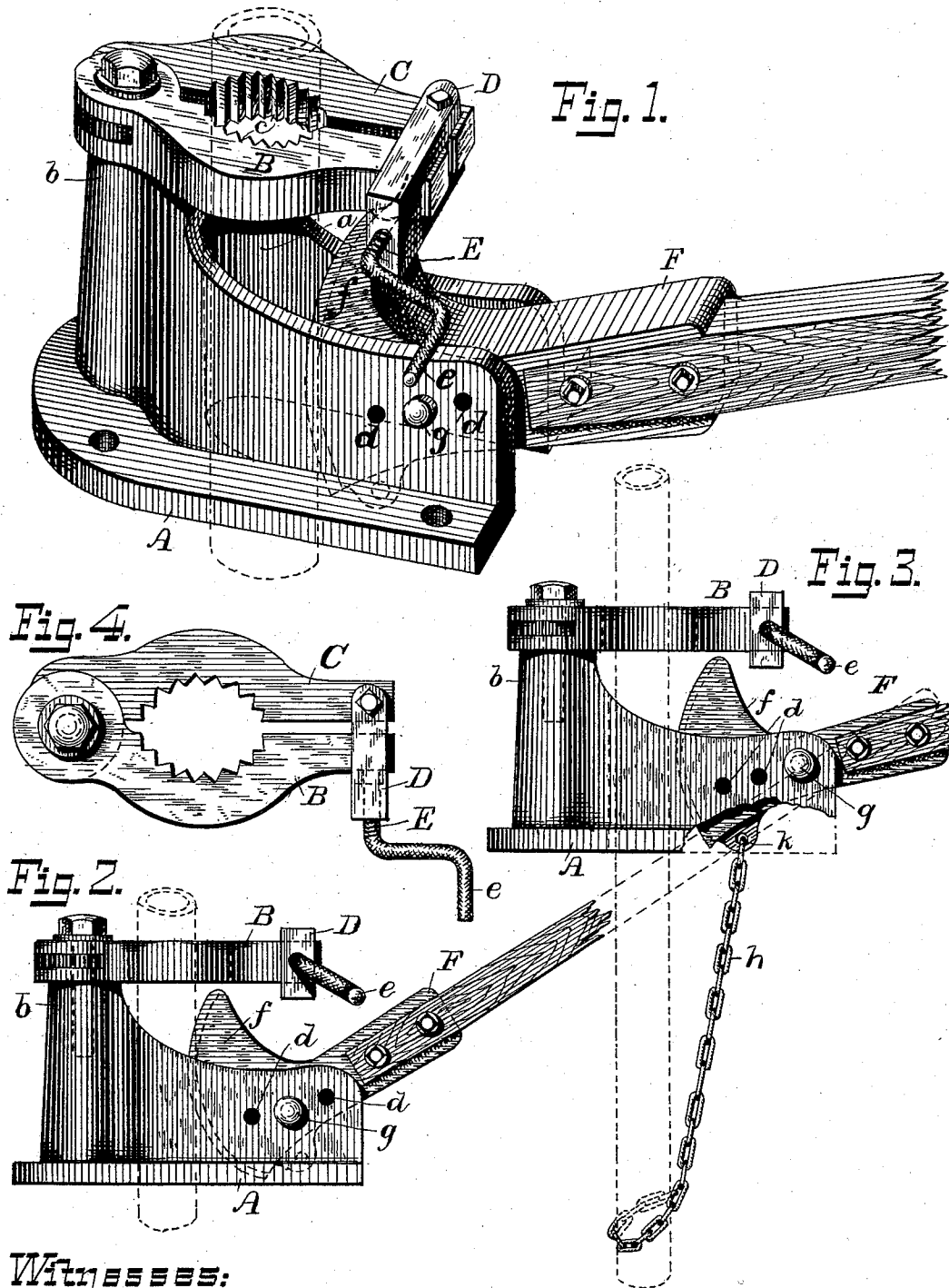
(No Model.)

E. J. OLIVER.

PUMP JACK.

No. 372,274.

Patented Oct. 25. 1887.



Witnesses:

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UNITED STATES PATENT OFFICE.

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PUMP-JACK.

SPECIFICATION forming part of Letters Patent No. 372,274, dated October 25, 1887.

Application filed March 10, 1887. Serial No. 230,450. (No model.)

To all whom it may concern:

Be it known that I, EUGENE J. OLIVER, a citizen of the United States, residing at Springfield, in the county of Clark and State of Ohio, have invented a new and useful Improvement in Pump-Jacks, of which the following is such a full, clear, and exact description thereof as will enable any person skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates, generally, to the pumps or piping for wells, and particularly to devices for lowering said pipes into the wells or removing them therefrom, and is in the nature of improvements upon the usual method employed therefor.

It consists in employing a heavy base of suitable form, having pivoted thereto a pair of jaws adapted to grasp and hold the pipe at any point for attaching or detaching a portion thereof, and a lever of suitable form to act as a brake in lowering the pipe into the well, and having a projection formed on said lever, so that it may also be used to lift the pipe out of the well by attaching a chain to the pipe and to said projection.

In the drawings, Figure 1 is a perspective view of my device when employed to hold a pipe as a vise for attaching or detaching a part thereof. Fig. 2 is a side elevation, on a reduced scale, showing the device acting as a brake for preventing the too rapid descent of the pipe when lowering it into the well. Fig. 3 is a side elevation, on a reduced scale, showing my invention as arranged to act as a lifting device for removing the pipe from the well; and Fig. 4 is a plan view of the jaws for holding the pipe, showing the method of forcing them together.

Similar letters refer to like parts in the several views.

So far as I am aware there is at present no device adapted to perform the functions which the herein-described device is capable of.

Referring to the drawings, A is a strong metal casting forming the base of the machine, and having a vertical slot formed therein and terminating in the form of semicircle at *a*, directly over the space to be occupied by the pipe. At one end of the base A, and near the semicir-

cular end of the slot, is formed a vertical projection, *b*, upon the top of which are pivoted two jaws, B and C, which have properly-toothed recesses formed therein at *c c* for receiving and holding the pipe, similar to a "pipe-vise," as shown by dotted lines in Fig. 1.

Upon the free end of the jaw C is pivoted the yoke D, the closed end of which incloses the free end of the jaw B. This end of the yoke D is provided with a screw, E, having formed upon its outer end a crank, *e*, for operating it. The point of the screw E presses against the free end of the jaw B, thus forcing the two jaws B and C together and firmly grasping the pipe, when additional sections of pipe may be screwed upon the piece held, or sections removed; or the pipe may be held for cutting off or for threading, thus dispensing with the use of a special vise for that work.

Pivoted in the slot of the base A is the lever F, which has formed on it the eccentric segment *f*, the outer edge of which is concave, the pipe being held as shown in Fig. 2—i. e., between the semicircular end *a* of the slot in the base A and the concave surface of the eccentric segment *f* of the lever F, by elevating the outer end of which any desired amount of pressure may be brought to bear upon the pipe, allowing it to slide slowly through in its descent into the well.

There are several pivot-holes, *d d*, in the base A other than that necessary in the operations just described. In any one of these the pivot-bolt *g* may be placed when using the lever F to raise a pipe out of a well, as shown in Fig. 3. In this case a chain, *h*, is fastened in any convenient manner to the pipe (shown in dotted lines) and the upper end attached to the lever F at *k*. The lever F is pressed down and the pipe raised, when it may be grasped by the jaws B C, the lever F again raised, and the operation repeated. By changing the pivot-bolt *g* from one hole to another in the base A and lever F more or less leverage may be obtained, according to the weight of the pipe to be lifted.

By the mechanism just described I am enabled to provide the mechanic with a strong, simple, and compact device by which all the work of a pipe-vise, of a brake for use in lowering pipe, and a lever for raising it may be performed. Thus one implement takes the

place of three, reducing the number and weight and increasing the efficiency of the tools and implements now in use for these purposes.

Having thus described my invention, its construction, operation, and uses, what I claim as new, and desire to secure by Letters Patent, is—

1. A combined tool or implement for use in introducing or removing the pipe of wells, said implement consisting of a pipe-vise having 10 pivoted jaws swinging in a horizontal plane and forced together by a suitable screw, and a lever forming a brake for use in lowering the pipe, and so constructed as to act, in combination with a chain or similar fastening, as an elevating-lever in raising it, substantially as and 15 for the purpose shown and described.

2. In a combined tool or implement for use in introducing or removing the pipe of wells, a pipe-vise whose jaws open and close horizontally, in combination with a fixed concave 20 surface formed in the base or frame of said implement, and a lever having formed thereon an eccentric adapted to force the pipe against said concave surface for the purpose of preventing

its too rapid descent, substantially as shown 25 and described.

3. In an implement for lowering the pipe into a well and removing it therefrom, the combination of a pair of jaws adapted to grasp the pipe, a suitable screw for closing said jaws, a lever 30 pivoted in the frame of said implement, and a chain adapted to be secured to the pipe at the lower end and to the lever at the upper end, substantially as and for the purposes shown and described.

4. In a combined implement, (as hereinbefore described, to wit:) having a pair of jaws adapted to engage and hold the pipe and a lever pivoted in the base of said implement, a perforated projection formed on said lever, 40 and a chain for attachment thereto, the said chain being also attached to the pipe in the well for the purpose of raising the same, substantially in the manner shown and described.

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Witnesses:

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