(No Model.)

W. H. DOWNING.

SUCKER ROD ELEVATOR.

No. 506,584. Patented Oct. 10, 1893.

Fig. 1.

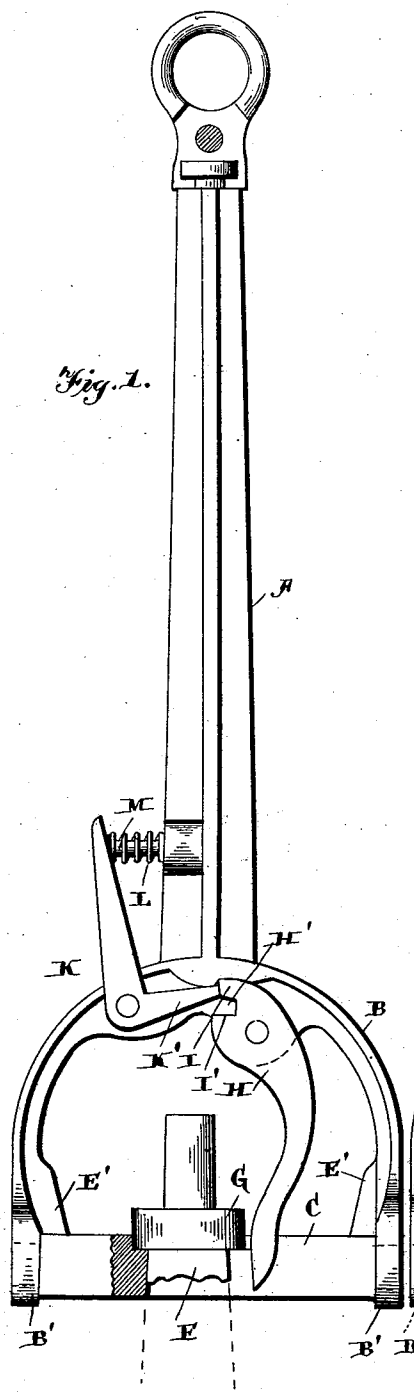


Fig. 2.

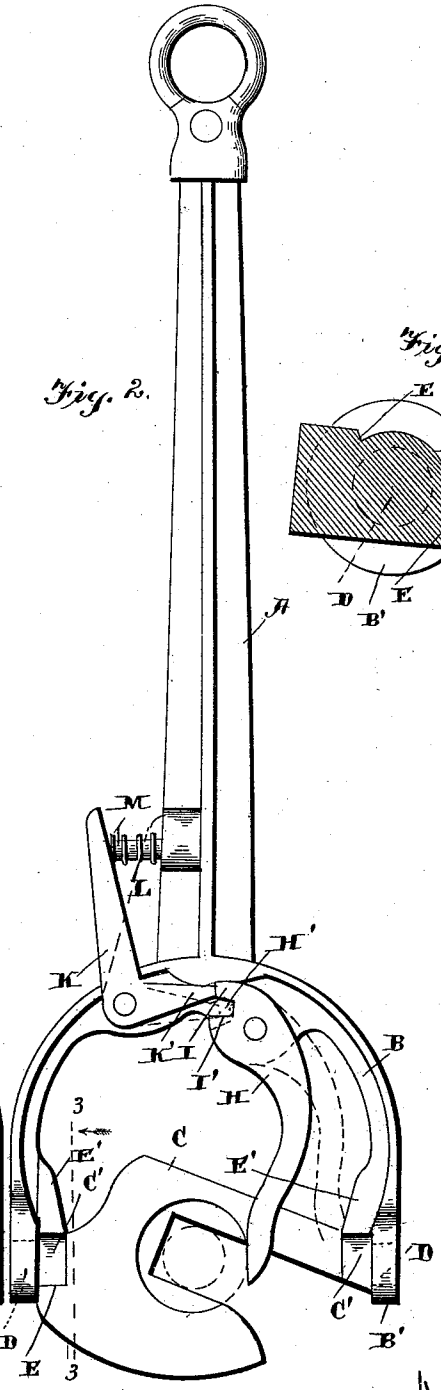
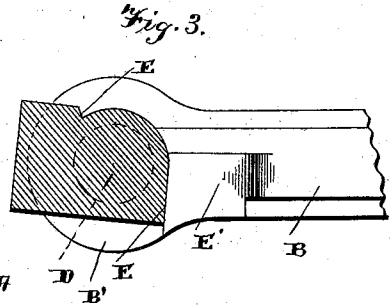


Fig. 3.



WITNESSES.

Geo. E. Frech.

Roland C. Fitzgerald.

INVENTOR.

Wm H. Downing,

By Lehmann Pattison & Mesick

attys

UNITED STATES PATENT OFFICE.

WILLIAM H. DOWNING, OF GOODELL, PENNSYLVANIA.

SUCKER-ROD ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 506,584, dated October 10, 1893.

Application filed March 15, 1893. Serial No. 466,100. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DOWNING, of Goodell, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Sucker-Rod Elevators; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in sucker rod elevators, and it consists in the novel features of construction hereinafter fully described and especially referred to in the claims.

The object of my invention is to provide an improved implement for grasping and securely holding a sucker rod while being elevated in the derrick or lowered into the tubing of an oil or Artesian well.

A further object of my invention is to provide an improved mechanism for holding the sucker rod within the elevator.

Referring to the accompanying drawings,—Figure 1, is a side elevation of my improved elevator. Fig. 2, is a plan view of the same, when in position for screwing or unscrewing the sucker rod. Fig. 3, is a sectional view on line 3—3, of Fig. 2.

A designates the shank or stem of the elevator and B the fork at its lower end.

C is the elevating hook having trunnions D, at its respective ends which turn in bearings B′, at the respective ends of the forks B. The hook ends are rounded as at C′, adjacent the inner side of the prongs of the fork B, and these rounded portions terminate at the shoulders E, which are adapted to bear against the projecting lugs E′ on the inner side of the said fork and in this way the elevating hook is held in a horizontal position as shown in Fig. 2, for the purpose of holding the sucker rod for screwing or unscrewing.

The opening of the hook C is angular as shown in Fig. 2, with a counter-sunk depression formed in its upper side to hold the rod in center of hook when lifting a string of rods out of the well tubing or putting them back, while the annular flange F of the rod G prevents the rod from dropping through the hook in being elevated. The above named counter-sunk depression forms a seat for the said flange and prevents lateral movement of the same.

Pivoted in the upper end of fork B is the tongue H which depends alongside the sucker rod as shown and is for the purpose of holding the latter within the elevating hook. The upper end of this tongue is notched, as at H′, which notch has immediately above it the projections I.

Pivoted within the upper portion of the part B and to one side of the tongue H is the L-shaped lever or latch K, the lower end K′ of which operates the tongue A, in the manner presently to be explained, while the upper end of the said lever is held normally outward from the stem A by the coiled spring L, which latter is held in place by the pin M, extending inward from the said latch.

When the several parts of the implement are in their normal positions as shown in Fig. 1, the depending tongue H, is held rigid by the end K′ of lever K, engaging the projection I of tongue H, as shown, so that it is quite impossible for the latter to turn upon its pivot. In this position it will therefore be seen that the sucker rod cannot be removed from the hook cavity. When it is desired to remove the same or place it within the hook the lever K is drawn inward by the operator pressing the same with his hand, thus throwing down the inner end K′ of the hook into the recess H′ of the tongue and against the shoulder I′, and this latter engagement depresses the upper end of the said tongue and throwing outward its lower end thus allowing the sucker rod to be removed, as will be readily understood. A swivel at the upper end of stem A is provided which is of ordinary construction.

By means of the device herein shown and described it will be seen that the sucker rod may be elevated with great ease and safety and at the same time instantly released by a mere pressure from the hand of the operator. It will also be seen that the same can be used for conveniently turning or holding the rod, as shown in Fig. 2.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. An improved elevator comprising a forked stem, an elevating hook pivoted in said frame, a pivoted locking tongue depending over and adapted to swing outward from the opening of the hook, and a spring actuated lever for holding the tongue in the desired adjustment, substantially as shown and described.

2. An improved sucker rod elevator comprising a stem, a hook at its lower end, a pivoted tongue depending over the said hook having a notch in its upper end, and an L-shaped lever, one end of which engages the said tongue above and below the said notch for drawing its lower end inward and outward, substantially as shown and described.

3. An improved sucker rod elevator comprising a stem, a hook at its lower end, a pivoted tongue depending over the said hook having a notch in its upper end, projection I above the notch, shoulder I′ below the notch, an L-shaped lever, the lower end of which bears against the projection I for the purpose of holding the said tongue in a rigid position and against the shoulder I′ for turning the said tongue outward, and a spring for holding the said lever normally in engagement with the projection I, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. DOWNING.

Witnesses:
W. J. FREDERICKS,
WALTER W. LEWIN.