

(No Model.)

D. W. BLACK.
SUCKER ROD ELEVATOR AND WRENCH.

No. 512,938.

Patented Jan. 16, 1894.

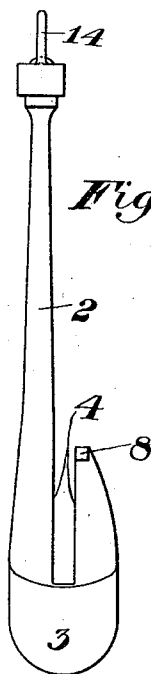


Fig. 1.

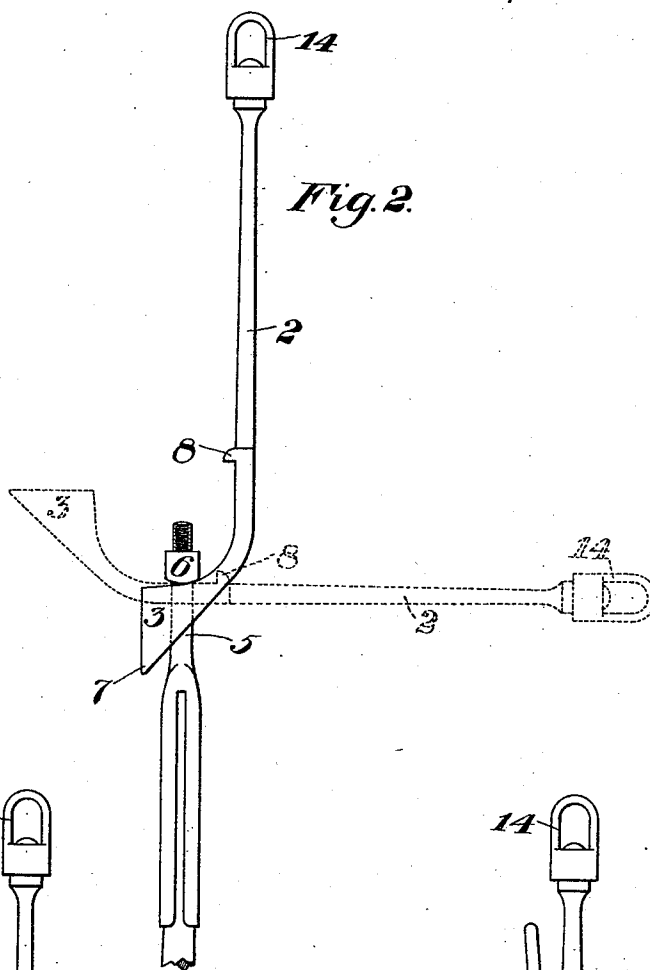


Fig. 2.

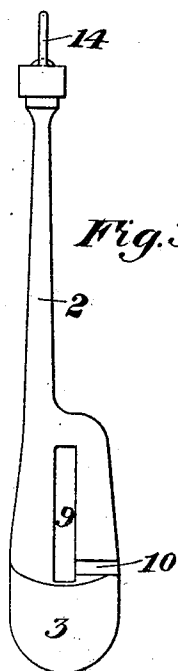


Fig. 3.

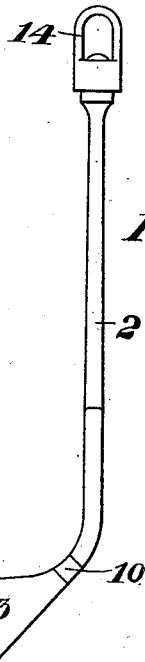


Fig. 4.

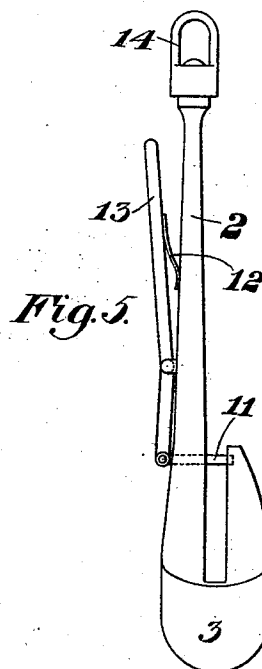


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

DAVID W. BLACK, OF BUTLER, PENNSYLVANIA.

SUCKER-ROD ELEVATOR AND WRENCH.

SPECIFICATION forming part of Letters Patent No. 512,938, dated January 16, 1894.

Application filed July 12, 1893. Serial No. 480,241. (No model.)

To all whom it may concern:

Be it known that I, DAVID W. BLACK, of Butler, in the county of Butler and State of Pennsylvania, have invented a new and useful Improvement in Sucker-Rod Elevators and Wrenches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of one form of my improved sucker-rod elevator and wrench. Fig. 2 is a side elevation of the same in position about the sucker-rod. Figs. 3 and 4 are front and side elevations respectively of a second form of my invention; and Fig. 5 illustrates a third modification.

My invention relates to the devices used for elevating and separating the sections of sucker-rods in oil and Artesian wells, and is designed to greatly simplify and cheapen their construction, as well as attain a more efficient device than those heretofore employed.

To that end it consists in a sucker-rod elevator and wrench, whose body is made in one solid integral piece, the lower or hooked portion of which is bent or curved at an angle to the stem.

It also consists in the above combination wherein the hooked portion is thickened and extended downwardly, as well as in the construction and arrangement of parts as hereinafter more fully described and set forth in the claims.

In the drawings, in which similar numerals indicate corresponding parts, 2 represents the stem of the device, having the lower hooked portion 3, which is bent or curved at an angle to the stem, as shown in Fig. 2. The sides 4 of the opening in the hook are substantially parallel, and are arranged to fit snugly over the squared portion 5 of the sucker-rod section below its head 6, as in Fig. 2, and the hook is gradually thickened toward its outer end, so that the end 7 may rest upon the casing at a level considerably below the head of the sucker rod, and the weight of the sucker-rod sections will thereby swing the wrench automatically into the horizontal position shown in dotted lines in Fig. 2 as the fulcrum is at 7 upon the casing. The end of the return bend of the hook is provided with a lug

8, which projects therefrom, and when the wrench is in horizontal position prevents its sliding from the casing, as the lug will contact with the head 6 and thereby prevent such action.

In Figs. 3 and 4 I show another form of my invention, wherein the lower end of the elevator is enlarged and provided with a slot 9, closed at each end and admission to which is had through the branch slot 10, which leads into some portion of its length. In this case, the lower enlarged end is bent or curved at an angle to the stem and thickened as before.

In Fig. 5 I show another form, wherein the upper open end of the hook is normally closed by a dog 11, which reciprocates through and is guided within a transverse aperture of the stem, this dog being forced into a small recess of the hook by the spring 12 between the lever-handle 13 and the stem 2. The swivel 14 at the upper end of the stem may be used or not as desired.

The operation of the device is as follows:—The wrench and elevator being hooked or engaged about the squared portion of a projecting sucker-rod below its head, the rope secured to the swivel 14 raises the sections until the head of the next section below appears. A second wrench is then similarly engaged with this section, and the rope being lowered slightly, the weight of the sections will turn the lower wrench into horizontal position, as in Fig. 2. The upper section is then unscrewed, when the rope is hooked about the swivel of the lower wrench and the action repeated.

The advantages of the device are apparent. The body of the device is solid and therefore strong and serviceable, there being no movable parts to get out of order. The weight of the sections automatically operates the lower wrench, and the whole device is cheap and simple.

Many changes other than those shown may be made in the form and arrangement of the parts without departure from my invention, since—

What I claim is—

1. A sucker-rod elevator and wrench, having an integral lower portion bent at an angle to the stem and provided with an opening

having substantially parallel sides arranged to fit about the squared portion of the sucker-rod section; substantially as described.

5 2. A sucker-rod elevator and wrench, having its lower portion bent at an angle to the stem, said bent portion being thickened at its extremity to rest upon the casing; substantially as described.

10 3. A sucker-rod elevator and wrench having an integral hook portion extending substantially parallel with the stem, the lower part of the hook portion being bent at an angle to the stem; substantially as described.

4. A sucker-rod elevator and wrench, having an integral hook-portion whose upper portion extends substantially parallel with the stem and is provided with a lateral lug, the lower portion of said hook being bent at an angle to the stem; substantially as described.

In testimony whereof I have hereunto set my hand.

DAVID W. BLACK.

Witnesses:

W. B. CORWIN,

H. M. CORWIN.