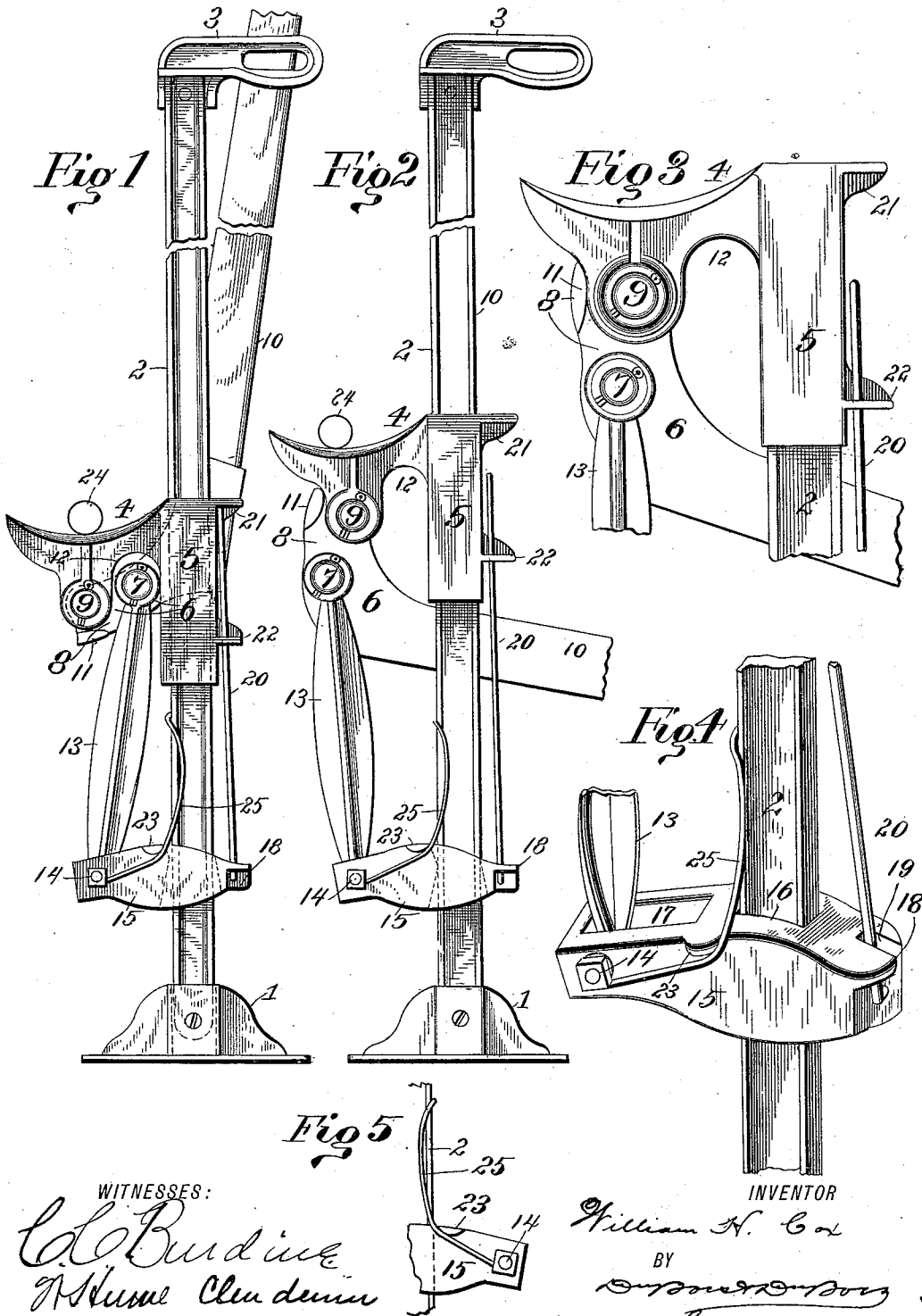


(No Model.)

W. H. COX.
LIFTING JACK.

No. 468,965.

Patented Feb. 16, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

WILLIAM H. COX, OF VIRDEN, ILLINOIS.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 468,965, dated February 16, 1892.

Application filed November 30, 1891. Serial No. 413,563. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. COX, a citizen of the United States, residing at Virden, in the county of Macoupin and State of Illinois, have invented certain new and useful Improvements in Lifting-Jacks; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to those lifting-jacks in which a vertically-movable bracket slides upon an upright to allow it to be drawn up under the object to be lifted, and then raised still higher by the downward movement of the lever, which lever is movable with the bracket.

The object of my invention is to produce a more durable and easily-operated device.

With this end in view my invention consists of the peculiar features and combinations of parts more fully described hereinafter, and pointed out in the claims.

In the accompanying drawings, Figure 1 represents a side elevation of my device in which the lever is shown raised to an almost vertical position, as in the adjusting operation; Fig. 2, a similar view in which the lever is shown depressed, as in the lifting operation; Fig. 3, a detail view of the sliding bracket with the lever broken off; Fig. 4, a detail view of the runner in perspective. Fig. 5 is a detail view showing the manner of attaching the spring to the runner.

The reference-figure 1 represents a base, to which is pivotally secured a vertical standard 2, having a handle 3, by which the jack is moved about. A vertically-movable bracket 4 is secured upon the standard by means of a movable sleeve 5, which loosely embraces the standard 2. The upper face of the bracket 4 is concaved to receive the axle of the wagon to be lifted. A bell-crank lever 6, having a movable fulcrum 7, has its short arm 8 fulcrumed to the bracket 4 at 9, and to its long arm is fitted a handle or lever 10. The short arm 8 of the bell-crank lever has a shoulder or lug 11, which engages the under side of the

bracket 4 and limits the downward movement of the handle 10. On the under side of the bracket, between the sleeve 5 and the fulcrum 9, is a recess 12, which, when the lever 10 is raised, receives the movable fulcrum 7, it fitting snugly in the recess. The fulcrum 7 of the lever works in the end of a downwardly-extending supporting-rod 13, forming a seat, which rod is pivoted at 14 to a runner 15, the runner having an orifice 16 through which passes the standard 2. The supporting-rod is pivoted in a slot 17 in the runner to allow it lateral play as the rod is changed from one position to another. (Seen more clearly in Figs. 1 and 2.) Projecting outwardly from the rear end of the runner 15 is a lug 18, having a lateral slot 19 in its center, through which passes a releasing-rod 20, which has its lower end secured in a downwardly-extending portion of the lug 18, and the upper end of the rod engages a projecting lug 21 on the top of the sleeve 5 when adjusting the jack after having first passed through a guiding lug or projection 22 on the lower end of the movable sleeve 5. Bearing against the front face of the standard 2 is an inverted-U-shaped spring 25, the lower ends of which are bent around projecting lugs 23 on each side of the runner 15 and fastened to the pivot-pin 14, which also acts as a pivot for the supporting-rod 13. The inner edges of the runner 15 are adapted to clamp the standard 2 and hold the runner securely in that position when the pressure of the releasing-rod 20 is withdrawn.

The object of pivoting the standard 2 to the base is to allow the standard a limited amount of lateral play, so that the base will always have a firm seat upon the ground.

In using my jack the operator first places it beneath the axle of the wagon to be lifted, such as 24, then draws the lever 10 up to an almost vertical position, thereby pressing on the releasing-rod 20, which in turn presses against the runner, the outer end of which presses against the spring 25 and allows the runner 15 to assume an almost horizontal position, whereupon it will slide freely on the standard 2. I then depress the lever 10, thereby pushing the fulcrum out directly beneath the pivotal point of the short arm of the lever to produce a toggle-link action, and

which will allow the spring 25 to exert its force, and thereby moving the runner into an inclined position and which locks itself tightly on the standard 2, for the weight of the bracket 4, the sleeve 5, and the supporting-rod 13 are brought down on the front end of the runner. Hence it will be seen that the runner automatically locks itself to the standard when the bracket is lifted to the desired height.

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

1. In a lifting-jack, the combination of a vertical standard, a lifting-bracket arranged to slide upon the standard, and a lever fulcrumed on a movable support, arranged to automatically lock itself to the standard, the short arm of said lever being pivoted directly beneath the lifting portion of the bracket, whereby the fulcrum of the lever is brought directly beneath said lifting portion, in the manner and for the purpose set forth.

2. In a lifting-jack, the combination of a bracket adapted to slide upon a vertical standard, a lever having its short arm pivoted to the bracket directly beneath its lifting por-

tion, and a fulcrum mounted on the end of a pivoted bar, said bar having its lower end pivotally attached to a runner arranged to automatically lock itself to the standard, as set forth.

3. In a lifting-jack, the combination of a vertical standard, a runner movable on said standard, and a spring bent in the shape of a loop, the ends of which are secured to the runner and the loop part bearing against the standard, as set forth.

4. In a lifting-jack, the combination of a standard, a runner movable on said standard, and a spring made of an integral piece of wire bent in the shape of a loop, which loop bears against the front face of the standard and has its ends bent around lugs on each side of the runner, whereby the runner is normally locked to the standard, in the manner and for the purpose substantially as described.

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

WILLIAM H. COX.

Witnesses:

F. L. COX,

HERBERT H. COWEN.