(No Model.)

H. D. VOORHIES.

WAGON JACK.

No. 419,298. Patented Jan. 14, 1890.

Fig. 1.

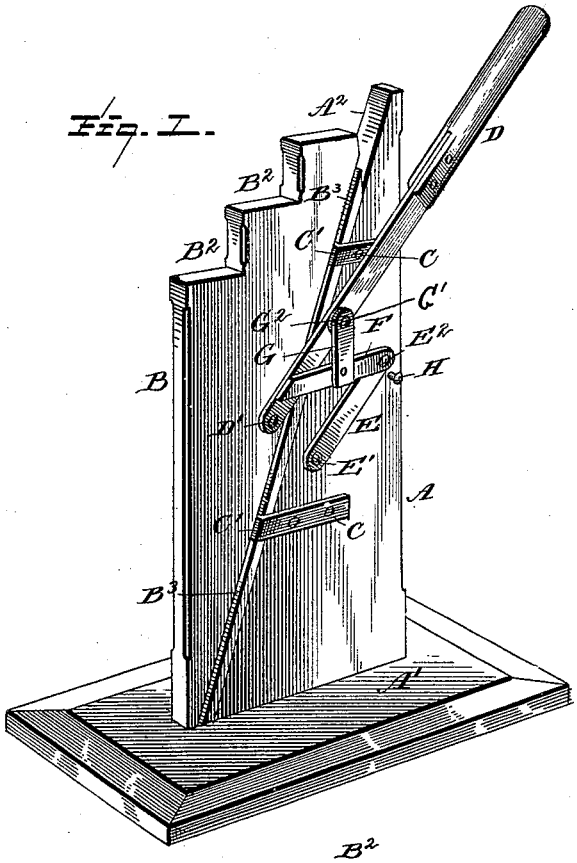
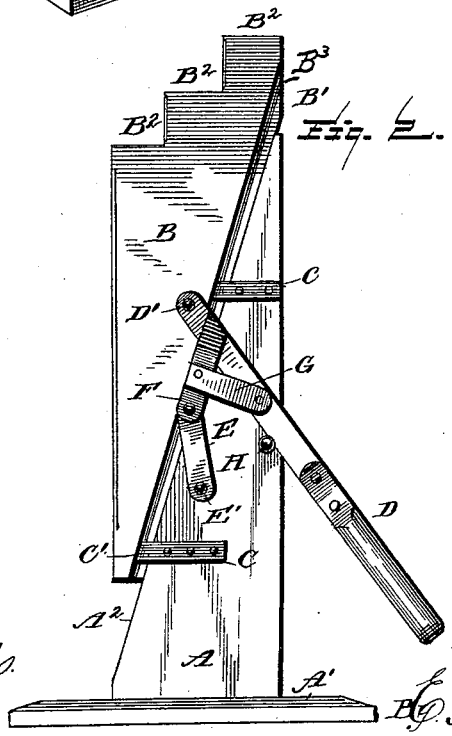


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 419,298, dated January 14, 1890.

Application filed October 7, 1889. Serial No. 326,239. (No model.)

To all whom it may concern:

Be it known that I, HENRY D. VOORHIES, a citizen of the United States, residing at Hornellsville, in the county of Steuben, State of New York, have invented certain new and useful Improvements in Wagon-Jacks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to certain new and useful improvements in lifting-jacks; and it has for its object to provide a simple and efficient device of this character with a combined lever mechanism for operating the same, which shall be self-locking.

The novelty resides in the peculiarities of construction and the combination, arrangement, and adaptation of parts, all as more fully hereinafter described, shown in the drawings, and then particularly pointed out in the appended claims.

The invention is clearly illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which—

Figure 1 is a perspective view of my improved lifting-jack. Fig. 2 is a side view with the movable part elevated.

Referring now to the details of the drawings by letter, A represents a suitable upright, which may be secured to any suitable base or support, as A′, and is formed with an inclined side A^2.

B is the movable portion, having its side adjacent to the inclined side A^2 of the upright inversely inclined, as at B′, and at its upper edge formed with the step-like bearing-surfaces B^2, as is usual in this class of devices. Adjacent to and parallel with the inclined face of the movable portion said movable portion is formed with a groove or channel B^3, in which fit the right-angled ends C′ of the metallic strips C, secured to the upright A, and extending beyond the inclined edge thereof, as shown best in Fig. 1, the said ends C′ being bent parallel with the inclined faces and groove, as shown. Although I have shown these plates and groove upon but one side of the device, it is to be understood that the opposite side is similarly constructed. These plates and grooves serve to guide the movable part and preserve the parallelism between the same and the standard or upright A.

D is the operating-lever, having a suitable handle, as shown, and pivoted at one end, as at D′, to the movable portion near the longitudinal center thereof.

E is an arm or link pivoted at one end, as at E′, to the standard or upright A, and its other end pivotally connected, as at E^2, with one end of the arm F, which is rigidly attached to the operating-lever in proximity to its pivot.

G is an arm or bar rigidly attached at one end to the arm F, near the center thereof, and its other end pivotally connected, as at G′, with the operating-lever, a collar or washer G^2 being provided upon said pivot, said washer being of the same thickness as the arm F, so as to prevent torsional strain on the parts, as will be understood.

The operation is simple and apparent. The manipulation of the lever D actuates the movable part. The peculiar connection between the lever and the stationary part provides a self-locking mechanism for the movable part when in its highest position, as indicated in Fig. 2, the toggle formed by the arms E and F when in this position preventing downward movement of the movable part. A stop-pin H is provided in the standard A to limit the movement of the lever. When in its intermediate position, the parts are locked by the engagement of the lever with the bottom edge of the upper bar C.

The device is simple, inexpensive, and in practice has been found most efficient, but little power being required to elevate a heavy load.

What I claim as new is—

1. The combination, with the standard having an inclined side, and the movable portion having a corresponding inclined side and longitudinal groove parallel therewith, of the strips on the standard having bent ends working in said groove, and the lever operating said movable portion, substantially as shown and described.

2. The combination, with a standard having an inclined side, and the movable part having a corresponding inclined side and

longitudinal groove parallel therewith, of the lever D, for actuating the movable portion of the parallel strips attached to the standard with their ends projecting beyond the inclined side thereof and bent at right angles to their length and parallel with the inclined side and working in said groove, substantially as shown and described.

3. The combination, with the standard and movable portion, of the lever pivoted at one end to the movable portion, the rigid arm on said lever near its pivot, the link pivotally connected with the other end of said arm and with the standard, and the short arm rigidly connected at one end to the rigid arm and at its other end pivotally connected with the lever, substantially as shown and described.

4. The combination, with the standard and movable portion, of the lever pivoted at one end to the movable portion, the rigid arm on said lever near its pivot, the link pivotally connected with the other end of said arm and with the standard, and the short arm rigidly connected at one end to the rigid arm and at its other end pivotally connected with the lever, and the stop-pin H on the standard, substantially as shown and described.

5. The combination, with the standard and movable portion having grooves D^3, of the lever pivoted at one end to the movable portion, the rigid arm on said lever near its pivot, the link pivotally connected with the other end of said arm and with the standard, and the short arm rigidly connected at one end to the rigid arm and at its other end pivotally connected with the lever, and the stop-pin H on the standard, and the upper horizontal strip C, substantially as shown and described.

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

HENRY D. VOORHIES.

Witnesses:

LEWIS H. CLARK,

JAY H. STEVENS.