(No Model.)

T. L. WILLIAMS.

CARRIAGE JACK.

No. 422,275. Patented Feb. 25, 1890.

Fig. 3.

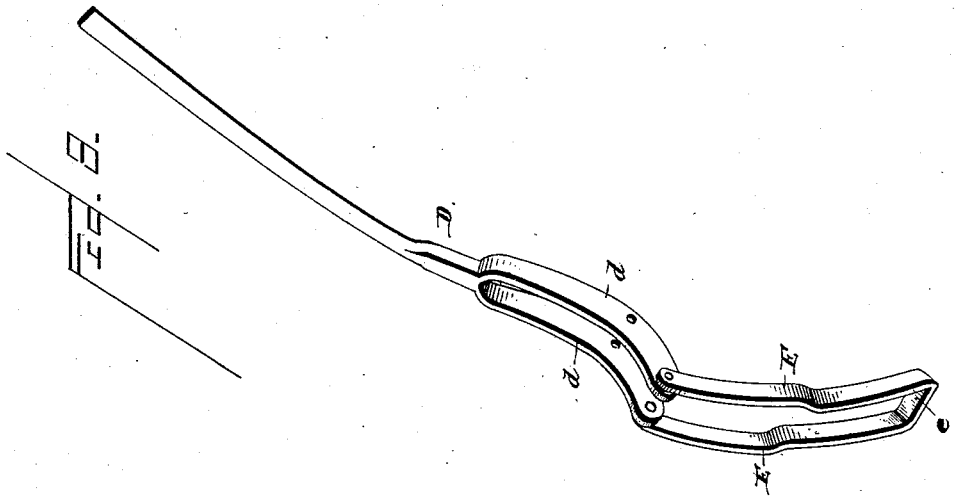

Fig. 2.

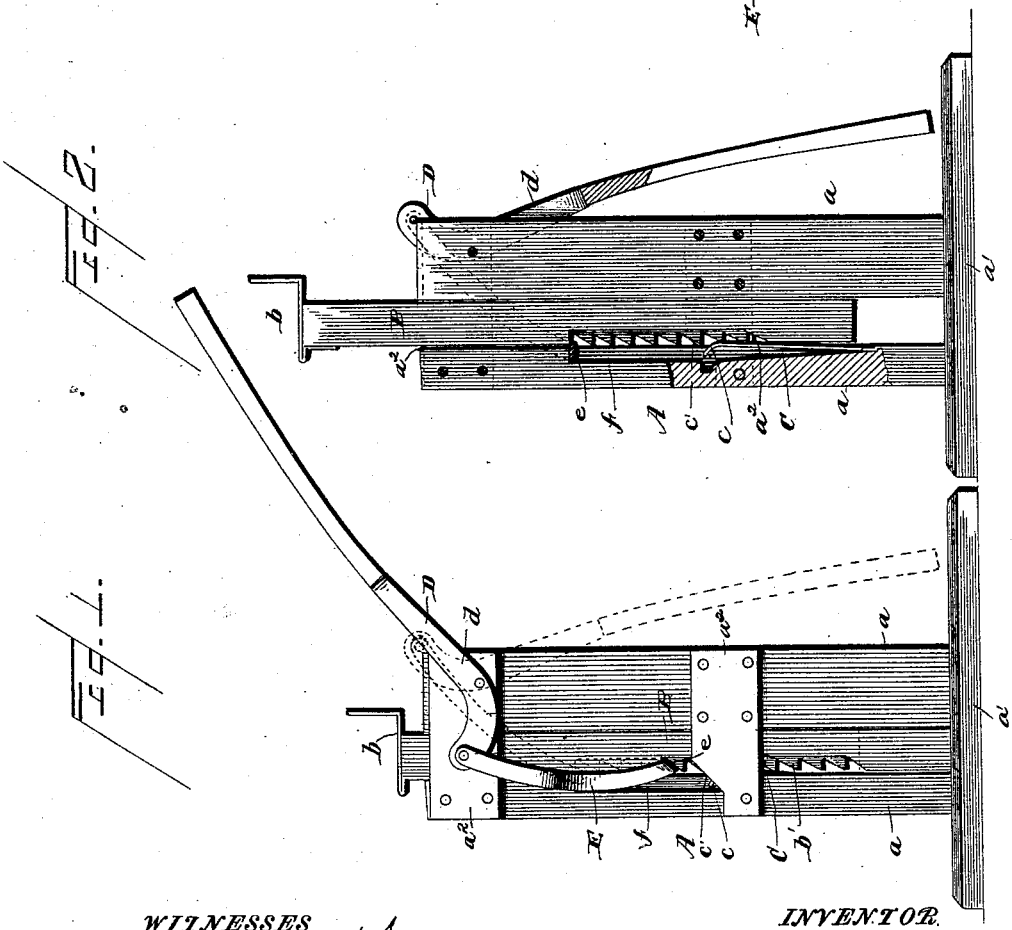

Fig. 1.

WITNESSES

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CARRIAGE-JACK.

SPECIFICATION forming part of Letters Patent No. 422,275, dated February 25, 1890.

Application filed July 19, 1889. Serial No. 317,985. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. WILLIAMS, of Big Bend, Butte county, California, have invented a new and useful Improvement in Carriage-Jacks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

This invention relates to certain improvements in lifting-jacks, particularly adapted to lift the axle of a vehicle at one end to accordingly affect the wheel thereat for its removal for the lubrication of the axle or other purposes; but it is also adapted for lifting purposes generally; and to these ends the nature of the invention consists of the novel combination of parts and their construction, as will fully appear from the following description and accompanying illustrations, in which—

Figure 1 is a side elevation of my improved lifting-jack. Fig 2 is a sectional elevation; and Fig. 3 is a detached perspective view of the lever and its bail.

In the embodiment of my invention I employ, preferably, two uprights *a a*, which are mortised into a base *a'* and connected together at a suitable interval or space apart by plates a^2 a^2, one applied at each side at the upper ends of the uprights *a a*, and two disposed about at the middle of the latter, the whole constituting the standard or stock A. In the space or interval between the uprights of the standard or stock A is arranged the lifting-bar B, provided with racks or teeth *b'*, the upper end of which may be armed or provided with an offset or right-angled bearing-plate *b* to prevent the accidental slipping or displacement therefrom of the superposed axle or other weight being lifted.

The rack portion of the lifting-bar B consists of a series of teeth, serrations, or notches *b'*, formed directly in the bar, as well understood and commonly practiced.

C is a retaining-spring, preferably a flat or plate-like one, suitably, though not necessarily, disposed in a recess in and secured at its lower end to the inner side of one of the uprights of the stock or standard A, and bearing near the upper end against the lifting-bar B to effect the holding of the latter at the various intervals of its elevation as the bail of its actuating or lifting lever (presently described) releases its hold to secure a new one. The extreme upper end of the retaining-spring C is bent outward, or in a direction away from the lifting-bar, as at *c*, the purpose of which will be seen farther on. Directly opposite this outwardly-bent portion *c* of the spring C the lower upright-connecting plates a^2 a^2 are formed with outward and downward inclined shoulders or edges *c'*, the significance of which will also appear hereinafter.

D is a lever, the upper or inner portion of which is bifurcated or forked, providing it with two branches *d d*. These branches are bowed or curved in the form of a proximate semicircle or arc and pivoted to one of the uprights of the stock or standard A, near the upper end of the latter, the pivotal point being at or a little above the center of their curvature.

E is a bail or pawl having its cross-bar *e* inclined at its forward edge and engaging the teeth or notches *b'* of the lifting-bar B. The side pieces or arms of the bail or pawl E are arranged to stand closely to but not have frictional contact with the sides of the standard A along their lower portions. The upper portions of the arms of the bail or pawl E are offset at their union with the lower contracted portions thereof, thus causing them to stand outward from the sides of the standard A. The upper ends of the outstanding portions of the arms of the bail or pawl E are pivoted to the upper ends of the shorter arms of the lever D, the latter being preferably arranged intermediately of the standard and the arms of the bail or pawl. A vertical recess or passage *f* is provided in one of the uprights of the standard or stock A, facing the lifting-bar B, for the cross-bar of the bail or pawl E to move in as it passes to the lifting-bar disengaged therefrom.

It will be observed that as the lever D is moved outward and upward within certain limits and then moved in a reverse direction it will cause the bail or pawl to engage and elevate the lifting-bar B, the height of elevation of course being determined by the amount of sweep or the arc described by the lever in its movement. This movement of

the lever D is repeated as often as necessary to give the upper end of the rack-bar the required elevation. The lever in its upward movement will swing or drop the cross-bar of the bail or pawl slightly outward away from the rack-bar, the bail or pawl being received into the recess *f*. Upon the return or downward movement of the lever when the jack is out of use its bail or pawl can, by being momentarily held outward from the rack-bar, be caused to pass into the upper part of the recess *f*, and thus allow the lever to swing and stand closely to the standard out of the way.

It will be seen that when it is desired to remove the pressure of the spring C from the rack it is only necessary to move the lever to its maximum upward limit, when the lower end or cross-bar of the bail or pawl will be deflected outward by the inclines c' of the lower plates a^2, and be caused to engage the upper bent end *c* of the spring, and thus deflect it (the plate) out of contact with and permit the lifting-bar to at once return to its lowered position, the lever then being lowered or moved inward to the standard, as above pointed out.

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, with the lifting-bar and the spring bearing against said bar, of the actuating-lever and bail or pawl engaging in its extreme downward movement the said spring and deflecting it from the lifting-bar, substantially as set forth.

2. The combination, with the lifting-bar and the spring bearing against said bar and having an upper bent end, of the actuating-lever and pawl, and the side plates of the containing stock or standard provided with inclines immediately opposite said upper bent end of the spring, substantially as specified.

3. In a lifting-jack, the combination, with the standard or stock and the contained lifting-bar, of the lever having the branches or prongs of its bifurcated portion curved in the form of a proximate semicircle or arc and pivoted to said standard, and the bail or pawl having the upper ends of its arms pivoted to the upper ends of the shorter arms of the lever, the cross-bar of said bail or pawl being inclined and engaging the rack, substantially as set forth.

4. The combination of the stock or standard provided with the lifting-bar having the toothed or serrated plate, the upper and lower side plates connecting the uprights of said standards, the lower ones of which are provided with upper inclined edges or shoulders, and the actuating-lever and pawl or bail, the lever having the branches or prongs of its bifurcated portion curved in the form of a proximate semicircle or arc and pivoted to said standard and to said bail or pawl, which bail or pawl engages the lifting-bar, substantially as set forth.

5. In a lifting-jack, the combination, with the standard or stock and the lifting-bar, of the actuating-lever and pawl or bail engaging said lifting-bar, said lever having curved pivoted portions, and the bail or pawl engaging said lifting-bar and having lower portions standing closely to but not in frictional contact with said standard, and upper offset or outstanding portions pivoted at their upper ends to the upper ends of the shorter arms of said lever, substantially as specified.

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

THOMAS L. WILLIAMS.

Witnesses:
SETH HALL,
A. M. WILLIAMS.