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STEPHEN C. LEONARD, OF OBERLIN, OHIO.

Letters Patent No. 109,635, dated November 29, 1870.

IMPROVEMENT IN LIFTING-JACKS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, STEPHEN C. LEONARD, of Oberlin, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Carriage-Jacks, of which the following is a description, reference being had to the accompanying drawing making part of this specification.

Specification.

Figure 1 is a side view of the jack.

Figure 2 is a top view.

Figure 3, an end view.

Like letters of reference refer to like parts in the different views.

The nature of this invention relates to a jack for lifting carriage-axles, &c., the construction and operation of which are as follows, viz.:

To each end of a base, A, fig. 1, is secured a pair of standards, B C.

Between the cheeks of these standards C is pivoted one end of a lever, D, which extends backward over the base referred to, and is received between the cheeks of the standards B, which serve as a guide for the vertical movement of the lever, and as a brace against any lateral action.

In the upper edge of the lever is formed a series of shoulders or rests, E.

In the upper shoulder is screwed a standard, F, the purpose of which will presently be shown.

G, fig. 3, is a rack, the lower end of which is pivoted to the standard B at the point *a*.

It will be observed that said rack is provided with an arm, H, having a rounded end.

Said end is made to rest upon a ledge or shoulder of the center-piece I, which is recessed for its reception, as seen in fig. 1.

The practical operation of this jack is as follows:

It is placed under the axle or other object to be raised by inserting thereunder the end C, or lower end, the lever or handle being depressed, as indicated by the dotted line *b*. The axle or other object is allowed to rest upon either of the shoulders E, according to the height that it may be from the ground, which is then raised by lifting upward the outer or

free end of the lever, thereby raising the axle. The lever thus raised is retained by the rack G, which falls against the side of said lever, and engages a lug or projection, J, fig. 2, which projection rests upon one of the notches of the rack.

The rack is forced in an engagement with the lug by a spring, K, which spring, however, may be dispensed with, as the weight of the arm will, under ordinary circumstances, be sufficient to cause the rack to engage the projection or lug.

It will be observed that the weight of the lever and the object raised is not borne entirely by the pivot *a*, but is mainly sustained by the shoulder on which the arm of the rack rests; hence the jack will be enabled to support a heavier weight than if it were made to depend only upon the strength of the pivot.

By removing the bolt L, and inserting it in either of the holes *c* below, the jack can be adjusted to different heights of axles; also, it can be adjusted to axles or objects much higher than either of the shoulders E, by allowing the axle or other object to rest upon the standard F, referred to, the height of which may be increased or lessened by screwing it in or out, as the case may be.

The position of the rack may be reversed from that shown and described. This would require the notches or teeth to be cut on the opposite edge, and the rack to be pivoted at the extreme end of the arm, thereby bringing the pivotal point on one side of the rack's line of gravity, which would cause said rack to fall against the lug of the lever without the assistance of the spring.

Claim.

What I claim as my improvement, and desire to secure by Letters Patent, is—

The standards B C, shouldered lever D, standard F, catch G, spring K, and base A, when arranged to operate in the manner as described, and for the purpose set forth.

S. C. LEONARD.

Witnesses:

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