C. F. DAVIS.

LIFTING-JACK.

No. 186,315. Patented Jan. 16, 1877.

Fig. 1.

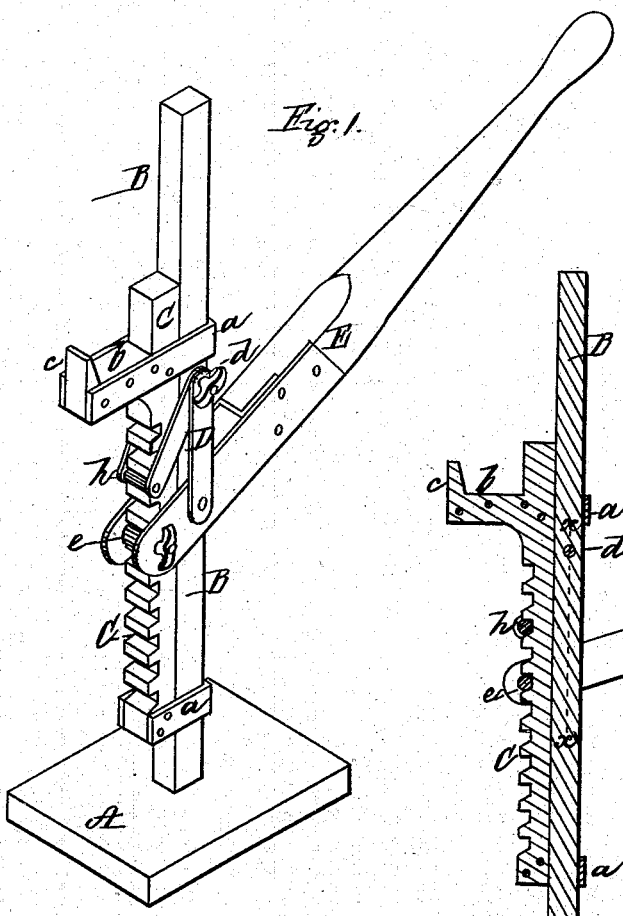



Fig. 2.

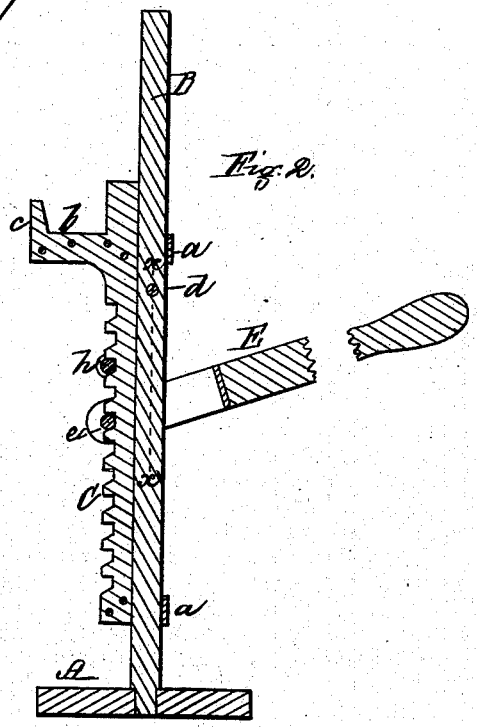
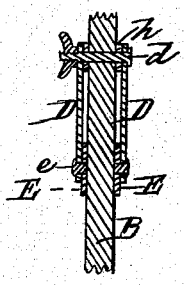



Fig. 3.

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# UNITED STATES PATENT OFFICE.

CHARLES F. DAVIS, OF WALTHAM, MASSACHUSETTS.

## IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **186,315**, dated January 16, 1877; application filed December 23, 1876.

*To all whom it may concern:*

Be it known that I, CHARLES F. DAVIS, of Waltham, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Lifting-Jacks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a perspective view of my improved lifting-jack. Fig. 2 is a longitudinal vertical section through the center of the same. Fig. 3 is a transverse section on the line *x x* of Fig. 2.

My invention has for its object to produce a powerful lifting-jack of simple construction; and consists in a rack-bar sliding vertically on a standard, and operated by a swinging bifurcated lever, pivoted to and supported by links pivoted to the standard, a bolt extending across the end of the lever engaging with the teeth of the rack-bar, and a suitable retaining-pawl being employed to hold the rack-bar as it is raised by the lever.

To enable others skilled in the art to understand and use my invention, I will proceed to describe the manner in which I have carried it out.

In the said drawings, A represents the base or foot piece; and B a vertical standard rising therefrom, on which slides the rack-bar C, kept in place thereon by means of straps *a a*. Near the top of this sliding rack-bar C is a horizontal arm, *b*, which is intended to be placed under the axle of the wagon or other object to be raised, the jack being prevented from slipping out of place by means of a projection, *c*, at the outer end of the arm *b*. D D are two swinging links, pivoted at their upper ends to the standard B, by means of a bolt, *d*, passing through it. To the lower ends of these links are pivoted the opposite sides of the bifurcated end of a long lifting-lever, E, the standard and rack-bar being embraced thereby, a bolt, *e*, extending across the open end of the lever and engaging with the teeth of the rack-bar, whereby the latter is raised by depressing the handle of the lever, the rack-bar being retained after each impulse of the lever by a pawl, *h*, pivoted to the standard B by the bolt *d*.

After each upward movement of the rack-bar the lever is swung out, so as to disengage the bolt *e* from the tooth of the rack-bar with which it was in contact, when it is carried down by raising the handle of the lever, to cause the bolt *e* to engage with the next tooth below, and thus take a fresh hold on the rack-bar.

The bolt *e* is made removable, in order that the lever may be swung up into a vertical position alongside of the standard A, in which position the jack occupies less space and is rendered more portable.

From the foregoing it will be seen that a jack constructed in accordance with my invention enables the operator to raise a very heavy load with the expenditure of but little power, on account of the great leverage exerted, while the parts are strong and of simple construction.

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

The combination and arrangement of the sliding rack-bar C, standard B, swinging bifurcated lever E, pivoted to and supported by the links D D, lifting-bolt *e*, and the retaining-pawl *h*, constructed and operating substantially in the manner and for the purpose set forth.

Witness my hand this 20th day of December, A. D. 1876.

CHARLES F. DAVIS.

In presence of—

P. E. TESCHEMACHER,

N. W. STEARNS.