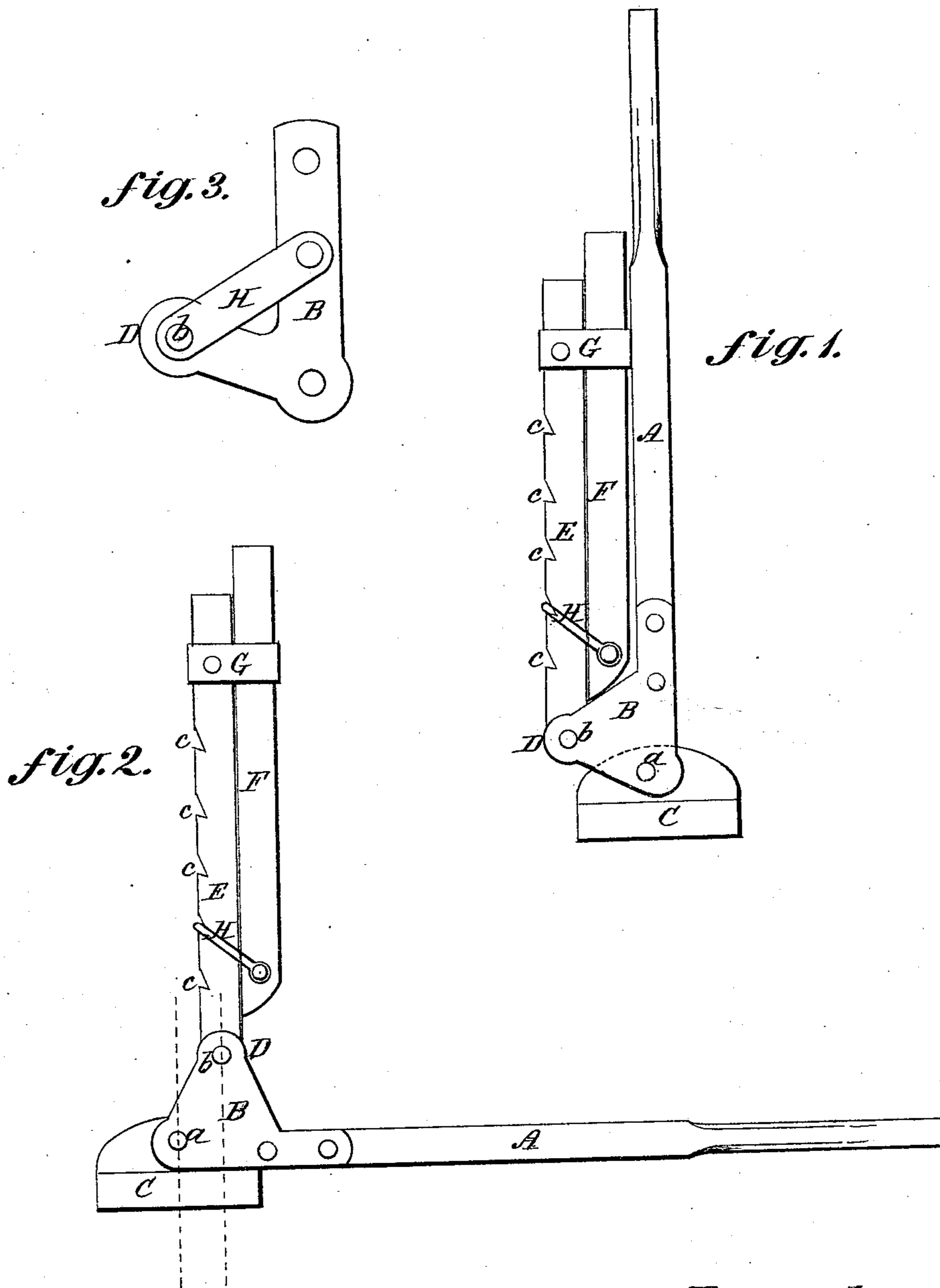


J. T. GUTHRIE.
Lifting-Jacks.

No. 147,127.

Patented Feb. 3, 1874.



Witnesses:

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UNITED STATES PATENT OFFICE.

JAMES T. GUTHRIE, OF LEESBURG, OHIO.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. 147,127, dated February 3, 1874; application filed January 6, 1874.

To all whom it may concern:

Be it known that I, JAMES T. GUTHRIE, of Leesburg, in the county of Highland and State of Ohio, have invented a new and useful Improvement in Lifting-Jacks, of which the following is a specification:

Lifting-jacks having pivoted levers and extensible slides have been used, in different combinations, with supporting-standards and other devices; and they have also been adapted for use with high and low vehicles, and in which the weight of the vehicle is made the means to maintain the lever in position when the jack is applied.

The object of my invention is to render the lifting-jack durable in its jointed connections, and to cheapen its construction, with entire convenience and safety in applying it. These advantages are obtained by the combination of angle-irons with the hand-lever, the supporting-standards, and the base, the said angle-irons having branches less than a right angle, and pivoted to the base in a line, or nearly so, with the inner side of the hand-lever, and carrying the supporting-standards in their free ends with the pivots of the angle-irons and of the supporting-standard, so arranged that the depression of the lever to raise the vehicle will bring the branches of the angle-irons upward, with their standard-pivot in advance of the base-pivot and over the lever, by reason of the acute angle of said short branches, and thereby hold the lever down by the weight of the vehicle.

In the accompanying drawings, Figure 1 represents the lifting-jack in the position it occupies for applying it to the axle of the vehicle; Fig. 2, a view in the position when supporting the wheel from the ground; and Fig. 3, the angle-iron with brace.

The hand-lever A has secured to its sides angle-irons B, by strong bolts passing through them and the end of the lever; and these angle-irons are secured to base C by a strong bolt, *a*, which forms the turning-point for said lever in a line with its inner side, or nearly so. The free ends D of the angle-irons project from the base-joint *a* at an acute angle to the lever; and they are jointed by a strong bolt, *b*, to the lower end of a standard, E, which is applied in a vertical position beneath the object to be raised. The turning-joints *a* and *b* are arranged in such relation to each other and the hand-lever, that when the latter is depressed to raise the axle the turning-joint

b of the supporting-standard will be brought over in front of the lever-joint *a* by the acute angle of the branches D, and by this construction bring the weight of the object directly upon the lever to hold it down, as shown in Fig. 2, wherein it will be seen that a vertical line drawn through the joint of the supporting-standard will bring it within—that is, to one side of—the joint of the lever and over the lever itself, when the latter occupies a position at right angles to the supporting-standard. This standard is provided with a series of notches, *c*, on its outer face, and an extensible standard, F, is arranged upon its inner side, and within a guide-strap, G, so as to be raised and lowered therein to suit the height of the axle, and held in such position by a link, H, pivoted to the bar F, and resting in the notches *c* in an oblique position, so as to hold the bar F firm against the supporting-standard. This extensible slide is for use with axles that may be higher from the ground than the length of the main standard.

In applying the jack, the lever is raised in a vertical position parallel with and against the supporting-standards, in which position the extensible bar will be between the lever and the jointed bar, and in this position of the parts the acute branches of the angle-irons will bring the supporting-standard in a vertical position, and hold the parts upright in applying the jack.

In both applying and releasing the jack, the hand-lever is brought to a vertical position, and in bringing it down the angle-iron branches move in the arc of a circle to bring the pivot of the supporting-standard over the lever.

The standard or the extensible slide is adjusted beneath the axle to raise it from the ground.

The angle-irons are either made solid, as shown in Figs. 1 and 2, or with braces H, as shown in Fig. 3, to render the acute supporting-branch D strong and durable.

I claim—

The acute angle-irons B D, jointed to the base C and to the supporting-standard E, in combination with the base C, the hand-jointed lever A, the standard E, and the extensible bar F, substantially as described.

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Witnesses:

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