

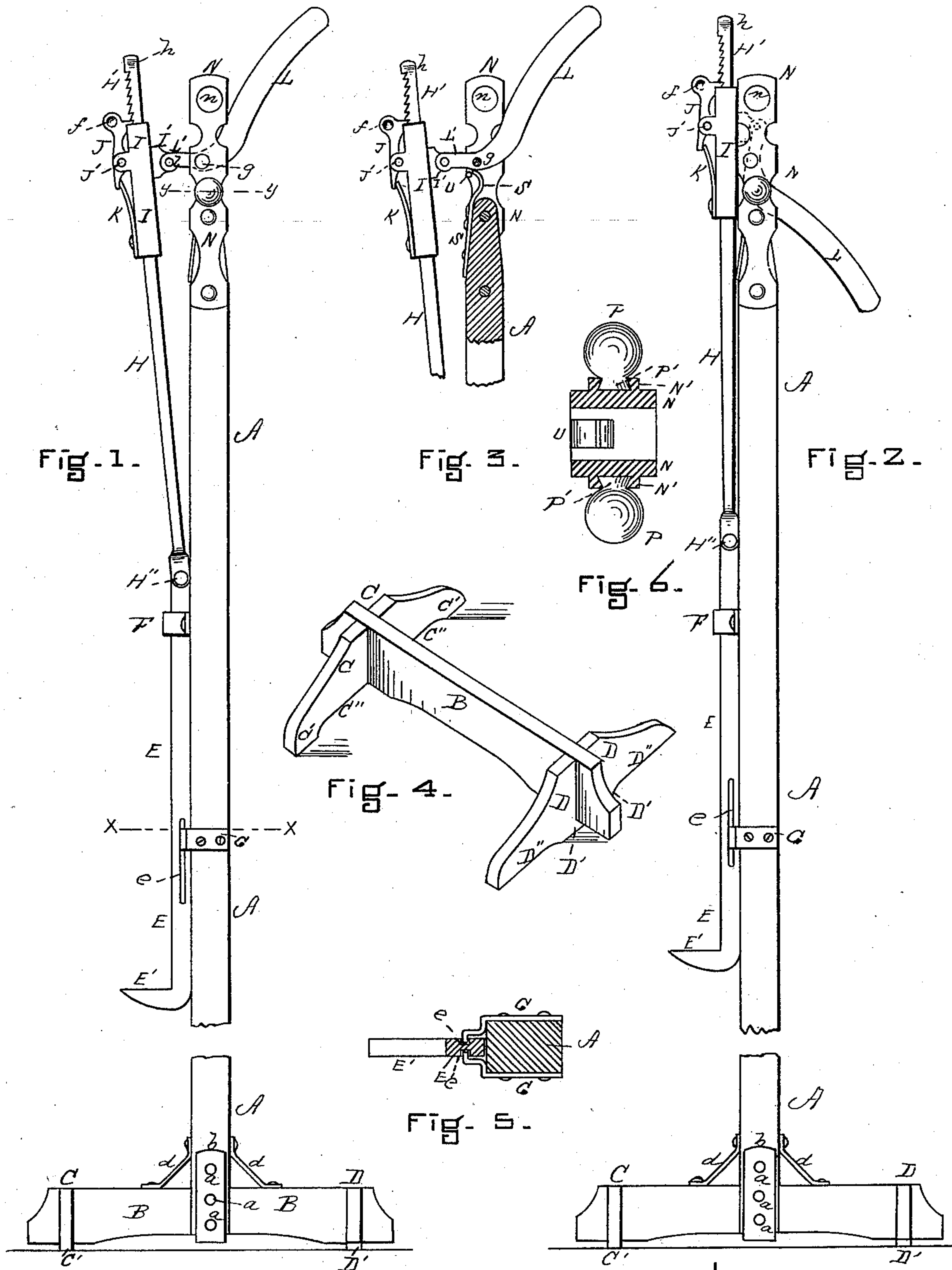
(No Model.)

2 Sheets—Sheet 1.

D. TRUE.
LIFTING JACK.

No. 308,643.

Patented Dec. 2, 1884.



WITNESSES

J. M. Hartnett.
Joseph Ichbaugh.

INVENTOR

David True.
By Mrs. Abby
Henry W. Williams.

(No Model.)

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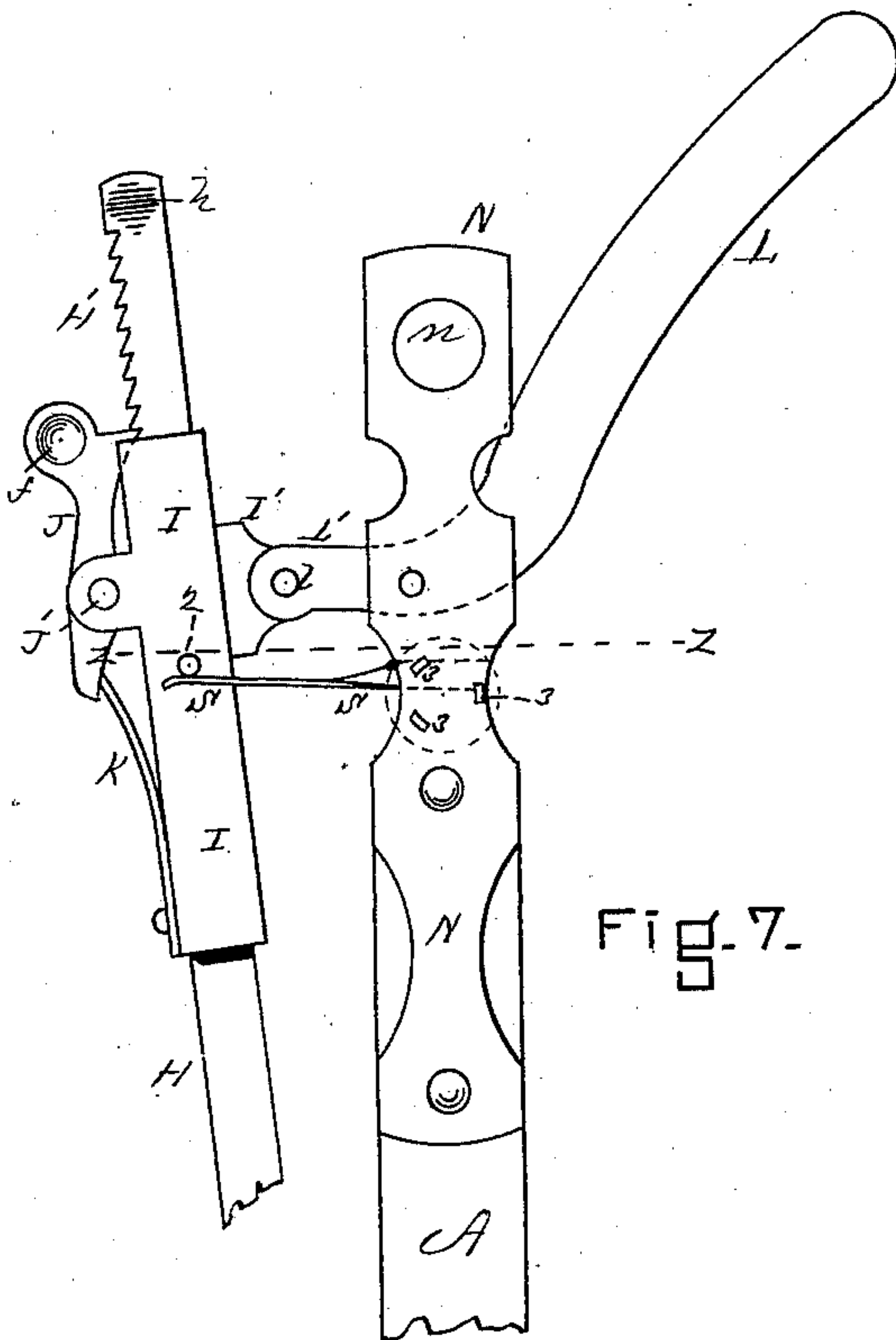


Fig. 7.

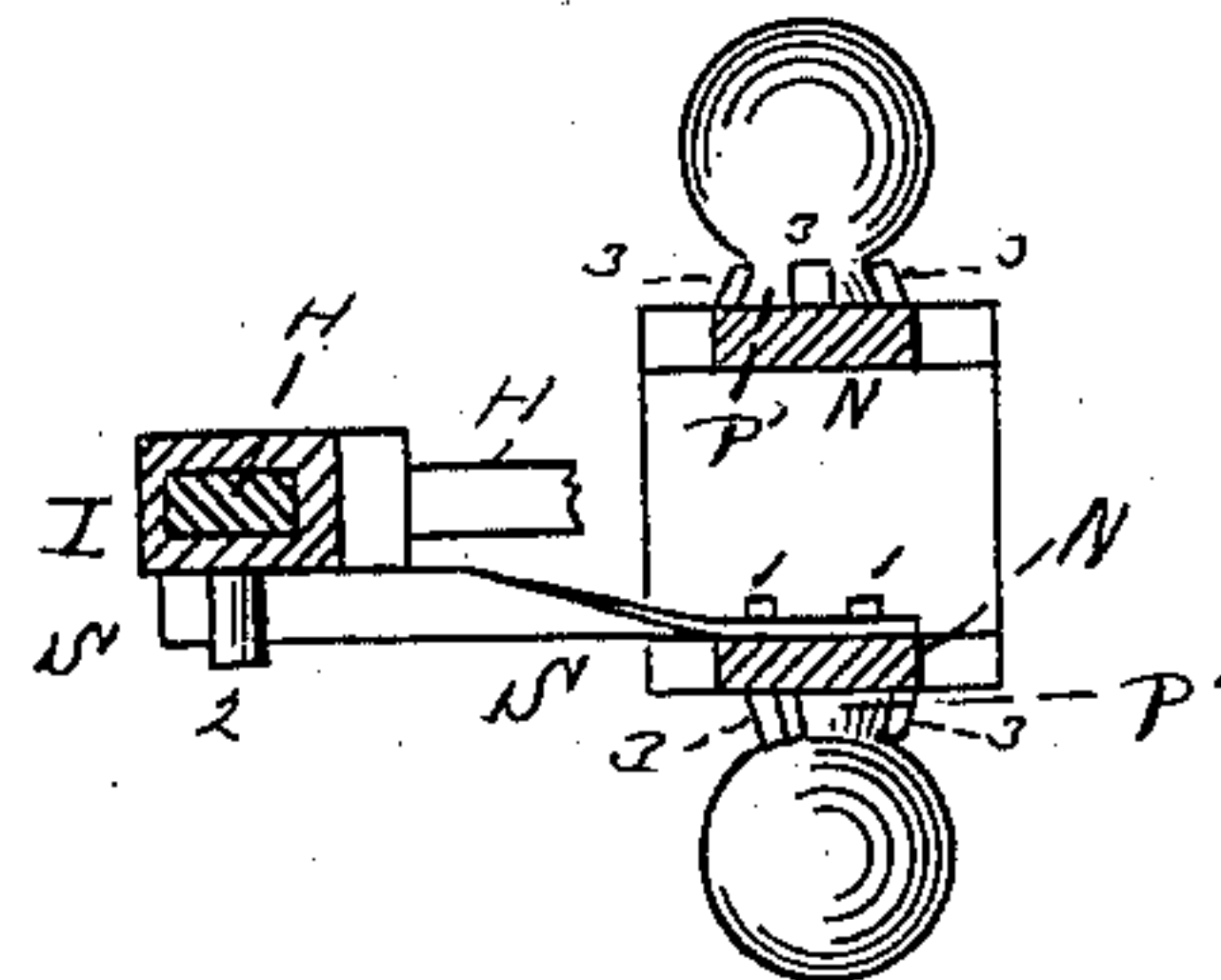


Fig. 8.

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UNITED STATES PATENT OFFICE.

DAVID TRUE, OF SALISBURY, MASSACHUSETTS.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 308,643, dated December 2, 1884.

Application filed May 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, DAVID TRUE, of Salisbury, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Lifting-Jacks, of which the following is a specification.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figures 1 and 2 are side elevations of my improved lifting-jack. Fig. 3 is a sectional view of the operative portion. Fig. 4 is a perspective view of the pedestal detached. Fig. 5 is a horizontal section on line *x*, Fig. 1. Fig. 6 is a horizontal section on line *y*, Fig. 1.

This invention relates more particularly to that class of lifting-jacks adapted for use in connection with carriages and wagons; and it is so constructed that it may be placed beneath the axle, between the wheel and carriage or wagon body, and operated by a person standing erect outside the wheel. The jack may be placed in position, operated, and removed without any necessity for stooping or getting behind the wheel, or danger of soiling the clothing or person.

A represents a post or standard secured to and supported by a pedestal consisting of the horizontal piece B and legs C D. The legs C are provided with two feet, C', or points of contact with the ground, said feet being at the outer ends of said legs. The legs D are provided with one foot, D', or point of contact with the ground, centrally situated, as shown; hence the pedestal rests upon the ground at three points—viz., the two feet C' and the foot D'. The outer feet, C', are produced by removing material from the leg at the central portion, C'', and the central foot, D', is produced by removing material from the leg at the outer portions, D''. There are three results produced by this method of constructing a pedestal—first, as there are but three points of contact with the ground, it has the advantage on a rough or uneven surface possessed by a tripod; second, it has, practically, the use of four feet or points of contact with the ground when liable to fall, as the portions D'' of the leg D are but slightly raised; and, third, owing to the relatively long connecting-bar B and the shape of the legs, when it tips and

falls it will always fall sidewise, (not cornerwise, as in case of a tripod,) thus protecting certain of the operative portions of the jack—such as the lifting-lever.

The post A may be secured to the pedestal in any suitable manner. In this case it is secured by means of rivets, *a*, passing through the outer plates, *b*, the bar B, and the post A, which straddles the bar. Additional strength is secured by means of the braces *d*.

E is the lifting-bar, provided with the foot or hook E', and held next the post A by means of guides F and G, said guide F consisting of a strap secured to the post and passing around the lifting-bar, and the said guides G consisting of bent metallic pieces of the shape shown, (see Fig. 5,) secured to the post and extending into vertical grooves *e* in the lifting-bar.

H is a rack-bar pivoted at H'' to the lifting-bar E, and provided with the teeth H' near its upper end.

I is a socket sliding upon the rack-bar and provided with the pawl J, pivoted at J' thereto and held in the teeth by means of the spring K. The rack-bar H is provided with a depression or thumb-place, *h*, and the pawl J is provided with a thumb-place, *f*, for convenience in handling. The short arm L' of the lifting-lever L is pivoted at *l* to the projection I', extending from the socket I, said lifting-lever being fulcrumed at *g* in the parallel bars or uprights N, bolted to and extending upward from the post A. These bars are provided with holes *n* for convenience in hanging up the lifting-jack. They are also provided with rubber blocks or buffers P, secured horizontally to the outer sides of the bars N by springing their shanks P' into beveled rings N', or by any other suitable means. The object of these buffers is to ease the blow when the lifting-jack tips over sidewise, as will always be the case, owing to the shape of the pedestal, as above described.

S is a spring extending from the upper end of the post A, and bearing against the under side of the short arm L' of the lifting-lever L, as shown in Fig. 3; and U is a stop-pin or rest extending horizontally from one of the uprights N beneath the short arm of the lifting-lever. The object of the spring S is to

hold the short arm L' a little above the pin U, upon which it would otherwise rest, for the purpose below stated.

The operation of the device is as follows:

- 5 The lifting-jack is placed between the wheel and carriage-body, with the foot or hook E' under the axle which is to be raised. The rack-bar H is then raised by placing the thumb and finger in the depressions *h* until the foot or hook E' touches lightly the under side of the axle, the position being that shown in Figs. 1 and 3. The axle is then raised by bearing down the long arm L of the lifting-lever, the short arm of course lifting the socket I, and by means of the pawl J, the rack-bar H, and lifting-bar E, the position assumed being that shown in Fig. 2. The axle is then dropped by raising the lifting-lever so that the device is in the position shown in Figs. 1 and 3, and the lifting-jack is readily removed from its position under the carriage-axle by raising the long arm of the lifting-lever L until the short arm L', bearing down the spring S, rests against the projection U. This leaves an appreciable space between the foot E' and the axle, so that the jack may be removed from under the axle with facility, without catching or crowding either the axle or the ground.
- 30 The operator, during the entire process above described, stands outside the wheel, and is not obliged to stoop or get in behind the wheel for any purpose.

There are various modifications possible to my invention, two of which are shown in Figs. 7 and 8, which are respectively an elevation and a section on line *z*, Fig. 7. These modifications consist, first, in applying the spring S at a different place, but producing the same result, and, second, in a slightly-different means for attaching the buffer P. The spring S is, in Figs. 7 and 8, riveted at 1 to the bar N, and bears upwardly against the pin 2, secured to the sliding socket I. The buffers P are held by fingers or prongs 3, extending from the bars N, and adapted to be bent over upon the shanks N' of said buffers.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a lifting-jack, the combination, with the supporting-post and the lifting-lever, of a

spring adapted when in its normal position to hold the lifting-bar and foot or hook slightly above its resting point, so that said bar and foot or hook may be pressed slightly downward against the spring to remove the lifting-jack, substantially as and for the purpose set forth.

2. In a lifting-jack, the combination, with the post A and the short arm L' of the lifting-lever L, of the spring S, secured to said post and bearing against said short arm, substantially as and for the purpose described.

3. In a lifting-jack, the combination, with the post A and lifting-lever L, of the spring S, secured to said post and bearing against the short arm of said lever, and the projection or rest U, extending from the bar N under the short arm of said lever, substantially as and for the purpose set forth.

4. In a lifting-jack, the herein-described pedestal, consisting, essentially, of the horizontal bar B, provided with the legs C, having the two outer feet, C', and the legs D, having the central foot, D', and their under sides removed at D'', substantially as and for the purpose described.

5. The combination of the post A, bars N, provided with the beveled rings N', and the buffers P, provided with shanks P', substantially as and for the purpose set forth.

6. The combination of the post A, provided with the parallel bars N, lifting-lever L, pivoted at *g* to said bars, sliding socket I, provided with the projection I' and spring K, the pawl J, rack-bar H H', and lifting-bar E, pivoted at H'' to said rack-bar, and provided with suitable guides extending from said post A, substantially as and for the purpose described.

7. The combination, with the lifting-lever L L' and socket I, of the rack-bar H H', provided with the depressions *h*, and the pawl J, provided with the depressions *f*, substantially as and for the purpose set forth.

8. The combination of the post A, the guides G, of the shape shown, and the lifting-bar E, provided with the grooves *e*, into which said guides extend, substantially as and for the purpose described.

DAVID TRUE.

Witnesses:

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CHARLES E. HOWE.