

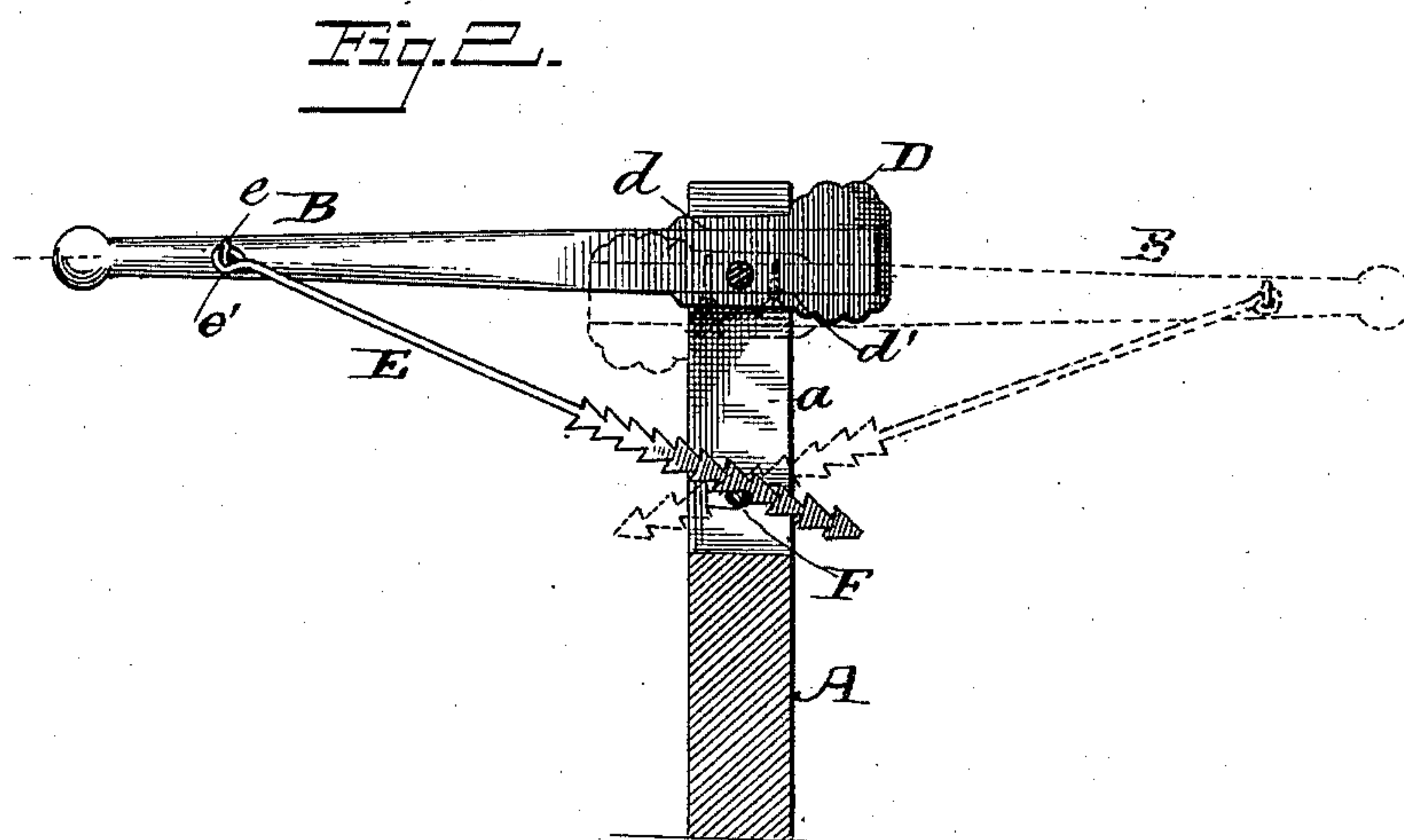
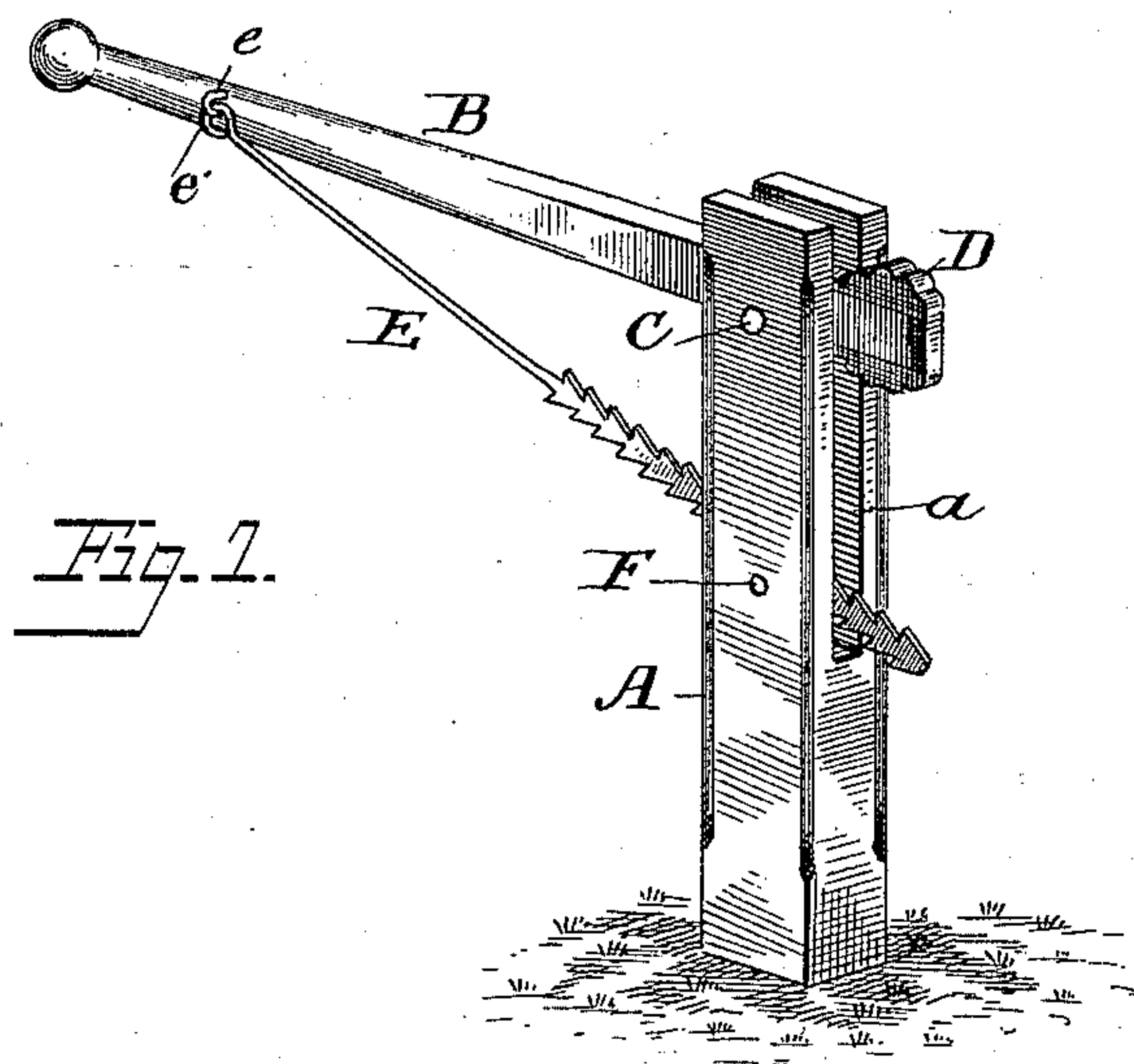
(No Model.)

W. F. KNOWLTON.

LIFTING JACK.

No. 369,645.

Patented Sept. 6, 1887.



Witnesses:  
*L. C. Hills*  
*W. B. Masson*

Inventor:  
*William F. Knowlton,*  
*by E. E. Masson*  
*atty.*



# UNITED STATES PATENT OFFICE.

WILLIAM F. KNOWLTON, OF ST. CLOUD, MINNESOTA, ASSIGNOR OF ONE-HALF TO JACOB S. HULL, OF SAME PLACE.

## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 369,645, dated September 6, 1887.

Application filed March 30, 1885. Serial No. 160,625. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. KNOWLTON, a citizen of the United States, residing at St. Cloud, in the county of Stearns and State of Minnesota, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to lifting-jacks wherein are combined a post, a lifting-lever pivoted thereto, and a holding-rod attached to the lever and adjustably connected with the post.

The object of my invention is to so construct and arrange the above-stated parts that the lever may be reversible upon its pivot to be operated from either side of the post and adapted to suit axles of different heights by such reversal.

In the accompanying drawings, Figure 1 is a perspective view of a lifting-jack constructed in accordance with my invention, and Fig. 2 a vertical section of the same.

The post A is preferably made of a solid piece of wood formed with a slot, *a*, opening from the top down a little more than half its length, in which the end of a lever, B, is fitted to work freely upon a pivoted bolt, C, which passes through bearing-holes in both the post and lever. The short arm of the lever has a cast-iron block, D, preferably in the form of a strap, to pass around the short end of the lever, and embraces both the upper and lower sides thereof to a suitable distance beyond the pivotal bolt C, as will be hereinafter specified.

The faces of the block D are notched, as shown, to provide suitable depressions, into which the axle may rest and be securely held, and one of its faces is made to bulge or project a greater distance beyond the wooden portion or edge of the lever than the other face of the said block, by which means the distance of the holding-notch upon one face of the block is farther from the pivoted bolt C than the holding-notch upon the other face of said block, and the length of the leverage being correspondingly greater the jack will be adapted to suit axles of different heights, one side of the lever being best adapted for the rear axle and the other side for the forward axle of the vehicle.

The difference in leverage of the reversible sides of the lever is varied to a still greater extent than that above described by making the pivotal bolt C pass through the lifting-lever to one side of the central longitudinal line arranged to pass through said lever, as shown clearly in Fig. 2 of the drawings. By this arrangement of the pivot-bolt the thickness of material upon one side of the pivot will be much less than upon the opposite side thereof, and the strength of the lever will be materially and correspondingly less when one side is used than when the other side is used. This difficulty has been overcome in my present invention by making the strap ends *d* of the block D long enough to extend beneath the pivot-bolt C a sufficient distance to re-enforce the weakened portion of the lever, and the said strap end *d* may be securely held upon the lever by wood-screws *d'* *d'* upon opposite sides of the pivot-bolt.

The lever B may be adjustably secured in any desired position by a holding-rod, E, pivoted to a staple, *e*, secured upon one side of the lever and adjoining the handle thereof. This rod E is provided with ratchet-teeth upon its free end, which engage with a bolt or stop-pin, F, that passes through the post A transversely through the slot in which the end of the lever B is held. The end of the holding-rod E is serrated upon both its upper and lower sides to permit it to freely engage with the stop-pin F when the lever B is in either position upon one or the other side of the post. The rod E is secured to one side of the lever by an eye, *e'*, formed on the end of the rod, which is looped upon the staple *e*, driven into the lever. This lever may be removed to cause its notched portion to engage equally well with the stop-pin F.

The operation of my improved device will be readily understood from the foregoing description. When the handle of the lever is elevated, the post A may be placed in a slightly-inclined position beneath the axle, and when the handle is depressed the toggle-joint formed by the lower end of the post and the short arm of the lever will straighten out, and the post will assume a vertical position beneath the axle, and the vehicle will be elevated by a direct lifting



action without either pulling or pushing it out of its original position. When the lever B is reversed to adapt it to lift the axle of a different height from the ground, the free end of the holding-rod E is withdrawn from the slotted portion of the post, and, together with the lever, is turned upon the pivot-bolt C and placed in position upon the opposite side of the post. The holding-rod E is then inserted from its new position into the slot *a* of the post from the opposite side thereof, and this lever may be readjusted, and held thereby in any required position.

The device is strong, simple, and inexpensive, and is well adapted to suit the varying heights of the front and rear axles of a vehicle without withdrawing any pivot-pin therefrom.

I am aware that lifting-jacks have been provided with a reversible lever retained in position on either side of its support by means of a bail having its ends pivoted to said support

and its bent portion entering notches in a longitudinal slot formed in said lever, and I do not claim said construction.

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

In a lifting-jack, the combination of a post having a slot, *a*, a pivot-pin at the upper end thereof, and a stop-pin, F, across it, a lever pivoted to said post, and a metal block projecting unequally from the top and the bottom of said lever and inclosing the end thereof, with a lever-holding rod pivoted to a staple upon said lever and toothed upon both edges for engagement with the stop-pin, substantially as and for the purpose described.

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

WILLIAM F. KNOWLTON.

Witnesses:

ANDREW C. ROBERTSON,

IRA M. NOYES.