A. R. HURST.

LIFTING-JACK.

No. 189,463. Patented April 10, 1877.

Fig. 1.

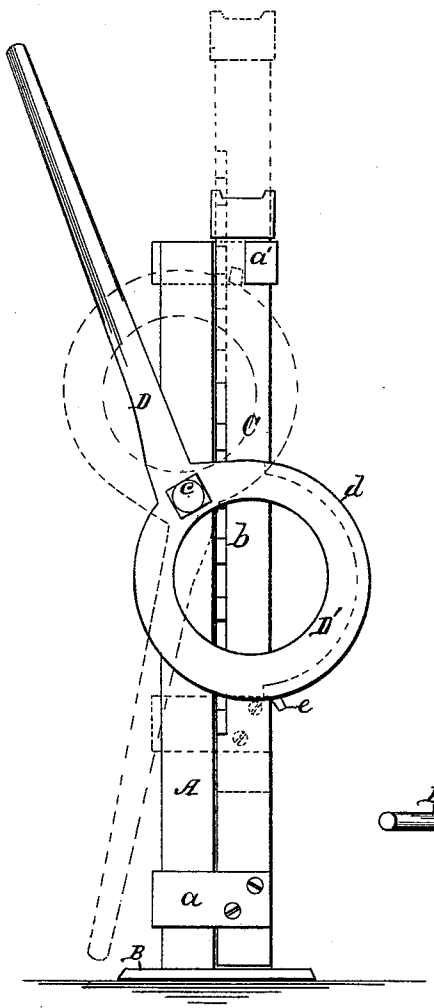


Fig. 2.

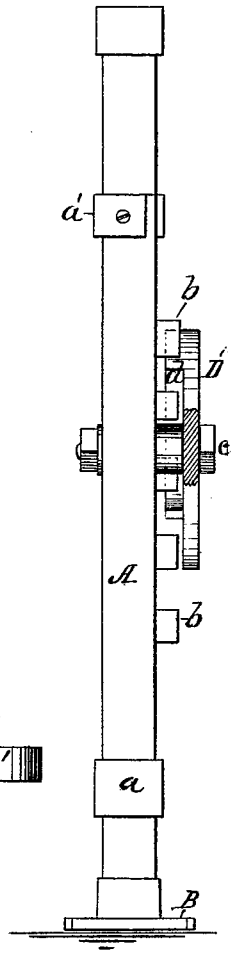
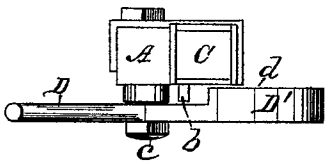


Fig. 3.



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ABRAM R. HURST, OF MECHANICSBURG, PENNSYLVANIA.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **189,463**, dated April 10, 1877; application filed March 30, 1877.

To all whom it may concern:

Be it known that I, ABRAM R. HURST, of Mechanicsburg, in the county of Cumberland and State of Pennsylvania, have invented a new and Improved Lifting-Jack; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a side view with the movement of the jack indicated in dotted lines. Fig. 2 is an edge view with the lever-handle in section. Fig. 3 is a plan view.

My invention relates to an improvement in lifting-jacks, designed with a view to simplicity, ease of adjustment, and compactness of folding; and it consists in a stationary standard having a lift-bar provided with laterally-projecting teeth or pins, and arranged in guides or keepers, to slide longitudinally upon the standard, in combination with a lever pivoted to the standard, and having an oblong or elliptical cam-head, which is provided with a laterally-projecting flange, adapted to engage with the teeth of the lift-bar to elevate the same, or to be disengaged therefrom, as hereinafter more fully described.

In the drawing, A represents the stationary standard, having a foot, B, that forms the ground support for the jack. C is the lift-bar, which is provided below with a guide or keeper, *a*, and is arranged to move through a similar guide, *a'*, attached to the standard at the top, which keepers serve to hold the lift-bar in proper parallel position, and yet permit the necessary longitudinal movement for the adjustment of said lift-bar.

This lift-bar is provided with a series of laterally-projecting teeth, *b*, formed upon a plate let into the bar, or formed upon the bar itself when the latter is made entirely of metal, which in some instances may be desirable.

D is the working-lever, pivoted at *c* to the standard A upon the same side of the jack upon which the teeth *b* are arranged to project.

This lever is provided with an oblong or elliptical cam-head, D', which is made of a ring shape, and is provided upon the side next to the teeth *b* with a flange, *d*, that extends about half way around the head.

In making use of the device the lever is first placed in the position shown in Fig. 1, and the lift-bar is adjusted by hand to the bottom of the axle. The lever is then turned downwardly, as shown in dotted lines, which causes its cam-flange *d* to engage with the bottom of one of the teeth *b*, and to lift the bar C and the axle supported thereupon, the said lift-bar and axle being maintained in their elevated position by the movement of the most eccentric portion of the head D' past the vertical line of the pivot *c*, and the engagement of a lug, *e*, upon said head with the tooth.

With the device constructed as described, it will be seen that the lifting-cam, when in the position shown in Figs. 1 and 3, is detached and disengaged from the teeth, which enables me to raise the lift-bar by hand immediately to the full extent of its free movement, and thus to employ the cam only to effect the immediate lifting of the axle.

This feature of my improvement enables me to quickly adjust the jack to all heights of axles without working the lifting-screws, and without the slow and tedious process of adjusting screw or ratchet jacks throughout their entire length, by working them up or down to the axle before the lifting of the same commences.

As a modification of my invention, and instead of constructing the cam-head as shown, I may make it in the form of a disk, or, if desired, in the form of a segmental head, the principal feature of the invention being the combination, with the toothed movable lift-bar, of a partially-flanged cam-head, arranged to be made separable from the teeth of said bar by a given position of the lever.

Having thus described my invention, what I claim as new is—

1. The lever having the cam-head partially flanged, and combined with the stationary standard, and the sliding lift-bar, having laterally-projecting teeth or pins, substantially as and for the purpose described.

2. The combination, with the standard A,

and the lift-bar C, having laterally-projecting teeth or pins, of a lever having a partially-flanged cam-head, whose flange is arranged to be disengaged from the teeth of the lift-bar by a movement of the lever, to permit the independent adjustment of the lift-bar to the axle, substantially as described.

The above specification of my invention signed by me this 30th day of March, 1877.

ABRAM R. HURST.

Witnesses:
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