M. D. WILLIAMS & W. H. DODGE.

Wagon-Jack.

No. 208,940. Patented Oct. 15, 1878.

Fig. 1.

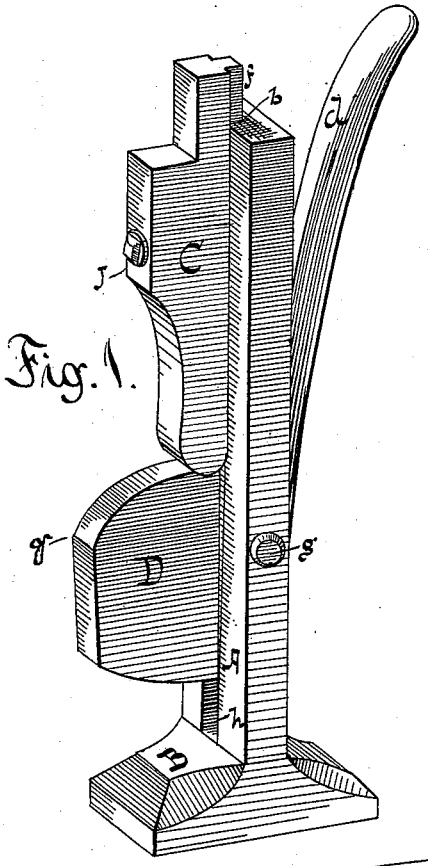


Fig. 2.

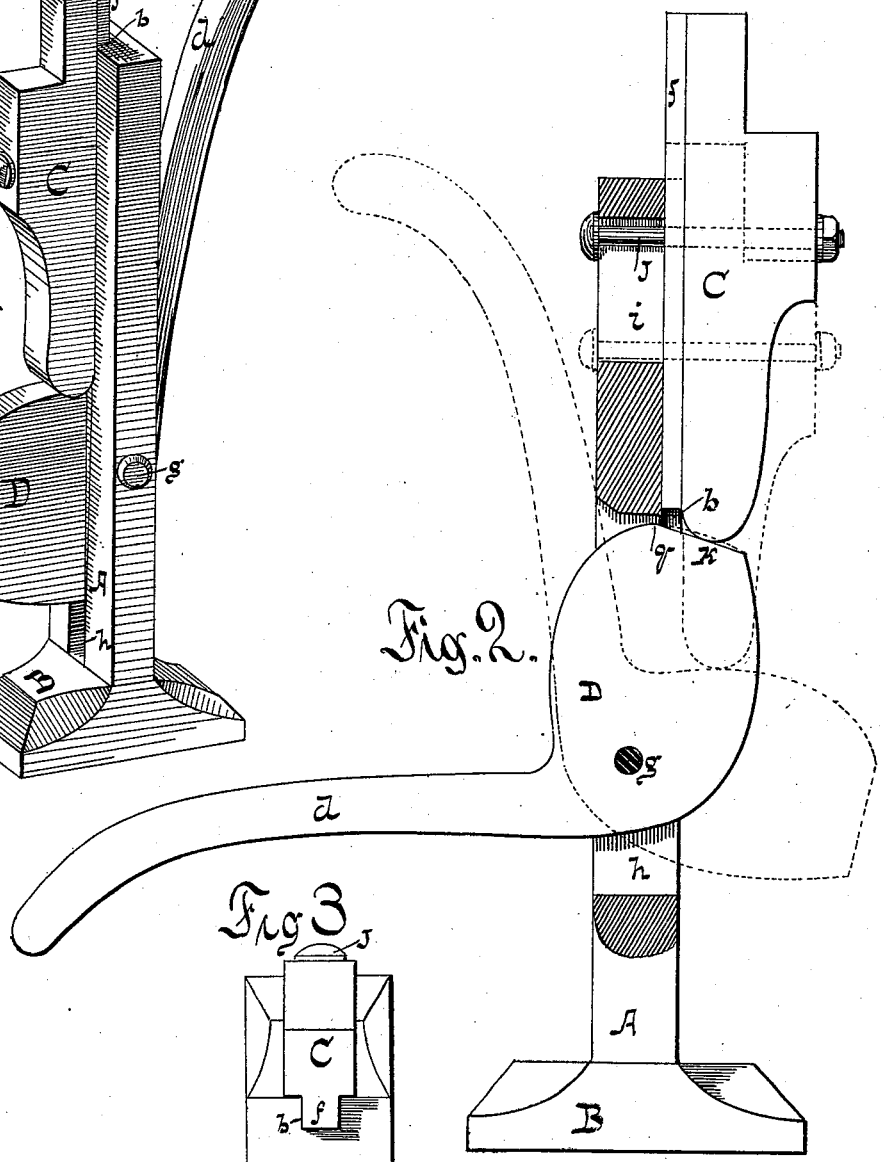
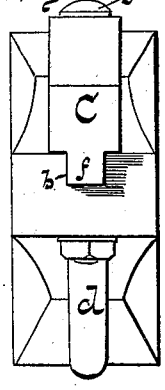


Fig 3.



WITNESSES:

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INVENTOR:

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UNITED STATES PATENT OFFICE.

MILES D. WILLIAMS AND WALLACE H. DODGE, OF MISHAWAKA, IND.

IMPROVEMENT IN WAGON-JACKS.

Specification forming part of Letters Patent No. **208,940,** dated October 15, 1878; application filed April 3, 1878.

To all whom it may concern:

Be it known that we, MILES D. WILLIAMS and WALLACE H. DODGE, of Mishawaka, in the county of St. Joseph and State of Indiana, have invented a new and useful Improvement in Wagon-Jacks; and that the following is a full and exact description of the same, reference being had to the accompanying drawing, wherein—

Figure 1 is a perspective view of our jack. Fig. 2 is a sectional elevation of the same. Fig. 3 is a plan of our jack.

The object is to construct a jack of cheap material and in a manner which will give efficiency with such simplicity of structure as will enable any ordinary mechanic to construct it of material commonly found about every carpenter-shop.

This invention belongs to that class known as "lever-jacks," wherein there is a standard or fulcrum resting on the ground, a lifting-slide, and a lever to produce motion between the above-named parts.

These general features being old, we make no claim except to their particular structure and organization, as described herein, and shown in the accompanying drawings.

A is a single standard, set at its base in a foot-piece, B. The front side of the standard A is provided with a central longitudinal groove, *b*, adapted to receive and guide the slide C, which is provided with a corresponding rib, *f*, along one edge. This rib or feather and its groove give the parts a very strong union without impairing the freedom of their movements up and down, and render it unnecessary to provide guides or fastenings other than a stay-bolt, J, which passes through said rib and slide C and through a slot, *i*, made in the standard A for that purpose. The bolt J has a broad head to cover the slot *i* and slide upon the solid wood on either side. This structure is exceedingly simple and cheap to construct, and efficacious. The rib and groove form a complete guide for the slide, bear all the lateral strains incident to use, and the bolt J serves to keep said slide up in position. The strain upon the bolt J is always a simple tensile strain without any side deflection or shear.

A cam, D, is pivoted by the bolt *g* in a slot, *h*, near the base of the standard A, and the lower end of the slide C, which is rounded for the purpose, rests upon the cam-surface of D. Different positions of the cam D and its lever *d* are shown in full and dotted lines in Fig. 2, and the corresponding variations in the position of the slide C are likewise shown. The operation of the cam D is well understood, and requires no elaboration here. As the lower end of the slide C necessarily rests upon the cam-surface of D, and goes up or down as the said cam is rotated, the weight of the slide C always rests upon a point at one side of a line vertical to the axis of the pivot *g*, and therefore, if the cam-surface is continuously receding from the pivotal center, there will always be a tendency under stress to fly back—*i. e.*, to cause the cam to recede and permit the slide to descend. Such tendency we counteract by changing the direction of the cam-surface at or about the point *q*, preferably from said point. We make said surface K straight for a distance as a chord, so that the slide will descend slightly as it passes upon said straight part, and thereby securely hold the lever *d* in position.

We are aware that others have effected a lock of the lever by the downward pressure of the superimposed mass; but we are not aware that this effect has hitherto been produced with a single pivoted lever and changed direction of the cam-surface.

Having described our invention, what we claim as new is—

A wagon-jack having a post, A, provided with a foot-piece, B, and slots *h i*, and groove *b*, combined with the slide C, provided with the rib *f*, adapted to the groove *b*, sliding tie-bolt J, and the cam D, pivoted in the slot *h*, and provided with the locking-surface *k*.

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Witnesses:
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