(No Model.)

J. J. PHARE.

COMBINED CARRIAGE JACK AND TIRE TIGHTENER.

No. 452,235. Patented May 12, 1891.

Fig. 1.

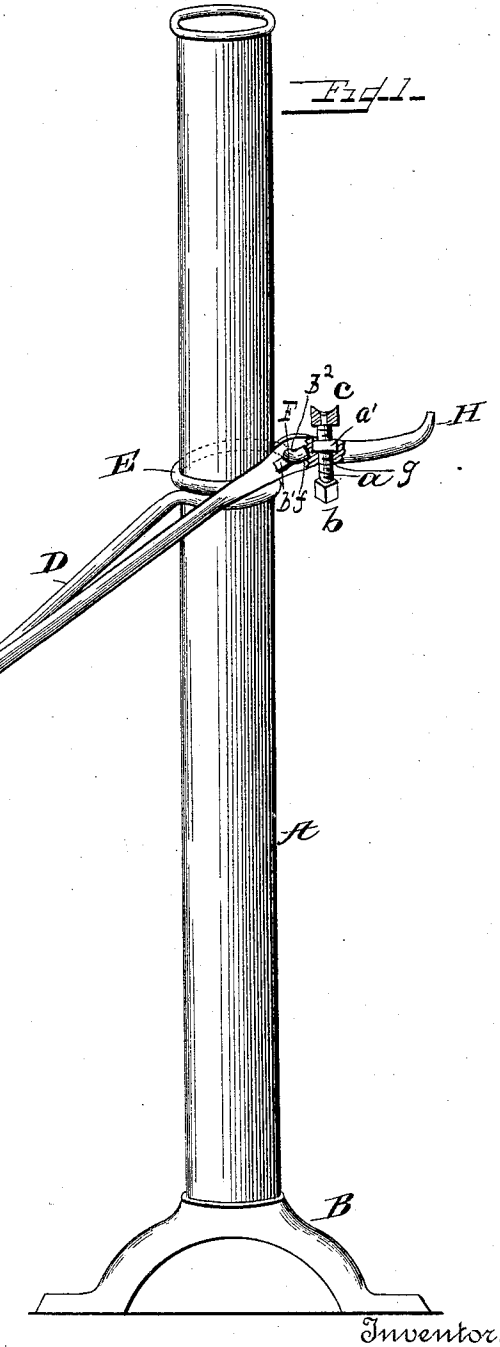


Fig. 2.

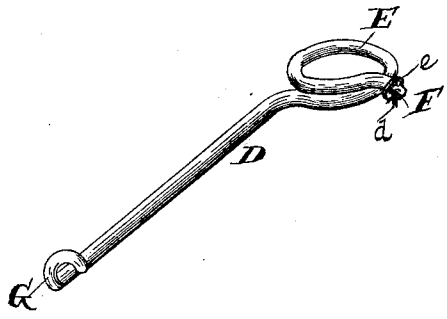
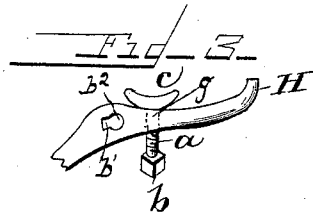


Fig. 3.



Witnesses:

G. A. Taubenschmidt,

L. J. Higdon

Inventor:

J. J. Phare,

by Higdon & Higdon

Attorneys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN JAY PHARE, OF INDEPENDENCE, MISSOURI, ASSIGNOR OF ONE-HALF TO WARREN J. GURNEY, OF SAME PLACE.

COMBINED CARRIAGE-JACK AND TIRE-TIGHTENER.

SPECIFICATION forming part of Letters Patent No. 452,235, dated May 12, 1891.

Application filed March 12, 1891. Serial No. 384,724. (No model.)

To all whom it may concern:

Be it known that I, JOHN JAY PHARE, of Independence, Jackson county, Missouri, have invented certain new and useful Improvements in Combined Carriage-Jacks and Tire-Tighteners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in combined carriage-jacks and tire-tighteners; and it consists in the novel construction and combination of parts herein described and claimed.

My object is to furnish a complete and substantial device inexpensive and durable in character, simple, and useful either as a carriage-jack or as a tire-tightener.

In the drawings, Figure 1 is a perspective view of my entire invention. Fig. 2 is a detached perspective view of the movable fulcrum and catch. Fig. 3 is a detail view of a portion of the lever, showing a modified form of raising-screw.

Similar letters refer to similar parts throughout the drawings, in which—

A represents the standard, constructed of a continuous piece of metal of the desired length, preferably cylindrical and hollow.

B is the standard-foot, shaped to fit a carriage-hub and also made to set firmly on the ground. The standard proper is securely fitted in the apex thereof.

E is the movable fulcrum, adjustable at any point on the standard, provided with a pivot F, having an offset *f*, and an arm or handle D, having a catch or hooked extension G, all combined in one piece and so bent that the pivot end lies over the fulcrum proper, thereby adding strength by the pressure. At the place of contact the parts may be welded, or, if desired, the whole piece may be a casting.

C represents the lever, which is so bent as to permit of easy adjustment under a wagon or carriage bed. It is widened at the point of attachment with the fulcrum and curved upward beyond that point, thus permitting the fulcrum to be raised higher upon the standard, while the lever is depressed to lift the weight.

Within the forward curved portion H, near the point of attachment with fulcrum, is an aperture *g* for the insertion of the raising-screw *a* of the tire-tightener, which will be more fully described hereinafter.

The lever is provided with an aperture b^2, connecting with a slot b' and adapted to receive the pivotal end F of the fulcrum. The lever is held in place by means of the offset *f* on the end of the pivot, or a pin *d* and a washer *e* on the outside of the lever, as in Fig. 2. By raising the handle of the lever the contact of the forward end H with the axle causes the fulcrum to engage the standard by friction, and then bearing down on the handle of the lever raises the weight until the said lever is engaged or secured by the hooked extension G of the arm or handle D. By releasing the lever from under this hook the weight may be lowered and the fulcrum disengaged.

The raising-screw of the tire-tightener is inserted in an opening *g* in the lever, and consists of a screw-threaded bolt *a*, with square head *b* passing through a threaded nut a', countersunk in the lever, and a cap *c*, secured by a swiveled joint, which cap is curved at its top to fit the felly; or, if desired, the opening *g* may be internally screw-threaded and the nut a' dispensed with, as shown in Fig. 3.

When the lever and fulcrum are adjusted and engaged, the use of the raising-screw is as follows: I place the standard-foot on the hub and by using a wrench on the square head of the bolt, the cap *c* of the screw fitting snugly the felly, the same will be raised from the shoulder of spoke and the tire may be tightened by placing washers on said shoulders.

One of the main advantages of my device as above described is that it is very strong and durable, owing to the small number of parts.

By forming the fulcrum, pivot, and arm carrying the catch in one piece it will be understood that much is gained. The adjustable screw in the short arm of the lever I also deem a valuable point in this connection.

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

1. The combination of a standard, a movable fulcrum thereon, a lever pivoted to said fulcrum, and an adjustable bolt arranged in the short arm of said lever, substantially as described.

2. In a carriage-jack, a standard, a movable fulcrum thereon, a pivot, and an arm D, carrying a catch G, said fulcrum, pivot, arm, and catch all being formed integral, in combination with a lever working on said pivot, substantially as described.

3. The combination of a standard, a movable fulcrum, a pivot and catch formed integral therewith, a lever, an adjustable bolt carried by the short arm thereof, having square head, and a swiveled cap *c*, having a concave upper side, substantially as described.

4. The combination of a standard, a movable fulcrum, a pivot and catch formed integral therewith, an offset on said pivot, a lever provided with an aperture, a slot connected with said aperture, and an adjustable bolt carried by the short arm of said lever, substantially as described.

5. The combination of a standard, a movable fulcrum, a pivot and catch formed thereon, a lever mounted on said pivot, a threaded nut countersunk in the short arm of the lever, the said lever being provided with an aperture *g*, registering with the bore of the nut, a screw-threaded bolt adapted to operate in said nut, and a swiveled cap thereon, substantially as described.

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

JOHN JAY PHARE.

Witnesses:

MELL G. SHAFFER,

J. B. LOWE.