No. 742,917. PATENTED NOV. 3, 1903.

S. SHREFFLER.

WAGON JACK.

APPLICATION FILED MAR. 9, 1903.

NO MODEL.

Fig. 1.

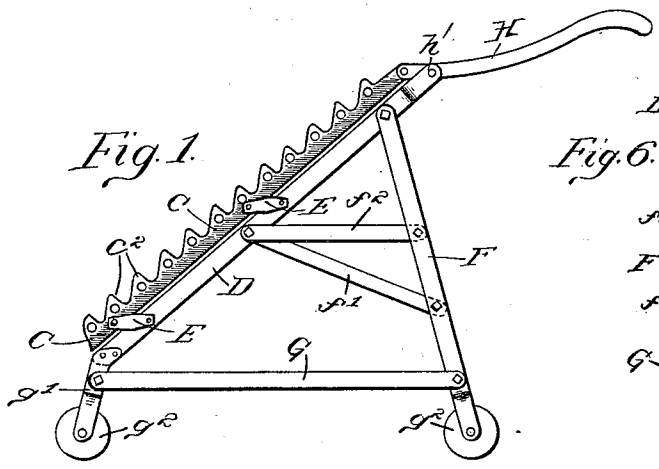


Fig. 6.

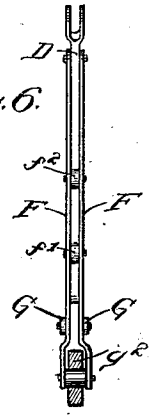


Fig. 3

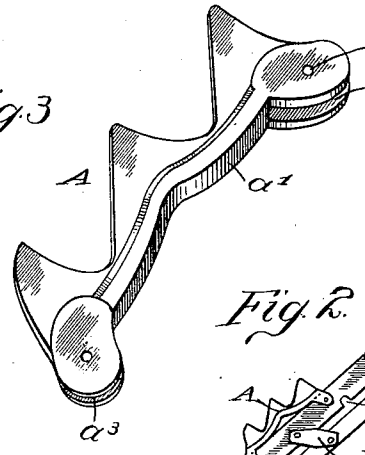


Fig. 4.

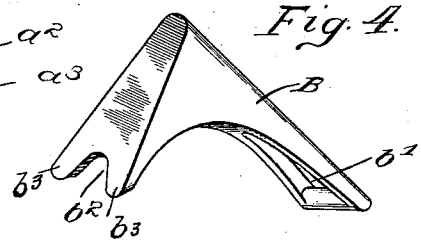


Fig. 2.

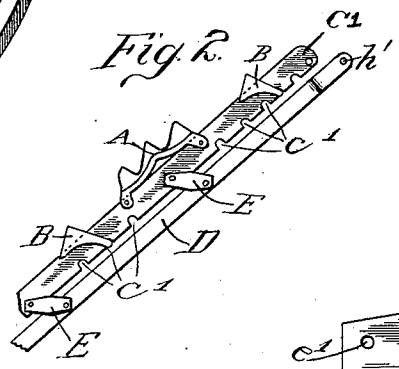
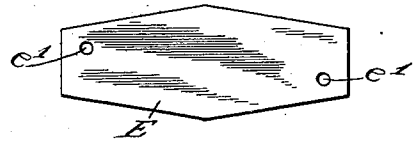


Fig. 5.



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No. 742,917. Patented November 3, 1903.

UNITED STATES PATENT OFFICE.

SAMUEL SHREFFLER, OF JOLIET, ILLINOIS.

WAGON-JACK.

SPECIFICATION forming part of Letters Patent No. 742,917, dated November 3, 1903.

Application filed March 9, 1903. Serial No. 147,030. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL SHREFFLER, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Wagon-Jacks, of which the following is a specification.

My invention relates to improvements in wagon-jacks, the chief objects of which are the production of a device of this character that can be cheaply produced, that will be strong, durable, and light, also a jack that will have great lifting power relative to the effort required to manipulate it and will raise the load on vertical planes, the device assuming automatically a position directly under the load.

A further object is to provide an all-metal jack having adjustable steps, thus facilitating its use on vehicles having axles of different heights.

My improved jack is made up largely of flat iron or steel straps or bars of suitable width and thickness, which are bolted or riveted together in such manner that it may be readily folded together by removing one or two bolts for convenience and economy in shipping.

Referring to the accompanying drawings, Figure 1 is a side elevation of one adaptation of my invention. Fig. 2 is a side elevation of a modified form of lifting-bar with its connections. Fig. 3 is a detail in perspective, on an enlarged scale, of the fixed steps, which may be attached to the lifting-bar shown in Fig. 2. Fig. 4 is a detail in perspective, on an enlarged scale, of an adjustable step that forms an important element of my invention; and Fig. 5 is a plan view of a movable link, two pairs of which are used in the jack. Fig. 6 is a rear edge view of the jack-frame.

The details of the drawings comprise a frame made up of the flat metal bars D, F, and G, arranged in the form of a triangle of which G is the base, and the inclined bars D and F are connected by cross-braces f' and f^2. The bars D and G are relatively heavy and the bars F are light, and two of them are used side by side and bolted together, as shown in Figs. 1 and 6.

Mounted between the lower and outwardly-bent ends of the bars F is a ground-wheel g^2, and a second wheel g^2 is mounted between the fork of g', which is riveted to the lower end of the front bar D, said wheels supporting the frame and facilitating its use, as will be explained.

Arranged above the front bar D is a lifting-bar C, which may be made as shown in Fig. 1 or as indicated by C′ in Fig. 2. The bar C is made of a section of flat steel cut or punched along its upper edge to produce the integral steps c^2. The bar C′ is composed of a section of flat steel cut or punched along its lower edge to form the notches c'. Riveted to the upper edge of this bar at its center is a step-section A, consisting of a casting provided with the steps, as shown, with a thickened base portion a', and with lugs a^2 at its ends, said lugs having slots a^3, which receive the upper edge of the bar, so that the lugs extend on either side of the bar and may be riveted thereon. In addition to the fixed steps described the bar is provided with adjustable steps B B, each of which consists of a stirrup-like casting formed with an opening b', adapted to loosely receive the bar, and with a groove b^2, into which slidingly fits the upper edge of the bar, the sides b^3 straddling the bar and preventing the step from tilting laterally when in use. The lifting-bars are connected with the top bar D by two pairs of links E, which are pivotally connected on opposite sides of said bars and permit a rocking movement of the lifting-bar. The pivot-holes e' are arranged near the diagonally opposite corners of the links, so that when the latter are brought to a vertical position by the movement of the lifting-bar the weight on the latter will tend to throw the links off their center, in which position the center of gravity will be shifted and serve to prevent the bar from returning to its normal position, as will be readily understood.

To the upper end of the lifting-bar is pivotally connected one end of the lever-handle H, the latter being pivotally supported at h' at the upper end of the bar D.

In use my improved jack is first applied to a vehicle-axle in the same manner as a common jack, and upon bearing down on the handle the lifting-bar moves upwardly, and simultaneously the frame is carried toward the axle by the wheels, thus bringing the lifting-point of the frame directly under the load.

It will be apparent that I may omit the fixed step-section A and utilize only the adjustable steps B; but I prefer to employ both, as such construction meets the greatest variety of conditions.

I am aware that others have employed adjustable steps in lifting-jacks, but same have been of different construction from the element B herein shown and have required an expensive construction of the lifting-bar.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a lifting-jack, a frame composed of the metal bars D, F and G, suitably braced, and supported on ground-wheels, a lifting-bar having steps along its upper edge, and links E pivotally connecting the lifting-bar with the bar D.

2. In a lifting-jack; a frame composed of the metal bars D, F and G, suitably braced, a lifting-bar having fixed and adjustable steps secured thereto, and links E pivotally connecting the lifting-bar with the bar D.

3. In a lifting-jack, a lifting-bar having notches in its lower edge, steps B, having an opening and a groove adapted to be engaged by the lifting-bar.

4. In a lifting-jack, a frame composed of flat metal bars secured together, a lifting-bar, and links pivotally connecting the lifting-bar with the frame, said links having their pivotal points arranged near the diagonally opposite corners.

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

SAMUEL SHREFFLER.

Witnesses:
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