

(No Model.)

G. C. WIMPEE.  
LIFTING JACK.

No. 485,902.

Patented Nov. 8, 1892.

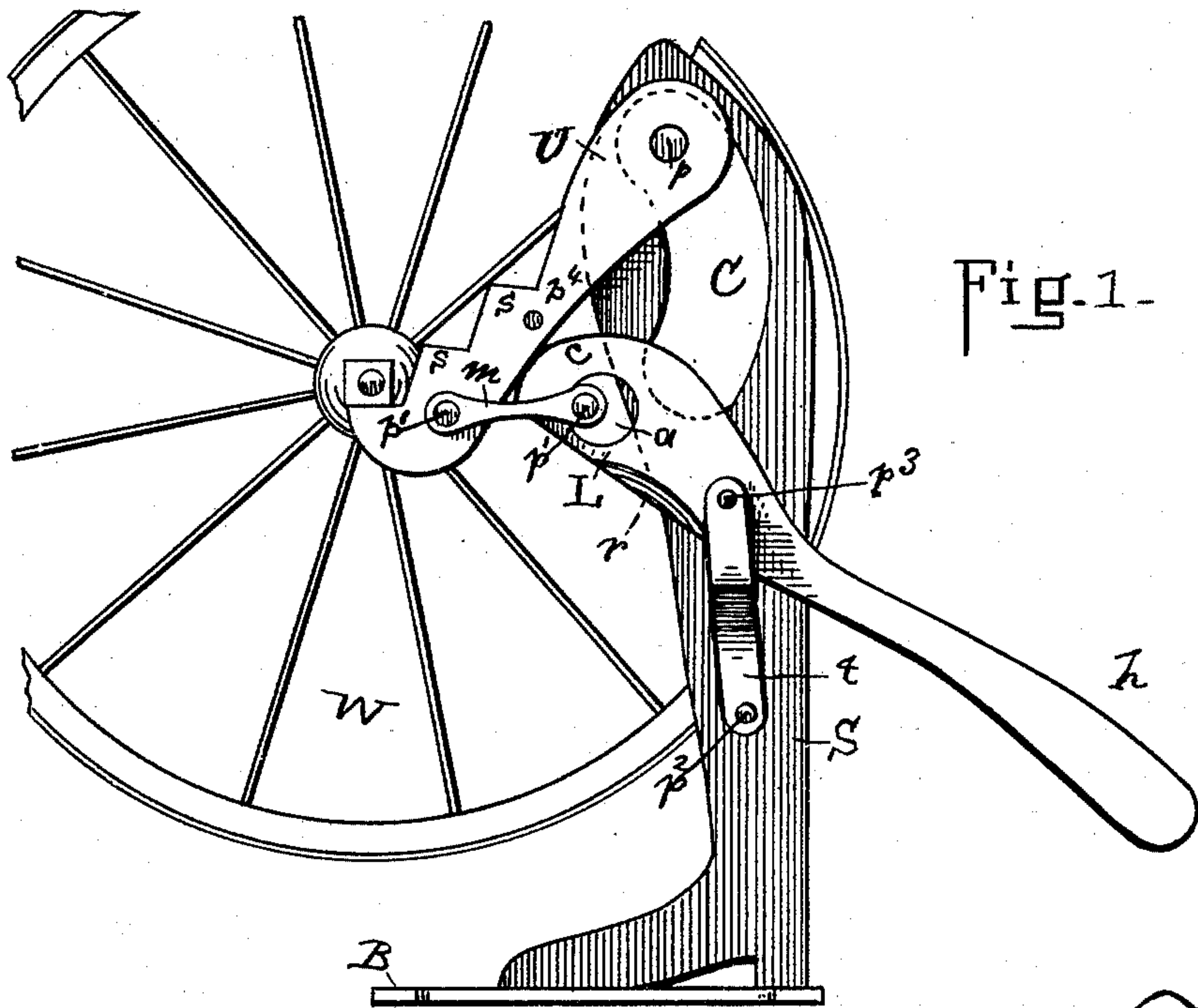


Fig. 1-

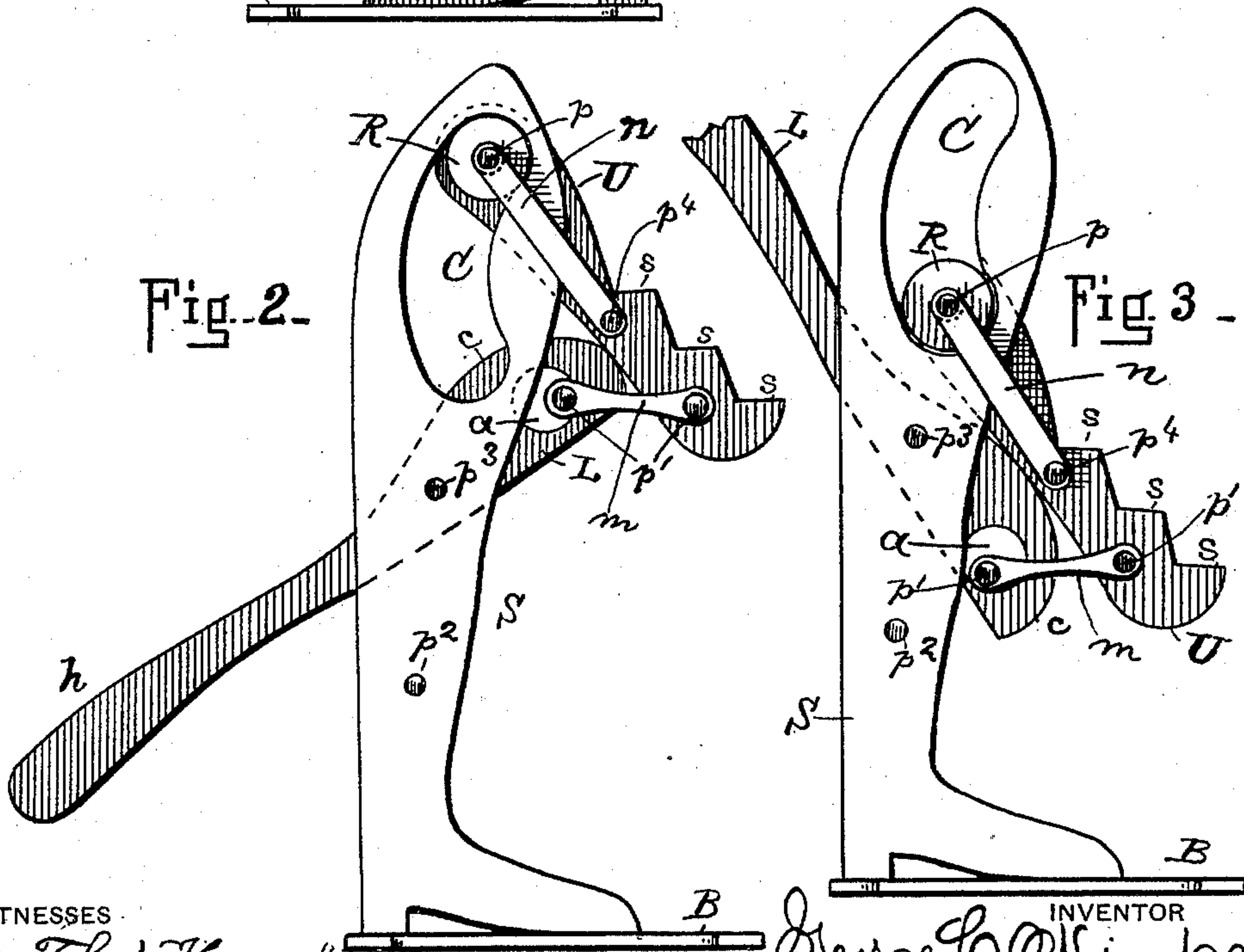


Fig. 2-

Fig. 3-

WITNESSES

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# UNITED STATES PATENT OFFICE.

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## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 485,902, dated November 8, 1892.

Application filed August 8, 1892. Serial No. 442,463. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE C. WIMPEE, a citizen of the United States, residing at Rome, in the county of Floyd and State of Georgia, have invented certain new and useful Improvements in Lifting-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to lifting devices of the class known as "wagon-jacks," and has for its object the provision of a wagon-jack composed of movable members that can easily operate the several connections and co-operative parts of the device, being arranged to be actuated without undue friction.

In carrying out my invention I provide a rigid standard or post and connect thereto a compound pivoted lever supplied with a revoluble pulley that relieves the device of strain and tension when actuated.

My invention further consists in certain new and simple elements and in combinations thereof, all as hereinafter fully described, illustrated in the drawings, and specifically pointed out in the claims.

Referring to the accompanying drawings, wherein like letters of reference point out similar parts on each figure, Figure 1 is a side elevation illustrating the device as lifting a carriage-wheel. Fig. 2 is a like view on the opposite side in the same position, the wheel being omitted. Fig. 3 is a view of the same side illustrated in Fig. 2, the levers being shown in reversed position.

S is a vertical standard, which rests on a base B, and near its upper end is a curved aperture C.

U is an upper lever having face-steps s, its upper end being connected by headed pin  $p$  to revoluble roller R, which lies loosely within aperture C of standard S, said pin  $p$  being immovably adjusted at the upper end of lever U, extending therefrom transversely, passing through roller R, which has a central orifice of greater diameter than the pin, allowing said roller to freely turn thereon. (See dotted lines, Fig. 3.) Said pin after passing through strap-bar  $n$  is held in place by having its end overturned, or it may be retained by nut or any suitable mechanism.

L is the lower or operating lever, one end forming a handle  $h$ , its opposite end at its upper side being curved to form a cam  $c$ . Said cam has a circular aperture  $a$  and is pivotally connected below to the standard S, under aperture C thereof.

$t$  is a bracket firmly connected to the standard S by pin  $p^2$ , which passes through said standard and has its head overturned on either side to firmly hold it in place, or it may be retained by threaded nut or any well-known mechanical device. From its lower terminal said bracket extends upwardly in vertical direction, its upper section being bent outwardly away from the standard for reception of the cam end of lever L and to allow it freely to turn within the open space left by bend of said bracket.

To facilitate movement of the handle within bend of the bracket, the face of its lower edge is cut away, forming a crescent-shaped recess  $r$ . After the end of lever L is seated within bend of the bracket a pivot-pin  $p^3$  is passed transversely through the upper end of the bracket, thence through cam member of handle and standard S, by which adjustment, as will be readily understood, the handle L is free to turn pivotally on said pin  $p^3$ , the opposite ends of which are retained in the same manner as the lower pin  $p^2$ , it being understood that both of said pins are firmly held in position, the lower one retaining the bracket in place, the upper one serving as a pivot upon which lever L can be turned, as previously set forth. The cam of the handle is provided with circular aperture  $a$ . On each side of the finished device is a short link  $m$ , which connects the levers L to lever U. At one end said links are pivoted at  $p'$  to the lower end of the stepped portion of lever U. At the opposite end they are connected by a pivot-pin  $p'$ , passing through aperture  $a$  of cam-head  $c$ , which aperture is of much larger diameter than the pin passing therethrough, whereby said pin is enabled to traverse the whole area of said aperture, and at the same time pivotally turn in bearings of links  $m$ .

The roller R is seated within the opening C at upper end of the standard and is adjusted to move freely within every portion of said opening in a manner and for a purpose presently set forth. Said opening has a pe-



rimeter composed of larger and smaller sectors joined by end curvilinear lines, as plainly shown in the drawings, thus composing track along which the roller R can travel in every  
 5 direction. The roller is placed flatly against the inner face of the upper end of the lever U. It is then inserted within opening C, and a short bar *n*, orificed at both ends, is then laid across standard S, and a pivot passed  
 10 through lever U, roller R, and bar *n*, upon which pivot the roller is free to turn, and the bar *n*, after bridging the standard in a right line, is at its opposite end held in place by pin *p*<sup>4</sup>, which extends directly through said  
 15 bar and the lever U, as plainly seen in the drawings.

The roller R is loosely pivoted to bar *n* and upper end of lever U by pin *p*, (see dotted lines, Figs. 2 and 3,) which admits of said  
 20 roller freely turning on its bearing, and as it is moved in any direction along the curved edges of opening C it thereby composes a movable cam in relation to said opening. A similar operative function is secured by  
 25 means of the pin *p*<sup>1</sup>, passing through the enlarged circular opening *a* in the cam-head *c*. Said pin is adapted to allow said opening to turn eccentrically on its axis, and thereby compose a compound cam movement for lever  
 30 L, all in connection with like movements of roller R, turning eccentrically on pin *p*, within sinuously-margined opening C.

From the foregoing description, in connection with the drawings, the nature and object of my invention and its practice will be  
 35 readily understood by all familiar with analogous devices. Its operation may be thus briefly stated.

The device in position shown in Fig. 3 is brought up against the object to be lifted.  
 40 To plainly illustrate its operation, a carriage-wheel W is shown. The lever L is then depressed and its cam will move lever U until the hub of the axle will rest on one of the  
 45 steps *s*. The handle *h* is then further depressed, which will have the effect of lifting the wheel W, and at the same time the roller R will travel upwardly until it reaches the upper curved end of opening C. The weight  
 50 of the object lifted will have the tendency to

force said roller forwardly within the opening into the position shown in Figs. 1 and 2, and the lever U will thus constitute a brace supporting the lifted wheel vertically and laterally, said lever U being under pressure  
 55 from the cam-head *c*. To lower the wheel, the handle *h* of lever L is moved upwardly during its progress in either direction, turning pivotally on pin *p*<sup>3</sup>. While said lever is being raised the brace *m* will be lowered, carrying with it lever U, causing roller R to descend, and the whole device will assume the position shown in Fig. 3.

Having thus fully described my invention and its practical operation, what I claim, and  
 60 desire to secure by Letters Patent of the United States of America, is—

1. A wagon-jack having an upright standard extending from a base-support, the upper end of which standard has curvilinear opening C, revoluble roller R, and stepped lever  
 70 U, the upper end of which is pivoted to said roller, which is adjusted within opening C and adapted to move reciprocatingly in said opening, the opposite end of said lever being  
 75 pivotally connected by brace *m* to operating-lever pivoted within upper end of bracket *t* to standard S, all in combination with lever L, substantially as described.

2. In a lifting-jack, the standard S and the  
 80 revoluble roller R, adjusted to move within curvilinear opening C of said standard, stepped lever U, and brace-bar *n*, pivoted at its opposite ends to said roller and brace, all in combination with lever-handle L, substan-  
 85 tially as described.

3. A lifting-jack having a standard S, provided at its upper end with curvilinear opening C, roller R, eccentrically pivoted at the upper end of lever U, all in combination with  
 90 cam-head *c* of lever L, eccentrically linked to lower end of lever U, as and for the purpose intended, substantially as described.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

GEORGE C. WIMPEE.

Witnesses:

MAX MEYERHARDT,  
 WM. A. WRIGHT.