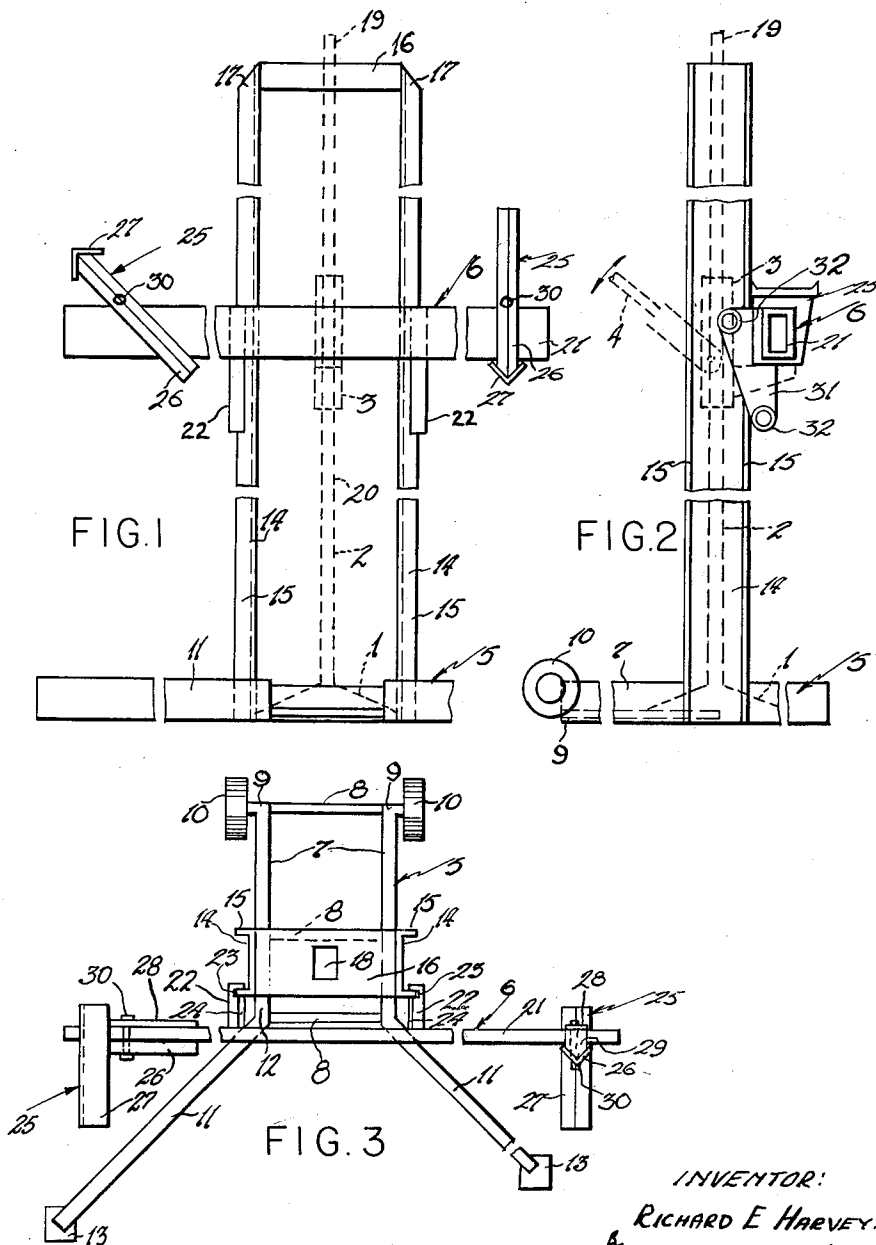


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LIFTING JACK FRAME
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LIFTING JACK FRAME

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1 Claim. (Cl. 254-2)

My invention relates to new and useful improvements in lifting jack frames. A common type of lifting jack comprises a substantially square base plate, and a single standard extending upwardly therefrom. A lifting bracket can be moved up and down the standard by means of reciprocating a handle, said bracket engaging the standard by means of a ratchet action.

This particular type of jack is relatively unsteady, particularly when used on uneven surfaces. However, hydraulic jacks are available which, in combination with a cross bar, give a certain amount of stability to the implement or automobile being lifted. The extremely high cost of such hydraulic jacks however precludes use except by such organizations as repair shops and the like.

My jack frame overcomes these disadvantages by providing a frame within which a standard conventional lifting jack can be placed and which is extremely stable, even on uneven surfaces. I provide a base framework, with a pair of standards extending upwardly therefrom and a lifting component slidably engageable upon the flanges of the standards, said lifting component, of course, being actuated by the conventional jack.

The principal object and essence of my invention, therefore, is to provide a device of the character herewithin described, adapted to be used with a conventional single standard jack and which is provided with a wide angle space framework thus adding materially to the stability of the device.

A further object of my invention is to provide a device of the character herewithin described which includes a transverse lifting component actuated by the associated jack, said lifting component having a pair of work engaging pads or brackets detachably secured thereupon and which are variable in position to enable the frame to be used under a great variety of conditions.

Another object of my invention is to provide a device of the character herewithin described which transforms the action of a conventional jack to a wide span supporting jack thus stabilizing the implement or automobile on which it is being used.

A yet another object of my invention is to provide a device of the character herewithin described which is extremely simple in construction, economical in manufacture, and otherwise well suited for the purpose for which it is designed.

With the foregoing objects in view, and such other objects and advantages as will become apparent to those skilled in the art to which this invention relates as this specification proceeds, my invention consists essentially in the arrangement and construction of parts all as hereinafter more particularly described, reference being had to the accompanying drawings in which:

FIGURE 1 is a front elevation of my device.

FIGURE 2 is a side elevation of an alternative embodiment thereof.

FIGURE 3 is a top plan view of FIGURE 1.

In the drawings like characters of reference indicate corresponding parts in the different figures.

Proceeding, therefore, to describe my invention in detail, reference should be made to the accompanying drawings in which I have illustrated in phantom, a conventional lifting jack comprising a substantially rectangular base 1, a standard 2 extending upwardly therefrom, and a conventional lifting component 3 actuated up and down the standard by means of the reciprocating handle 4.

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My device comprises a base framework collectively designated 5 and a lift component collectively designated 6.

Specifically the base framework comprises a pair of spaced and parallel members 7 with cross members 8 at spaced intervals therebetween, the ends 9 of the members 7 having ground engaging wheels 10 journaled for rotation thereon. Stabilizing legs 11 extend diagonally outwardly from the opposite end 12 of the members 7 and terminate in ground engaging pads 13, as clearly shown in FIGURE 3.

A pair of standards taking the form of open-ended channel members 14, are secured as by welding, by the lower ends thereof, to the members 7 and extend upwardly therefrom in spaced and parallel relationship, it being observed that the flanges 15 of the channel members face outwardly from one another. A cross member 16 spans the upper end 17 of the standards and is welded thereto thus maintaining spaced and parallel relationship and it will be observed that this cross member 16 is apertured as at 18, to receive the upper ends 19 of the jack standard 20, it being observed that the base 1 of the jack fits in between the members 7 and two of the cross bars 8.

The lift component 6 comprises a cross bar 21 having a pair of members 22 secured thereto as by welding and extending from one side thereof in spaced and parallel relationship. These members are grooved as at 23 so that the grooves engage the flanges 15 of the standards 14, reinforcing plate 24 being welded against the members 22 and engaging the outer side of the channels.

It will, therefore, be appreciated that the lift component can be moved up and down the channel standard and thus it can be situated on either of the flanges of the pair of standards.

The work engaging brackets collectively designated 25, are detachably engageable upon the cross bar 21 and the underside view of the right hand bracket 25 shows the construction of this bracket (see FIGURE 3).

A length of angle iron 26 is welded by one end thereof to a work engaging pad 27 which is also a length of angle iron, said length of angle iron 26 extending upwardly at right angles from the pad 27. A flat plate 28 is also welded to the pad 27 and extends upwardly therefrom spaced and parallel from the angle iron 26 and bridging piece 29 is welded to the upper end of the members 26 and 28 thus maintaining the spaced relationship therebetween, and it will be observed that the space between the members 26 and 28 is just sufficient to allow the bracket 25 to be slid on and off the cross bar 21. Finally, a bolt or pin 30 spans the members 26 and 28 intermediate the ends thereof and is so positioned, that in conjunction with the cross piece 29, permits the work engaging bracket to be situated as shown on the left-hand end of the cross bar in FIGURE 1 or, alternatively, permits it to be reversed to take up the position shown on the right-hand end of the cross bar in FIGURE 1. It will also be appreciated that the work engaging bracket 25 shown on the left of FIGURE 1 can be swung over 90 degrees to point inwardly and that the use of the angle iron 27 as a pad, presents a flat surface which may be engaged under the vehicle or chassis that is being raised.

In FIGURE 2, the lift component is mounted for reciprocation upon the channels by means of a pair of side plates 31, carrying rollers or wheels 32 at each end thereof. The vertical misalignment of the wheels is such that one set pass upon the rear side of the channels and the other set pass upon the other side of the flanges, thus giving smooth reciprocation and stable mounting for the lift component.

In operation, the conventional jack shown in phantom is positioned within the frame with the extremities 19 of

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the standard 20 extending through aperture 18. The lift component 6 is then engaged on the flanges of the standards 14 and the work engaging components positioned as best suited for the work to be undertaken. The lift component 3 of the conventional jack is then engaged under the cross bar 21 and the handle 4 actuated to raise the component 3 of the jack together with the lift component 6.

Since various modifications can be made in my invention as hereinabove described, and many apparently widely different embodiments of same made within the spirit and scope of the claim without departing from such spirit and scope, it is intended that all matter contained in the accompanying specification shall be interpreted as illustrative only and not in a limiting sense.

What I claim as my invention is:

A lifting frame for use with a conventional lifting jack of the type having a base, a standard extending upwardly from said base and a lifting member movable upwardly and downwardly on said standard, said lifting frame comprising a substantially rectangular base frame including a pair of side members and a pair of end members, a pair of open-ended vertical channels secured at their lower ends to said side members of said base frame and disposed at the outside of said side members with the flanges

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of said channels extending outwardly, a cross bar secured to and extending between the upper ends of said vertical channels and provided with a central aperture, said base frame being adapted to receive the base of a conventional lifting jack between the side members thereof whereby to prevent displacement of the jack base on the ground and said aperture of said cross bar being adapted to receive the upper end portion of the jack standard whereby to prevent the jack from tipping, a horizontal bar extending transversely of and mounted for raising and lowering movement on said vertical channels, means on said horizontal bar engaging one of the outwardly facing flanges of each channel whereby the bar may be removed from said channels, said horizontal bar being adapted to be supportably engaged by the lifting member of the stated jack, and load engaging means on said horizontal bar.

References Cited in the file of this patent

UNITED STATES PATENTS

20	D. 1,81,071	Stovern et al. -----	Sept. 24, 1957
	1,477,790	Townsend -----	Dec. 18, 1923
	2,786,650	Bottorff -----	Mar. 26, 1957
	2,852,229	Gross -----	Sept. 16, 1958
25	2,867,409	Southerwick -----	Jan. 6, 1959
	2,895,712	Stovern et al. -----	July 21, 1959