

March 16, 1954

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2,672,243

JACK WITH ADJUSTABLE LOAD-RECEIVING TABLE

Filed Oct. 17, 1951

2 Sheets-Sheet 1

Fig. 1

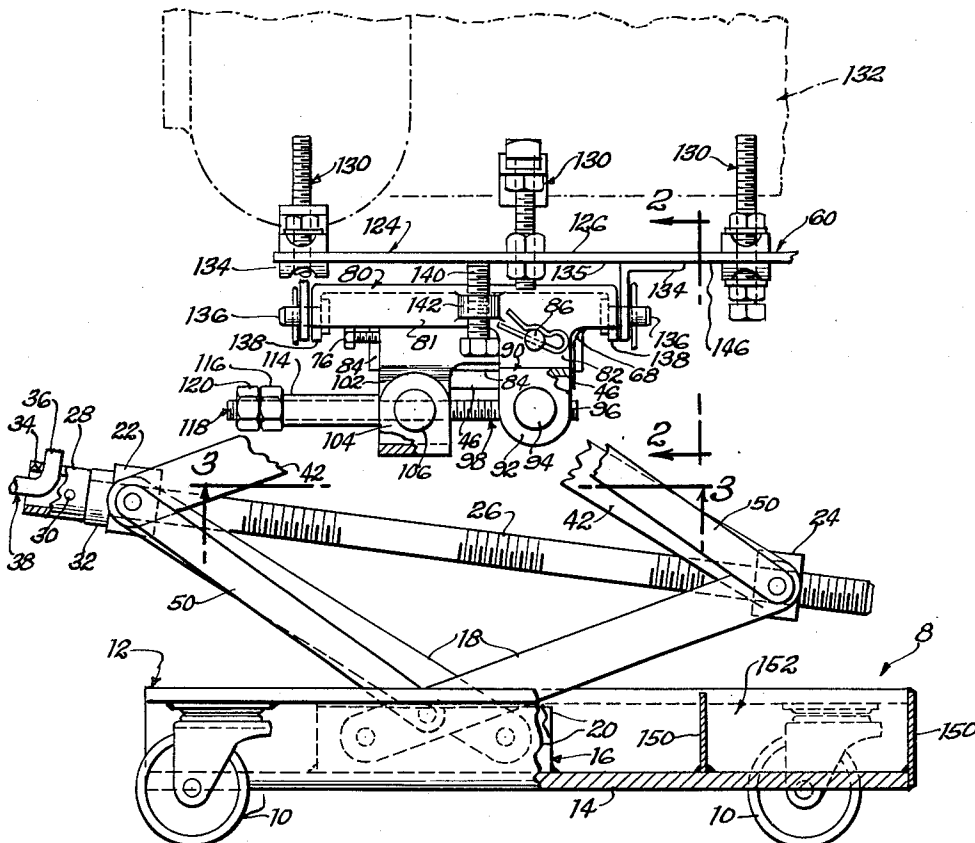
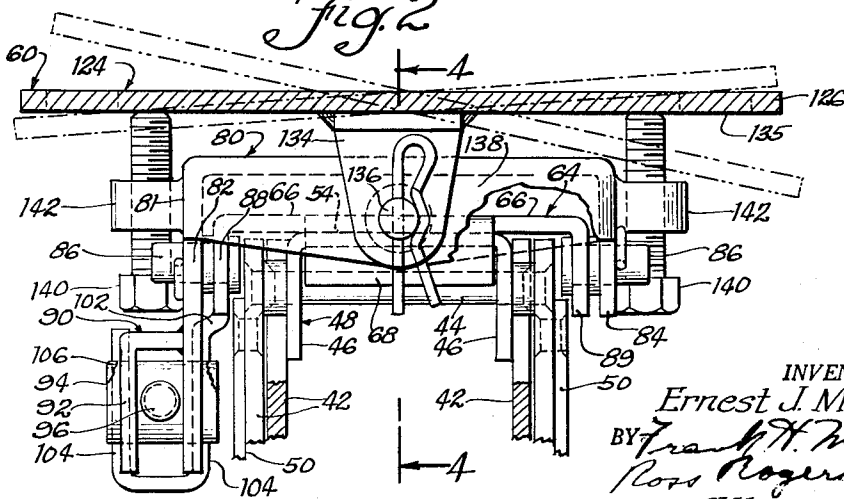


Fig. 2



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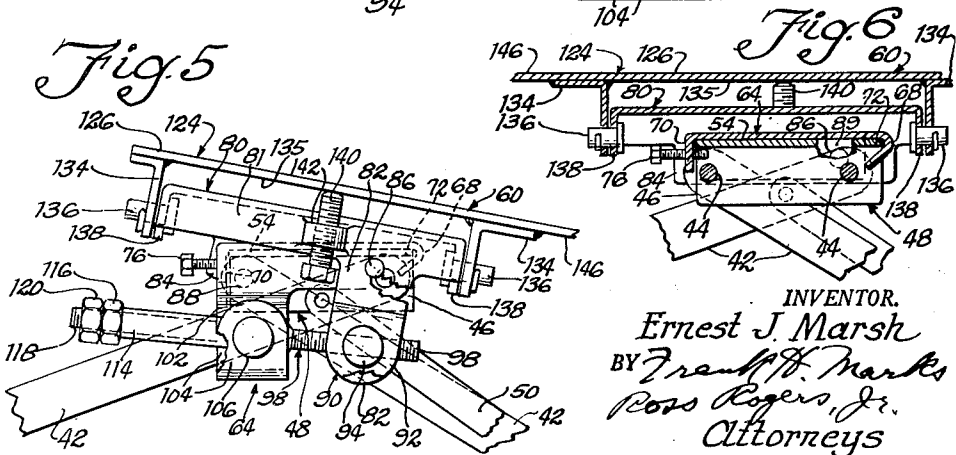
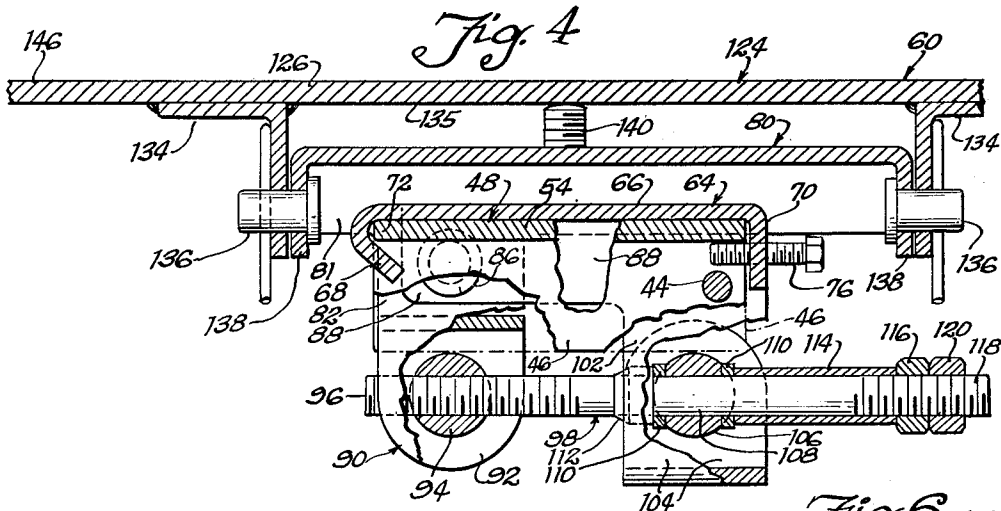
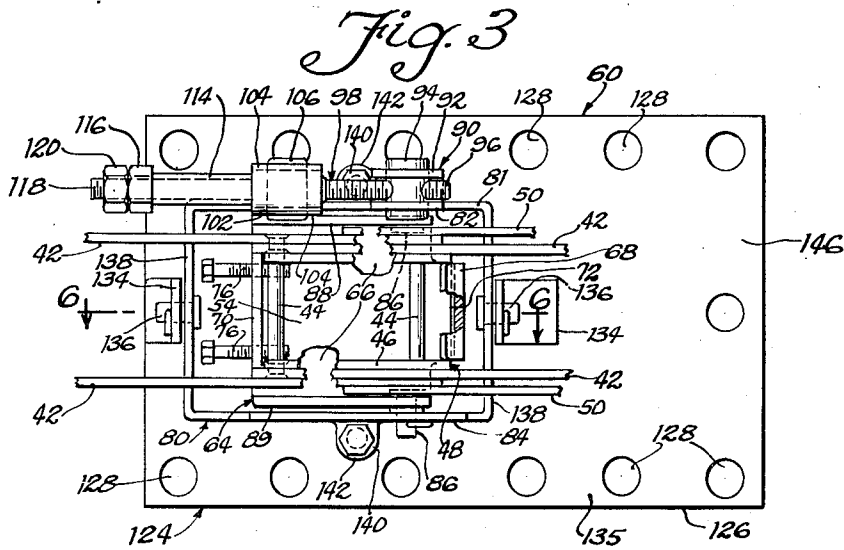
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2 Sheets-Sheet 2



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# UNITED STATES PATENT OFFICE

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## JACK WITH ADJUSTABLE LOAD-RECEIVING TABLE

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Application October 17, 1951, Serial No. 251,773

3 Claims. (Cl. 214—1)

1

This invention relates to lifting jacks and is concerned more particularly with improvements in the subject matter of my copending application Serial No. 186,829, filed September 26, 1950, now Patent No. 2,621,891, entitled "Wheeled Scissors Jack."

It is an object of my invention to provide a lifting jack with a load receiving structure adapted to be adjusted to occupy various tilted positions to cradle loads of various shapes or occupying various positions.

Another object is to provide a load receiving structure which may be readily tilted to the desired angle and then securely held in the selected position.

A further object of the invention involves a load receiving structure having an overhang adapted to be reversibly mounted to locate the overhang where it is best suited to the particular load encountered.

An additional object is to provide a jack including a load receiving structure which is universally tiltable and securable in the desired adjustment.

Further objects and advantages of the invention will appear as the description proceeds.

The invention will be better understood upon reference to the following description and the accompanying drawings, in which:

Fig. 1 is a front elevational view of a lifting jack embodying features of the invention, with portions shown in section;

Fig. 2 is an enlarged sectional view partly broken away and taken as indicated by the line 2—2 of Fig. 1;

Fig. 3 is a bottom view taken as indicated by the line 3—3 in Fig. 1;

Fig. 4 is a sectional view with portions broken away and taken as indicated by the line 4—4 in Fig. 2;

Fig. 5 is a view similar to the upper portion of Fig. 1 with the parts in a different adjustment; and

Fig. 6 is a sectional view taken as indicated by the line 6—6 in Fig. 3.

Referring now more particularly to the drawings, there is shown an understructure which may take the form of a wheeled base 8 mounted on four casters 10 and comprising a channel 12 to whose web 14 a channel bracket 16 is welded or otherwise secured. Sets of lower scissor links 18 are pivoted to the bracket flanges 20 and to a collar 22 and a nut 24, respectively, receiving an adjusting rod 26, and a sleeve 28 affixed at 30 to one end of the rod and spaced from the collar

2

22 by a washer 32 has a lateral hole 34 for the reception of the removable offset end 36 of a cranking rod 38 adapted to be turned by the operator in opposite directions to move the collar and nut toward and way from each other.

Sets of upper scissor links 42 are likewise arranged at opposite sides of the adjustment rod 26, the upper ends of said links being pivotally connected at 44 to the depending flanges 46 of an inverted channel bracket 48. Stabilizing links 50 are connected to certain of the scissor links 42 and 44 to complete the scissor jack.

It is apparent from the foregoing that the web 54 of the upper bracket 48 of the scissor jack mechanism will always be parallel to the web of the base bracket 16, irrespective of the adjustment of said mechanism.

A load receiving table embodying features of my invention is indicated generally at 60 and is adapted to be removably connected to the upper flanged bracket 48 of the elevating mechanism. To this end the table 60 includes an adaptor 64 having a web 66, adapted to overlie the web 54 of the bracket 48, and depending end flanges 68 and 70, the flange 68 being in the form of a hook adapted to receive one end 72 of the bracket web 54 and the flange 70 extending vertically and threadedly receiving screws 76, the inner ends of which are arranged to underlie the bracket web, and the bracket flanges 46 straddle the lower portions of the ends of the hook 70, so that the adaptor may be releasably secured in fixed assembly with the bracket. Sufficient clearance is afforded between the flanges 68 and 70 to enable the adaptor 64 to be swung into and out of assembled relation with the bracket web 54.

An open inverted box-like body 80 is arranged over the adaptor 64 and includes a flange 81 having a depending ear 82 and an opposite depending flange 84 straddling and tiltably connected at 86 to two opposite depending flanges 88 and 89 of the adaptor 64, the tilt axis being located preferably substantially closer to one end of the adaptor and body than to the other end. An L-shaped piece 90 is welded or otherwise suitably joined to the outer face of the ear 82 with a depending arm 92 forming with the ear a fork affording spaced bearings for an internally threaded clevis pin 94 receiving the threaded end portion 96 of an adjusting rod 98.

The flange 88 has a depending tongue 102 bent into U-shape to provide mutually facing vertical portions 104 serving as bearings for a clevis pin 106 serving as a bearing for a smooth portion

3

108 of the rod 98, the pin being flattened where the rod enters and leaves the same for the reception of thrust washers 110, a collar 112 being secured to the rod adjacent one of the washers and between said pin and the clevis pin 94. A sleeve 114 is disposed about the rod 98 adjacent the other washer 110 and is held in engagement therewith by a nut 116 engaging the threaded end 118 of the rod, a lock nut 120 engaging the other side of the nut.

It is now apparent that pursuant to rotation of the rod 98, the clevis pin 94 will be moved toward or away from the clevis pin 106, as the case may be, and thus the body 80 will be tilted one way or the other relative to the adaptor 64 about the axis of the pivot pins 86 and will be securely held in the selected position by the adjusting mechanism, the rod thus constituting in effect a turnbuckle. The operator rotates the rod 98 simply by applying a wrench to one or the other of the nuts 116 and 120.

The load receiving table unit 60 includes a table top 124 comprising a plate 126 with a plurality of holes 128 adapted to receive load cradling mechanisms 130 which may be adjusted to conform to the lower contour of the load, an example of which is shown in dot-dash lines at 132 (Fig. 1), depicting the housing of a rear axle and differential. It is unnecessary to enter into any detailed description of the cradling mechanisms 130 since they form no part of the present invention and are fully disclosed in my said co-pending application.

Brackets 134 welded or otherwise suitably secured to the bottom face 135 of the plate 126 straddle and are tiltably connected at 136 to opposite walls 138 of the body 80, the pivot axis being disposed at right angles to the axis of the pivots 86. Screws 140 threaded through lugs 142 extending laterally from the flanges 81 and 84 of the body 80 are engageable with the bottom face 135 of the plate 126 and serve to fix the angle at which the plate extends with respect to the body.

The table top plate 126 is preferably dimensioned and arranged to have a substantial cantilever overhang, as shown at 146, relative to the remainder of the load receiving table unit 60, to accommodate a load configured so that it extends at one side substantially beyond a directly overhead position relative to the adaptor. And where convenience or necessity demands, the unit 60 may be reversed so that the portion 146 will overhang in the opposite direction. This change requires nothing more than the backing up of the adaptor screws 76 to free the adjacent end 72 of the jack bracket 48, swinging the table adaptor 64 up free of the bracket, reversing the table, rehooking the adaptor over the bracket, and readjusting the adaptor screws under the bracket end 72.

From the foregoing, it is apparent that the load receiving table top 124 may be adjusted to any desired angle or list relative to the body 80 about the axis of the pivot 136, and to any desired fore-and-aft angle relative to the adaptor 64 about the axis of the pivot 86, so that the table 60 is capable of universal adjustment relative to the adaptor, and the table may selectively occupy reversed positions relative to the jack bracket 48 to overhang in either of opposite directions.

Plates 150 may be secured to the base 12 to form therewith a container 152 for tools, etc.

Various changes coming within the spirit of

4

my invention may suggest themselves to those skilled in the art. Hence I do not wish to be limited to the specific embodiments described or uses mentioned, but intend the same to be merely exemplary, the scope of my invention being limited only by the appended claims.

I claim:

1. In a lifting jack having elevating means, a bracket having a web and supported on said means, an adaptor having a web arranged to overlie the web of said bracket, said adaptor web having spaced pierced depending flanges embracing said bracket, an open inverted box-like body having pierced side and end walls arranged to embrace said adaptor with the openings of said flanges and side walls being in registration, pins received in said openings and pivotally securing said box-like body to said adaptor whereby the same is tiltable about a horizontal axis, screw means associated with said box-like body and said adaptor for effecting a tilting adjustment of said box-like body, a load receiving table comprising a table top having a pair of depending pierced legs embracing the end walls of said box-like body and with the openings of said end walls and said box-like body being in registration, pins received in said openings and pivotally securing said load receiving table to said box-like body whereby said table is tiltable about a horizontal axis disposed transversely to said first mentioned axis.

2. In a lifting jack having elevating means, a bracket supported on said means, an adaptor having a web arranged to overlie said bracket, said web having spaced pierced depending flanges embracing said bracket, means associated with said adaptor for securing the same to said bracket, an open inverted box-like body having pierced side and end walls arranged to embrace said adaptor with the openings of said flanges and said walls being in registration, pins received in said openings and pivotally securing said box-like body to said adaptor whereby the same is tiltable about a horizontal axis, said adaptor and said box-like body each having a depending yoke, the said yokes being arranged in alinement and the legs of each being pierced to receive a pin, a manually rotatable rod swiveled in one of said pins and threaded in the other for effecting a tilting adjustment of said box-like body relative to said adaptor, a load receiving table comprising a table top having a pair of depending pierced legs embracing the end walls of said box-like body and with the openings of said end walls and said box-like body in registration, pins received in said openings and pivotally securing said load receiving table to said box-like body whereby said table is tiltable about a horizontal axis disposed transverse to said first mentioned axis.

3. In a lifting jack having elevating means, a bracket having a web and supported on said means, an adaptor having a web arranged to overlie the web of said bracket, said adaptor web having spaced pierced depending flanges embracing said bracket, an open inverted box-like body having pierced side and end walls arranged to embrace said adaptor with the openings of said flanges and side walls being in registration, pins received in said openings and pivotally securing said box-like body to said adaptor whereby the same is tiltable about a horizontal axis, screw means associated with said box-like body and said adaptor for effecting a tilting adjustment of said box-like body, a load receiving table com-

5

prising a table top having a pair of depending  
pierced legs embracing the end walls of said box-  
like body and with the openings of said end walls  
and said box-like body in registration, pins re-  
ceived in said openings and pivotally securing 5  
said load receiving table to said box-like body  
whereby said table is tiltable about a horizontal  
axis disposed transverse to said first mentioned  
axis, said box-like body having a pair of spaced  
screws spaced substantially equidistant from said 10  
first mentioned horizontal axis and engageable  
with the underside of said table top for securing  
the same in a desired degree of tilt relative to  
said box-like body.

ERNEST J. MARSH. 15

6

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