May 19, 1959 J. F. PALKA 2,887,289

LIFTING JACKS AND SUPPORTS THEREFOR

Filed Dec. 18, 1953 2 Sheets-Sheet 1

Fig. 1

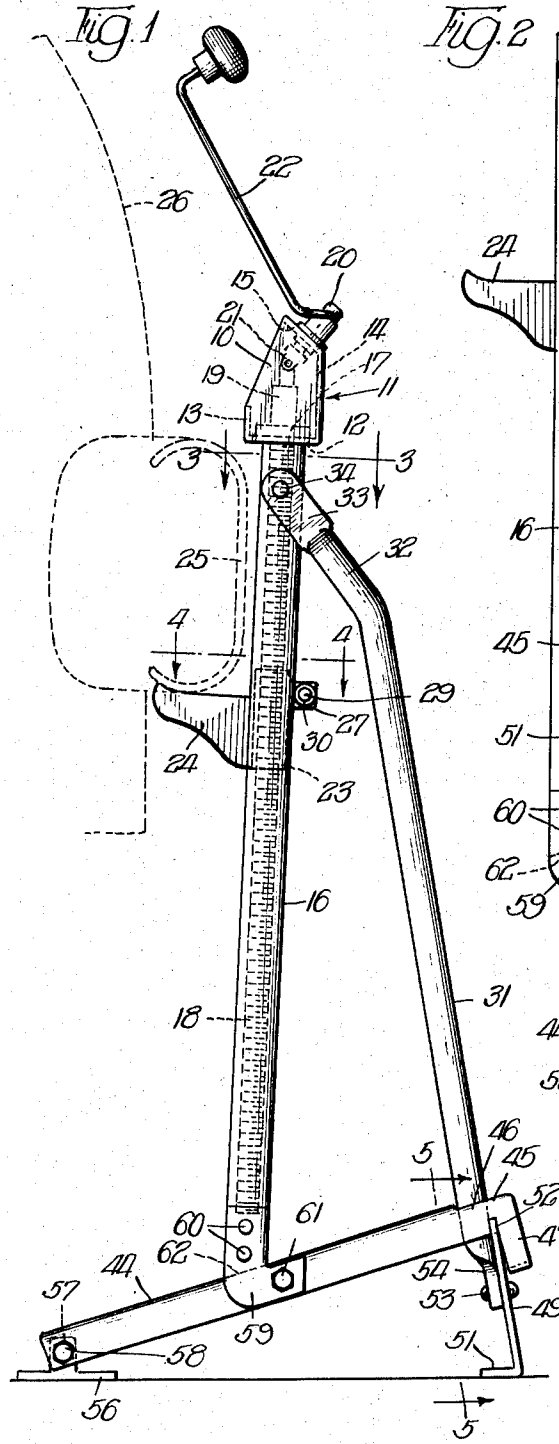


Fig. 2

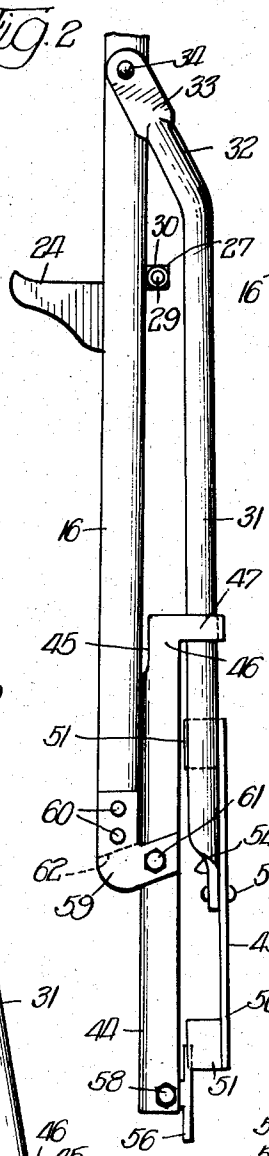


Fig. 3

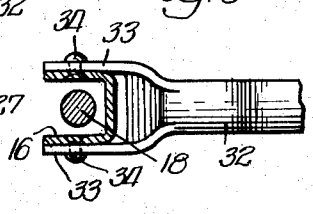


Fig. 4

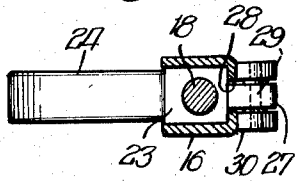
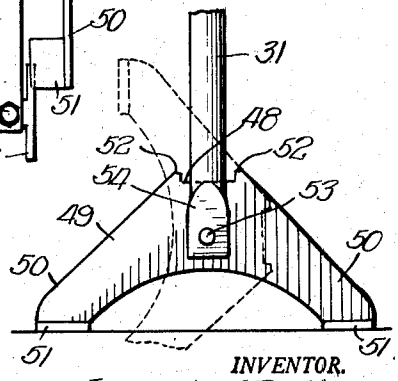


Fig. 5



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LIFTING JACKS AND SUPPORTS THEREFOR

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Fig. 6

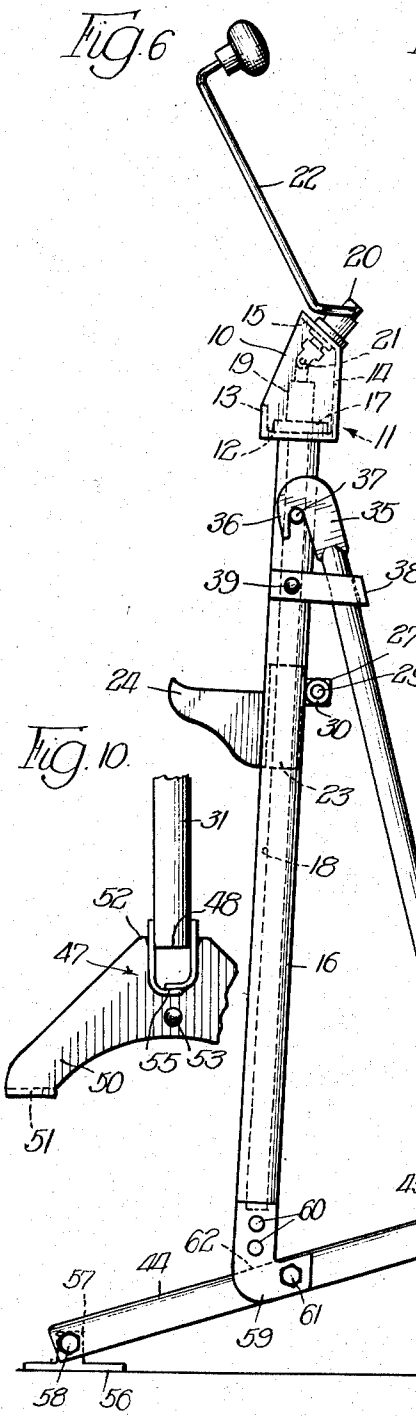


Fig. 7

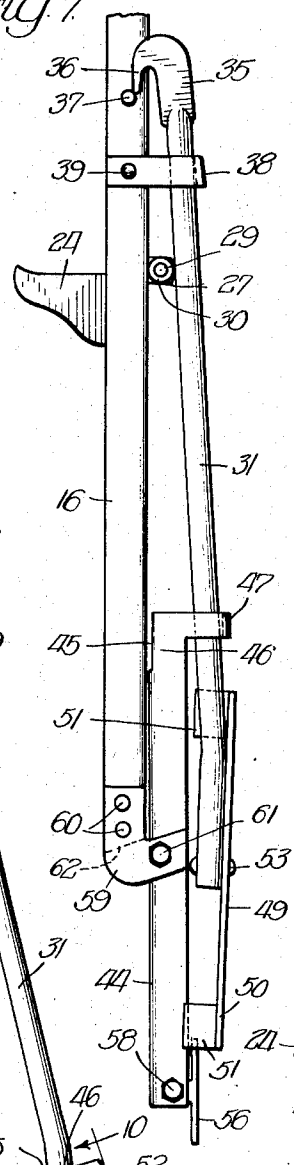


Fig. 8

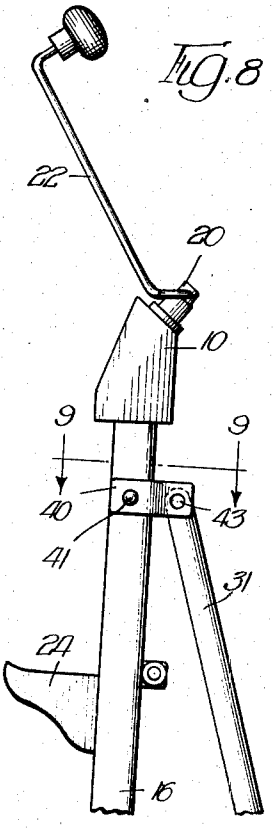
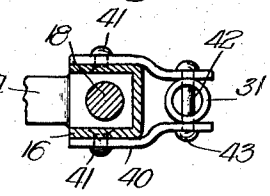


Fig. 10

Fig. 9



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LIFTING JACKS AND SUPPORTS THEREFOR

Joseph F. Palka, Chicago, Ill.

Application December 18, 1953, Serial No. 398,944

15 Claims. (Cl. 248—166)

The present invention relates to the supports for lifting jacks of the nature disclosed in my co-pending application, filed November 10, 1953, Serial No. 391,284.

The lifting jack for which the present support was devised is of a type which includes a strut leg wherein a threaded post is positioned for a rotary movement, with means for supporting the upper end of the post at the upper end of the strut leg, with means for imparting a rotary movement to the post. A block in a threaded engagement with the post is positioned within the strut leg, said block having a load engaging member extending through a longitudinal slot or recess made in said strut leg. When a rotary movement is imparted to said post said block with said load engaging member is adapted to shift in a longitudinal direction with relation to said strut leg for either lifting or lowering the load with which said load engaging member is in engagement.

One of the principal objects of the present invention is the provision of suitable support for maintaining said strut leg in a substantially vertical position during the lifting operation of the jack.

Another object of the present invention is the provision of a supporting leg or prop co-acting with said strut leg for preventing the latter from tilting away from the load during the operative position of the lifting jack.

A still further object of the present invention is the provision of a brace, the forward end of which being adapted to rest upon the ground and the rear end of which being adapted to be supported in a spaced relation from the ground, with the strut leg supported upon said brace intermediately of its ends for the purpose of distributing the weight pressure of the strut leg during the operative position of the lifting jack.

Another object of the present invention is the provision of a suitable foot adjacent the lower end of said supporting leg or prop upon which one end of said brace is supported in a spaced relation from the ground.

Another object of the present invention is to provide suitable means whereby said brace and said supporting leg may shift substantially in parallelism with said strut leg for the purpose of mutually folding the said three parts into a compact package during the inoperative position of the jack.

For the purpose of quickly and efficiently folding the said three parts it is preferable that said brace be in a pivotal relation with the lower end of said strut leg, so that in the folded mutual position said brace assumes a contactual parallel relation with the strut leg. Therefore, another object of the present invention is the provision of suitable means at the upper end of said supporting leg whereby the major portion of said supporting leg may remain in a spaced parallel relation with said strut leg with said brace interposed between said strut leg and said supporting leg, notwithstanding the fact that the upper end of said supporting leg was in a pivotal engagement with said strut leg during the operative position of the jack.

A still further object of the present invention is the

provision of suitable connecting means between said strut leg and said supporting leg for maintaining the two in a substantially angular mutual relation during the operative position of the jack, and which means nevertheless would permit at least the major body portion of said supporting leg to assume a substantially parallel relation with said strut leg and accommodate therebetween said brace when the jack remains in a folded inoperative position.

With the above general objects in view and others that will appear as the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated in the accompanying drawings and pointed out in the appended claims.

In the drawings forming a part of this application and in which like designating characters refer to corresponding parts throughout the several views:

Fig. 1 is a side elevational view of the present jack with the support thereof in any open operative position, illustrating one structural type of the supporting leg and the pivotal connecting means thereof with the strut leg for permitting the major portion of the supporting leg to assume a parallel relation with the strut leg when the support parts of the jack are brought to a folded inoperative position;

Fig. 2 is the side elevational view of the support parts of the jack while in a folded inoperative position;

Fig. 3 in a cross sectional view taken on line 3—3 of Fig. 1, showing one type of pivotal connection between the supporting leg and the strut leg;

Fig. 4 is a cross section on line 4—4 of Fig. 1, showing in top elevation the load engaging member, its appurtenances and its connecting means with the threaded post and the strut leg;

Fig. 5 is the front elevational view of the supporting foot carried by the lower end of the supporting leg, the view having been taken along the plane indicated by line 5—5 of Fig. 1;

Fig. 6 is a side elevational view of the lifting jack with the support thereof in an open operative position, illustrating another structural type of the supporting leg and a modified pivotal disengageable connecting means between said supporting leg and the strut leg permitting the lower portion of the supporting leg to assume a parallel relation with the strut leg when the pivotal connecting means of said supporting leg are disengaged from said strut leg when the parts of the support are brought to a folded inoperative position;

Fig. 7 is a side elevational view of the support parts of Fig. 6 in a folded inoperative position;

Fig. 8 is a fragmentary side elevational view of the upper portion of the jack illustrating still another form of the connecting means between the supporting leg and the strut leg of the jack which may permit assumption of a substantially spaced parallel relation between the supporting leg and strut leg when the two are brought to a folded position;

Fig. 9 is a cross sectional view taken on line 9—9 of Fig. 8; and

Fig. 10 is a fragmentary elevational view, along line 10—10 of Fig. 6, showing interconnecting means between the brace and the foot carried by the supporting leg, when the jack support is in an operative open position.

Referring to the present drawings in detail the jack disclosed therein includes a housing or head which embodies a pair of substantially parallelly disposed plates 10, within which a frame member generally indicated by 11, including base 12, lip 13, vertical wall 14 and an inclined stud shaft supporting wall 15 are enclosed in a transverse relation therewith. Between the free upper end of said lip 13 and the free front end of said inclined

wall 15 there is a space affording access inwardly of said housing.

Welded or otherwise affixed to the underface of base 12 by its upper end is strut leg 16, which is recessed at its front edge. Seated upon base 12 is thrust ball bearing 17. Passed through said base 12 and said thrust ball bearing 17 is the smooth upper end of post 18. The major body portion of said post 18 located below said base 12 is threaded and is disposed within said strut leg 16 and extends substantially throughout the length of the latter. The portion of the upper smooth end of said post 18 which remains above said thrust ball bearing 17 is extended through sleeve 19 which is in rigid relation with said post 18 above said thrust ball bearing 17. The lower end of said sleeve 19 rests upon and bears against the upper race of said thrust ball bearing 17.

Passed through said inclined supporting wall 15 and supported therewithin for rotary movement is shaft 20. The inner end of said shaft 20 which remains within said head connects with the portion of the upper end of said post 18 which remains above said sleeve 19 through the medium of flexible or universal joint 21.

By means of handle 22 which engages the outer end of shaft 20 a rotary movement may be imparted to the latter, which movement through the means of the said flexible or universal joint 21 is transmitted to said post 18 for the purpose of rotating the latter in either direction.

Said strut leg 16 is substantially U-shaped on transverse cross section. Positioned within the walls of said strut leg 16 in a contactual relation is block 23 which is in a threaded relation with the threaded portion of said post 18 disposed below said base plate 12. By virtue of this arrangement when a rotary movement is imparted to said post 18 in either direction said block 23 is induced to shift in a vertical direction, upwardly or downwardly depending upon the direction of rotation imparted to said post 18 by means of said shaft 20, universal or flexible joint 21 and handle 22.

Integrally formed with said block 23 and extending forwardly through the recess formed by the front free edges of the side walls of said strut leg 16 is load engaging member 24 adapted to engage any load such as bumper 25 of vehicle 26, as is seen in Fig. 1.

Integrally formed with the upper end of said block 23 and extending rearwardly from the rear face thereof is lug 27 which is accommodated within slot 28 made in the rear leaf of said strut leg 16. Said slot 28 is co-extensive with said strut leg 16 intermediately of the ends of the latter and at least to the extent of the required maximum shifting movement of said load supporting member 24 in either direction.

Supported upon the ends of pin 29 which is passed through lug 27 in a transverse relation is a pair of rollers 30, one on each side of said lug 27, which contact with and bear against the edge portions adjacent said slot 28 of the rear leaf of said strut leg 16, as is clearly seen in Fig. 4. Said rollers 30 constitute guides for said block 23 and prevent the positional distortion of block 23 with relation to post 18 when under pressure of the load weight exerted upon said load engaging member 24, and thereby minimize the undue degree of friction which would otherwise ensue between said block 23 and post 18.

The jack support further includes supporting leg 31 which at least during the operative position of the jack is connected by its upper end with strut leg 16 adjacent its upper end in such a manner as to permit the major lower portion of said supporting leg 31 to remain in a parallel relation with strut leg 16 when the jack is in a folded position for the purpose already specified. Various connecting means between said supporting leg 31 and strut leg 16 are provided. One of them is shown in Figs. 1 and 2. There, the upper end of said supporting leg 31 is bent to define extension 32 which remains in an angular position with the main lower body portion of said supporting leg 31. When the support parts of the jack are in a folded inoperative position illustrated in Fig. 2 with the main body portion of said leg 31 substantially in a parallel relation with strut leg 16, said extension 32 remains astride of the space between the main body portion of said supporting leg 31 and said strut leg 16.

The free end of said extension 32 is bifurcated to define a pair of leaves 33, which in the operative position relative to strut leg 16 remain in a contactual relation with the sides of the latter and are pivotally connected thereto by means of rivets 34 upon which said extension 32 and leg 31 are adapted for angular swinging motion with relation to strut leg 16.

Another connecting means between supporting leg 31 and strut leg 16 is illustrated in Figs. 6 and 7. There, the upper end of supporting leg 31 is bifurcated to define a pair of leaves 35, the free ends of which are formed into hooks 36, which in the operative open position of the supporting leg 31 with relation to strut leg 16 are adapted to engage laterally projecting pins 37 carried by the sides of said strut leg 16 adjacent its upper end. A short distance below said pins 37 a U-shaped yoke 38 by its free ends is affixed by means of rivets 39 or any other suitable means to the sides of said strut leg 16. The upper end of said supporting leg 31 below said leaves 35 fits within said yoke 38, the bight of said yoke 38 contacting the adjacent body portion of said supporting leg 31 when the latter remains in an outwardly spread angular relation with respect to said strut leg 16 for preventing the disengagement of said supporting leg 31 from said strut leg 16 which might otherwise ensue by virtue of the frontal thrust at the strut leg 16 during the lifting operation of the jack.

Preceding the folding of the jack support hooks 36 are disconnected from pins 37 which operation will of course disengage supporting leg 31 from strut leg 16. Without removing said leg 31 from within yoke 38 the former is shifted in a substantial parallelism with said strut leg 16 as is seen in Fig. 7.

Still another form of connecting means between supporting leg 31 and strut leg 16 is best illustrated in Figs. 8 and 9. There, a pair of bracket members 40 are rigidly affixed by one of their ends to the sides of said strut leg 16 by means of rivets 41. The free ends of said bracket members 40 extend rearwardly of said strut leg 16 in a substantially parallel mutual relation, as is seen in Fig. 9. Interposed between the free rear ends of said bracket members 40 is the upper end of supporting leg 31 which is maintained in a pivotal relation with said bracket members by means of pivot pin 42 having its ends provided with rivet heads 43.

Said bracket members 40 extend rearwardly of said strut leg 16 to a sufficient distance so that they may remain astride of the space when supporting leg 31 has been shifted upon its pivot 42 to a folded position with relation to strut leg 16 and in a parallelism therewith for the purposes hereinabove mentioned.

Cooperating with strut leg 16 and supporting leg 31 is brace 44 preferably made in a channeled form of metallic sheet material, and is substantially U-shaped on transverse cross section. At one end the top portion of said brace 44 is provided with recess 45 defining a pair of arms 46 between which said supporting leg 31 is disposed while the jack support is in an operative position.

The free ends of said arms 46 are connected by an arcuate plate defining yoke 47 which remains in a perpendicular relation with brace 44 and extends beyond the lower edges of said brace 44 and said arms 46, as is seen in Figs. 1 and 6.

In the operative position of brace 44 the lower edges of said brace 44, or more specifically the lower edges of said arms 46, rest upon the upper edge 48 of plate 49, which defines a foot upon which leg 31 is supported.

The lower end of said plate 49 is bifurcated to define a pair of spaced, straddling supporting members 50,

the ends of which are flanged to define base plates **51** which are adapted to contact the ground when the jack remains in the operative open position.

Adjacent each end of edge **48** plate **49** is provided with upwardly projecting lug **52**, the two of which remain in contact with the outer faces of arms **46** when said brace **44** is engaged with said plate **49**, as is clearly seen in Figs. 1 and 10.

Rivet or like pivot pin **53** is passed through said plate **49** and leg **31**, as seen in Fig. 6, for pivotally engaging said foot with the lower end of leg **31**. If preferred, the lower end of leg **31** may be flattened, as at **54** in Figs. 1 and 5, whereat said pivot pin **53** may be engaged. The pivotal connection of the said foot permits angular adjustment of said foot for bringing the latter into an operative position as is shown in full lines in Figs. 1, 5, 6 and 10, preliminarily to the conditioning of the jack support to assume its operative open position in which the jack is capable of being supported upon the ground, or into the folded, inoperative position, illustrated in full lines in Figs. 2 and 7, and in dotted lines in Fig. 5.

The height of said foot is shorter than its width when the foot remains in an operative position. Thus when the foot is turned upon its pivot **53** to the extent of 90 degrees, as indicated by dotted lines in Fig. 5, the same will assume a comparatively compact relation with the support when the latter remains in a folded inoperative position.

Said yoke **47** is formed out of strips extending from the ends of said arms **46**. The free ends of said strips are rounded and thereupon are soldered, welded or otherwise connected as at **55**. In this manner the entire brace, including the complementary strips that ultimately are formed into yoke **47**, may be struck out from metallic sheet material by a single operation. Thereupon the blank may be longitudinally bent into a channeled formation, with the free ends of the yoke strips brought into contactual relation and thereupon joined as above indicated.

The opposite end of said brace **44** carries foot **56**, from which lug **57** upwardly projects. The latter enters the channel defined by the body of said brace **44** and is there pivoted to the sides of said brace **44** by a transversely passed bolt **58**. Said foot **56** is adapted for pivotal swinging motions upon said pivot **58** for adapting the former for a solid contactual engagement with the ground when the jack remains in an operative standing position, as is seen in Figs. 1 and 6.

It is observed that in the operative position of the jack shown in Figs. 1 and 6 brace **44** is interlocked with foot plate **49** and supporting leg **31**. The body portion of brace **44** adjacent recess **45**, with said supporting leg **31** disposed within said recess **45**, constitutes a stop preventing leg **31** to shift in the direction axial of said brace **44** and towards strut leg **16**.

Said yoke **47** being in contact with the outer rear face of said foot plate **49** defines a stop whereby both said leg **31** and said foot plate **49** are prevented from shifting to the opposite direction, that is away from strut leg **16**. As was already mentioned said lugs **52** prevent brace **44** and supporting leg **31** from shifting to a direction transverse with relation to said brace **44**.

Carried by the lower end of said strut leg **16** is a pair of L-shaped bracket plates **59**, which by their vertical portions are riveted as at **60** or are otherwise rigidly affixed to the sides of said strut leg **16**. The horizontal portions of said bracket plates **59** remain in contact with the sides of said brace **44** and are pivoted thereto by means of pin **61** passed through said plates **59** and said brace **44**.

In the operative open position of the jack support the lower end of strut leg **16** is in contact with the upper edge of said brace **44**, as is indicated by dotted line at **62**, so that the weight thrust upon strut leg **16** by virtue of the object being lifted is transferred to said brace **44**. It

is also noted that in the open operative position of the jack support the lower end of said strut leg **16** contacts and bears against brace **44** substantially at the central point of the latter thereby substantially equally distributing the load between both ends of said brace **44**.

It is also observed that the strut leg **16** remains substantially in a vertical position. In view of the pressure exerted by the rear end of brace **44** upon foot plate **49** and by virtue of rigid connection between said foot plate **49** and the upper end of strut leg **16** through the medium of supporting leg **31**, any forward tilting of the jack and of strut leg **16** in the direction toward the object being lifted is for all purposes practically eliminated.

By virtue of the angular position of said supporting leg **31** with relation to strut leg **16**, and in view of the fact that said leg **31** by its lower end is supported upon the ground by means of foot plate **49**, said supporting leg **31** defines and acts as a prop for strut leg **16** effectively preventing tilting of the jack structure rearwardly, that is away from the object being lifted.

The fact that the front end of brace **44** which carries foot **56** is disposed forwardly of strut leg **16** to a considerable distance, adds to the stability of the jack by preventing the forward tilting of said strut leg **16**.

To fold the jack support brace **44** is angularly shifted upon its pivot **61** until said brace **44** assumes a parallel position with strut leg **16**, with the rear end of said brace **44** by its top edge coming in contact with the rear portion of said strut leg **16** adjacent its lower end, as is seen in Figs. 2 and 7. At the inception of the upward shifting movement of the rear end of said brace **44** arms **46** thereof are disengaged from the upper edge **48** of foot plate **49**, with yoke **47** coming out of engagement with the rear face of said foot plate **49**. Further upward shifting of the rear end of brace **44** along said leg **31** will ultimately bring said yoke **47** to a transverse embracing relation with said supporting leg **31**, as is seen in Figs. 2 and 7. In that ultimate relation between said brace **44** and supporting leg **31** both of these parts assume a substantially parallel contacting relation, with the end of said brace **44** which carries said yoke **47** interposed between said strut leg **16** and said supporting leg **31**. In that ultimate folded position strut leg **16** and supporting leg **31** will not only assume a substantially mutually parallel relation but also necessarily a spaced relation by virtue of the fact that the rear, now upper, end of brace **44** remains interposed therebetween.

To make the ultimate parallel position between strut leg **16** and the major portion of supporting leg **31** possible, hence biased extension **32**, yoke **38** or bracket plates **40** as the alternate means for straddling the space between strut leg **16** and supporting leg **31** in order to maintain the major portion of supporting leg **31** in parallelism with strut leg **16** during the folded position of the support parts and without separating supporting leg **31** from the other parts of the jack support while the parts thereof are in a folded position. In the case of the structure illustrated in Figs. 6 and 7, when the jack support parts are in a folded position and the upper end of brace **44** and the lower end of strut leg **16** are simultaneously manually grasped, with supporting leg **31** downwardly depending, the latter will not become separated from the bundle, because yoke **38** will prevent such a result. Of course, there will be no problem whatsoever insofar as the possibility of the parts coming apart is concerned in the case of structure illustrated in Figs. 6 and 7 when the jack while in a folded position is carried with strut leg **16** disposed downwardly when the bundle is supported in a horizontal position with manual hold preferably at said strut leg **16**.

In effect said plate **49** may be considered as a prolongation of said supporting leg **31** with the upper end of said plate **49** acting as a rest or stop for the rear end of brace **44** for maintaining the said end of brace **44**

in a spaced relation with the ground when the jack is in an open operative position.

Considering the invention from another aspect were plate 49 eliminated and the rear end of brace 44 connected to the lower free end of supporting leg 31, in that event brace 44 throughout its length would rest upon the ground in the operative position of the jack. Such arrangement would work reasonably well on a level ground.

While there is described herein preferred embodiments of the present invention, it is nevertheless to be understood that minor changes may be made therein without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being capable of angular swinging motions with respect to said strut leg for alternately assuming an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, a hook formed at one end of said supporting leg, a pivot pin extending from said strut leg adjacent the end thereof opposite from that at which said brace is connected, said hook being adapted to engage said pivot pin for supporting said supporting leg in an open operative angular position with relation to said strut leg, on disengaging said hook from said pivot pin said supporting leg being capable of assuming a folded inoperative parallel and spaced relation with said strut leg, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, in its open operative position said brace being adapted to rest upon the ground and support said strut leg in a vertical position, and a yoke extending from said strut leg in the proximity of said pivot pin and at a point intermediately of said pivot pin and said brace, said yoke being in a substantially coplanar relation with said strut leg, said brace and said supporting leg and in an embracing relation with said supporting leg for the purpose of supporting said supporting leg in parallelism with said strut leg when said hook has been disengaged from said pivot pin and said supporting leg has been shifted to its folded inoperative position, said yoke being adapted to straddle the space defined by said strut leg and said supporting leg when the two remain in a folded inoperative parallel relation.

2. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being capable of angular swinging motions with respect to said strut leg for alternately assuming an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, and a bracket member extending from said strut leg adjacent the end thereof opposite from that at which said brace is connected, one end of said supporting leg being pivotally connected to the free end of said bracket member, said supporting leg being capable of angular swinging motions upon said bracket member for alternately assuming an open operative angular position with relation to said strut leg or a folded inoperative parallel and spaced relation therewith, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, in its open operative position said brace being adapted to rest upon the ground for supporting said strut leg in a vertical position, said bracket member being adapted to straddle the space defined by said strut leg and said supporting leg when the two remain in a folded inoperative parallel relation.

3. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise thereof, a supporting leg pivoted by one of its ends to said strut leg adjacent one end of the latter, said supporting leg being capable of angular shifting movement to or away from said strut leg, a brace, said brace including a bifurcated end defining a pair of arms within which said supporting leg is accommodated, a stop carried by said supporting leg in a spaced relation with the free end thereof, normally said stop being adapted to support said arms in a spaced relation with the adjacent free end of said supporting leg, in the operative position of the jack the free end of said supporting leg and the opposite free end of said brace being adapted to rest upon the ground, and a yoke extending from said arms in a transverse relation with said brace, said yoke being adapted to engage said stop on a horizontal plane for preventing the shifting movement of said supporting leg away from said strut leg, in the operative position of the jack said strut leg being supported by one of its ends upon said brace at a point intermediately of the ends thereof.

4. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg pivotally affixed by one of its ends to said strut leg adjacent one end of the latter, said supporting leg being adapted for angular swinging motions upon its pivot to or away from said strut leg, a brace, means for engaging one end of said brace in a spaced relation with the opposite end of said supporting leg for maintaining the said end of said brace in a spaced relation with the ground in the operative position of the jack, and means for engaging the latter end of said brace with said supporting leg substantially on a horizontal plane for preventing angular shifting of said supporting leg relative to said strut leg, the opposite end of said brace being adapted to rest upon the ground, the opposite end of said strut leg being supported upon said brace at a point intermediate of its ends.

5. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg pivotally affixed by one of its ends to said strut leg adjacent one end of the latter, said supporting leg being adapted for angular swinging motions upon its pivot to or away from said strut leg, a plate pivotally attached to the opposite end of said supporting leg, said plate defining a foot upon which said supporting leg is supported upon the ground in the operative position of the jack, a brace, means for engaging one end of said brace with said plate in a spaced relation with the ground, and means for engaging the latter end of said brace with said leg substantially on a horizontal plane for preventing angular shifting of said supporting leg relative to said strut leg, the opposite end of said brace being adapted to rest upon the ground, the opposite end of said strut leg being supported upon said brace substantially in a vertical position at a point intermediate of the ends of said brace.

6. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg pivotally affixed by one of its ends to said strut leg adjacent one end of the latter, said supporting leg being adapted for angular swinging motions upon its pivot to or away from said strut leg, a plate affixed to the opposite end of said supporting leg, said plate defining a foot upon which said supporting leg is supported upon the ground in the operative position of the jack, a brace, one end of said brace resting upon the upper edge of said plate for maintaining the

said end of said brace in a spaced relation with the ground, the said end of said brace being in contact with a point of said supporting leg disposed toward said strut leg for preventing said supporting leg from shifting towards said strut leg, and a transversely disposed downwardly depending member extending from that end of said brace, said member being adapted to engage said plate at the face thereof disposed away from said strut leg for preventing shifting of said supporting leg away from said strut leg, the opposite end of said brace being adapted to rest upon the ground, the opposite end of said strut leg being supported upon said brace substantially in a vertical position at a point intermediate of the ends of said brace.

7. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg pivotally affixed by one of its ends to said strut leg adjacent one end of the latter, a brace, means for disengageably interconnecting one end of said brace with the opposite end of said supporting leg, the opposite end of said strut leg being normally supported upon said brace substantially in a vertical position at a point intermediate of the ends of said brace, and pivotal interconnecting means between said last named end of said strut leg and said brace substantially at said point, on rendering said first named means inoperative for the purpose of disengaging said brace from said supporting leg said brace being adapted for angular shifting movement into a contactual relation with said strut leg and said supporting leg being adapted for angular shifting movement into a contactual relation with said brace for the purpose of bringing said strut leg, said brace and said supporting leg to a mutually folded position.

8. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being adaptable for angular swinging motions about its pivotal connection with respect to said strut leg so that it may be made to assume an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, means pivotally connecting the supporting leg to the end of said strut leg opposite from that at which said brace is connected, said supporting leg being adaptable to assume an angular position with relation to said strut leg with at least a major portion of said supporting leg being adaptable alternately to assume a folded parallel and spaced relation with said strut leg, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, an interlocking means between said brace and said supporting leg when the two are in an open operative position relative to said strut leg, and means provided at the upper portion of the supporting leg whereby the major portion of said supporting leg will be in parallelism with said strut leg when said supporting leg has been shifted to its folded inoperative position.

9. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being adaptable for angular swinging motions about its pivotal connection with respect to said strut leg so that it may be made to assume an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, means pivotally connecting the supporting leg to the end of said strut leg opposite from that at which said brace is connected, said supporting leg being adaptable to assume an angular position with relation to said strut leg with at least a major portion of said supporting leg being adaptable alternately to assume a folded parallel and spaced relation with said strut leg, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, and an interlocking means between said brace and said supporting leg when the two are in an open operative position relative to said strut leg, and a connecting member between said strut leg and said supporting leg for maintaining at least the major portion of the latter in parallelism with said strut leg when said supporting leg has been shifted to its folded inoperative position.

10. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being adaptable for angular swinging motions about its pivotal connection with respect to said strut leg so that it may be made to assume an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, means pivotally connecting the supporting leg to the end of said strut leg opposite from that at which said brace is connected, said supporting leg being adapatable to assume an angular position with relation to said strut leg with at least a major portion of said supporting leg being adaptable alternately to assume a folded parallel and spaced relation with said strut leg, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, and an interlocking means between said brace and said supporting leg when the two are in an open operative position relative to said strut leg, and a connecting member between said strut leg and said supporting leg for maintaining at least the major portion of the latter in parallelism with said strut leg when said supporting leg has been shifted to its folded inoperative position, said connecting member being in a straddling relation with the space defined by said strut leg and said supporting leg when the latter remains in its folded inoperative position with relation to the former.

11. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being adaptable for angular swinging motions about its pivotal connection with respect to said strut leg so that it may be made to assume an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, means pivotally connecting the supporting leg to the end of said strut leg opposite from that at which said brace is connected, said supporting leg being adaptable to assume an angular position with relation to said strut leg with at least a major portion of said supporting leg being adaptable alternately to assume a folded parallel and spaced relation with said strut leg, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, in its open position said brace being adapted to rest upon the ground and support said strut leg in a vertical position, and a connecting member between said strut leg and said supporting leg for maintaining at least the major portion of the latter in parallelism with said strut leg when said supporting leg has been shifted to its folded position.

12. In a lifting jack, a support comprising a strut leg, said strut leg being capable of supporting a load engaging member for shifting movement lengthwise of said strut leg, a brace pivotally connected with one end of said strut leg at a point intermediate of the ends of said brace, said brace being adaptable for angular swinging motions about its pivotal connection with respect to said strut leg

so that it may be made to assume an open operative transverse relation with said strut leg or a folded inoperative parallel contactual relation therewith, a supporting leg, and an angular extension rigidly connected with one end of said supporting leg, said extension by its free end being pivotally connected to said strut leg adjacent the end thereof opposite from that at which said brace is connected, said supporting leg being capable alternately of assuming an open operative angular position with relation to said strut leg or a folded inoperative parallel and spaced relation therewith, in said latter position of said supporting leg with relation to said strut leg said brace being interposed therebetween, said extension straddling the space defined by said strut leg and said supporting leg when the two remain in a folded inoperative parallel relation.

13. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg, means pivotally connecting said supporting leg at one of its ends to said strut leg adjacent one end of the latter, a brace, means for connecting one end of said brace with the opposite end of said supporting leg, the opposite end of said strut leg being supported upon said brace at a point intermediate of the ends of said brace, whereby said supporting leg and said brace maintain the strut leg in substantially a vertical position.

14. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg, said supporting leg being pivotally connected by one of its ends to said strut leg adjacent one end of the latter, a brace, one end of said brace having means for connection with the opposite end of said supporting leg, the opposite end of said strut leg being supported upon said brace at a point intermediate of the ends of said brace, the opposite free end of said brace past the point of contact therebetween and said strut leg defining means for preventing tilting of said strut leg in the direction of said free end of said brace.

15. In a lifting jack, a support comprising a strut leg, said strut leg being adapted for supporting a load engaging member for shifting movement lengthwise of said strut leg, a supporting leg, said supporting leg being pivotally connected by one of its ends to said strut leg adjacent one end of the latter, said supporting leg defining means for preventing tilting of said strut leg in the direction of said supporting leg, a brace, one end of said brace being connectable with the opposite end of said supporting leg, the opposite end of said strut leg being supported upon said brace at a point intermediate the ends of said brace, the opposite free end of said brace past the point of contact therebetween and said strut leg defining means for preventing tilting of said strut leg in the direction of said free end of said brace.

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