A. J. & L. PERKINS.

LIFTING JACK.

APPLICATION FILED DEC. 28, 1916.

1,260,030.

Patented Mar. 19, 1918.

2 SHEETS—SHEET 1.

Fig. 1.

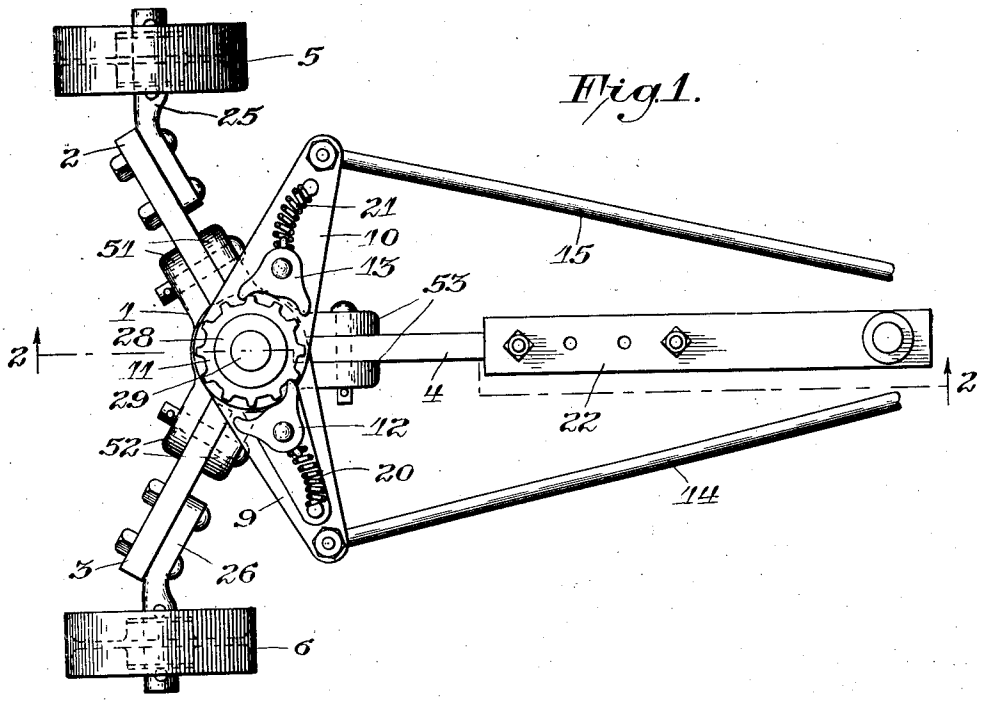
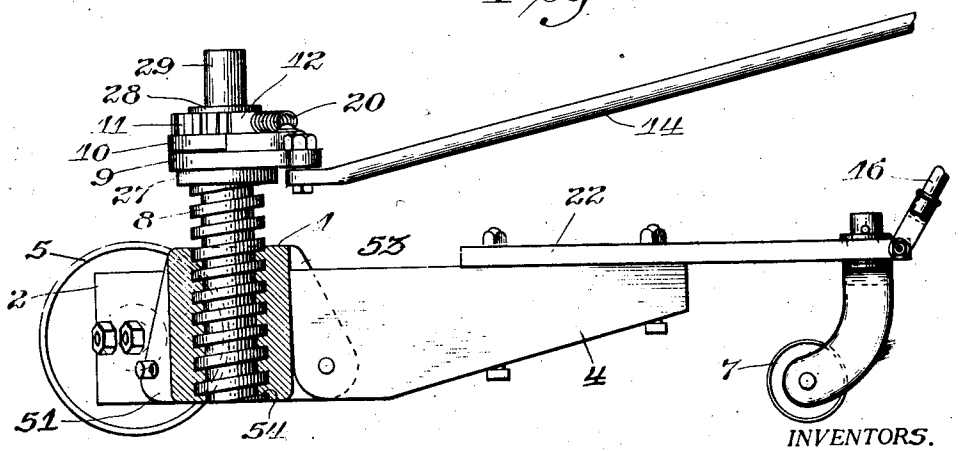


Fig. 2.



INVENTORS.

Andrew J. Perkins & Lester Perkins,

BY Chas. L. Byron

ATTORNEY

A. J. & L. PERKINS.

LIFTING JACK.

APPLICATION FILED DEC. 28, 1916.

1,260,030.

Patented Mar. 19, 1918.

2 SHEETS—SHEET 2.

Fig. 3.

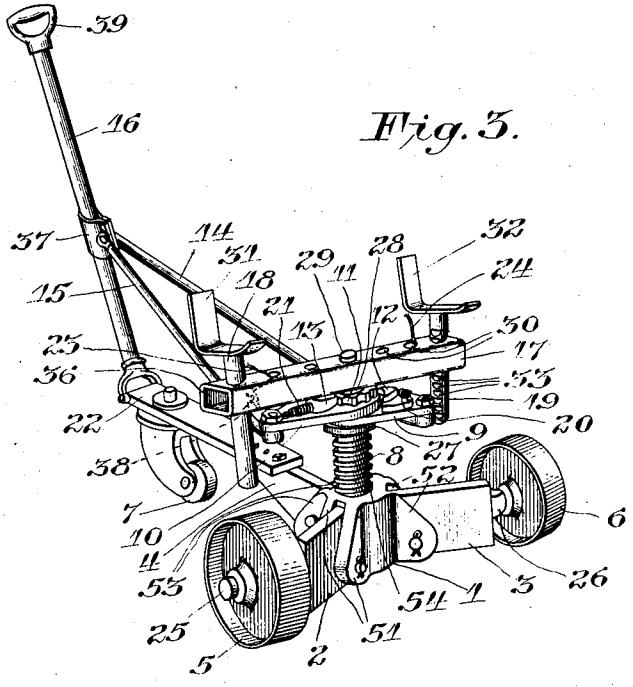


Fig. 4.

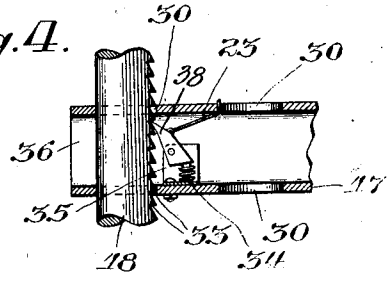
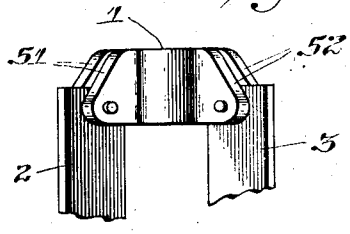


Fig. 5.



INVENTORS

Andrew J. Perkins & Lester Perkins,

BY Thos. L. Byrn

ATTORNEY

UNITED STATES PATENT OFFICE.

ANDREW J. PERKINS AND LESTER PERKINS, OF CHICAGO, ILLINOIS.

LIFTING-JACK.

1,260,030. Specification of Letters Patent. Patented Mar. 19, 1918.

Application filed December 28, 1916. Serial No. 139,379.

To all whom it may concern:

Be it known that we, ANDREW J. PERKINS and LESTER PERKINS, citizens of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a full, clear, and exact description.

Our invention relates to lifting jacks, and more particularly to portable jacks designed for use in connection with automobiles and other heavy vehicles.

One of the objects of the present invention is to provide a portable jack so that when placed in position and in use the jack and vehicle can be moved about or the vehicle changed from one position to another.

A further object of our invention is to provide a jack which can be conveniently folded to occupy a minimum amount of space.

A further object of our invention is to facilitate and quicken the adjustment of a jack in an improved manner by utilizing both the forward and backward movement of a control operating member.

The invention is illustrated on the accompanying sheets of drawings, in which—

Figure 1 is a fragmentary plan view of our lifting jack, parts being removed for the sake of clearness;

Fig. 2 is a partial vertical sectional view taken in the plane of line 2—2 in Fig. 1;

Fig. 3 is a perspective view of the lifting jack;

Fig. 4 is an enlarged detail of one of the adjustable standards, together with ratchet dogs, which co-acts with it; and

Fig. 5 shows the position the arm members take with reference to main standard when the jack is folded.

The various novel features will be apparent from the following description and drawings, and will be particularly pointed out in the appended claims.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

Referring to the drawings, we have shown a main standard or frame member 1 having three pairs of spaced wings 51, 52 and 53, the first two pairs pivotally receiving radially extending arm members 2 and 3 which may be folded downwardly to occupy a minimum amount of space laterally. Secured to the arms 2 and 3, respectively, are extending spindles 25 and 26, upon which are mounted two carrying wheels 5 and 6.

Extending radially forward from the main standard 1, and pivotally connected between the third or front pair of wings 53, is a draft member 4, to the front end of which is detachably secured an auxiliary draft member or bar 22. A caster wheel 7 supports the front end of the bar 22. Pivotally connected to the front end of draft bar 22 is a combined operating control lever and tongue 16, said tongue being provided with a handle 39 for the purpose of moving the lifting jack proper from place to place, either when the same is in use as a jack or when the same is detached from the objects designed to be elevated and held in elevated positions. It will be understood that the only purpose of providing the caster 7 and carrying wheels 5 and 6 is to provide a means for movably mounting the jack proper.

A vertically arranged lifting screw 8 meshes with an internally threaded central hollow portion 54 of the main standard 1. Pivotally mounted on an upper stem portion 29 of the lifting screw 8 and over a fixed washer or collar 27 thereon, are two oppositely disposed arms 9 and 10. Pivoted on said arms are two co-acting reversible double-pronged pawls 12 and 13 yieldably pressed and held in their different positions by arcuately-arranged compression springs 20 and 21, which springs are reversible and suitably backed. Said pawls 12 and 13 engage a ratchet wheel 11, which is secured or fixed to the adjustable screw 8. A washer 28 is loosely mounted upon the stem 29 and forms a sliding surface for a transversely-arranged member 17 pivotally mounted on the upper portion of stem 29. This member 17 is provided with a plurality of selective, vertical apertures 30 arranged in a horizontal series for the reception of two vertically disposed jack extensions 18 and 19 having receiving supporting brackets 31 and 32, respectively, at the upper ends thereof. The jack extensions 18 and 19 are each provided with a plurality of ratchet teeth 33 which are engaged by ratchet pawls 38, said pawls being yieldably pressed by pressure springs 34 and suitably supported by and pivoted to U-shaped members 35 positioned within the passageway 36 of member 17. Extension members 18 and

19 may be released from the ratchet pawls 38 by withdrawing the latter by means of wire connections 23 and 24. In view of the fact that member 17 is pivotally mounted horizontally and the extensions are vertically adjustable, the bracket supports 31 and 32 are substantially universally adjustable.

The pawl carrying arms 9 and 10 are pivotally connected at their outer extreme ends to two forwardly converging connecting rods 14 and 15, said rods also being pivotally connected to a bracket 37 which is fixed to the hand control lever 16.

From this disclosure, it will be seen that a forward movement of the lever 16 will draw rods 14 and 15 and arms 9 and 10 forwardly, causing the front prong of pawl 12 to engage and turn ratchet wheel 11 in a counterclockwise direction, as shown in Fig. 1, and causing adjusting screw 8 to rise relative to standard 1 for lifting purposes, while the rear prong of pawl 13 rides over the teeth of the ratchet wheel. A return movement of the lever 16 will cause the rear prong of pawl 13 to engage and turn the ratchet wheel 11, thus causing the adjustable screw to turn in the same direction to further elevate the screw and thereby the supporting brackets 31 and 32, while the front prong of pawl 12 rides over the teeth of the ratchet wheel. Thus the forward and backward movements are utilized to accomplish an adjustment of the jack in the same sense.

It will be seen that the pawls 12 and 13 are reversible, the reverse positions being made by laterally pressing the compression springs 20 and 21 until they assume arcs formed in opposite directions to the ones shown in Fig. 1. With the pawls 12 and 13 reversed, a forward and backward movement of lever 16 will lower the jack.

The arms 2 and 3 and draft member are limited in their upward swinging movement or are held in their normal working positions by their innermost ends engaging the tubular upright portion of standard 1. When the jack is not in use, the arms 2 and 3 may be swung downwardly, as shown in Fig. 5, so that the jack will occupy less space in its folded condition. And, also, the draft member 4 can be lowered for the same purpose.

There may be various modifications of the arrangement herein shown and described, and it is our intention to cover all such modifications which do not depart from the spirit and scope of our invention as set forth in the following claims.

What we claim as new is:

1. In a lifting jack, the combination of a frame having a main central portion, arms pivotally connected to and foldable under the main portion, carrying wheels on said arms, and a lifting member adjustably supported in said frame.

2. In a wheeled lifting jack, the combination of a wheeled supporting frame, a lifting screw mounted therein, a ratchet wheel secured to said screw, arms pivotally connected to said lifting screw, means carried by said arms engageable with said ratchet wheel for transmitting motion to the screw, and jack draft means for actuating said arms.

3. In a wheeled lifting jack, the combination of a wheeled supporting frame, a lifting screw mounted therein, a ratchet wheel secured to said screw, arms pivotally connected to said lifting screw, means carried by said arms engageable with said ratchet wheel for transmitting motion to the screw, and jack draft means pivotally connected to said supporting frame and to said arms for actuating the latter.

4. In a lifting jack of the class described, the combination of a portable folding frame, carrying wheels therefor, a jack screw pivotally mounted on said frame, a cross bar mounted on said jack screw, and a pair of standards adjustably mounted on said cross bar.

5. In a lifting jack of the class described, the combination of a portable frame, carrying wheels therefor, a single jack screw centrally mounted on said frame, actuating means for said screw, a cross bar pivotally mounted on said jack screw, and a pair of standards adjustably mounted on said cross bar.

6. In a lifting jack of the class described, the combination of a portable frame, carrying wheels therefor, a single jack screw centrally mounted on said frame, and a double-acting oscillating mechanism operatively connected to said screw including coacting oppositely disposed arms adjustable with the screw, reversible pawls carried thereby, and a ratchet wheel connected to said screw and pawls.

7. In a lifting jack, the combination of a frame having a main central portion, arms pivotally connected to and foldable under the main portion, carrying wheels on said arms, a jack screw mounted in the central portion of said frame, a control member, and means associated therewith for continuing the adjustment of the jack screw during the forward and backward movement of said control member.

In testimony whereof we affix our signatures.

ANDREW J. PERKINS.
LESTER PERKINS.