

J. H. BURKHOLDER.

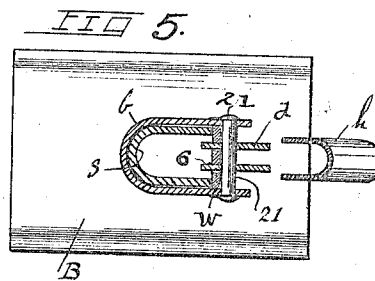
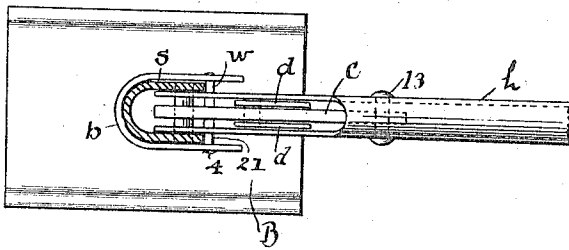
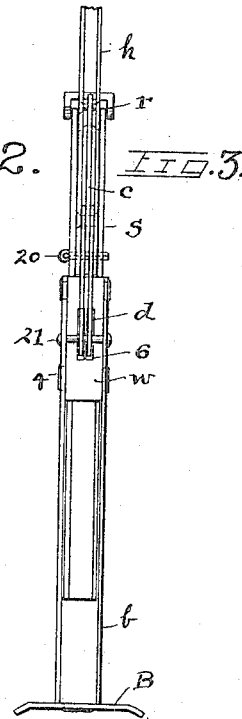
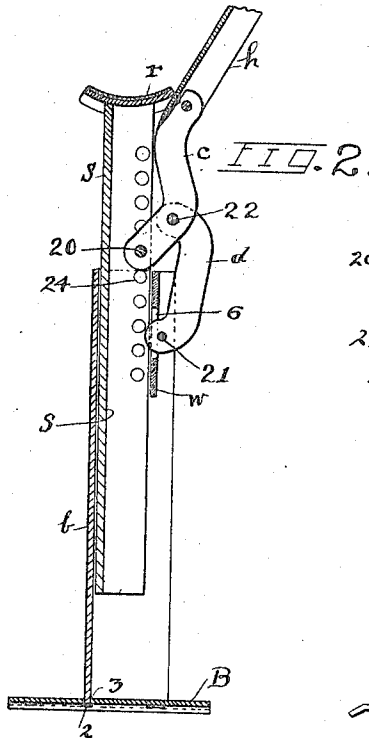
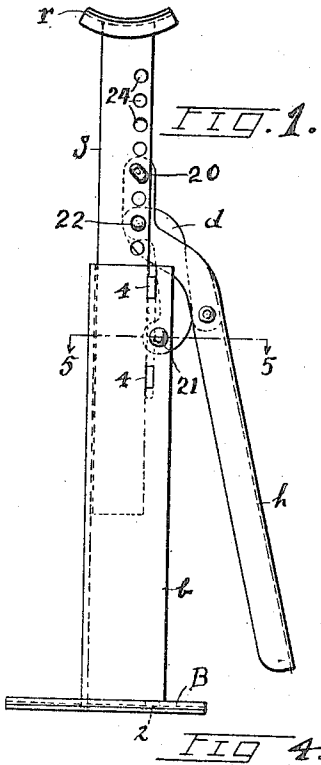
LIFT JACK.

APPLICATION FILED JULY 12, 1915.

Patented Dec. 12, 1916.

2 SHEETS—SHEET 1.

1,208,285.



WITNESSES:

Geo. E. Fischer.

INVENTOR.

J. H. BURKHOLDER.

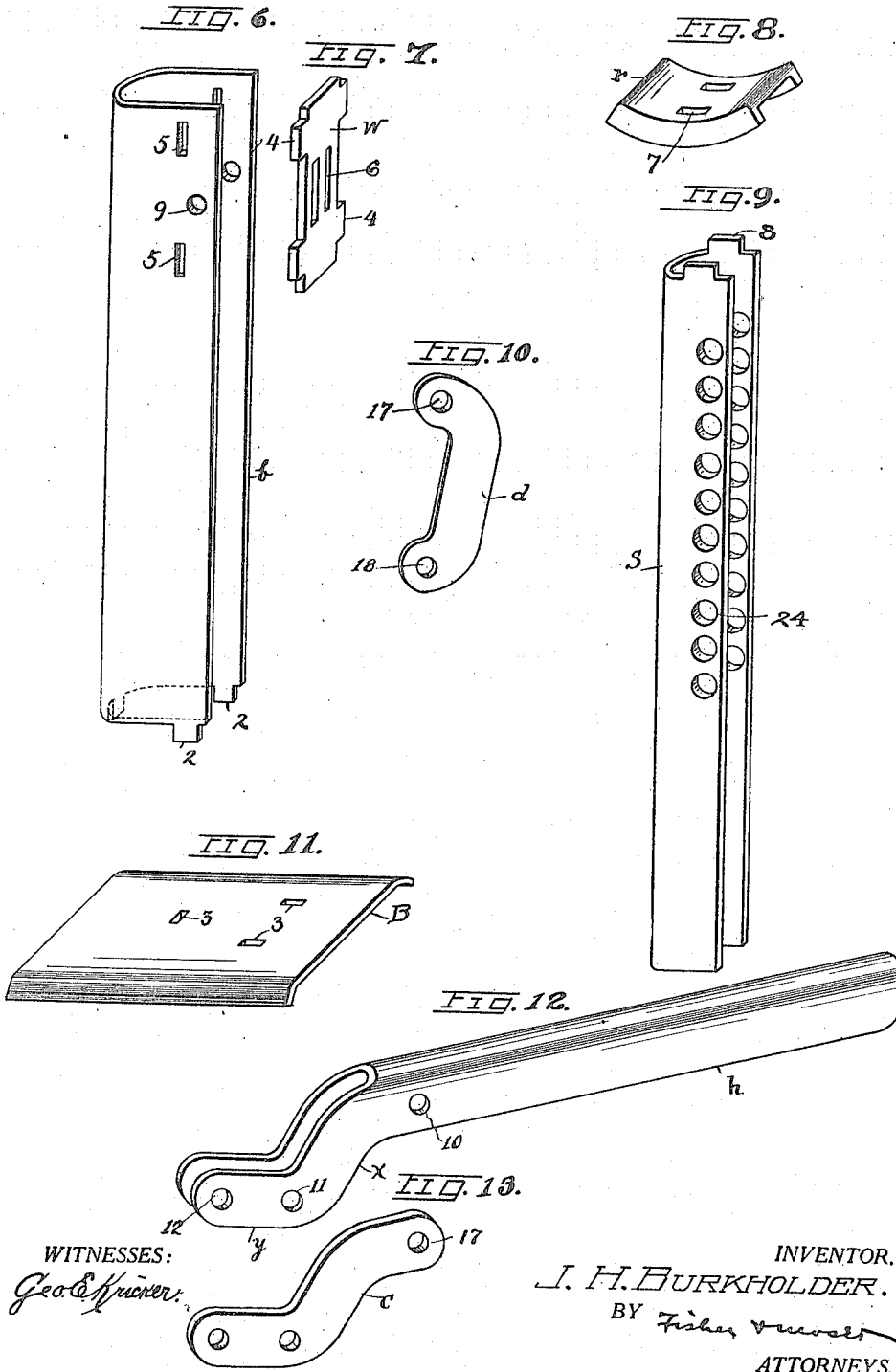
BY

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UNITED STATES PATENT OFFICE.

JOHN H. BURKHOLDER, OF ASHLAND, OHIO, ASSIGNOR TO THE ELITE MANUFACTURING COMPANY, OF ASHLAND, OHIO, A PARTNERSHIP.

LIFT-JACK.

1,208,285.

Specification of Letters Patent.

Patented Dec. 12, 1916.

Application filed July 12, 1915. Serial No. 39,270.

To all whom it may concern:

Be it known that I, JOHN H. BURKHOLDER, a citizen of the United States, residing at Ashland, in the county of Ashland and State of Ohio, have invented certain new and useful Improvements in Lift-Jacks, of which the following is a specification.

This invention pertains to lift jacks for automobiles and other vehicles, but is more especially intended for use as a tire saver of the jack type for machines having rubber tires.

In the accompanying drawings, Figure 1 is a side elevation of the machine with the handle down at end of its down stroke and Fig. 2 is a sectional elevation with the handle up in position, to be depressed to lift a load. Fig. 3 is a rear edge elevation of Fig. 2. Fig. 4 is a cross section of the jack above the handle pivot and showing the handle in substantially horizontal position. Fig. 5 is a cross section on line 5—5, Fig. 1, looking down.

Sheet 2 shows details of the jack in perspective; thus, Fig. 6 is a view of the body thereof and Fig. 7 of the brace plate set in the top of the said body between the sides thereof. Fig. 8 is a detail of the shoe which surmounts the lift standard and Fig. 9 is a view of the lift standard itself. Fig. 10 shows one of the two fulcrum links. Fig. 11 is a view of the base or bottom plate and Fig. 12 of the handle. Fig. 13 shows an inlaid reinforcing member for the handle.

From the foregoing views it will be apparent that the entire jack is struck up or stamped by means of suitable dies from sheet metal, which gives the jack obvious manufacturing advantages as well as providing the public with a cheap, simple and efficient article which is practically indestructible.

Structurally, the body *b* is of U pattern in cross section its entire length and provided with a plurality of tenons 2 adapted to be riveted in corresponding slots 3 in the base B, thus unifying said parts. The said body is open its entire depth and adapted to receive the U shaped lift standard *s*, which also is U shaped and conformed to the interior of the body in its rounded front and sides and operatively confined therein at its rear by the plate or webbing *w*. The said plate has lugs 4 at its edges riveted in cor-

responding slots 5 in the said body, and two parallel slots 6 vertically at its middle for use as hereinafter described. The shoe or rest *r* is permanently fixed on the top of the standard *s* by means of the slots 7 therein and lugs 8 on said standard.

The handle *h* likewise is of U shape in cross section except at its inner end which is cut away on its back, leaving it with two sides forming the shank thereof. The said sides have a compound bend edgewise, the first bend being downward on a curve to the necessary inclination and length to make the handle operative with the other parts and the outer portion thereof substantially parallel to the body of the handle. Three transverse holes 10, 11 and 12, are provided in the end of the handle and an inlaid reinforcing piece *c* is employed to give strength to the otherwise weakened shank of the handle and is bent like said shank and incorporated therewith by the rivets or pins through said holes 10 and 11 and at the pivot hole 12. Riveted connections 21 and 22 through said parts are preferred to secure said piece *c* permanently at holes 10 and 11, the cross connection 22 also serving to engage the fulcrum links *d* with the handle.

Two fulcrum links are employed in the present construction of jack, and they are shaped as seen in Fig. 10 with the ends bent or extending inward in respect to the body thereof so as to bring the holes 17 and 18 in its ends into position practically outside the lines of the body of the link, especially at the upper end. This throws said end with its pivot 22 in hole 17 inward across the dead center line taken on the pivots 20 and 21 when the handle is down to the limit of its down stroke and the handle is thereby locked against down pressure or weight on the left standard. The said handle itself is pivoted through holes 12 and the removable pivot pin 20 on the standard *s*, and the said standard is provided with a series of perforations 24 through both sides from its top downward a certain distance so as to provide the desired range of accommodation for machines of different wheel or axle elevation. Some are comparatively low and others high and any needed adjustment can be quickly made by these means.

It will be seen in Fig. 5, particularly, that the rivet 21 for the fulcrum links passes

through the body *b* and bears against the fixed plate *w* at its front and serves as a reinforcing medium therefor, and the fulcrum links *d* pivoted on said rivet find room for operation in the slots 6.

The series of opposite holes 24 in standard *s* are as near as possible to the edges of said sides so as to promote the locking of the handle when down by throwing its pivot on said standard out beyond the center line through the lower pivots 21 and 22.

In the use of the jack it is the practice to set the handle on the standard through the holes 24 according to the elevation of the vehicle with which the jack is to be used and so that the shoe will slip under the axle or the hub of the wheel with the handle in raised position. Then a single down stroke of the handle will lift the vehicle as much as needed and the handle automatically locks itself by reason of the off center position of the pivot 22 as described.

It is necessary that the handle have split ends with the back removed, both to bend the shank as shown and to afford room for the upper ends of the fulcrum members *d* to project upward through said shank when the handle is down, Fig. 1. It will be noticed that said members approximate a U shape having their perforated ends extending inward and cut away between said ends to enable the said members to throw their upper pivot within the dead center line, as above described.

By the term "inward" or "inner ends" I have reference to the relations from the standpoint of the operator and the jack at his front. Hence the first bend of the handle is inward from its own body.

What I claim is:

1. A lift jack having a U-shaped body in cross section and a lift standard of like formation therein having a series of transverse holes through the sides thereof, a cross piece connecting the sides of said body at its upper end behind said standard and confining the standard in sliding relations in the front portion thereof, in combination with a unitary handle having opposite flat sides at its end with a double bend edgewise and the extremity thereof in approximately a parallel plane with its body and pivotally engaged in holes in said standard over said body, and a pair of fulcrum links having inwardly extending extremities at their ends and the lower ends of said links pivoted within the sides of said body behind said standard and the upper ends pivoted within

the sides of said handle at the outer of said bends.

2. A jack as described, having a body and a lift standard of U shape in cross section and the rounded portions of said parts alike at the front and open at the rear, the standard being of less width than the body, a confining plate connecting the sides of said body behind said standard and a cross rod through the sides of said body relatively behind said plate, in combination with two flat fulcrum members pivoted on said cross rod at their lower ends within the sides of said body and a handle having said fulcrum members pivoted at their upper ends between the sides thereof and said handle pivoted at its extremity within the sides of said standard above the end of said body, the said handle having two bends in its fulcrum end between its inner and its outer pivot connections.

3. The jack described having a U-shaped body and a lift standard slidable therein of U shape in cross section and provided with a series of holes oppositely through its sides and edges, in combination with a handle U-shaped in cross section and having a shank with flat opposite sides open across its top and having two bends edgewise bringing the extremities of said sides into a plane nearly parallel with the body of the handle, a set of fulcrum links having inwardly extending extremities provided with holes and pivoted within the sides of the handle at their upper ends and within the sides of said body at their lower ends, and the said handle pivoted in one of said series of holes in the standard above said body.

4. The jack described having a U-shaped body and a U-shaped standard slidably mounted therein, a U-shaped handle having a split end with flat sides and a compound bend edgewise of the sides thereof and a reinforcing piece in said shank bent correspondingly thereto and fixed between the said sides, in combination with fulcrum members pivotally engaged between the sides of said shank and the sides of said reinforcing piece, and said handle pivoted on said standard through the extremity of its reinforced shank.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN H. BURKHOLDER.

Witnesses:

LERA A. MARKLEY,
C. C. CHAPMAN.