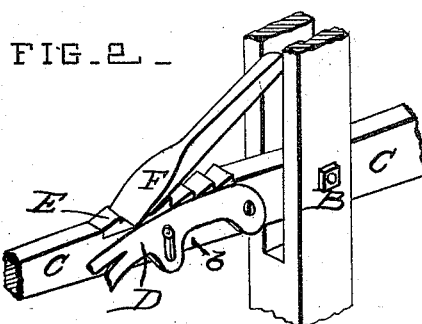
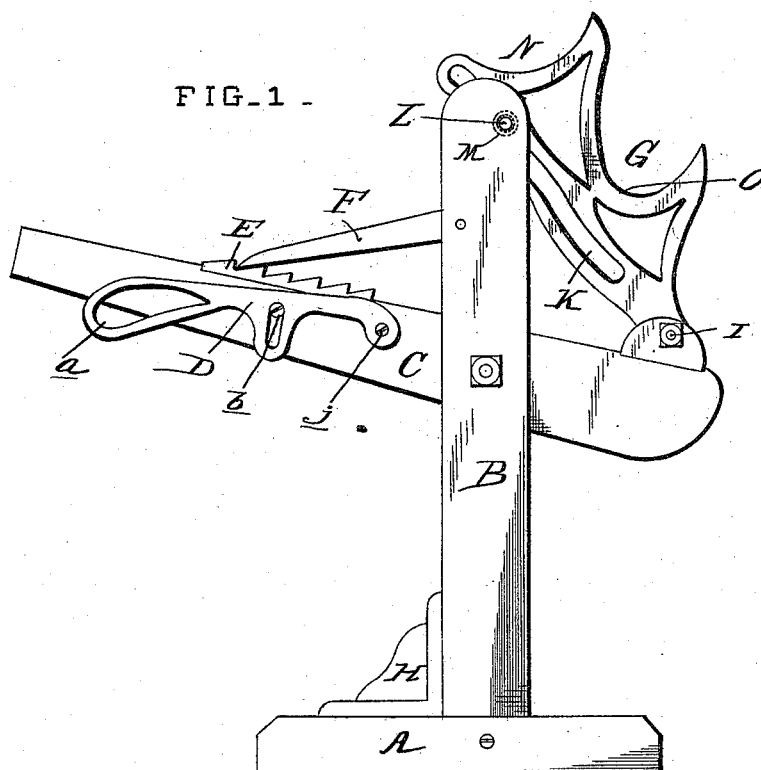


(No Model.)

W. B. BOYD.  
LIFTING JACK.

No. 535,089.

Patented Mar. 5, 1895.



**WITNESSES**

D. Gallatin  
Father Tomar's

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By Chas E. Barber  
" Atty.

# UNITED STATES PATENT OFFICE.

WILLIAM B. BOYD, OF WATERLOO, SOUTH CAROLINA.

## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 535,089, dated March 5, 1895.

Application filed November 9, 1893. Serial No. 490,439. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. BOYD, a citizen of the United States, residing at Waterloo, in the county of Laurens and State of South Carolina, have invented certain new and useful Improvements in Axle-Lifting Jacks, of which the following is so full, clear, and exact a description as will enable those skilled in the art to which my invention ap-  
10 pertains to make and use the same, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved jack. Fig. 2 is a sectional detail view show-  
15 ing locking and releasing devices.

The object of my invention is to provide a lifting jack by the use of which the axles of vehicles may be raised a sufficient distance from their normal elevations, as they extend  
20 from the hubs of the wheels to the vehicle, to facilitate the removal of the wheel for the purpose of oiling the journals and the ends of the axles.

Another object of my invention is to provide a lifting jack by the use of which the  
25 greatest weight may be lifted in the shortest possible time and with the least expense of physical and of mechanical force.

Another object of my invention is to construct a lifting jack, the construction of which  
30 shall be so simple and complete that there will be few parts to get out of order and one which may be manipulated by any person without previous instruction.

Another object of my invention is to provide a lifting jack by the use of which the  
35 axles of vehicles may be raised a sufficient distance to facilitate the oiling of the journals, and the axle locked in such elevated  
40 position, and held there, without liability of accidental collapse of the jack or dropping of the axle.

With these objects in view, my invention consists of a base piece A, to which is secured  
45 a standard B, and to which is pivoted a lever C. The lever C is provided with a rack bar or ratchet plate E which may be made of cast iron and secured to the lever, or which may be made of the same material as that of which  
50 the lever is made.

A catch or pawl F is pivotally secured somewhat above the pivotal point of the lever C,

and is adapted to fit into the several notches of the ratchet plate E, to hold the axle in an elevated position at any desired predeter-  
55 mined height. The lever C is provided with a releasing device for the catch or pawl which releasing device is designated by the letter D. This releasing device D is pivotally secured at *j* to the lever C. Said device  
60 is provided with a handle *a* having a loop extending through it, and about midway between the pivotal point and the handle is a slot through which extends a pin *b* which limits the upward and downward movement of  
65 the releasing device.

To the forward end of the lever C is pivotally secured by means of suitable brackets and a bolt I, an axle lift G which is provided  
70 with a curved slot K which extends along the axle lift vertically, and which embraces a bolt L which is encircled by the friction bearing or sleeve M to prevent friction. The axle  
rest is provided with two projections N and O, the upper one N, being for the rear axles  
75 of the vehicle or the one which is higher of the two axles of the vehicle, while the other one is for the lower axle. The axle lift has its slot K curved so the weight of the axle when on the upper side of the rest, when raised, is  
80 over the center of the standard.

At the junction of the standard B and the base piece A is a cast iron brace H, which is  
secured by bolts to both base piece and the standard to add strength to the structure. 85

The operation of my device is as follows: The lever C is raised at its rear end, which causes the projections which are to raise the axle to drop down toward the base of the lifting jack. Weight is then applied to the free  
90 end of the lever C and the axle is raised to the desired elevation, and the pawl engages with the ratchet plate on the lever C and locks it and securely holds it in elevated position. When it is desired to lower the axle,  
95 after the journal has been oiled, the releasing device D is raised as the lever C is lowered at its outer end and the pawl is disengaged from the ratchet plate and the axle  
100 is allowed to drop as the free end of the lever C is allowed to fly up.

While I have described this lifting jack as especially designed for use in oiling vehicles, and raising the axles of vehicles, it is obvious

that it may be used for other similar purposes without departing from the spirit of my invention, and without in any way interfering with its usefulness.

5 It will be observed that the standard has a central recess in its upper portion, across which extends the bolt L so that the axle-lift whose slot encircles the bolt rides on the bolt and is kept in place by the bolt, bringing the  
10 weight which is raised by the lifting jack, virtually over the line of the center of the base at all times.

It will be observed that the projections N and O form axle rests which are in the form  
15 of depressions on the face of the axle lift and the metal on the lift projects above the point where the axle rests, thus preventing it from slipping off and at the same time preventing the vehicle from being forced away from the  
20 jack causing the axle to slip from the jack, a serious defect in jacks heretofore used.

Having thus fully described my invention, what I believe to be new and of my invention, and what I desire to secure by Letters Patent of the United States, and what I therefore 25 claim, is—

In a lifting jack of the character described, the combination of a base and standard; with a lever pivoted to the standard, and an axle lift pivotally secured to said lever, and a 30 ratchet and pawl for locking the lever in position, and a releasing device provided with a slot and pivotally secured to the lifting lever, and a pin on the lifting lever which limits the movement of the pawl releasing device 35 through the slot, substantially as described.

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

WILLIAM B. BOYD.

Witnesses:

W. A. WHARTON,  
J. W. SHELL.