

1,424,748.

Patented Aug. 1, 1922.

FIG. 1

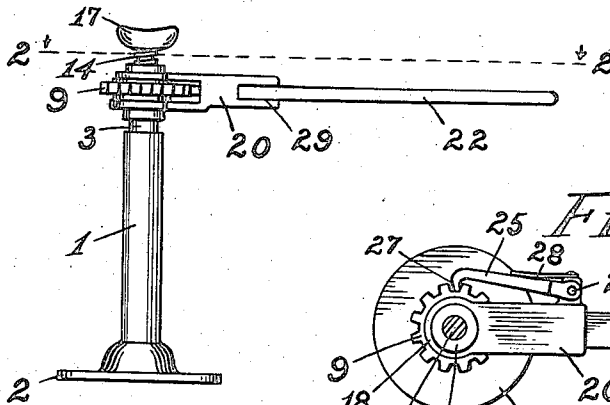


FIG. 2

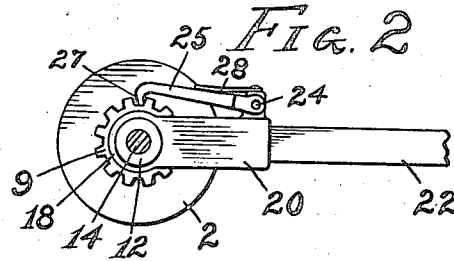


FIG. 3

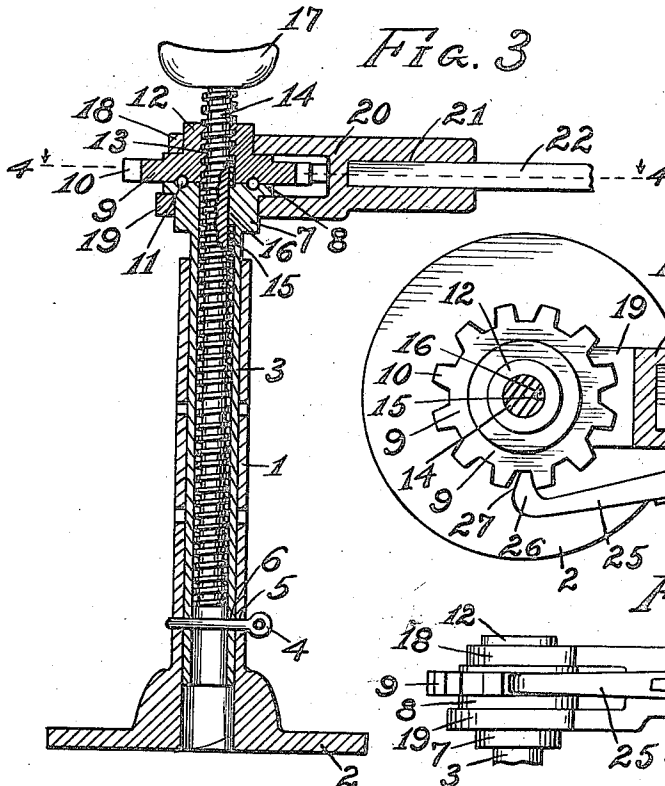


FIG. 4

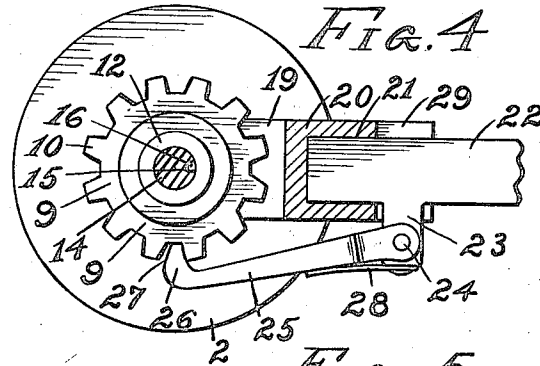
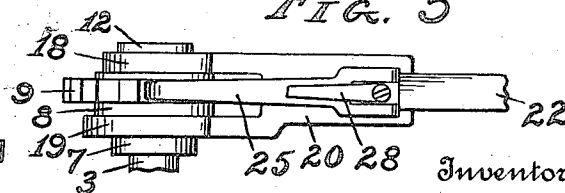


FIG. 5



Inventor
M. T. Stranahan

By

W. H. Lumsden,
his Attorney

UNITED STATES PATENT OFFICE.

MILES T. STRANAHAN, OF ELYRIA, OHIO.

LIFTING JACK.

1,424,748.

Specification of Letters Patent.

Patented Aug. 1, 1922.

Application filed April 2, 1920. Serial No. 370,679.

To all whom it may concern:

Be it known that I, MILES T. STRANAHAN, a citizen of the United States, residing at Elyria, in the county of Lorain and State of Ohio, have invented certain new and useful Improvements in Lifting Jacks, of which the following is a specification.

This invention relates to lifting jacks and has for its principal object to provide such a device of simple and durable construction, which requires but little effort to operate and is stable when in use.

Another object of the invention is to provide a lifting jack having a detachable operating lever, which may be readily removed for convenience in carrying the device in the tool box of an automobile, also that the operating lever may be changed to the opposite side for lowering the jack.

With the above and other objects in view as will be readily understood, the invention will be hereinafter fully described as illustrated in the accompanying drawings, and the novel features thereof will be distinctly pointed out in the appended claims.

In the drawings, similar characters of reference are used to designate corresponding parts.

Figure 1 is a side view of a lifting jack constructed in accordance with my invention,

Fig. 2 is a sectional plan view taken on line 2—2 of Fig. 1,

Fig. 3 is a vertical sectional view, on an enlarged scale, of the lifting jack,

Fig. 4 is a sectional view taken on line 4—4 of Fig. 3, the operating lever being at the opposite side to that shown in Fig. 2, and

Fig. 5 is a side view of Fig. 4.

Referring to the drawings, 1 represents a hollow standard having a base 2. Telescopically mounted within the standard 1 is a cylindrical shell 3, which is adapted to be set at different elevations and also held against rotation, by means of a pin 4 passing through aligning openings 5 in said standard and opposite openings 6 through said shell. The upper part of the shell 3 is increased in diameter to form a cylindrical neck 7, which is increased at its end to form a top flange 8. A power wheel 9 having teeth 10 is rotatably mounted upon the flange 8, and ball bearings 11 are interposed therebetween to reduce the friction formed integrally upon the upper side of the power

wheel 9 is a hub 12, and said wheel and its hub are bored out and internally threaded at 13 for the purpose of engaging the threads of a screw 14, which is loosely mounted in the hollow shell 3. The screw 14 is provided with a longitudinal groove 15 for permitting vertical movement upon a feather 16 projecting into said groove from the upper inside wall of the shell 3, which feather is adapted to prevent rotary movement of the screw when the power wheel 9 is rotated to cause vertical movement thereof. The screw 14 is provided with a suitably shaped head 17 for engaging the weights to be raised.

The power wheel 9 is rotated by means of the mechanism now to be described. Rotatably mounted upon the hub 12 and the neck 7, with the power wheel 9 therebetween, are upper and lower sides 18 and 19 respectively of a yoke 20, which is provided with a socket 21 for receiving an operating lever 22. Extending laterally from and formed integrally with the operating lever 22 is a lug 23, to which is pivotally connected at 24 a hook 25, having an inturned end 26, with a rear beveled side 27, which inturned end is adapted to engage the teeth 10 of the power wheel 9. A suitable spring 28 is fixed to the lug 23 and bears against the hook 25 for holding it in engagement with the power wheel. By pulling the operating lever forward, when the hook 25 is at the rear side thereof, as shown in Fig. 2, the power wheel 9 is rotated clockwise, thereby causing its internal threads 13 to act upon the threads of the screw 14, and thus force it upwardly. In pushing the operating lever in the opposite direction, the beveled rear side 27 of the end 26 of the hook, will slide over the teeth 10 of the power wheel, and the spring 28 will force the hook into engagement with said teeth. In order to lower the screw 14, the operating lever 22 is removed from the socket 21, turned over, and replaced in the socket, with the hook 25 at the front side thereof, as shown in Fig. 4, engaging a tooth of the power wheel. By pushing upon the operating lever 22, the power wheel 9 will be rotated counter-clockwise, thereby lowering the screw 14. The sides of the socket 21 of the yoke 20 are cut away at 29 to accommodate the lug 23 of the operating lever 22, whether the lever is applied with the hook 25 at either the rear or front side for raising or lowering the jack.

It is thought that the construction, operation, and advantages of the invention will be fully understood without further explanation.

5 Having fully described my invention, what I claim is:

1. In a lifting jack, the combination of a screw, means for supporting the screw, means for permitting longitudinal movement of the screw and preventing rotary movement thereof, a power wheel for causing longitudinal movement of the screw, a yoke, a lever, means pivoted to the side of the lever for actuating the power wheel, and the lever being removably connected to the yoke whereby the means pivoted to the side of the lever for actuating the power wheel may be changed to either side of the power wheel, substantially as described.

20 2. In a lifting jack, the combination of a screw, means for supporting the screw, means for permitting longitudinal movement of the screw and preventing rotary movement thereof, a power wheel for causing longitudinal movement of the screw, a yoke, a lever, a hook pivoted to one side of the lever for actuating the power wheel, and the lever being removably connected to the yoke whereby the lever may be connected to the yoke with the hook at either side of the power wheel, substantially as described.

3. In a lifting jack, the combination of a screw, means for supporting the screw, means for permitting longitudinal movement of the screw and preventing rotary movement thereof, a power wheel for causing longitudinal movement of the screw, a yoke, a lever, the yoke being provided with a socket for the attachment of the lever thereto, a lug extending from the side of the

lever, a hook pivoted to the lug for actuating the power wheel, and the lever being adapted to be inserted into the socket of the yoke to cause the hook to engage either side of the power wheel, substantially as described. 45

4. In a lifting jack, the combination of a screw, means for supporting the screw, means for permitting longitudinal movement of the screw and preventing rotary movement thereof, a power wheel for causing longitudinal movement of the screw, a yoke, a lever, the yoke being provided with a socket for the attachment of the lever thereto, a lug extending from the side of the lever, a hook pivoted to the lug for actuating the power wheel, and a spring fixed to the lug and tending to force said hook into engagement with the power wheel, substantially as described. 60

5. In a lifting jack, the combination of a screw, means for supporting the screw, means for permitting longitudinal movement of the screw and preventing rotary movement thereof, a power wheel for causing longitudinal movement of the screw, a yoke, a lever, the yoke being provided with a socket for the attachment of the lever thereto, a lug extending from the side of the lever, a hook pivoted to the lug for actuating the power wheel, a spring fixed to the lug and tending to force said hook into engagement with the power wheel, and the lever being adapted to be inserted into the socket of the yoke to cause the hook to engage either side of the power wheel, substantially as described. 75

In testimony whereof I affix my signature.

MILES T. STRANAHAN.