E. H. MARSHALL.

LIFTING JACK.

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1,223,995. Patented Apr. 24, 1917.

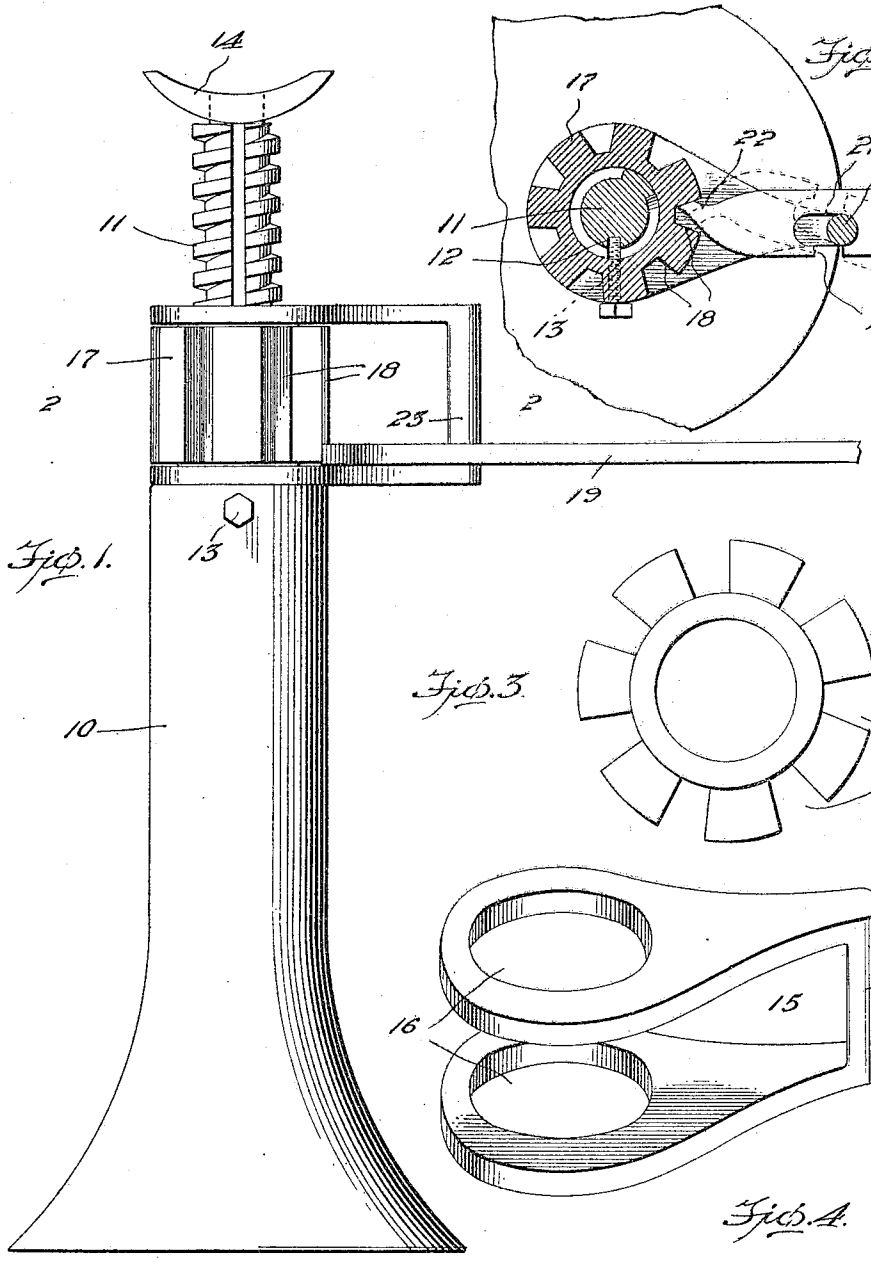


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Inventor.

E. H. Marshall

Witnesses

Paul W. Hunt.

M. Roberds

By David O. Moore.

Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

ERNEST H. MARSHALL, OF MONTEZUMA, IOWA.

LIFTING-JACK.

1,223,995. Specification of Letters Patent. Patented Apr. 24, 1917.

Application filed December 28, 1915. Serial No. 68,982.

To all whom it may concern:

Be it known that I, ERNEST H. MARSHALL, a citizen of the United States, residing at Montezuma, in the State of Iowa, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

This invention relates to improvements in lifting jacks, one object of the invention being the provision of a screw jack, in which the feed nut is so constructed as to be operated upon by a removably fulcrumed lever, which lever in turn is movably mounted to permit a forward or reverse rotation of the nut.

A further object of this invention is the provision of a screw lifting jack, which is simple, durable and inexpensive in construction, and thoroughly efficient and practical in use.

In the accompanying drawings:—

Figure 1 is a side elevation of the complete jack.

Fig. 2 is a cross section on line 2—2 of Fig. 1, with the two positions of the operating levers illustrated, one position being in full and the other in dotted lines.

Figs. 3 and 4 are detail views of the various parts of the jack.

Referring to the drawings, the numeral 10 designates the hollow base of usual construction, having mounted therein the screw 11, having the key-way 12, for the reception of the screw-key 13, which is carried by the base. Mounted upon the upper end of the screw is the usual work engaging member 14.

The yoke 15, is provided with the two openings 16 through the terminals thereof, and these openings fit loosely upon the screw, the lower terminal resting upon the top of the base, while mounted upon the screw between the terminals is the operating nut 17, which is provided with the longitudinal slots 18, the purpose of which will presently appear.

The operating lever 19, is provided with the fulcrum receiving opening 21, having leading thereto the slot 20, which is open to one side of the lever, the claw or prying end 22 thereof being reduced and formed to one side of the lever, so that when the lever is fitted upon the yoke as shown in Figs. 1 and 2, the end 22 will be placed in engagement with one slot 18, at a time, so that as the lever is reciprocated, rotation in one direction is imparted to the nut, and the feed screw is raised or lowered, according to the positioning of the opening 20 upon the reduced cylindrical fulcruming portion 23 of the yoke.

When the handle 19 is swung in one direction the claw 22 thereof binds in one of the slots or recesses 18 of the nut and turns the nut upon the jack screw 11. At the completion of the stroke of the handle, the latter is swung back to obtain a new grip upon the nut. In swinging the handle back the claw 22 thereof rides over the periphery of the nut, retracting the handle 19 by virtue of the longitudinal positioning of the opening 21. By this arrangement the pawl and handle are made in one piece, and no springs or other devices are required which are usually employed in devices of this nature. The yoke 15 supports the fulcrum 23 at the opposite sides of the lever so that there is no lateral binding of the lever upon the jack screw.

It will thus be seen that the lever may be shifted to change the relative position of the end 22 to the nut, so that the screw may be raised or lowered, the yoke of course being held rigidly to the upper end of the base.

What I claim, as new, is:—

In a lifting jack, the combination with a hollow base, a jack screw mounted in the base for vertical movement therein, and a nut threaded upon the jack screw and provided in its periphery with a plurality of rests, of a yoke embracing the nut and being mounted at its sides for free rotation upon the jack screw, said yoke having a rounded fulcrum portion joining the sides and being spaced from the nut, and a lever having a longitudinal slot therein near one end to receive the fulcrum portion of the yoke and having a laterally opening recess communicating with the slot to permit the easy engagement and disengagement of the lever with respect to said fulcrum, said lever having a laterally directed claw on said end adapted for engagement in said recesses of the nut, said longitudinal fulcrum-receiving slot being adapted to permit the retraction of the lever when reciprocated to obtain a new grip of the claw upon the nut.

In testimony whereof I affix my signature.

ERNEST H. MARSHALL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."