

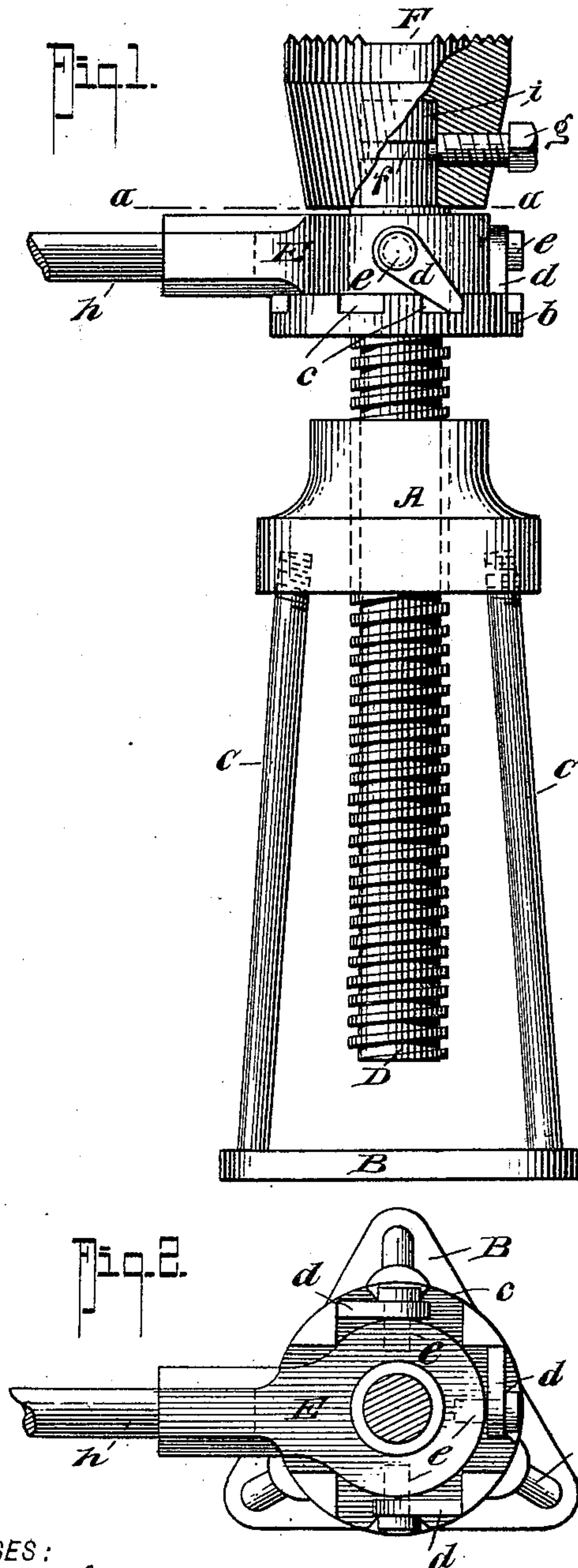
**No. 632,197.**

**Patented Aug. 29, 1899.**

**A. OLSEN.**  
**LIFTING JACK.**

(Application filed Nov. 1, 1898.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 632,197, dated August 29, 1899.

Application filed November 1, 1898. Serial No. 695,210. (No model.)

*To all whom it may concern:*

Be it known that I, ANDREW OLSEN, a citizen of the Dominion of Canada, residing at Nanaimo, in the Province of British Columbia, Canada, have invented a new and useful Lifting-Jack, of which the following is a specification.

My invention relates to improvements in lifting-jacks of that class in which the lifting is done by a screw; and the object of my invention is to provide means for operating the same by a very slight movement of the lever having pawls thereon which engage in a rack or pawl-recesses arranged around the upper outer side of a fixed ring or flange near the upper end of the lifting-screw.

I attain the above object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 shows an elevation of my lifting-jack; and Fig. 2 shows a plan of the same, sectioned on line *a a*.

Similar letters and numerals refer to similar parts throughout both views.

The top *A* of the frame of my jack is rigidly tied to the base-plate *B* by the pillars *C*. Threaded into the top piece *A* and passing downward therethrough is a stout screw *D*, and arranged near the top of this screw is a fixed flange *b*, which is provided on its top or upper side with pawl-recesses *c*. These recesses are placed at regular intervals and have vertical edges on both their pawl-engaging sides, so that a reversal movement for unwinding or lowering the screw may be effected, as will be fully understood presently.

Lying on top of the flange *b* and made to rotate freely on the top shank of the screw is a lever-socket *E*. Securely pivoted to the rounded end of this lever-socket are pawls *d*, these being secured by bolts or pins *e*. The said pawls are formed, as shown, so as to engage the rack close to their bearing-supports, and, as shown in Fig. 1, they are reversible, having oppositely-deflected teeth or dogs, so that when they are reversed the oppositely-projected teeth will engage in the opposite walls of the recesses, and thus provide for the lowering of the screw, as before mentioned.

Above the upper surface of the lever-socket the shank of the screw *D* is slightly reduced

in diameter, and arranged to turn on this, but resting on its end, is a head-piece *F*, the top of which is slightly enlarged to present a greater area of surface to the load being lifted, as is the case in other jacks of this class. To prevent the head-piece *F* from being detached from the shank of the screw, an annular groove is cut in said shank, as *f*, and a pin or bolt *g* is inserted therein. This allows the head to turn freely, but prevents it from becoming detached.

By reason of the pawl flange or ring *b* having the pawl-recesses therein, and the pawls *d* pivoted to the socket *E*, which is worked by the lever *h*, it is shown that a slight movement of such lever will turn the screw, and therefore the jack can be advantageously operated where very little space is available for the movement of the lever, this being one of the essential features of my invention.

It will be noticed that by forming the screw-shank with a fixed ratchet-flange *b* a smooth hub portion extending up centrally from the flange and terminating the hub portion in a shoulder or seat for the member *F* to rest on, providing the extremities of the said shank with a spindle member 2, adapted to fit the socket in the member *F*, and forming a spindle with an annular groove to receive the end of the adjusting-screw *g* a very compact, simple, and easily-manipulated arrangement of parts is produced. Thus by simply loosening the screw *g* the pawl-head *E* is readily detached without disorganizing any of the component parts. Again, it provides for a perfect and stable turn-plate for the rotary head *E*, as at no time will the member *F* bear frictionally against it, as the said member *F* is supported on the shoulder of the hub portion of the shank.

I am aware that jack-screws having a screw-shank provided with a fixedly-held flange carrying the ratchet portions has been provided, and I therefore make no claim to such construction; but

What I do claim, and desire to secure by Letters Patent, is—

A lifting-jack; comprising a supporting-frame having a threaded bearing; a screw-shank operating in said bearing; an annular bearing-flange fixedly connected with the



screw-shank, said bearing having a ratchet-top face, the screw-shank having a hub portion projected centrally up from the ratchet-flange, and terminating in a spindle of reduced diameter, whereby a seat or rest portion is provided, the said spindle having an annular groove; a lever-head rotatably mounted on the annular bearing-flange and the hub portion of the screw-shank; a pawl pivotally secured to said head and adapted to engage the ratchet-face of the annular flange, and a

rest member F, having a socket to receive the grooved spindle end of the screw-shank, and an adjusting-screw carried by the member F, adapted to engage the groove in the spindle, all being arranged substantially as shown and described. 15

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Witnesses:

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