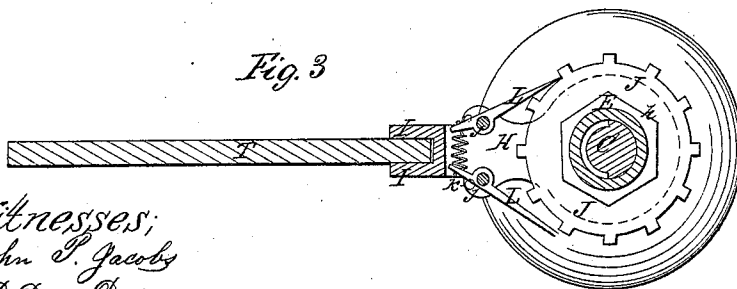
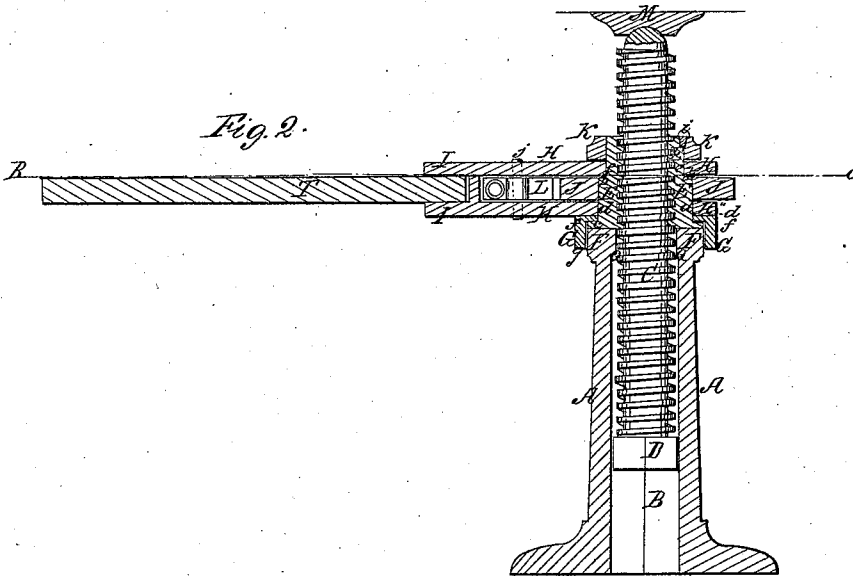
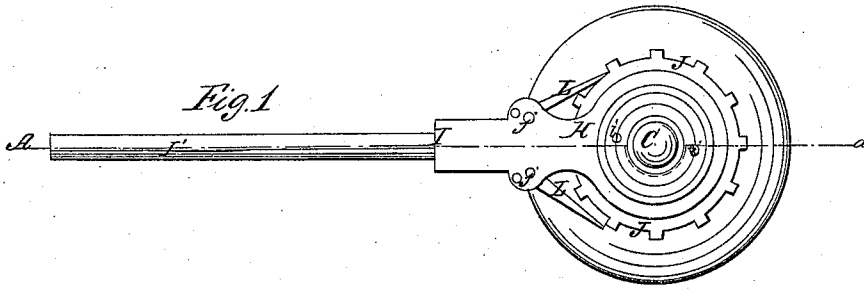


*C. B. Conant,
Lifting Jack.*

N^o 34,482.

Patented Feb. 25, 1862.



*Witnesses;
John P. Jacobs
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UNITED STATES PATENT OFFICE.

CHARLES B. CONANT, OF HARDWICK, MASSACHUSETTS.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. 31,482, dated February 25, 1862.

To all whom it may concern:

Be it known that I, CHARLES B. CONANT, of Hardwick, in the county of Worcester and State of Massachusetts, have invented a new and Improved Screw-Power or Lifting-Jack; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 represents a plan view of a lifting-jack embracing my said improvements. Fig. 2 represents a longitudinal section taken on line A a, Fig. 1; and Fig. 3 represents a horizontal section taken on line B c, Fig. 2.

In the accompanying drawings, A represents a hollow base or stand, the hollow or interior B being of polygonal form.

C is the operating or lifting screw, the lower part of which works up and down in the base or stand part A. This screw C is inserted or passed up from the bottom of the stand and has on its lower end a hub or boss D of polygonal form, which closely fits the interior of A, whereby it serves to guide the lifting-screw C and keep it in a central position, and also serves the further purpose of a stop or check to prevent the screw from being worked up out of the stand A by striking against the projection a on the upper interior part of A. E is the operating-nut, which fits and works on the screw C. It rests on the enlarged top F of stand A, its outer upper surface being turned or formed so as to present two shoulders b c. On the lower shoulder rests the inner projection f of the guide-collar piece G, the lower part g of the latter bearing against the outer surface of the enlarged part F of the stand A.

H is a pawl-holder, which is formed within two circular pieces of metal H' H'' and a shank I to receive a handle or lever I'. The circular parts H' H'' are horizontal, and are far enough apart to receive the ratchet J, which has a central opening h of polygonal form to fit on or over a portion E' of nut E, which is made of a corresponding form. The lower circular part H'' fits and turns on the circular part d of nut E, while the upper circular part H' fits and turns on the circular part e of the same nut. The part H'' rests on the upper surface of collar G, while the part H' rests on the shoulders b of nut E. Nut E and the pawl-holder are held securely

together by means of a cap-piece K', which fits on or over the upper part of nut E and on top of the pawl-holder, where it is held by screws or bolts r' r', which take into both the collar and nut, as indicated in the drawings.

In the holder H there are placed two pawls L L, which turn on pivots or pins j j. The outer ends of these pawls are forced apart by means of a contracted spiral spring placed between them and so connected thereto as not to get out of place, whereby the inner ends of the pawls are always kept in contact or engaged with the ratchet J, as will be understood by referring to Fig. 3.

Either of the pawls L may be disengaged from the ratchet by inserting a pin k in the pawl-holder, as shown in Fig. 3.

On the upper end of screw C there is placed a cap M to bear against the object to be raised or compressed.

From the above description it will be seen that by moving or vibrating the lever I' the ratchet J and nut E will be turned, thus elevating or depressing screw C, according to the direction in which the nut and ratchet are turned, which will depend on which pawl is permitted to engage the ratchet-wheel J.

The extent of the utility and practical value of a lifting-jack depends in a great measure on the construction, and consequently that construction which renders the device the strongest and least liable to get out of order by the separation or breaking of the parts, other things being equal, is to be preferred, since when in use it is often far removed from any shop where repairs can be made, and often under circumstances in which delays are both dangerous and expensive—as, for instance, on railroads. Again, the device is often used by persons not skilled in the mechanic arts, or even with the particular construction of the device, and it is therefore very important that it should be so constructed as not to get out of order easily. I have carefully regarded all of these facts in the production of my improved lifting-jack or screw-power.

By the use of a screw having a polygonal boss or hub on its lower end to fit the interior of the stand, as before stated, no "feather" or "groove" is required to keep the screw from turning, while the strain is divided on both the screw and stand. Again, by the use

of said boss or hub in connection with the guide-collar G the screw is properly guided in its movements up and down, while any lateral strain at the top of the screw is transferred to the outside of the top of the stand A, and consequently there is less danger of bursting the hollow stand or of injuring the screw, the screw-thread not coming in contact with the stand A at all, but is free to slide up and down therein. Again, there is no danger of turning the screw out of the stand, since the boss or hub on its lower end will come in contact with the projection on the inner side of stand A and prevent it. In consequence of the enlargement F and the use of the guide-collar G, nut E is guided with ease and in a firm manner, since its base is extended much beyond its thread.

I do not claim, broadly, the employment or use of a screw operated by a nut; but

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

1. The combination, with the stand A and screw C, of the boss or hub D, collar G, and internal projection *a*, substantially as and for the purposes set forth.

2. The combination, with the screw C and stand A, of stop or hub D, projection *a*, nut E, pawl J, guide-collar G, holding-collar K, and the pawl-frame H, substantially as and for the purposes set forth.

CHARLES B. CONANT.

Witnesses:

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