

(No Model.)

F. B. STEVENS & G. BONNER.
Combined Screw and Lever and Traversing Jack.
No. 243,646.

Patented June 28, 1881.

Fig. 1.

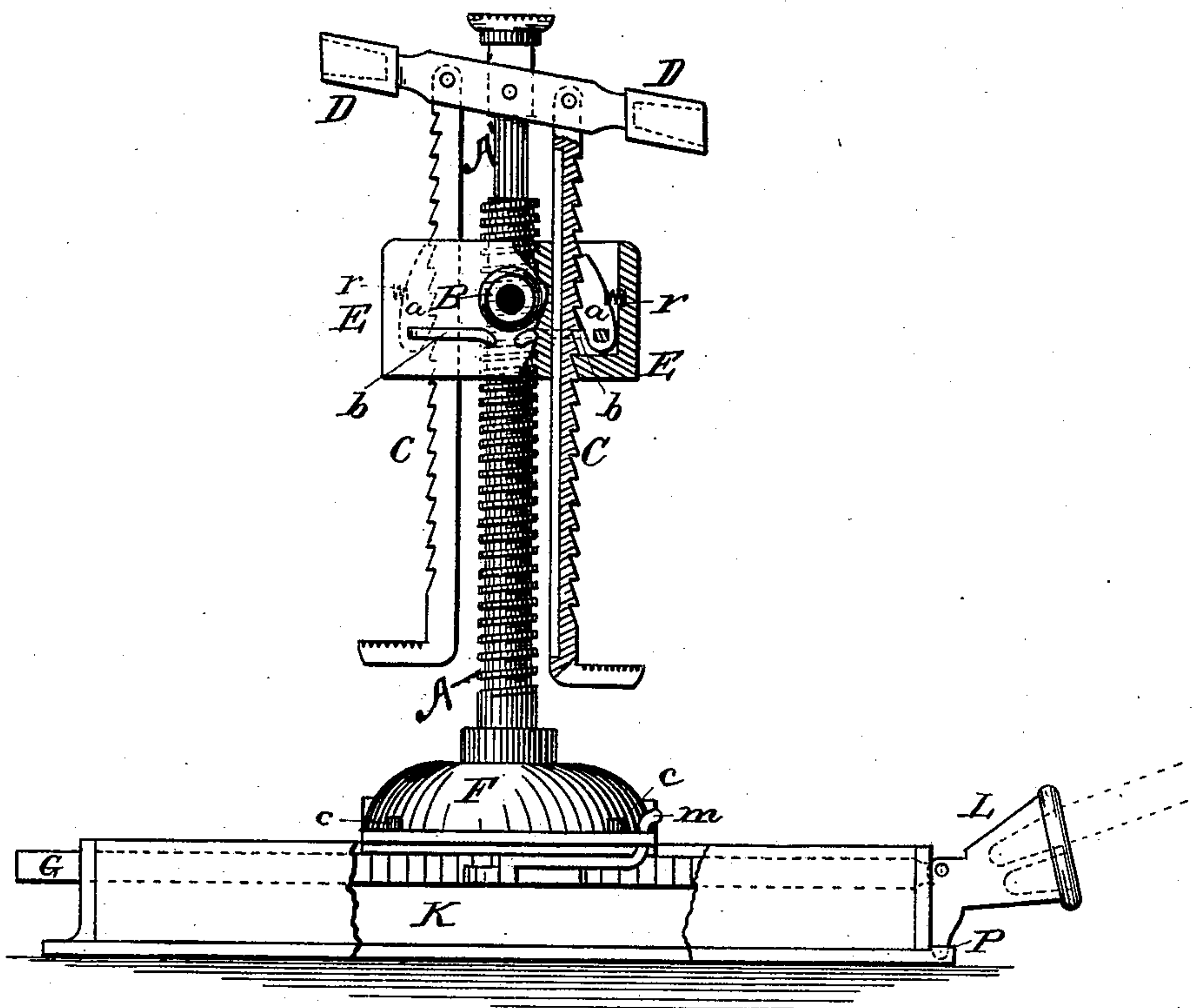


Fig. 2.

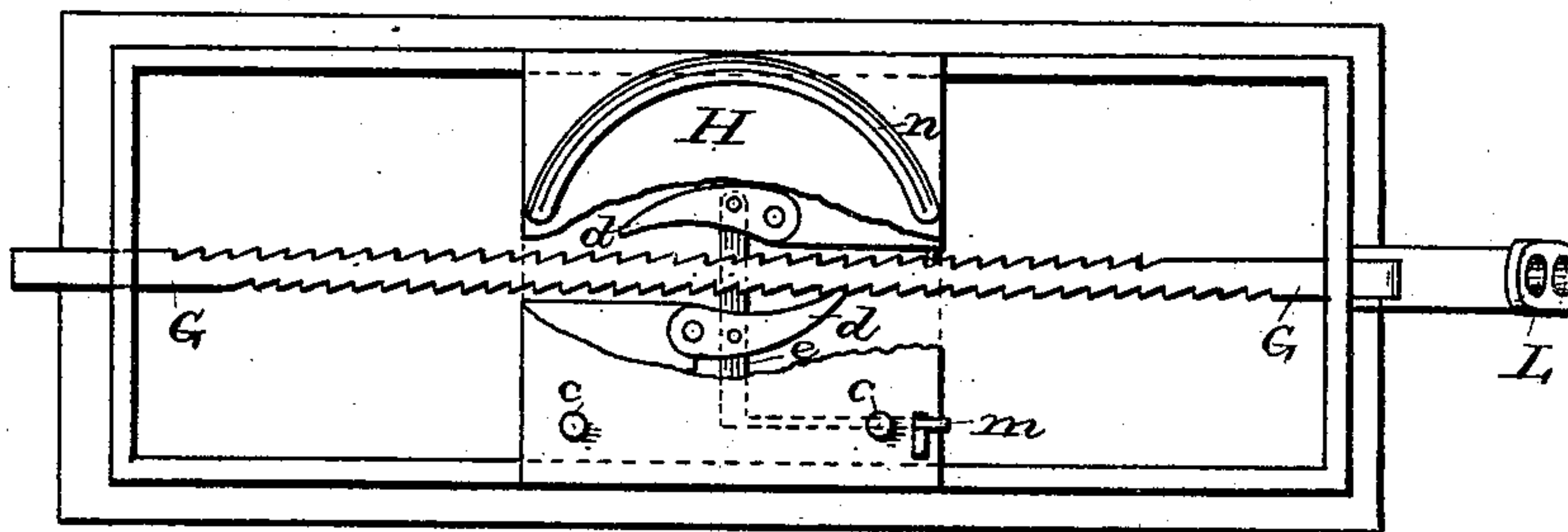
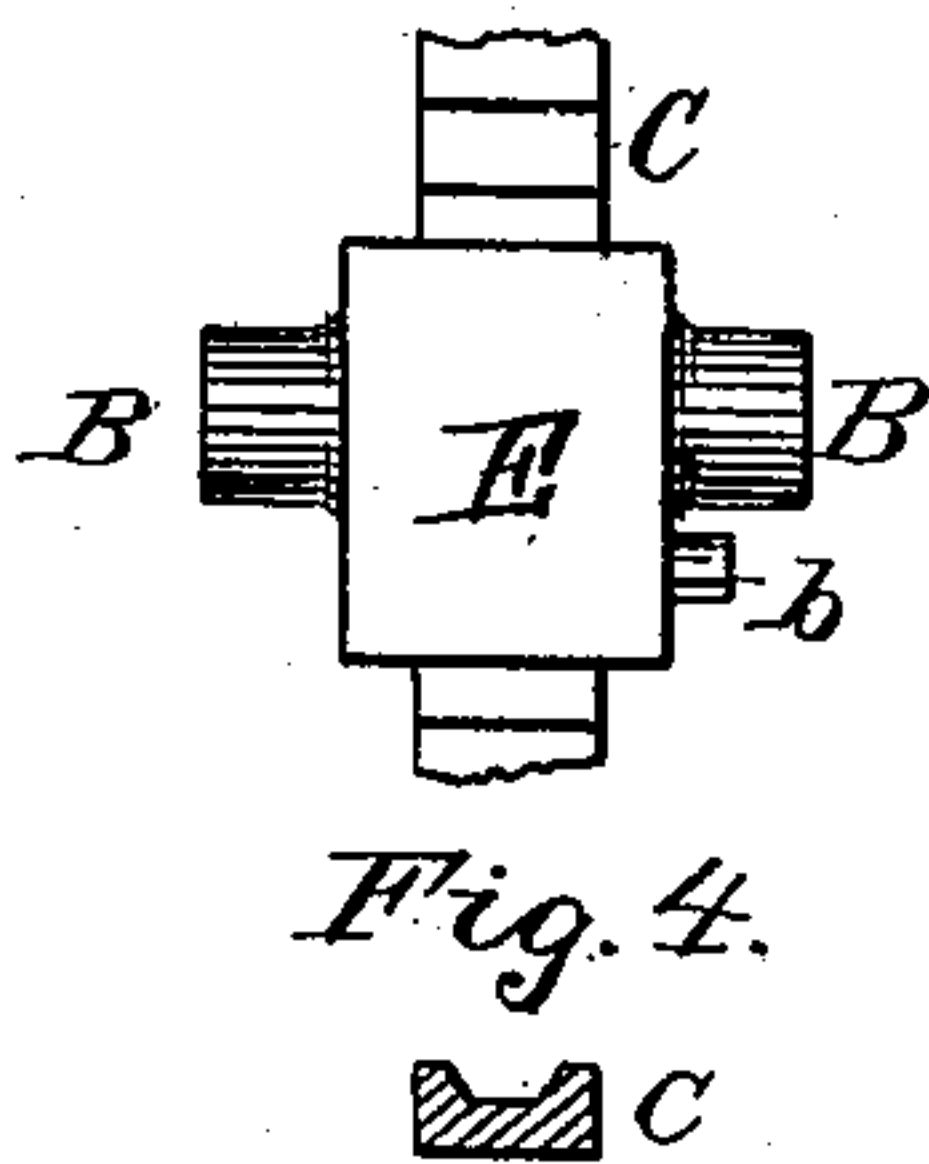


Fig. 3.



Witnesses:

J. W. Garner.
W. J. Asgood.

Inventors:

Franklin B. Stevens
George Bonner
Hyman & Kane
Attys

UNITED STATES PATENT OFFICE.

FRANKLIN B. STEVENS AND GEORGE BONNER, OF PORT HURON, MICHIGAN,
ASSIGNORS OF ONE-HALF TO CHARLES B. PECK AND WILLIAM BONNER,
OF SAME PLACE.

COMBINED SCREW AND LEVER AND TRAVERSING JACK.

SPECIFICATION forming part of Letters Patent No. 243,646, dated June 28, 1881.

Application filed May 11, 1881. (No model.)

To all whom it may concern:

Be it known that we, FRANKLIN B. STEVENS and GEORGE BONNER, of Port Huron, in the county of St. Clair and State of Michigan, have invented a new and useful Improvement in a Combined Screw and Lever Lifting and Traversing Jack; and we do hereby declare that the following is a full, clear, and exact description of the improvement, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

This invention relates to lifting-jacks or means for raising objects; and it consists in the combination, with a screw and lever lifting-jack, of a mechanism for traversing the same upon a bed and a shifting means, as will be hereinafter set forth.

It also consists in triple gripe-pawls arranged in a casing, double-ended slotted lever, with pendent rack-bars, and trips.

It also consists in the combination and arrangement of parts, as will be hereinafter more fully described and claimed.

Figure 1 of the drawings is a side view, partially in sections, of our improved jack. Fig. 2 is a top or plan view of the bed or foundation frame, showing the traversing and shifting mechanism. Fig. 3 is an end view of casing E, showing the side sockets, B B, and one of the trips b. Fig. 4 is a transverse sectional view of one of the racks C.

The letter A represents the screw-threaded tube within which the adjustable lifting-bar A' moves. The lower end of the screw-threaded tube is firmly connected to the dome-shaped block F, thereby affording a firm base.

To the upper end of the lifting-bar A' is pivoted the double-ended slotted or socketed lever D, from which, on opposite sides from the center, are pivoted the pendent rack-bars C C, substantially as shown in Fig. 1 of the drawings. These rack-bars C, suspended from the double-ended lever D, pass through vertical slots or openings in the casing E, surrounding a portion of the screw-threaded tube J.

The letters a a are triple gripe-pawls resting on the inside at bottom of casing E, held in position by means of pins attached to trips b b on side of the casing, and in position against the rack-bars C C by spiral springs r r, as seen in Fig. 1 of the drawings.

Heretofore the pawls employed were single, without any support on casing, the whole strain, when lifting, resting on the pins attached to the triple gripe-pawl on lower side of casing. The employment of the triple gripe-pawls gives better security when lifting, owing to the triple gripe on the rack, and is easier tripped on side of casing.

On each side of the screw-threaded tube are arranged projections B B on side of casing E, so formed as to receive lever or levers for the purpose of turning the casing on the screw-threaded tube, in connection with slotted lever D, when it is necessary to lower the height independent of the pawls a a. The slotted lever D is made double, so that double the manual labor can be employed when circumstances will permit of it, and to be used in connection with the socket-projections B B on side of casing for lowering or raising independent of the racks. The rack-bars c c are grooved or channeled to secure lightness and strength.

The letter K represents the bed or foundation frame, preferably rectangular, upon which is mounted, in a suitable manner, the lifting-jack, hereinbefore described.

The letter H represents the sliding plate or platform, formed with the segmental flange n, and provided with the fastening-pins c c, to which the lifting-jack is attached. This platform H, with the jack and its lifting mechanism, is operated horizontally by the double-face rack-bar G, worked by a lever inserted in the fulcrum-block L, which latter is connected to the rack-bar G by means of a knuckle-joint at P.

To the under side of the sliding plate or platform H are pivoted the pawls d d, so as to engage on opposite sides of the rack-bar G, and in the manner as seen in Fig. 2 of the drawings.

The forward and backward motions of the

traversing mechanism are shifted or changed by means of the connecting-bar *e*, attached to the pawls *d d* and the spring pin or lever *m*.

From the foregoing description it will be seen, in connection with the drawings, that we have a combined screw and lever lifting-jack which is mounted upon a plate or platform, and the same operated by means of a traversing mechanism, the advantages of which are well understood by those skilled in the art.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, with a screw and lever lifting-jack, of a mechanism for traversing the same upon a bed, and shifting means *d* and *e*, substantially as described.

2. The combination, with the screw and le-

ver lifting-jack, of a traversing mechanism consisting of the double rack-bar *G*, with fulcrum-block *L* and pawls *d*, substantially as described.

3. The combination, substantially as described, of the triple pawls *a a*, arranged within the casing, the double-ended slotted lever *D*, rack-bars *C C*, and the trips *b b*, arranged on the side of the casing, and fastened through square apertures in the pawls *a a* with the spiral springs *r r*.

FRANKLIN B. STEVENS.
GEORGE BONNER.

Witnesses:

WM. T. MITCHELL,
THOMAS WELLMAN.