

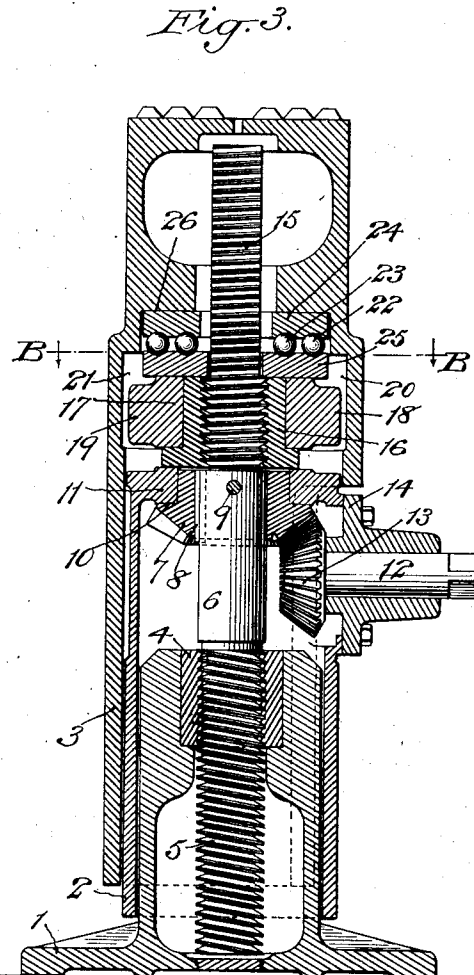
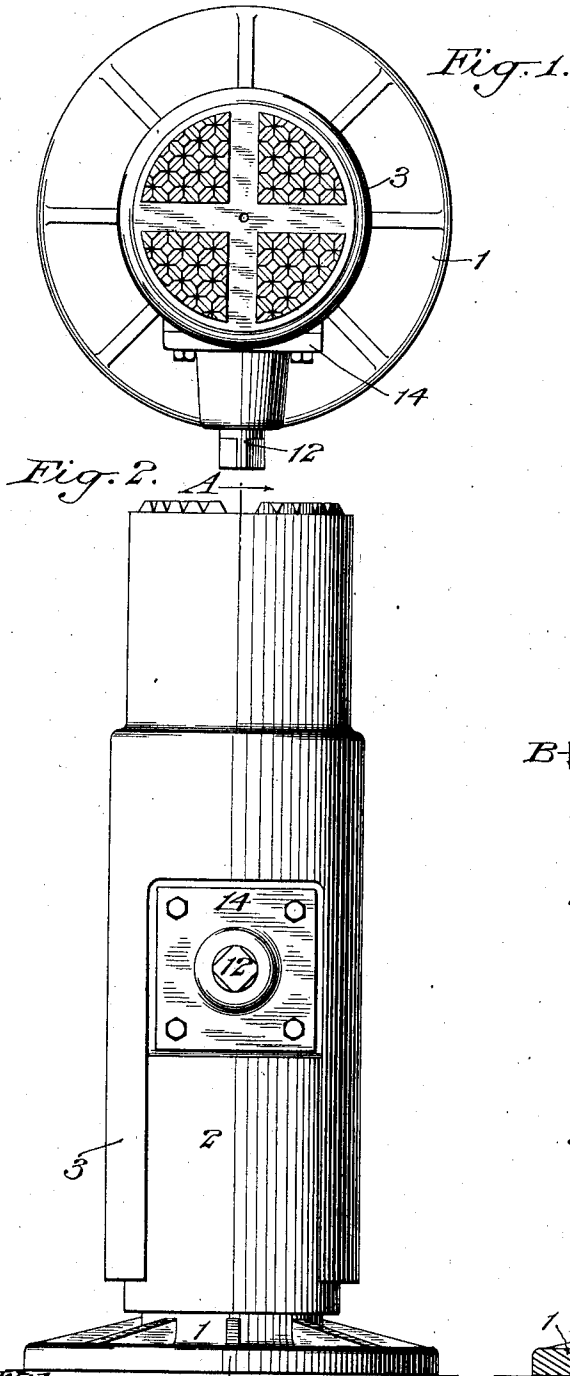
C. L. CRABB.
LIFTING JACK.

APPLICATION FILED JUNE 8, 1910. RENEWED FEB. 2, 1912.

1,037,874.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.



Witnesses:
J. George Barry.
Nancy C. Thoms.

Inventor:
Charles L. Crabb
by his attorneys
Mount Seward

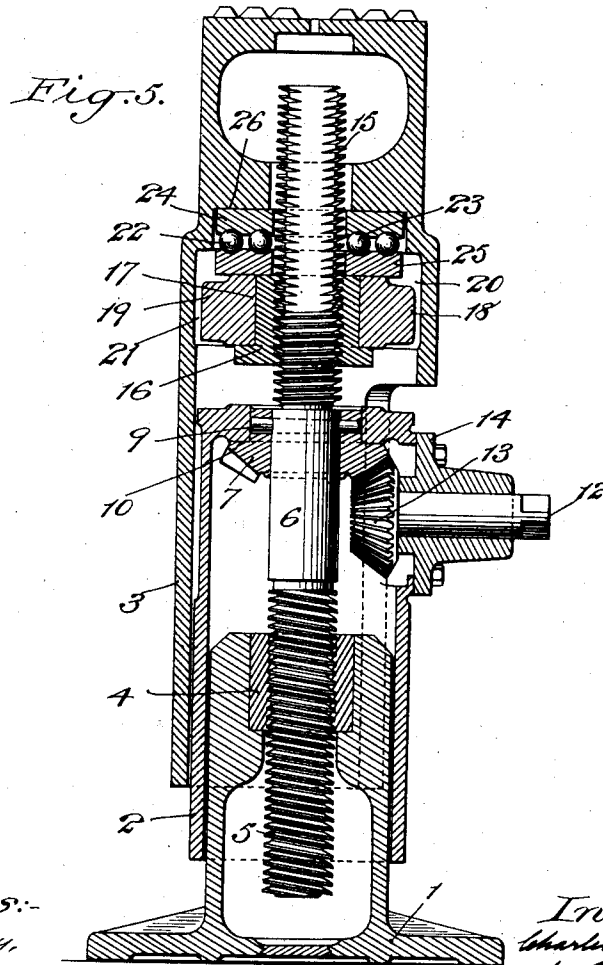
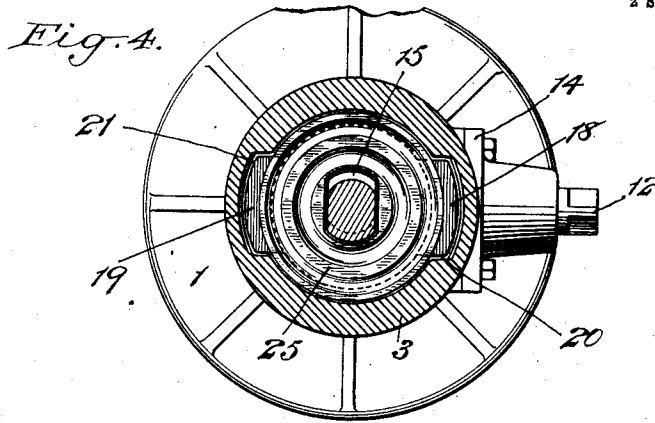
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Witnesses:-
F. George Barry,
Henry C. Thoms.

Inventor:-
Charles L. Crabb
by his attorneys
Thompson & Ward

UNITED STATES PATENT OFFICE.

CHARLES L. CRABB, OF PEAPACK, NEW JERSEY, ASSIGNOR TO TOPPING BROTHERS, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

LIFTING-JACK.

1,037,874.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed June 6, 1910, Serial No. 565,172. Renewed February 2, 1912. Serial No. 675,048.

To all whom it may concern:

Be it known that I, CHARLES L. CRABB, a citizen of the United States, and resident of Peapack, in the county of Somerset and State of New Jersey, have invented a new and useful Improvement in Lifting-Jacks, of which the following is a specification.

This invention relates to an improvement in lifting jacks and has for its object to provide a device in which an oppositely threaded double lifting screw is provided whereby each turn of the screw will lift the intermediate member of the jack a predetermined distance above the lower member or base, and, at the same time, will lift the upper member of the jack a predetermined distance with respect to the intermediate member thus lifting the upper member away from the lower member or base a distance the sum of the movements of the intermediate and upper members.

A further object is to provide a jack of the above character which will be very simple in construction, easy to operate, and strong and durable.

A practical embodiment of my invention is represented in the accompanying drawings, in which—

Figure 1 represents the lifting jack in top plan, Fig. 2 is a side view of the same with the parts in their lowered position, Fig. 3 is a section taken in the plane of the line A—A of Fig. 2, looking in the direction of the arrows, Fig. 4 is a transverse section taken in the plane of the line B—B of Fig. 3, looking in the direction of the arrows, and Fig. 5 is a section similar to Fig. 3, with the intermediate and upper members raised a predetermined distance away from the lower member or base.

The lower member or base of the jack is denoted by 1, the intermediate member by 2 and the upper member by 3. These three members are hollow and are arranged to telescope one within the other. The lower member 1 is provided with a nut 4 arranged to receive the lower screw threaded portion 5 of an oppositely threaded double screw 6.

A bevel gear 7 is secured to the central portion of the double screw 6 at the top of the intermediate member 2 of the jack, in

the present instance by providing a feather 8 and pin 9. This bevel gear 7 is provided with a shoulder 10 upon which the top 11 of the intermediate member 2 rests.

A horizontal shaft 12 is provided with a bevel gear 13 which meshes with the bevel gear 7 within the intermediate member 2. This shaft 12 is mounted in suitable bearings in a plate 14 secured to the intermediate member 2.

A crank handle, not shown herein, or any other device, may be attached to the shaft 12 for rotating the same to raise and lower the jack.

The upper portion 15 of the double screw 6 is threaded oppositely from the lower portion 5. This upper screw threaded portion 15 engages the bushing 16 of a traveling nut 17, which nut is provided with oppositely arranged lugs 18, 19, located in recesses 20, 21, in the inner walls of the upper member 3 for preventing the nut from turning.

An anti-friction bearing is interposed between the upper member and the traveling nut, as follows:—One or more annular rows of balls, in the present instance two rows 22, 23, are interposed between upper and lower bearing plates 24, 25. The lower bearing plate 25 is made to turn with the double screw 6 so as to insure a rolling action of the balls between the upper and lower plate. This is accomplished in the present instance by cutting away the opposite sides of the upper screw threaded portion 15 and forming the hole through the lower bearing plate 25 to loosely fit the cross sectional form of the cutaway portion of the screw.

The upper member 3 of the jack is provided with an extended shoulder 26 resting upon the upper bearing plate 24 so as to give great strength and rigidity to the jack when in its raised position.

In operation, as the oppositely threaded double screw 6 is turned by the rotation of the shaft 12 to lift the jack, the intermediate member 2 will be lifted a predetermined distance with respect to the lower member 1 by the engagement of the lower screw threaded portion 5 with the nut 4. At the same time, the upper member 3 will be

lifted a predetermined distance with respect to the intermediate member 2 by the engagement of the upper screw threaded portion 15 with the traveling nut 17. Therefore, the total lifting of the upper member 3 will be the sum of the distances traveled by the intermediate member and the upper member.

It is evident that various changes might be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of my invention; hence I do not wish to limit myself strictly to the structure herein set forth, but

What I claim is:—

1. A lifting jack comprising telescoping upper, lower and intermediate members and an inclosed oppositely threaded double screw supporting the intermediate and upper members and having its oppositely threaded portions engaged with the upper and lower members respectively.

2. A lifting jack comprising telescoping upper, lower and intermediate members, an inclosed oppositely threaded double screw supporting the intermediate and upper members and having its oppositely threaded portions engaged with the upper and lower members respectively and means

carried by the intermediate member for turning the screw.

3. A lifting jack comprising telescoping upper, lower and intermediate members, an inclosed oppositely threaded double screw supporting the intermediate and upper members and having its oppositely threaded portions engaged with the upper and lower members respectively and means for turning the screw comprising an operating shaft carried by the intermediate member and a bevel gear connection between the shaft and double screw.

4. A lifting jack comprising telescoping upper, lower and intermediate members, a traveling nut interlocked with the upper member and an oppositely threaded double screw supporting the intermediate and upper members and having one of its threaded portions engaged with the lower member and its other threaded portion engaged with said traveling nut.

In testimony, that I claim the foregoing as my invention, I have signed my name in presence of two witnesses, this 7th day of May, 1910.

CHARLES L. CRABB.

Witnesses:

C. R. KAY,
WM. J. TIGA.