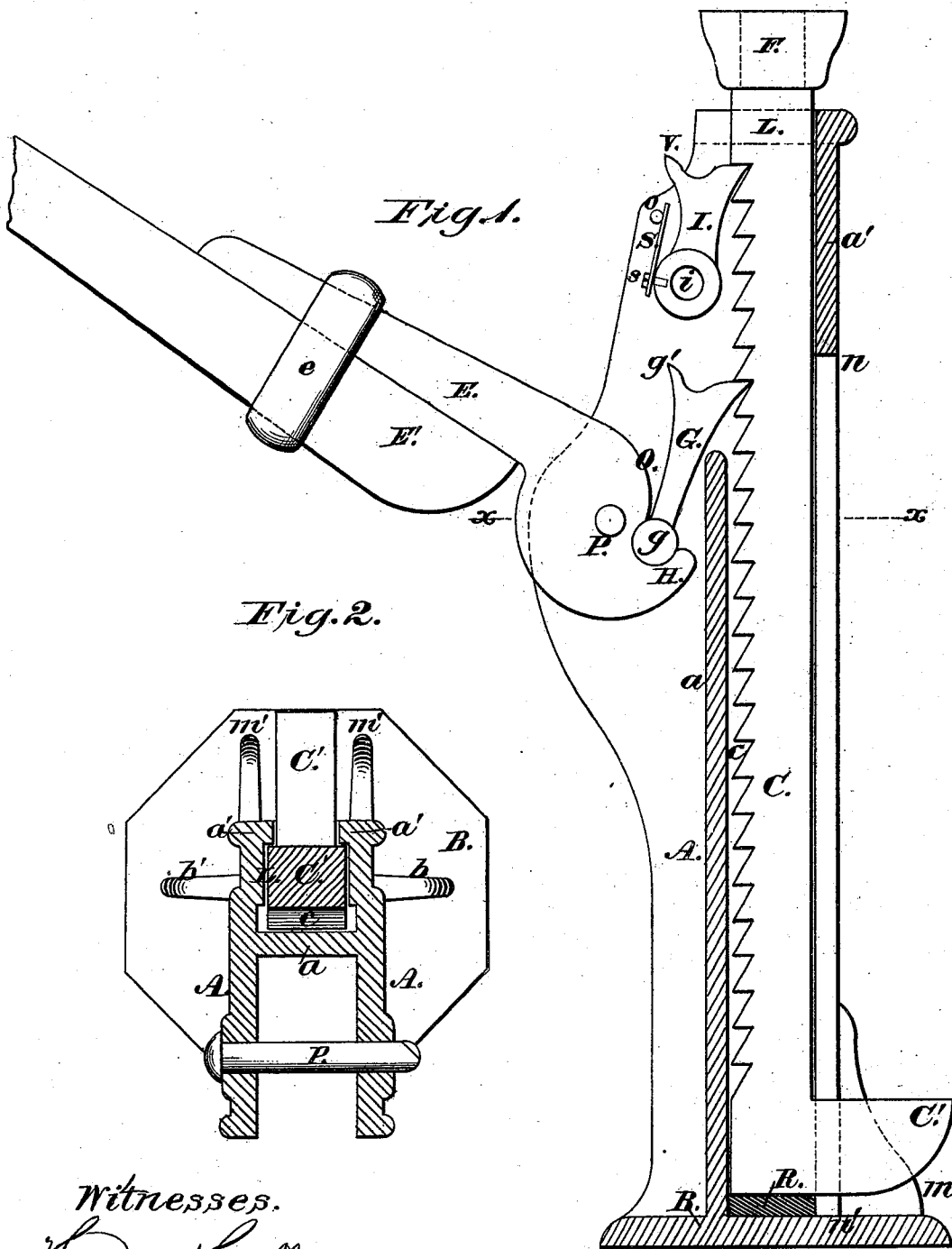


J. O. JOYCE.
LIFTING-JACK.

No. 172,924.

Patented Feb. 1, 1876.



Witnesses.
Herman Merrill.
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Inventor.
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Att'y

UNITED STATES PATENT OFFICE.

JACOB O. JOYCE, OF DAYTON, OHIO.

IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **172,924**, dated February 1, 1876; application filed July 30, 1875.

To all whom it may concern:

Be it known that I, JACOB O. JOYCE, of Dayton, in the county of Montgomery and State of Ohio, have invented certain Improvements in Lifting-Jacks, of which the following is a specification:

This invention relates to certain improvements in the construction of lifting-jacks, which are fully described hereinafter.

In the accompanying drawing, Figure 1 represents a central vertical section of my improved lifting-jack, and Fig. 2 a transverse section on the line *xx* of Fig. 1.

The letters *A A* represent the sides of the frame, and *a a'* the front and rear portions thereof, and *B* the base, all of which are preferably cast in a single piece, with a vertical slot extending from near the top to the bottom, in the rear part *a* of the frame, as indicated, between the letters *n n'*. The front part *a* of the frame terminates at a sufficient distance below the top of this slot to permit of the ready introduction of the lifting-bar *C*. In suitable projecting and curved portions of the side frames *A A*, at the front of the jack, is journaled the lifting-lever *E*, and within a rounded seat in the end of this lever is arranged the lifting-pawl *G*, the lower end of which is also rounded, as at *g*, so as to form what might be termed a "knuckle-joint." The head of the lever is provided with a rounded surface, *o*, so that when the lever is sufficiently elevated, the said surface will come in contact with the lifting-pawl *G*, and throw or force the same in engagement with the rack-bar *C*.

The lifting-pawl *G*, by this construction and arrangement, will incline at an angle to a perpendicular line drawn through the center of *g*, so that its own weight will cause it to engage quickly with the teeth of the ratchet *c* on the lifting-bar *C*.

The head of the lifting-pawl is provided with a thumb-piece or projection, *g'*, by which it may be caught and drawn back when the lifting-bar is to be run down in the frame. The holding-pawl *I* is pivoted, as at *i*, between

the side frames *A A*, and its head takes against or under the notches in the lifting-bar *C*, to hold said bar while the lifting-lever is raised to take a new purchase or set. The holding-pawl *I* is thrown inward against the notches of the bar *C* by a spring, *s*, as shown, and is provided with a thumb-piece, *V*, by which it may be drawn back when desired.

The cylindrical pawl-seat in the lever *E* is made in the form of an arc of a circle, but greater than one-half of a circle, so that the pawl can only be taken out and put in endwise, and thus prevents the displacement of the pawl so long as the lever is in its proper position.

In the present instance I have shown the lifting-lever as composed of two parts, *E E'*, connected and secured together by a band, *e*; but it is evident that it may be made of a single piece.

R represents an elastic substance, rubber being preferred, situated in the base *B* of the jack, which is intended to deaden the blow caused by dropping the bar *C*.

This enables me to dispense with the use of pins, &c., for the bar to fall and rest upon, and obviates the danger of breakage occasioned by the bar dropping against the base.

I claim as my invention—

1. The lifting-lever *E*, with the circular seat formed of an arc greater than half of a circle, with the cylindrical bearing of pawl *G* working therein, combined in the frame of a lifting-jack, in such a manner that the pawl can only be removed endwise, and when the lever is out of the frame, substantially as herein set forth.

2. The combination, in a lifting-jack, of the lever *E*, having the rounded surface *o*, the pawls *G I*, rack-bar *C*, case *A*, and elastic cushion *R*, all constructed and arranged as herein shown and described, for the purpose specified.

JACOB O. JOYCE.

Witnesses:

O. M. GOTTSCHALL,
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