

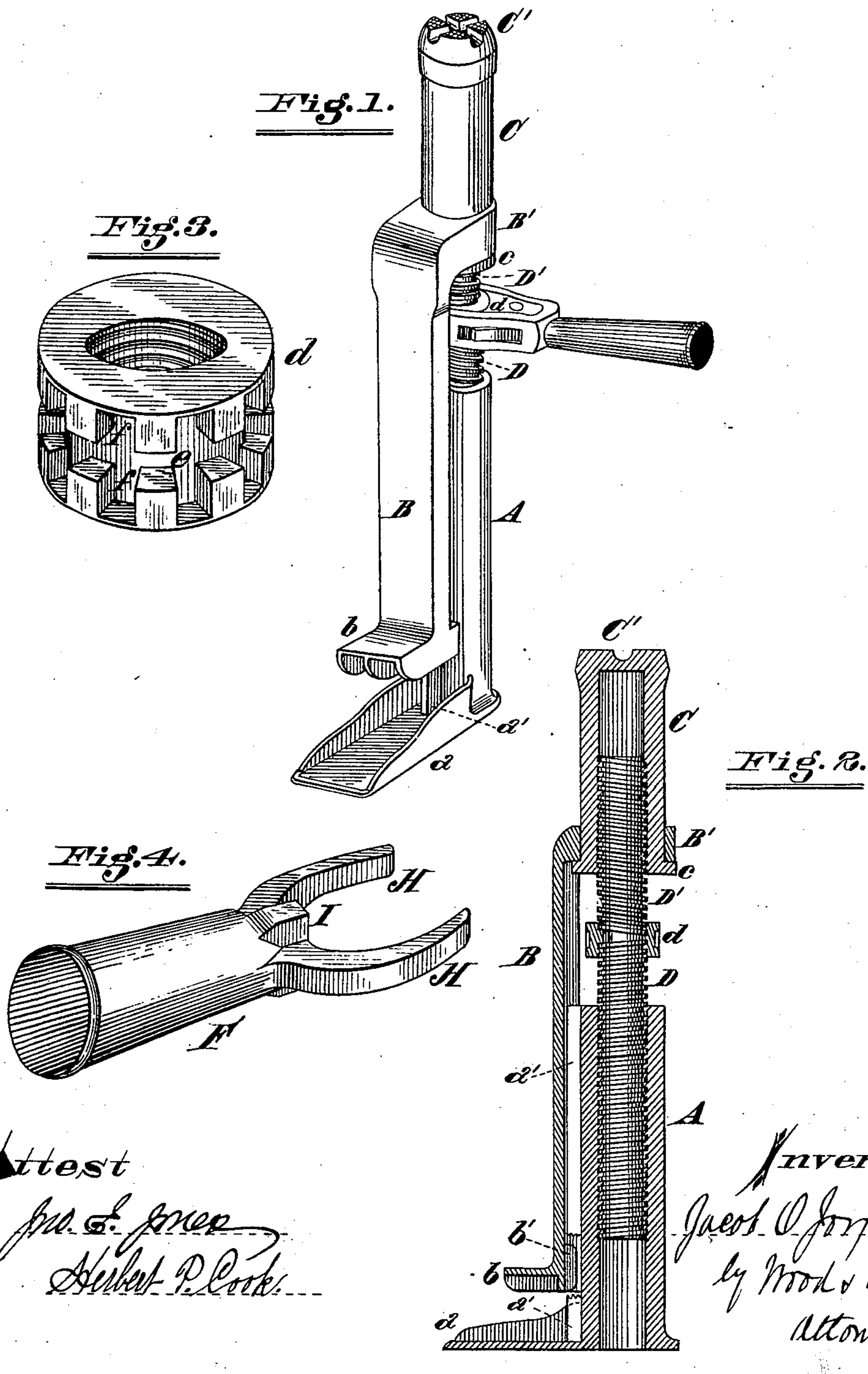
(No Model.)

J. O. JOYCE.

LIFTING JACK.

No. 256,002.

Patented Apr. 4, 1882.



Attest
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UNITED STATES PATENT OFFICE.

JACOB O. JOYCE, OF DAYTON, OHIO.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 256,002, dated April 4, 1882.

Application filed February 13, 1882. (No model.)

To all whom it may concern:

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

My invention relates to improvements in lifting-jacks, and especially to the class called "screw-jacks."

The invention consists in a lifting-jack combining in its structure a tubular base having an interior screw-thread, a hollow platen internally threaded in a direction opposite to the threads in the tubular base, an arm attached to the hollow platen and projecting downward therefrom and provided with a projecting foot-piece, a right-and-left-hand screw arranged in the tubular base and hollow platen, and a head secured to said right-and-left-hand screw, and constructed to receive a device by which to rotate the same for the purpose of raising the tubular platen and lifting the said downwardly-projecting arm which is connected thereto, all of which will be more fully hereinafter described.

The invention embraces other features, all of which are clearly illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view, showing my improvement in position for operation. Fig. 2 is a central vertical section of Fig. 1. Fig. 3 is a perspective view of the screw-head, and Fig. 4 a perspective view of the wrench.

A represents the base of the jack. It is made hollow, and a right-hand screw-thread is cut in the bore thereof.

a represents a projection of the base to form a seat for the foot of ground-lift.

C represents a hollow screw-platen, the threads being left-hand, or in the reverse direction to those of base A.

D D' represent a right-and-left-hand screw-rod engaging with those of base A and platen C.

d represents the screw-head, which is rigidly attached to and around the screw-rod at the central point of the right and left hand threads.

B represents a downwardly-projecting arm journaled or seated upon the platen C. It is preferably seated upon a flange, c, cast integral with the platen C. It may, however, be attached to the platen C in various ways.

b represents the foot rigidly attached to the arm B, and forming a seat for a lower or ground lift.

b' represents a channeled or grooved lug cast on the rear side of the arm B.

a' represents a rib or feather cast integral with the base A. The channels or lugs b' and the feather a' form guides to hold the arm B in a perpendicular plane.

Various other modes of forming the guides may be used in lieu of those here shown.

d represents the screw-head attached to the screw D. It is provided with the annular groove e and sockets f upon either side of the annulus, to receive lugs on the wrench for turning the right-and-left-hand screw.

F represents a clutch-wrench. It is provided with elongated circular jaws H, which engage around the head d and rest within the annular groove e. To prevent the wrench from coming off the head, the points of the forks are drawn together, so that their distance apart will be less than the diameter of the head within the groove.

I represents lugs cast upon the wrench F at the base of the forks, and of a shape and size adapted to fit the recess f either side of the annular groove e, so that when the lugs I are projected into the recesses f their engagement will turn the head and raise the platen by the combined operation of the right-and-left-handed screw. The elongation of the jaws H allows the lugs I to be withdrawn from the recesses e and the wrench turned loosely on the head for a new hold on the head.

The sliding clutch-wrench and corresponding-shaped head d may be variously modified and still retain the mode of operation herein described.

Instead of the clutch-wrench F and its counterpart head d, pawls working in the jaws of the wrench and rack-teeth cut in the head d, having means for disengaging the pawls, allowing the wrench to move loosely on its head, as shown in Fig. 1, may be substituted, and are the equivalents of the clutch-wrench and head here shown.

I claim—

1. A lifting-jack combining in its structure a tubular base, A, having an interior screw-thread, a hollow platen, C, internally threaded in a direction opposite to the threads in the

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tubular base, an arm, B, connected with the said platen and projecting downward therefrom, and having a foot-piece, *b*, a right-and-left-hand screw, D D', arranged in the threaded
5 tubular base and hollow platen, and a screw-head, *d*, secured to the said right-and-left-hand screw, substantially as described.

2. A lifting-jack combining in its structure a tubular base, A, having an interior screw-
10 thread, a hollow platen, C, internally threaded in a direction opposite to the threads in the tubular base, an arm, B, connected with the said platen and projecting downward therefrom, and having a foot-piece, *b*, a right-and-left-
15 hand screw, D D', arranged in the threaded tubular base and hollow platen, and a screw-head, *d*, secured to the said right-and-left-hand

screw, and constructed with the annular groove *e* and sockets *f*, for receiving the arms H and lug I of a wrench, F, substantially as described. 20

3. In combination with the right-and-left-hand screw-jack, the downwardly-projecting arm B and foot *b*, suspended upon the screw-platen C, and having the guides *a'* and *b'* formed upon the base A and arm B, substan- 25
tially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

JACOB O. JOYCE.

Witnesses:

WARREN MUNGER,
GRAFTON C. KENNEDY.