

Robertson & Collins,

Lifting Jack.

N^o 77,406.

Patented Apr. 28, 1868.

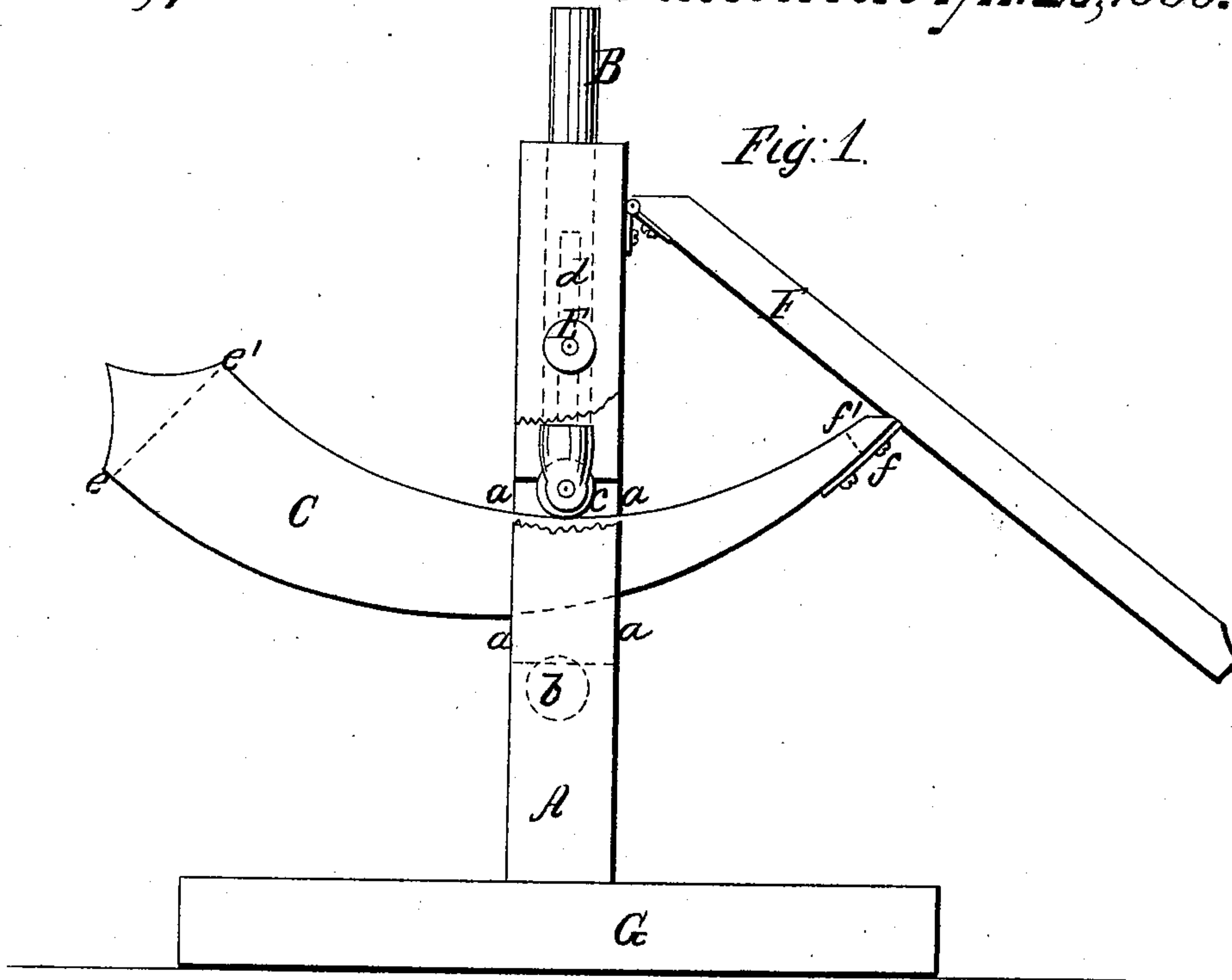
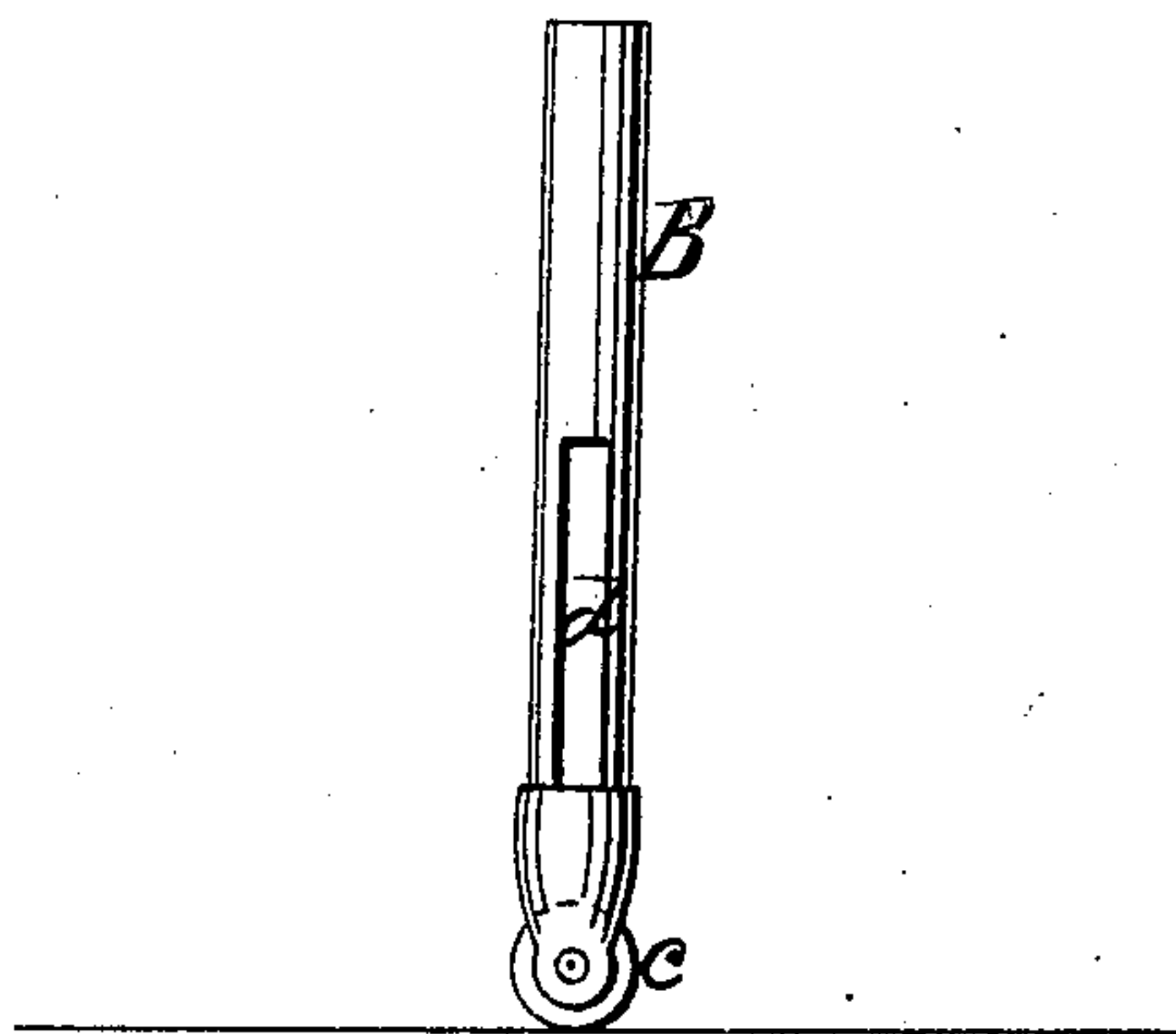


Fig. 2.



Witnesses;

*Jesse Goff
W. Purvis*

Inventor;

*Robert S. Robertson & Austin B. Collins per
W. B. Towles*

United States Patent Office.

EZRA S. ROBERTSON AND AUSTIN B. COLLINS, OF MOUNT LIBERTY, OHIO.

Letters Patent No. 77,406, dated April 28, 1868.

IMPROVEMENT IN LIFTING-JACKS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that we, EZRA S. ROBERTSON and AUSTIN B. COLLINS, of Mount Liberty, in the county of Knox, and State of Ohio, have invented a new and useful Improvement in Lifting-Jacks; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation.

Figure 2 is a view in detail of lifting-bolt.

Our invention relates to an improved lifting-jack, which is peculiarly adapted to lifting vehicles and such other weights as require the application of mechanical power.

It consists of—

First, in elevating a round bar, which is located in a suitable aperture in an upright standard, by a lever and wedge, or compound lever.

Second, in the said bar having attached, at its lower extremity, a pulley, so pivoted in the forked end of the bar as to project therefrom, and to impinge against and rotate upon a curved wedge, which wedge works in a vertical quadrilateral-shaped slot in the middle of said standard, and which wedge is pivoted to a lever or arm as aforesaid, and rests upon a pulley located in the lower part of said aperture, the said pulley being designed for the reduction of friction.

Third, in a thumb-screw, working into and through the standard aforesaid, upon a plane horizontal to the elevating-bar, which is designed to press against the said elevating-bar, and, by impinging it in a groove formed therein, to hold it rigidly at the point desired, and thus, in combination with the pivoted lever and the parts aforesaid, to act as an auxiliary for the accomplishment of the object specified.

A represents the upright standard, resting upon a platform, G, the said standard having a round aperture therein, extending from the apex to about the middle thereof, where it opens into a vertical quadrilateral-shaped slot, *a*; in the lower portion of which aperture is located a pivoted pulley, *b*.

B represents the lifting-bolt, having, in a forked projection at its lower end, a pulley, *c*, which pulley rests upon the curved wedge aforesaid, and thus holds the weight steadfast at the desired elevation.

C represents a curved wedge, designed to work in the vertical quadrilateral-shaped slot, *a*, aforesaid, and to rest and work upon a pulley in the said upright standard.

E represents a male screw, working into and through a female screw in the upright standard, and which is designed to impinge against the lifting-bolt in the groove *d* thereof, as aforesaid.

F represents an arm or lever, hinged or pivoted at one end to the upright standard, and near the apex thereof, and to which arm or lever the wedge is pivoted near the centre thereof.

Operation.

The machine is placed with its lifting-bolt B under the object to be raised, and the curved wedge C drawn through the quadrilateral-shaped slot *a*, as far as it will properly go, by the operator taking hold of the lever F and pulling it toward him, which will raise the object to a distance equal to the difference between the extremities *e e'* and *f f'* of the wedge.

Having thus fully described our invention, what we claim therein as new, and desire to secure by Letters Patent, is—

Claim.

The combination and arrangement of the lifting-bolt B, having a groove, *d*, and pulley, *c*, with the standard A, lever F, curved wedge C and thumb-screw E, the whole when constructed and operating in the manner and for the purpose as herein shown and described.

EZRA S. ROBERTSON,
AUSTIN B. COLLINS.

Witnesses:

SAML. J. BRENT,
EDWIN DAVIDSON.