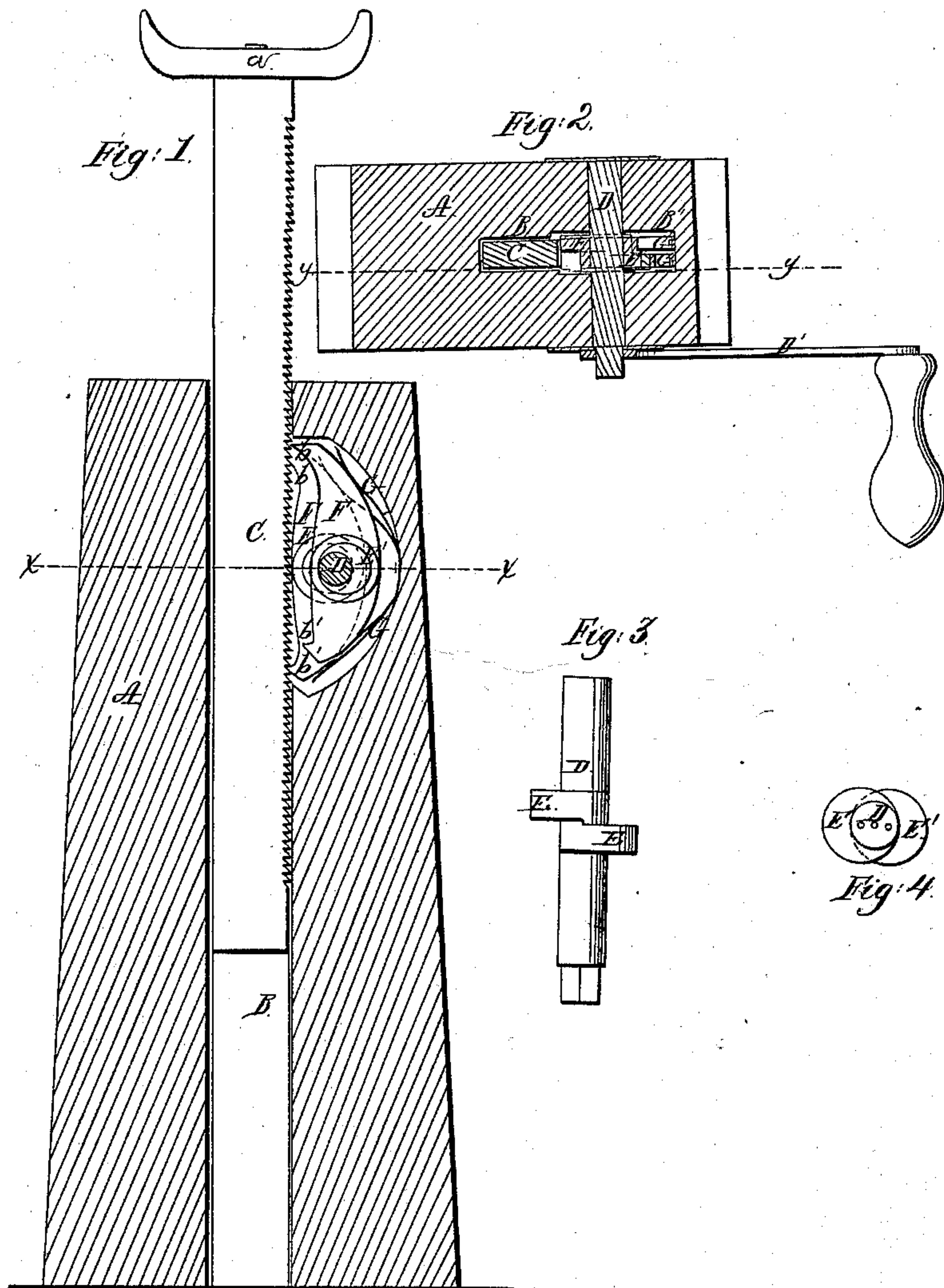


S. Lauchli,
Lifting Jack,
No. 43,369, *Patented June 28, 1864.*



Witnesses:
Henry Harris
C. L. Gifford

Inventor:
Samuel Lauchli
per Munn & Co. Attorneys

UNITED STATES PATENT OFFICE.

SAMUEL LAUCHLI, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HIMSELF AND
WILLIAM G. RICH, OF SAME PLACE.

IMPROVEMENT IN ELEVATING-JACKS.

Specification forming part of Letters Patent No. 43,369, dated June 28, 1864.

To all whom it may concern:

Be it known that I, SAMUEL LAUCHLI, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Elevating-Jacks; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side sectional elevation of my invention; Fig. 2, a plan sectional view of the same; Fig. 3, a plan of the double eccentric shaft; Fig. 4, an end view of the same.

Similar letters of reference indicate like parts.

This invention pertains to that class of devices commonly known as "jacks," or machines used for the movement of all kinds of weighty bodies.

A is the post or standard upon which the parts are mounted. This post may be made of wood, iron, or other material, in one or more parts and in any desired form.

B is an aperture extending through the standard A, said aperture corresponding in area and form to a toothed bar, C, which moves in said aperture. The bar C is furnished at its upper end with a pivoted plate or head, *a*, upon which rests the object to be raised, lowered, or moved.

Within a cavity, B', in the standard A, at one side of the toothed bar C, I arrange a rotating-shaft, D, which passes through the standard A, and has one or both of its ends squared and made to project from the standard A, to receive a crank, D', by which the shaft D and the machine is operated. Two cranks may be employed, if desired, one upon each end of the shaft D.

Arranged upon, or forming part of the shaft D, are two cams or eccentrics, E E', having their thrusts arranged on opposite sides of the shaft D. Upon each cam E E' there is fitted a swinging double-armed lever F F' in the man-

ner shown. The extremities of the lever-arms terminate in teeth *b b'*, which gear or take into the teeth of the toothed bar C. Each lever F F' is so hung upon the cams E E' that the lever-arms are of unequal length. Behind each lever there is a spring, G, arranged as shown, each spring having two leaves, one of which presses on each lever-arm. When the shaft D is turned, the eccentrics E E' will impart to their respective levers F F' a combined vertical and horizontal movement, and the teeth *b b'* of the said levers will alternately engage the teeth of the bar C. The cams E E' are so made and set that a vertical movement of the levers F F' will take place while the teeth *b b'* are engaged with the teeth of the bar C, by which vertical movement the bar C will be raised or lowered according to the direction in which the shaft D is turned. The arrangement of the cams E E' is also such that the movement of the levers F F' is alternate in respect to their engagement or disengagement from bar C. The several teeth *b b'* of each lever act also alternately upon the teeth of the bar C. When the bar C is being moved upward, the upper tooth, *b*, does not withdraw from the teeth of bar C until after the lower tooth, *b'*, has been withdrawn. When the bar C is moved downward, the lower tooth, *b'*, remains in contact with the teeth of bar C until after the upper tooth, *b*, has withdrawn. Complete security against any slippage of the bar C is thus secured.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The combination of the double eccentric-shaft D and independent alternating levers E E' with the rack-bar C, substantially in the manner and for the purpose herein shown and described.

SAMUEL LAUCHLI.

Witnesses:

WM. A. PURRINGTON,
ABIEL STEVENS.