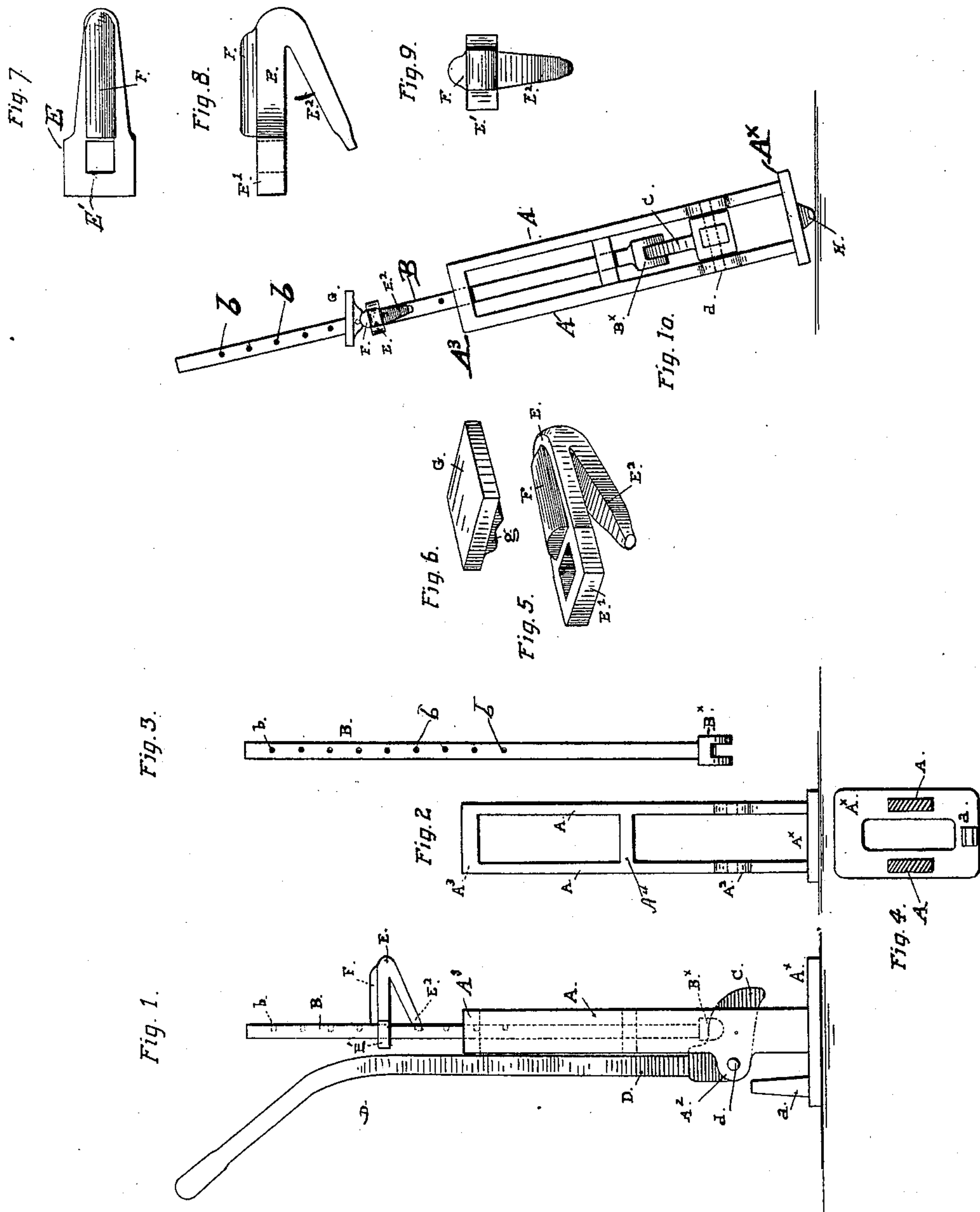


(No Model.)

M. P. HOLMES.
LIFTING JACK.

No. 434,712.

Patented Aug. 19, 1890.



Witnesses:

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UNITED STATES PATENT OFFICE.

MILO P. HOLMES, OF SAN FRANCISCO, CALIFORNIA.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 434,712, dated August 19, 1890.

Application filed February 4, 1890. Serial No. 339,184. (No model.)

To all whom it may concern:

Be it known that I, MILO P. HOLMES, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, 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 for raising heavy wagons and trucks, moving machinery, replacing cars on the track, and other similar work; and it consists in certain novel construction and combination of upright frame, lifting-bar, hand-lever, and adjustable rest or toe on the lifting-bar, as hereinafter more fully described, producing a light and powerful instrument at low cost of manufacture.

The nature of these improvements and the manner in which I construct and produce the same will be understood from the following description, in which the accompanying drawings are referred to by figures and letters.

Figure 1 represents a lifting-jack constructed according to my invention. Figs. 2, 3, and 4 illustrate the frame and lifting-bar in detail, Fig. 4 being a top view of the base. Figs. 5 and 6 are perspective views of the adjustable rest or toe of the lifting-bar and the saddle-plate that is provided for use in connection with it when the weight is to be shifted or moved sidewise after being lifted. Figs. 7, 8, and 9 are detail views of the adjustable toe on the lifting-bar. Fig. 10 shows the lifting-jack as adapted for special work where a weight is to be shifted sidewise or moved as well as raised from the ground.

A indicates the standard or upright frame; B, the lifting-bar; C D, the hand-lever, and E the adjustable toe or rest on the lifting-bar.

The frame is composed of two uprights A A, united at the top by the cross-piece A³, in which is a slot for the lifting-bar, and fixed at the bottom to a base-plate A^x. A cross-bar A⁴ between the two uprights below the top furnishes an additional guide for the lifting-bar. On the back edge of the uprights, near the bottom, are lugs A², to take a bolt or pin *d*, on which the lever is fulcrumed. The part C of the lever is a cam or quadrant shaped piece, on which the bottom end of the lifting-bar sets, that end being slotted, as shown at

B*, to take over the edge of the quadrant. In shaping this part and placing the fulcrum calculations are made to apply the power as nearly as possible under and in line with the lifting-bar. The lever D is also set to stand about perpendicular at the lowest position of the lifting-bar, and the handle is bent away from the frame at the top to bring it sufficiently away from the work in that position. Upon the foot-plate A* is provided a stud or stop *a* in line with the lever D to prevent it from falling so low as to throw the cam C out of its bearing B*. In the front of the lifting-bar, or that side which is opposite the hand-lever, is a row of holes *b* at short intervals apart. The adjustable toe E has an eye E', fitted to slide loosely on the lifting-bar. The front end is bent downward and backward to form a tongue or brace E² of suitable length to bear against the bar, and the end of this part is finished to a taper or blunt point to take into the holes in the bar. When the toe is set to the required height on the lifting-bar, this pointed end of the brace engages one of the holes *b* and locks the toe in position. When properly set on the lifting-bar, this toe will hold under any weight it can sustain without breaking, and there is no danger of its slipping on the bar as is sometimes the case with movable toe-pieces of the kind in which the bite or friction of the piece on the bar is relied on to hold the weight.

To adapt this lifting-jack for shifting a weight sidewise and for other like operations where the piece lifted is also to be removed from place, I provide a rocking piece G, which I term a "saddle-plate," to rest across the top of the toe and take under the piece of work to be raised. The top of the toe is formed with a rounded back F, and the bottom of the saddle-piece is grooved or rounded to fit this part F, as shown at *g*, Fig. 6, so that when the saddle-piece is laid across the toe it can rock on it. In such use and operation of the jack it is necessary to "cant" or throw over the frame obliquely to one side or the other, and to accomplish this easily the base of the frame is at such time set on block H of suitable height and with an acute bottom edge to form a rocker. This piece can be formed as a part of the base where the jack is to be used alto-

gether for such character of work, or it can be slipped under the base of the jack when required.

Fig. 10 of the drawings illustrates the manner of operating the jack in such work.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

A lifting-jack consisting of a base-plate A*,
10 having the stud or stop *a*, the standards A, fixed to said base and having the perforated cross-pieces A³ and A⁴ and the bearing-lugs A², a lifting-bar B, having a bifurcated lower end B*, and provided with a series of open-

ings *b b*, a toe-piece E, adjustable on bar B, 15 and provided on its upper face with a rounded longitudinal rib F, a saddle-plate G, having a rounded depression or groove *g* to fit over the rib F, and the lever D, pivoted in lugs A² A², and having the cam C operating in the bifur- 20 cated end of lifting-bar, all constructed and combined for operation as set forth.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

MILO P. HOLMES. [L. S.]

Witnesses:

C. W. M. SMITH,
CHAS. E. KELLY.