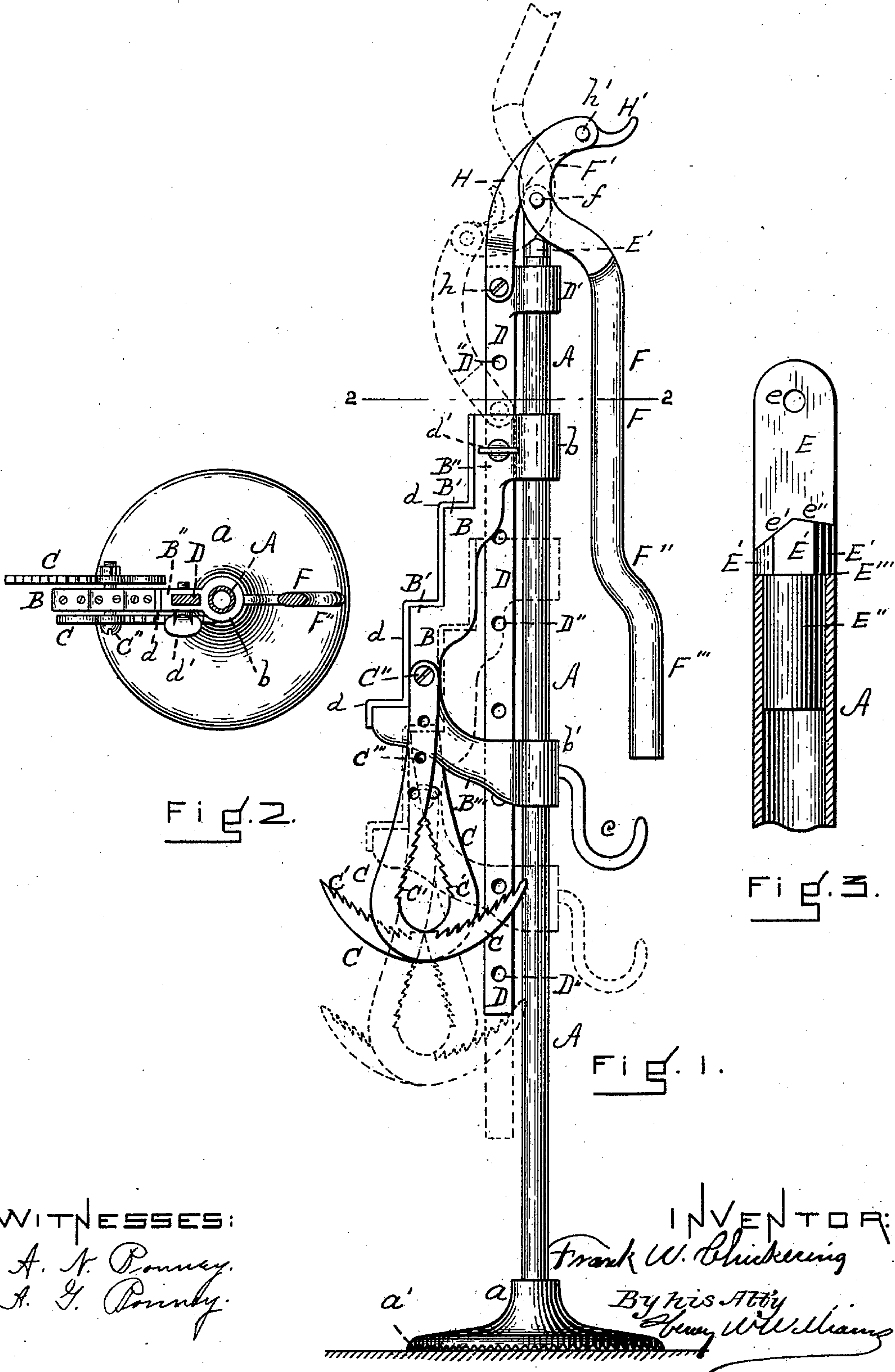


(No Model.)

F. W. CHICKERING.
LIFTING JACK.

No. 602,056.

Patented Apr. 12, 1898.



WITNESSES:
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FRANK W. CHICKERING, OF CABOT, VERMONT.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 602,056, dated April 12, 1898.

Application filed November 17, 1897. Serial No. 658,787. (No model.)

To all whom it may concern:

Be it known that I, FRANK W. CHICKERING, a citizen of the United States, residing in Cabot, in the county of Washington and State of Vermont, have invented new and useful Improvements in Lifting-Jacks, of which the following is a specification.

This is an improved lifting-jack intended more particularly for use as a wagon-jack, although it may be utilized for lifting any other articles, such as shafts or axles, for which it is adapted.

The invention consists in the novel construction and arrangement of parts fully described below and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved lifting-jack with the lifting-frame in a raised position and the lifting-lever dropped, broken lines in said figure showing the lifting-frame dropped into position for operation and the lifting-lever raised. Fig. 2 is a horizontal section taken on line 2, Fig. 1. Fig. 3 is an enlarged vertical section and elevation illustrating the coupling between the standard and the lifting-lever.

Similar letters of reference indicate corresponding parts.

A represents a tubular standard the lower end of which is screwed or otherwise rigidly secured to the base *a*. This base is made bell-shaped, so as to accommodate itself to uneven surfaces and inequalities and rest firmly thereon without rocking, thereby sustaining the standard steadily in an upright position. The lower edge of this base is provided with serrations or corrugations *a'* in order that it may be prevented from slipping.

B is a lifting-frame provided with suitable steps or ledges *B'* and formed with arms or flanges *B'' B'''* at its upper and lower ends, respectively, said arms terminating in tubular ends *b* and *b'*, through which the tubular standard A extends and upon which standard said tubular ends *b b'* slide. A hook *c* is rigidly secured to the lower tubular end *b'* of the lower arm *B'''*, such hook being adapted to have hung upon it the wrench when not in use. The steps *B'* are of suitable shape to receive an ordinary wagon-axle, and they are faced with rubber *d* or similar material, as is also the vertical edge of the lifting-frame,

in order to prevent marring or scratching the axle. From opposite sides of the lower portion of the lifting-frame are hung hooks C, said hooks being oppositely suspended from a suitable bolt *C''* and being formed on their inner or gripping edges with serrations or teeth *C'*. These hooks, whose engaging portions are curved, are for use in lifting a round axle or shaft in such a manner that it cannot possibly slip or roll out of engagement, and inclose said axle by gravity, as will be readily understood by reference to Fig. 1.

The arms or shanks *B'' B'''* are formed with vertical holes, preferably rectangular in shape, and one exactly above the other, for the purpose of receiving the correspondingly-shaped lifting-bar D. This bar is provided at its upper end with the integral tubular flange *D'*, sliding on the standard A, and with perforations *D''*, by means of which it is adjustably connected as to height with the lifting-frame B, supporting said frame by means of a thumb-screw *d'*, which extends through the arm or flange *B''* and one of said perforations *D''*. By this means the lifting-bar D supports the lifting-frame B at any desired height from the ground, both said frame and bar sliding on the standard A.

At the upper end of the standard A it is provided with a vertical extension or coupling consisting of the flat portion E, formed near its upper end with the perforation *e*, the thickened portion *E'*, and the pin *E''*. This pin is driven into the upper end of the tubular standard A, resting thereon by means of the shoulder *E'''*. The upper edge of the thickened portion *E'* is formed on opposite sides of the flat portion E with ledges *e'* and *e''*. The beveled edge *e'* is formed at an angle of about forty-five degrees, and the ledge *e''* is nearly horizontal. This construction is clearly shown in Fig. 3, and its object is below described.

Extending through the perforation *e* is a pivot-pin *f*, by means of which the bifurcated curved portion *F'* of the lifting-lever F is secured to the upper end of the rigid coupling E. The lower end of the lifting-lever F is bent outward at *F''* in order that its handle portion *F'''* may be at a sufficient distance from the standard to prevent the hand of the operator from coming in contact therewith.

A curved link H is pivotally secured at its lower end by means of the pin or bolt *h* to the upper end of the lifting-bar D, and said link is pivotally secured near its upper end
5 by a suitable pin *h'* to the outer or upper end of the bifurcated curved portion *F'* of the lifting-lever. The upper end of the curved link H is formed with a hook *H'*, upon which the wrench and nut can be hung while re-
10 moving the wheel and oiling the axle.

When the device is not in use, its parts are in the position indicated in Fig. 1, the lower edge of the curved portion *F'* of the lifting-bar resting on the ledge or shoulder *e''*. When
15 the lifting-lever F is swung up, the parts drop into the position indicated in broken lines in Fig. 1, and the lower edge of the curved portion *F'* rests on the ledge or shoulder *e'*, the lever being in a nearly vertical position. By
20 means of the curved shape of the portion *F'* and link H the lifting-lever when raised swings over far enough to rest on said ledge *e'* without danger of dropping or swinging back and drops by gravity into the position
25 indicated by full lines in Fig. 1 when it is swung beyond a certain point. The shape of these parts *F'* and H, in connection with the bifurcated form of the former, allows the lifting-bar D to slide vertically in its slideways
30 without binding.

My mechanism provides for ample vertical movement of the lifting-frame B, while by removing the thumb-screw *d'* from the position shown in the lifting-bar D and applying it to
35 another hole *D''* therein the vertical adjustment of the lifting-frame with relation to the lifting-bar is sufficient for all practical purposes.

When the lifting-jack is not in use, it can
40 be hung up by means of the space between the lifting-frame B and lifting-bar D.

The hooks C are each provided with several perforations *C'''*, whereby they may be rendered adjustable as to height by removing
45 the screw or bolt *C''*.

Having thus fully described my invention,

what I claim, and desire to secure by Letters Patent, is—

1. In a lifting-jack of the character described, the standard A; the lifting-frame B
50 provided with the arms *B''* *B'''* slidable on the standard; the hooks C pivotally secured at their upper ends to opposite sides of the lifting-frame and arranged with their hooked portions extending toward each other, such
55 portions being provided with the inner serrated edges *C'*; the lifting-bar D extending through said arms *B''*, *B'''* and adjustably connected thereby as to height with the lifting-frame and slidable on the standard; an
60 extension or coupling driven into the upper end of the standard; the lifting-lever F provided with the curved portion *F'* pivotally connected with the upper end of said coupling or extension; and the curved link H piv-
65 otally connected at its opposite ends with the upper end of the lifting-bar and the upper end of the lifting-lever, substantially as set forth.

2. A lifting-jack of the character described, 70 comprising the standard A; the base *a* made bell-shaped and with its lower edge provided with the serrations *a'*; the lifting-frame B provided with the hook *c*, said lifting-frame
75 slidable on the standard; the lifting-bar D adjustably secured to the lifting-frame and extending through suitable arms connecting the same with the standard, said lifting-bar
80 slidable on said standard; the coupling or extension projecting upward from the upper end of the standard; the lifting-lever F pivotally secured to the upper end of said coupling or extension, and the curved link H piv-
85 otally secured at its opposite ends to the upper ends of the lifting-bar and lifting-lever and provided at its upper end with the hook *H'*, substantially as described.

FRANK W. CHICKERING.

Witnesses:

GEO. O. BOYLES,
M. D. WELLS.