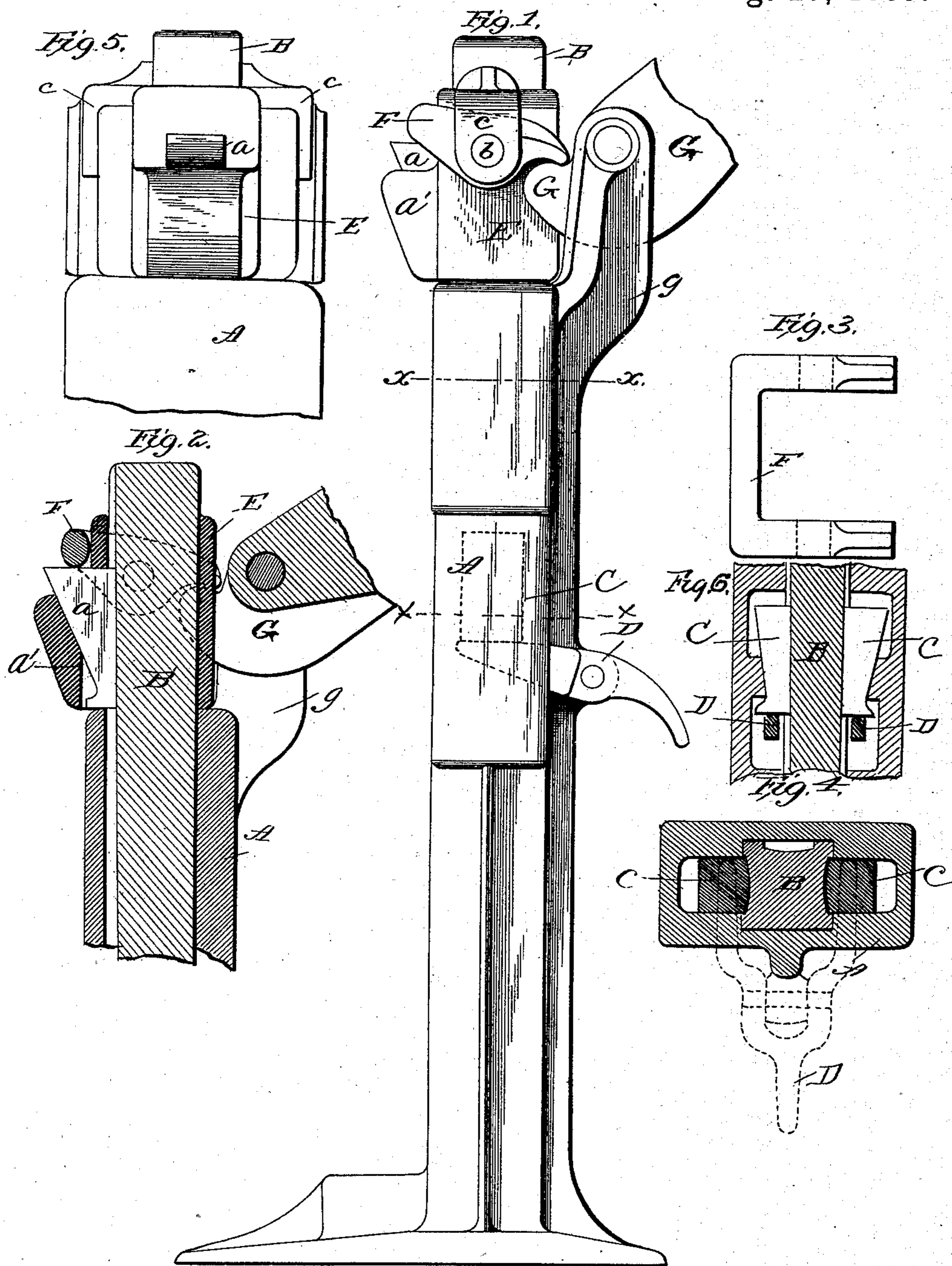


(No Model.)

L. J. CRECELIUS.  
LIFTING JACK.

No. 410,074.

Patented Aug. 27, 1889.



Attest:  
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Atty.

# UNITED STATES PATENT OFFICE.

LOUIS J. CRECELIUS, OF ST. LOUIS, MISSOURI, ASSIGNOR TO ANDREW WARREN, OF SAME PLACE.

## LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 410,074, dated August 27, 1889.

Application filed June 27, 1889. Serial No. 315,739. (No model.)

*To all whom it may concern:*

Be it known that I, LOUIS J. CRECELIUS, of St. Louis, in the State of Missouri, have invented a new and useful Improvement in Lifting-Jacks; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention relates to lifting-jacks, and particularly to the lifting-head of such jacks, and while I have shown the invention as applied to a jack having a tapered lifting-bar, as patented to me May 29, 1888, No. 383,710, I do not limit myself to its use in such connection, as it may be applied with equally good effect to a plain bar or a bar of any shape or form in which a lifting-head is gripped to it to raise the load. The form of standard and the grips in the standard-head are substantially the same as similar parts shown in prior patents granted to me, and I simply show these parts for convenience of illustration and not because my present improvements are particularly applicable thereto.

In the accompanying drawings, Figure 1 represents a side elevation of a lifting-jack, showing the parts in normal position, with the handle of the lifting-lever broken away. Fig. 2 is a sectional view of the upper end of the lifting-bar, showing a portion of the standard in section and the clutch-box of the lifting-head also in section. Fig. 3 is a detail view of the binding loop or band. Fig. 4 is a section on line *xx* of Fig. 1, with the operating-lever shown in dotted lines; and Fig. 5 shows a front elevation of the lifting-head, parts being omitted. Fig. 6 is a vertical section through a portion of the standard and lifting-bar, showing the standard-grips and part of the lever for operating them directly.

In the drawings, A is the standard, and B the lifting-bar. As the improvements claimed herein relate particularly to the lifting-head with its grip mechanism, any suitable form of grip may be used for the standard; but for convenience I have shown a grip similar to the standard-grip disclosed by my patent, No. 407,173, of July 16, 1889, this consisting of the wedges C. (Shown in dotted lines, Fig. 1, in section in Fig. 4, and in elevation in Fig. 6.)

These wedges are operated to release the lifting-bar by the bifurcated lever D bearing directly against their lower ends.

The lifting-head or clutch-box is shown at E, and it is provided upon its front face with a pocket *a'*, having an opening to the face of the lifting-bar, and its face opposite this opening is inclined, this pocket being adapted to receive a wedge *a*, which serves as the gripping medium of the lifting-head or clutch-box, and it will be understood is representative of any form of grip which may be substituted for the wedge shown.

In the present case, instead of a link-connection between the lifting-lever G and the clutch-box and grip, as shown in my prior patents, I provide a pivoted loop F, which straddles the clutch-box, being pivoted thereto by means of pivot-pins *b*, which are supported in brackets *c*, depending from the upper part of the lifting-head upon each side, leaving a space between the brackets and the side walls of the lifting-head equal to the thickness of each of the arms of the loop F, so that the said loop has free pivotal movement between the brackets and the lifting-head. The front end of the loop is closed and rests normally upon the upper end of the grip *a*, carried by the lifting-head, while the side arms of the loop extend to the rear and are adapted to be acted upon by the lifting-lever G. This lever is supported between the limbs of a bifurcated bracket *g*, with its lifting end formed slightly of hook shape, the front end being bifurcated, so as to straddle the lifting-head, and thus bring the ends of the lever one upon each side of the lifting-head and directly beneath the arms of the loop F. It will thus be seen that on the depression of the lifting-lever the lifting end will have the tendency to bear upwardly against the arms of the loop, throwing down its closed end in contact with the grip in the head, thus forming the connection between the lever and the lifting-bar practically rigid, so that in the continued movement of the lifting-lever the bar will be raised and the load with it.

In the form of clutch shown for the lifting-head the top of the standard acts to release

the lifting-bar from its grip, as shown in Fig. 2, when the grip is free from the pressure of the binding-loop.

As I have said, I do not limit myself to the particular form of grip shown, as other forms may be used, and of course other forms of releasing devices for both the grip in the head and the grip in the standard. Neither do I limit myself to the clutch-box moving by gravity, as in forms of jacks used in positions other than perpendicular a spring may be employed to keep the grip normally in contact with the face of the lifting-bar.

Having thus described my invention, what I claim is—

1. In combination with a standard A and lifting-bar B, a lifting-head E, a grip *a*, carried thereby, a lifting-lever G, and a loop F, piv-

oted to the lifting-head and interposed between the lifting-lever and the grip, said loop being acted upon by the lever, whereby the action of the lever is transmitted to the grip through the loop, substantially as described.

2. In combination with the standard A and lifting-bar B of a jack, a lifting-head E, having a pocket, a grip *a* in said pocket, a pivoted loop F, bearing on said grip *a*, and a lifting-lever G, adapted to act upon the opposite end of said loop, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LOUIS J. CRECELIUS.

Witnesses:

C. A. THOMPSON,

C. D. GREENE, Jr.