

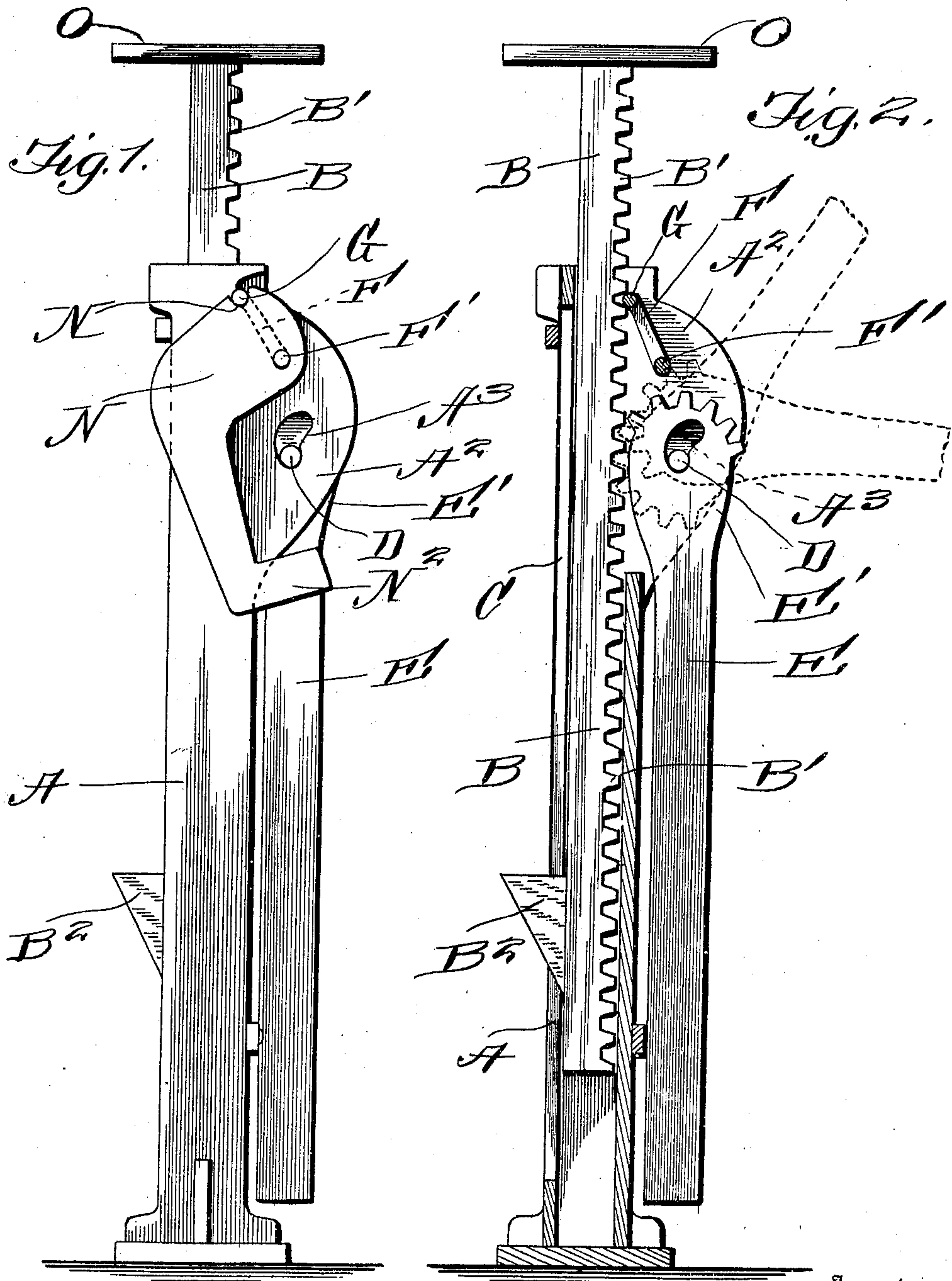
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PATENTED AUG. 14, 1906.

F. M. PATTERSON.

LIFTING JACK.

APPLICATION FILED MAY 3, 1906.



Witnesses

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FRANK M. PATTERSON, OF WINFIELD, KANSAS.

LIFTING-JACK.

No. 828,771.

Specification of Letters Patent.

Patented Aug. 14, 1906.

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To all whom it may concern:

Be it known that I, FRANK M. PATTERSON, a citizen of the United States, residing at Winfield, in the county of Cowley and State of Kansas, have invented certain new and useful Improvements in Lifting-Jacks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in lifting-jacks; and the object of the invention is to produce a simple and efficient device of this nature in which a longitudinally-movable rack-bar is adapted to be actuated by cog-teeth upon a pivotal lever and so arranged that the teeth upon the lever may be thrown out of gear with the rack-teeth as the handle is raised to get a new purchase upon the rack-bar.

The invention consists, further, in the provision of means in a lifting-jack in which a longitudinally-movable rack-bar is provided adapted to be actuated by means of a pivotal lever having rack-teeth which mesh with the teeth of a rack-bar and in the provision of a pivotal pawl for holding the rack-bar as it is raised while the operating-lever is raised and automatically released from the rack-bar to get a new purchase upon the teeth thereof.

My invention consists, further, in other details of construction and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claim.

I illustrate my invention in the accompanying drawings, in which—

Figure 1 is a side elevation of my improved lifting-jack, and Fig. 2 is a sectional view centrally and longitudinally through the device.

Reference now being had to the details of the drawings by letter, A designates the standard of my lifting-jack, which is preferably hollow, and mounted within the standard is the longitudinally-movable rack-bar B, having teeth B' upon one face thereof, and a bracket member B² projects from one face of said bar and is guided in a slot C in one face of the standard. Bracket extensions A² project from the standard, and each of said

bracket-arms has an angled slot A³, in which the pivot-pin D has a play.

E designates an operating-handle having a head E' with cog-teeth thereon, which are adapted to mesh with the teeth of said rack-bar, and said pin D passes through the handle of the lever, thereby forming means whereby the lever may be fulcrumed.

F designates a locking-pawl having pintles F' projecting from opposite edges thereof, which pintles are journaled in apertures in the bracket extensions of the standard. One edge of said pawl, which is angular, is adapted to normally engage the teeth of the rack-bar and prevent the same from movement in one direction. A lug G, projecting from one end of said pawl, rests in a groove N, formed in the edge of the releasing-plate N', which latter is pivotally mounted upon one of said pintles F'. The lower end of said releasing member N' has an angled projection N², forming a convenient means whereby the member may be rocked upon its pivot for the purpose of releasing the pawl from the teeth of the rack-bar.

The operation of my invention is as follows: When it is desired to raise an object, either by bringing the bracket-arm B² in contact therewith or whether the object to be moved rests upon the plate O at the top of the rack-bar, the latter is raised or given a longitudinal movement by the downward movement of the lever, which causes the ends of the pivotal pin D to fulcrum in the lower ends of the angled slots A³, which throws the teeth upon the head E' of the lever in mesh with the teeth of the rack-bar. After the lever has been swung to its lowest limit the pawl will hold the purchase, and by raising the lever the cog-teeth upon the head thereof will be thrown out of mesh with the teeth of the rack-bar by reason of the elongated angled slot A³, thereby allowing the lever to be raised for a new purchase upon the teeth of the rack-bar. When the lever is raised a sufficient height and it is desired to swing the same downward, the teeth in the head thereof will readily mesh with the teeth of the rack-bar, and by repeating the swinging movement of the lever the rack-bar may be extended step by step, as may be desired. As the lever is swung to its highest position the angled slot will throw the teeth upon the lever out of engagement with the teeth of the rack-bar, and if the pawl is thrown out of engagement with said rack-bar the latter will

fall by gravity, which will also be the case when the lever is at its lowest throw, provided the pawl is disengaged from the teeth of the rack-bar. By simply pushing upon the lower end of the releasing member the pawl will be readily disengaged.

While I have shown my invention as applied especially to a lifting-jack, it will be understood that the principle may be applied equally as well for various purposes, with slight modifications, to adapt the same for any particular purpose, the essential feature of the invention being the means whereby the cog-teeth of the lever may be automatically thrown out of engagement with the rack-bar.

What I claim is—

A lifting-jack comprising a standard, a longitudinally-movable rack-bar mounted

therein, a pivotal lever having cog-teeth adapted to engage the teeth of the rack-bar, a pivotal pin projecting from said lever and mounted in angled slots formed in the standard, the teeth of said lever being adapted, as the lever is raised, to be thrown out of engagement with the teeth of the rack-bar, a pawl having pintles pivotally mounted in bracket-arm extensions of the standard, a projection upon one end of said pawl, a pawl-releasing member pivotally mounted upon one of said pintles and having a recess to receive said projection of the pawl, as set forth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FRANK M. PATTERSON.

Witnesses:

S. C. BLACK,
GEO. HULVEY.