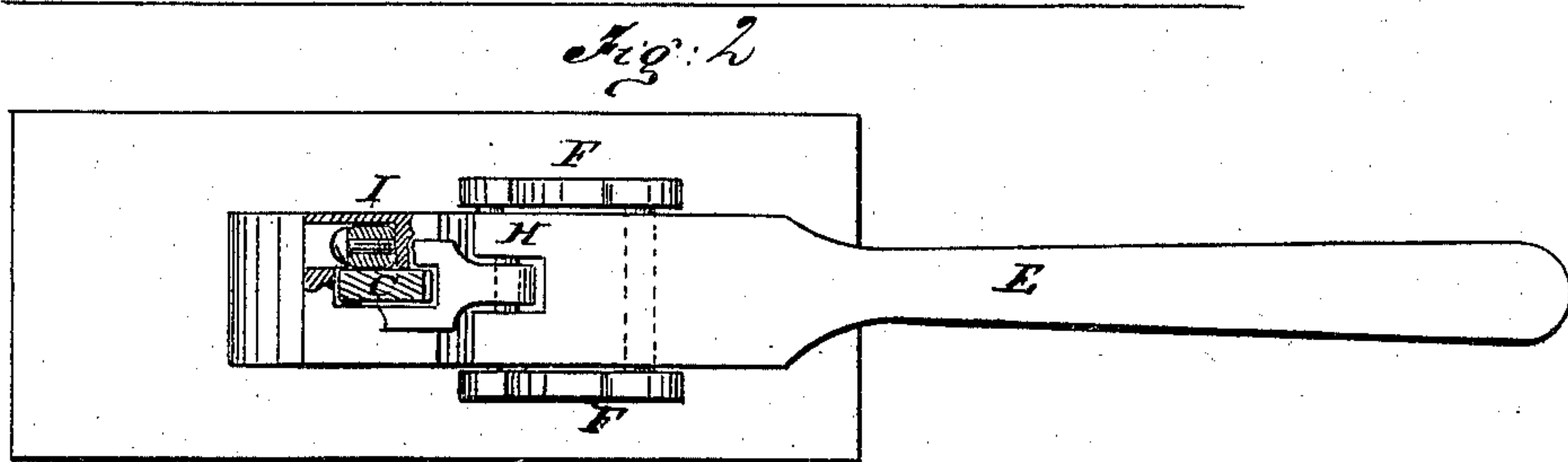
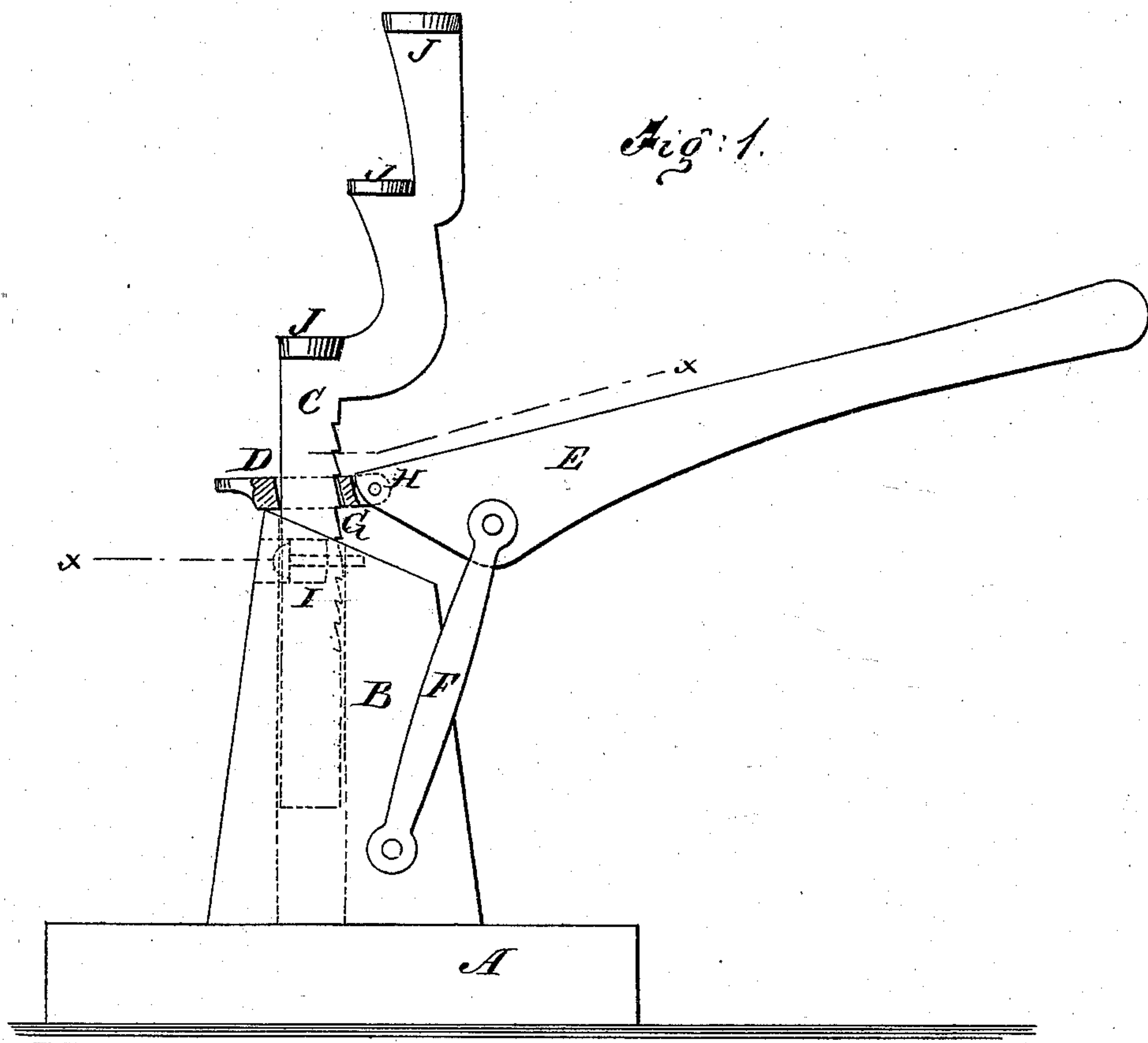


W. M. DOTY.  
Lifting-Jacks.

No. 138,078.

Patented April 22, 1873.



Witnesses:

*Chas. Nida*  
*Edgwick*

Inventor:

*W. M. Doty*

Per

*Munnell*

Attorneys.

# UNITED STATES PATENT OFFICE.

WILLIAM M. DOTY, OF NEW YORK, N. Y.

## IMPROVEMENT IN LIFTING-JACKS.

Specification forming part of Letters Patent No. **138,078**, dated April 22, 1873; application filed March 15, 1873.

*To all whom it may concern:*

Be it known that I, WILLIAM M. DOTY, of the city, county, and State of New York, have invented a new and useful Improvement in Lifting-Jacks, of which the following is a specification:

Figure 1 is a side elevation of my improved lifting-jack, partly in section. Fig. 2 is a cross-section of Fig. 1 on the line *x x*.

Similar letters of reference indicate corresponding parts.

The object of this invention is to improve, simplify, and cheapen apparatus for raising carriages and wagons, and for all similar uses; and it consists in the construction and arrangement of parts, as hereinafter described and specifically indicated in the claims.

A is the base. B is the stand. C is the lifting-bar. D is the ratchet-link. E is the lever, and F F the self-adjusting fulcrum-bars. The back edge of the lifting-bar is provided with ratchet-teeth G, with which the ratchet-link D is made to engage for lifting the link, being loosely attached to the short end of the lever, as seen at H. The link works loosely on the bar, and drops by its own gravity when the long end of the lever is received. When the link engages with a tooth of the bar its outer end binds or gripes the other edge of the bar, the link being a gripe as well as a ratchet-pawl. By means of the link the bar can be raised eight or ten inches, more or less. The weight of the lifting-bar is supported by means of an adjustable friction-spring, I, which is made to bear against its side, as seen in Fig. 2. This spring consists of a piece of

rubber tubing on a wood-screw. By turning the screw the rubber tube is expanded or contracted, and the friction on the bar is increased or diminished, as may be required. J represents three, more or less, lifters on the bar C. They are arranged so as to be nearly over the center of gravity when either one of them is employed. This adapts the jack for all kinds of vehicles, the axles of which vary from one to two feet, or more, in height from the ground.

I am aware that a succession of lifters on the same bar is not new; but I am not aware that they have hitherto been combined with a lifting-bar constructed and operating in the manner described.

The lower portion of the lifting-bar is made thinner below the ratchet-teeth, so that the friction-spring will not bear upon it, which allows it to drop back, and prevents its being carried too high, or so as to endanger the socket.

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

1. A friction-spring, substantially as shown at I, for supporting the lifting-bar, as shown and described.

2. A lifting-jack, consisting of the base A, stand B, lifting-bar C, link D, lever E, fulcrum-bars F, and friction-spring I, arranged to operate as and for the purposes described.

WILLIAM M. DOTY.

Witnesses:

T. B. MOSHER,  
ALEX. F. ROBERTS.