A. Woodworth,

Lifting Jack,

No. 51,381, Patented Dec. 5, 1865.

Fig: 1.

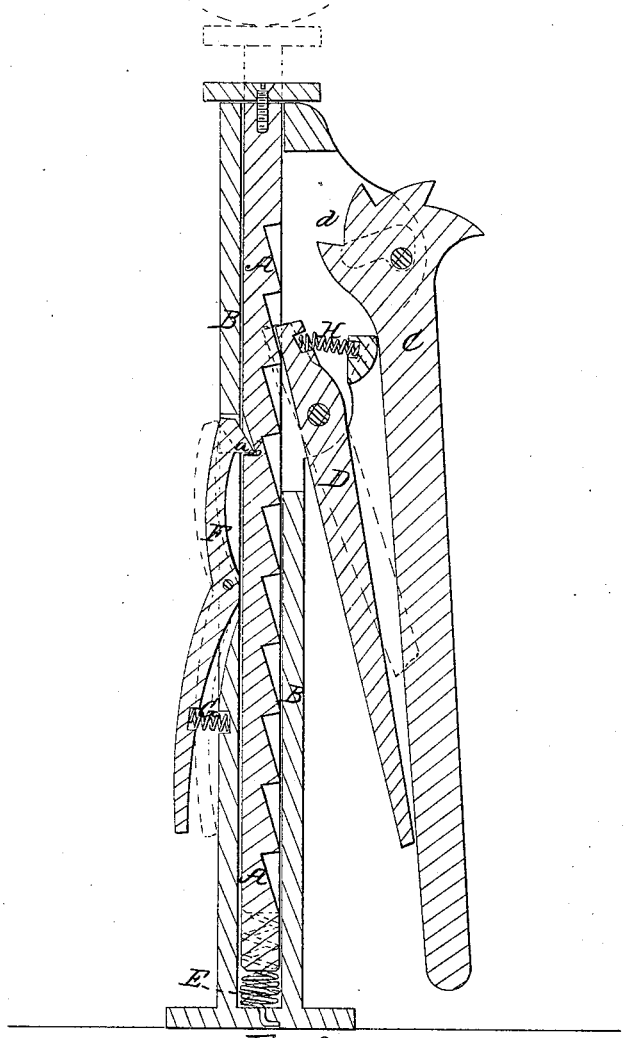
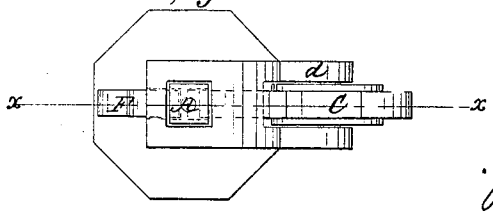


Fig: 2.



Witnesses.

Inventor

A Woodworth

By Munn & Co.

UNITED STATES PATENT OFFICE.

ALFRED WOODWORTH, OF NORTH WHITE CREEK, NEW YORK.

IMPROVED LIFTING-JACK.

Specification forming part of Letters Patent No. **51,381**, dated December 5, 1865.

To all whom it may concern:

Be it known that I, ALFRED WOODWORTH, of North White Creek, in the county of Washington and State of New York, have invented a new and useful Improvement in Lifting-Jacks; and I do hereby delcare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal vertical section of a lifting-jack with my invention applied thereto, taken in the plane of the line *x x*, Fig. 2. Fig. 2 is a top view of the same with the head of the rack-bar removed.

Similar letters of reference indicate corresponding parts.

My invention consists in the employment or use of a spiral spring located under the lower end of the rack-bar in a lifting-jack for the purpose of throwing the said bar up against the axle of the vehicle, after which it can be worked or forced up by the teeth of the lifting-lever as desired, which saves considerable time as well as manipulation of the lever; and it consists also in the employment or use of a detent pawl or lever for holding down the rack-bar when the spring is depressed.

A represents the rack-bar, which is fitted to slide up and down in a suitable guiding frame or case, B; and C is the lifting-lever, having suitable teeth for operating upon the rack-bar, and D is a pawl or locking-lever which fits under the teeth of the rack-bar and prevents the same from descending unless said pawl is thrown out of gear for that purpose. These parts are all of well-known construction, and I have mentioned them merely to give a clearer understanding of my improvements, which I will now proceed to describe.

E represents a spiral spring, which is placed in the bottom of the casing B and secured therein in any suitable way, and so arranged that it will throw up the rack-bar A, as can be understood by reference to the position of the parts shown in red outline in Fig. 1.

F is a detent-pawl having a catch or nose, *a*, on its end, which catches into a notch, *b*, on the side of the rack-bar opposite the teeth when the rack-bar is depressed, and a spring, G, is applied between this pawl F and the casing, below the pivot, for the purpose of keeping the nose bearing against the rack-bar, so that it will catch into the notch *b* the moment the bar is thrust down far enough to permit it.

H is another spring placed above the point where the locking-lever or pawl is pivoted to the ear *d*, which carries it as well as the lifting-lever. It is so arranged as to bear against the said pawl near its upper end for the purpose of keeping the same pressed against the teeth of the rack-bar, so as to hold the same at any point to which it may be raised. By thus placing the spring it is entirely out of the way, (concealed, as it were,) and therefore not likely to be deranged or damaged by careless usage of the jack.

A great advantage is gained by the employment of a spring, E, under the rack-bar, namely: The jack can be set under the axle of the vehicle in the desired place and the rack-bar released by pressing upon the lower end of the detent pawl or lever F, when the rack-bar will be thrown up by the force of the spring E against the axle, which rack-bar will be detained there by the pawl or locking-lever, and it is only necessary to move up and down the lifting-lever two or three times and the wheel will be sufficiently elevated from the ground. This saves a great deal of manipulation, besides providing a more perfect and better lifting-jack.

What I claim as new, and desire to secure by Letters Patent, is—

1. The employment or use of a spiral spring, E, under the bottom of the rack-bar, for the purposes herein shown and described.

2. The detent-pawl F, in combination with the rack-bar A and spring E, substantially as described.

3. The combination and arrangement of the rack-bar A, lifting-lever C, locking bar or pawl D, spring E, detent-pawl F, and spring H, as herein shown and described.

The above specification of my invention signed by me this 8th day of August, 1865.

ALFRED WOODWORTH.

Witnessses:

M. M. LIVINGSTON,

C. L. TOPLIFF.