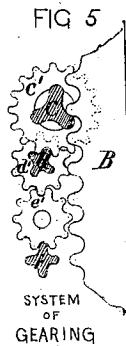
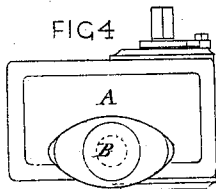
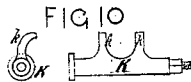
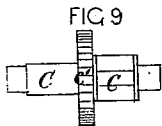
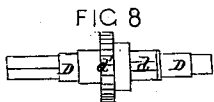
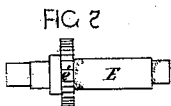
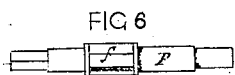
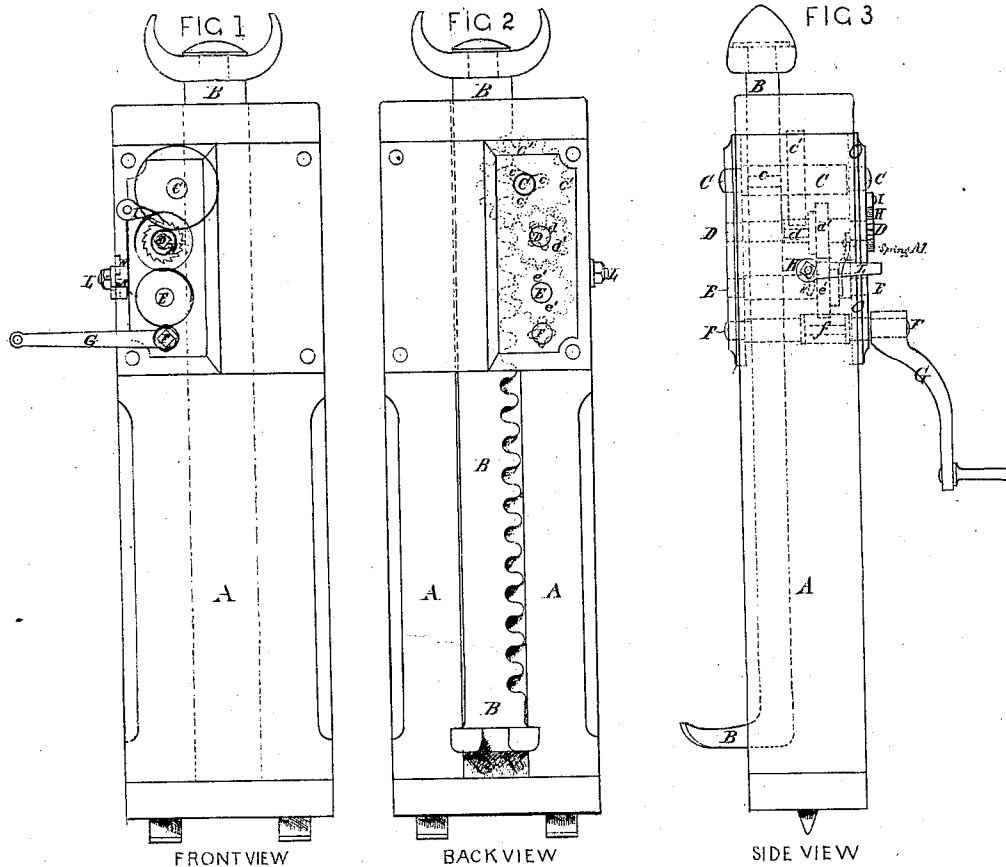


L. F. Garcin,

Lifting Jack.

No. 101454.

Patented Apr. 5. 1870.



WITNESSES  
*Joseph*  
*Thomas J. Regan*

INVENTOR  
*Leon-Paul Garcin*

# United States Patent Office.

LEON PAUL GARCIN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO HIMSELF AND JOHN D. HOOKER, OF SAME PLACE.

Letters Patent No. 101,454, dated April 5, 1870.

## IMPROVED LIFTING-JACK.

The Schedule referred to in these Letters Patent and making part of the same.

I, LEON PAUL GARCIN, of the city and county of San Francisco and State of California, have invented a certain Improvement in Geared Lifting-Jacks, of which the following is a specification.

### *Nature and Objects of the Invention.*

This invention is simply an additional improvement to the common geared lifting-jack, whereby increased power may be obtained, when required. The parts are simple, and consist in certain additions to the train of gears and means provided for throwing the additional gears in and out of operation.

### *Description of the Accompanying Drawings.*

Figure 1 is a front view of the lifting-jack, with my improvement added.

Figure 2 is a back view of same.

Figure 3 is a side view.

Figure 4 is a plan or top view.

Figure 5 exhibits the system of gearing, detached from the jack.

Figures 6, 7, 8, and 9, show the spindles and gears attached, in detail, and

Figure 10 represents two views of the shifting-shaft.

Letters of reference in all figures indicate like parts.

### *General Description.*

A is the stock or frame of the lifting-jack, generally made of wood.

B is the lifting-bar, made of good wrought iron or steel, which is provided with teeth, as shown.

The pinion *c*, forged from the spindle *C*, will engage with the teeth on the lifting-bar *B*, and the gear-wheel *e* on the spindle *C* will engage with the pinion *d* on the spindle *D*; then the gear-wheel *d*, which is firmly secured on its spindle, will engage with the gear-wheel *e*, which is loosely fitted on the spindle *E*, and the wheel *e* will be driven by the pinion *f*, which is forged from the first spindle *F*.

The spindles *D* and *F* will project through the casing of the jack.

Their ends so projecting will be made square, to receive the crank-handle *G*.

The usual ratchet-wheel *H* will be supplied on the spindle *D*, and the pawl *I*, engaging with it, will prevent the gears "running back," and will thus insure the "lift" being held when made.

To throw in and out of gear the wheel *e*, there is provided what I call the shifting-shaft *K*, which will be set in the stock at *K*, fig. 3.

The arms *k k* of this shifting-shaft will bear against the side of the wheel *e*, so that, when the spring-lever *L* which is secured to the end of the shifting-shaft is moved up, the gear-wheel *e* will be thrown forward

and clear of the wheel *d*. Again, when the lever *L* is moved down, the arms *k k* will release themselves from the wheel *e*, and, by the action of the spring *M*, will be pushed back into gear with the wheel *d*.

The spring *M* is simply a flat piece of spring-steel, riveted to the casing of the jack, and bearing against the wheel *e*.

There are notches, *N N*, cut into the edge of the side plate *O*, in which notches the lever *L* will rest, and be firmly held as it may be placed.

The additional parts added to the common style of lifting-jack will be: the gear-wheels *d* and *e*, the spindles *E* and *F*, the shifting-shaft *K* and its parts, and the spring *M*.

### *Remarks.*

The first set of gears, which can be revolved by the crank-handle, being placed on the end of the spindle *D*, can always be operated whether the remaining gears are engaged or not. This would make it seem unnecessary to provide any means to throw out the gear *e*; but the advantage of throwing out this gear is, that the lifting-bar *B* may be easily and speedily run down after the lift is made and the jack is withdrawn from the load.

Of course, I cannot claim as new the addition to the train of gearing, for lifting-jacks have been made, to the inventor's knowledge, with even more gears than are used in this jack; but in such cases there has been no provision made for using but one power, whereas in this jack two powers are applied with equal facility, one power, the lighter, working with greater speed, and the heavier power necessarily working slower.

My invention will, then, consist in the combination of parts whereby the additional set of gears can be thrown in and out of gear—parts which are themselves not new, but are newly applied for this purpose, and these parts, when applied as I have set forth, will greatly increase the usefulness of lifting-jacks of the pattern here spoken of.

### *Claim.*

I claim as my invention—

The combination of the loose gear-wheel *e*, (made to slip back and forth on the spindle *E*), the spring *M*, and the shifting-shaft *K* and its lever *L*, or the equivalents of the same, operating in connection with the remaining parts, substantially as and for the purpose as hereinbefore set forth.

LEON PAUL GARCIN.

Witnesses:

GEORGE PURDY,  
THOMAS J. REGAN.