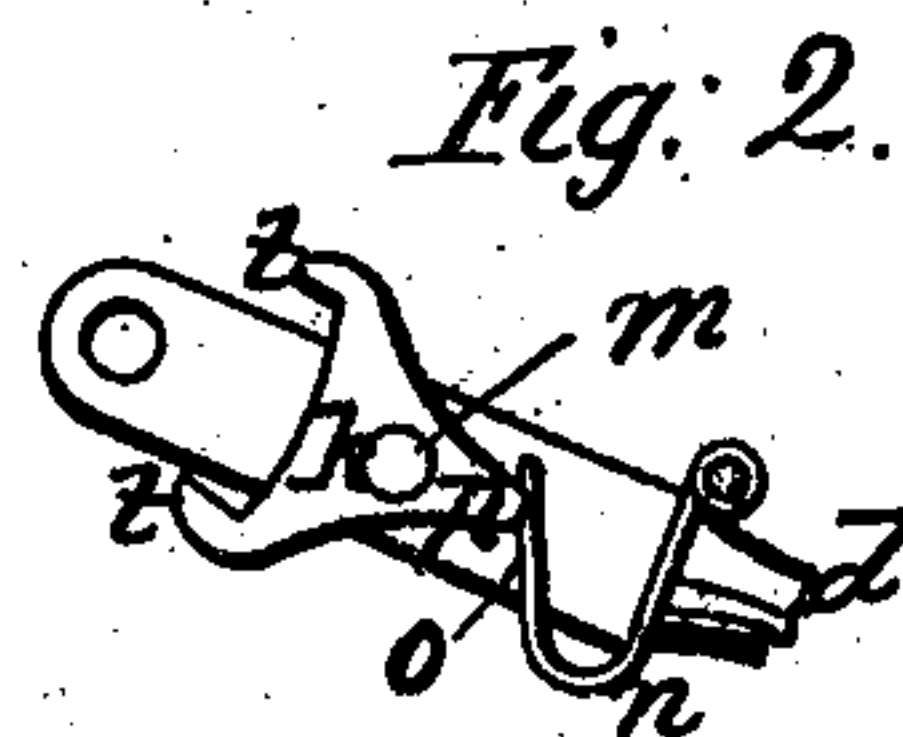
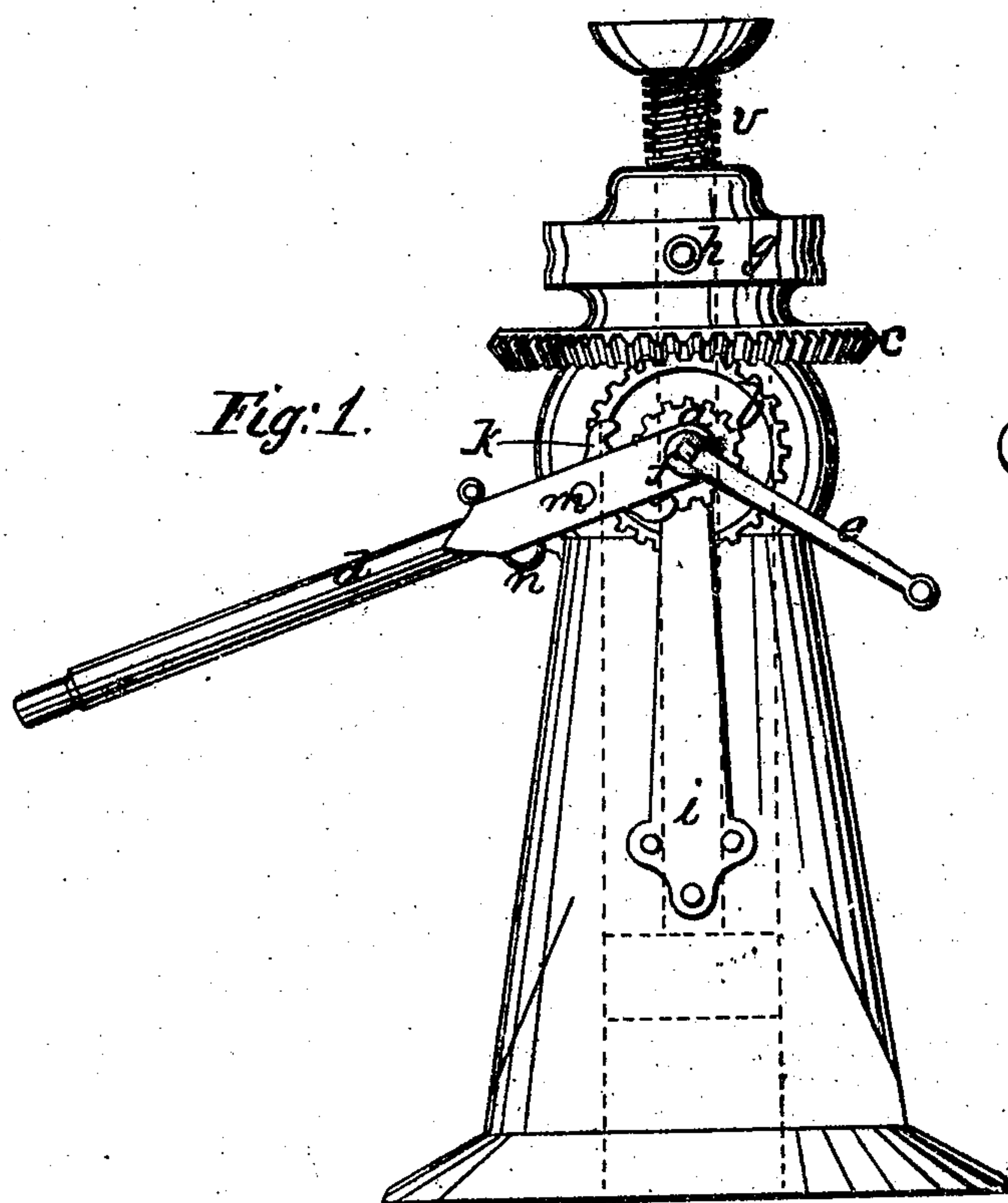


No. 68,241.

PATENTED AUG. 27, 1867.

C. H. SAWYER.
JACK SCREW.



Witnesses:
William Henry Clifford
Henry C. Houston

Inventor:
C. H. Sawyer

United States Patent Office.

CHARLES H. SAWYER, OF SACO, MAINE.

Letters Patent No. 68,241, dated August 27, 1867.

IMPROVEMENT IN JACK-SCREW.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES H. SAWYER, of Saco, in the county of York, and State of Maine, have invented a new and improved Jack-Screw; and I hereby declare the following to be a full, clear, and exact description of the same, which will enable others to make and use my invention, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows a side elevation of my invention.

Figure 2, a view of the inner side of one end of the hand lever.

Like letters indicate the same parts.

My invention consists of an upright or post, upon which are set, and to which are attached, the following devices, viz, the ratchet *a*, geared wheels *b c*, the arm *d*, crank *e*, shaft *f*, set into the upright, and revolving cap *g*. The cap *g* and wheel *c* are of the same piece, and revolve together. The ratchet *a* and geared wheel *b* are rigidly attached to the shaft *f*. The revolving cap has holes for the insertion of a bar; these are illustrated at *h*. The shaft *f* is supported by the brace *i*. The shaft can be turned either by the crank *e* or bar *d*, as choice or the amount of force to be exerted may decide, greater power, of course, being required to move the same weight by the crank *e* than with the arm *d*. Both the crank and arm are fixable and removable to and from the shaft. Upon the inner side of the arm or bar *d*, near the end thereof that is connected with the shaft *f*, is the pawl *k*. This pawl swings on the pivot *m*, and is held in any position by the spring *n*. Upon the spring is a projection, in order to hold the pawl when placed in either position, (see *o*.) The end *p* of the pawl can be pressed to either side of this projection at pleasure. This pawl works into the ratchet *a*. As the bar *d* is swung up or down the pawl can be so set as to catch the ratchet, and then the power applied to the bar will move the shaft-wheel *b*, which, working into the gear *c*, revolves the cap *g*. The same results from turning the crank *e*. The pawl *k* is provided with a lip, *t*, to fit over the ratchet, in order to retain the pawl in its proper position. Removing the bar *d* from the shaft *f* and reversing it, the end *r* may be inserted into the holes *h* and the cap then revolved by this direct application of the bar thereto. In the centre and through the revolving cap *g* is a female screw; into this works the male screw *v*, which, by the revolution of the cap in one or the other way, is raised or lowered, or turned outward or inward at pleasure.

By these means, thus combined and arranged, great power, as well as different degrees thereof, is obtained in one jack-screw. The different methods of operating the screw may be used separately or conjointly.

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

The jack-screw, combining the different parts herein described, arranged and to operate as set forth.

CHS. H. SAWYER.

Witnesses:

WILLIAM HENRY CLIFFORD,

LEWIS PIERCE.