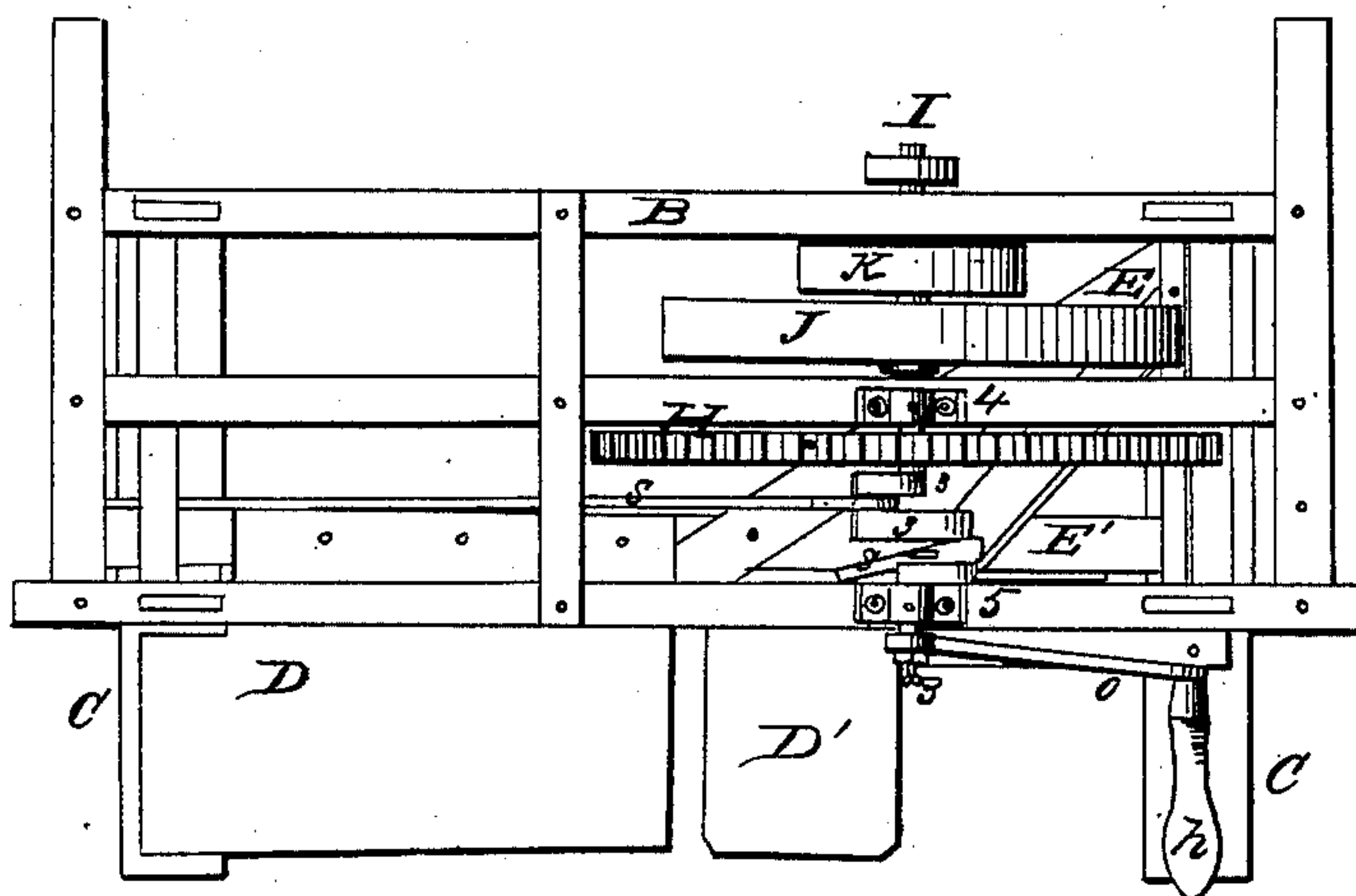
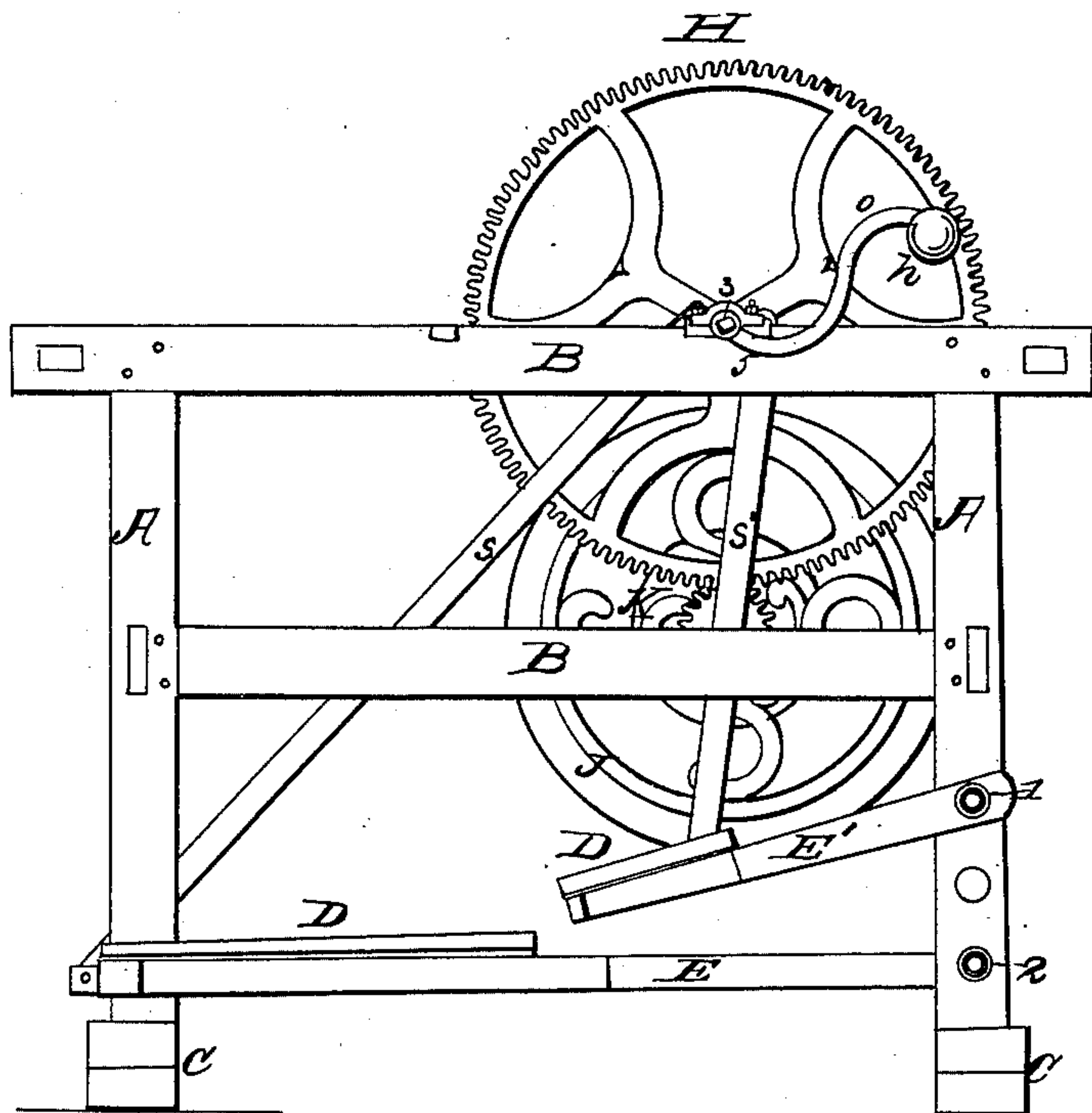


T. L. KENWORTHY & A. SILVERS.
MANUAL POWER MACHINE.

No. 67,315

Patented July 30, 1867.



Witnesses
A. P. K. Peck
A. L. Peck

Inventor
Thomas S. Kenworthy
Aaron Silvers
by their atty

United States Patent Office.

THOMAS L. KENWORTHY AND AARON SILVERS, OF COLLINSVILLE, OHIO.

Letters Patent No. 67,315, dated July 30, 1867.

IMPROVEMENT IN MANUAL-POWER MACHINES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that we, AARON SILVERS and THOMAS L. KENWORTHY, of Collinsville, in Butler county, in the State of Ohio, have invented a new and useful Improvement in Manual-Power Machines; and we do hereby declare that the following is an exact and full description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 represents a top view of our invention.

Figure 2 represents a front side elevation of the same.

The object of our invention is to so construct and arrange the mechanism of the manual-power machine as to avail of the weight of the body of the operator, while it shall provide the most convenient and advantageous position for him to exert his muscular power to propel the machine.

The rectangular frame A B rests upon the extended sills C, the latter forming a broad base at the front side of the machine below the treadle platforms D D'. The treadle-frames E E' are hinged in the same vertical plane by means of the rollers 1 and 2, which are journaled in the two end posts of the frame, as represented in the drawings. The double-crank shaft 3, resting in boxes on the central and front frame-pieces at 4 5, is provided with a hand-crank or winch, at the front side of the machine, and situated above the treadle-platforms D', and the other end of double-crank shaft 3 is provided with the large gear-wheel H, which meshes into the small pinion on the end of shaft I, which carries the balance-wheel J and pulley K.

Through this gearing power may be communicated to drive a vertically reciprocating saw, or, by means of belts, a rotary circular saw may be driven. The machine may also be used to operate other mechanism, as will be readily understood by millwrights and others.

When operating the machine, the operator will stand with his right foot on the platform D', his left foot on platform D, and with his right hand upon the handle *h* of the winch *o*. The natural movement of the body of the operator in pushing the crank *o* will bring the weight of his body upon the platform D', on which the right foot is placed, and when he pulls the winch *o* towards him (and as it passes through the lower part of its circle) his body will swing backwards and thereby throw his weight upon the platform or treadle D, and these treadles D and D' being connected by pitmen S S' with the two cranks on opposite sides of the line of shaft 3, the treadles and hand-winch *o* will work together to propel the machine. By this arrangement the operator will be afforded every facility for easily exerting his strength, and at the same time moving the weight of his body to drive the machine. In "turning a winch" a person will necessarily oscillate his body, alternately casting its weight upon each foot, and by the arrangement of the treadles and winch in the manner described, this natural and easy movement of the body of the operator is availed of to propel the machine, not only by muscular effort, but by the gravity of the operator's body.

We are aware that manual-power machines have been constructed with double treadles and levers, all operated by an attendant, but we do not claim such devices, either jointly or severally, our invention being confined to our manner of constructing, arranging, and operating the treadles and winch, which are so placed in relation to each other as to secure the advantages hereinbefore set forth.

Having fully described our improvements in manual-power machines, what we claim therein, and desire to secure by Letters Patent, is—

The arrangement and combination of the treadles D and D', extending in front of the main frame A B, and operating conjointly with the winch *o*, when constructed and applied in the manner and for the purpose described.

In testimony whereof we have hereunto set our hands this 25th day of February, 1867.

THOMAS L. KENWORTHY,
AARON SILVERS.

Witnesses:

A. L. PECK,
H. P. K. PECK.