D. E. MYERS.

Gearing for Windlasses.

No. 151,420. Patented May 26, 1874.

Fig. 1

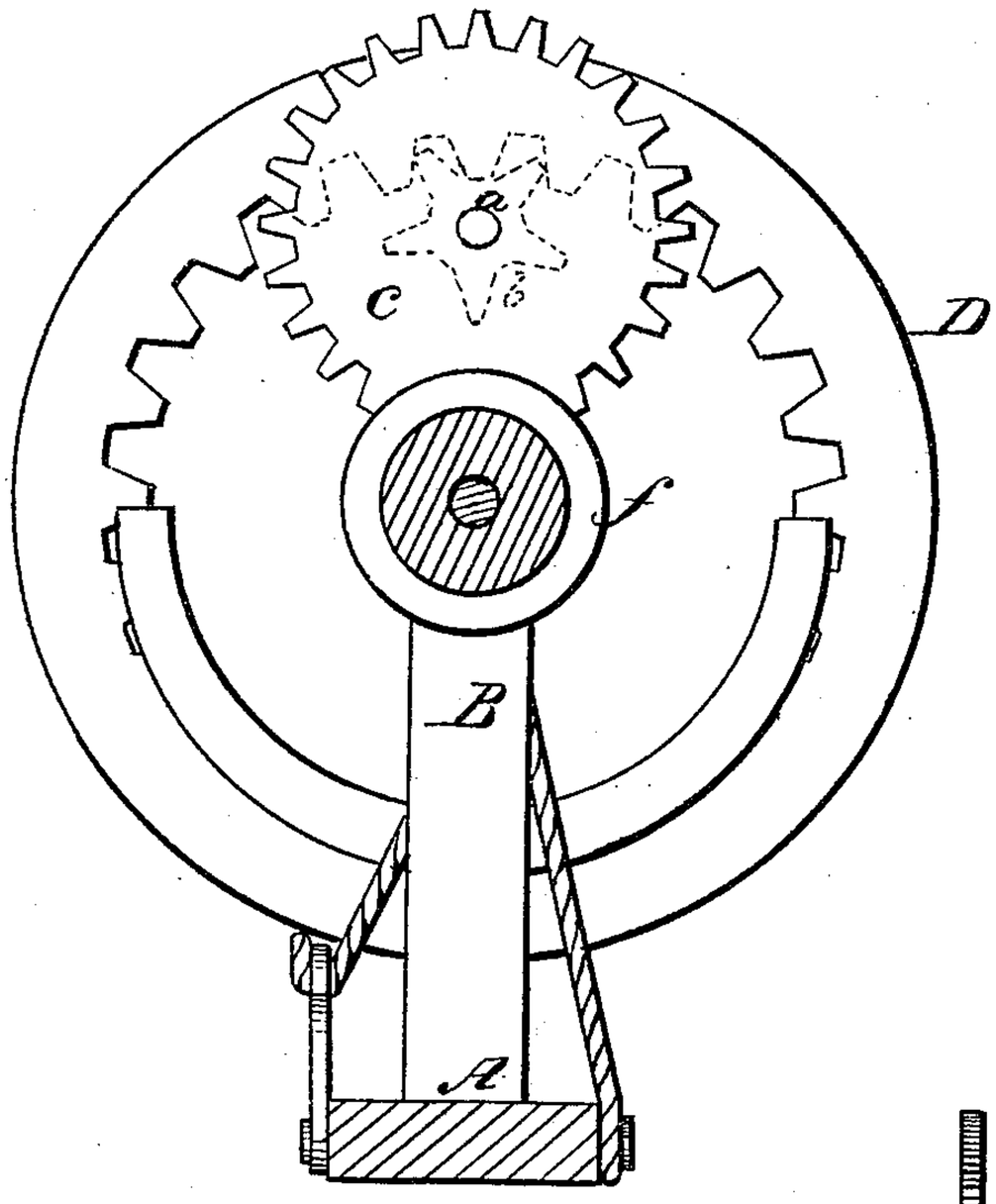
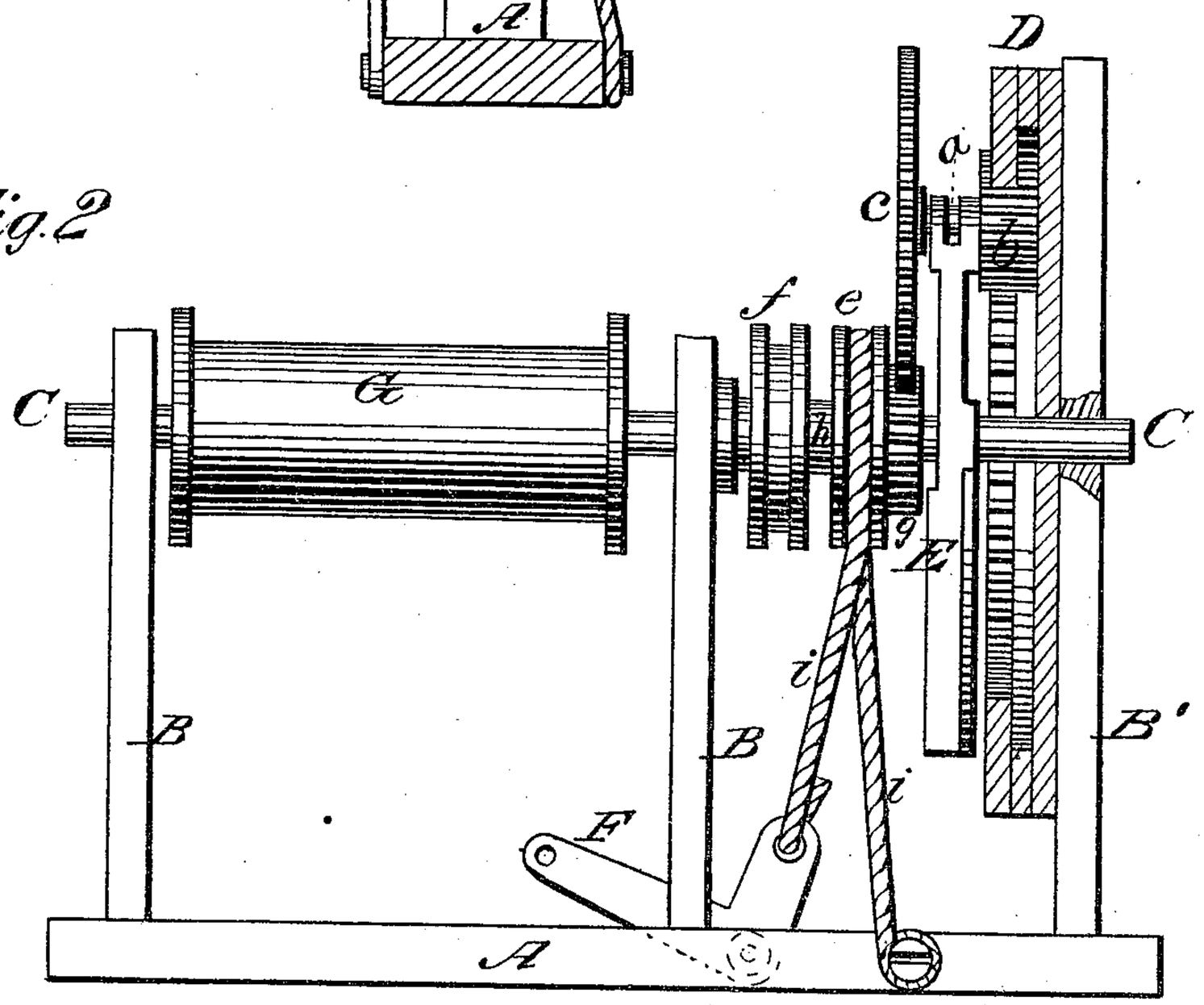


Fig. 2



Witnesses.
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UNITED STATES PATENT OFFICE.

DAVID E. MYERS, OF LOGANSPORT, INDIANA.

IMPROVEMENT IN GEARINGS FOR WINDLASSES.

Specification forming part of Letters Patent No. **151,420**, dated May 26, 1874; application filed April 18, 1874.

To all whom it may concern:

Be it known that I, DAVID E. MYERS, of Logansport, in the county of Cass and State of Indiana, have invented a new and valuable Improvement in Mechanical Movements; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a cross-section of my device; and Fig. 2 is a face view, part sectional, of the same.

This invention has relation to mechanical movements, and is designed for elevating heavy bodies, for drawing vehicles, and for other purposes where great power is required to perform the work.

It consists in combining, with a stationary inside spur-wheel, a revolving loaded spider, carrying large and small spur-wheels, which spider is applied on a revolving shaft, and actuated by a pinion spur-wheel and a belt-pulley applied loosely on said shaft, as will be hereinafter explained.

In the annexed drawings, A designates a foundation, from which three standards, B B B′, rise perpendicularly, constituting the supporting frame of the new mechanical movement. C designates a horizontal shaft, which has its bearings in the standards B B′, and is free to turn therein. One end of the shaft C passes through the center of an internal spur-wheel, D, which is rigidly secured to the standard B′. E designates what I denominate a spider, which is rigidly secured upon the shaft C alongside of the spur-wheel D, and adapted to afford a bearing for a short shaft, *a*, carrying a pinion spur-wheel, *b*, and a large spur-wheel, *c*. That end of the spider E opposite to the end *b c* is loaded and provided with a curved guide, which covers part of the teeth of the wheel D, as shown in Fig. 1. The pinion *b* engages with the teeth of a fixed wheel, D, and the spur-wheel *c* engages with a pinion, *g*, which is keyed on one end of a short tubular shaft, *h*, turning loosely on the shaft C. On this tubular shaft *h* two grooved wheels, *e* and *f*, are keyed, around one of which a rope or cable, *i*, is applied, one end of which is made fast to the foundation A, and the other end is made fast to the lever F, pivoted to said foundation. By depressing the lever F the rope *i* will tightly embrace the wheel *e*, and operate as a friction-brake. The wheel *f* is intended to receive upon it an endless belt, which communicates rotary motion to it from any convenient prime motor. On the shaft C a drum or reel, G, is keyed, around which is applied a rope for elevating or drawing objects. The machine herein described may be applied to a carriage, and thus made portable; or it may be fixed to some established object.

The machine, as shown in the drawings, is arranged as an elevator, and when rotary motion is applied to the wheel *f*, as described, this motion will be transmitted to the shaft C through the medium of the wheels *g*, *c*, *b*, and D, and the spider E, which latter, being loaded as described, will balance the movements and cause them to run regularly.

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

The revolving loaded spider E, carrying on one end wheels *c b*, and secured to the shaft C, in combination with the fixed inside spur-wheel D, the pinion *g*, and the belt-wheel *f*, substantially as described.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

DAVID ELISHA MYERS.

Witnesses:

FRANKLIN S. CROCKETT,

T. S. ROLLINS.