

G. TURNER.

Device for Converting Motion.

No. 164,783.

Patented June 22, 1875.

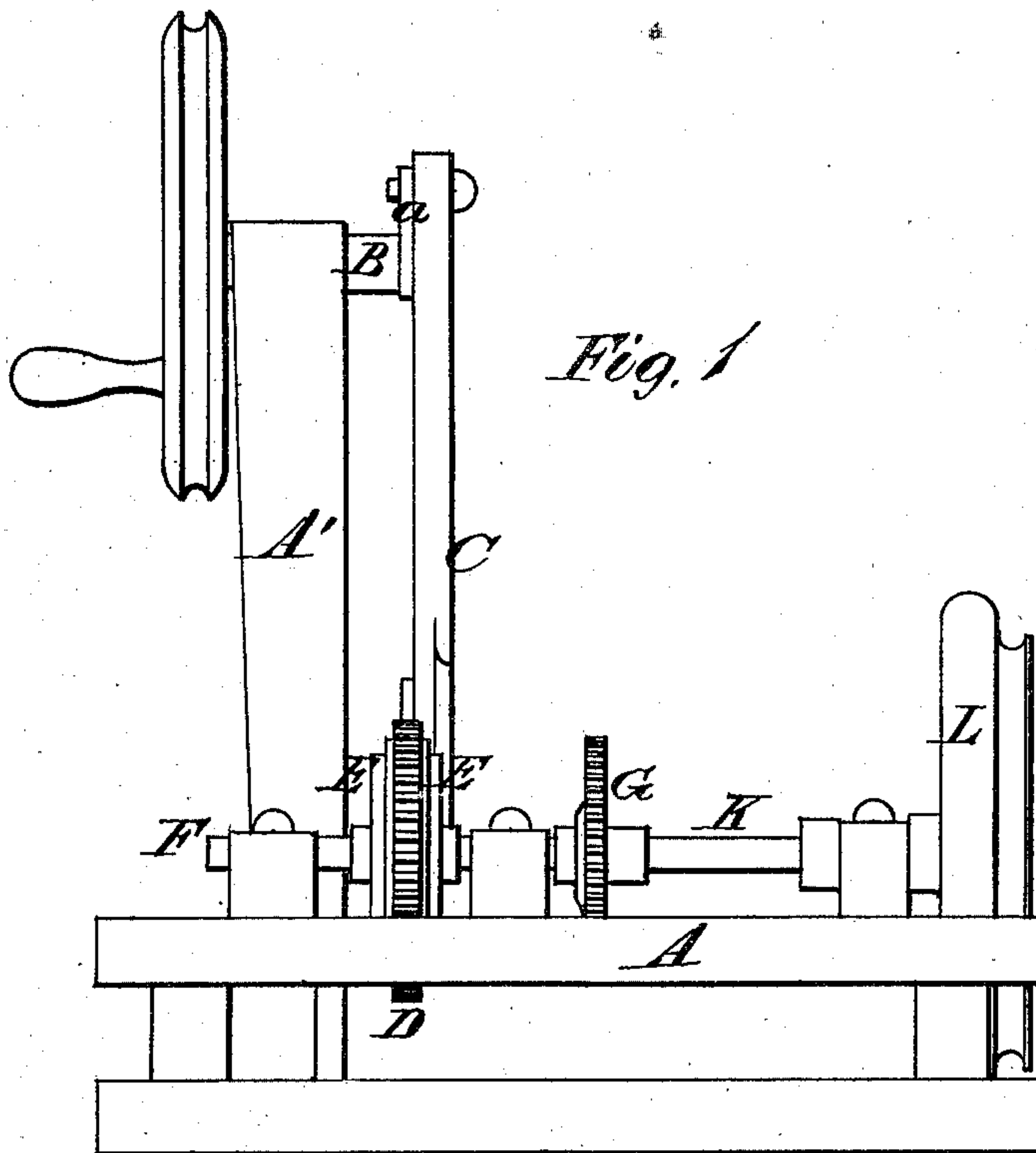
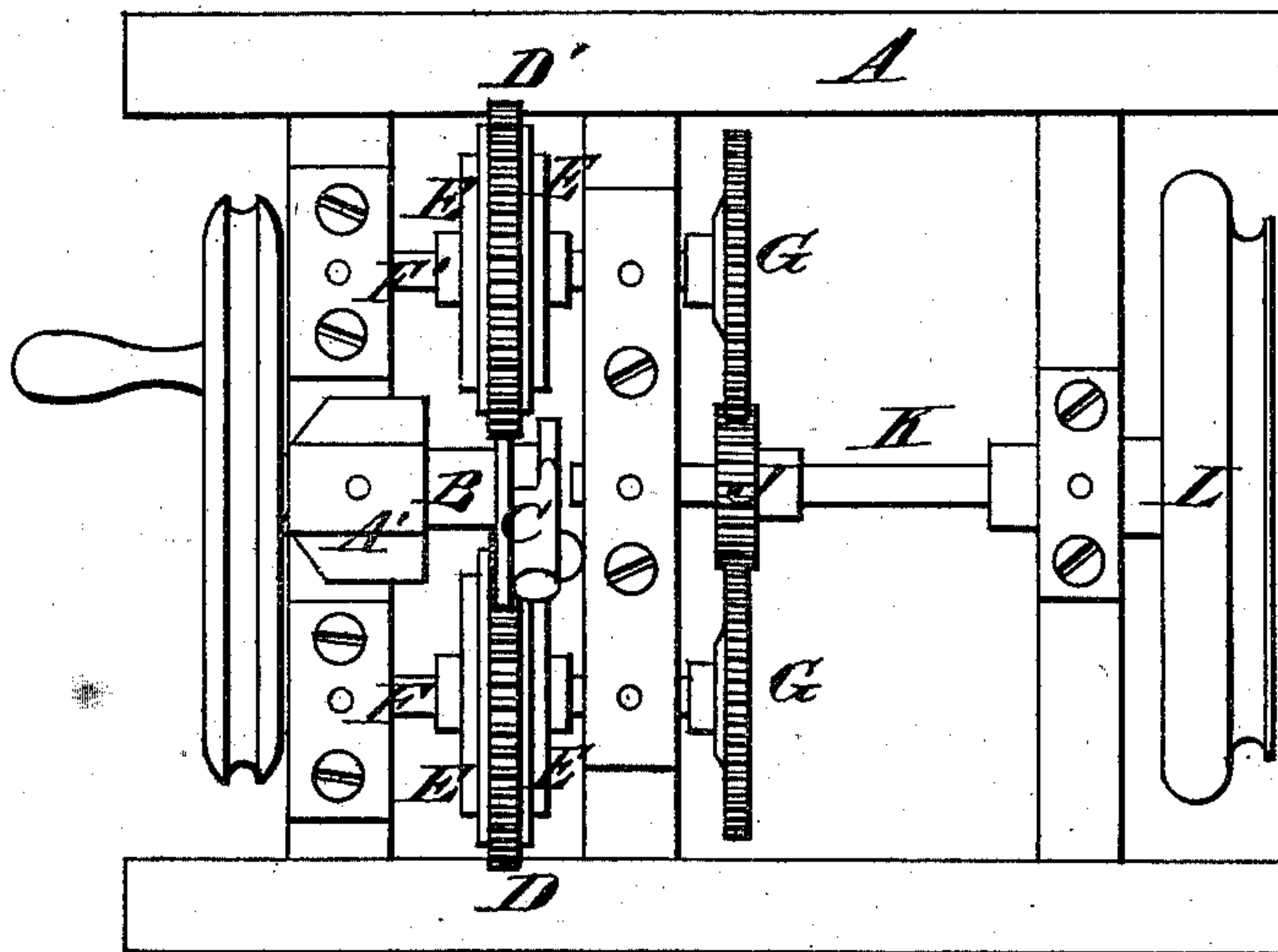


Fig. 2.



WITNESSES

Robert Everett,
Geo. C. Upham.

INVENTOR

George Turner,
Chipman and Johnson & Co.,
ATTORNEYS

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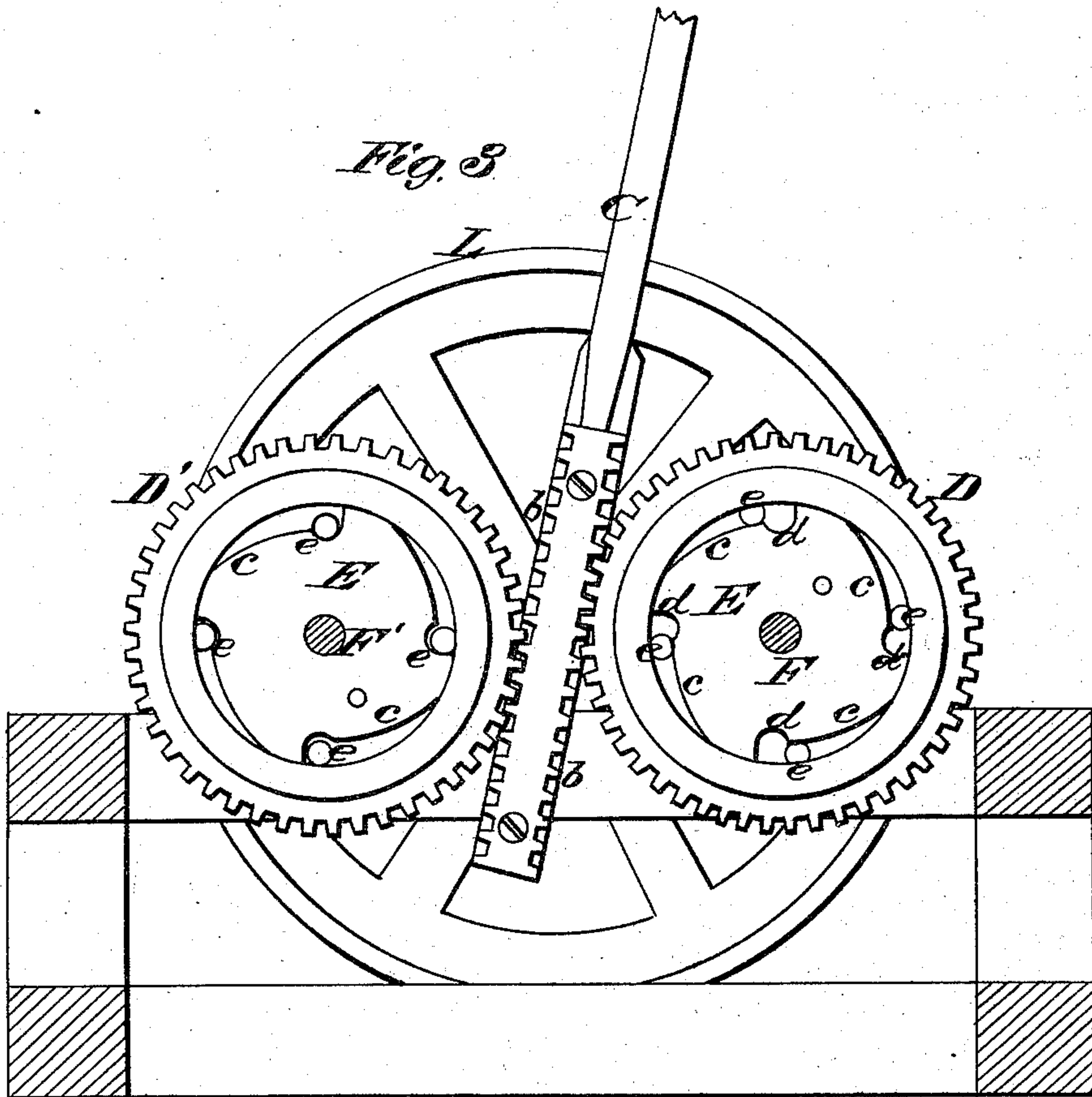
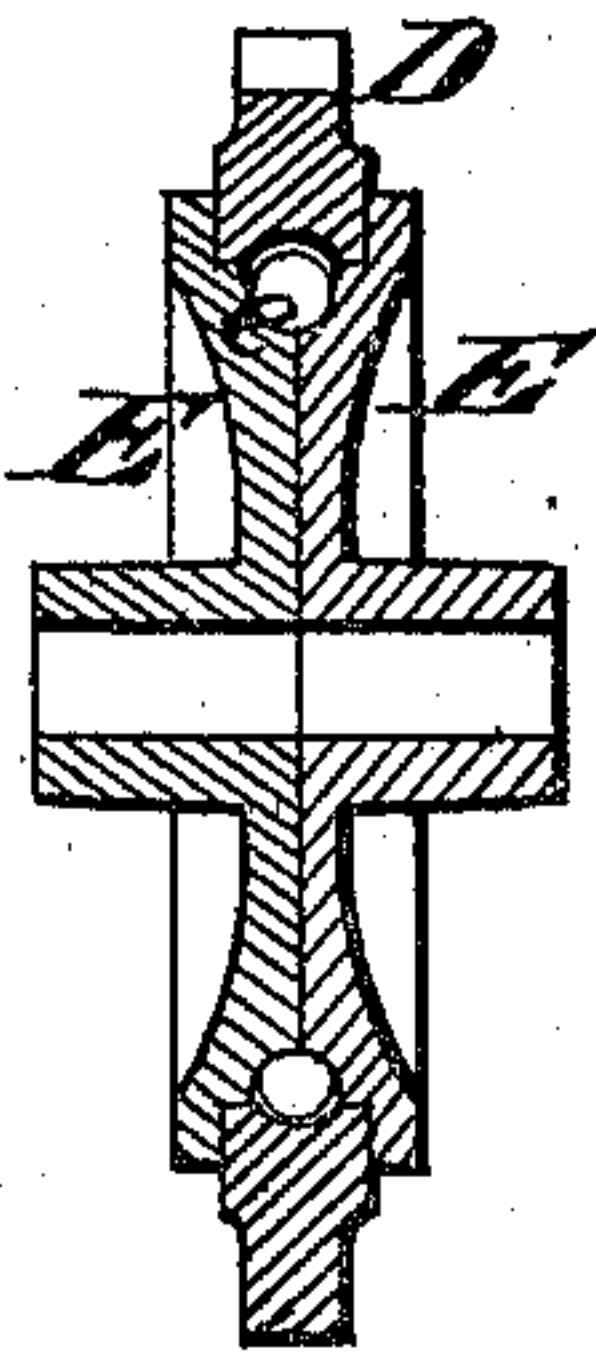


Fig. 4



WITNESSES

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George Turner,
Chipman & Son, & Co.,
ATTORNEYS

UNITED STATES PATENT OFFICE.

GEORGE TURNER, OF KALAMAZOO, MICHIGAN, ASSIGNOR OF ONE-HALF
HIS RIGHT TO LE GRAND WHITCOMB, OF SAME PLACE.

IMPROVEMENT IN DEVICES FOR CONVERTING MOTION.

Specification forming part of Letters Patent No. **164,783**, dated June 22, 1875; application filed
March 27, 1875.

To all whom it may concern:

Be it known that I, GEORGE TURNER, of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a new and valuable Improvement in Converting Motion; 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 drawings is a representation of a front view of my device, and Fig. 2 is a plan view of the same. Fig. 3 is a side view, part sectional, and Fig. 4 is a sectional detail-view.

The object of this invention is to obtain rotary motion from a pitman-rod, which is actuated by a crank; and the nature of my invention consists in a driving-crank, a pitman having rack-teeth on opposite sides of it, and two spur-wheels, which engage with said rack-teeth, and which are so applied on their shafts that they engage with the same when turned in one direction only, as will be hereinafter explained.

In the annexed drawings, A designates a frame, which is designed for supporting the improved mechanism, and B is a short shaft, which has its bearing in the upper end of a post, A', rising from frame A. On one end of shaft B is keyed a crank-arm, *a*, to which is pivoted the upper end of a pitman-rod, C, the lower portion of which is constructed with rack-teeth *b b* on its edges. The rack-teeth *b b* engage with two spurred rings, D D', which are clamped between circular plates E E, confined on shafts F F'. The plates E of each

spurred ring have inclined planes *c* formed on them, shown in Fig. 3, which terminate in semicircular recesses *d*, for receiving small balls *e*. The eccentric surfaces or inclined planes *c* of the plates belonging to the two rings D D' are so arranged relatively to each other that when the pitman-rod C is caused to descend the balls *e* of ring D will bind on this ring and turn the shaft F. At the same time the ring D' will be turned without moving its shaft F'. When the pitman-rod C is caused to rise, the ring D' will rotate its shaft F', and ring D will turn freely without moving its shaft F. The shafts F F' carry spur-wheels G G on their inner ends, both of which wheels engage with a pinion spur-wheel, J, which is keyed on a shaft, K, carrying a balance-wheel, L.

It will be seen from the above description that the pitman-rod C receives vertical and vibratory motions, and transmits, through the medium of wheels D D', their clutches, and the wheels, a continuous rotary motion to the shaft K.

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

The spurred rings D D', clamped between two circular plates, E E, each plate having inclined planes *c c*, which terminate in semicircular recesses *d*, and the balls *e*, in combination with the racked pitman C and operating mechanism.

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

GEORGE TURNER.

Witnesses:

BUN. BANNISTER,
FRANK W. RICH.