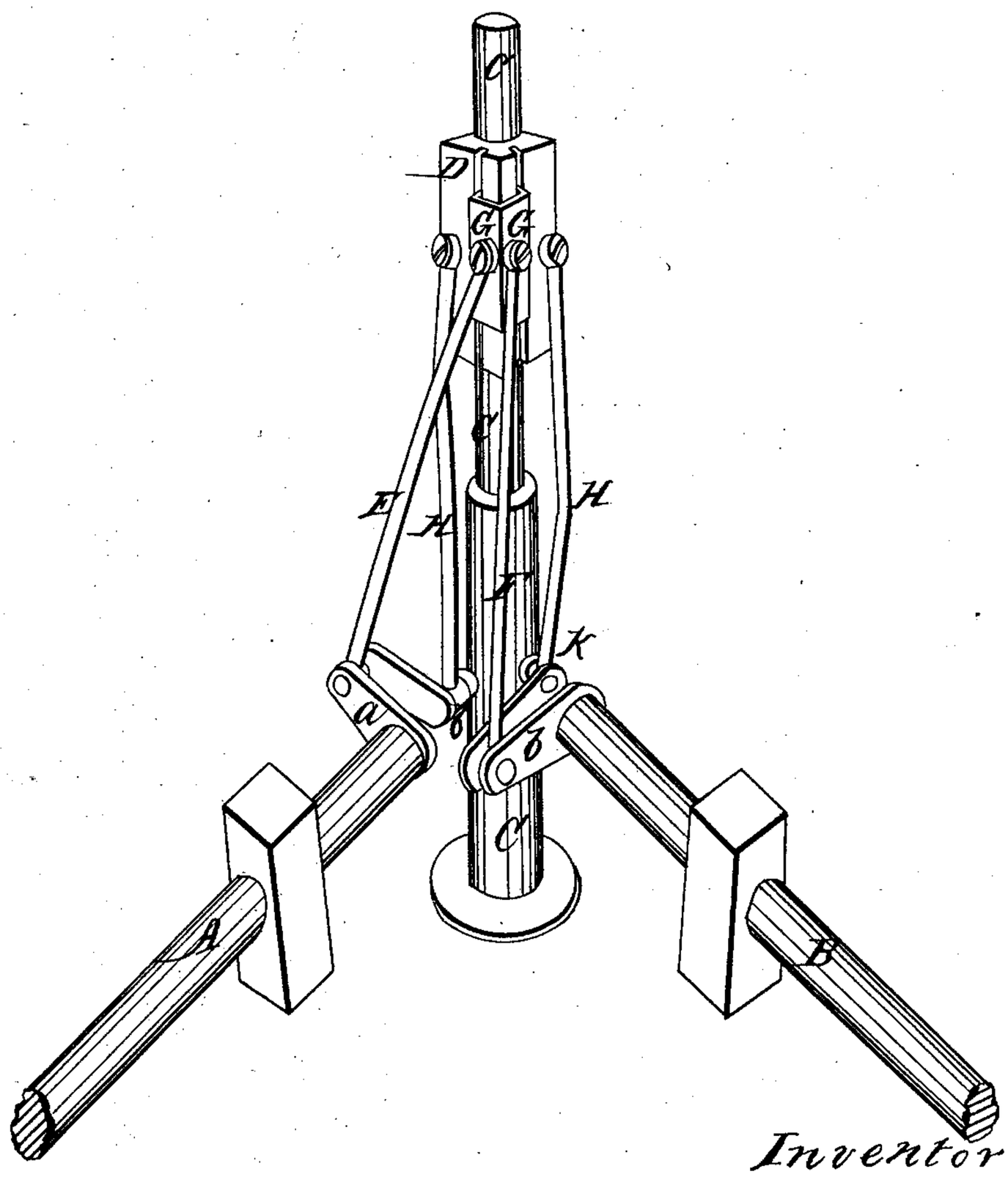
Snell & Penney,

Converting Motion.

No. 69,719. Patented Oct. 8, 1867.



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CHARLES D. SNELL AND JOHN W. PENNEY, OF MECHANIC FALLS, MAINE.

Letters Patent No. 69,719, *dated October* 8, 1867.

IMPROVEMENT IN MECHANICAL MOVEMENT.

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, CHARLES D. SNELL and JOHN W. PENNEY, of Mechanic Falls, in the county of Androscoggin, and State of Maine, have invented a new and improved "Mechanical Movement;" and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a mechanical movement, and consists in a device for running shafting at any angle without the use of the bevel-gearing.

The accompanying drawing is a perspective view of our device.

Similar letters of reference indicate corresponding parts.

A is the revolving shaft, the motion whereof is to be imparted to another shaft B, making any angle with A. C is an upright, on which slides the long collar D, having the planes of its faces at right angles to the planes in which lie the axes of the shafts respectively, so that if the shaftings are to be at right angles to one another the collar D will have a rectangular section. A pitman, E F, is attached to the cranks *a* and *b* respectively, and connects them with another long collar, G, sliding in grooves in the faces of D.

A rotary motion being given to the shaft A, the pitman E carries the collar G up and down the grooves in D, and imparts an oscillating motion to the crank *b* and shaft B, the pitman F not being carried to the dead-point. An oscillating motion may in like manner be converted into a rotary, (back.) To convey a rotary motion to the shaft B from the rotary shaft A, the rods H and K are attached to the ends *h* and *k* of the cranks *a* and *b*, eccentrically to the axes of A and B, pivoted at their other extremities to those faces of the long collar D which are presented to these axes of A and B. As the shaft A now revolves, besides the sliding motion of G in the grooves of D, a sliding motion is imparted by the rod or pitman H to D upon the upright C, which carries the shaft B, by means of the rod K, over the dead-points of E and F, imparting a rotary motion to B. A and B may be inclined to one another at any angle, and may be situated in any planes, the position of the upright C being varied accordingly.

We claim as new, and desire to secure by Letters Patent—

1. The sliding collar D, in combination with the upright C, or its equivalent, and in combination with the pitmen H and K, or their respective equivalents, in manner and for the purposes substantially as described.

2. The collar G, sliding in the sliding collar D, and in combination with it and with the upright C, or its equivalent, in manner and for the purposes substantially as described.

3. The sliding collar G, in combination with the pitmen E and F, or their respective equivalents, and in combination with the cranks *a* and *b*, in manner and for the purposes substantially as described.

4. The pitmen E, F, H, and K, and collars D and G, in combination with the shafts A and B and cranks *a* and *b*, all substantially as above set forth and described.

CHARLES D. SNELL,
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