J. D. HAZLET.

CRANK-SPEEDER.

No. 173,005. Patented Feb. 1, 1876.

Fig. 1.

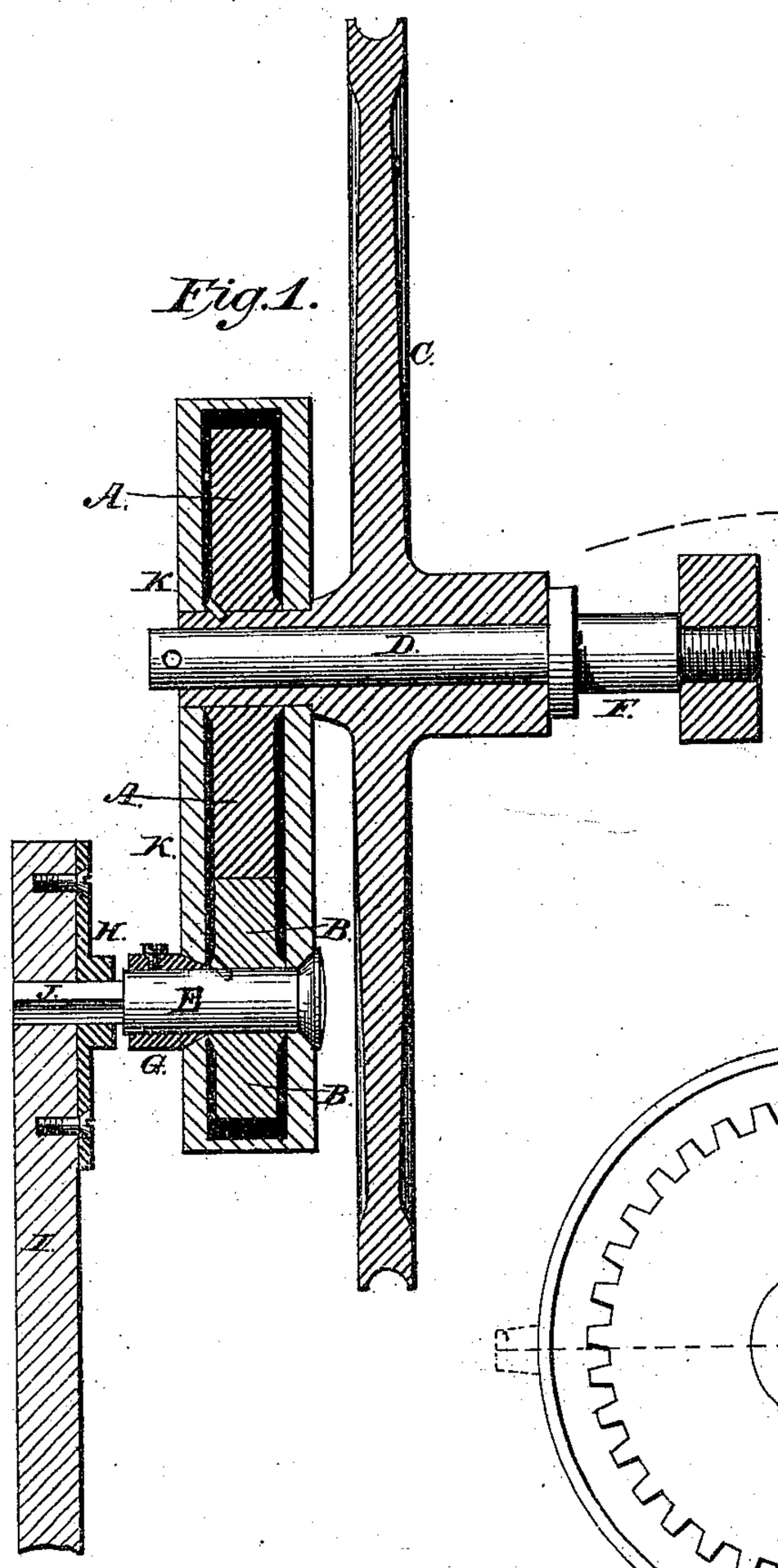
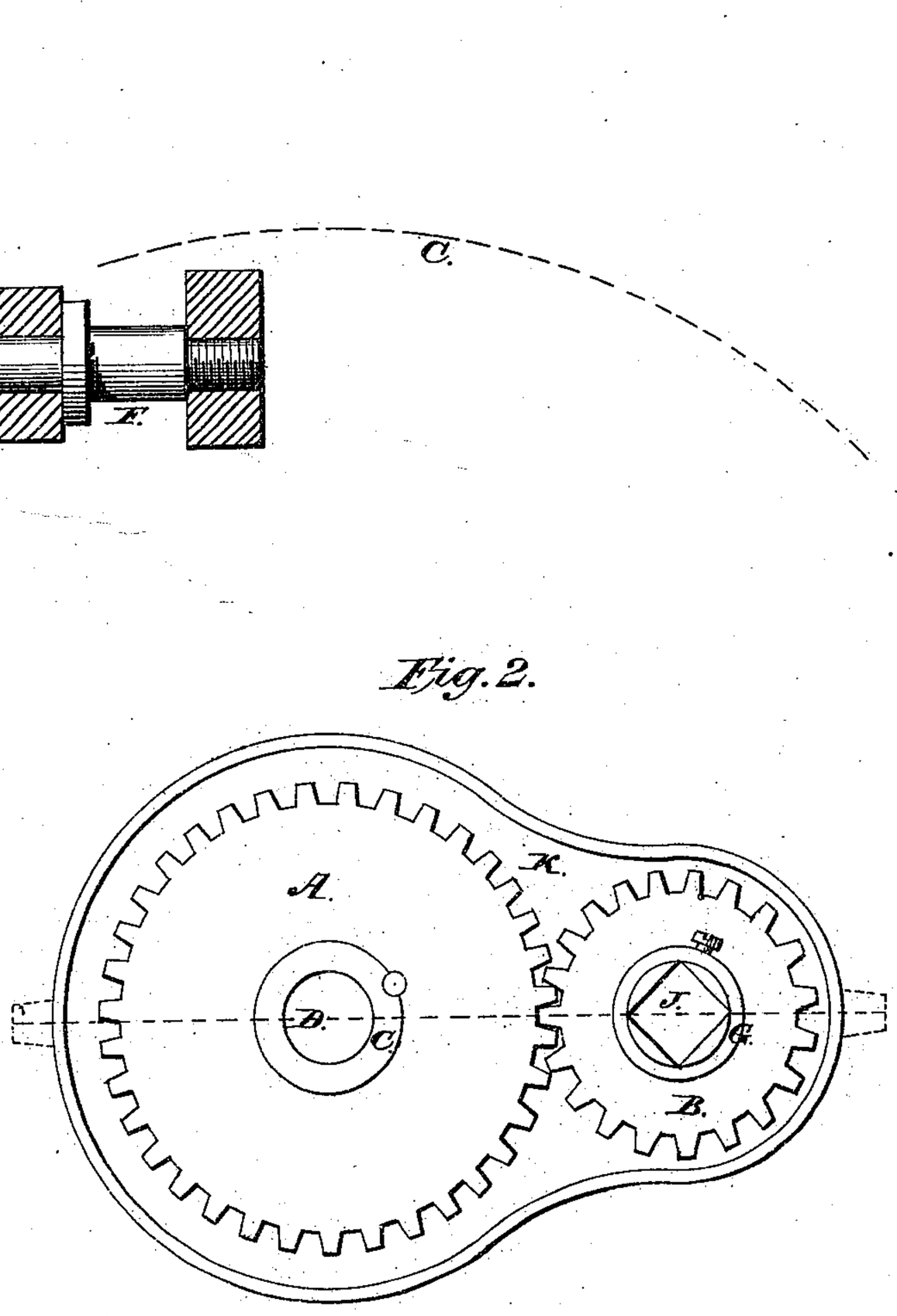


Fig. 2.



Attest:

J. N. McCloskey

Thos. S. Minnes

Inventor:

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UNITED STATES PATENT OFFICE.

JOHN D. HAZLET, OF MEADVILLE, PENNSYLVANIA.

IMPROVEMENT IN CRANK-SPEEDERS.

Specification forming part of Letters Patent No. **173,005**, dated February 1, 1876; application filed November 18, 1874.

To all whom it may concern:

Be it known that I, JOHN D. HAZLET, of Meadville, Pennsylvania, have invented a Crank-Speeder, of which the following is a specification:

The object of my invention is, particularly in case of sewing-machines, to get more than a revolution of the first driver or band-wheel from one revolution of a crank. I do this by fitting the cog-wheel A tight on the hub of the band-wheel C, when both will revolve together on the spindle D, which is secured in place to the leg of the machine at F, Fig. 1. I then make a hollow case, K, Figs. 1 and 2, which, practically, I make in two parts, and secure them together by the lugs at the ends. (See dotted lines through the center of Fig. 2.) I will then make the pinion B to mesh into A and fit it tight to the spindle E. The case is fitted loose on the hub of C, and loose on the spindle E, which has a beveled head, and beveled tightener G to take up the wear. The end of the spindle E from the dotted shoulder marked J is made square, (see J, Fig. 2,) and fits tight into a mortise through the boss H and the pitman I; thus, the pitman I, spindle E, and pinion B, are all firmly united together.

Now, when the pitman is forced down, the whole power of the tread is exerted on the cogs of A direct, for the rigid pinion forces A, cog by cog, before it, while it makes the circuit of a crank; and has not only given a revolution to A and C by the crank movement, but has added to that movement by just the number of cogs it has pushed in making the circuit. If the pinion B is just half the diameter of A, it will quicken the movement of A and C just a half revolution, but if A and B were of the same diameter, then a full revolution would be added to that of the crank, or if three revolutions were desired for a turn of the crank, just reverse the gear and put the small wheel B on C, and the larger one A on E, and so on to any speed that may be desired.

The case K is the medium by which the wheels A and B are held in their relative position to each other.

Having now described my invention, I would state that I am aware that a system of gearing similar to that herein described has been employed, such gearing being shown in the patent granted to E. Soper January 14, 1868, and I therefore do not claim said gearing broadly and irrespective of its arrangement; but

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

The band-wheel C, mounted and turning loosely on the stud-shaft D, in combination with the spur-wheel A keyed to its hub or sleeve, inclosing plates K, mounted and turning loosely on said hub, and affording bearings for the crank-pin E, to which the pitman I and the spur-wheel B, meshing with the wheel A, are connected, all arranged and operating as described.

JOHN D. HAZLET.

Witnesses:

J. N. MCCLOSKEY,

THOS. S. MINNISS.