J. SANDALL, Jr.

Link-Motions.

No. 155,466. Patented Sept. 29, 1874.

Fig: 1.

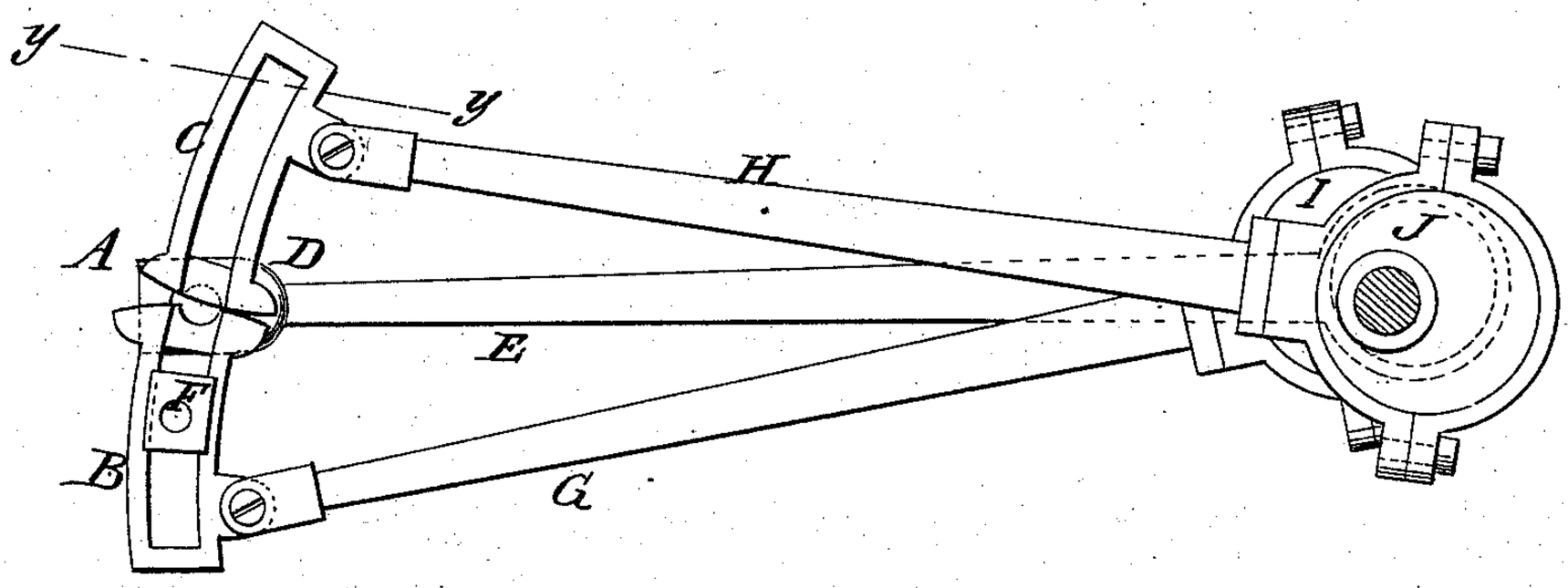


Fig: 2.

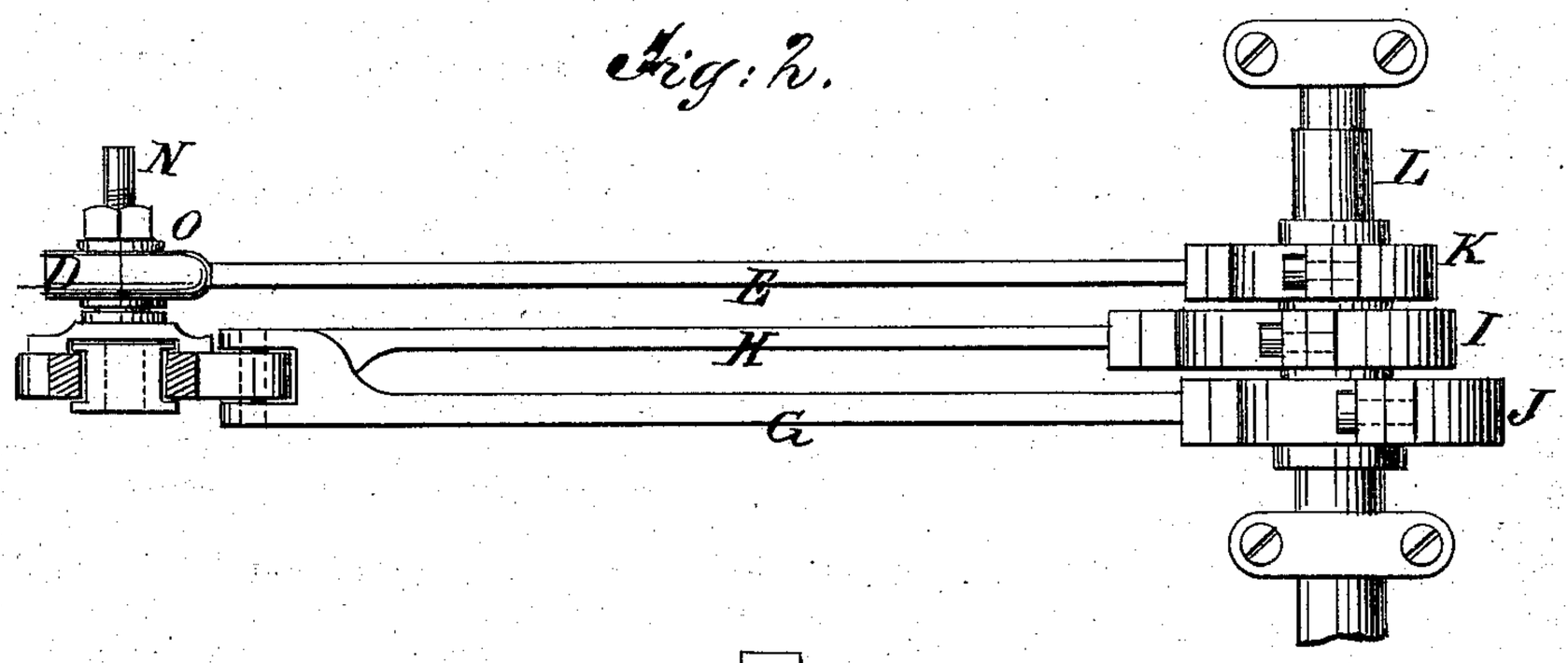
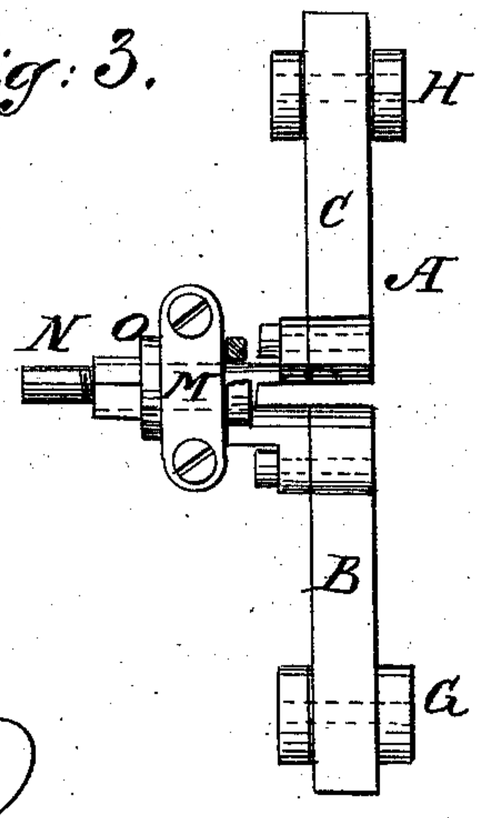


Fig: 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN SANDALL, JR., OF CHARLOTTETOWN, CANADA.

IMPROVEMENT IN LINK-MOTIONS.

Specification forming part of Letters Patent No. **155,466,** dated September 29, 1874; application filed August 22, 1874.

To all whom it may concern:

Be it known that I, JOHN SANDALL, Jr., of Charlottetown, in the Province of Prince Edward's Island and Dominion of Canada, have invented a new and useful Improvement in Link-Motion, of which the following is a specification:

This invention relates to new and useful improvements in what is known as the "link-motion" of steam-engines, adapted to locomotive, marine, and stationary steam-engines; and it consists of a link formed in two parts, each part being connected with an eccentric, and with both parts connected with a central eccentric, by the rod of which the two parts are made to operate as though hinged together.

In the accompanying drawing, Fig. 1 is a side view of the link, showing its connection with the eccentric-rods. Fig. 2 is a top view of the same. Fig. 3 is a view looking down from the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A is the link, made in two parts, B and C, but connected with the head D of the eccentric-rod E, that they act as a whole link for the sliding valve-rod box F. G and H are the ordinary link eccentric-rods, attached to the link A in the usual manner. I and J are the eccentrics. K is the eccentric of the rod E. L is the shaft. The inner ends of the parts B C of the link have each a cross-piece, M, to one of which is attached the rod N, and to the other a tubular box, O. The head D of the rod takes hold of this tubular box. The rod N passes through the box; consequently, the eccentric moves the middle of the link A in and out to the extent of its throw, while the other eccentrics operate upon the ends of the link A in the usual manner. The eccentric K may be set so as to vary this central motion of the link. The action of the valve may consequently be varied as may be desired, but ordinarily it is set opposite the crank, so that it answers for backing or going ahead.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of the flexible link A and eccentric-rods E, G, and H, substantially as and for the purpose specified.

2. A flexible link formed of two parts, connected at their inner or adjacent ends, which are adapted for motion independent of the motion of their outer ends, as shown and described.

JOHN SANDALL, JR.

Witnesses:
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