2 Sheets—Sheet 1.

J. S. WINSOR.

GATE.

No. 173,839. Patented Feb. 22, 1876.

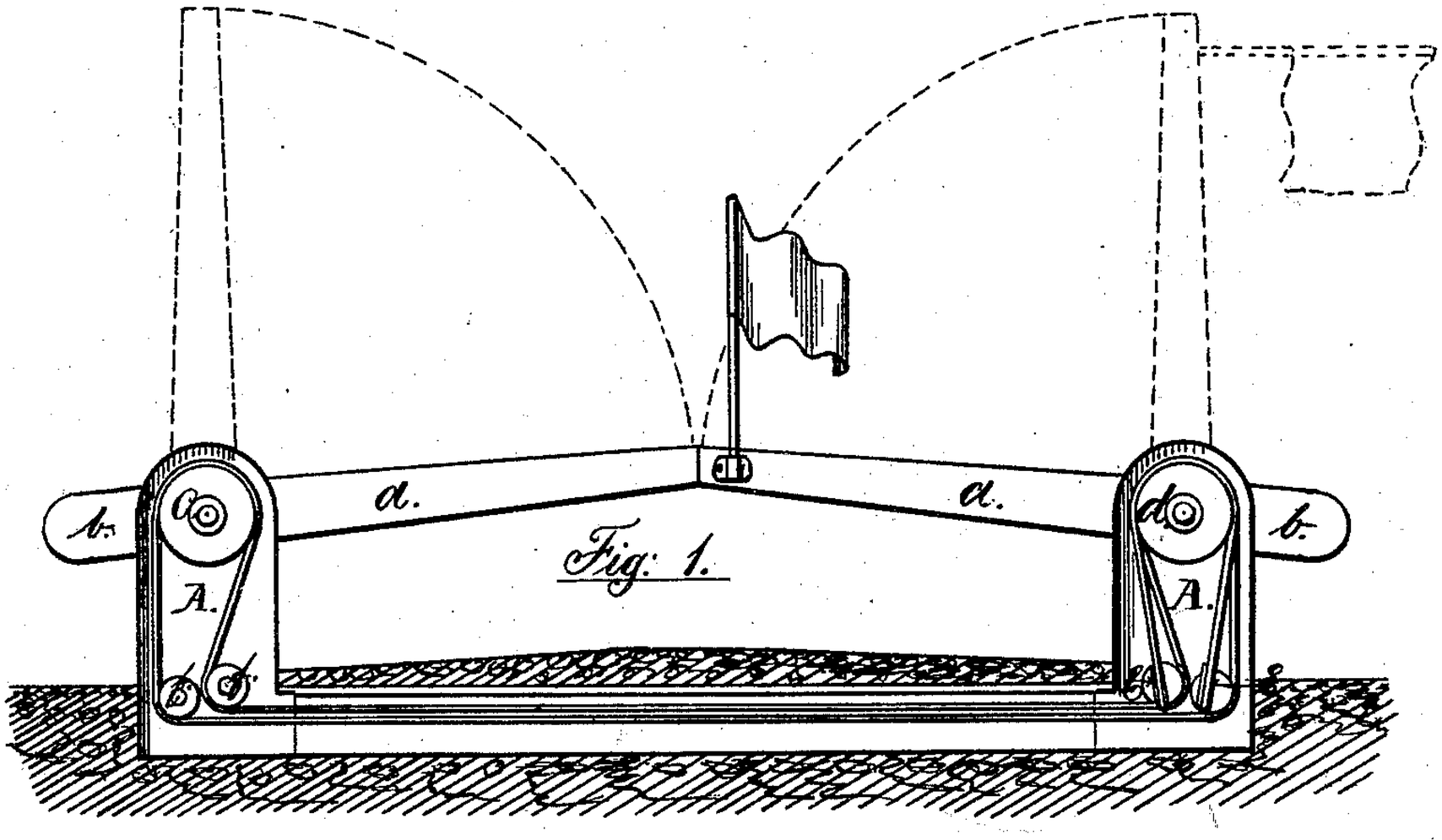

Fig. 1.

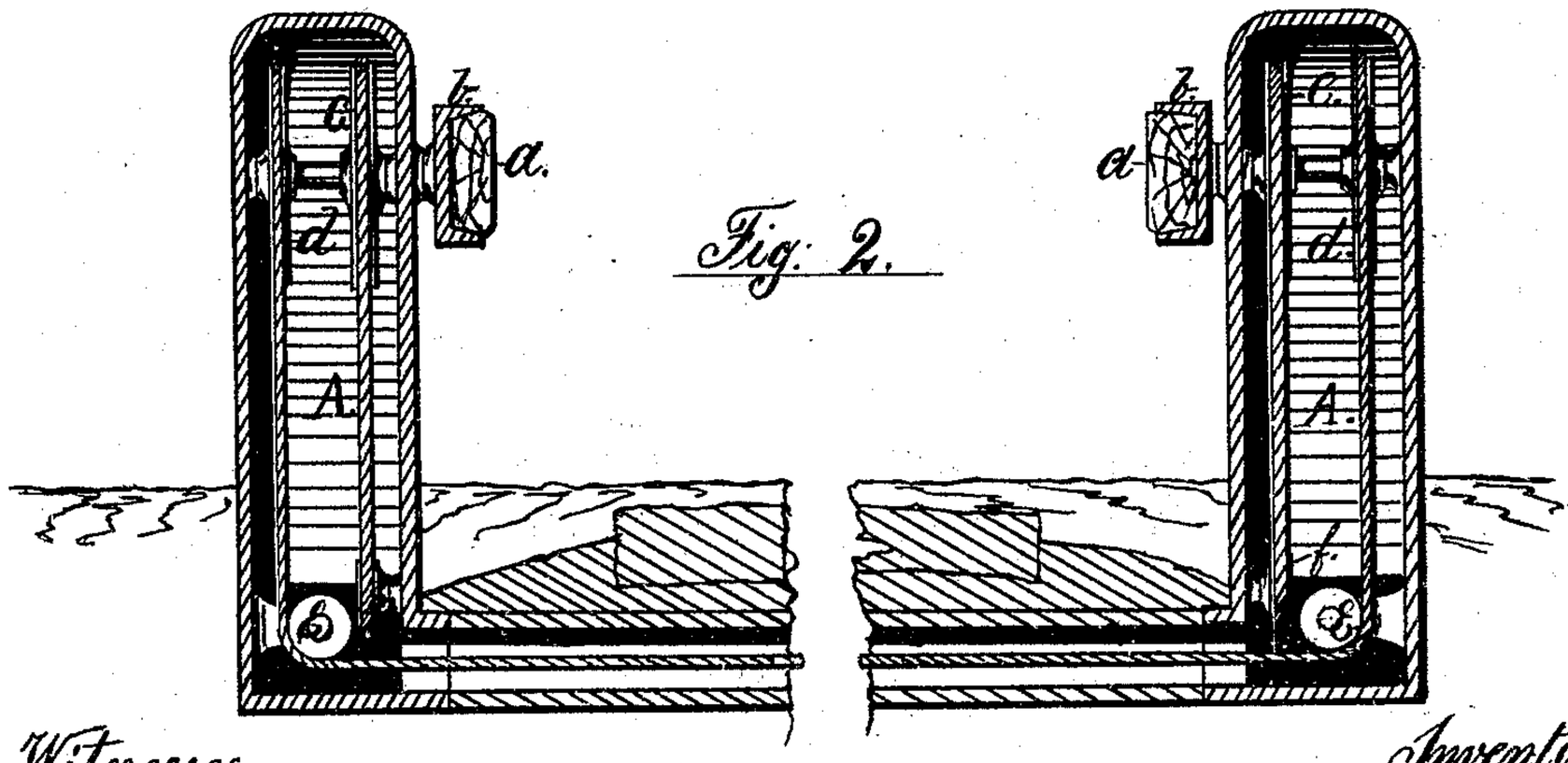

Fig. 2.

Witnesses

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Attorney.

2 Sheets—Sheet 2.

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GATE.

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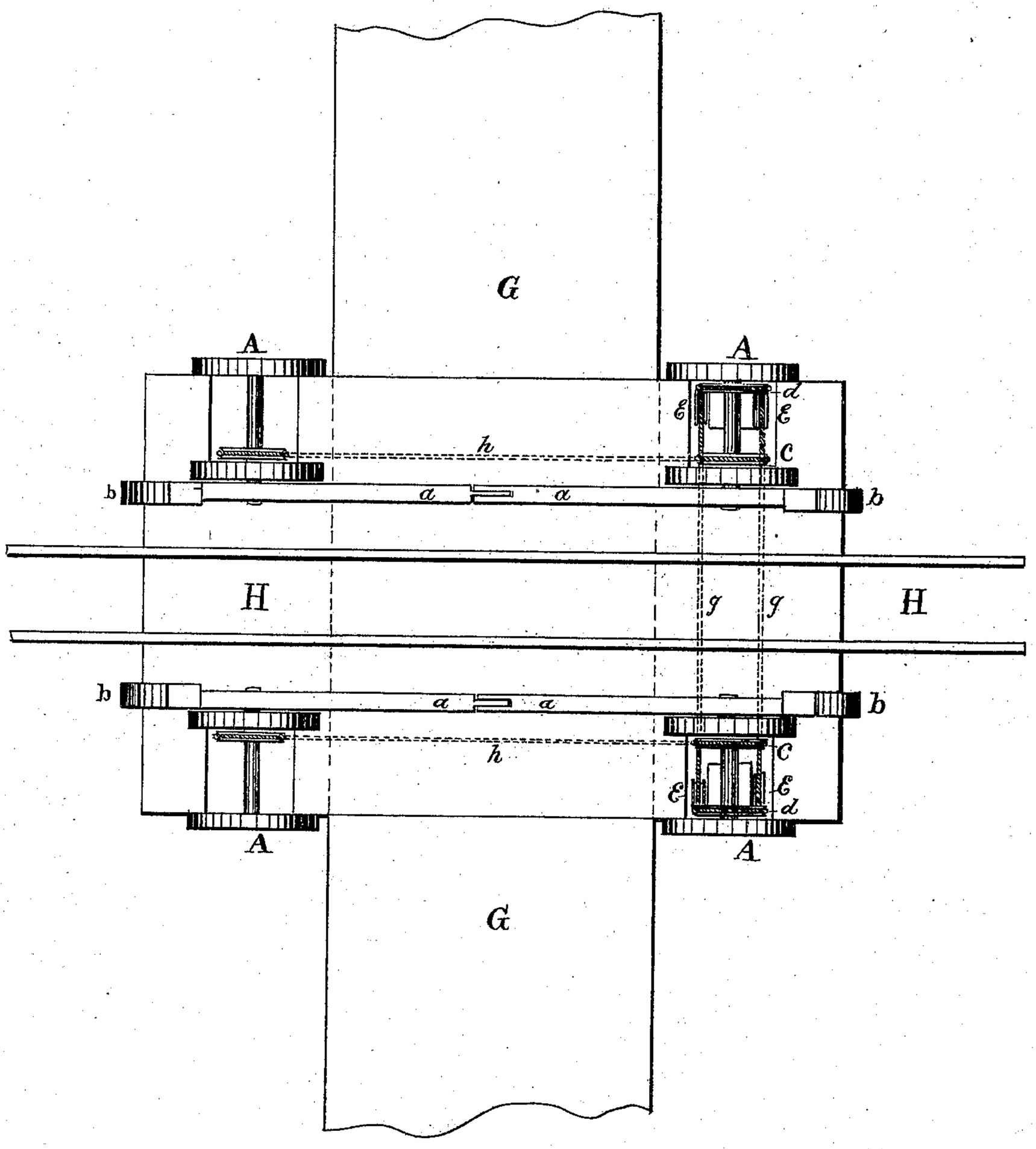

Fig. 3.

Witnesses

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UNITED STATES PATENT OFFICE.

JOSEPH S. WINSOR, OF PROVIDENCE, ASSIGNOR TO CHARLES MOIES, OF LINCOLN, RHODE ISLAND.

IMPROVEMENT IN GATES.

Specification forming part of Letters Patent No. **173,839**, dated February 22, 1876; application filed November 18, 1875.

To all whom it may concern:

Be it known that I, JOSEPH S. WINSOR, of the city of Providence, county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Gates; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification:

This invention has reference to an improvement on my invention patented May 26, 1874, No. 151,260, for improvement in gates; and consists in the novel arrangement by which two or more gates can be opened and closed simultaneously, or successively, from one point.

Figure 1 is a vertical longitudinal section, showing the gate, the standards, and the mechanism for simultaneously operating the same. Fig. 2 is a vertical cross-section, showing an end view of one set of the standards, and the connections by which both gates are operated. Fig. 3 is a plan view, representing a common road crossing a railway, where a gate is located on each side of the same, and by dotted lines showing the connecting mechanism whereby both gates are operated simultaneously from any point.

In the drawings, *a a* are the bars, forming, when closed, as shown in Fig. 1, the gate proper. A A are the standards, placed on each side of a road, and in which the connecting mechanism is secured. *b b* are balance-weights, secured to the outer ends of the bars *a a*, which are supported by shafts in suitable bearings in the standard A A. These balance-weights *b b* are made of such proportion as will balance, or nearly balance, the bars, so that the least possible amount of power is required to open or close the same.

Secured to the shaft is the wheel *c*, and to the standards the pulleys *f f*. A wire rope, cord, or chain passes over the wheel *c* in each one of the standards, and continues under the pulleys *f f*, so that an endless connection is formed, by which the motion of one arm or bar, *a*, connected with the wheel *c*, is transmitted to the other, and both are made to operate simultaneously.

In Fig. 3, G G represent a common road or street, and H H a railway-track. The dotted lines *g g* represent the cords, wire-ropes, or chains passing from pulleys E E under the railway, as also seen in Fig. 2; and *h h* represent the ropes, &c., passing from pulleys *f f* under the common road or street, as seen in Fig. 1, to operate the bars *a a* simultaneously.

All parts so far described are the same as shown in my original Patent No. 151,260, above referred to.

At railroad-crossings two or more gates are required, and it is desirable to operate the same either simultaneously or successively from one point. Fig. 2 represents two standards, A A, placed on opposite sides of such a railroad-crossing. The shafts supporting the arms *a a* beside the chain-wheel *c* also carry the wheels *d d*, over which the chain, cord, or wire-rope passes; and, being led under the pulleys E E, extends through a box or tunnel under the roadway, and so connects the two gates by an endless chain or rope, and transmits the motion from one gate to the other.

When it is desirable to open and close one gate after the other, one of the wheels *d*, in the standard where the gate-keeper has most convenient access, is made separate from the shaft supporting and operating the gate, and a crank is attached to the wheel *d*. Each gate can, therefore, be closed independently of the other, and two or more gates can be operated from one point.

Instead of an endless chain, the larger portion of the connection extending under the roadway may be a straight rod or wire; and, if more convenient, a shaft may extend across the roadway having a chain-wheel at each end connected by a chain, cord, or wire-rope with the wheels *d d*, so that the motion of the bars *a a* of one gate is transmitted to the bars of the other gate by the shaft.

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

The combination, with two gates consisting of vertically-swinging balanced bars *a a* constructed as described, of the mechanism herein described, consisting of the cords or chains *g h* and pulleys *c d e* for opening and closing the gates, substantially in the manner specified.

JOSEPH S. WINSOR.

Witnesses:

JOSEPH A. MILLER,

WILLIAM G. BRADLEY.