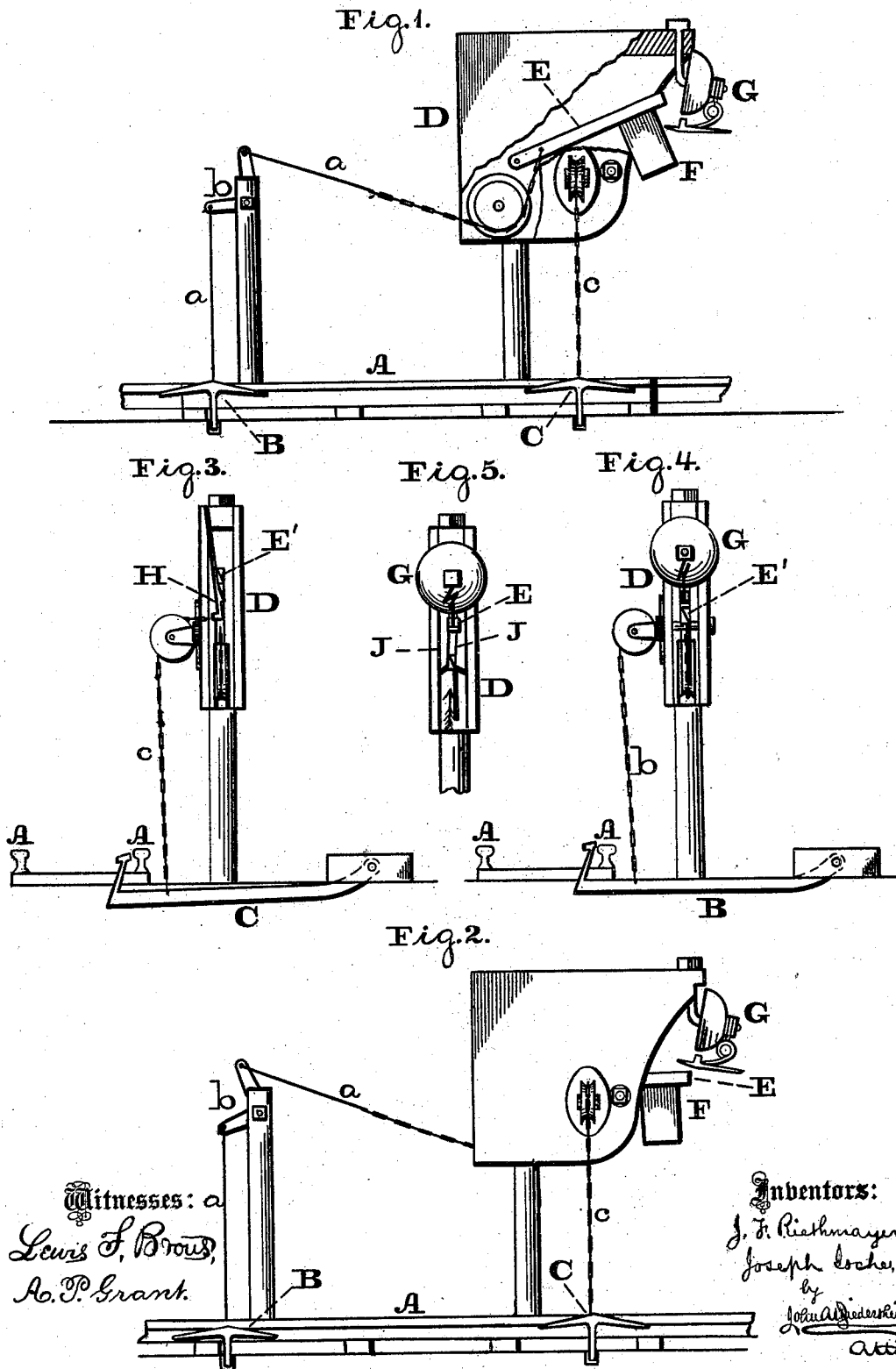


J. F. RIETHMAYER & J. ISCHE.

RAILROAD-SIGNAL.

No. 174,007.

Patented Feb. 22, 1876.



UNITED STATES PATENT OFFICE.

JACOB F. RIETHMAYER AND JOSEPH ISCHE, OF HATFIELD, PA.

IMPROVEMENT IN RAILROAD-SIGNALS.

Specification forming part of Letters Patent No. **174,007**, dated February 22, 1876; application filed January 27, 1876.

To all whom it may concern:

Be it known that we, JACOB F. RIETHMAYER and JOSEPH ISCHE, both of Hatfield, in the county of Montgomery and State of Pennsylvania, have invented a new and useful Improvement in Railroad-Signals; and we do hereby declare the following to be a clear and exact description of the nature thereof, sufficient to enable others skilled in the art to which our invention appertains to fully understand, make, and use the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side view of the device embodying our invention. Fig. 2 is a similar view thereof, the signal being made. Figs. 3 and 4 are end views thereof. Fig. 5 is an end view of a portion thereof.

Similar letters of reference indicate corresponding parts in the several figures.

Our invention consists in means for indicating at crossings the approach of trains. The signal will be made in advance of the train, and returned to its normal position when the crossing is fully reached or passed, this being accomplished by a system of levers and connections operated by the train.

The invention also consists in so constructing and guiding the signal-staff that, when the signal has accomplished its object, said staff will not be obstructed in its return motion.

Referring to the drawings, A represents the rails, in proximity to one of which there is pivoted a lever, B, which is located some distance from the crossing at which the signal is to be made. C represents another pivoted lever, which is located at or about the crossing, and in proximity to said lever C there is elevated a box or frame, D, within which is mounted a lever or staff, E, to which is hung a flag, F, having a rising and falling motion with said staff. The front end of the staff is beveled, as at E', the widest side being below, and said end is adapted to strike the hammer of a bell or gong, G, which is secured to the box or frame D. The staff E is connected to the lever B by means of suitable connections, and bell-cranks *a b* properly located, so that when the lever B is depressed the staff E will be drawn down.

Within the box D there is pivoted a catch, H, which is adapted to engage automatically with the staff E, when the latter is depressed, so that said staff will be held in its lowered position, as shown in Fig. 2.

In order to release the catch and cause it to return to its normal position, we attach thereto connections *c*, which are also attached to the lever *c*.

The staff E is fitted between guides J, whose inner faces extend diagonally, so as to impart a diagonal motion to the staff.

When there is no train approaching, the flag is raised, and the parts are in position shown in Fig. 1.

When a train approaches a crossing, and is, say, two hundred or three hundred yards therefrom, it reaches the lever B, and the flanges of the wheels or a finger projecting from the truck strike the lever B, whereby the staff E will be depressed and the flag displayed, as shown in Fig. 2.

In the downward motion the wide side of the front end of the staff strikes the hammer of the gong or bell G, and the latter is sounded; this, with the position of the flag, indicating the near approach of the train. As soon as the staff reaches the catch H, it forces it back until its head clears the staff, then the catch springs forward and takes hold of the staff, whereby the flag is prevented from rising.

When the train reaches the crossing or passes it, the lever C is depressed, and this draws back the catch H, whereby the staff is disengaged and the flag returns to its normal position, thus indicating no danger. In this return motion the diagonal guides J, in connection with the beveled surface E' of the front end of the staff, prevents the staff from striking the bell-hammer in a vertical direction, and thus no alarm is sounded, and the passage of the staff is not obstructed, whereby its return to its normal position is assumed, so that the next train will operate the staff, as in the previously-described instance.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The flag-staff E and gong G, and the connections *a b c*, in combination with the operating-lever B, catch H, and releasing-lever C, substantially as and for the purpose set forth.
2. The staff E, carrying the flag F and striking the gong G, the operating-lever B, and releasing-lever C, in combination with the catch H and the diagonal guides J, substantially as and for the purpose set forth.

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Witnesses:

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