

(No Model.)

N. M. REYNOLDS.

RAILWAY SIGNAL.

No. 335,243.

Patented Feb. 2, 1886.

Fig. 1.

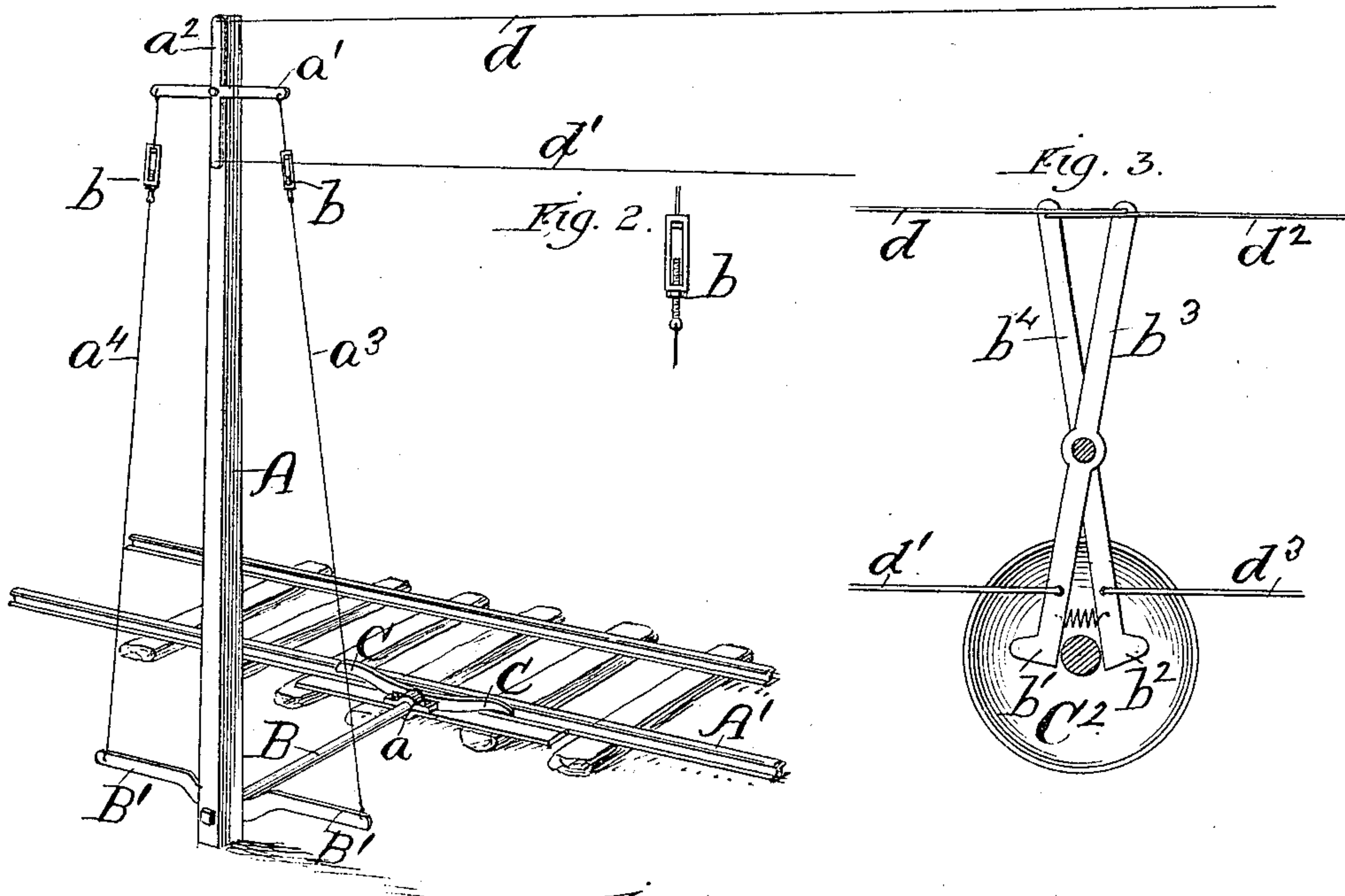


Fig. 4.

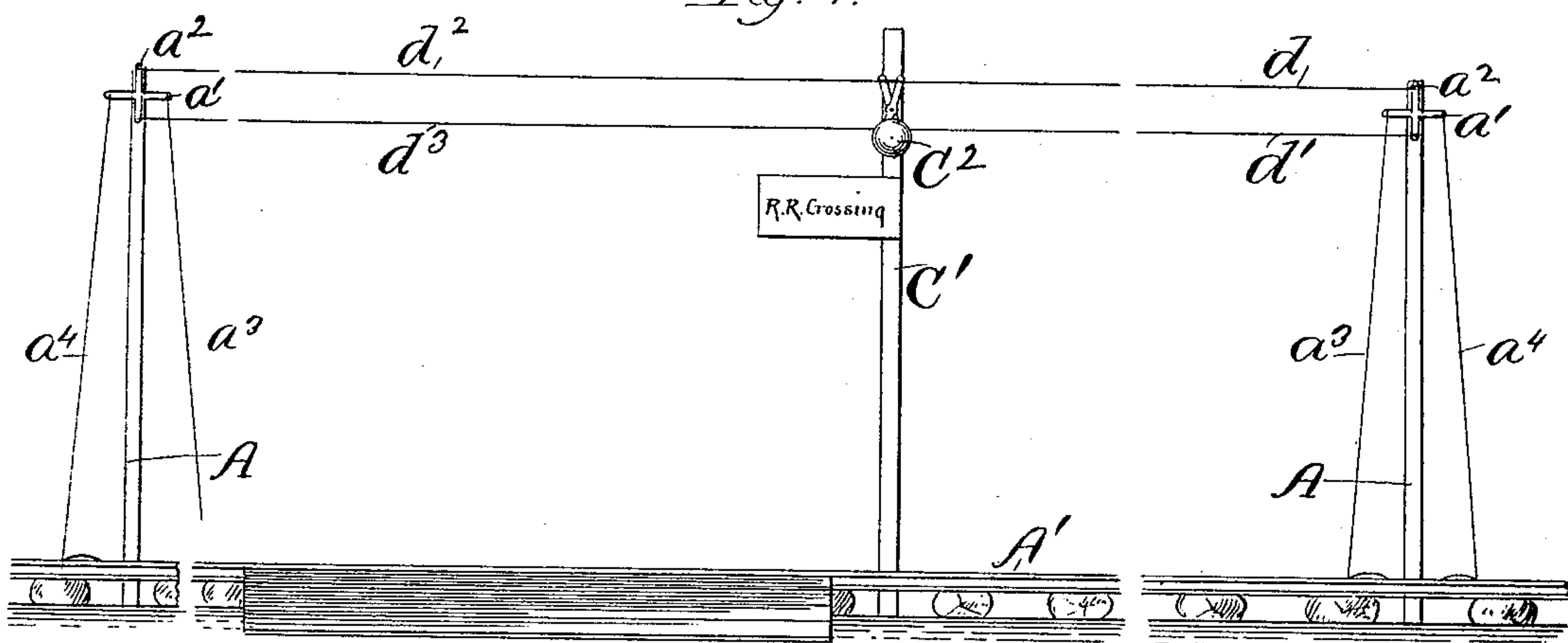
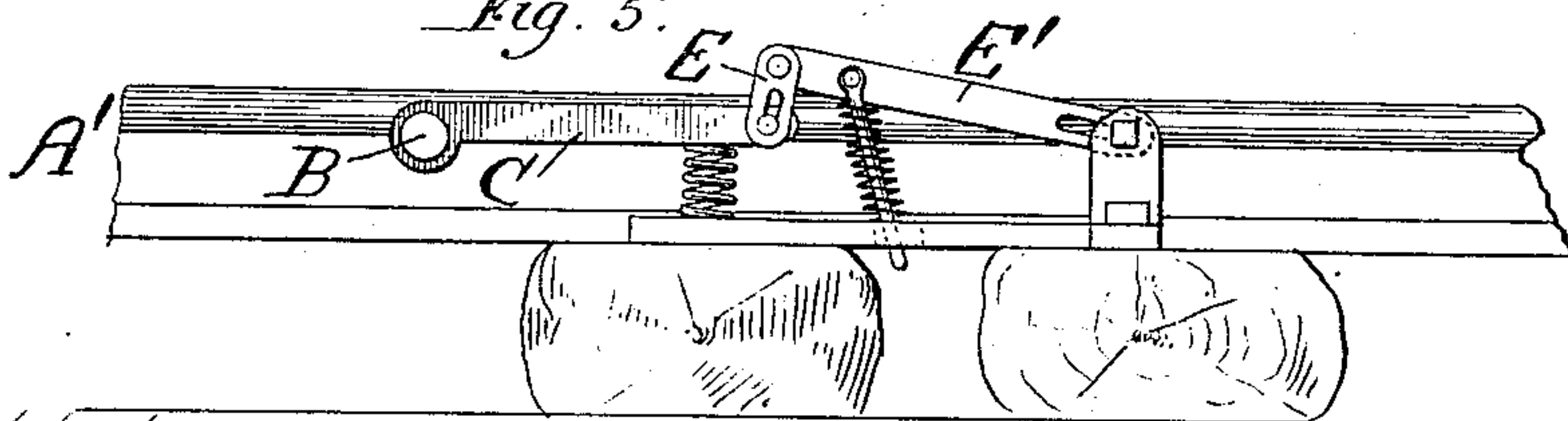


Fig. 5.



Witnesses:

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NATHAN M. REYNOLDS, OF SOUTH CHICAGO, ILLINOIS.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 335,243, dated February 2, 1886.

Application filed January 14, 1885. Serial No. 152,845. (No model.)

To all whom it may concern:

Be it known that I, NATHAN M. REYNOLDS, of South Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Railway-Signals, of which the following is a full, clear, and exact description, that will enable others to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

This invention relates to improvements in automatic alarm-signals for railway-crossings; and it consists of certain novel features in the construction, arrangement, and operation of parts, as will be hereinafter set forth in detail.

Figure 1 is a view in perspective showing the arrangement of the device with relation to a railway-track; Fig. 2, an enlarged detached detail. Fig. 3 shows the signal-gong, together with the clappers and operating-wires. Fig. 4 shows the arrangement of the device on each side of the crossing, and Fig. 5 is a modification.

Referring to the drawings, A represents a post placed at any convenient point alongside of the track A' and at any required distance from the crossing or station. The outer end of the rock-shaft B is provided with a suitable journal-bearing in the lower end of the post A, and extends horizontally therefrom to a point adjacent to the track, and rests in the journal-box *a*. Mounted on the outer end of this rock-shaft, and rigidly secured thereto, is the lever-arm B', extending laterally from each side of the same, as shown in Fig. 1. The opposite end of this rock-shaft is provided with the rocker-arm C, extending from each side of the shaft, the ends of the arm being bent upward, so as to bring the same on about a level with the track and present a proper contacting-surface for the moving car-wheels.

On one side of the post A, and near the top, are pivoted the cross-arms *a'* *a''*, running at right angles with reference to each other, as shown in Figs. 1 and 4. To the ends of the horizontal arm *a'* are attached the upper ends of the wires *a'''* *a''''*, the lower ends of which are in turn attached to the ends of the lever-arm B'. These wires are kept taut and properly ad-

justed with reference to each other by means of the turn-buckle *b*.

At a point convenient to the crossing is located the post C', near the top of which is placed the signal or alarm gong C². This gong is provided with the two striking-hammers *b'* *b''*, the handles *b'''* *b''''* of which are crossed and pivoted together near their longitudinal center. The upper end of the handle *b'* is connected with the upper end of the vertical cross-arm *a''* by means of the wire *d*, while the hammer end is connected with the lower end of the arm *a''* by means of the wire *d'*, the companion wires *d''* *d'''* connecting the striking-hammer *b''* with the duplicate signal device on the opposite side of the crossing, as shown in Fig. 4.

When a train approaches the crossing, the truck-wheels come in contact with and force down one end of the rocker-arm C, imparting a corresponding movement to the lever-arm B' through the medium of the rock-shaft B, and sounds the alarm-signal on the gong by means of the connecting-wires *a'''* and *d* and the cross-arms *a'* *a''*, the wires *a''''* and *d'* serving to return the signal to a normal position as the truck-wheels strike the opposite end of the rocker-arm C, thus sounding a continuous alarm. When a train approaches in the opposite direction, the operation and functions of the connecting-wires are reversed.

Fig. 5 is a modification showing how the parts having contact with the truck-wheels may be constructed and arranged so as to avoid ringing the gong when leaving a station or crossing. In this case the rocker-arm only projects from one side of the rock-shaft and away from the crossing. The arm in this case does not have a direct contact with the truck-wheels, but is forced down by means of the link E, connecting with the highest end of the bar E'. The link E and bar E' are provided with elongated slots, which provide for an end-wise movement of the bar E', and thus avoid depressing the end of the rocker-arm when a train is leaving a station or crossing. The spiral springs shown serve to return the parts to their normal position.

Having thus described my invention, what I

claim, and desire to secure by Letters Patent,
is—

5 In an automatic alarm-signal for railways,
the combination, with a rock-shaft, of a rocker-
arm, a lever-arm adapted to have a corre-
sponding movement with said rocker-arm, the
vertical wires $a^3 a^4$, the turn buckle or buckles
 b , the cross-arm a' , the companion cross-arm

a^2 , the wires $d d'$, the striking-hammers $b' b^2$,
having crossed handles, as described, and the 10
signal-gong C^2 , all constructed, combined, and
arranged to operate as set forth.

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Witnesses:

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