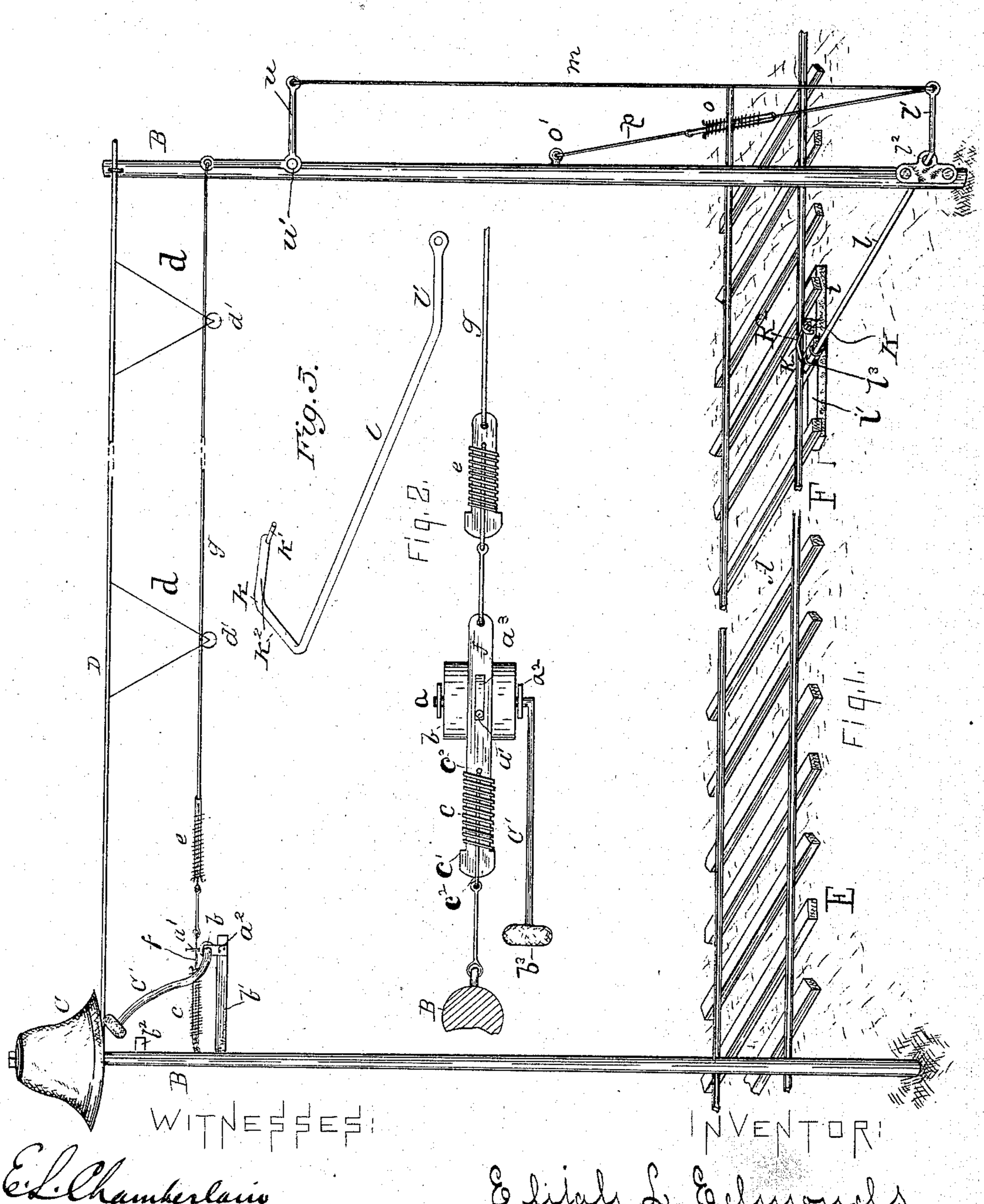
(No Model.)

E. L. EDMONDS.

RAILROAD ALARM.

No. 322,430. Patented July 21, 1885.



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ELIJAH L. EDMONDS, OF DAYSVILLE, ILLINOIS.

RAILROAD-ALARM.

SPECIFICATION forming part of Letters Patent No. 322,430, dated July 21, 1885.

Application filed April 21, 1884. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH L. EDMONDS, of Daysville, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in Railroad-Alarms; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in railroad-alarms; and it consists in a combination of mechanical devices, whereby railroad-trains may be made to herald their approaches to railroad crossings and stations.

In the annexed drawings, which form a part of this specification, Figure 1 is a view in perspective of the combined devices embracing my aforesaid improvements. Fig. 2 represents a detail top view of a part of Fig. 1. Fig. 3 represents a view in detail of the rocking shaft *l* of Fig. 1.

A represents a road-bed, whereon rest the ties E, which support the rails F of a railroad.

B represents two strong poles, set at a convenient distance apart, which should be increased in number in proportion to the distances at which it is desired that trains should be from crossings or depots when the alarm is given.

C represents an alarm-bell secured to the top of a pole, B.

D represents a strong wire or rod, extending from pole to pole and fastened at or near the tops thereof. From the rod D depend hangers *d*, which furnish bearings for the pulleys *d'*, which support the wire *g*.

A represents a short rocking shaft passed through a fast pulley, *b*, and having bearings at a^2. To one end of the rocking shaft aforesaid and at right angles to it is attached a hammer, C', consisting of an arm, to the free end of which is fastened a head, b^3.

b' represents a horizontal arm secured to the pole B. To the free end of the arm *b'* the bearings a^2 are attached. b^2, secured to the pole B, is a rest for receiving the hammer-head b^3 as it drops back from the alarm-bell C.

a' represents a pin, set perpendicularly into the pulley *b* at its highest point, which pin aforesaid passes upward through the slot a^3 in *f*.

f represents an elongated plate, about which is coiled a spiral spring, *c*, which is kept from slipping over the end of the plate aforesaid by the shoulders *c'*.

c^2 represents a piece of wire bent U-shaped, the arms of which are passed between the plate and spiral spring aforesaid. The ends c^3 of the wire aforesaid are bent outward to form bearings for the coil *c*. *c* and its attachments c^2 *f* unite to form a spring best adapted to my invention.

The springs *e* and *o* are of the same construction as the spring aforesaid, minus the slot a^3.

The arm K^2 of the rocking shaft *l* is shaped like the legs of an isosceles triangle, the base being removed, and lies parallel to the rail F. l^2 l^3 are bearings of *l*. The apex or elbow K of the arm aforesaid should project above the rail F three or four inches. One end of the arm K^2 should be secured firmly to the rocking shaft *l*. The other end should be furnished with a wrist, K', which extends parallel to the rocking shaft aforesaid, under the arch of the staple *i*, which is driven into the timber *i'*, and prevents the free end of the arm aforesaid from rising too high.

u represents a bell-crank hinged at *u'*, each arm whereof has an eye through its free end, one for the wire *g* and one for the wire *m*. A wire, *p*, also connects the free end of the arm *l'* with the screw-eye *o*.

Each wheel passing along the rail F depresses the apex K of K^2 to the level of the top of the rail aforesaid, thereby rocking the shaft *l*, and pressing downward the free end of *l'*, which imparts its motion to *m*, which in turn rocks the crank *u*, which imparts its motion to *g*, which moves *f* against *a'*, thereby rocking *b* and impelling the hammer C' against C.

The instant a wheel leaves K^2 the springs *c e o* return the parts aforesaid to their former positions, ready for the next wheel.

I claim as my invention—

1. The combination, with the rocking sha *l*, with its arms *l'* K^2, the latter provided with the wrist K', of the staple *i* and the bearings l^2 l^3, substantially as described.

2. The combination, with the short rock-shaft

a, furnished with the hammer C′, of the fast pulley *b*, provided with the pin *a′*, the elongated plate *f*, slotted at a^3, the spiral spring *c*, and the U-shaped wire c^2, substantially as set forth.

3. The combination, with the rocking-shaft *l*, with its arms *l′* K^2, the latter provided with the wrist K′, of the bearings l^2 l^3, the staple *i*, the spring *o*, the connecting-wires *p m g*, the bell-crank *u*, the hangers *d*, pulleys *d′*, the rock-shaft *a*, furnished with the hammer *c′*, the fast pulley *b*, provided with the pin *a′*, the elongated plate *f*, with its slot a^3, the spiral springs *c e*, and the U-shaped wire c^2, substatially as described.

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Witnesses:
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