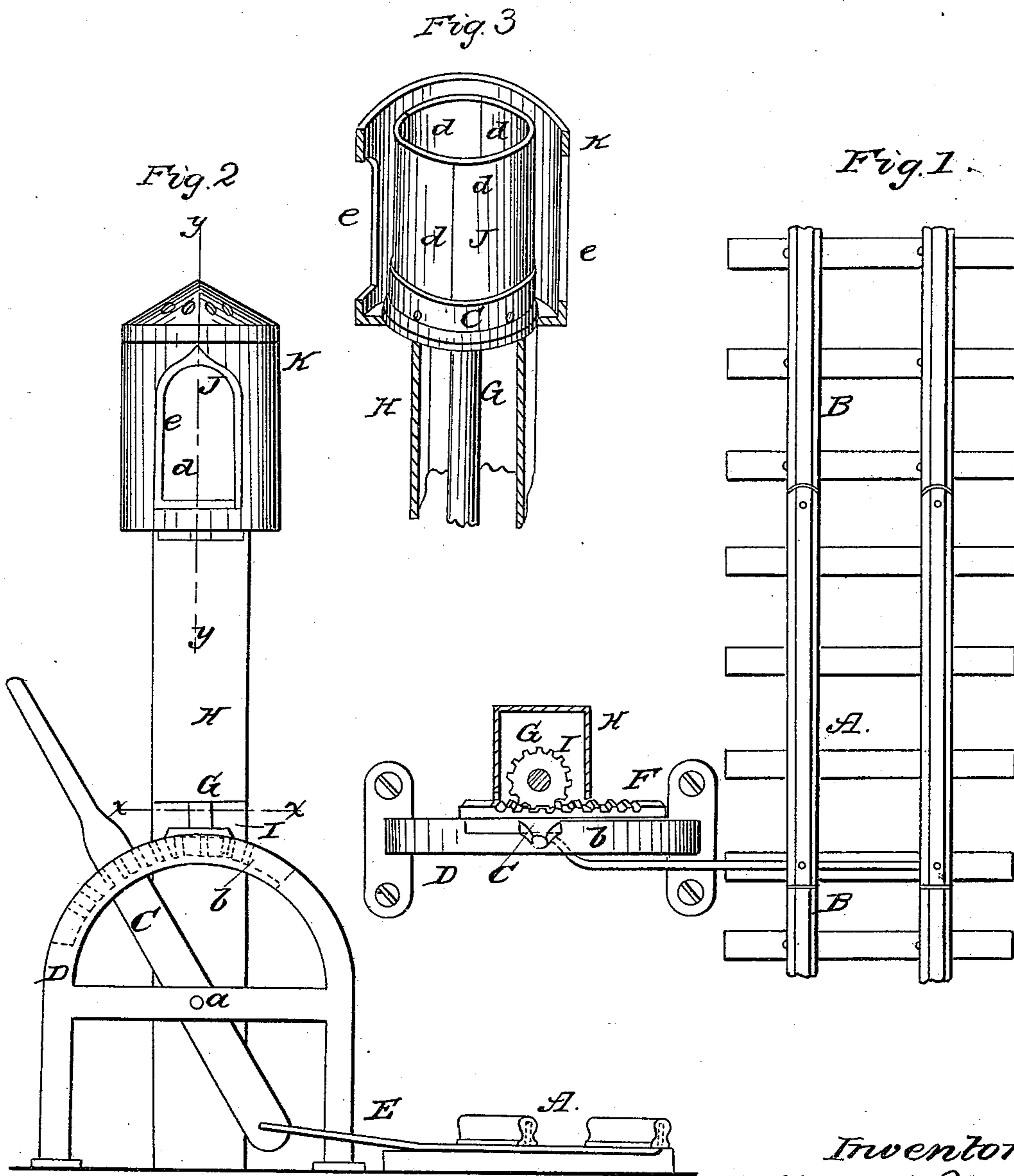


Railroad Signal Switch.

No. 40,898.

Patented Dec. 15, 1863.



Witnesses
J W Cronk
J W Reed

Inventor
Horace H Barnes
per *[Signature]*
attorneys

UNITED STATES PATENT OFFICE.

HORACE H. BARNES, OF MEXICO, NEW YORK.

IMPROVEMENT IN SIGNAL-SWITCHES FOR RAILROADS.

Specification forming part of Letters Patent No. 40,898, dated December 15, 1863.

To all whom it may concern:

Be it known that I, HORACE H. BARNES, of Mexico, in the county of Oswego and State of New York, have invented a new and Improved Railroad-Signal Switch; 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, making a part of this specification, in which—

Figure 1 is a horizontal section of my invention, taken in the line *x x*, Fig. 2; Fig. 2, an elevation of my invention; Fig. 3, a detached vertical section of the lantern, taken in the line *y y*, Fig. 2.

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

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a switch, which may be constructed in the usual way; and B are the rails of a main track. C is a lever, which is attached by a fulcrum-pin, *a*, to an upright frame, D, which is secured permanently in position by the side of the switch or track. The lower end of the lever C is connected by a rod, E, to the switch A, and to the lever C, above the fulcrum-pin *a*, there is attached a segment-rack, F, which is fitted and works against the upper part, *b*, of the frame D, said part *b* being of semicircular form, as shown clearly in Fig. 2.

G is a vertical shaft, which is inclosed within an upright box, H, and has a bevel-pinion, I, on its lower end, which gears into the segment-rack F, and on the upper end of this shaft G there is attached a circular plate, *c*, on which a lamp is placed, said lamp being inclosed by a glass cylinder, J, which is composed of colored sections, *d*, as shown in Fig. 3.

The cylinder J is encompassed by a box, K, having two slots or openings, *e e*, made in it at opposite points or sides, said box being either square or cylindrical, and secured to the top of the box H, which incloses the shaft G.

From the above description it will be seen that the switch A is moved by actuating the lever C, and it will also be seen that as the lever C is moved the shaft G is rotated, and also the lamp and glass cylinder, and hence different-colored lights will be displayed or exposed at each movement of the lever, one color indicating when the switch is in line with the main track, and another color indicating when the switch is in line with the branch track. It will be understood, of course, that the openings *e e* in the box K are in line with the main track of the road, and that the light is visible to the engineer if a train is approaching the switch in either direction, the colored sections *d* of the cylinder J being so arranged that the same colored light will be shown at both sides of the box K.

By this arrangement a very simple, durable, and economical signal-switch is obtained, one that will operate with certainty and with but a moderate expenditure of power.

I do not claim, broadly, the turning of the lantern by the act of moving the switch; but,

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

The arrangement of the segment-rack F, pinion I, shaft G, lantern J, and box K with the switch-lever C and frame D, in the manner herein shown and described.

HORACE H. BARNES.

Witnesses:

J. COURTER ADAMS,
LAURA C. ADAMS.