

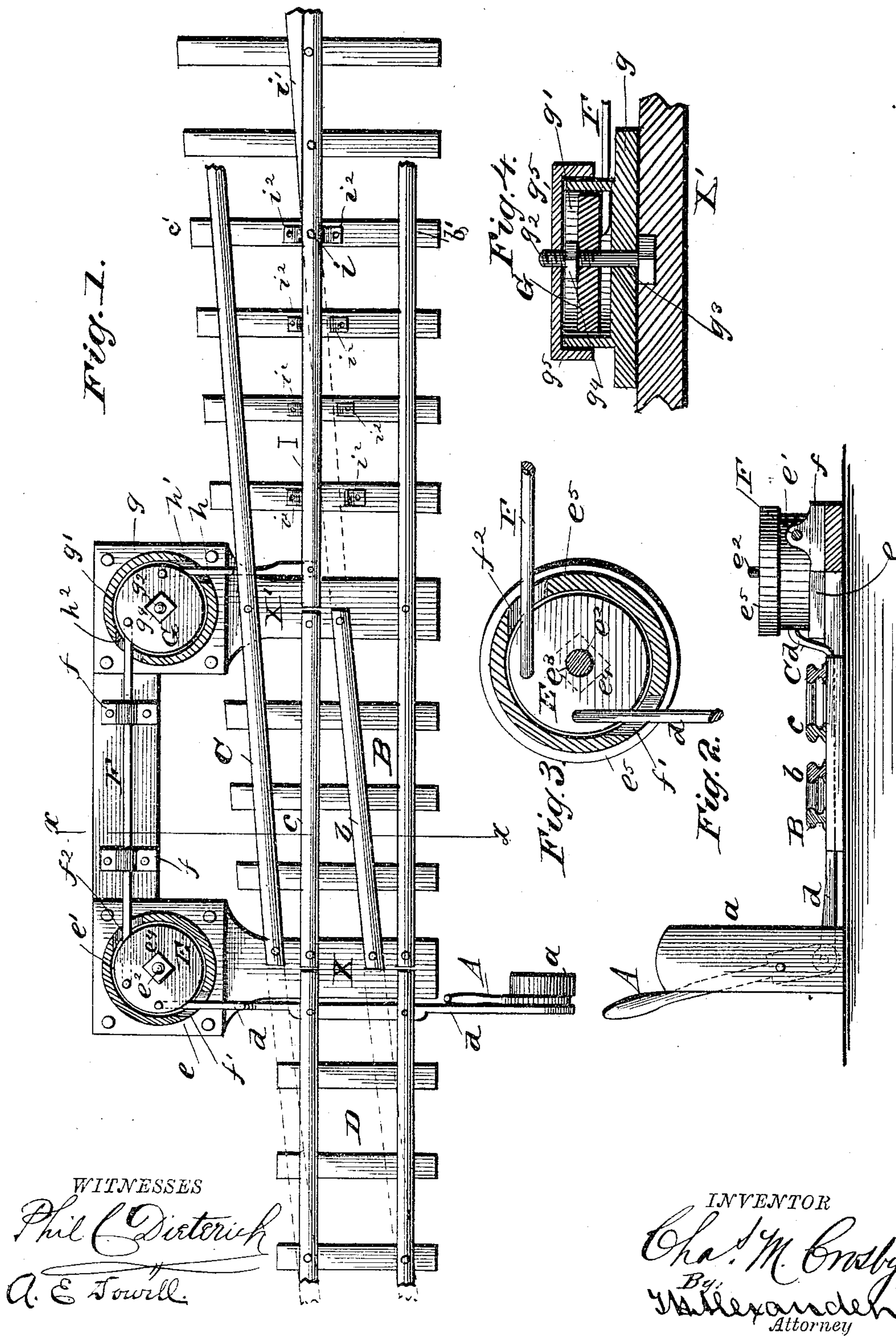
(No Model.)

C. M. CROSBY.

RAILROAD SWITCH.

No. 353,847.

Patented Dec. 7, 1886.



WITNESSES

Phil C. Dietrich

A. E. Towill.

INVENTOR

Chas. M. Crosby

By: W. Alexander
Attorney

UNITED STATES PATENT OFFICE.

CHARLES M. CROSBY, OF HILLSBOROUGH, OHIO, ASSIGNOR TO HIMSELF,
HARRY ASHER, AND CHARLES S. BELL, ALL OF SAME PLACE.

RAILROAD-SWITCH.

SPECIFICATION forming part of Letters Patent No. 353,847, dated December 7, 1886.

Application filed November 27, 1885. Serial No. 184,119. (No model.)

To all whom it may concern:

Be it known that I, CHARLES M. CROSBY, of Hillsborough, in the county of Highland and State of Ohio, have invented certain new and useful Improvements in Railroad-Switches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification, in which—

Figure 1 is a plan view of a portion of railroad-track having my improved switch applied; Fig. 2, a section on line $x x$, Fig. 1. Figs. 3 and 4 are details of portions of the switch mechanism.

This invention relates to improvements in railway-switches, the object being to construct a switch in such manner that the necessity of frogs and guard-rails may be avoided and line of track made more clear; and it consists in the arrangement and novel construction of parts hereinafter described, and pointed out in the appended claim.

Referring to the accompanying drawings by letter, A designates the switch lever pivoted on its standard a , and B represents the first section of the main track beyond the switch-lever. C is the corresponding section of the side track or siding. The inner rails, b and c , of said sections have their ends outward from the switch-lever bolted to a solid transverse bed-rail, X' , but have no frog adjacent to them, as is usually the case.

D is the movable switch-section of track in front of the switch-lever, and connecting either with the section B or section C in the usual manner.

d is the switch-rod pivoted on the lower end of the lever A, and running thence to connect with the rails of the switch-section D. The said rod extends outward on the side of the track opposite the switch-lever, and has its other end pivoted to the lower surface of a disk, E, which lies and turns in a corresponding recess, e' , in a block, e , preferably of cast-iron. The block e is cylindrical, and is provided with a rectangular flange at its lower portion, through the angles of which the block is securely bolted in place.

The disk E has passing through it a short shaft, e^2 , the lower end of which passes through a central circular opening, e^3 , in the floor of the recess e' , and has a proper head thereunder, as shown, so as to hold it in place. The upper end of the shaft e^2 is threaded and receives the nut e^4 , which presses down on the disk E and aids in keeping it in place.

e^5 is a cap or cover, which is screwed upon the end of the shaft e^2 , outside of the nut e^4 , and which protects the disk from dust and dirt.

F is a rod having one end pivoted to the under surface of the disk E, running thence parallel with the section B of the main track, and having its other end pivoted to the under surface of a disk, G, identical in construction with the disk E, and hereinafter described. The rod F passes through guide loops or brackets $f f$, which hold it down and in proper position for working.

$f' f^2$ are openings or slots in the cylindrical body of block e , respectively for the passage of the rods d and F, heretofore described.

The disk G rests and turns in a recess, g' , of a block, g , similar to the block e . The block g is secured to the bed-rail X' , on which the ends of the rails b and c are bolted.

g^2 is the shaft of the disk G; g^3 , the opening for the said shaft. g^4 is the nut on the same, and g^5 is the cap or cover for the disk G. All these parts are identical in construction with the corresponding parts of disk E and block e .

h is a rod having its outer end pivoted to the under surface of block G, and running thence inward along the edge of the bed rail or tie X' , remote from the switch-lever.

$h' h^2$ are openings or slots in the cylindrical part of block G, and serving, respectively, for the passage of rods h and F.

I is a rail lying between the rails b' and c' of the second section of the main and side tracks beyond the switch-lever. At the point i , where the said rails are a distance apart equal to double the width of the track with the width of a rail added, the rail I is bolted firmly to a tie. Beyond that point, as far as the rail extends, it is similarly bolted down. All parts of the rail toward the switch from the point i are free to move laterally. Outward from the point i the rail I has a triangular block, i' ,

secured to it, which has an edge parallel with the rail C of the siding. The opposite side of the rail I is parallel with the rail B of the main track.

5 The inner end of the rod *h* is pivoted to the rail I, near the end which adjoins the ends of the rails *b* and *c*, so that by turning the switch-lever inward the disks E and G will, by means of the described connecting-rods, turn on their
10 axes, and by means of the rod *h* cause the forward end of the rail I to correspond with the end of the rail *b* of the side track, so as to open said track and close the sideway. By reversing the lever the siding is similarly opened
15 and the main track closed.

*i*² *i*² are chairs secured to the ties at and in front of the point *i*, and in which the movable portion of the rail I rests, allowing sufficient room in their recesses for the rail to have the
20 proper movement, as described.

Some of the advantages of the described con-

struction above those in ordinary use are that it is simpler, because in one line of rail in the second section the frogs and guard-plates are all dispensed with, and on account of their ab- 25
sence the switch is safer to travel over, as the lines of both main track and siding are clearer.

Having described my invention, I claim—

In a railway-switch, the combination of the switch-lever A, the sections of track, B, C, and D, the disks E and G, the rods *d*, F, and *h*, the
30 blocks *e* and *g*, in which the disks are pivoted and turn, the caps *e*⁵ and *g*⁵, and the rail I, all constructed and arranged substantially as and for the purpose specified. 35

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

CHARLES M. CROSBY.

Witnesses:

T. H. ALEXANDER,
A. E. DOWELL.