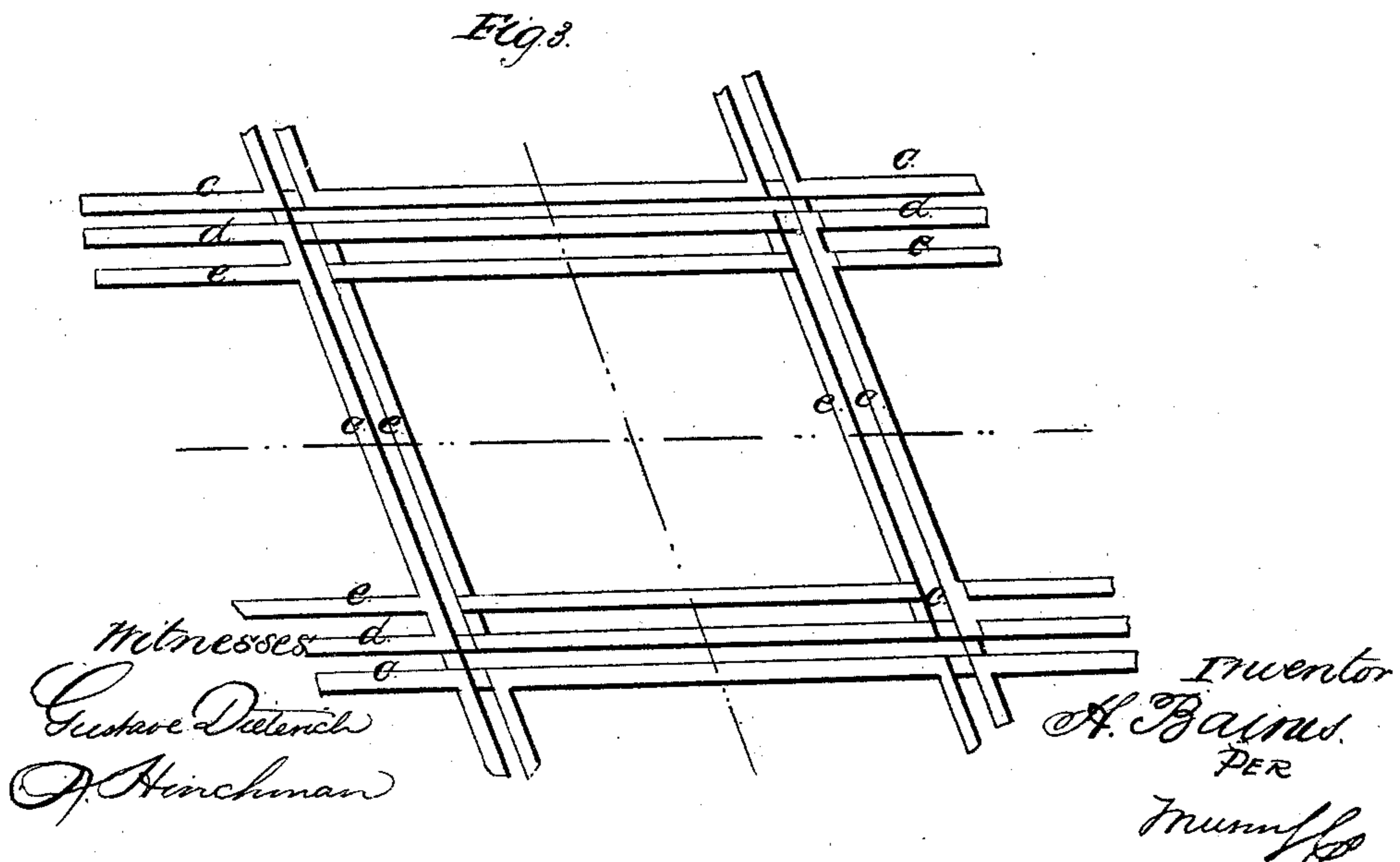
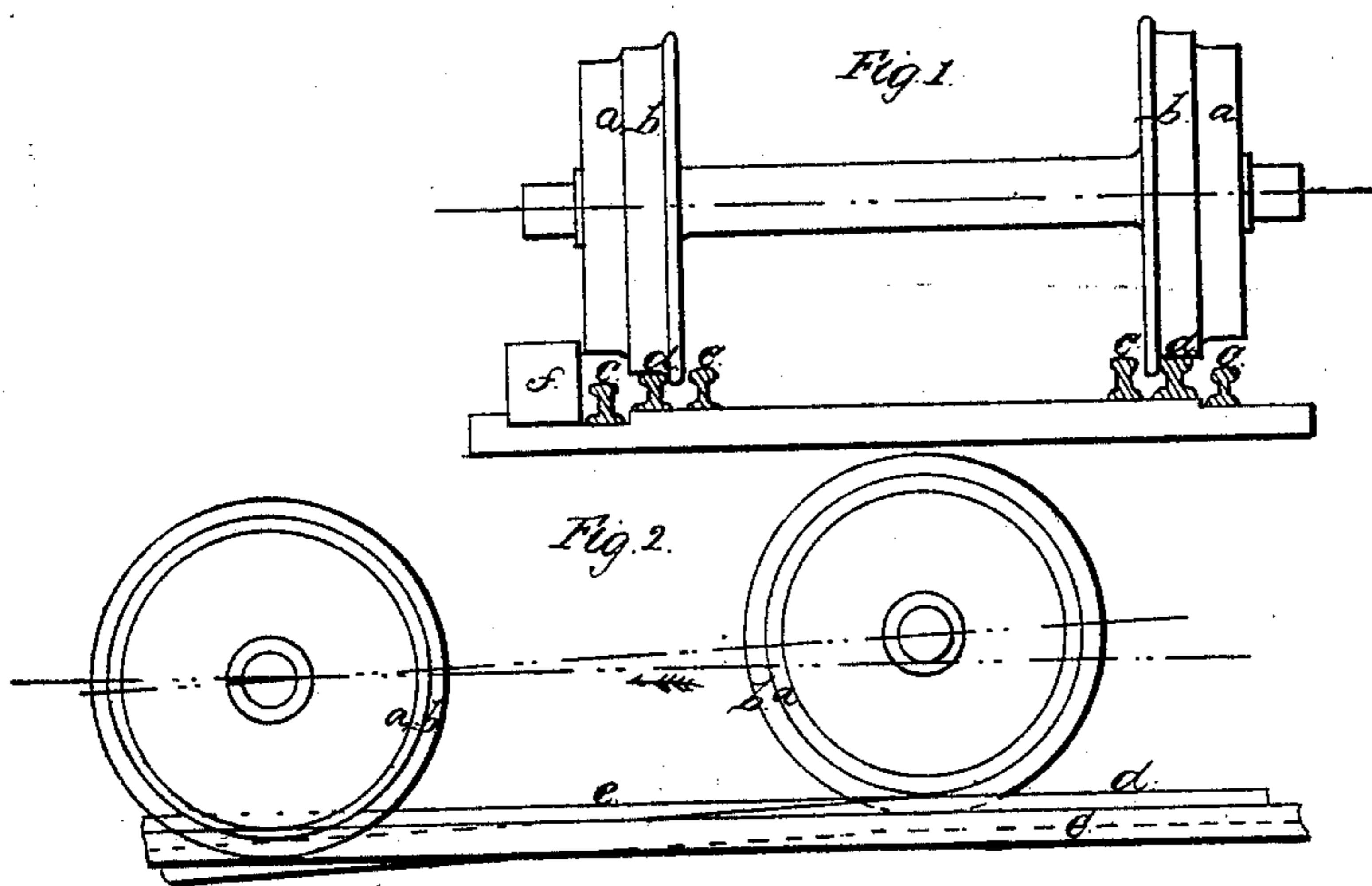


*H. Baines,*

*Railway Frog.*

*No. 94,541.*

*Patented Sept. 7. 1869.*



# United States Patent Office.

HUGH BAINES, OF MANCHESTER, ENGLAND.

Letters Patent No. 94,541, dated September 7, 1869.

## RAILWAY-CROSSING FOR CONE-WHEELS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, HUGH BAINES, of Manchester city, Lancashire, and Kingdom of England, have invented a new and useful Improved Cone-Wheel with Crossings adapted; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification.

When narrow-gauge rolling stock is provided with cone-wheels, they can run over broad-gauge tracks; however, the narrow-gauge tread, where desirable, may be carried over diamond and other crossings, on high rails, provided and tapering at each end, and thus prevents the cutting off the crossings and diamonds now in use, and the tapered rails will admit of broad-gauge rolling stock running as heretofore. But at diamond-crossings, where there will be no objections to have extra grooves cut for flanges, then the narrow-gauge-track rail can be kept below the broad-gauge rail the difference in the cone diameter. In adopting this plan, the high-tapered rail will not be required; extra low rails will be used at all public crossings, to afford easy access for horses.

At crossings in yards, where it will not be desirable to use high rails, then the wing-rails may be left wider, to admit extra width of wheels passing through; but when this plan is chosen, then the wing-rails may be connected with the switch-rails, and both work together by means of rods and cranks, or any other convenient mode.

Figure 1, in the drawing, is a cross-section of my

improved crossing, with the cone-wheels to which it is adapted, said wheels being designed for use on broad-gauge and narrow-gauge tracks, without requiring a third rail, except at crossings where a high-tapered rail will enable the narrow-gauge tread to ascend and descend, and thereby raise the flange above the rails of the crossing-track, and take off and bring on the broad-gauge part of the cone on to its track. *a a* are a broad-gauge tread, and *b b* narrow-gauge tread; *c c* are broad-gauge track; *d d*, narrow-gauge track; *e e*, guard rails inside; *f f*, outside guard for curves.

Figure 2 is a side elevation, showing one cone-wheel resting on broad gauge, and the other on narrow gauge, when passing crossings. In said figure, *d d* indicate a high-tapered rail at crossings.

Figure 3 is a ground plan of crossings or diamond. The foregoing letters of reference apply to the last figure.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

A railway-crossing, adapted to the use of cone-wheels, for tracks of different gauges, arranged and operating substantially as and for the purpose set forth.

The above specification of my invention signed by me, this 6th day of April, 1869.

HUGH BAINES.

Witnesses:

JOHN L. BLAICKIE,  
A. R. FAULKNER.