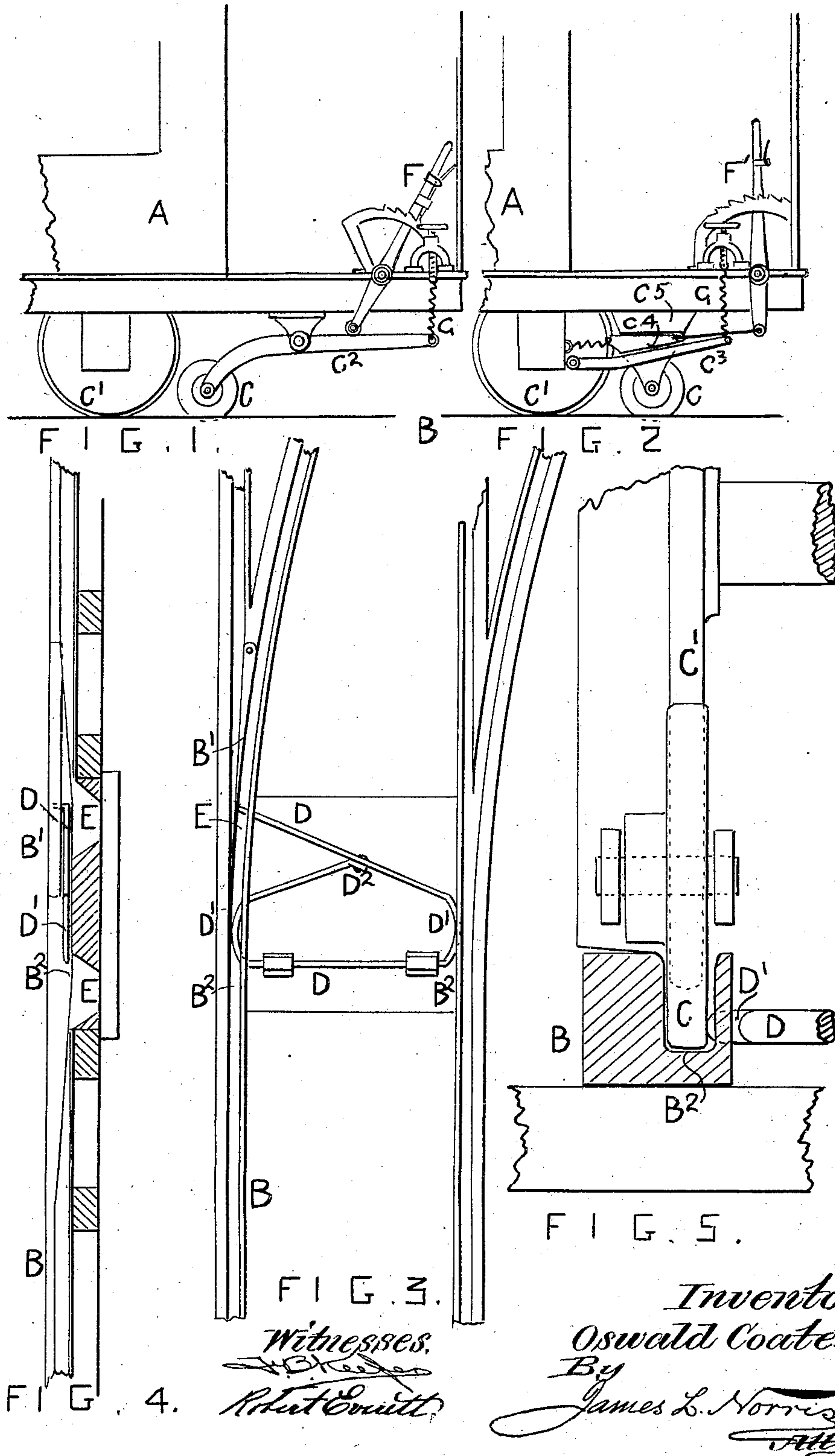


No. 897,061.

PATENTED AUG. 25, 1908.

O. COATES.
SHIFTING POINT FOR TRAM LINES.

APPLICATION FILED JAN. 3, 1908.



UNITED STATES PATENT OFFICE.

OSWALD COATES, OF CHRISTCHURCH, NEW ZEALAND.

SHIFTING POINT FOR TRAM-LINES.

No. 897,061.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed January 3, 1908. Serial No. 409,187.

To all whom it may concern:

Be it known that I, OSWALD COATES, a subject of His Majesty the King of Great Britain, and resident of the city of Christchurch, in the British Dominion of New Zealand, an accountant, (whose post-office address is Christchurch, New Zealand,) have invented certain new and useful Improvements in Shifting Points for Tram-Lines, of which the following is a specification.

The object of this invention is to produce and set forth a simple and reliable and effective means of directing and moving facing points of rails, thus obviating the services of a shunter, or pointsman. For this purpose the point, (or points,) are secured to a bent sliding bar with wedge shaped working ends, which is placed slightly below the flanges of the car wheels so that it is totally unaffected by their passing over it. The said bar being so formed that one or other working end lies close to the inner edge of the rail near it, but capable of sliding and carrying the point with it. This sliding is effected by a "finder" wheel on a lever, which has a deeper flange than the car wheels and consequently can be pressed deeper so as to displace the working end of the bar if the points are not pointing as desired.

Referring to the accompanying drawing:— Figure 1 shows an outline of a car end with my invention in position on same and Fig. 2 is a similar outline with same in modified form. Fig. 3 is a plan of rails at a turn-out showing the usual point with the arrangement for working same as needed. Fig. 4 is a longitudinal section of Fig. 3, and Fig. 5 is an enlarged detail cross section of the rail showing the groove deep enough to work the bar moving the points.

A, while outlining a car end may obviously be any vehicle passing over facing points suitable for my invention to work on, and B are ordinary rails.

B¹ is a point but it will be easily seen that the invention would as easily work two points if they were connected in the usual manner.

C is the "finder" wheel somewhat similar to a car wheel but with a deeper flange.

C¹ is the ordinary car flanged wheel and the differences in depth of the flanges between C and C¹ are clearly shown in Fig. 5.

D is the bent bar secured in the usual manner of a point shifting bar or turned up under

and into the point B¹. This has working ends D¹ D¹ so that one touches the inner edge of the rail when the point is "home", either way. This is shown as bent back and secured at D² but it is obvious that other forms of this bar may be used, such as a double headed forged bar but the form set forth is deemed the simplest, cheapest and most effective.

B² is a slight well or deepening of the groove in grooved rails or similar construction in other makes to allow the wheel C to descend low enough to move the obstruction D¹ when a point is to be moved, into which the wheels C¹ do not descend.

E E are dirt collecting recesses generally to be covered with a movable grating or the like.

C² is the lever-arm working C which is kept to its work by the adjustable spring G and put out of action by the lever F which would raise or lower C as needed. C³ is a slightly different lever-arm keeping C up normally by the adjustable spring G, which is forced down by the wedge C⁴ working under the block C⁵ which may be on springs if needed, the whole controlled by the lever-handle F¹. Either of the handles F or F¹ may have a quadrant as shown.

If the car passed back it would automatically move the points from near the butt in the usual manner. If facing points were only in one direction, two sets of "finder" wheels and gear, only, would be needed. The "finder" wheels would be given a small amount of play in their journals to follow the exact position of the working end of the sliding bar, which would slide in suitable bearings.

Having now described my invention, what I claim and desire a patent of the United States of America for, is:—

1. In lines of rails, at facing points thereof, in combination, the point secured to a bent sliding bar having wedge shaped working ends, with a "finder" wheel formed to go deep enough with its deep flange to shift the said bar and so move the point before the car comes to same, all substantially as shown and as described herein.

2. In combination, with a car and rails it runs on, a facing point so connected to a bent bar with wedge shaped working ends, that a loose wheel on said car can be depressed, and by displacing the projecting end of said bar

so move the point, all substantially as shown on the drawing and as described and explained herein.

3. In points of rails, in combination, a car
5 having wheels placed before the usual car
wheels capable of being raised or lowered
deeper than the car wheel flanges go, and
when so lowered can displace the projecting
working end of a wedge shaped bent bar con-
10 nected with said points, for moving same as

desired, with dirt wells for keeping said points clear, all substantially as set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

OSWALD COATES.

Witnesses:

A. WALKER,
O. WRIGHT.