M. FRANKLIN.

RAILWAY ROAD BED.

APPLICATION FILED NOV. 13, 1907.

904,418. Patented Nov. 17, 1908.

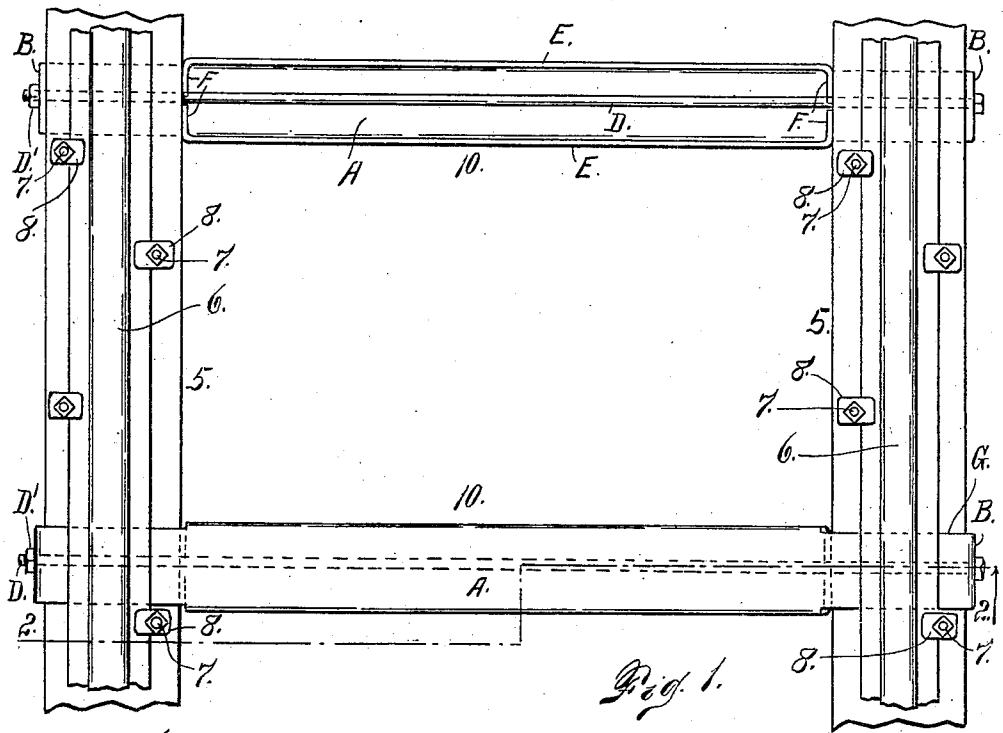

Fig. 1.

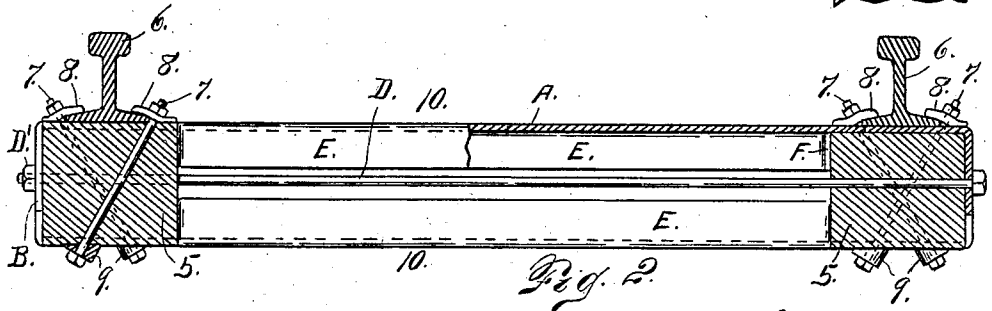

Fig. 2.

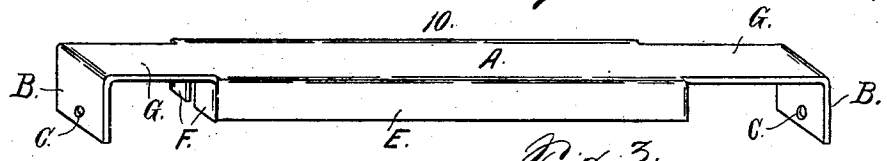

Fig. 3.

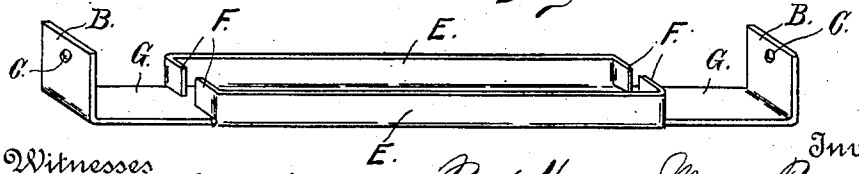

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

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RAILWAY ROAD-BED.

No. 904,418. Specification of Letters Patent. Patented Nov. 17, 1908.

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To all whom it may concern:

Be it known that I, MOSES FRANKLIN, a citizen of the United States, residing at Grand Junction, in the county of Mesa and State of Colorado, have invented certain new and useful Improvements in Railway Road-Beds; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in railway road beds, my object being to provide a construction which shall to a very large extent overcome the vibration of the cars incident to traveling over roads of ordinary construction.

In my improved road bed the rails are laid upon longitudinally disposed stringers which take the place of the ordinary cross ties. By virtue of this construction the rails are supported their entire length, there being no gaps or spaces where the rails are unsupported.

With road beds having ordinary cross ties, the vibration of the cars is very great, being largely due to the spaces between the ties where the rails are unsupported. With my improved construction this difficulty is entirely overcome. Furthermore my improved road bed is provided with transversely located tie plates whose opposite extremities are interlocked with the stringers, thus preventing the possibility of the spreading of the rails since if the stringers are held against spreading, the rails which are securely fastened thereto cannot spread. These transversely located tie plates are preferably alternately arranged to occupy positions both above and below the stringers.

Having briefly outlined my improved construction, I will proceed to describe the same in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a top plan view of my improved road bed showing the stringers broken away at both ends and illustrating two of the tie plates, one engaging the stringers above and the other below. Fig. 2 is a transverse section taken on the line 2—2 Fig. 1. Fig. 3 is a perspective view in detail of one of my improved tie plates shown in the position it occupies when engaging the stringers above. Fig. 4 is a similar view with the position of the plate reversed or showing the position it occupies when engaging the stringers underneath.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate each of two longitudinally disposed stringers, the same being preferably composed of wood and made of any suitable size to give the rails 6 the proper support. As shown in the drawing these stringers are composed of wood beams square in cross section. The rails 6 are placed longitudinally upon these beams and are held in place by bolts 7 which engage washers 8, the latter overlapping the base of the rails. The bolts as shown in the drawing are passed entirely through the stringers 5 in a diagonal direction. Their lower extremities engage washers 9 made of such shape as to form seats for the heads of the bolts and also engage the horizontal face of the stringer. The diagonal position of the bolts adds great security to the fastening of the rails. Before the rails are applied to the stringers 5, the transverse tie plates 10 are placed in position. As heretofore stated these tie plates are alternately arranged above and below the stringers. Each tie plate as shown in the drawing consists of a body part A having flanged extremities B adapted to engage the stringers on opposite sides. These flanges are provided with openings C through which fastening devices as tie rods D may be passed, the said rods passing through both stringers and being secured by nuts D′.

The body A of each tie plate, as shown in the drawing is provided with side flanges E bent at right angles to the body of the plate. The extremities of these side flanges are free from the body of the plate and bent inwardly toward each other as shown at F, leaving unflanged spaces G between the flanges F and the flanges B, to receive the stringers. When these plates are put in position, the spaces G of one tie plate engage the tops of the stringers 5 which are cut away to let the parts G enter, whereby the tie plate extremities are made flush with the upper surface of the stringer on opposite sides of the plate. The next tie plate is preferably placed underneath the stringers in which event their lower surfaces engage the parts G of the tie plates, the stringers

being also cut away at the bottom to receive the said parts whereby they are flush with the lower surface of the stringers. These tie plates may be located at any suitable intervals in order to make the road bed absolutely secure and prevent the stringers and rails from spreading. The length of these tie plates determines the gage of the road or the distance apart of the rails.

It will be observed that the flanges F of the tie plates engage the stringers on the inside while the flanges B engage them on the outside thus making it impossible for the stringers to move laterally in either direction.

Having thus described my invention, what I claim is:

1. In a road bed, the combination of longitudinally disposed stringers and transversely disposed tie plates flanged to engage the stringers on opposite sides, the tie plates being arranged alternately above and below the stringers which are cut away to receive the plates, whereby the latter are flush with the surfaces of the stringers, substantially as described.

2. The combination of longitudinally disposed stringers, transversely disposed tie plates flanged at their opposite extremities to engage each stringer on both sides, the tie plates being also provided with reinforcing side flanges and bolts arranged to pass diagonally through the longitudinal stringers and fasten the rails, substantially as described.

3. The combination in a road bed, of longitudinally disposed stringers, transversely disposed tie plates flanged to engage the stringers on the outside to prevent the latter from spreading, rails engaging the stringers throughout their entire length, and fastening bolts passed diagonally through the stringers, the said bolts having top washers overlapping the base of the rails and held in place by nuts screwed upon the fastening bolts, substantially as described.

4. The combination with longitudinally disposed stringers, transversely disposed tie plates connecting the stringers to prevent them from spreading, rails engaged to the stringers throughout their entire length, rail-fastening bolts arranged on opposite sides of the rail and passing diagonally through the stringers, and washers overlapping the base of the rails on opposite sides and held in place by the bolts, substantially as described.

5. A railway road bed composed of longitudinally disposed stringers and transversely disposed tie plates, each of said plates being flanged at its opposite extremities to engage the stringers on opposite sides, tie rods passed transversely through the stringers and through the end flanges of the tie plates and bolts passed diagonally through the stringers to fasten the rails, substantially as described.

6. The combination in a road bed, of longitudinally disposed stringers, transversely disposed tie plates flanged to engage the stringers on the outside to prevent the latter from spreading, rails engaging the stringers, fastening bolts passed diagonally through the stringers, the said bolts having top washers overlapping the base of the rails and held in place by nuts screwed upon the fastening bolts, and tie rods passed transversely through the stringers and through the end flanges of the tie plates, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

MOSES FRANKLIN.

Witnesses:
A. J. O'Brien,
Dena Nelson.