

J. McMULLEN.
Rail.

No. 212,617.

Patented Feb. 25, 1879.

Fig: 1

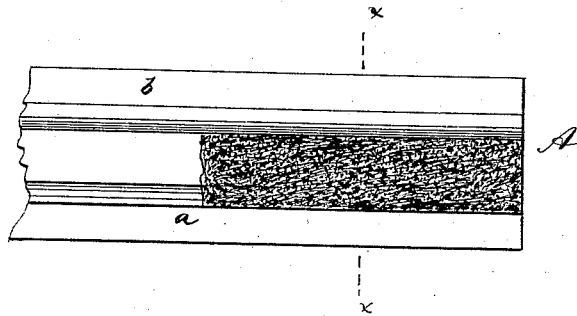
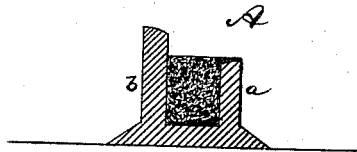


Fig: 2



Witnesses
T. B. Hooper
J. Turk

Inventor:
James M. Mullen
by his attorney
O. P. Brien

UNITED STATES PATENT OFFICE.

JAMES McMULLEN, OF NEW YORK, N. Y.

IMPROVEMENT IN RAILS.

Specification forming part of Letters Patent No. 212,617, dated February 25, 1879; application filed July 24, 1878.

To all whom it may concern:

Be it known that I, JAMES McMULLEN, of New York city, county and State of New York, have invented a new and Improved Rail for Railroads, of which the following is a specification:

This invention relates to a novel construction of rails for railroads, having for its object to diminish the noise caused by the passing of the wheels over the rails.

The invention consists in providing the rails with a continuous longitudinal groove from end to end, which is filled with an elastic or non-sound-transmitting substance, said substance extending over one flange of said rail, all as hereinafter more fully pointed out.

In the accompanying drawings, Figure 1 represents a top view of my improved rail for railroads. Fig. 2 is a vertical transverse section on the line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in both figures.

The letter A represents a part of my improved railroad-rail, made of iron, steel, wood, or other suitable material, and of proper size and shape. The rail A is provided at its upper side with a longitudinal groove, extending from end to end of the rail, thus producing a flange, *a*, at the inner, and a flange, *b*, at the outer, side of the rail. By the "inner flange" I mean the one on which the wheels of the train run.

The groove in the rail A is filled with a non-sound-producing and non-sound-transmitting substance, which substance is also spread over the inner flange, *a*, as indicated in Fig. 2.

I prefer to fill the groove in the following manner, and with the following materials:

Asphaltum or other suitable bituminous matter is mixed with gravel, or equivalent substance, in proportion to produce a thick mass, which is filled into the groove in layers, one layer being tightly rammed down before the next one is placed upon it. The surface is finished off with a layer of asphaltum and petroleum, properly mixed, which composition is also tightly rammed down. The surface composition is also spread over the upper edge of the inner rail, *a*. The rail A may be filled with the composition before it is placed on the road; but I prefer to fill the rails after the track has been laid, so as to be enabled to fill all the rails on the same side of the road at or about the same time. In this way the filling composition will be continuous along the entire road, and aid to join the rails.

Instead of the hereinabove-described composition, equivalent substances—such as lead or other malleable composition—may be used.

In order to prevent the filling composition from being pressed out of the groove by the weight of the trains, I prefer to make the outer flange, *b*, higher than the inner flange, *a*, as indicated in Fig. 2 of the drawings.

I claim—

The combination of the rail A, constructed with a longitudinal groove, substantially as specified, with a non-sound-transmitting substance, which is filled into said groove and extends over one flange of the rail, substantially as and for the purpose herein shown and described.

JAMES McMULLEN.

Witnesses:

T. B. MOSHER,
F. V. BRIESEN.