No. 690,603. Patented Jan. 7, 1902.

H. C. PHELPS.

GROOVED RAIL APPLIANCE FOR STREET RAILWAY T-RAILS.

(Application filed May 29, 1901.)

(No Model.)

Fig. 1.

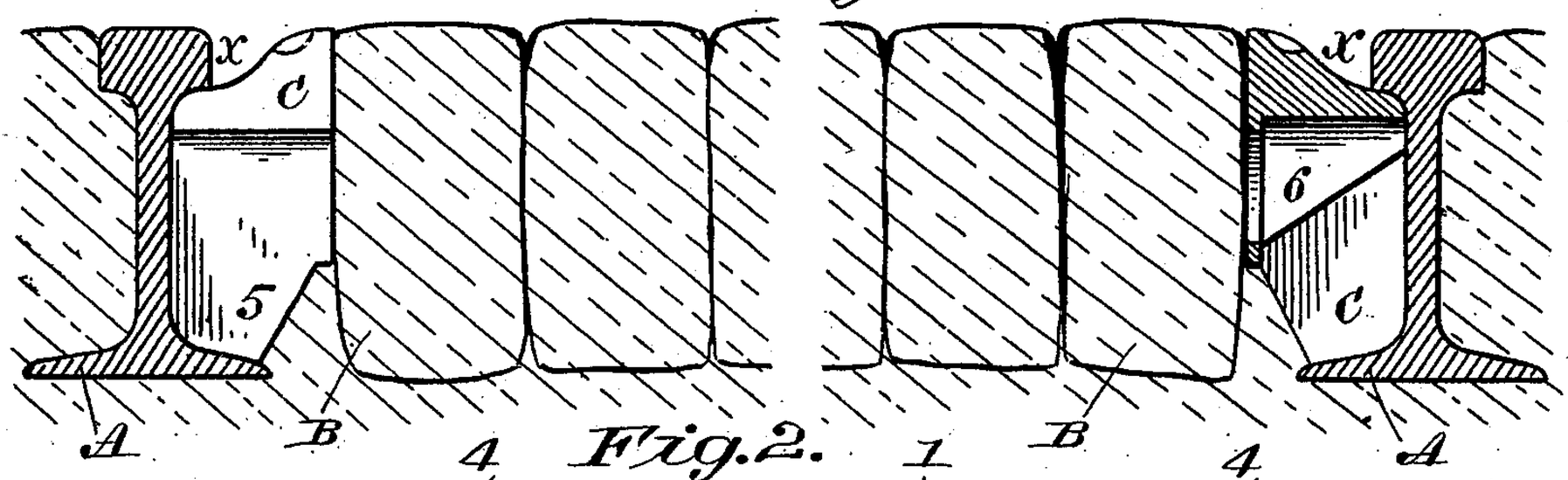


Fig. 2.

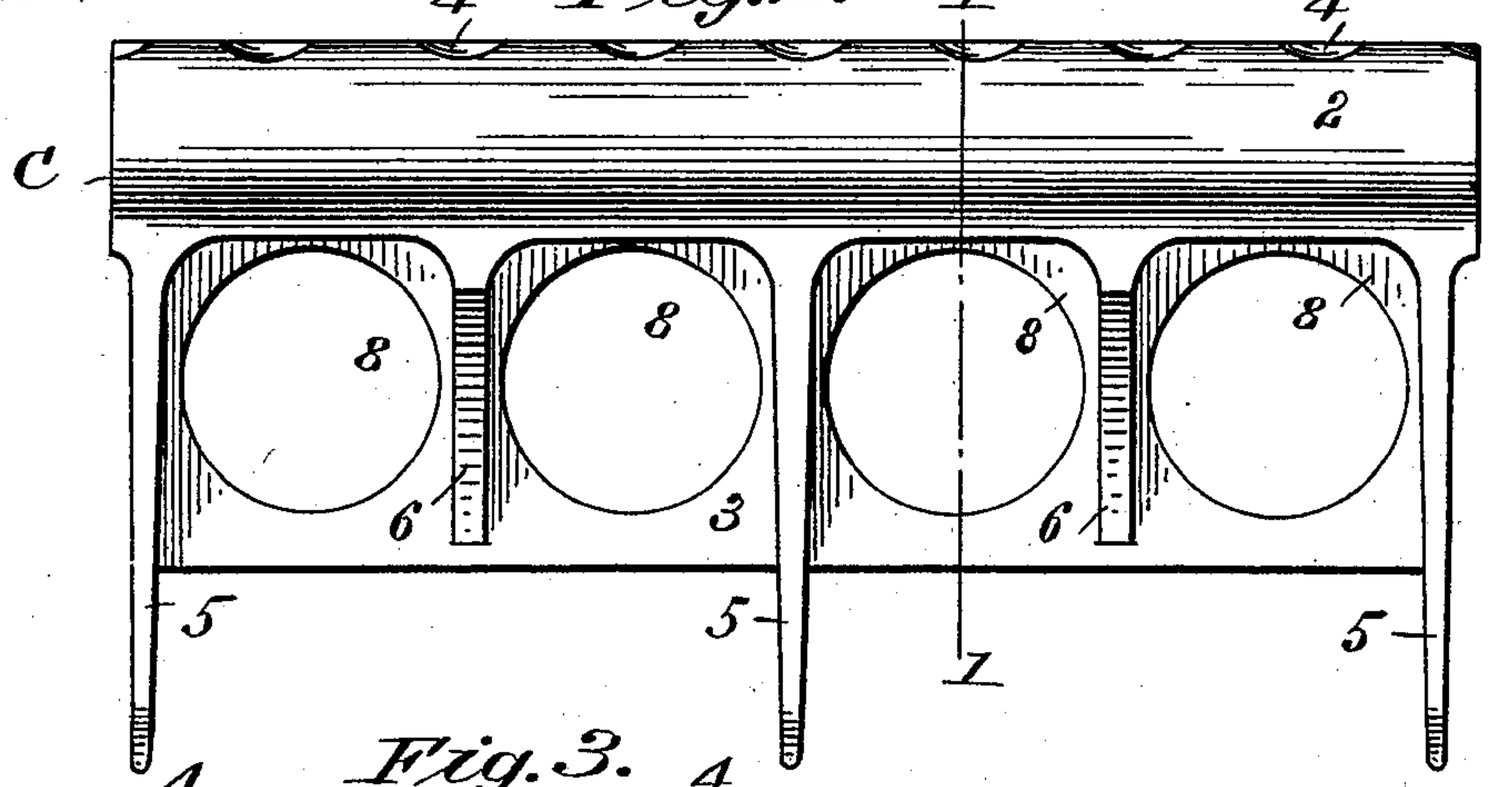


Fig. 3.

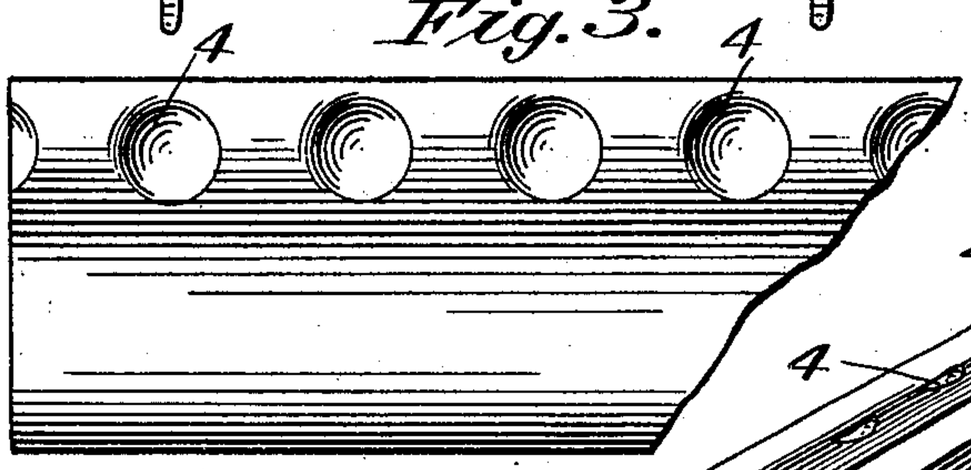
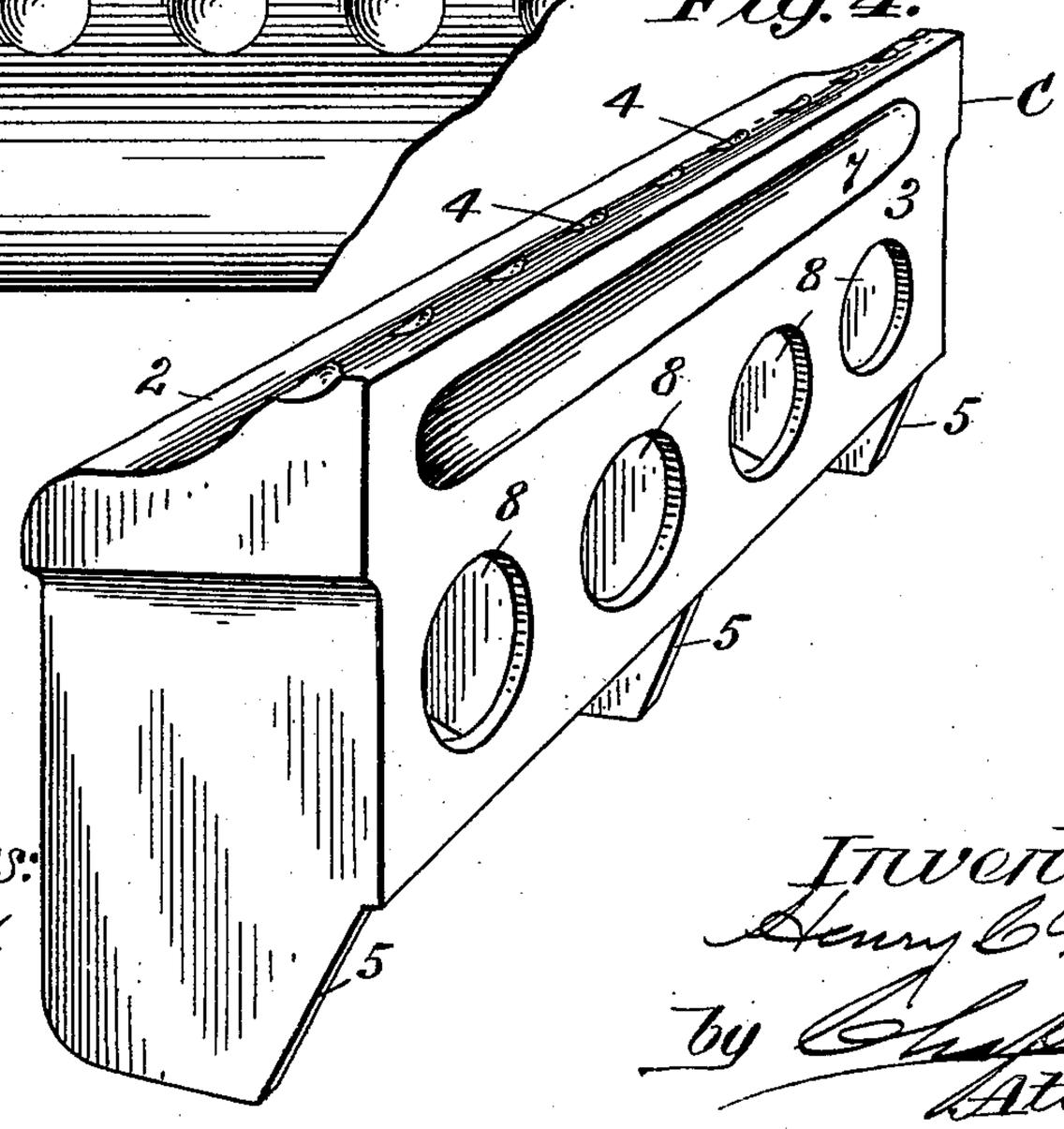


Fig. 4.



Witnesses:
J. D. Garfield.
K. D. Clemons

Inventor:
Henry C. Phelps
by Church & Church
Attorneys.

UNITED STATES PATENT OFFICE.

HENRY C. PHELPS, OF LEE, MASSACHUSETTS.

GROOVED RAIL APPLIANCE FOR STREET-RAILWAY T-RAILS.

SPECIFICATION forming part of Letters Patent No. 690,603, dated January 7, 1902.

Application filed May 29, 1901. Serial No. 62,365. (No model.)

To all whom it may concern:

Be it known that I, HENRY C. PHELPS, a citizen of the United States of America, residing at Lee, in the county of Berkshire and State of Massachusetts, have invented new and useful Improvements in Grooved Rail Appliances for Street-Railway T-Rails, of which the following is a specification.

This invention relates to improvements in devices for converting the T-shaped rails of street-railways into grooved rails, the object being to provide convenient and comparatively inexpensive means for said conversion; and the invention consists in providing longitudinal block-like sections of suitable form, preferably of metal, to be applied against the inner opposite sides of the said T-rails, resting upon the foot thereof and held in proper position by the paving or other street-surfacing material between the rails.

In the drawings forming part of this specification, Figure 1 is a cross-sectional view of the T-rails of a street-railway and a paved roadway and an end view at one rail and a cross-sectional view on line 1 1, Fig. 2, at the opposite rail, illustrating my improved rail-converting device applied between the pavement and the inner sides of said rails. Fig. 2 is a side elevation of the rail-converting device, the side shown being that which is applied against the rail. Fig. 3 is a plan view of a portion of the top face or tread of the said device. Fig. 4 is a perspective view of one complete section of said rail-converting device.

Referring to the drawings, A A indicate the T-rails of a street or other railway, between which, as ordinarily arranged, the pavement or surfacing material is laid directly against the inner opposite sides of the rails in a plane with the tread-surfaces thereof, a groove to receive the flanges of the car-wheels being generally formed in the part of the pavement or surfacing directly adjoining the inner side or border of the tread of each rail. Said flange-receiving grooves being formed as aforesaid are subjected to the crushing action of vehicle-wheels passing continually thereover and soon become more or less filled up, and, furthermore, the smooth tread-faces of the rails cause frequently the feet of horses to slip thereon; but by the use of my improved device constructed as below described the permanency of said flange-grooves is insured, and the upper surface thereof presents suitable indentations, in which the shoes of horses engage, thereby preventing said slipping. Said rail-converting device consists of single sections of a metal casting C, as clearly shown in Figs. 2 and 4 of the drawings, in which 2 indicates the top and 3 the back thereof. Said top 2 has a surface of ogee form in cross-section, thereby adapting its lower border to pass under the tread of a rail, as shown, the higher opposite border rising to a height corresponding with the plane of the tread of said rail and of the road-surface, thereby forming with the border of said tread the requisite wheel-flange groove *x*. On the higher part of the upper surface of said top is a line of indentations 4 substantially in the plane of the said tread-surface of the rail, in which the shoes of horses may engage, as aforesaid.

Each section of the device has three upright legs 5 extending from beneath the top 2 as far as the distance may be between the under side of the tread and the upper side of the foot of the rail to which the section is to be applied. Short brackets 6 are provided between the back 3 and the under side of the top 2, forming additional supports for the latter. A longitudinal groove or recess 7 and openings 8 are provided in said back 3, which when the road-bed between the rails A consists of macadam or similar material may permit the said material to enter within the converting section or casting C, and thereby effect a union of elements which conduces to durability. It will be noted that the said section C is of such height in practice that while the lower ends of the legs 5 thereof rest upon the foot of the rail A the lower border of the top 2 is brought to close engagement under the inner border of the tread of the rail, and being there held by the intermediate road-bed a firm and permanent construction is the result, and said metallic wheel-flange groove *x* at the side of the said tread is formed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. A series of metallic devices for converting T-shaped railroad-rails into a track hav-

ing a wheel-flange groove, consisting of block-like metallic sections each having a top of ogee form, legs beneath said top supporting the same on the foot of the rail, and an outer side having openings therethrough for engagement with the road-bed, substantially as described.

2. Devices for converting T-shaped railroad-rails into a track having a wheel-flange groove consisting of block-like metallic sections, each having a top of ogee form, a series of indentations in the surface of the higher portion of said top, legs beneath said top supporting the same on the foot of the rail, and an outer side having openings therethrough for engagement with the road-bed, substantially as described.

HENRY C. PHELPS.

Witnesses:
H. A. CHAPIN,
K. I. CLEMONS.