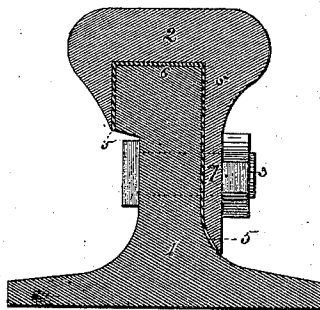


M. R. PERKINS.
Railway Rails.

No. 144,221.

Patented Nov. 4, 1873.



WITNESSES.

Ch. H. Duhamel
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UNITED STATES PATENT OFFICE.

MICHAEL R. PERKINS, OF PORTSMOUTH, NEW HAMPSHIRE.

IMPROVEMENT IN RAILWAY-RAILS.

Specification forming part of Letters Patent No. **144,221**, dated November 4, 1873; application filed May 9, 1873.

To all whom it may concern:

Be it known that I, M. R. PERKINS, of Portsmouth, county of Rockingham and State of New Hampshire, have invented certain new and useful Improvements in Railroad-Rails, of which the following is a specification:

The object of my invention is to produce a compound rail, simple and cheap in construction, that will relieve machinery from the injurious effect of concussion, and allay the action of frost, by the combination of the sections 1 and 2 with an intervening continuous layer of water-proof paper of sufficient thickness, as shown in the accompanying drawing.

The accompanying drawing represents a cross-section of my compound rail.

1 represents the lower part or section of the rail, consisting of the base and shank, having a head or broad bearing-surface, 6, for the cap or crown 2 to rest upon. This section is attached to the cross-ties in the usual manner, and may be made of the cheaper grades of iron. Fitting over the head or broad bearing-surface 6 is the upper part or section 2, consisting of the cap or crown, with a downward extension, 7, for securing the section to the shank by means of bolts 3. This section may be made of iron or steel. Extending continuously throughout, between the sections 1 and 2, is a packing, 5, made of water-proof paper, as shown in drawing. The function of this continuous packing is fourfold, to wit: It pre-

vents lateral and vertical concussion and rattling, obviates the action of frost, and prevents any wear from friction. The nature of the material prevents its gathering moisture, and sections 1 and 2 are so constructed as to drain the packing, preventing the lodgment of moisture to be affected by frost.

I am aware that rubber has been used heretofore as a cushion to ease the effects of vertical concussion, but its disadvantages are such as to render its use impracticable. The heat of a summer sun, attracted by the iron rails, soon softens it, and the action of frost makes it rotten and brittle, and it loses its elasticity and becomes useless.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The section 1, having broad bearing-surface 6, in combination with section 2 and paper packing 5, extending continuously between the sections, arranged to prevent lateral as well as vertical concussion, and neutralize the action of frost, heat, and moisture, substantially as shown and described.

In testimony that I claim the foregoing as my invention I hereunto affix my signature.

MICHAEL R. PERKINS.

Witnesses:

M. HOWE CALL,
JAMES D. BUTLER.