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(54) Title: RAIL FIXINGS

(57) Abstract

A damper (18) for reducing the track noise emitted by a rail system comprises a deformable material (20) attachable to a surface of the rail, incorporating a plurality of elongate discontinuous resonant members (22, 24) of a stiff material as compared to the deformable material, sized to contain at least two resonant frequencies in the range of interest. The resonant members (22, 24) are suitably of steel or other metallic material. They can be of different profile, to form a resonant system with at least two resonant frequencies in the relevant frequency range. They are suitably embedded in the deformable material (20), to ensure adequate vibrational transfer from the rail to the resonant members and also provide environmental protection. The deformable member (20) is visco-elastic, for example rubber or a rubber-like material. This may be preformed and glued to the rail (10), or it can be cured in place on the rail. The damper (18) is positioned on the rail (10) at the junction between the web (14) and the foot (16) of the rail. One resonant member (22, 24) can be an elongate angled section, the angle preferably matching the angle between external surfaces of the head (12) and foot (16). Another resonant member (22, 24) can be a solid elongate block, the external faces adjacent the web (14) and foot (16) being angled to match.

