a protective sheathing made of thermoplastic material, the purpose of which is to isolate the wood from any external contact and thus to protect it from any possible biological attacks.

[0011] Documents WO0158663, and WO2016105209 describe railway sleepers, in which the central core is made of a solid piece of wood. However, this configuration presents a non-negligible risk: in case of alteration of all or part of the plastic shell, the whole central core gradually decomposes due to its one-piece structure allowing the propagation of the rot phenomenon from one area to another, which leads to the weakening of the mechanical properties of the considered sleepers.

[0012] Document US4286753 teaches the possibility of designing the central core of a railway sleeper from a juxtaposition of solid wood planks or particle boards, bonded together to form a homogeneous block. However, the disadvantage of the solution described is that it requires the use of potentially harmful and polluting substances such as formaldehyde.

[0012a] According to a first aspect of the present invention, there is provided a support for railway track rails, in particular of the railway sleeper type, comprising a central core of parallelepipedal appearance formed of at least two juxtaposed slats of thickness e, made of solid wood or wood-based materials, and a protective sheathing covering said central core, said protective sheathing being in one piece, and being formed by a peripheral wall having at least two opposite upper and lower faces and two opposite lateral faces, designed to fit at least the four longitudinal faces of the central core as well as at least one internal partition extending between two opposite faces or two contiguous faces of the said peripheral wall and delimiting with the peripheral wall of the protective sheathing at least two cells each having a shape complementary to a slat of the said central core, characterised in that said slats have a plurality of through-holes formed through their thickness e and in that the through-holes of each slat are connected to the through-holes of the adjacent slats by pins of plastic material filling said through-holes.

[0013] The purpose of the present invention is to propose a support for railway track rails, such as a railway sleeper, of the type consisting of a central core made of

wood or wood-based materials covered with a protective sheathing, having an alternative structure to those already described, making it possible both to overcome all the disadvantages mentioned above and to improve its longevity regarding the effects of the weight of the trains travelling on the railways, while at the same time satisfying the technical, budgetary and environmental criteria currently in force. More precisely, the present invention aims to propose a machinable support for railway track rails, whose life span is extended compared to existing rail supports, which is environmentally friendly, and whose structure and constituent materials allow easy recycling.

[0014] To this end, it is an object of the present invention to provide a support for railway track rails of the kind indicated in the preamble, characterised in that said slats have a plurality of through-holes formed through their thickness e and in that the through-holes of each slat are connected to the through-holes of the adjacent slats by pins of plastic material filling said through-holes.