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(54) **Title:** FLEXIBLE INTER-PLATE

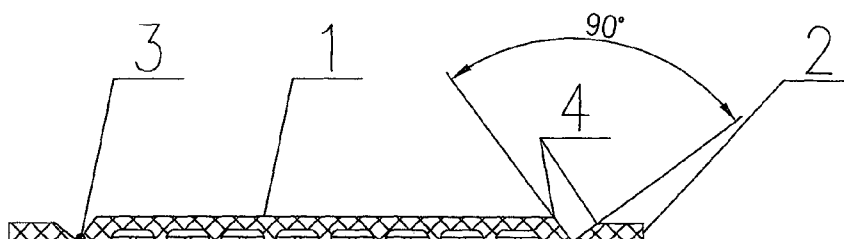


Fig. 1

(57) **Abstract:** A flexible inter-plate for fixation of rails and parts of switches for railway and tram trails, wherein from one side of the flexible plate (1) there is created - with a distance from the edges (2) - at least one key seat (3) leading to corner cuts (31) for bending the edges of the flexible inter-plate to a functional shape.



Flexible Inter-Plate

Technical Field

The technical solution relates to the flexible inter-plate for fixation of rails and parts of switches on the trails for railway, suburban, underground and tram applications.

Contemporary State of the Art

The hitherto known and used solution of flexible inter-plate in systems of fixation of rails and parts of switches copy the shape of upper or lower part in the place of fixation and they are usually provided with holes for reaching the required characteristics, e.g. static rigidity. In patent CZ 293 627 there is described such a plate for placement between the rail and the concrete railroad tie, equipped with a pattern on one side for arrangement of functional characteristics.

Nature of the Technical Solution

The aim of the technical solution is to create a flexible plate for dampening the vibrations and for absorption of dynamic load of a rail in vertical as well as horizontal direction, longitudinal as well as transversal.

This can be reached by a flexible inter-plate for fixation of rails and parts of switches on trails mainly for railway, suburban, underground and tram applications, in compliance with this technical solution, which is based mainly on the fact that from one side of the plate there is - with a distance from its edges - created at least one key seat leading to corner cuts for bending the edges of the flexible inter-plate to a functional shape.

So as to bend the flexible plate edges upwards and against each other it is advantageous for two parallel key sets to be developed with a distance between them at one pair of opposite edges of the flexible inter-plate, with a distance.

It is purposeful for the walls of the key seats to take an angle of 90 °.

In consideration of vibrations dampening it is advantageous for one side of the flexible plate to be smooth, while the other side is shaped in the area delimited by key seats.

It is advantageous that the flexible inter-plate in the rails fixation system is easily workable in the area for the distribution plate, which it may even surround, respectively even from the upstairs when using the cover sheets.

List of Figures in Drawings

The technical solution will be explained in detail using the drawings, showing in Fig. 1 a scheme of the flexible inter-plate with key seats in unfold form, in Fig. 2 there is shown the flexible inter-plate in the form for placement of the distribution plate, in Fig. 3 there is a variant of a flexible inter-plate with double key seats in unfold form, in Fig. 4 there is a flexible inter-plate in the form for use of the cover sheet and in Fig. 5 there is a view of the bottom part of the flexible inter-plate.

Examples of Technical Solution

The flexible inter-plate 1 according to Fig. 1 is made of plastics or rubber. In a distance from the edge 2 there are made key seats 3 on one side of the flexible inter-plate 1 - they follow each other in corner cuts 31. The distance of the key seats 3 from the edges 2 is selected depending on thickness of the non-shown distribution plate used - when bending the edges according to Fig. 2, the flexible inter-plate surrounds it even along the side walls.

In the version for use in the system of fixation of rails and parts of switches using the cover sheets, there is placed another pair of key seats 3 on the flexible inter-plate 1 with a distance from the first pair of opposite edges 2, as you can see in Fig. 3. The pair

of key seats 3 - after bending against each other, as you can see in Fig. 4 - allows for the distribution plate to be partially covered even from the upper side.

In both versions, one side of the key seat is smooth, while the other side is shaped e.g. like the set of recessions 5 in the area delimited by key seats 3 from the upside.

In the second version of the flexible inter-plate 1 according to Fig. 3 and 4, there is arranged dampening of vibrations and absorption of dynamic load of rails not only in vertical direction, but also in horizontal direction, transversal as well as longitudinal, while in case of version as per Fig. 1 it dampens vibrations even from the upside in fixation systems with cover sheets.

Industrial Applicability

The flexible inter-plate is designed for systems of fixation of rails and parts of switches for railway and tram applications.

CLAIMS

1. A flexible inter-plate for fixation of rails and parts of switches for railway and tram trails **characterised by the fact that** from one side of the flexible plate (1) there is created - with a distance from the edges (2) - at least one key seat (3) leading to corner cuts (31) for bending the edges of the flexible inter-plate to a functional shape.
2. A flexible inter-plate according to claim 1 **characterised by the fact that** in case of one pair of opposite edges (2) of the flexible inter-plate (1) another key seat (3) is made in parallel with each of the key seats.
3. A flexible inter-plate according to claim 1 or claims 1 and 2 **characterised by the fact that** walls (4) of the key seats (3) take the angle of 90 °.
4. A flexible inter-plate according to claim 1 or claims 1 and 2 **characterised by the fact that** one side of the flexible plate (1) is smooth, while the other side in the area delimited by key seats (3) is shaped.

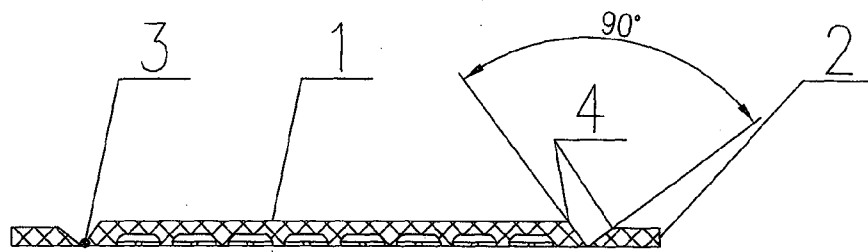


Fig. 1

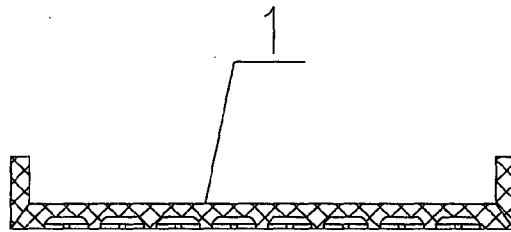


Fig. 2

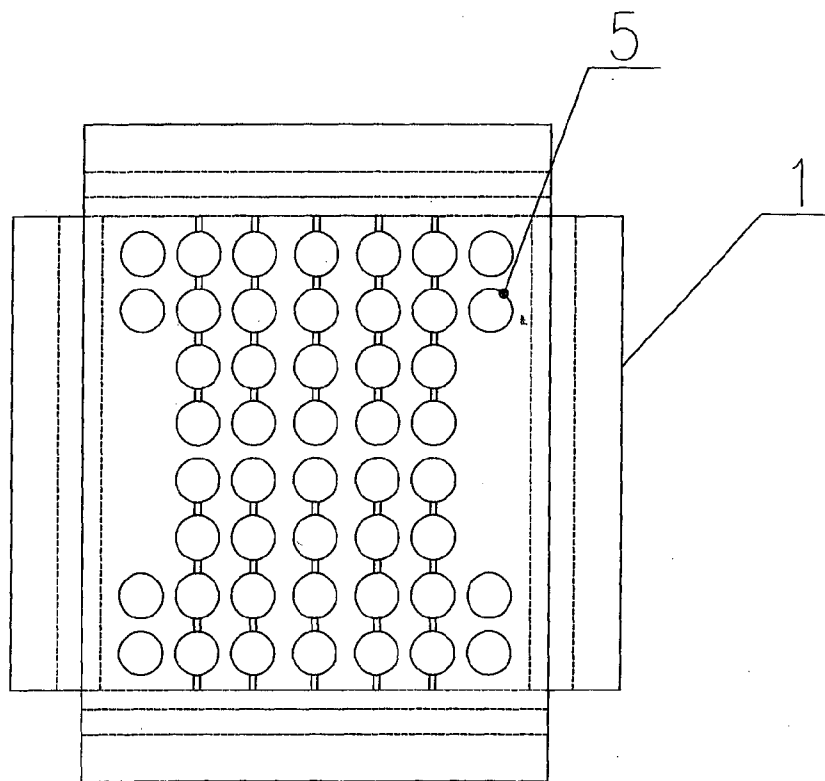


Fig. 5

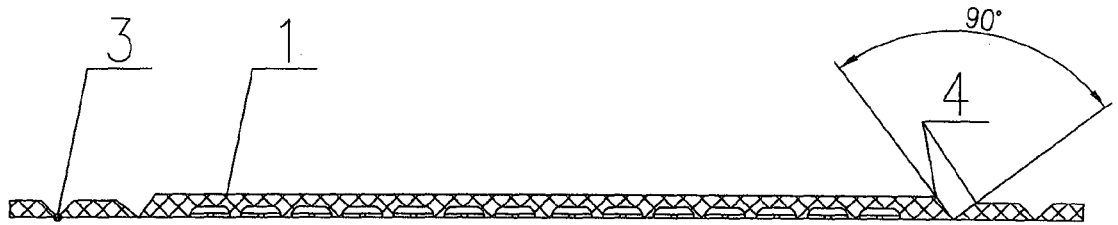


Fig. 3

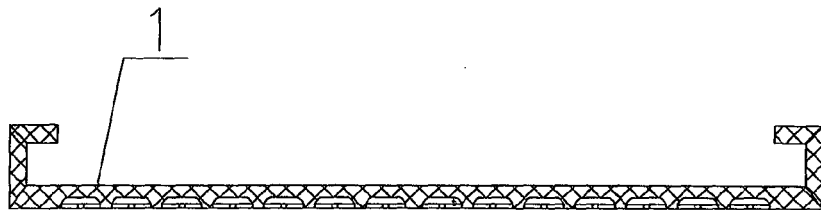


Fig. 4