

TITLE OF THE INVENTION

Profiled rail system

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BACKGROUND OF THE INVENTION

10 The invention relates to a profiled rail system for bridging expansion joints, cavities and/or as the edging of floor coverings.

From DE 20 2005 020 074 A1, a profiled rail system of
15 the generic type is known. It essentially consists of two profiles, into which floor covering elements can be clicked in place on the end side. Both profiles are mutually telescopable. For this purpose, one of the profiles has a web aligned parallel to the floor
20 covering, which web engages in a pocket of the opposite profile. This profiled rail system has proved itself in practice and forms the basis for the present invention.

BRIEF SUMMARY OF THE INVENTION

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The invention is based on the object to provide a profiled rail system of the type stated in the introduction, which is distinguished by a wide applicability.

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This object is achieved according to the invention, by means of the following features.

The profiled rail system in accordance with the
35 invention is used to bridge expansion joints, cavities and/or as the edging of floor coverings. Particularly in floor coverings made of natural materials such as

wood, consideration must be given to an expansion and shrinkage of the floor covering. For this purpose, expansion joints are left between the floor coverings. Moreover, for the same reason, the floor coverings are
5 distanced from the walls in order, here too, to realize expansion joints. For this purpose, the profiled rail system has at least one web aligned substantially parallel to the floor covering, which web engages displaceably in a pocket. In this way, the profiled
10 rail system is telescopable and can thus be adjusted to the expansions and shrinkages of the floor covering. In order to obtain a wide applicability for this profiled rail system, it is desirable to obtain as great a telescopability as possible. For this, the web would
15 need to be shaped correspondingly long and the pocket correspondingly deep to allow even wide expansion joints and cavities to be reliably covered. Since these profiled rails are generally extruded, it is not however possible to produce a deep and flat pocket with
20 the necessary dimensional accuracy. In order to solve this problem, the pocket of the profiled rail system is configured in two parts. The pocket consists, on the one hand, of a cover plate overlapping the web and, on the other hand, of a base plate underlapping the web.
25 It is here envisaged that the cover plate is provided in a first part and the base plate in a second part. A deep recess in the profiled rail is thus no longer necessary, with the result that this can be very easily moulded. In this way, the depth of the pocket is
30 basically unlimited. In order to hold the two parts securely together, holding means are provided, which join the two parts together.

A simple and, at the same time, effective configuration
35 of the holding means, is obtained in the form of at least one undercut web. The two parts can thereby be clicked one into the other, which considerably

simplifies the complexity of assembly of both parts. Preferably, the web is of flexurally elastic configuration, in order to allow both parts to be easily clicked one into the other.

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Alternatively or additionally the holding means are formed by at least one screw. This ensures a simple fitting together of the parts. As a result of the releasable holding means, moreover, the pocket is
10 easily accessible to allow easy removal, for example, of foreign bodies which have got into the pocket.

In order to be able easily to fix the screws, it is favourable if, on at least one of the parts, a driving
15 channel is formed. This driving channel supports the screws, so that a secure connection of both parts one to another is thereby ensured. The driving channel can likewise be easily produced by extrusion methods, without the need for further finishing work. The
20 driving channel is preferably configured as a threaded driving channel in order to give a secure holding of the screw. Alternatively or in addition, the screw can also be configured as a self-cutting screw. In this way, the holding of the screw in the driving channel
25 can be improved, or the shaping of the driving channel can be simplified.

It is favourable if the driving channel is provided in the first part. In this way, the fitting of the screws
30 is realized from the base plate, so that the screw heads, in the assembled state of the profiled rail system, are not visible.

In order to obtain a wide adaptability of the profiled
35 rail system even with thin floor coverings, it is favourable if the pocket has a depth corresponding to at least three times the width of the pocket. As a

result of the prescribed measures, the profiled rail system can nevertheless be produced without difficulty by extrusion methods, thereby allowing a cost-effective production.

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The pocket preferably has a depth corresponding to at least four times the width of the pocket. In this way, the expansion of even large-area laminate floors can be compensated without difficulty, so that, all in all, a
10 very wide applicability of the profiled rail system is obtained.

It is advantageous if the floor covering is formed from floor covering elements, which can be held together in
15 a click-in manner by undercut tongue and groove profilings. This produces a low complexity of assembly for laying of a floor covering. In order also to keep the complexity of laying the profiled rail system as low as possible, this is provided with undercut tongue
20 and groove profilings to fit the floor covering elements. In these profilings, the floor coverings can be clicked appropriately in place. The mounting of the profiled rail system on the floor covering elements is here effected directly on the end face, so that an
25 overlapping of the floor covering by the profiled rail system is not necessary. A continuous covering is thereby obtained, which, even in the region of the expansion joint, has a sufficiently firm connection. For the assembly of the profiled rail system, the
30 profiled rails and/or the floor covering elements are tilted slightly and then the tongue is forced into the opposite groove. The assembly of the profiled rail system is essentially no different from the laying of the floor covering elements. This makes the laying of
35 the total floor covering considerably easier and can thus be carried out without difficulty even by untrained persons. In particular, the need to align the

profiled rail system to the expansion joint is eliminated. As a result of the click connection between the floor covering elements and the profiled rail, a correct mutual alignment of the two parts is automatically obtained. The fact that the floor covering elements are not overlapped by the profiled rail system also reduces the risk of tripping.

In order to eliminate the tripping risk stemming from the profiled rail system, it is favourable if at least one of the profiled rails, on the top side, lies roughly flush with the adjacent floor covering element. In particular, it is envisaged to configure the profiled rail system in such a way that it nowhere juts over the floor covering. Tripping on these profiled rails is thereby precluded.

Further advantages and features of the present invention are presented in the following detailed description with reference to the accompanying figure which contains an exemplary embodiment of the present invention. It should be understood, however, that the drawing serves merely for the purpose of illustrating the invention and does not restrict the scope of protection of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

To these and to such other objects that may hereinafter appears, the present invention relates to a heating apparatus as described in detail in the following specification and recited in the annexed claims, taken together with the accompanying drawing in which shows:

Figure 1 shows a perspective exploded representation of a first embodiment of a profiled rail system, and

5 Figure 2 shows a perspective exploded representation of a second embodiment of a profiled rail system.

DETAILED DESCRIPTION OF THE INVENTION

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Figure 1 shows a perspective exploded representation of a first embodiment of a profiled rail system 1 having adjacent floor covering elements 2, which form a floor covering 3.

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The floor covering element 2 has on the end face a tongue and groove profiling 4, which is formed, on the one hand, by an undercut groove 5 and, on the other hand, by an undercut tongue 6. By slightly angling a floor covering element 2, and then inserting the tongue 6 into the groove 5 and tilting the angled floor covering element 2 back into the horizontal position, the individual floor covering elements 2 can be clicked together. This allows particularly simple assembly of the floor covering 3, so that this can be laid even by untrained persons.

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The profiled rail system 1 has respectively on the end face a groove 5 and tongue 6, which are shaped in accordance with the grooves 5 and tongues 6 of the floor covering elements 2. In this way, the profiled rail system 1 can be clicked together in the same way as the floor covering elements 2.

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35 In order to obtain a desired length compensation of the profiled rail system 1, this is configured such that it is telescopable. The profiled rail system 1 consists of

a one-part web part 7 and a two-part pocket part 8. The web part 7 has a web 9, which extends substantially parallel to the floor covering 3, i.e. in the horizontal direction. This web 9 engages in a pocket 10
5 configured in the pocket part 8, so as thereby to realize the telescopability of the profiled rail system 1.

The pocket part 8 is of two-part configuration and
10 consists of an upper, first part 11 and a lower, second part 12. The first part 11 has a cover plate 13, which overlaps the web 9 and which is also visible in the assembled state of the profiled rail system 1. The second part 12 has a base plate 14, which underlaps the
15 web 9 and which forms the lower portion of the pocket 10. On the base plate 14, upwardly directed, roughly vertical webs 15 are provided, which, with downwardly directed, roughly vertical webs 16, form stops for the web 9. In this way, the telescoping distance on both
20 sides is limited.

In the second part 12, bores 17 are provided, which are passed through by screws 18. In order to obtain a flat structure of the profiled rail system 1 as a whole,
25 flat head screws are preferably used as the screws 18.

In the first part 11, opposite the bores 17, a driving channel 19 is provided, into which the screws 18 can be driven. This driving channel 19 has the advantage over
30 a threaded bore that it can be produced very easily by extrusion moulding methods. Moreover, the driving channel 19 allows the screws 18 to be fixed in any chosen position without the two parts 11, 12 having to be exactly aligned with each other.

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Figure 2 shows a second embodiment of the profiled rail system 1 according to Figure 1, wherein the same

reference symbols designate the same parts. Below, only the differences relative to the embodiment according to Figure 1 are discussed.

5 For the fixing together of the parts 11, 12, in the embodiment according to Figure 2 a screw connection is dispensed with. Instead, the second part 12 has two vertically upwardly directed webs 20, which are provided on the outside with respectively at least one
10 undercut 21. The webs 20 engage in a likewise undercut receptacle 22 in the first part 11, which is configured to fit the webs 20.

For the assembly of the profiled rail system 1, the web
15 part 7 is first placed into the pocket 10 of the second part 12. Then the first part 11 is pressed onto the second part 12 such that the webs 20 engage in the receptacle 22. When the parts 11, 12 are pressed together one against the other, the two webs 20 of the
20 second part 12 are bent together, this deformation being realized in the elastic region. When the end position of the two parts 11, 12 relative to each other is reached, the web 15 of the second part 12 lies flat against the cover plate 13 of the first part 11. In
25 this end position, the webs 20 slacken again and attain their shape represented in Figure 2, in which they engage in locking manner into the undercut receptacle 22 of the second part 11.

30 Since some exemplary embodiments of the present invention are not shown or described, it must be understood that a multiplicity of changes and modifications of this exemplary embodiment described are possible, without departing from the essential idea
35 and scope of protection of the invention defined by the claims.

List of reference numerals

	1	profiled rail system
	2	floor covering element
5	3	floor covering
	4	tongue and groove profiling
	5	groove
	6	tongue
	7	web part
10	8	pocket part
	9	web
	10	pocket
	11	first part
	12	second part
15	13	cover plate
	14	base plate
	15	web
	16	web
	17	bore
20	18	screw
	19	driving channel
	20	web
	21	undercut
	22	receptacle

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

- 5 1. Profiled rail system for at least one of bridging expansion joints, cavities and as an edging of floor coverings, having end faces being formed on one hand by an undercut groove and on the other hand by an undercut tongue, said floor coverings can be clicked together, wherein said profiled rail system has at least one web aligned substantially parallel to said floor covering, which web engages displaceably in a pocket formed by a cover plate
10 overlapping said web and a base plate underlapping said web, said pocket being configured in at least two parts, a first part forming said cover plate and a second part forming said base plate, and said first part and said web having end faces being provided with a groove and tongue being shaped in accordance with said groove and said tongue of said floor coverings, and said first and second part are held together by holding means, said holding means
15 containing at least one of:
A: two undercut webs for achieving a click connection engaging in a likewise undercut receptacle in said first part; and
B: at least one screw being supported in at least one driving channel being formed into said first part.
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2. Profiled rail system according to Claim 1, wherein at least one of said first and second part containing at least one driving channel formed into it supporting said screw.
3. Profiled rail system according to Claim 2, wherein said at least one driving channel is
25 provided in said first part.
4. Profiled rail system according to any one of claims 1 to 3, wherein said pocket having a depth corresponding to at least three times the width of said pocket measured perpendicularly to said floor covering.
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5. Profiled rail system according to Claim 4, wherein said pocket having a depth corresponding to at least four times the width of said pocket measured perpendicularly to said floor covering.
- 35 6. Profiled rail system according to any one of claims 1 to 5, wherein said floor covering consisting of floor covering elements, wherein said floor covering elements and said profiled rail system can be joined together in a click-in manner and on the end side by said undercut

tongue and said groove profilings, by slight tilting and pressing of said tongue into said groove.

7. Profiled rail system according to any one of claims 1 to 6, wherein said profiled rail
5 system and said floor covering having top sides, said top sides lying flush with one another.