

COMPONENTS FOR RAIL FASTENING ASSEMBLY

The present invention relates to components for a rail fastening assembly.

5 In the documents WO93/12294, WO93/12295 and WO93/12296, the present applicants disclosed a railway rail fastening system in which a rail fastening clip is driven laterally onto the rail and can be held in a clip anchoring device (shoulder) in a "pre-assembly" or "parked" position in
10 which the toe portion of the clip does not bear on the rail. This enables railway sleepers to be preloaded at the factory with clips which are held in the pre-assembly position such that when the sleepers are delivered to site the clips can simply be driven home once the rail is in
15 place. In addition, when maintenance of the rail is subsequently required, the clip can be driven off the rail back into the pre-assembly position. Such clips are sometimes known as "switch-on/switch-off" clips. Such a fastening system has proved to be very successful, but the
20 applicant is desirous of making improvements to some aspects of its manufacture and use.

In a previous application, unpublished at the date of filing the present application, the applicants disclose a shoulder in which clip-engaging features on the lower part
25 of the walls of the shoulder are absent. Accordingly, it is necessary to provide an alternative clip bearing part for the heels of the clip.

According to a first aspect of the present invention there is provided a component for use in a rail fastening
30 assembly, the assembly comprising a railway rail fastening clip having a first part for bearing on a railway rail and a railway rail clip anchoring device for retaining the railway rail clip, which component comprises a first

portion adapted to receive a lateral load from the rail when located between a substantially upright face of the rail clip anchoring device and the side of the foot of an adjacent railway rail when the assembly is in use; wherein

5 the component further comprises a second portion for receiving a second bearing part of the railway rail clip; and the first portion and the second portion of the component are spaced apart and interconnected by a connection portion. Thus, the component can provide the

10 missing heel bearing parts of the anchoring device. In addition, if the heel bearing parts of the component require replacement because of wear or damage, this can be done quickly and easily. It is also easy to replace the component by one having a first portion of greater or

15 lesser thickness and/or a second portion of greater or smaller height, if adjustment of the characteristics of the assembly is required. Moreover, by interconnecting the first and second portions, the number of loose parts that need to be provided and assembled at the sleeper factory

20 and to make repairs in the field can be minimised.

The first portion is preferably adapted to transmit the lateral load received from the rail to the rail clip anchoring device. Thus, the first portion functions as a sidepost.

25 The connection portion desirably comprises at least one elongate member extending between the first and second portions. As the elongate member need not receive lateral load from the rail, relatively small and thin members can be used, reducing the cost of the materials required.

30 The connection portion preferably joins the first and second portions of the component such that, when the first portion is located between the anchoring device and the

rail foot, the connection portion extends outside the periphery of the anchoring device.

In a preferred embodiment, the connection portion comprises two elongate members, one elongate member
5 extending between respective first points on the first and second portions and the other elongate member extending between respective second points on the first and second portions. If a region bounded by the interconnected
10 elongate members, first portion and second portion is shaped so as to accommodate the rail clip anchoring device, the component may be installed in the rail fastening assembly simply by slipping the component over the top of the anchoring device. Desirably, the component fits
15 closely around a base portion of the anchoring device.

The component may advantageously be integrally formed, preferably of material having a hardwearing surface which can cope with the demands placed on both the first and second portions. Alternatively, one part could be co-
20 injected and two different materials used if required. If the first portion of the component is to form an insulator, at least the first portion is formed of electrically-insulating material. In any case, the component is
preferably formed of plastics material, for example nylon.

The second portion preferably comprises at least one
25 structure which extends upwardly, when the component is in use, to define a clip-receiving surface. The second portion desirably comprises two spaced-apart clip seat regions, each having a clip-receiving surface. The clip seat regions may be formed by respective interconnected
30 structures. If the component is approximately rectangular in outline, the clip seat regions may be located respectively at adjacent corners of the component. Desirably, each clip seat region is substantially L-shaped

in cross-section when viewed substantially perpendicularly to the clip receiving surfaces.

The first portion may have at least one part which overlies part of the anchoring device. In this case, the
5 part may be such that it is overlain by the rail fastening clip when the clip is retained by the anchoring device.

When a component embodying the present invention is in combination with a railway rail clip anchoring device, the first portion of the component is located adjacent to a
10 substantially upright face of the anchoring device which is to face the foot of a railway rail when the device is in use and the second portion is located on the opposite side of the anchoring device to the said substantially upright face. The second portion serves as a heel seat portion of
15 the anchoring device upon which the heel portion of the rail fastening clip bears when the device is in use.

According to a second aspect of the present invention, there is provided a sealing plate, for use with a rail clip anchoring device having a head and a stem which extends
20 from the head into a concrete sleeper when the anchoring device is in use, the plate being designed to extend over the underside of the head when the stem of the device is being set in a concrete sleeper, thereby to prevent ingress of concrete into the head of the device, and to be retained
25 on the surface of the sleeper thereafter.

The plate is desirably made, for example, of plastics material, for example polypropylene.

The sealing plate may be used to seal the aperture in the mould pocket during sleeper manufacture and prevent the
30 ingress of concrete into the head of the shoulder. When in use the sealing plate is effectively glued on to the top of the concrete sleeper, such that its top face is flush with

the face of the top surface of the concrete on the sleeper top.

According to a third aspect of the present invention, there is provided a rail fastening assembly comprising a
5 sealing plate embodying the second aspect of the present invention, a rail clip anchoring device, and a component embodying the first aspect of the present invention. The sealing plate hooks onto the shoulder and thereafter provides a flat bearing surface for the heel seat/side-post
10 component.

Reference will now be made, by way of example, to the accompanying drawings in which:

Figure 1 shows a component plate embodying the first aspect of the present invention, Figure 1A showing a
15 perspective view from above, Figure 1B showing a perspective view from below, Figure 1C showing a plan view from above, Figure 1D showing a part sectional view taken on line V-V in Figure 1C, Figure 1E showing a sectional view taken on line Y-Y in Figure 1D, Figure 1F showing a part sectional view taken on line W-W in Figure 1E, Figure
20 1G showing a front view of the component, Figure 1H showing a sectional view taken on line Z-Z in Figure 1G, Figure 1J showing a plan view from below, Figure 1K showing a sectional view taken on line X-X in Figure 1C, Figure 1L showing a detail C from Figure 1J, Figure 1M showing a detail A from Figure 1E, and Figure 1L showing a detail B from Figure 1H;
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Figure 2 shows a sealing plate embodying the second aspect of the present invention, Figure 2A showing a
30 perspective view from above, Figure 2B showing a perspective view from below, Figure 2C showing a plan view of the top surface of the sealing plate, Figures 2D and 2E showing respective side views, Figure 2F showing a plan

view of the underside of the sealing plate, Figure 2G showing a sectional view taken along the line T-T in Figure 2C, Figure 2H showing a sectional view taken along the line W-W in Figure 2F, Figure 2J showing a sectional view taken
5 along the line Z-Z in Figure 2C, Figure 2K showing a detail C from Figure 2J, Figure 2L showing a detail D from Figure 2G, Figure 2M showing a detail B from Figure 2G, Figure 2N showing a sectional view taken along the line U-U in Figure 2F, and Figure 2P showing a detail A from Figure 2H;

10 Figure 3 shows an anchoring device suitable for use with a component embodying the first aspect of the present invention and a sealing plate embodying the second aspect of the present invention, Figure 3A showing a perspective view from above and Figure 3B showing a side view; and

15 Figure 4 shows a railway rail fastening assembly employing a component embodying the first aspect of the present invention and a sealing plate embodying the second aspect of the present invention, in which Figure 4A shows the assembly in a side view in which a rail fastening clip
20 is bearing on the rail, Figure 4B shows a perspective view of the assembly, and Figure 4C is a plan view from above.

As shown in Figures 1A to 1N, a component 7 embodying the first aspect of the present invention comprises a first portion 71 and a second portion 72. Respective ends of the
25 first and second portions are connected together by means of two elongate members 73.

The first portion 71 is shaped so as to function as a sidepost insulator, having a substantially upright bearing face 78 which receives lateral loads from the rail and
30 transmits them to an adjacent rail clip anchoring device 1 (see Figure 3) and a shelf 77 which overlies part of the anchoring device 1.

The second portion 72 comprises two spaced-apart clip seat regions 75, joined together by an elongate member 74. The clip seat regions 75 have respective L-shaped clip receiving surfaces 75a. The rear edge of each surface 75a is provided with a recess 75b shaped to ease installation of the clip.

The elongate members 73, 74 and clip seat regions 75 are substantially hollow structures, having strengthening ribs as required.

A plastic sealing plate 2 embodying the second aspect of the present invention will now be described with reference to Figures 2A to 2P. The sealing plate 2 has a first major face 20 which is uppermost when the plate 2 is in use on the top of a sleeper and a second major face 21 opposite to the first. The sealing plate 2 is substantially rectangular in outline, having a cut-out portion along one side 22, defining ears 23 which ensure a seal at the corners of a shoulder 1 located above the plate 2 within the cut-out 22. The cut-out 22 has a bevelled edge 22a which mates with a corresponding bevelled edge on a rear face 15 of the shoulder 1. The cut-out 22 also has recesses 24 for receiving twin stems of the shoulder 1 (see Figure 3).

An example of an anchoring device (shoulder), suitable for use with a component embodying the first aspect of the present invention and a sealing plate embodying the second aspect of the invention, will now be described with reference to Figures 3A and 3B. The anchoring device 1 shown in Figure 3 comprises a head 1A from the underside of which downwardly project two stems 1B for embedding in the concrete sleeper during its manufacture. Alternatively, a Y-shaped stem may be used.

The head 1A of the anchoring device 1 comprises two spaced-part walls 10, connected together at one end of the head 1A, at the bottom of the walls 10, by a connection portion 14. The top surface of the connection portion 14 is downwardly inclined and forms a ramp 140, while the front surface of the connection portion 14 forms the front face 12 of the shoulder 1. The end of the walls 10 at the front end of the head 1A are connected to the front face 12 of the shoulder by curved portions 13.

The walls 10 extend outwardly at their tops to provide respective clip-engaging surfaces 11 provided with a clip-engaging projection 110, which projects downwardly. The clip-engaging surfaces 11 are inclined downwardly from the rear of the shoulder 1 to the front of the shoulder 1, for deflecting the leg of a railway rail fastening clip. The front face 12 of the shoulder 1 is provided with projections 120 for engaging with the sleeper mould so as to set the shoulder at the correct height in the mould before the concrete is introduced. Alternatively, a single shelf could be provided instead of the two projections 120. The shoulder 1 has a rear face 15 opposite to the front face 12.

Referring once again to Figs. 1A to 1N, the major face 20 of the plate 2 is formed with upstanding tabs 27 which are provided for cooperating with respective features 127 on the underside of the shoulder 1 to retain the plate 2 on the shoulder 1 (and vice versa) before the plate 2 and shoulder 1 have been set into the concrete of the sleeper. Apertures 26 are also provided in the major face of the plate 2 to allow formation of the underside of tabs 27 during manufacture of the sealing plate 2.

The shoulder 1 is held in place and positioned in the mould by means of a mechanism which pulls on the head 1A

that protrudes through the bottom of the mould. The projections 120 on the shoulder 1 serve to reduce the amount of this pulling force which is applied to the sealing plate, which might otherwise distort.

5 The first major face 20 of the plate 2 is also formed with an elongate upstand 25 along part of the rear edge of the plate 2 which assists in retaining the component 7, the elongate member 74 of the component 7 being positioned between the upstand 25 and the tabs 27 when the component
10 is in use.

 The second major face 21 of the plate 2, which forms the underside of the plate, is formed with a plurality of intersecting ribs 28 which define numerous rebates 29. When the plate is set into the top surface of a concrete
15 sleeper, these rebates 29 are filled with concrete, providing additional strength to the plate 2, and thereby reducing the amount of material, and hence cost, required to make the plate 2.

 A railway rail fastening assembly employing the
20 elements described above will now be described with reference to Figures 4A to 4C. The railway rail fastening assembly of Figures 4A to 4C, for fastening a railway rail 5, comprises a shoulder 1 as described with reference to Fig. 3, a rail fastening clip 3, a component 7 embodying
25 the first aspect of the present invention as described with reference to Fig. 1, a sealing plate 2 embodying the second aspect of the present invention as described with reference to Fig. 2 and a rail pad 4. It will be appreciated that, although not shown in Figures 4A to 4C, when in use the
30 stems 1B of the shoulder 1 are embedded in the concrete sleeper 6. The sealing plate 2 is also embedded in the concrete sleeper 6, such that the top face of sealing plate 2 is flush with the upper surface of the sleeper 6. The

clip 3 may be driven into the shoulder 1 by introducing the chamfered free ends of clip legs 31, 37 into the gaps between the top surfaces 75a of the clip seat regions 75 on the component 7 and the clip-engaging surfaces 11 on the
5 outer surface of the walls 10 of the shoulder 1, and inserting a toe portion of the clip 3, bearing a toe insulator 34a, into the space between the inner surfaces of the walls 10 of the shoulder 1, such that the toe of the clip 3, through the toe insulator 34a, bears on the ramp
10 140 of the shoulder 1. This position is known as the "pre-assembly" or "parked" position, in which the clip does not bear on the rail 5, but overlies shelf 77 of component 7. Interlocking features on the toe insulator 34a and ramp 140 prevent the clip 1 "backing off" out of the shoulder 1.
15 Downwardly-facing parts of the legs 31, 37 rest on the top surfaces 75a of the clip seat regions 75.

The clip 3 can be driven from the pre-assembly position (first operative position) into a second operative position in which the toe portion of the clip 3 bears on the foot of
20 the rail 5, the projections 110 on the walls 10 engage detents in the legs 31, 37 of the clip 3 and second and sixth portions 32, 36 (heel portions) of the clip 3 bear on the top surfaces 75a of the clip seat regions 75. The clip 3 overlies the shelf 77 of the side post insulator portion
25 of the component 7. The clip can be withdrawn from this position back into the pre-assembly position, if required in order to remove or work on the rail.

As the clip 3 is installed, the toe of the clip 3 is driven upwards by the ramp 140 in the centre of the
30 shoulder 1, and the legs 31, 37 are driven down, thereby spreading the clipapart. This makes it possible to make the assembly a little lower than would otherwise be possible.

CLAIMS

1. A component (7) for use in a rail fastening assembly, the assembly comprising a railway rail fastening clip (3) having a first part (34) for bearing on a railway rail (5) and a railway rail clip anchoring device for retaining the railway rail clip (3), which component (7) comprises a first portion (71) adapted to receive a lateral load from the rail (5) when located between a substantially upright face (12) of the rail clip anchoring device (1) and the side of the foot of an adjacent railway rail (5) when the assembly is in use;
- characterised in that the component (7) further comprises a second portion for receiving a second bearing part (32, 36) of the railway rail clip (3); and
- the first portion (71) and the second portion of the component (7) are spaced apart and interconnected by a connection portion (73).
2. A component as claimed in claim 1, wherein the said first portion (71) is adapted to transmit the lateral load received from the rail (5) to the rail clip anchoring device (1).
3. A component as claimed in claim 1 or 2, wherein the connection portion (73) comprises at least one elongate member (73) extending between the first and second portions (71, 72).
4. A component as claimed in claim 3, wherein the or each elongate member (73) is not adapted to receive lateral load from the rail (5).

5. A component as claimed in any preceding claim, wherein the connection portion (73) joins the first and second portions (71, 72) of the component (7) such that, when the first portion (71) is located between the anchoring device (1) and the rail foot, the connection portion (73) extends outside the periphery of the anchoring device (1).

6. A component as claimed in any preceding claim, wherein the connection portion (73) comprises two elongate members (73), one elongate member (73) extending between respective first points on the first and second portions (71, 72) and the other elongate member (73) extending between respective second points on the first and second portions (71, 72).

7. A component as claimed in claim 6, wherein a region bounded by the interconnected elongate members (73), first portion (71) and second portion (72) is shaped so as to accommodate the rail clip anchoring device (1).

8. A component as claimed in claim 7 which fits closely around a base portion of the anchoring device (1).

9. A component as claimed in any preceding claim which is integrally formed.

10. A component as claimed in any preceding claim, wherein at least the said first portion (71) is formed of electrically-insulating material.

11. A component as claimed in any preceding claim which is formed of plastics material.

12. A component as claimed in any preceding claim, wherein the second portion (72) comprises at least one structure (75) which extends upwardly, when the component (7) is in use, to define a clip-receiving surface (75a).

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13. A component as claimed in claim 12, wherein the second portion (72) comprises two spaced-apart clip seat regions (75), each having a clip-receiving surface (75a).

10 14. A component as claimed in claim 13, wherein the said clip seat regions (75) are formed by respective interconnected structures.

15 15. A component as claimed in claim 13 or 14, which is approximately rectangular in outline, wherein the clip seat regions (75) are located respectively at adjacent corners of the component (7).

20 16. A component as claimed in claim 13, 14 or 15, wherein each clip seat region (75) is substantially L-shaped in cross-section when viewed substantially perpendicularly to the clip receiving surfaces (75a).

25 17. A component as claimed in any preceding claim, wherein the said first portion (71) has at least one part (77) which overlies part of the anchoring device (1).

30 18. A component as claimed in claim 17, wherein the said at least one part (77) is such that it is overlain by the said rail fastening clip (3) when the clip (3) is retained by the said anchoring device (1).

19. A component as claimed in any preceding claim in combination with a railway rail clip anchoring device (1), wherein the said first portion (71) of the component (7) is located adjacent to a substantially upright face (12) of the anchoring device (1) which is to face the foot of a railway rail (5) when the device (1) is in use and the second portion (72) is located on the opposite side of the anchoring device (1) to the said substantially upright face (12).

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20. A component and anchoring device combination as claimed in claim 19, wherein the said second portion (72) serves as a heel seat portion of the anchoring device (1) upon which the heel portion (32, 36) of the rail fastening clip (3) bears when the device (1) is in use.

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21. A component and anchoring device combination as claimed in claim 19 or 20, wherein the anchoring device (1) comprises two interconnected spaced-apart walls (10), between which a portion of the clip (3) to be retained is held when the anchoring device (1) is in use, and clip-engaging means (110), supported by the walls (10), for engaging a portion of the rail fastening clip (3) to be retained, wherein the device (1) does not have any feature or surface which engages the surface of that clip portion which faces downwardly when the clip (3) is in use.

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22. A component and anchoring device combination as claimed in claim 19 or 20, wherein the anchoring device (1) comprises two interconnected spaced-apart walls (10), between which a portion of the clip (3) to be retained is held when the anchoring device (1) is in use, and clip-engaging means (110), supported by the said walls (10),

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defining contact regions at which the device (1) engages the rail clip (3) to be retained when the clip (3) bears on a railway rail (5), the device (1) not engaging the clip (3) at any other region of the device (1) when the clip (3) is bearing on the rail (5) in normal operation, wherein none of the said contact regions of the device (1) can be seen when the anchoring device (1) is viewed from above when in its operative orientation in which it will be used when adjacent to a railway rail (5) and wherein all of the said contact regions of the device (1) can be seen when the anchoring device (1) is viewed from below when in the said operative orientation.

23. A component and anchoring device combination as claimed in claim 19 or 20, wherein the anchoring device (1) comprises two interconnected spaced-apart walls (10), between which a portion of the clip (3) to be retained is held when the anchoring device (1) is in use, and clip-engaging means (110), supported by the said walls (10), defining contact regions at which the device (1) engages the rail clip (3) to be retained when the clip (3) bears on a railway rail (5), the device (1) not engaging the clip (3) at any other region of the device (1) when the clip (3) is bearing on the rail (5), wherein, when the device (1) is in use, all the said contact regions of the device (1) lie substantially at the same horizontal distance from the edge of the rail foot when measured perpendicularly to the axis of the rail (5) and in the plane of the rail foot.

24. A component and anchoring device combination as claimed in any one of claims 21 to 23, wherein the walls (10) of the anchoring device (1) are interconnected by a connection portion (14) which has a part which extends between the

said walls (10) from the one end thereof, which will be closest to the railway rail (5) when the device (1) is in use, towards the other end thereof and has a top surface which extends in a downwardly-inclined direction so as to form a ramp (140) for deflecting a portion of the said railway rail fastening clip (3) to be retained as it is driven into the anchoring device (1), and the said ramp (140) of the anchoring device (1) is operable to engage with a tab (27) on an associated sealing plate (2).

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25. A component and anchoring device combination as claimed in claim 24, wherein the said connection portion (14) of the anchoring device (1) has another part which extends between the said one end of the walls (10) below the said top surface to form a bearing face (12).

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26. A component and anchoring device combination as claimed in claim 25, wherein the height of the said bearing face (12) is less than that of the said walls (10).

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27. A component and anchoring device combination as claimed in claim 26, wherein the height of the said connection portion (14) at the said one end of the head (1A) is approximately half that of the said walls (10).

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28. A component and anchoring device combination as claimed in any one of claims 24 to 27, wherein the said part of the connection portion (14) forming a ramp (140) is connected to the said walls (10) along its side edges.

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29. A sealing plate (2), for use with a rail clip anchoring device (1) having a head (1A) and a stem (1B) which extends from the head (1A) into a concrete sleeper (6) when the

anchoring device (1) is in use, characterised in that the plate (2) is adapted for extending over the underside of the head (1A) when the stem (1B) of the device (1) is being set in a concrete sleeper (6), thereby to prevent ingress
5 of concrete into the head (1A) of the device (1), and for being retained on the surface of the sleeper (6) thereafter.

30. A sealing plate as claimed in claim 29, wherein the
10 plate (2) is formed such that a seal is created around the periphery of a major face (20) of the plate (2) when pressure is applied to the other major face (21).

31. A sealing plate as claimed in claim 29 or 30, wherein
15 the plate (2) is formed of plastics material.

32. A sealing plate as claimed in claim 29, 30 or 31,
wherein the plate (2) is substantially rectangular in outline.

20 33. A sealing plate as claimed in claim 32, wherein one edge of the plate (2) has a cut-out portion (22) shaped for receiving a portion of the head (1A) of the anchoring device (1) adjacent to the stem (1B) thereof.

25 34. A sealing plate as claimed in claim 33, wherein the said cut-out portion (22) has a bevelled edge (22a) which matches a bevelled edge of the said portion of the head (1A) of the anchoring device (1).

30 35. A sealing plate as claimed in any one of claims 29 to 34, wherein the plate (2) comprises locating means (27) for

locating the plate (2) on the head (1A) of the anchoring device (1).

36. A sealing plate as claimed in claim 35, wherein the
5 said locating means (27) comprise at least one tab (27) protruding from a major face (20) of the plate (2) for engaging with a corresponding feature on the anchoring device (1).

10 37. A sealing plate as claimed in any preceding claim, wherein the major surfaces (20, 21) of the plate (2) are formed with one or more apertures (24) therethrough for receiving respective portions of the anchoring device (1) which extend from the underside of the head (1A) of the
15 anchoring device (1).

38. A sealing plate as claimed in any preceding claim, wherein the major face (21) of the plate (2) which is lowermost when the sleeper (6) is in use is provided with
20 strengthening ribs (28) which intersect to define a plurality of rebates (29).

39. A sealing plate as claimed in any preceding claim, in combination with a concrete sleeper (6) into which it has
25 been set, wherein the major face (20) of the plate (2) which is uppermost when the sleeper (6) is in use is flush with the uppermost surface of the concrete sleeper (6).

40. A sealing plate as claimed in claim 39, when read as
30 appended to claim 36, wherein the said rebates (29) are filled with concrete.

41. A sealing plate as claimed in any one of claims 29 to 40 in combination with an anchoring device (1) for use in retaining a railway rail fastening clip (3), the anchoring device (1) comprising two interconnected spaced-apart walls (10), between which a portion of the clip (3) to be retained is held when the anchoring device (1) is in use, and clip-engaging means (110), supported by the walls (10), for engaging a portion of the rail fastening clip (3) to be retained, wherein the device (1) does not have any feature or surface which engages the surface of that clip portion which faces downwardly when the clip (3) is in use.

42. A sealing plate as claimed in any one of claims 29 to 40 in combination with an anchoring device (1) for use in retaining a railway rail fastening clip (3), the device (1) comprising two interconnected spaced-apart walls (10), between which a portion of the clip (3) to be retained is held when the anchoring device (1) is in use, and clip-engaging means (110), supported by the said walls (10), defining contact regions at which the device (1) engages the rail clip (3) to be retained when the clip (3) bears on a railway rail (5), the device (1) not engaging the clip (3) at any other region of the device (1) when the clip (3) is bearing on the rail (5) in normal operation, wherein none of the said contact regions of the device (1) can be seen when the anchoring device (1) is viewed from above when in its operative orientation in which it will be used when adjacent to a railway rail (5) and wherein all of the said contact regions of the device (1) can be seen when the anchoring device (1) is viewed from below when in the said operative orientation.

43. A sealing plate as claimed in any one of claims 29 to 40 in combination with an anchoring device (1) for use in retaining a railway rail fastening clip (3), the device (1) comprising two interconnected spaced-apart walls (10),
5 between which a portion of the clip (3) to be retained is held when the anchoring device (1) is in use, and clip-engaging means (110), supported by the said walls (10), defining contact regions at which the device (1) engages the rail clip (3) to be retained when the clip (3) bears on
10 a railway rail (5), the device (1) not engaging the clip (3) at any other region of the device (1) when the clip (3) is bearing on the rail (5), wherein, when the device (1) is in use, all the said contact regions of the device (1) lie substantially at the same horizontal distance from the edge
15 of the rail foot when measured perpendicularly to the axis of the rail (5) and in the plane of the rail foot.

44. A sealing plate and anchoring device combination as claimed in any one of claims 41 to 43, wherein the walls
20 (10) of the anchoring device (1) are interconnected by a connection portion (14) which has a part which extends between the said walls (10) from the one end thereof, which will be closest to the railway rail (5) when the device (1) is in use, towards the other end thereof and has a top
25 surface which extends in a downwardly-inclined direction so as to form a ramp (140) for deflecting a portion of the said railway rail fastening clip (3) to be retained as it is driven into the anchoring device (1), and a tab (27) on the sealing plate (2) is operable to engage with the said
30 ramp of the anchoring device (1).

45. A sealing plate and anchoring device combination as claimed in claim 44, wherein the said connection portion

(14) of the anchoring device (1) has another part which extends between the said one end of the walls (10) below the said top surface to form a bearing face (12).

5 46. A sealing plate and anchoring device combination as claimed in claim 45, wherein the height of the said bearing face (12) is less than that of the said walls (10).

10 47. A sealing plate and anchoring device combination as claimed in claim 46, wherein the height of the said connection portion (14) at the said one end of the head (1A) is approximately half that of the said walls (10).

15 48. A sealing plate and anchoring device combination as claimed in any one of claims 44 to 47, wherein the said part of the connection portion (14) forming a ramp (140) is connected to the said walls (10) along its side edges.

20 49. A rail fastening assembly comprising a sealing plate and anchoring device combination as claimed in any one of claims 41 to 48, and further comprising a component (7) as claimed in any one of claims 1 to 18.