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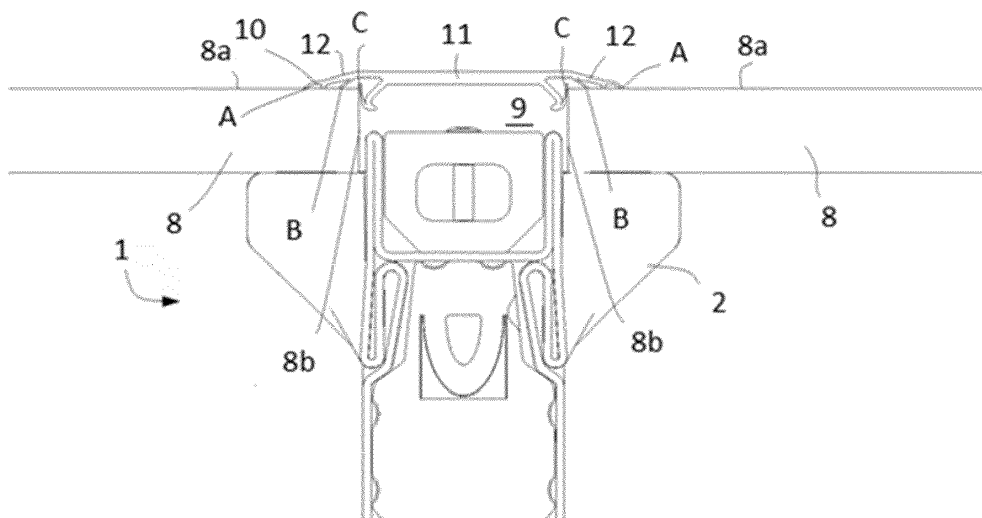
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(54) **STRIP FOR A HORIZONTAL FORMWORK SYSTEM**

(57) Strip adapted for sealing a gap (9) between two adjacently arranged formwork panels (8), said gap (9) being delimited by side walls (8b) of the respective panels (8). The strip (10) comprises a body (11) with two flanges (15), each of which is configured for being housed in the gap (9) and pressing against the side surface (8b) of the corresponding panel (8), the strip (1) further comprising arms (12) extending on both sides of the body (11), each

of which is configured for being supported on an upper surface (8a) of the corresponding panel (8), the arms (12) and the two flanges (15) being configured for holding the strip (10) against the corresponding panels (8) and for sealing the gap (9) preventing concrete from entering same, generating a respective longitudinal sealing area (A, B, C) against the respective surface (8a, 8b) of the corresponding panel (8).



**FIG. 2**

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**Description**

## TECHNICAL FIELD

**[0001]** The present invention relates to a strip adapted for sealing a gap between adjacently arranged formwork panels of a horizontal formwork system.

## PRIOR ART

**[0002]** Strips adapted for sealing gaps between adjacently arranged formwork panels like those described in EP 1375781 A1 and WO 2015/090995 A1 are known in the state of the art.

**[0003]** WO 2015/090995 A1 describes a strip comprising two components which can move over one another in a direction transverse to the longitudinal direction of the strip, said two components being attached through a spring-type element. The strip is thereby pressed against the formwork panels sealing the gap preventing concrete from entering same. The movement of the two components over one another is possible as a result of a gap between the two components. Said gap is filled with elastic material to prevent concrete from filling it.

**[0004]** ES 2322546 T3 describes a slab formwork system, wherein the cross beams include on top a rubber bar with flexible lateral extensions such that said cross beams furthermore define a sealing means with said rubber bar that covers the cross beam on its top and sides.

**[0005]** Finally, EP 3202998 A1 describes a slab formwork system, wherein the cross beams include a housing adapted for receiving a strip which fills the gap formed between two adjacent formwork panels. The strip includes a body having a substantially rectangular section and projections extending on both sides of the body projecting as little as possible with respect to the panels so that a good finish is obtained.

**[0006]** Finally, GB 990,903 A discloses a strip for covering the joints between adjacently arranged formwork panels. The strip comprises a body with two ends bent inwards to form a channel. The strip is fixed to the respective panel through a plurality of fixing devices, each of which has a head adapted to slide into and be held by the body against the ends of the body, and arms extending from the head and the free ends of which are bent outwards, such that they press against the formwork panels, fixing the fixing devices and, with them, the strip against the formwork panels.

## DISCLOSURE OF THE INVENTION

**[0007]** The object of the invention is to provide a strip as defined in the claims.

**[0008]** The strip according to the invention is adapted for sealing a gap between adjacently arranged formwork panels of a horizontal formwork system, said gap being delimited by side walls of the respective formwork panels.

**[0009]** The strip comprises a body comprising two

flanges extending longitudinally with respect to the body, each of which is configured for being housed partially in the gap and pressing against the side surface of the corresponding formwork panel, the strip further comprising arms extending on both sides of the body along the length of said body, each of which is configured for being supported on an upper surface of the corresponding formwork panel, the arms and the two flanges being configured for holding the strip against the corresponding formwork panels and for sealing the gap preventing concrete from entering same, generating a respective longitudinal sealing area against the respective surface of the corresponding formwork panel.

**[0010]** A strip which efficiently seals the gap between formwork panels, particularly through the arms that are pressed against the upper surface of the respective panels, and which is easy to assemble/disassemble since it is coupled only to the panels, i.e., it is not coupled to other elements of the horizontal formwork system, is thereby obtained, whereby other devices for holding the strip in the gap are not required.

**[0011]** These and other advantages and features of the invention will become evident in view of the drawings and the detailed description of the invention.

## DESCRIPTION OF THE DRAWINGS

**[0012]**

Figure 1 shows a perspective view of a horizontal formwork system comprising a strip according to the invention.

Figure 2 shows a partial section view of the horizontal formwork system shown in Figure 1.

Figure 3 shows a cross-section of the strip shown in Figure 1.

## DETAILED DISCLOSURE OF THE INVENTION

**[0013]** Figure 1 shows a horizontal formwork system 1 comprising edge beams 2, main beams 3, props 6 which support heads 7 supporting the main beams 3 and the edge beams 2, and formwork panels 8.

**[0014]** In the embodiment shown in Figure 1, the horizontal formwork system 1 further comprises central beams 4 which are arranged parallel to the edge beams 2 and supported on the cross beams 3. The formwork panels 8 are arranged supported on said edge beams 2 and central beams 4.

**[0015]** In other embodiments not shown in the drawings, instead of props 6, the horizontal formwork system 1 may comprise falseworks or other structures capable of supporting the formwork panels 8, edge beams 2, central beams 4 and main beams 3.

**[0016]** The horizontal formwork system 1 comprises at least one strip 10 according to the invention. The strip 10

is adapted for sealing a gap 9 between two adjacently arranged formwork panels 8, the gap 9 being delimited by side walls 8b of the respective formwork panels 8. The ends of both formwork panels 8 are arranged supported on the corresponding corner beam 2, such that the gap 9 is generated between same.

**[0017]** The purpose of said strip 10 is to prevent, once concrete is poured over the formwork panels 8, said concrete from entering the gap 9, which complicates any later disassembly of the horizontal formwork system 1, and moreover, to prevent an irregular surface on the concrete once it sets in the area where the strip 10 is arranged. Furthermore, the strip 10 has to be easily assembled and/or disassembled, so no other additional elements are required for holding said strip 10 against the formwork panels 8.

**[0018]** The strip 10 comprises a longitudinal body 11 configured for being housed partially in the gap 9 and arms 12 configured for being supported on an upper surface 8a of each formwork panel 8 such that they contribute to holding the strip 10 against the panel 8 and seal the gap 9 preventing concrete from entering same along the entire length of the strip 10. Each arm 12 extends on each side of the body 11 along the length of the body 11. The body 11 and arms 12 form a single part.

**[0019]** Each arm 12 comprises a tab 16 extending from one end of the arm 12. The tab 16 extends longitudinally along the arm 12 and is configured for being supported against the upper surface 8a of the corresponding formwork panel along the length of the tab 16, generating a first sealing area A which prevents concrete from passing into the gap 9 when the tab 16 is pressed against the upper surface 8a of the formwork panel 8 when concrete is poured over the formwork panels 8. The sealing area A extends longitudinally along the arm 12.

**[0020]** The tab 16 and the arm 12 are made of different materials, the material of the tab 16 being an elastic material. In the embodiment shown in the drawings, the arms 12 are made of rigid PVC while the tabs 16 are made of flexible PVC.

**[0021]** In the embodiment shown in the drawings, each arm 12 comprises an additional tab 17 extending longitudinally along the arm 12, said additional tab 17 being configured for generating a second sealing area B when the additional tab 17 is pressed against the upper surface 8a of the corresponding formwork panel 8 when concrete is poured over the formwork panels 8. Said additional sealing area B extends longitudinally along the arm 12. The additional tab 17 and the tab 16 arranged at one end of the arm 12 are substantially parallel to one another. Therefore, in the embodiment shown in the drawings, the strip 10 includes two tabs 16 and 17 configured for generating different sealing areas A and B arranged parallel to one another in each arm 12 such that, in the event that the first, outermost arranged sealing area A does not completely seal at any given time preventing concrete from entering, the second sealing area B would prevent concrete from entering the gap 9.

**[0022]** The tab 16 arranged at the end of each arm 12 and the additional tab 17 are made of the same elastic material. In the embodiment shown in the drawings, both tabs 16 and 17 are made of flexible PVC.

**[0023]** Moreover, each arm 12 comprises a support 18 including a substantially planar surface 18a configured so that the strip 10 is supported on the corresponding formwork panel 8 correctly positioning said strip 10 with respect to the corresponding formwork panels 8 and allowing the tabs 16 and 17 of each arm 12 to correctly carry out their sealing function. The support 18 is arranged between both tabs 16 and 17, i.e., between the tab 16 arranged at one end of the arm 12 and the additional tab 17, said support 18 extending longitudinally along the arm 12. The support 18 is made of the same material as the arm 12.

**[0024]** Moreover, the body 11 of the strip 10 comprises two flanges 15, each of which is configured for being housed partially in the gap 9 and directly pressing against the side surface 8b of the corresponding formwork panel 8, holding the strip 10 against the corresponding panel 8 and generating a third longitudinal sealing area C against the respective side surface 8b. This third sealing area C against the respective side surface 8b of the formwork panel 8 represents an additional degree of security of the sealing of the strip 10 against the formwork panels 8, such that in the event that concrete passes through the arms 12 which could not be held by the sealing areas A and B generated through the tabs 16 and 17 of each arm 12, the third sealing area C against the side surface 8b of the respective formwork panel 8 would finally prevent concrete from entering the gap 9.

**[0025]** In the embodiment shown in the drawings, the strip 10 has a constant cross-section. The body 11 includes a base 11a and two prolongations 14 extending from base 11a along the length of the body 11. Particularly, each prolongation 14 extends from a respective end 11b and 11c of the body 11, transversely away from body 11 at an angle with respect to the base 11a. Each flange 15 extends at an angle from one end of the respective prolongation 14 towards the corresponding arm 12. Each flange 15 has a length such that it projects with respect to the corresponding formwork panel 8, particularly with respect to the upper surface 8a of the corresponding formwork panel 8 once the strip 10 is inserted in the gap 9. Contact of the flanges 15 with the part of the side wall 8b of the corresponding panel 8 closest to the upper surface 8a of said panel 8 to prevent concrete from entering the gap 9 is thereby assured. In other words, the third sealing area C is generated on the side surface 8b that is as close as possible to the upper surface 8a.

**[0026]** The base 11a and the prolongations 14 of the body 11 are made of the same material, said material being different from the material of the flanges 15. The material of the flanges 15 is more elastic, which allows assuring the sealing against the side wall 8b of the corresponding panel 8. The base 11a and the prolongations 14 are made of a rigid material, while the flanges 15 are

made of a flexible material. In the embodiment shown in the drawings, the base 11a and the prolongations 14 are made of rigid PVC, while the flanges 15 are made of flexible PVC.

**[0027]** The strip 10 is inserted in the gap 9 before pouring concrete over the formwork panels 8. The strip 10 is coupled only to the formwork panels 8, not to other elements of the horizontal formwork system 1, the strip 10 being held against said formwork panels 8 only through the arms 12 and the flanges 15 of the body 11. Moreover, in the embodiment shown in the drawings, the strip 10 does not cover the corresponding head 7.

**[0028]** The strip 10 is inserted partially in the gap 9 and positioned correctly through the respective supports 18 of the arms 12. The tabs 16 and 17 of the arms 12 are supported against the top surfaces 8a of the respective panels 8, adapting to the possible irregularities of said panels 8. Moreover, the flanges 15 of the body 11 are supported against the side surfaces 8b of the respective panels 8, which contributes to holding said strip 10 against the formwork panels 8. When concrete is poured, the concrete itself presses the arms 12 towards the formwork panels 8 such that the tabs 16 and 17 of the arms 12 press against the respective panel 8, sealing the gap 9 preventing concrete from passing into same.

**[0029]** In the embodiment shown in the drawings, the strip 10 comprises two tabs 16 and 17 in each arm 12 and two flanges 15 in the body 11. In other embodiments, the strip 10 may comprise a single tab 16 or 17 in the arm 12 and the two flanges 15 in the body 11, the rest of the features of the strip 10 being identical to those described above for the embodiment shown in the drawings.

## Claims

1. Strip adapted for sealing a gap (9) between two adjacently arranged formwork panels (8), said gap (9) being delimited by side walls (8b) of the respective formwork panels (8), **characterized in that** it comprises a body (11) comprising two flanges (15) extending longitudinally with respect to the body (11), each of which is configured for being housed partially in the gap (9) and pressing against the side surface (8b) of the corresponding formwork panel (8), the strip (1) further comprising arms (12) extending on both sides of the body (11) along the length of said body (11), each of which is configured for being supported on an upper surface (8a) of the corresponding formwork panel (8), the arms (12) and the two flanges (15) being configured for holding the strip (10) against the corresponding formwork panels (8) and for sealing the gap (9) preventing concrete from entering same, generating a respective longitudinal sealing area (A, B, C) against the respective surface (8a, 8b) of the corresponding formwork panel (8).
2. Strip according to the preceding claim, wherein each arm (12) comprises a tab (16) which extends longitudinally along the corresponding arm (12) and is configured for generating a first longitudinal sealing area (A) when pressed against the upper surface (8a) of the corresponding formwork panel (8).
3. Listing according to the preceding claim, wherein the tab (16) extends from one end of the arm (12).
4. Listing according to claim 2 or 3, wherein the tab (16) is made of a material different from the material of the arm (12), the material of the tab (16) being an elastic material.
5. Listing according to any of claims 2 to 4, wherein each arm (12) comprises an additional tab (17) which extends longitudinally along the corresponding arm (12) and is configured for generating a second longitudinal sealing area (B) when pressed against the upper surface (8a) of the corresponding formwork panel (8).
6. Listing according to the preceding claim, wherein the additional tab (17) is arranged between the tab (16) and the body (11).
7. Listing according to claim 5 or 6, wherein the additional tab (17) is made of a material different from the material of the arm (12), the material of the additional tab (17) being an elastic material.
8. Strip according to any of claims 5 to 7, wherein each arm (12) includes a support (18) including a substantially planar surface (18a) configured so that the strip (10) is supported on the upper surface (8a) of the corresponding formwork panel (8) positioning said strip (10) with respect to said formwork panel (8).
9. Strip according to the preceding claim, wherein the support (18) is arranged between the tab (16) and the additional tab (17), extending longitudinally along the corresponding arm (12).
10. Strip according to any of the preceding claims, wherein the body (11) comprises two prolongations (14), each of which extends transversely at an angle from one end (11b, 11c) of the body (11) away from the strip (10), each flange (15) extending at an angle from one end of the respective prolongation (14) towards the corresponding arm (12).
11. Strip according to the preceding claim, wherein the flanges (15) are made of a material different from the material of the prolongations (14), the material of the flanges (15) being an elastic material.
12. Strip according to any of the preceding claims,

wherein the body (11) and the arms (12) form a single part.

13. Horizontal formwork system comprising formwork panels (8) and at least one strip (10) according to any of the preceding claims arranged in the gap (9) between two adjacently arranged formwork panels (8).

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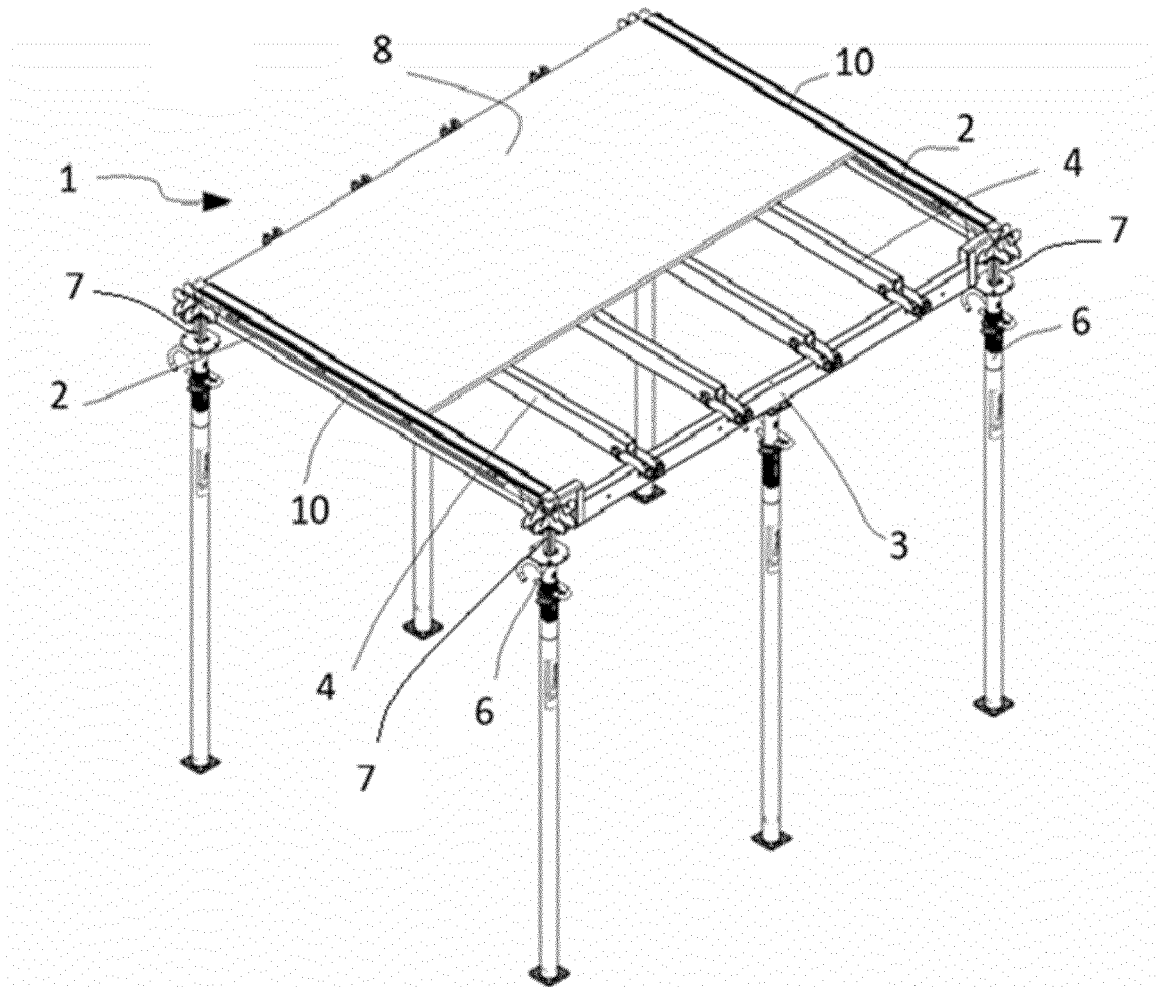


FIG. 1

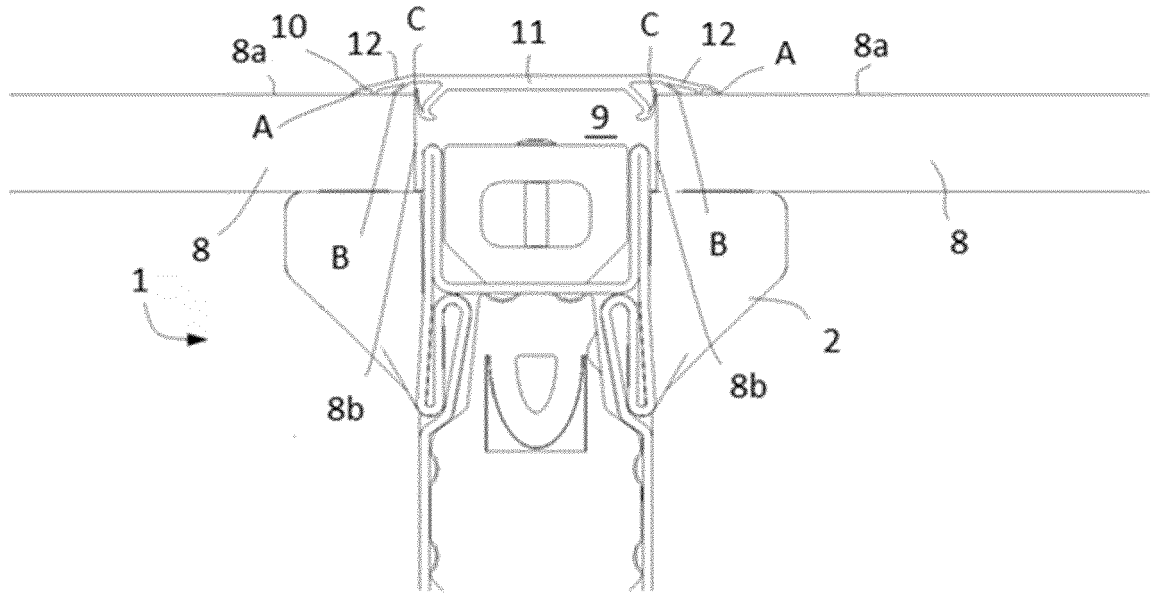


FIG. 2

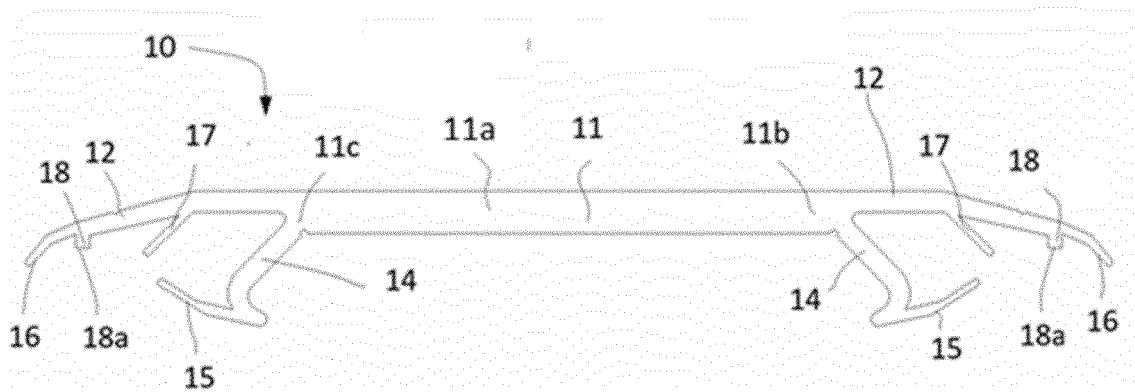


FIG. 3



EUROPEAN SEARCH REPORT

Application Number  
EP 19 38 2526

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