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**Datasheet for the decision
of 3 December 2021**

Case Number: T 1563/16 - 3.2.05

Application Number: 11749905.3

Publication Number: 2521873

IPC: F16L11/08

Language of the proceedings: EN

Title of invention:

Flexible hose with knitting reinforcement and process for its manufacturing

Patent Proprietor:

Caneva, Gianmarco

Opponent:

Fitt S.p.A.

Relevant legal provisions:

EPC Art. 54(1), 54(2), 87(1), 111(1)
RPBA 2020 Art. 13(2), 11

Keyword:

Novelty - (yes)

Priority - (yes)

Late-filed objection - amendment after summons - exceptional
circumstances (no)

Remittal - special reasons for remittal

Decisions cited:

G 0002/98



Beschwerdekammern

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Case Number: T 1563/16 - 3.2.05

D E C I S I O N
of Technical Board of Appeal 3.2.05
of 3 December 2021

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Decision under appeal: **Interlocutory decision of the Opposition
Division of the European Patent Office posted on
15 April 2016 concerning maintenance of the
European Patent No. 2521873 in amended form.**

Composition of the Board:

Chairman P. Lanz
Members: T. Vermeulen
C. Brandt

Summary of Facts and Submissions

- I. The patent proprietor lodged an appeal against the interlocutory decision of the opposition division finding that European patent No. 2 521 873 (hereinafter "the patent") as amended according to the third auxiliary request filed during the oral proceedings of 1 March 2016 met the requirements of the European Patent Convention.
- II. The opposition had been filed against the patent as a whole on the basis of the grounds for opposition under Article 100(a) EPC together with Article 54(1) EPC (lack of novelty) and with Article 56 EPC (lack of inventive step) and under Article 100(b) EPC.
- III. The opposition division came to the conclusion that the ground for opposition under Article 100(b) EPC did not prejudice the maintenance of the patent as granted, but that the subject-matter of claim 1 according to the main request (the patent as granted) was not novel with respect to document D27. In regard of the first and second auxiliary requests, the opposition division held that the requirements of Article 84 EPC were not met.
- IV. The documents referred to during appeal proceedings are the following:

D1	PD-2009-A-160;	D2	WO 2012/014122 A1;
D3	US 1,485,056;	D4	GB 470,795;
D5	US 3,068,676;	D6	US 6,216,497 B1;
D7	FR 2 849 148 A3;	D8	US 3,578,028;
D9	US 3,201,954;	D10	WO 2010/052657 A2;
D11	US 5,309,738;	D12	WO 2012/095736 A2;

D13 US 430,300; D14 US 2,870,619;
D15 GB 2 199 629 A; D16 FR 2 793 866 A1;
D17 EP 0 527 512 A1; D18 US 2,788,804;
D19 EP 0 623 776 A2; D20 US 3,462,976;
D21 US 2001/0039972 A1; D22 US 4,679,599;
D23 US 3,779,308; D24 KMC High-speed catalogue;
D25 US 2,141,042; D27 US 3,564,871;

D38 English translation of VI2010A000189;
D39 comparison between D38 and application;
D40 US 2,201,905;
D41 The 2009 Hose Handbook.

- V. With the statement of grounds of appeal the appellant (patent proprietor) filed Exhibits 1 to 3.
- VI. On 21 January 2021 the parties were summoned to oral proceedings.
- VII. In a communication pursuant to Article 15(1) of the Rules of Procedure of the Boards of Appeal in the 2020 version (RPBA 2020), issued on 7 September 2021, the parties were informed of the board's provisional opinion in respect of the novelty objections raised against the subject-matter of claims 1 and 6.
- VIII. With a letter dated 18 November 2021 the respondent submitted further arguments and filed a new objection of insufficiency of disclosure.
- IX. Oral proceedings before the board were held by videoconference on 3 December 2021.
- X. The appellant requested that the decision under appeal be set aside and that the patent be maintained as

granted (main request) or, alternatively, on the basis of the claims of one of first or second auxiliary requests filed during the oral proceedings held before the opposition division on 1 March 2016.

The respondent requested that the appeal be dismissed.

XI. The main request corresponds to the patent as granted. The independent claims have the following wording (the feature numbering used by the board is introduced in square brackets):

"1. [1a] Flexible hose with knitted reinforcement, comprising [1b] at least one inner tubular layer (2) made of polymer material defining a longitudinal axis (X) and [1c] at least one knitted reinforcement layer (4) wound on said inner layer (2), [1d] said reinforcement layer (4) comprising at least one first (5) and one second (6) series of yarns [1e] spiral wound on said inner layer (2) and [1f] knitted together to form meshes (7, 7', 7'',...) [1g] arranged on respective mesh courses (8, 8', 8'',...; 9, 9', 9'') inclined with respect to said longitudinal axis (X) and [1h] respective mesh wales (10, 10', 10'',...) substantially parallel to said axis (X), [1i] in which each of said meshes (7, 7', 7'',...) is formed by a portion of a yarn of said first series (5) forming a first chain eyelet (11, 11', 11'',...) and [1j] by a portion of a yarn of said second series (6) forming a second chain eyelet (12, 12', 12'',...) and [1k] in which each of said first (11, 11', 11'',...) and second (12, 12', 12'',...) chain eyelets is substantially U-shaped with a pair of longitudinal sections (13, 14; 13', 14'; 13'', 14'',...; 15, 16; 15', 16'; 15'', 16'',...) joined by a substantially transverse section (17; 17'; 17'',...; 18, 18', 18''), characterized in that [1l] for

each of said meshes (7, 7', 7"), said first chain eyelet (11, 11', 11",...) and said second chain eyelet (12, 12', 12",...) are substantially identical to each other and [1m] have the respective substantially longitudinal sections (13, 14; 13', 14'; 13", 14",... ; 15, 16; 15', 16'; 15", 16",...) and substantially transverse sections (17; 17'; 17";...; 18, 18', 18") completely substantially reciprocally superimposed [1n] to define a reinforcement knitting (4) that is generally single-layer [1o] and locally of double-yarn type."

"6. [6a] Process for manufacturing a flexible hose according to one or more of the preceding claims, comprising [6b] a step of making at least one inner layer (2) of polymer material and [6c] a subsequent step of knitting at least one first (5) and one second series (6) of yarns at the periphery of said inner layer (2) to form on the same at least one knitted reinforcement (4), [6d] in which said knitting step is carried out with said series of yarns (5, 6) placed in rotation with predetermined directions around said inner layer (2) and [6e] by means of a plurality of needles (19) configured for hooking respective yarns of said series (5, 6) and [6f] knitting them together in order to define mesh wales (10, 10', 10",...) of said reinforcement layer (4), [6g] said needles (13) being configured for hooking at least one yarn of said first series (5) and/or of said second series (6) and obtaining chain meshes (7, 7', 7",...) [6h] defining mesh wales (10, 10', 10",...) substantially parallel to the axis (X) of the hose and [6i] mesh courses (8, 8', 8",...; 9, 9', 9",...) inclined with respect to the same, [6j] in which each chain mesh (7, 7', 7",...) comprises a first eyelet (11, 11', 11",...) formed by a yarn of said first series (5) and joined to a second

chain eyelet (12, 12', 12",...) formed by a yarn of said second series (6), [6k] said first eyelet (11, 11', 11",...) and said second eyelet (12, 12', 12",...) each having a substantially U-shaped form with respective pairs of longitudinal sections (13, 14; 13', 14'; 13", 14",...; 15, 16; 15', 16'; 15", 16",...) joined by a substantially transverse section (17; 17'; 17";...; 18, 18', 18"), [6l] wherein said needles (19) are arranged for hooking a yarn of said first series (5) and a yarn of said second series (6) in such a manner that said first eyelet (11, 11', 11",...) and said second eyelet (12, 12', 12",...) of a same mesh (7, 7', 7",...) result substantially identical with each other [6m] with respective substantially longitudinal sections (13, 14; 13', 14'; 13", 14",...; 15, 16; 15', 16'; 15", 16",...) and transverse sections (17; 17'; 17";...; 18, 18', 18") completely substantially superimposed, [6n] to form a reinforcement knitting (4) that is generally single-layer and [6o] locally of double-yarn type."

XII. The appellant's submissions may be summarised as follows:

Novelty in view of document D27

At least features 1b, 1c, 1d, 1e, 1g, 1i, 1j, 1l and 1m were not disclosed by document D27. Therefore, the subject-matter of claim 1 as granted was novel over document D27. This also applied to the manufacturing process of claim 6 as granted.

No reference was made in document D27 to an inner tubular layer made of polymeric material. Instead, the document merely referred to a hose covering, in particular for a vacuum cleaner hose. At the filing

date of document D27, there were plenty of examples of vacuum cleaner hoses that were rigid and made of metal or of another non-polymeric material, cf. Exhibits 1 to 3. Besides, the hose of the invention served to resist pressure from the inside, not from the outside, as was the case for a vacuum cleaner hose. Moreover, document D27 merely disclosed the back side layer of a fabric; it did not disclose at least one knitted reinforcement layer wound on another layer.

As there were no differences in document D27 among the yarns and their function, the arbitrary grouping of yarns in different series was not justified. Hence, there were no first and second series of yarns.

There was no clear and unambiguous disclosure of spirally wound yarns or of an inclined arrangement of the mesh courses in document D27. Nowhere in the prior art description was it specified or suggested that the fabric was continuously knitted. The desired form could have also been obtained by introducing discontinuity elements. Alternatively, the fabric could have been knitted along the axis of the knitted reinforcement layer without the need of introducing a spiral orientation. Moreover, the conditions of the inclined arrangement of the mesh courses and the arrangement of the mesh wales substantially parallel with respect to the longitudinal axis were mutually exclusive.

Insofar as the yarns were regarded as being spirally wound, the U-shaped eyelets could not have any longitudinal sections joined by transverse sections.

The eyelets represented in Figure 7 of document D27 were contiguous and clearly lied in the same flat plane adjacent to one another. Hence, they were neither

identical nor superimposed. This also followed from the purpose of the fabric of document D27, namely to avoid projections and nodules at the intersections of the yarns. Claim 1 should be construed with a mind willing to understand, not to misinterpret. The term "superimposed" could therefore not be interpreted as meaning that the eyelets were adjacent in the same plane; they must lie one above the other such that they were covering one another. Should the term be interpreted in a broader manner, then the eyelets would not be identical. The respondent's argument with respect to the expression "radially and frontally superimposed" was baseless. First, claim 1 did not contain a reference to a radial view. In any case, it was clear that "radial" implied a direction along a radius, hence coming from the axis of the tubular layer. In contrast, the schematic drawing presented by the respondent at the oral proceedings was a transverse cross-section, not a radial view. Further, the term "frontally" referred to the view of the observer perpendicularly to the plane of the drawings, as was clear from the expression "front view" in conjunction with Figures 3 and 4 in paragraph [0022] of the patent. The mention of the term "superimposed" in paragraphs [0010] and [0012] of the patent related to the intersecting yarns of the eyelets, not to the longitudinal and transverse sections as in the wording of feature 1m. The respondent wrongly alleged that the superposition of two eyelets at different radial distances from the layer axis was unrealistic. Yarns were flexible, they were stretched out when positioning the outer layer. This allowed them to stay in the superimposed state. Both Figure 7 of document D27 and Figure 3 of the patent showed incomplete hooking steps reflecting a situation where the eyelets were not yet formed. In Figure 9 of the patent two yarns were

clearly superimposed also during the initial hooking step. Also Figure 8 of the patent illustrated that the needles were configured to simultaneously hook and work a yarn 5 of a first series and a yarn 6 of a second series. By contrast, the yarns of document D27 were stacked in an adjacent configuration. A further consideration was the specific shape of the hook of the needles of the patent, which allowed the yarns to be placed in parallel one on top of the other.

Novelty in view of documents D2, D12 - right to priority

According to G 2/98, priority was to be acknowledged only if the skilled person could derive the subject-matter of the claim directly and unambiguously, using common general knowledge, from the previous application as a whole. This was the case for claim 1 as granted. It was immediately clear from the figures of the priority application that, if the mesh wales were superimposed, then also the longitudinal and transversal sections of the eyelets were superimposed. In view of claims 3 and 4 of the priority application, the term "reciprocally" was directly and unambiguously disclosed. It was further evident from the figures of the priority application that the knitting reinforcement layer was of the double-yarn type only in those areas where the eyelets were superimposed. In other areas the knitting reinforcement layer was generally single-layer. Reference was made to the last three lines on page 2 of document D38. The same arguments applied to process claim 6.

In consequence, documents D2 and D12 did not form prior art under Article 54(3) EPC.

Admittance of late-filed objection

The objection of insufficiency of disclosure raised during opposition proceedings was rejected by the opposition division and was not even considered by the board. The new objection raised by the respondent with letter dated 18 November 2021 was not a reaction to new developments. It should therefore not be admitted into the appeal proceedings.

- XIII. The respondent's submissions were essentially as follows:

Novelty in view of document D27

The subject-matter of claim 1 as granted lacked novelty in view of document D27.

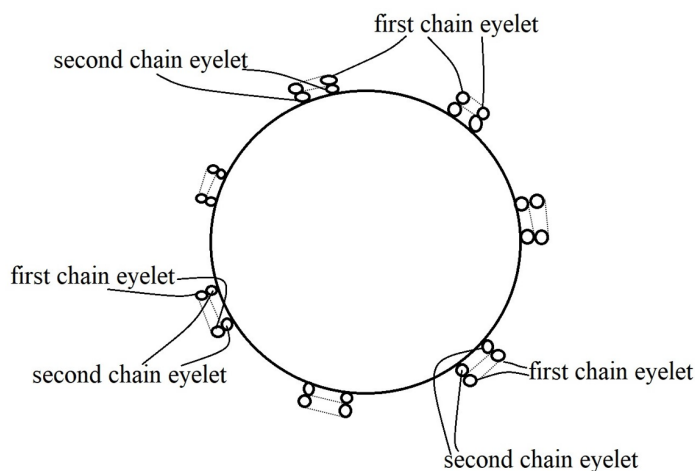
According to column 1, lines 24 to 27 and 33 to 38 of document D27, a knit tubular fabric was disclosed for use as a covering of a vacuum cleaner hose. The latter was definitely flexible and realised in a polymeric material, since that was what the person skilled in the art would have expected as a material for a vacuum cleaner hose.

The eight yarns visible in Figure 7 of document D27 could be grouped in a first series Y1, Y3, Y5, Y7 and a second series Y2, Y4, Y6, Y8.

Although the inclination of the mesh courses could not be derived from Figure 7 of document D27, the operation of a circular knitting machine with stationary needle cylinder and rotating cam tracks and yarn guides implied that each yarn was applied in a spiral fashion while the inner hose was pulled upwardly along the

center of the machine. The rotation of the yarn guides and the axial advancement of the inner hose must have resulted in an inclined arrangement of the mesh courses. For better appreciation of the operation of the machine of document D27, reference was made to document D40, which was cited therein. Further reference was made to document D41, which constituted common general knowledge in the technical field of hoses.

The respective substantially longitudinal sections and substantially transverse sections of the eyelets shown in Figure 7 of document D27 were completely substantially reciprocally superimposed. In this regard, paragraph [0032] of the patent indicated that the term "superimposition" should be construed in two ways: either referring to a radial or to a frontal arrangement. The latter did not have a clear meaning; it could imply that the distance from the eyelets to the axis of the knitted tubular layer was the same or not. Concerning the radial superimposition, the question arose what exactly was meant by a radial view. In a possible radial view represented by a schematic drawing submitted at the oral proceedings the chain



Schematic drawing submitted by the respondent at the oral proceedings

eyelets were superimposed, yet both layers remained visible. Hence, the expression "radially and/or frontally" was not clear at all and the term "superimposed" must be construed in a broad manner covering eyelets that followed one another along the entire part. Superimposition was also mentioned in paragraphs [0010] and [0012] of the patent when describing the prior art solutions of documents D7 and D8, thus acknowledging that the term did not imply any condition concerning the plane the yarns lied in. Furthermore, the patent description contained several passages, for example in paragraphs [0045], [0046], [0049], [0058] and [0059], disclosing a number of alternatives and options from which it was not possible to derive in a precise manner how the yarns were arranged. Figure 8 of the patent did not disclose that the yarns were superimposed. In fact, the interpretation that the eyelets were superimposed in two different planes was unrealistic and was not found in real hoses. As soon as a knitted layer was obtained in practice, the yarns would intertwine and change such an ideal arrangement, particularly when an extruded outer layer was applied on top of the knitted layer and tension was applied to the hose. Further, when comparing the drawings of Figures 7 and 9 of the patent with those of Figure 3 of document D27 it became clear that the yarns were guided substantially in the same manner. As the knitting steps were carried out in the same manner as in the patent, the result must therefore be the same. Even if document D27 did not contain the term "superimposed" and the arrangement of the yarns within the closed needle indicated that a superimposition in the sense of different planes was not possible, the prior art arrangement must be superimposed in the same way as the arrangement of the patent. It could further be argued that Figure 7 of

document D27 showed the yarns in the same plane just for reason of an improved visual understanding.

Figure 7 of document D27 clearly disclosed that each of the first and second chain eyelets were U-shaped and substantially identical to each other. Should this not be found to be the case, then the same conclusion must apply to the chain eyelets of the patent, which were obtained in a similar way.

Concerning feature 10, in the areas of superimposed yarns in the knitted tubular layer of document D27 the knitting was locally of double-yarn type.

The arguments in support of the novelty objection also applied to the subject-matter of claim 6.

Novelty in view of document D24

Page 3 of document D24 represented a hose referred to as 'Interweave' that was obtained according to the teaching of document D27. The inclination of the mesh courses was clear from the figure, as well as the spiral winding of the yarns.

Hence, the subject-matter of claim 1 lacked novelty in view of document D24.

Novelty in view of documents D2, D12 - right to priority

The subject-matter of claims 1 and 6 as granted did not correspond to the invention of the priority application.

In comparison with claim 1 of the priority application, the feature "*mesh wales of said first yarn series are superimposed to the mesh wales of said second yarn series*" was deleted in claim 1 as granted. The deletion of this essential feature was a generalisation of the priority invention. According to the patent each mesh wale was formed by a part of a first yarn and a part of a second yarn. As a consequence, superimposed eyelets could now be connected along the mesh wale by a single eyelet.

The priority application also failed to disclose features 1k, 1l and 1m of claim 1 as granted and features 6k, 6l and 6m of claim 6 as granted. The figures of the priority application did not directly and unambiguously disclose that the first and second eyelets were substantially U-shaped, nor that they were substantially identical and completely substantially and reciprocally superimposed. In particular, the eyelets of the priority application did not have two parallel sections that were joined by a transverse section. Instead, the legs of the eyelets were not parallel and they were made in one piece with the transverse section. Moreover, Figure 4 of the patent showed that parts of the eyelets were not superimposed. Further, the addition of the term "reciprocally" in claim 1 of the patent implied that the sections of the second yarn series could also be superimposed to the sections of the first yarn series. Claim 1 of the priority application did not cover this possibility. The scope of the patent was therefore broadened. In addition, when comparing Figure 5 of the patent with Figure 4 of the priority application the reference signs '5' and '6' of the first and second yarn series were interchanged.

The wording of features 1o and 6o was nowhere to be found in the priority application. Figure 2 of the patent related to a second, double-yarn configuration which was, however, not part of the priority application.

Hence, the effective date of the claims as granted was the filing date of 4 July 2011 so that documents D2 and D12 formed prior art according to Article 54(3) EPC.

Admittance of late-filed objection

The change in specific meaning of the term "superimposed" compared to the opposition proceedings justified raising an objection of lack of sufficiency of disclosure against claim 1 as granted. Considering that the respondent had difficulties construing the claim in absence of a single drawing that showed how the hose actually looked like, the objection was also *prima facie* very relevant. It should be admitted into the appeal proceedings.

Reasons for the Decision

Novelty in view of document D27

1. In the decision under appeal the opposition division found that the subject-matter of claim 1 as granted was not new in view of document D27 (cf. points 21 to 24 on pages 7 to 10). This is refuted by the appellant, who holds the view that at least features 1b, 1c, 1d, 1e, 1g, 1i, 1j, 1l and 1m are not disclosed by document D27.

(a) *Inner tubular layer*

2. Document D27 concerns the manufacture of a knitted tubular hose covering. In column 3, lines 43 to 47 it is mentioned that, during the manufacture of the knitted hose covering, the hose is pulled upwardly so that "*the surface of the tubular fabric which would otherwise be the inner surface becomes the outer surface of the fabric, and vice versa*". Even though its content cannot be regarded as part of the disclosure of document D27, the board finds the reference to document D40, cited in column 1, line 51 of document D27, helpful for understanding what is implicit from the above-mentioned passage, namely that the inner tubular layer (reference sign y in Figure 3 of document D40) is pulled upwardly (in the direction of the arrow with reference sign b), causing what initially is the inner surface of the tubular fabric to become the outer surface of the fabric, and vice versa. From this passage, the board deduces that a knitted reinforcement layer is wound on an inner tubular layer. Furthermore, column 1, lines 24 to 38 of document D27 refers to the practice of covering a vacuum cleaner hose. As per definition a hose is a *flexible* tube or pipe. Thus, the appellant's examples of rigid metal vacuum cleaner pipes in Exhibits 1 to 3 do not qualify as hoses. The vacuum cleaner hose mentioned in document D27 must therefore be made of a polymer material. Hence, the board adheres to the respondent's view that feature 1b is known from document D27.

Also the argument that the subject-matter of claim 1 would be constrained to hoses that serve to resist pressure from the inside is not followed. The gardening hoses mentioned in the introductory part of the patent description merely reflect a preferred use of the

flexible hose (paragraph [0001]: "*particularly but not exclusively*"). No field of application or intended use is included in claim 1.

(b) First and second series

3. The board is unable to see why the yarns Y1 to Y8 used to produce the fabric of document D27 could not be grouped in two or more series of yarns in line with what is required by feature 1d. As long as each mesh of the fabric is formed by a portion of a yarn of the first series forming a first chain eyelet and a portion of a yarn of the second series forming a second eyelet, in accordance with features 1i and 1j, the requirements of claim 1 would be met in this respect. Further particularities that might call for a different selection of the yarn series have not been claimed and can therefore not be relied on when determining the matter for which protection is sought.

(c) Spirally wound, inclined

4. As regards features 1e and 1g, the board cannot find fault in the opposition division's conclusion (s. the fourth paragraph on page 10 of the decision under appeal).

According to column 1, lines 41 to 51 of document D27 the knitted reinforcement layer is fabricated by means of a circular knitting machine of the type with multiple yarn feeds, a stationary needle cylinder and rotating cam tracks and yarn guides. Generally, such machines are operated by continuously running a series of bobbins with separate yarns around a vertical axis and by successively feeding the yarns to a set of needles that reciprocate in a longitudinal direction

parallel to the axis. Accordingly, for each revolution of the machine at least one mesh course is produced. The board shares the respondent's view that, similarly to document D40, the yarns of the hose covering of document D27 are spirally wound on an inner tubular layer. Even if the inclination of the mesh courses is not immediately apparent from Figure 7 of document D27, the board is at a loss as to how the prior art hose covering could have been produced other than in a continuous and progressive manner creating mesh courses inclined with respect to the longitudinal axis and mesh wales substantially parallel to said axis. The appellant's suggestions that the desired form could have been obtained by "*introducing discontinuity elements*" or that the fabric could have been knitted along the axis of the knitted reinforcement layer are insufficient to cast doubt on the above findings. In the board's view, features 1e and 1g are thus disclosed by document D27.

(d) U-shaped eyelets

5. Feature 1k requires that each of the first and second chain eyelets is substantially U-shaped with a pair of longitudinal sections joined by a substantially transverse section. Given that the U-shaped eyelets of the knitted reinforcement layer of document D27 are formed by the reciprocal movement of the needles parallel to the longitudinal axis, the legs of the eyelets will substantially extend along the longitudinal axis, much in a similar way as in the patent. The slight inclination visible in Figure 7 of document D27 would seem to be inherent to knitting eyelets (cf. Figures 3 and 5 of the patent). And even though the sections joining the legs of the eyelets assume a curved form in the schematic illustration of

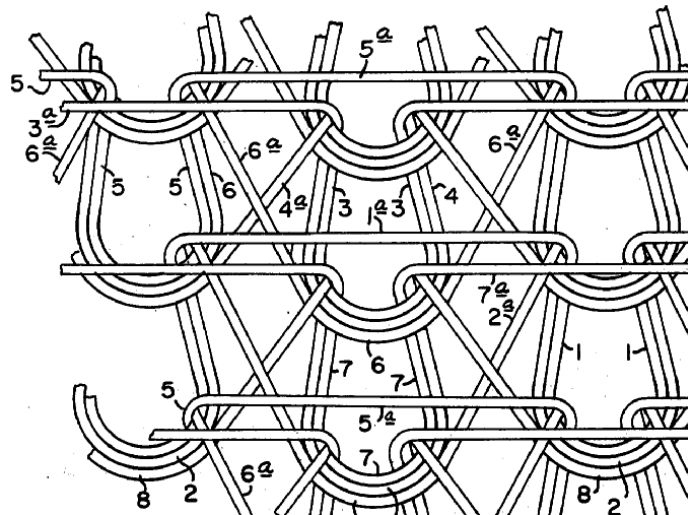
Figure 7 of document D27, the board is satisfied that their orientation can still be considered as "substantially transverse".

(e) Superimposed, identical

6. According to normal understanding, something is superimposed when it is "placed or laid on top of something else"; two things are superimposed when they are "imposed one upon another, typically so that both are still evident" (see, for example, the Oxford English Dictionary). The term "reciprocally" is generally understood as "with regard to each other". Hence, the respective substantially longitudinal sections and the substantially transverse sections of the first and second eyelets are reciprocally superimposed when they are placed on top of each other.

In line with the established case law (see the Case Law of the Boards of Appeal of the EPO, 9th edition, July 2019, II.A.6.3), the board does therefore not see any need to turn to the patent description in order to interpret the expression "reciprocally superimposed" which in itself imparts a clear, credible technical teaching to the skilled reader. Hence, the appellant's line of argument based on the further limitations "radially and/or frontally" contained in paragraph [0032] of the patent is not accepted. The same applies to the argument that a much broader interpretation of the term "superimposed" followed from the prior art description in paragraphs [0010], [0012] of the patent or from the detailed description of the embodiments in paragraphs [0045], [0046], [0049], [0058] and [0059] of the patent.

7. This is different for the adverbial adjuncts "completely substantially", the meaning of which is not immediately clear. The board observes that the patent description uses the expression "in a substantially complete manner" instead (cf. paragraphs [0031], [0033] and [0047]). The parties did not dispute this interpretation. Incidentally, it leaves some margin for the extent to which the respective substantially longitudinal and substantially transverse sections of the eyelets are placed on top of each other, covering a situation as in Figures 3 and 5 of the patent where a (small) portion of a section of the lower eyelet appears from below the corresponding section of the upper eyelet.
8. In the light of these considerations, the board adheres to the appellant's view that the disclosure of document D27 is at variance with the subject-matter of claim 1 as granted. Figure 7 of document D27, an excerpt of which is reproduced below, illustrates that each mesh



is formed by an inner eyelet nested inside an outer eyelet on the same (cylindrical) plane. For example, inner eyelet 3 lies inside outer eyelet 4, while inner eyelet 5 lies inside outer eyelet 6. Even if some overlap would inevitably occur in the area of

inflection between longitudinal sections of the eyelets, on the one hand, and the horizontal float stitches depicted by reference signs 1a, 3a, 5a, 7a and the diagonal stitches represented as 2a, 4a, 6a, on the other hand, the substantially longitudinal and substantially transverse sections of the inner and outer eyelets of document D27 are not placed on top of each other in a substantially complete manner. Nor can the nested eyelets be considered as substantially identical.

9. The respondent argued that the interpretation according to which the eyelets were superimposed in two different planes was unrealistic and was not found in real hoses. In the board's view, this line of argument is not so much concerned with the novelty objection in view of document D27, but rather touches on the question whether the invention is disclosed in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art. It may very well be that, as the respondent puts forward, the knitted yarns of the hose according to claim 1 would be pressed into a flat arrangement as soon as an (unclaimed, hence optional) outer layer is applied thereon. Further, it cannot be excluded that a sufficient tension exerted on the knitted reinforcement layer of the claimed hose would, under circumstances, force some of the upper eyelet sections into the same cylindrical plane as the lower eyelet sections. Nevertheless, this does not imply *a contrario* that, in the absence of such an outer layer and an external tension, the eyelets of the flat, knitted reinforcement layer shown in Figure 7 of document D27 would automatically lie on top of each other. But even assuming, *arguendo*, that this were indeed probable and that the representation of Figure 7 possibly served to improve the visual understanding of

the prior art knitting structure, the board does not accept that the requirements of features 1l and 1m can be derived directly and without ambiguity from document D27.

10. A certain analogy between the fabrication of the knitted reinforcement layers of the patent and of document D27 cannot be denied. It is reasonable to assume, however, that the relative arrangement of the yarns in each of the end products is determined by many factors that are left unmentioned both in the patent and in document D27. One example could be the specific geometry of the needle hooks illustrated in Figure 3 of document D27 and Figure 7 of the patent. The appellant has convincingly argued that a different hook geometry may impact the way in which eyelets are arranged with respect to each other. Therefore, the board is not persuaded that the intermediary manufacturing steps apparent from Figures 1 to 6 of document D27, notwithstanding a certain similarity with the patent figures, would have inevitably led to a flexible hose with the same structure as set out in claim 1 as granted.

11. In summary, the respondent has not convinced the board that the flexible hose disclosed in document D27 has, for each of its meshes, first and second chain eyelets that are substantially identical to each other (feature 1l), their respective substantially longitudinal sections and substantially transverse sections being placed on top of each other in a substantially complete manner (feature 1m). A similar conclusion also holds with respect to features 6l and 6m of the independent process claim 6 as granted, the wording of which ("substantially identical", "completely substantially

superimposed") comes very close to that of features 1l and 1m.

(f) Conclusion

12. In view of the above, the board concludes that the opposition division was incorrect in its finding that the subject-matter of claim 1 as granted lacks novelty in view of document D27 (Article 54(1) and (2) EPC). Furthermore, the board also concludes that the subject-matter of claim 6 as granted is new in view of document D27 (Article 54(1) and (2) EPC).

Novelty in view of document D24

13. In the statement of grounds of appeal, the respondent raised a novelty objection based in view of the figure labelled 'Interweave' disclosed on page 3 of document D24. Similarly as in Figure 7 of document D27, at least the substantially transverse sections of each eyelet seem to lie on the same cylindrical plane, resulting in smaller eyelets nested inside larger eyelets. This runs counter to the requirements of features 1l and 1m (and features 6l and 6m).
14. Hence, the subject-matter of claims 1 and 6 as granted is new with respect to document D24 (Article 54(1) and (2) EPC).

Novelty in view of documents D2, D12 - right to priority

15. Documents D2 and D12 are international publications which claim a priority date of 30 July 2010 and 14 January 2011, respectively, i.e. after the priority date of the patent. According to the respondent, claims 1 and 6 as granted do not enjoy the right to priority

of the Italian application VI2010A000189, filed in English translation as D38, so that both documents D2 and D12 would constitute state of the art within the meaning of Article 54(3) EPC.

(a) Right to priority

16. The respondent's case hinges on the argument that, contrary to the requirements of Article 87(1) EPC and opinion G 2/98, claims 1 and 6 as granted are not directed to the same invention as the earlier Italian application VI2010A000189. The board cannot follow this line of argument, in particular regarding the deletion of the feature "*mesh wales of said first yarn series are superimposed to the mesh wales of said second yarn series*" from claim 1 of the priority application. It is generally recognised that a wale of a knitting refers to a column of loops or eyelets produced by the same needle on successive knitting cycles. According to the third paragraph on page 2 of document D38, an English translation of VI2010A000189, a mesh of the knitting is formed by simultaneously hooking a yarn of a first series forming a first eyelet and a yarn of a second series forming a second eyelet. Figures 7 and 8 of the priority application give a visual representation thereof. In consequence, each mesh wale of the priority application is inevitably formed of a column of already superimposed eyelets. It is not apparent to the board how the wording of claim 1 as granted, which replaces the incorrect general formulation of claim 1 of the priority application by a set of more limited features (features 1i, 1j and 1m), can result in a generalisation of the claimed subject-matter.

17. Concerning features 1k, 1l and 1m of claim 1 as granted, the board accepts that their wording

("substantially U-shaped", "substantially identical", "substantially longitudinal sections", "substantially transverse sections") is not disclosed as such in the priority application. However, Figures 1, 2 and 4 of the priority application illustrate that the eyelets disclosed as *"superimposed on each other in a substantially complete manner"* in the bottom paragraph on page 2 of document D38 each have two leg sections substantially extending in a direction parallel to axis X and a substantially transverse section. Thus, no ambiguity is possible regarding whether the eyelets of the priority application are substantially U-shaped and substantially identical to each other. Further, the board fails to see how the use of the term "joined" in feature 1k of claim 1 as granted is without basis in the priority application. In the board's view, the term "joined" is used here as an adjective rather than a past participle implying a preceding joining action. In fact, considering that each eyelet must be made from a single portion of yarn (features 1i and 1j), the specific wording of feature 1k can only mean that the legs of the eyelets are made in one piece with the transverse section. As regards the term "reciprocally" used in feature 1m, the appellant's view is shared that claims 3 and 4 of the priority application offer a direct and unambiguous basis.

18. The respondent further argued that feature 1o was without basis in the priority application. According to the fourth and fifth paragraphs on page 3 of document D38, however, the two yarns 5, 6 are superimposed *"only at the respective eyelets"*; the meshes thus formed differ from *"a hose belonging to the state of the art, in which meshes 7, 7', 7", ... are only formed by yarn of one of the two series"*. Further, the ninth paragraph on page 4 of document D38 refers to a yarn of the first

series 5 and a yarn of the second series 6 simultaneously hooked "*in order to obtain a single-layer knitted reinforcement 4 with each mesh wales 10, 10', 10'',... defined both by yarns of the first series 5 and by yarns of the second series 6*". Also claim 8 of the priority application in its English translation D38 refers to "*a single layer reinforcement knitting*" with chain meshes comprising a second eyelet made by a yarn of the second series superimposed to a first eyelet made by a yarn of the first series. Considering the content of the priority application as a whole, the board thus concludes that the skilled person would derive directly and unambiguously that the reinforcement knitting is generally single-layer and locally of double-yarn type.

19. The same applies to features 6k, 6l and 6m and 6o of claim 6 as granted, which is based on claim 8 of the priority application.
20. In the board's view, the subject-matter of claims 1 and 6 as granted is therefore entitled to claim priority from the earlier application VI2010A000189 pursuant to Article 87(1) EPC. The effective filing date of the claimed subject-matter in the sense of Article 89 EPC is therefore 7 July 2010.

(b) Documents D2 and D12

21. Documents D2 and D12 have priority and publication dates which are after the effective filing date of the patent. Hence, they do not constitute state of the art within the meaning of either Article 54(2) EPC or Article 54(3) EPC.

Conclusion on novelty

22. As none of the novelty objections raised by the respondent against the claims as granted is successful, the ground for opposition under Article 100(a) EPC together with Article 54(1) EPC does not prejudice the maintenance of the patent in its granted version.

Admittance of late-filed objection

23. The respondent's objection of lack of sufficiency of disclosure was raised for the first time with letter dated 18 November 2021, i.e. after notification of the summons to oral proceedings on 21 January 2021. This constitutes an amendment of the respondent's appeal case for which, according to Article 25(1) and (3) RPBA 2020, Article 13(2) RPBA 2020 applies. According to this provision, the amendment is, in principle, not taken into account unless there are exceptional circumstances, which have been justified with cogent reasons by the party concerned.
24. The respondent's only argument put forward in support of the late filing rests on an alleged change in the specific meaning of the term "superimposed". In the board's view, exceptional circumstances are not justified, for the following reasons. In point 10 of the communication under Article 15(1) RPBA 2020, the board construed the term "superimposed" in the sense that the respective longitudinal and transverse sections of the first and second eyelets were to be placed on top of each other. In doing so, the board's preliminary opinion deviated from the opposition division's conclusion that longitudinal and transverse sections placed next to each other were also superimposed (cf. points 22 and 24 of the decision

under appeal). However, the board's interpretation of the term "superimposed" was entirely in line with the appellant's position in point 8 of the statement of grounds of appeal:

"[T]he reference "*superimposed*" cannot be interpreted as meaning that the sections are adjacent and lie on the same plane, as it has been alleged. Superimposed means that they do not lie on the same plane, namely that they lie one **on** (i.e. above) the other, and not **adjacently** on the same plane." (emphasis in original)

Thus, the underlying issue invoked by the respondent for justifying their late-filed objection was already on file at the earliest stage of the appeal proceedings. There was therefore no reason to wait more than five years and file a new objection of lack of sufficiency of disclosure just two weeks before the scheduled date of oral proceedings.

25. The board concludes that the respondent has not provided cogent reasons justifying exceptional circumstances. The respondent's objection of lack of sufficiency of disclosure is therefore not taken into account pursuant to Article 13(2) RPBA 2020.

Remittal to the opposition division

26. Article 111(1), second sentence, EPC leaves it to the board's discretion to decide on the appeal either by exercising any power conferred on the department of first instance or by remitting the case to that department. The appropriateness of remittal to the department of first instance is thus a matter for

decision by the board, which assesses each case on its merits.

27. In cases where a decision of a first-instance department is based solely on one particular issue which is decisive for the case, other essential issues being left outstanding, and the subsequent appeal on the particular issue is allowed, the board normally considers remitting the case to the first-instance department for consideration of the undecided issues (see Case Law of the Boards of Appeal of the EPO, 9th edition, July 2019, V.A.7.4). This is all the more legitimate if the undecided issues cannot be dealt with by the board without an undue burden so that "special reasons" present themselves in the sense of Article 11 RPBA 2020 (see Supplementary publication 2, OJ EPO 2020, 54).

28. The opposition division's sole ground for rejecting the claims as granted was lack of novelty of the subject-matter of claim 1 in view of document D27 (s. points 21 to 24 of the decision under appeal). As set out in point 12. above, the board follows the appellant's view that the subject-matter of claim 1 as granted is new over document D27. Thus, the opposition division's sole ground for rejecting the main request (patent as granted) does not hold.

29. In the reply to the grounds of appeal, the respondent raised, in addition to the novelty objections discussed above, multiple inventive step objections against the subject-matter of claims 1 and 6 as granted. These can be grouped as follows:

- (a) Objections against claim 1 as granted:
 - (i) starting from document D1, D7, D8, D9, D14 or D15 (each in combination with either of documents D3, D4, D5, D6 or D13);
 - (ii) starting from document D16 to D23, D10, D24, D25 or D27.

- (b) Objections against claim 6 as granted:
 - (i) starting from D1 (in combination with either of documents D3 to D6);
 - (ii) starting from D3 (in combination with document D10 or document D11).

30. The opposition division did not take position on inventive step of the subject-matter of the claims as granted, neither in the decision under appeal nor in the communication issued in preparation of the oral proceedings. Nor can their view on the matter be derived from the reasoning provided in respect of the subject-matter of claims 1 and 6 according to the third auxiliary request, which was found to be novel and inventive over document D27 in view of an additional feature taken from dependent claims 3 and 8 as granted, respectively.

31. The board further notes that the appellant's arguments in favour of inventive step are limited to the submissions filed with letter dated 26 November 2021 in respect of the respondent's inventive step objections grouped under (a) (i). No arguments were presented in respect of the objections grouped under (a) (ii) against the subject-matter of claim 1 as granted or in respect of the objections grouped under (b) (i) and (b) (ii) against the subject-matter of claim 6 as granted.

32. Under these circumstances, the board judges that ruling on the undecided issue of inventive step for the first time in appeal would constitute an undue burden and would run counter to the primary object of appeal proceedings to review the decision under appeal in a judicial manner as expressed in Article 12(2) RPBA 2020. The case is therefore remitted to the opposition division for further prosecution, in particular for examining the ground for opposition under Article 100(a) EPC together with Article 56 EPC in respect of the granted claims.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the opposition division for further prosecution.

The Registrar:

The Chairman:



N. Schneider

P. Lanz

Decision electronically authenticated