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(54) Spring clip for filing documents

(57) A spring clip (10) for storing documents in file-holders having a ring or lever mechanism (22). The clip (10) has a triangular-shaped body by folding and shaping a metal sheet. The body of the clip (10) comprises a rear portion (11), which extends in a longitudinal direction, and a pair of lateral jaws (12, 13) that can be elastically spread apart and which extend towards each other from the rear portion (11) to front edges (14, 15) to define an opening for insertion and removal of documents; the clip (10) comprises also a pair of control levers (16, 17) hinged to the front edges of the jaws (12, 13). The body of the clip (10) also comprises at least one side wing (18, 19; 23) which extends from the rear portion (11) and provided with a slot (20, 21; 24) for hooking the clip (10) to the ring or lever mechanism (22) of a file-holder.

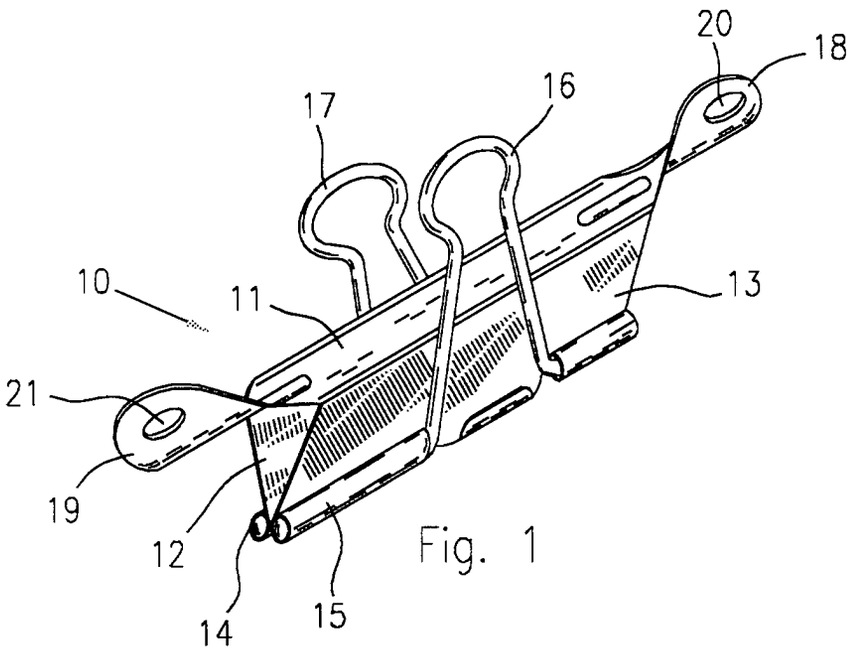

Fig. 1

EP 1 201 455 A1

Description

BACKGROUND OF THE INVENTION

[0001] This invention refers to an improved spring clip, and more particularly to a spring clip suitable for clamping and filing sheet documents in file-holders provided with a ring, lever or similar retaining mechanism.

STATE OF THE ART

[0002] Spring clips for holding loose documents are widely used and described in some prior patents, for example in US-A-4.696.081, US-A-4.761.862 and in the references cited in the same documents.

[0003] Usually, a spring clip device of the type mentioned above, is obtained by starting from a flexible metal sheet of spring steel, which is suitably shaped and folded to form a substantially triangular-shaped body, seen in a cross-sectional view, comprising a back or rear portion which extends in a longitudinal direction, and two lateral jaws that can be elastically spread apart; the two jaws are slanting forward one against the other one, from the rear portion, to define an opening between their opposite front edges for introduction and/or removal of sheets, and which are elastically pressed against the documents to be gripped. A clip also comprises a pair of control levers hinged to the front edges of the jaws, which can be made to rotate into a forward or a rearward position against the lateral jaws to enable the clip to open whenever a document must be inserted or removed.

[0004] The use of these conventional clips is an end to itself, in that it does not enable them to be used for storing documents into file-holders provided with a usual normal ring or lever mechanism. Consequently, whenever one or more documents must be filed and stored in a file-holder for subsequent consultation, use is generally made of plastic covers already provided with a row of universal holes, suitable for inserting into file-holders provided with ring-type or other types of mechanisms.

OBJECTS OF THE INVENTION

[0005] An object of this invention is to provide a spring clip of the type previously referred to, which is suitably shaped to enable it to be used with and stored into a file-holder provided with a ring or lever mechanism, and which holds the documents firmly gripped, thereby eliminating the use of conventional perforated covers.

[0006] A further object of the invention is to provide a spring clip of the aforementioned type, having limited overall dimensions, designed to enable the stored documents to be easily inserted and/or removed, and to enable them to be easily consulted in a normal file-holder, thereby constituting a part integrative for a different filing system.

BRIEF DESCRIPTION OF THE INVENTION

[0007] The above can be achieved by means of a spring clip according to claim 1.

[0008] More in particular, according to the invention a spring clip what has been provided suitable for storing sheets or documents in a file-holder of the type having a ring or lever mechanism, in which the clip is performed by starting from a flexible metal sheet which is shaped and folded to form a triangular-shaped body, in a cross-sectional view, in which said body comprises a back or rear portion which extends longitudinally, and a pair of lateral jaws that can be elastically spread apart, the jaws slanting forward from the rear portion of the clip to define an aperture for introduction and/or removal of documents from the opposing edges of the jaws, and a pair of control levers hinged to the lateral jaws, characterised in that the back portion of the clip comprises at least one side wing at the back portion of the clip, parallely extending to the front edges of the jaws, said wing having an enlarged hole for hooking the clip to a ring or lever mechanism of the file-holder.

[0009] According to a first preferential embodiment, the clip is provided with opposite wings which coplanary and longitudinally from each end of the back portion of the clip, to simultaneously engage with two rings of the retaining mechanism of the file-holder.

[0010] According to a further embodiment, the two wings extend longitudinally for the same length or for different lengths to enable the clip to be used with ring mechanisms having a different pitch.

[0011] According to a still further embodiment, the clip is provided with a single wing which extends in a direction opposite to the front jaws of the clip, in an intermediate area of the back portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] Some preferential embodiments of a spring clip according to the invention, will be now described in greater detail hereunder with reference to the figures of the accompanying drawings, in which:

Fig. 1 shows a perspective view of a first embodiment, with a double wing;
Fig. 2 shows a side view of the clip of fig. 1;
Fig. 3 shows a view from the rear side of the clip of fig. 1;
Fig. 4 shows an end view of the clip of fig. 1;
Fig. 5 shows the application of the clip of fig. 1 into a usual ring mechanism of a file-holder;
Fig. 6 shows a second embodiment of the clip according to the invention;
Fig. 7 shows a third embodiment of the clip according to the invention.

DETAILED DESCRIPTION OF THE INVENTION

[0013] With reference to figures from 1 to 5, a description will be given hereunder of a first preferential embodiment of a spring clip according to the invention. The clip, as a whole, indicated by reference 10, is obtained starting from a sheet of spring steel which is suitably cut and folded to obtain a triangular-shaped body, seen in a cross-sectional view, which extends in a longitudinal direction.

[0014] As shown in Fig. 1, the body of the clip 10 comprises a rear portion or back 11, from which two slanted jaws 12 and 13 are extending forward and which converge with each other towards respective front edges 14, 15; the opposite edges 14 and 15 of the jaws 12, 13 are appropriately rounded, or curled and may be spreaded apart to form a front aperture or mouth for introduction, removal and for gripping loose sheets or documents which are to be stored.

[0015] The clip 10 is furthermore provided with two control levers 16 and 17 of folded steel wire, which are hinged to the rounded fore edges 14 and 15 of the two gripping jaws for the documents; the control levers 16 and 17 can be turned between a forward position, shown by a dash line in Fig. 2 and shown in Fig. 5, and a rear position shown in the remaining figures, in which the levers 16 and 17 rest against the jaws 12 and 13 of the clip to enable them to be open by pressing the levers with fingers of one hand.

[0016] The structure of the spring clip described above, is wholly conventional and its shape or its dimensions may also vary compared to that shown.

[0017] According to this invention, the clip 10 in the example of figures from 1 to 5, is provided with two side wings 18, 19 which are coplanary arranged to the front edges of the jaws and are obtained by cutting and folding end portions of the metal sheet.

[0018] More precisely, each wing 18, 19 extends into an intermediate plain, longitudinally from an end of the back 11 of the clip, and is provided with a hole or slot 20, 21 which enables the clip to be hooked to a usual ring mechanism of a file-holder, as shown schematically in figure 5.

[0019] In the case of figures 1-5, the hooking wings 18, 19 extend in a same plane along the longitudinal direction of the back 11, rearwardles the latter to enable the clip to be easily hooked to the ring mechanism 22.

[0020] Each wing 18, 19 is also obtained by folding and bringing together two shaped cut portions of the metal sheet, which are substantially disposed on the intermediate longitudinal plane of the clip.

[0021] Within the scope of this invention, however, other solutions and other shapes for the clip and/or the wings are made possible for hooking the clip to a ring or lever mechanism of file-holders of different type.

[0022] A second embodiment is shown in the view of figure 6, which shows a spring clip substantially similar to that of the previous figures, with the sole difference that here one of the wings, for example wing 18, is provided with a shank 11' which extends over a greater space compared to the shank of wing 19, to adapt the spring clip to ring mechanisms having a larger or different pitch between the rings, compared to the previous case.

[0023] For the remainder, the spring clip of figure 6 is wholly similar to that previously described.

[0024] Figure 7 of the accompanying drawings shows a third embodiment; in figure 7 the same reference numbers as the previous figures have also been used to indicate similar or equivalent parts.

[0025] The solution of figure 7 differs in that it is provided with a single central wing 23 with respective slot 24, which protrudes rearwardly from the back 11 of the clip so as to enable the same clip to be used singly or in combination with other similar and/or different clips, hooking onto a single ring of a retaining mechanism of a conventional file-holder.

[0026] While in the case of the previous solutions, the two wings-18, 19 were obtained by folding shaped extensions of the back 11 of the clip, in the case of figure 7 the wing 23 is obtained by making an annular cut-out in one or both jaws 12 and 13 when cutting the metal sheet, and then folding the cut portions backward.

[0027] In the cases shown, the wings 18, 19 and 23 are obtained integral with the body of the clip 10 starting from a single metal sheet of spring steel; however, if required, the slotted wings 18, 19 and 23 may be differently shaped or performed, compared to that shown, provided they are suitable for the scopes of the invention.

Claims

1. A spring clip (10) particularly for storing documents in a file-holder having a ring or lever mechanism (22), in which the clip is performed from a metal sheet which is folded to form a triangular-shaped body, and in which said clip body (10) comprises a back portion (11) which extends longitudinally, and a pair of lateral jaws (12, 13) that can be elastically spread apart, said jaws (12, 13) slanting forward from the rear portion (11) of the clip and having front edges (14, 15) defining a front mouth for introduction and removal of documents between the opposite front edges (14, 15) of the jaws (12, 13), and a pair of control levers (16, 17) hinged to the lateral jaws (12, 13), **characterised in that** the body of the clip (10) is provided with at least one side wing (18, 19; 23) at the back portion (11) of the clip (10), parallely extending to the front edges (14, 15) of the jaws (12, 13), said wing (18, 19; 23) having an enlarged slot (20, 21; 24) for hooking the clip (10) to a ring mechanism (22) of the file-holder.

2. A spring clip (10) according to claim 1, **character-**

ised in that the body of the clip (10) is provided with the wings (18, 19), which coplanary and longitudinally extend at both ends of the rear portion (11) of the clip (10).

3. A spring clip (10) according to claim 2, **characterised in that** the wing (18) at one end of the back portion (11) of the clip (10) comprises a shank member (11') of greater length than the shank member of the wing (19) at the other end of the clip (10).

4. A spring clip (10) according to claim 1, **characterised by** comprising a centrally disposed wing (23) at the back portion (11) of the clip (10).

5. A spring clip as claimed in any previous claim, **characterised in that** each wing (18, 19; 23) is made integral with the body (10) of the clip.

6. A spring clip according to claim 1, **characterised in that** the wing (18, 19; 23) is provided by folding two opposing shaped extensions edges of the body (10) of the clip.

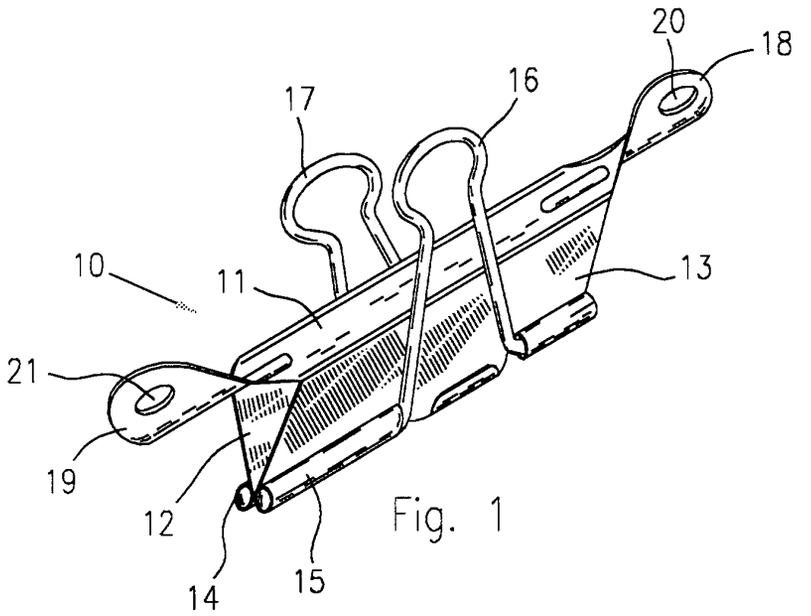

Fig. 1

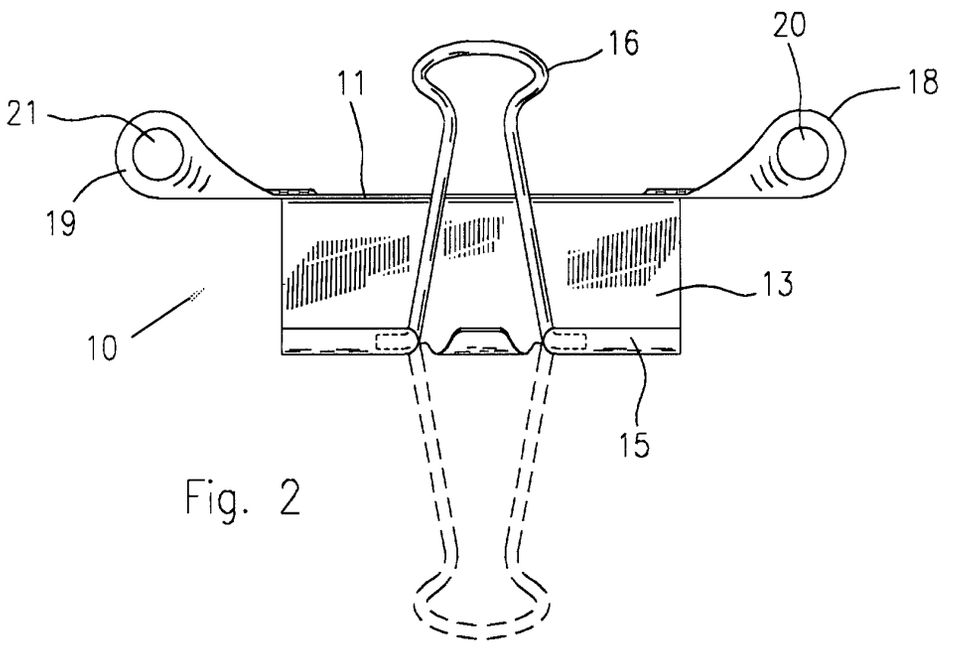

Fig. 2

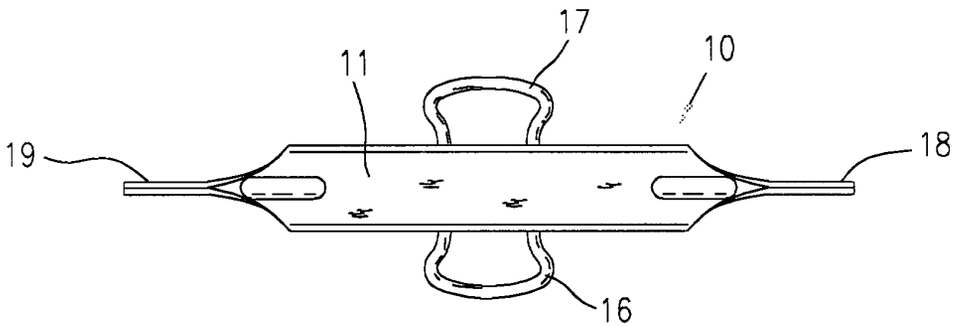

Fig. 3

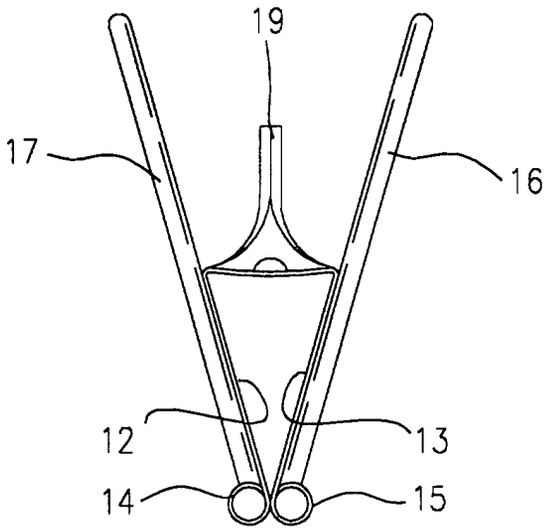

Fig. 4

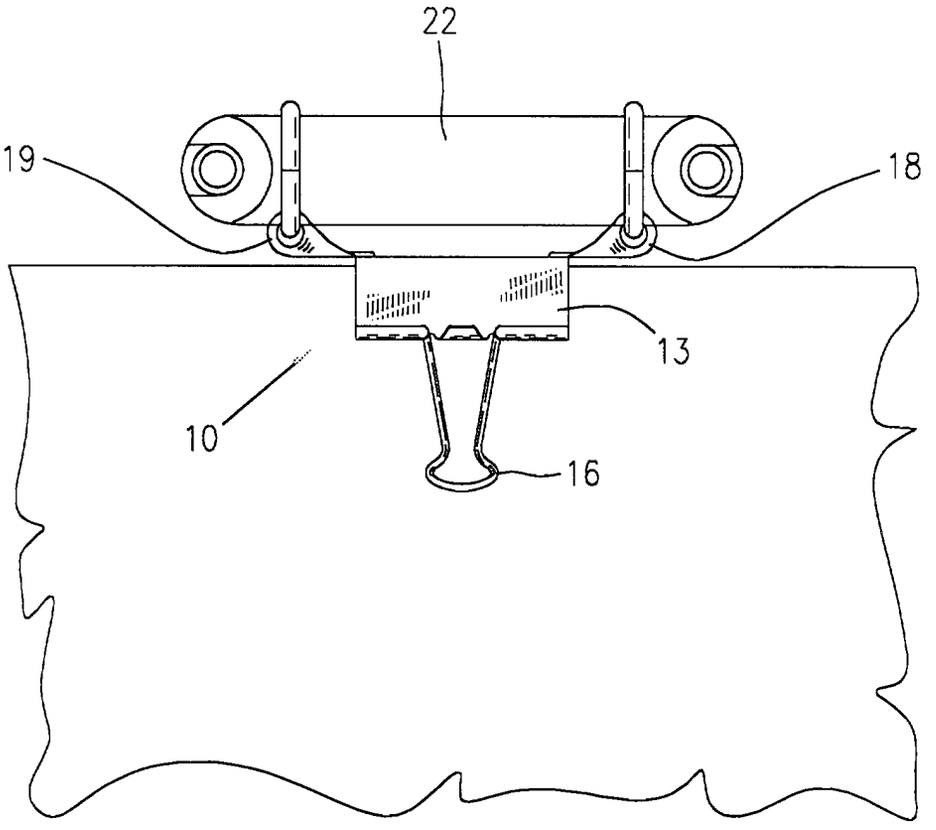

Fig. 5

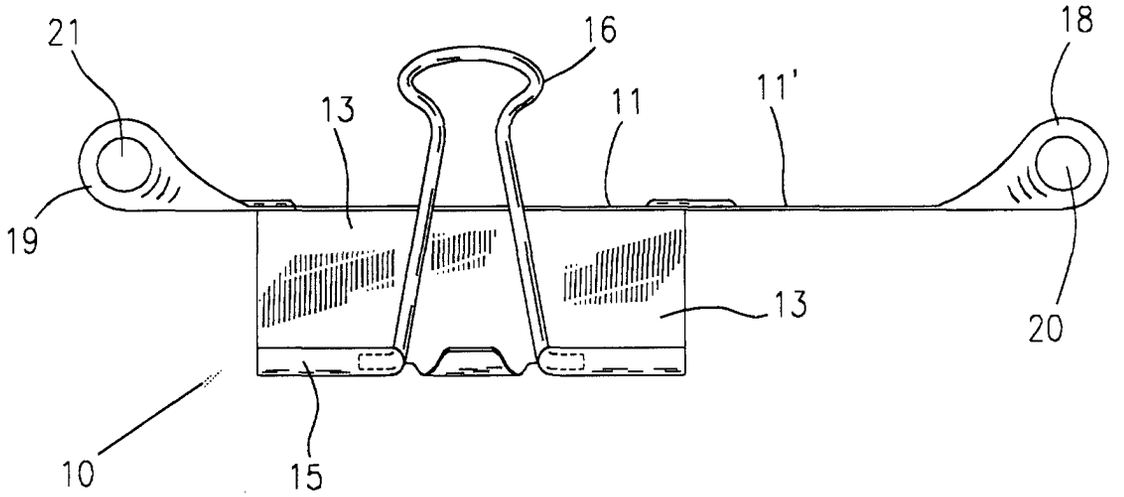

Fig. 6

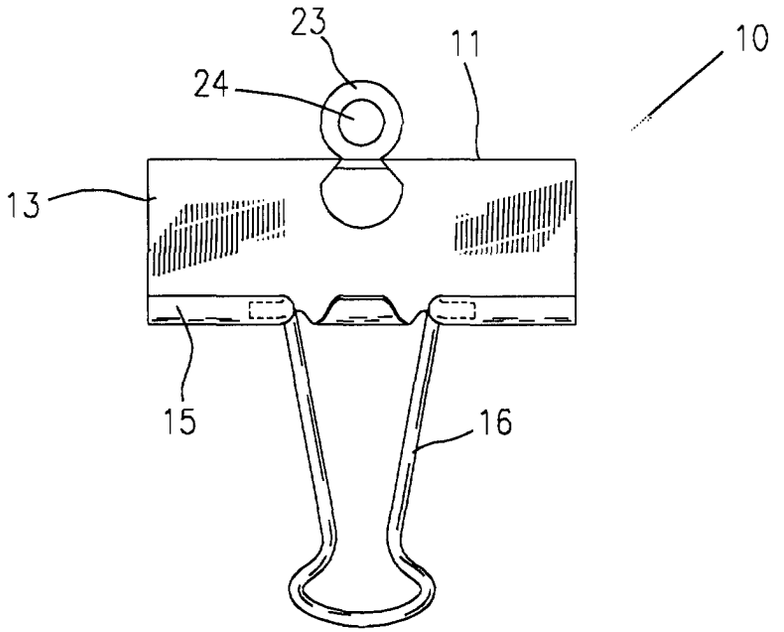

Fig. 7

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EUROPEAN SEARCH REPORT

Application Number
EP 01 12 3878

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 556 435 A (LAWRENCE HOLMES BARRON) 5 October 1943 (1943-10-05) * page 1, line 92 - line 99; figure 1 *	1,4	B42F11/00 B42F1/00
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TECHNICAL FIELDS SEARCHED (Int.Cl.7)

B42F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	6 February 2002	Loncke, J

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 12 3878

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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06-02-2002

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82