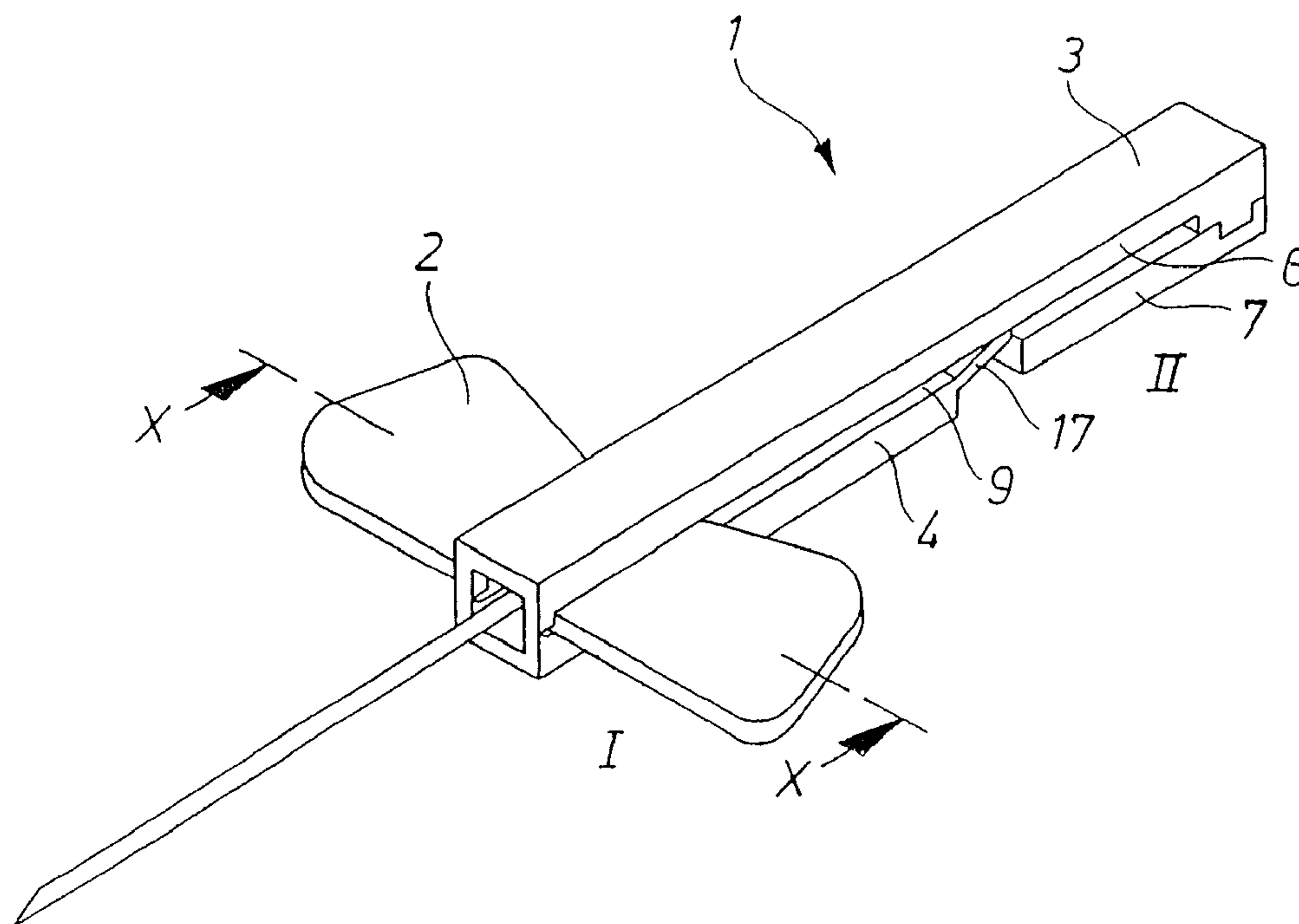




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(71) Demandeur/Applicant:
SARSTEDT AG & CO., DE
(72) Inventeur/Inventor:
SARSTEDT, WALTER, DE
(74) Agent: OGILVY RENAULT

(54) Titre : BOITIER DE PROTECTION D'UNE AIGUILLE A AILETTES
(54) Title: PROTECTIVE HOUSING FOR A BUTTERFLY NEEDLE



(57) **Abrégé/Abstract:**

The invention relates to a protective housing (1) for a butterfly needle (2), which comprises an elongate lower cap (4) and an elongate upper cap (3), each having a substantially U-shaped cross-section, that can be closed to give a housing unit once the wings of the butterfly needle (2) are inserted. Guide grooves (9) are defined by free gap distance on both sides between the adjacent vertical side walls (6, 7) of the caps (3, 4). An upstream spring-loaded element (17) projects in a constant locking position (II) from at least one of the side walls (6 or 7) into one of the guide grooves (9).



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US): **SARSTEDT AG & CO.** [DE/DE]; Rommelsdorfer-
strasse, 51588 Nümbrecht (DE).

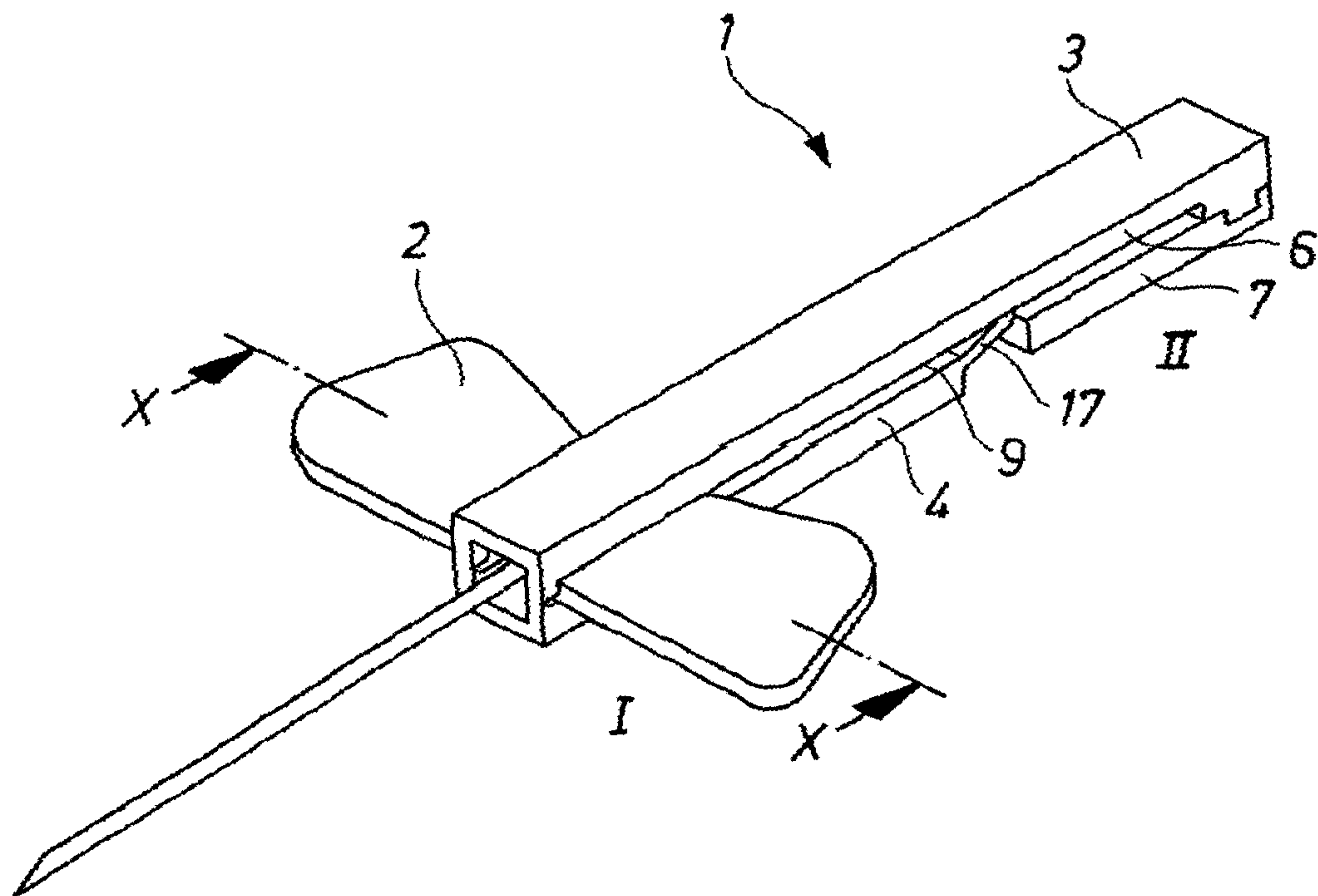
(72) Erfinder; und

(75) Erfinder/Anmelder (nur für US): **SARSTEDT, Walter**
[DE/DE]; Rommelsdorferstrasse, 51588 Nümbrecht (DE).(74) Anwalt: **GIHSKE, Wolfgang**; Hemmerich & Kollegen,
Eduard-Schloemann-Strasse 55, 40237 Düsseldorf (DE).(81) Bestimmungsstaaten (national): AE, AG, AL, AM, AT,
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(54) Title: PROTECTIVE HOUSING FOR A BUTTERFLY NEEDLE

(54) Bezeichnung: ABDECKGEHÄUSE EINER FLÜGELKANÜLE



(57) Abstract: The invention relates to a protective housing (1) for a butterfly needle (2), which comprises an elongate lower cap (4) and an elongate upper cap (3), each having a substantially U-shaped cross-section, that can be closed to give a housing unit once the wings of the butterfly needle (2) are inserted. Guide grooves (9) are defined by free gap distance on both sides between the adjacent vertical side walls (6, 7) of the caps (3, 4). An upstream spring-loaded element (17) projects in a constant locking position (II) from at least one of the side walls (6 or 7) into one of the guide grooves (9).

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**Veröffentlicht:**

- mit internationalem Recherchenbericht
- vor Ablauf der für Änderungen der Ansprüche geltenden Frist; Veröffentlichung wird wiederholt, falls Änderungen eintreffen

Zur Erklärung der Zweibuchstaben-Codes und der anderen Abkürzungen wird auf die Erklärungen ("Guidance Notes on Codes and Abbreviations") am Anfang jeder regulären Ausgabe der PCT-Gazette verwiesen.

(88) Veröffentlichungsdatum des internationalen**Recherchenberichts:**

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(57) Zusammenfassung: Bei einem Abdeckgehäuse (1) einer Flügelkanüle (2), bestehend aus einer im Querschnitt im wesentlichen jeweils U-förmigen langgestreckten Unterkappe (4) und einer langgestreckten Oberkappe (3), die nach dem Einfügen der Flügel der Flügelkanüle (2) zu einer Gehäuseeinheit verschließbar sind, sind Führungsnuten (9) von beidseitigen freien Spaltabständen zwischen den zueinander benachbarten vertikalen Seitenwänden (6, 7) der Kappen (3, 4) gebildet und ragt in einer Dauerverriegelungsposition (II) ein vorgeschaltetes Federrastmittel (17) von zumindest einer der Seitenwände (6 bzw. 7) her in eine der Führungsnuten (9) hinein.

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TRANSLATION

Shield Case for a Butterfly Needle

The invention relates to a butterfly needle having a generally U-section and elongated lower shell and an elongated upper shell that are connected together to form the case after the butterfly needle is fitted to them and that form on each side a guide slot defining front and rear holding and retaining positions.

In order to draw blood, a needle, which has an adapter that can be connected via tubing to the blood-drawing syringe, is used which has wings. In order to prevent the user from inadvertently getting stuck by the needle, such butterfly needles are provided with a shield case that encloses the needle.

Such a shield case is known from EP 0,436,646. The needle in this system is pulled from the patient by the tube connected to the needle. In order to protect the user from needle sticks, the pulled-back needle is held in a protected position. In order to secure the protection, an anchor part is pressed against the patient. Such a procedure reduces or minimizes the risk of an undesired needle stick for the user.

In this known embodiment the butterfly needle is pulled directly out of the skin of the patient into the protected position inside the shield case.

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Such a procedure is difficult for the patient since the anchor part has to be pressed with one hand against the skin of the patient while simultaneously the tube is pulled with the other hand. There is the possibility that the needle, which to this time is still in the blood vessel of the patient, moves. This movement can be painful.

It is an object of this invention to simplify the operation of a protective case of this type such that when pulling out the butterfly needle there is no resistance to overcome and the withdrawal of the needle can take place in the position the needle has assumed in the vein.

This object is achieved with the features in the characterizing clause of the independent claim.

In one embodiment the upper shell is narrower than the lower shell so that the guide slots form vertically and horizontally open gaps on both sides between the adjacent vertical side walls of the shells. A spring element projects from at least one side wall of one of the shells into the respective guide slot and arrests the butterfly needle in the rear retaining position.

The front holding position for the butterfly needle is defined by a holding formation projecting from inside the upper or lower shell or from both shells and that engages a middle region of

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the butterfly needle. This holding formation can be formed for example as one or more bumps or ridges.

Further embodiments and advantages of the invention are seen in the claims and the following description of an embodiment of the invention shown in the drawing. Therein:

FIG. 1 is a perspective side view of a blood-drawing set comprised of a butterfly needle and its shield case;

FIG. 2 is a section taken along line X-X of FIG. 1; and

FIG. 3 is a longitudinal section through the blood-drawing set of FIG. 1.

FIG. 1 shows a conventional blood-drawing set comprised of a butterfly needle 2 held inside a shield case 1. The shield case 1 is comprised of an upper shell 3 and a lower shell 4. In the illustrated embodiment the upper shell 3 and the lower shell 4 are of the same width. It is however also possible to make the upper shell 3 narrower than the lower shell 4.

The upper shell 3 can be connected with the lower shell 4 by, for example, a membrane hinge. After fitting the butterfly needle 2, the upper shell is locked to the lower shell 4 by, for example, a barb connection.

It is also possible to lock the upper and lower shells 3 and 4 together at both edges. Spaced side walls 6 and 7 of the upper and lower shells 3 and 4 form horizontal gaps 8 that in turn constitute guide slots 9 for the wings of the needle 2.

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If the upper shell 3 is narrower than the lower shell 4, there will be the horizontally open gaps 8 as well as vertically open gaps 10 through which the wings of the needle 2 extend.

In the starting position of the butterfly needle 2, that is the position in which the set is supplied to the user, the needle 11 is covered by a guard tube 12. An elastic web or bump 13 holds the butterfly needle 2 by engagement with a raised part 14 in a central region 15 of the butterfly needle 2.

After drawing blood, the butterfly needle 2 is pulled out of the patient's vein. As it is pulled back the bump 14 of the middle part 15 of the butterfly needle 2 moves under the elastically deformable bump 13. The wings fit at the end of the guide groove 9 into a retaining seat II defined by spring elements 17 projecting into the guide groove. The spring elements 17 are easily pushed down by the passing wings.

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Patent claims:

1. A shield case (1) for a butterfly needle (2) has a generally U-section and elongated lower shell (4) and an elongated upper shell (3) that are connected together to form the case after
5 the butterfly needle (2) is fitted to them,
characterized in that
vertical side walls (6 and 7) of the shells (3 and 4) form guide
grooves (9) through which the wings project on both sides of the
case and a spring element (17) projecting from at least one of the
10 side walls (6 or 7) into the respective groove (9) defines a
retaining seat for the butterfly needle (2).

2. The shield case according to claim 1
characterized in that
a bump (13) projecting from inside one of the shells (3 or 4)
15 defines a front holding seat (I) for the butterfly needle (2) and
coacts with a bump (14) in a central region of the butterfly needle
(2).

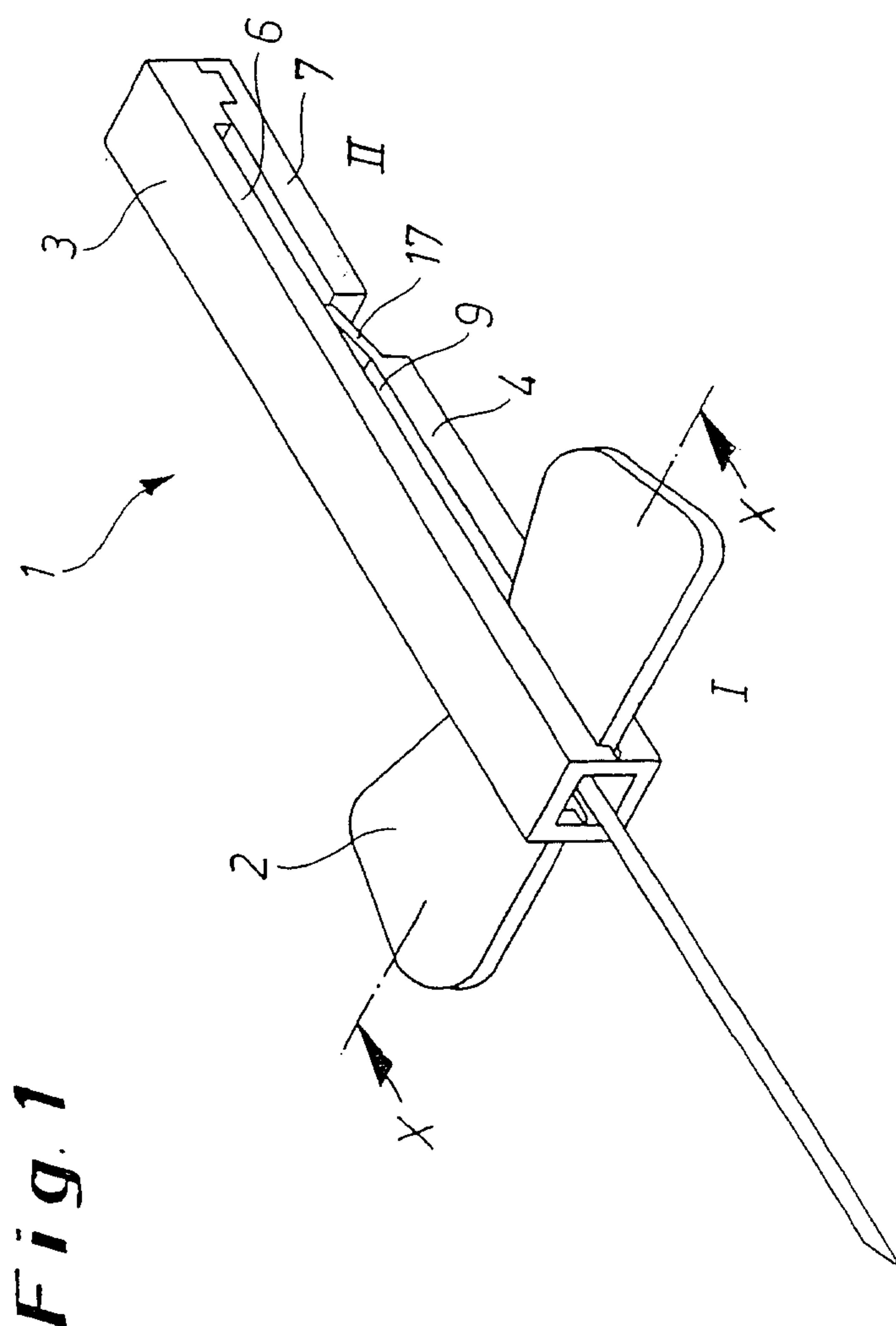


Fig. 1

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Fig. 2

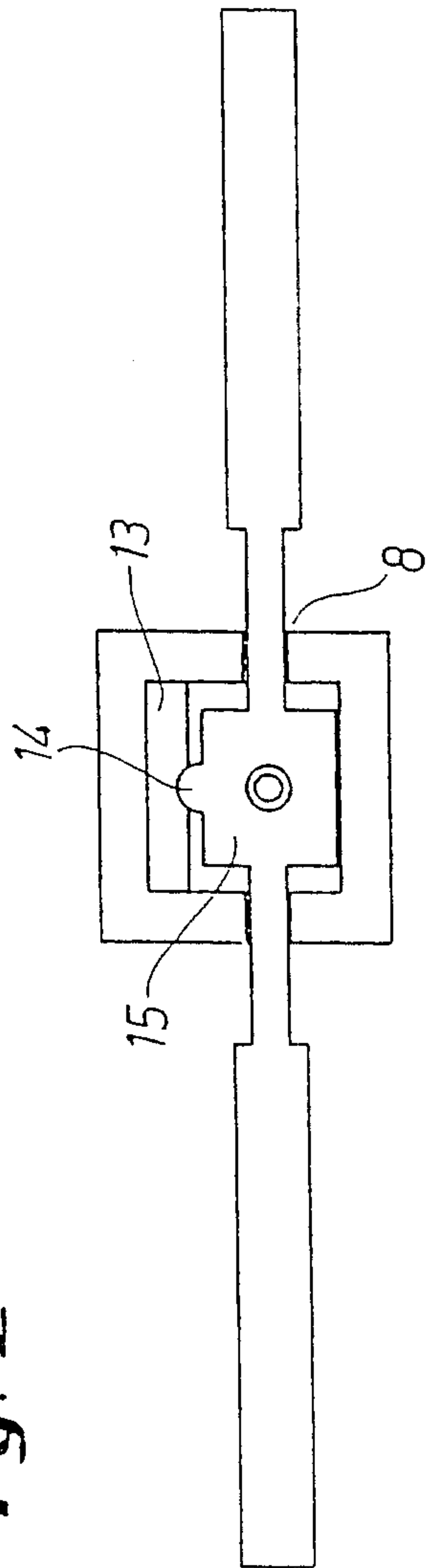
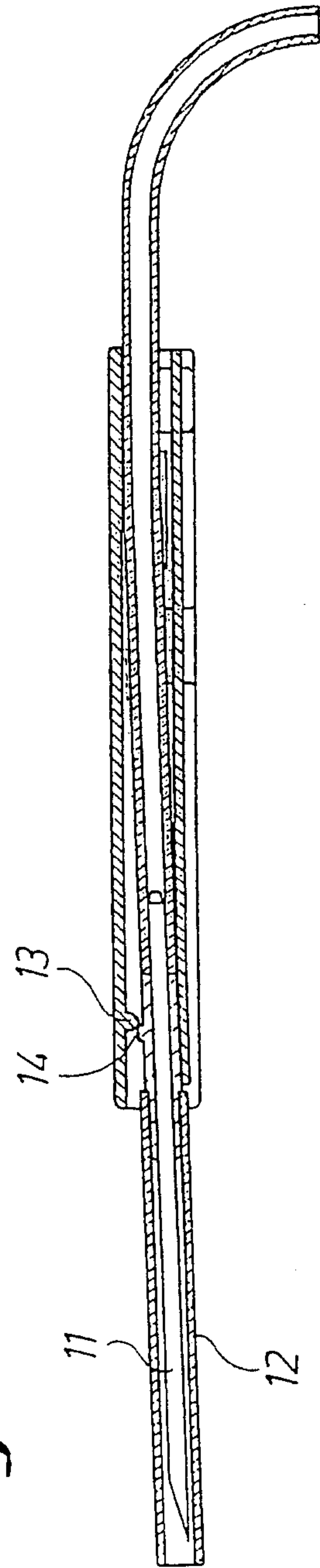


Fig. 3



Substitute Sheet (Rule 26)
ERSATZBLATT (REGEL 26)

