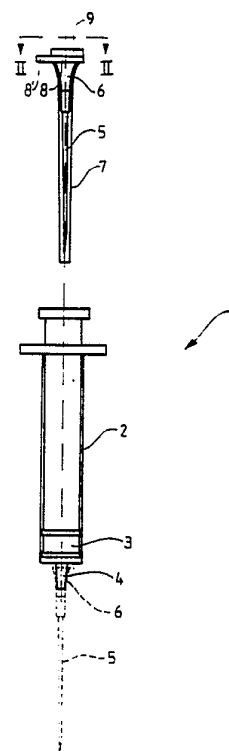




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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(21) International Application Number: PCT/NO91/00107 (22) International Filing Date: 2 August 1991 (02.08.91) (30) Priority data: 903601 16 August 1990 (16.08.90) NO (71)(72) Applicant and Inventor: OLSEN, John, Due [NO/NO]; Jonas Liesgt. 4, N-4021 Stavanger (NO). (74) Agent: HÅMSØ, Eivind; Håmsø Patentbyrå, P.O. Box 171, N-4301 Sandnes (NO). (81) Designated States: AT, AT (European patent), AU, BB, BE (European patent), BF (OAPI patent), BG, BJ (OAPI patent), BR, CA, CF (OAPI patent), CG (OAPI patent), CH, CH (European patent), CI (OAPI patent), CM (OAPI patent), CS, DE, DE (European patent), DK, DK (European patent), ES, ES (European patent), FI, FR (European patent), GA (OAPI patent), GB, GB (European patent), GN (OAPI patent), GR (European patent), HU, IT (European patent), JP, KP, KR, LK, LU, LU (European patent), MC, MG, ML (OAPI patent), MN, MR (OAPI patent), MW, NL, NL (European patent), NO, PL, RO, SD, SE, SE (European patent), SN (OAPI patent), SU ⁺ , TD (OAPI patent), TG (OAPI patent), US.		Published <i>With international search report.</i>
(54) Title: PLASTER-LIKE ADDITIONAL EQUIPMENT FOR USE IN CONNECTION WITH SYRINGES (57) Abstract A complete, disposable syringe (1) for blood sampling is delivered packed within a sterile package together with the cannula (5, 6) enclosed in a cover (7). One has aimed at providing a plaster-like additional equipment for use in connection with such a syringe (1), said additional equipment always being at hand whenever the syringe is used, and which is to prevent spillage of blood subsequent to the blood sampling. The plaster-like additional equipment is to be removed after use without causing pain. At this end, said additional equipment comprises one as plaster acting small disc (9) of blood-absorbing material, e.g. cotton, and which, preferably, is attached to an easily removable lid (8) on the cannula cover (7), and which is provided with an annular adhesive layer (10) for the disc's (9) adherence to the skin at the spot punctured by the cannula point.		



+ DESIGNATIONS OF "SU"

Any designation of "SU" has effect in the Russian Federation. It is not yet known whether any such designation has effect in other States of the former Soviet Union.

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Plaster-like additional equipment for use in connection with syringes

This invention relates to a plaster-like additional equipment for use in connection with syringes, especially disposable syringes for blood sampling.

Usually, such disposable syringes are delivered with the cannula packed into a particular plastic cover together with the syringe within one package, and wherein the cover of the cannula is closed at both ends, one end being formed with an easily removable lid provided with a projecting tongue-shaped grip portion in order to facilitate the removal thereof.

After one blood sampling has been carried out by means of such a syringe, the puncture of the skin as a result of the insertion of the cannule is usually covered by a piece of cotton, serving the purpose of absorbing emerging blood, said piece of cotton being kept in place by means of a quite comprehensive adhesive strip which, thus, with the piece of cotton forms a kind of "Norwegian-plaster".

When proceeding in such a conventional way, a large consumption of cotton is required, as well as some spillage of blood being unavoidable. Using cotton pieces and adhesive strips involves sanitary lacks; cotton and/or adhesive strip not always being available, thus delaying the blood

sampling.

In addition, the use of a cottonpiece-retaining adhesive strip causes a not negligible feeling of discomfort, often painful, when removed.

The object of this invention is, with simple and cheap means, to overcome these deficiencies and disadvantages of prior art technique, and provide a plaster-like additional equipment as substitution for the cotton piece and the adhesive strip, and which is formed and arranged such as to follow each single syringe, whereby such equipment always is at hand; which has a negligible surface of contact adapted to adhere to the skin, so that the removal thereof may take place almost free of pain; and which, while maintaining sanitary conditions, reduces the spillage of blood during blood sampling.

In accordance with the invention, this object is realized through the design and arrangement of the plaster-like additional equipment as set forth in the characterizing part of the following claims.

The plaster-like additional equipment according to the invention consists of a semithick disc of blood-absorbing material. The disc is so small that it may be fastened, e.g. adhered, to said end lid of the cannula cover having a grip portion and will, thus, always be at hand when blood sampling is to take place. The insignificant dimensions of the disc within the plane thereof give a very restricted adhering contact surface with the skin, and as said contact surface, additionally, is annular, removal of the disc may take place painlessly so to speak.

That face of the disc to be adhered onto the skin is, except for a central portion, provided with a layer of an adhesive

and, prior to use, preferably entirely covered by an easily removable protective foil. The foil is removed immediately before the disc is to be adhered to the skin. The disc is placed such onto the skin that the central portion not provided with an adhesive covers the puncture of the skin caused when previously inserting the cannula.

As mentioned above, the disc is attached to the end lid of the cannula cover, said lid being provided with a projecting tongue-shaped grip portion. When gripping said grip portion with two fingers, the positioning of the disc onto the skin is facilitated.

As the blood-absorbing plaster-like disc is packed together with the syringe, sanitary conditions are secured when using the disc. Practical tests have shown that blood spillage is substantially reduced when using plaster-like bloodabsorbing discs according to the invention.

An example of an embodiment of the invention is diagrammatically shown in the accompanying drawing, wherein:

Figure 1 shows an exploded side elevational view of a disposable syringe provided with a plaster-like additional equipment in the form of a blood-absorbing disc attached to the lid of the cannula cover, the cannula cover carrying said disc being adapted to be accommodated within the syringe in the packed condition thereof. Dotted lines show the cannula occupying its functional position, wherein it has been pushed onto the end of the syringe;

Figure 2 shows a top plan view, seen in the direction of the arrows II-II in figure 1, illustrating the plaster-like blood-absorbing disc and the underlaying grip portion of the cannula cover lid; and

Figure 3 shows, on a larger scale, a side elevational view of the plaster-like blood absorbing disc and the underlying cannula cover lid.

In the drawing, reference numeral 1 denotes a disposable syringe of constructively conventional construction, 2 denoting the syringe cylinder and 3 the piston of the syringe. One end of the syringe cylinder 2 has an externally slightly cone-shaped socket 4 for the attachment of a cannula 5, the carrier 6 of which having a correspondingly slightly conical shape.

In the packed condition of the disposable syringe 1, the cannula 5,6 is accommodated within its own plastic cover 7 together with the syringe into one package, the plastic cover of the cannula being closed at both ends, one end being formed as an easily removable lid 8 provided with a projecting tongue-shaped grip portion 8' .

On top of this cannula cover lid 8 is, according to the invention, attached a small semithick plaster-like blood-absorbing disc 9 intended to replace the previously discussed piece of cotton.

The top surface of the disc 9 is, except for a central portion 9', provided with a layer of adhesive 10 for the disc's 9 adherence to the skin, said layer, prior to use, being entirely covered by an easily removable protective foil 11.

Thus, the disc 9 offers a negligible annular adhering contact face 10 against the skin - an obvious advantage when removing the disc. The grip portion 8' is utilized when the disc 9 is to be removed. Nevertheless, such a small disc will have a sufficient blood-absorbing capacity to prevent spillage of blood and, thus, act intentionally. The

packaging of said disc together with the syringe 1 as well as the protective foil 11 make such discs 9 extremely hygienically in use.

Such discs 9 according to the invention may substantially consist of or contain cotton or similar liquid-absorbing substances.

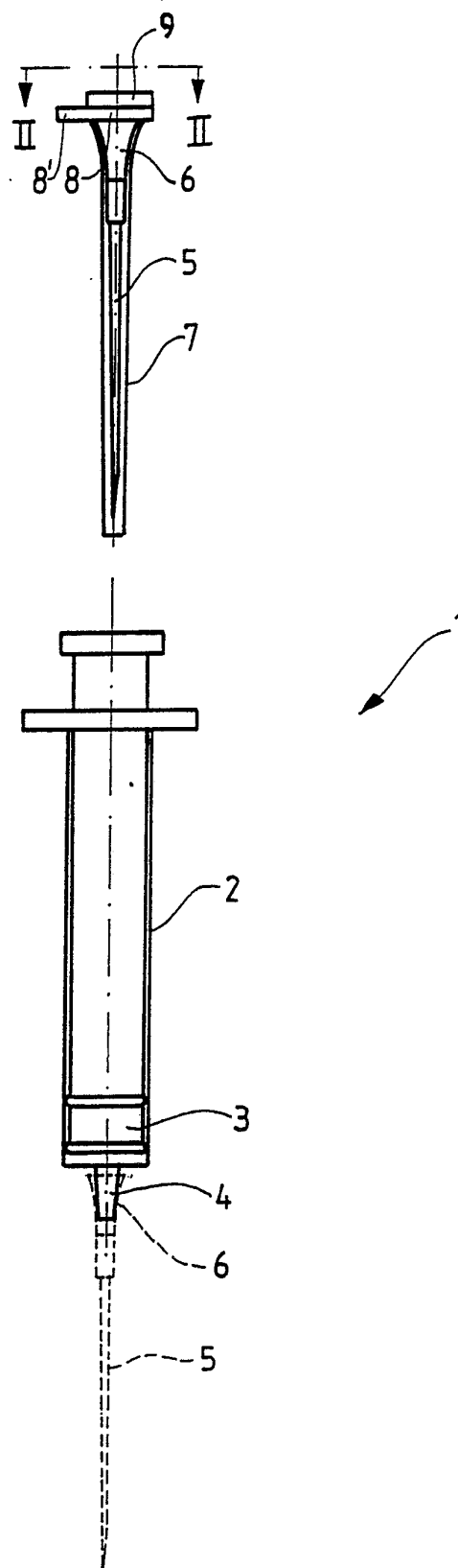
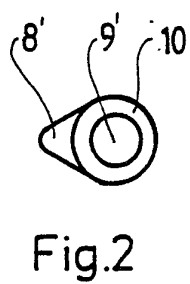
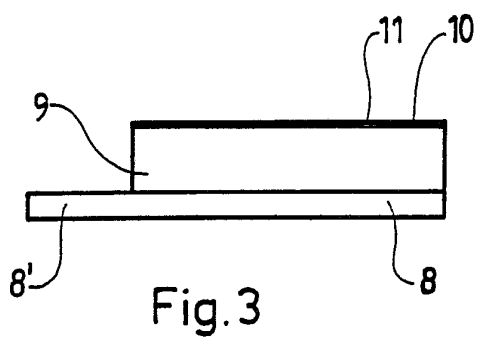
All components of the syringe as well as auxiliary equipment (the disc 9) are delivered ready for use within a sterile package, not shown.

C l a i m s

1. An arrangement in or relating to a syringe, especially a disposable syringe (1) for blood sampling, and which is delivered within one package together with the cannula (5,6) of the syringe enclosed within a cannula cover (7) of its own, c h a r a c t e r i z e d i n that a removable lid (8) on the cannula cover (7) is formed to constitute a plaster in the form of a small disc (9) of blood-absorbing material, e.g. cotton, the disc (9) being provided with an annular layer of adhesive (10) for the disc's (9) adherence onto the skin at the spot punctured by the cannula point.

2. An arrangement as defined in claim 1, c h a r a c t e r i z e d i n that that side of the disc (9) which is to be adhered to the skin, is covered by an easily removable protective foil (11).

I/I



INTERNATIONAL SEARCH REPORT

International Application No PCT/NO 91/00107

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶ According to International Patent Classification (IPC) or to both National Classification and IPC IPC5: A 61 M 5/31														
II. FIELDS SEARCHED Minimum Documentation Searched⁷ <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 25%; text-align: left; border-bottom: 1px solid black;">Classification System</th> <th style="text-align: left; border-bottom: 1px solid black;">Classification Symbols</th> </tr> <tr> <td style="padding: 5px;">IPC5</td> <td style="padding: 5px;">A 61 M</td> </tr> </table> Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in Fields Searched⁸ SE,DK,FI,NO classes as above			Classification System	Classification Symbols	IPC5	A 61 M								
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III. DOCUMENTS CONSIDERED TO BE RELEVANT⁹ <table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 10%; text-align: left; border-bottom: 1px solid black;">Category *</th> <th style="text-align: left; border-bottom: 1px solid black;">Citation of Document,¹¹ with indication, where appropriate, of the relevant passages¹²</th> <th style="width: 10%; text-align: left; border-bottom: 1px solid black;">Relevant to Claim No.¹³</th> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">FR, A1, 2625438 (C.E.D.I.A.T.-MEDIFFUSION) 7 July 1989, see the whole document --</td> <td style="vertical-align: top; text-align: center; padding: 5px;">1-2</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">GB, A, 1265686 (BECTON, DICKINSON AND COMPANY) 1 March 1972, see the whole document --</td> <td style="vertical-align: top; text-align: center; padding: 5px;">1</td> </tr> <tr> <td style="vertical-align: top; padding: 5px;">A</td> <td style="padding: 5px;">US, A, 4113090 (CARSTENS) 12 September 1978, see the whole document -- -----</td> <td style="vertical-align: top; text-align: center; padding: 5px;">1</td> </tr> </table>			Category *	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²	Relevant to Claim No. ¹³	A	FR, A1, 2625438 (C.E.D.I.A.T.-MEDIFFUSION) 7 July 1989, see the whole document --	1-2	A	GB, A, 1265686 (BECTON, DICKINSON AND COMPANY) 1 March 1972, see the whole document --	1	A	US, A, 4113090 (CARSTENS) 12 September 1978, see the whole document -- -----	1
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* Special categories of cited documents:¹⁰ "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step "Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family														
IV. CERTIFICATION <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border-bottom: 1px solid black; padding: 5px;"> Date of the Actual Completion of the International Search 29th October 1991 </td> <td style="width: 50%; border-bottom: 1px solid black; padding: 5px;"> Date of Mailing of this International Search Report 1991 -11- 18 </td> </tr> <tr> <td style="border-bottom: 1px solid black; padding: 5px;"> International Searching Authority SWEDISH PATENT OFFICE </td> <td style="border-bottom: 1px solid black; padding: 5px;"> Signature of Authorized Officer Folke Svensson </td> </tr> </table>			Date of the Actual Completion of the International Search 29th October 1991	Date of Mailing of this International Search Report 1991 -11- 18	International Searching Authority SWEDISH PATENT OFFICE	Signature of Authorized Officer Folke Svensson								
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ANNEX TO THE INTERNATIONAL SEARCH REPORT ON INTERNATIONAL PATENT APPLICATION NO.PCT/NO 91/00107

This annex lists the patent family members relating to the patent documents cited in the above-mentioned international search report. The members are as contained in the Swedish Patent Office EDP file on 91-09-27
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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
FR-A1- 2625438	89-07-07	NONE	
GB-A- 1265686	72-03-01	DE-A- 1944059	70-03-05
		FR-A- 2016615	70-05-08
		SE-B- 368337	74-07-01
		US-A- 3545607	70-12-08
US-A- 4113090	78-09-12	NONE	