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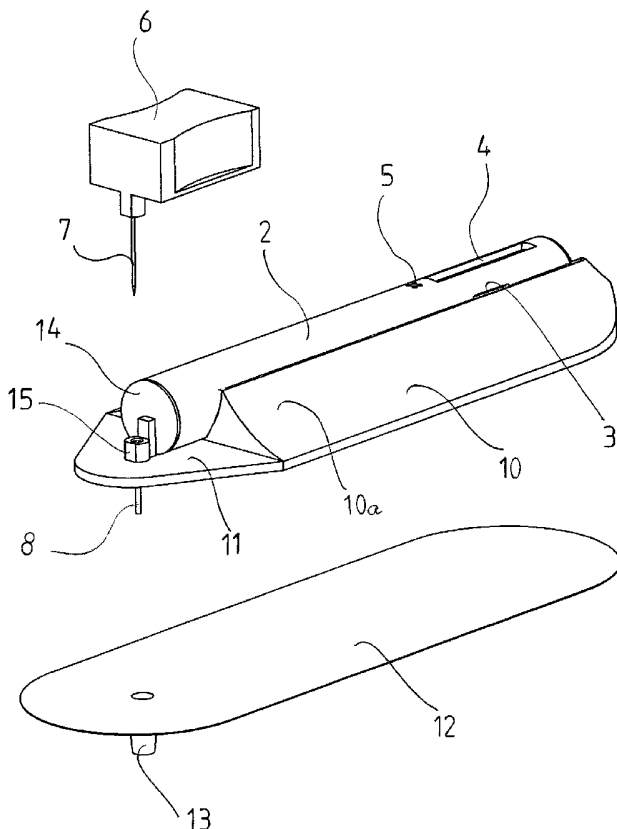
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[Continued on next page]

(54) Title: A DISPOSABLE, WEARABLE INSULIN DISPENSING DEVICE, A COMBINATION OF SUCH A DEVICE AND
A PROGRAMMING CONTROLLER AND A METHOD OF CONTROLLING THE OPERATION OF SUCH A DEVICE



(57) Abstract: A disposable, wearable, self-contained in-
sulin dispensing device comprising a housing 2, an insulin
source in said housing and adapted for pumping insulin
from said insulin source to a catheter 8 for injection of in-
sulin in a user of the device, the catheter being associated
with the housing and projecting generally perpendicularly
to a generally planar surface of the housing intended for
abutting a skin surface of the user, an adhesive layer 11 be-
ing provided on the planar surface for adhering the surface
to the skin surface, and a removable release sheet 12 cov-
ering the adhesive layer for protecting the adhesive layer
prior to use of the device, the release sheet being provided
with catheter protection means 13 to enclose and protect
an end portion of the catheter such that removal of the re-
lease sheet for exposing the adhesive layer exposes the end
portion, and the pump means comprising an actuator com-
prising a shape memory alloy wire.



ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
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INTERNATIONAL SEARCH REPORT

Inte Application No
PCT/DK 03/00916

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M5/142 A61M5/145

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 99 48546 A (ELAN CORP PLC ;YAGIL GIL (IL); CARMEL EHOUD (IL); GROSS JOSEPH (IL) 30 September 1999 (1999-09-30) page 23, line 4 -page 24, line 5 page 14, line 12 -page 15, line 9	1,2,6-9, 11,12,28
A	---	26
X	WO 02 40083 A (INSULET CORP) 23 May 2002 (2002-05-23) page 5, line 1 - line 23 page 11, line 1 -page 12, line 27	6-9,26, 28
A	---	1,27
P,X	WO 03 103763 A (INSULET CORP) 18 December 2003 (2003-12-18) page 11, line 26 -page 13, line 29 page 17, line 19 -page 18, line 15	4,6-9, 26,28,31
P,A	---	1,11
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

"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

"I" 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 when the document is taken alone
"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

Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 21457 A (ELAN MED TECH ;GROSS JOSEPH (IE); LAVI GILAD (IL); TSALS IZRAIL (U) 19 June 1997 (1997-06-19) page 17, line 3 - line 14; figure 4	1,2
A	---	11,12
X	US 5 919 167 A (VANROYEN DONALD F ET AL) 6 July 1999 (1999-07-06) column 2, line 66 -column 4, line 53	4-6,14
A	---	7-9,28
A	WO 01 91833 A (NOVO NORDISK AS) 6 December 2001 (2001-12-06) page 17, line 1 - line 23 abstract	3,6,13, 19,26, 27,29,30
A	---	
A	WO 02 100469 A (DAVIES MICHAEL BIRSHA ;JONES ANTHONY PATRICK (GB); GLAXO GROUP LTD) 19 December 2002 (2002-12-19) page 11, line 16 -page 15, line 7 page 31, line 8 -page 33, line 13 -----	3,4,6, 13-17, 26,27, 29,30

INTERNATIONAL SEARCH REPORT

ional application No.
PCT/DK 03/00916

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1,2,13,19-27

I: Claims 1, 2, 13 and 19-27 directed to a disposable, wearable, self-contained medicine dispensing device comprising a removable, protective release sheet covering a planar surface of the dispensing device housing.

2. Claims: 3,11,12,19-27,29 , 30

II: Claims 3, 11, 12, 19-27, 29 and 30 directed to a disposable, wearable, self-contained medicine dispensing device comprising recording/playback means arranged inside the housing, such that verbal messages may be recorded and played back and a method for controlling the operation of the dispensing device.

3. Claims: 4,5,11,12,14-27

III: Claims 4, 5, 11, 12 and 14-27 directed to a disposable, wearable, self-contained medicine dispensing device comprising a pump means, the actuator of which comprising shape memory alloy wire and a method for controlling the operation of the dispensing device.

4. Claims: 6-12,19-28 , 31

IV: Claims 6-12, 19-28 and 31 directed to a disposable, wearable, self-contained medicine dispensing device comprising controlling means for controlling the operation of a pump actuator.

INTERNATIONAL SEARCH REPORT

Information on patent family members

Inte Application No
PCT/DK 03/00916

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