

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
22 April 2010 (22.04.2010)

PCT

(10) International Publication Number  
**WO 2010/044670 A3**

(51) International Patent Classification:

*H01F 17/00* (2006.01)    *H05K 1/16* (2006.01)  
*H01F 21/12* (2006.01)    *H03H 5/00* (2006.01)

(21) International Application Number:

PCT/NL2009/050627

(22) International Filing Date:

16 October 2009 (16.10.2009)

(25) Filing Language:

Dutch

(26) Publication Language:

English

(30) Priority Data:

1036082	16 October 2008 (16.10.2008)	NL
1036092	21 October 2008 (21.10.2008)	NL
1036509	3 February 2009 (03.02.2009)	NL
1036981	22 May 2009 (22.05.2009)	NL
1037277	11 September 2009 (11.09.2009)	NL
1037278	11 September 2009 (11.09.2009)	NL

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(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD AND DEVICE FOR A CONTROLLABLE COIL AND/OR CAPACITOR AND/OR CIRCUIT

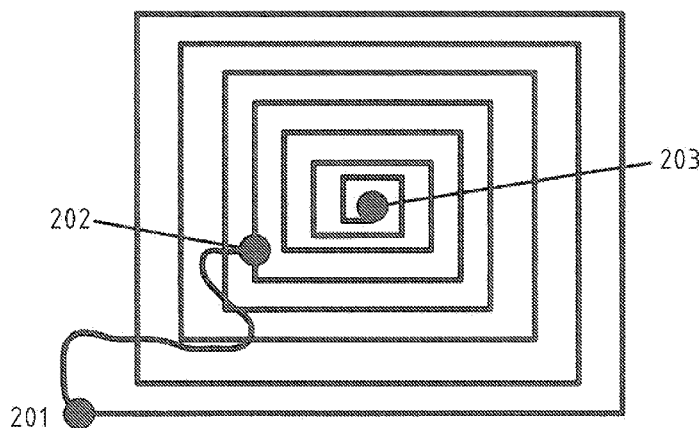


FIG. 2

(57) Abstract: The present invention relates to a method and device for a controllable coil and/or capacitor and/or circuit. This further application relates to, among others, a transformer, durable modular lighting or lighting systems, a power supply without 50 Hz transformer, providing energy for gas discharge lamps, and devices for disinfection. The invention also relates to a kit comprising components for manufacturing the embodiments of the device according to the invention. The device comprises a controllable coil and/or capacitor and/or circuit and/or transformer, characterized by at least one flat spirally wound coil and mechanical means (202) for varying the number of windings of the coil.



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**Published:**

**(88) Date of publication of the international search report:**

10 June 2010

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

**INTERNATIONAL SEARCH REPORT**

International application No  
PCT/NL2009/050627

<b>A. CLASSIFICATION OF SUBJECT MATTER</b>		
INV. H01F17/00	H01F21/12	H05K1/16 H03H5/00
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b>		
Minimum documentation searched (classification system followed by classification symbols) H01F H05K H03H		
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		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
<b>Category*</b>	<b>Citation of document, with indication, where appropriate, of the relevant passages</b>	<b>Relevant to claim No.</b>
X	US 2004/196198 A1 (AISENBREY THOMAS [US]) 7 October 2004 (2004-10-07)	1-4
Y	abstract figures 2,13 paragraphs [0004], [0008], [0036] - [0040], [0064], [0065]	5-7
Y	US 7 298 238 B1 (EATON DERAN S [US] ET AL) 20 November 2007 (2007-11-20) abstract; figures	5-7
A	US 6 229 270 B1 (STEPHENSON JOHN PETER [GB] ET AL) 8 May 2001 (2001-05-08) abstract	1,8,9,11
A	US 5 113 116 A (WILSON ROBERT F [CA]) 12 May 1992 (1992-05-12) abstract	8-10
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family 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 *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 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  4 February 2010		Date of mailing of the international search report  08/04/2010
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer  Marti Almeda, Rafael

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/NL2009/050627

## Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 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 No. III Observations where unity of invention is lacking (Continuation of item 3 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 fees, this Authority did not invite payment of additional fees.
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.:

1-11, 19-25 as far as dependent on claim 1-11

### Remark on Protest

- The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- 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: 1-11 and 19-25 as far as dependent on claims 1-11

Device comprising a controllable coil  
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2. claims: 12-18 and 19-25 as far as dependent on claims 12-18

Device for providing a gas discharge lamp with electrical energy  
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# INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/NL2009/050627

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2004196198	A1	07-10-2004	NONE
US 7298238	B1	20-11-2007	US 7456722 B1 25-11-2008
US 6229270	B1	08-05-2001	AT 227501 T 15-11-2002 AU 737663 B2 30-08-2001 AU 8550298 A 22-02-1999 CA 2299459 A1 11-02-1999 DE 69809240 D1 12-12-2002 DE 69809240 T2 16-10-2003 DK 998837 T3 25-11-2002 EP 0998837 A1 10-05-2000 ES 2184308 T3 01-04-2003 WO 9907190 A1 11-02-1999 NZ 502774 A 29-06-2001 PL 338356 A1 23-10-2000 PT 998837 E 31-03-2003
US 5113116	A	12-05-1992	US 5216338 A 01-06-1993