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(71) Applicant (for all designated States except US): **ABB TECHNOLOGY AG** [CH/CH]; Affolternstrasse 44, CH-8050 Zurich (CH).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **JOHNSON, Charles, W.** [US/US]; 840-a N. 10th Street, Wytheville, VA 24382 (US). **OUTTEN, Samuel, S.** [US/US]; 555 B E. Spiller St., Wytheville, VA 24382 (US). **IBARRA, Claudio** [US/US]; 1100 Long Street, Christiansburg, VA 24073 (US). **SARVER, Charlie** [US/US]; 14506 North Scenic Highway, Rocky Gap, VA 24366 (US).(74) Agent: **SZCZEPANIK, Melissa, J.**; ABB Inc., 29801 Euclid Avenue, Wickliffe, OH 44092 (US).

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

24 January 2013

(54) Title: GROUNDING SWITCH

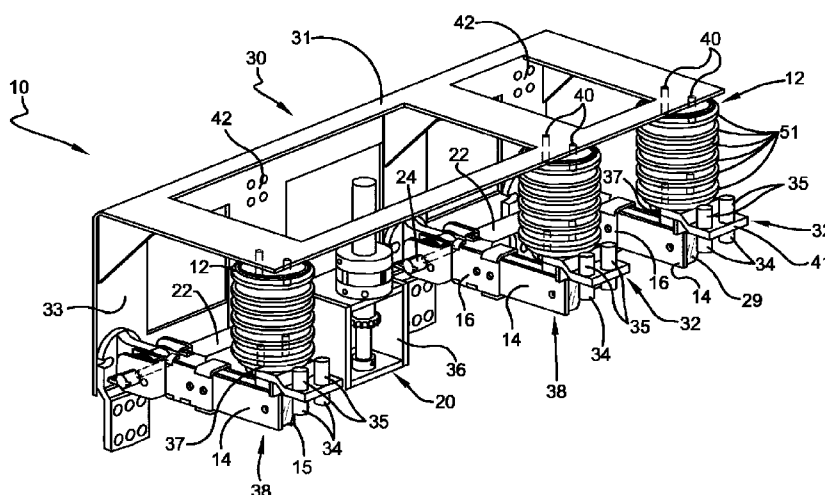


FIG. 3

(57) Abstract: A grounding switch is comprised of a structural frame, at least one first contact, at least one second contact, at least one spacer, and a geared drive assembly. The opening and closing of the grounding switch is controlled by the geared drive assembly. The geared drive assembly is operable to rotate the at least one second contact around the axis of a connecting rod to move the at least one second contact into and out of contact with the at least one first contact. The closing of the grounding switch first and second contacts serve to connect a transformer or other electrical device to ground potential.

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/038980

A. CLASSIFICATION OF SUBJECT MATTER

INV. H01H31/00 H01H3/40 H01H3/58
ADD.

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)

H01H

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 practicable, search terms used)

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2008/001589 A1 (JAPAN AE POWER SYSTEMS CORP [JP]; YAMAMOTO KAZUMA; TANIMIZU TORU) 3 January 2008 (2008-01-03) abstract; figures 1-8 -----	1,6,7
A	US 2006/254890 A1 (YU LYUN [KR]) 16 November 2006 (2006-11-16) abstract; figure 10a paragraph [0077] -----	1
A	EP 2 073 332 A1 (ABB TECHNOLOGY AG [CH]) 24 June 2009 (2009-06-24) abstract; figures 1-9 paragraph [0016] - paragraph [0025] paragraph [0033] ----- -/--	1,5



Further documents are listed in the continuation of Box C.



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 application or patent 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

24 August 2012

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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

INTERNATIONAL SEARCH REPORT

International application No
PCT/US2012/038980

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2 820 862 A (CARMICHAEL ROBERT D ET AL) 21 January 1958 (1958-01-21) abstract; figures column 4, line 8 - column 5, line 8 -----	1,5
A	DE 44 36 118 A1 (SCHOENEMANN THOMAS DIPL ING [DE]) 28 March 1996 (1996-03-28) abstract; figures column 3, line 61 - column 4, line 37 -----	9

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/038980

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.:

see annexe

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/US2012/038980

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2008001589 A1	03-01-2008	CN 101484960 A JP 4729447 B2 JP 2008010327 A TW 200816249 A WO 2008001589 A1	15-07-2009 20-07-2011 17-01-2008 01-04-2008 03-01-2008
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US 2820862 A	21-01-1958	NONE	
DE 4436118 A1	28-03-1996	NONE	

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-9

Invention number 1:

Grounding switch for a power distribution device comprising:

- a structural frame.
 - a spacer
 - at least one switch
 - a drive assembly comprising at least one rod, a drive shaft and a drive box
- rotation of the at least one rod causing the second contact of switch to pivot moving each switch toward the open position or the switch position.

2. claims: 10-17(partially)

Invention number 2:

Transformer comprising:

- a ferromagnetic core.
- At least one coil assembly mounted to the at least one limb.
- An enclosure.
- A grounding switch.
