

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number
WO 00/77802 A1

(51) International Patent Classification⁷: H01F 29/00,
H02M 7/155, 7/515, 1/12

(74) Agent: PRAHL, Eric, L.; Fish & Richardson P.C., 225
Franklin Street, Boston, MA 02110-2804 (US).

(21) International Application Number: PCT/US00/16018

(22) International Filing Date: 9 June 2000 (09.06.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/329,596 10 June 1999 (10.06.1999) US

(63) Related by continuation (CON) or continuation-in-part
(CIP) to earlier application:
US 09/329,596 (CON)
Filed on 10 June 1999 (10.06.1999)

(81) Designated States (*national*): AE, AL, AM, AT, AU, AZ,
BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK,
DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU,
LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA,
UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,
IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG,
CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

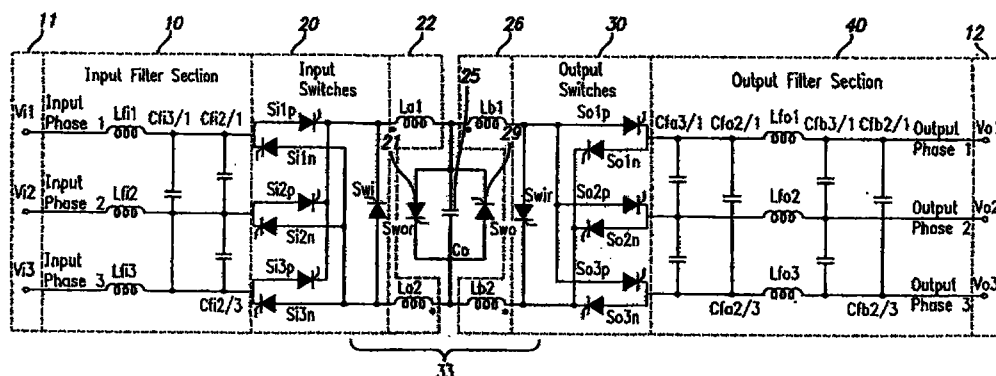
— With international search report.

(71) Applicants and

(72) Inventors: LIMPAECHER, Rudolf [US/US]; 45 Parson-
age Lane, Topsfield, MA 01983 (US). LIMPAECHER,
Erik, R. [US/US]; 45 Parsonage Lane, Topsfield, MA
01983 (US).

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: CHARGE TRANSFER APPARATUS AND METHOD THEREFOR



(57) Abstract: An apparatus and method therefor transfers electric charge between a charge storage device (25) and a first power terminal (11) having a plurality of first-nodes. The method interchanges charge between the charge storage device and a first first-node of the plurality of first-nodes through an inductive section (22), and, when a predetermined charge has been interchanged between the charge storage device and the first first-node, replacing the first first-node by a second first-node of the plurality of first-nodes. Charge is interchanged between the charge storage device and the second first-node through the inductive section. Preferably, the ratio of the charge interchanged between the charge storage device and the first first-node and the charge interchanged between the charge storage device and the second first-node is equal to a ratio of the currents drawn from the first first-node and the second first-node. Charge can also be interchanged between the charge storage device and a second power terminal (12) using a similar method.