



- (51) **International Patent Classification:**
A47L 15/00 (2006.01) A47L 15/42 (2006.01)
- (21) **International Application Number:**
PCT/IT2013/000021
- (22) **International Filing Date:**
24 January 2013 (24.01.2013)
- (25) **Filing Language:** Italian
- (26) **Publication Language:** English
- (30) **Priority Data:**
VI2012A000025 27 January 2012 (27.01.2012) IT
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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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, 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, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, 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, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- 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))

- (88) **Date of publication of the international search report:**
3 January 2014

(54) **Title:** ERGONOMIC PROFESSIONAL DISHWASHER

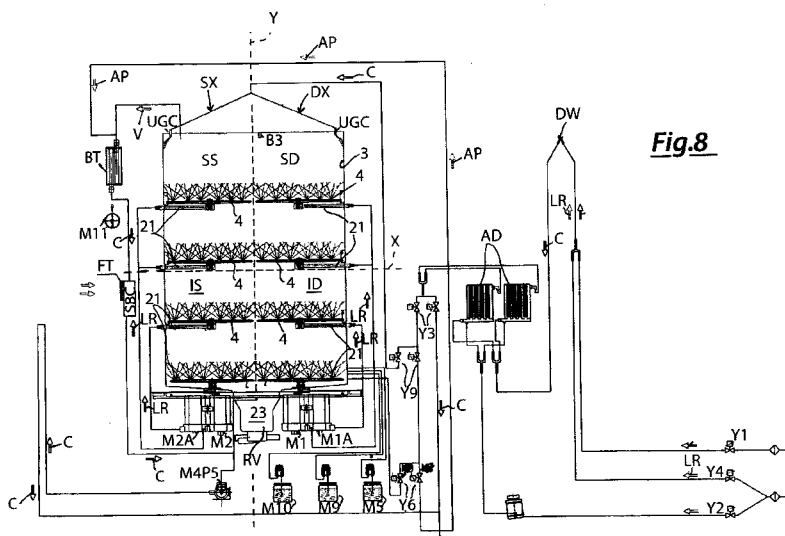
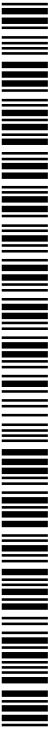


Fig.8

(57) **Abstract:** An ergonomic professional dishwasher (1) comprising a housing (2) with an internal wash chamber (3), in which the dishes (20) to be washed are contained, said dishes (20) being arranged on shelves (4) installed at certain heights, said shelves (4) being associated with washing rotors or nozzles (21), which have holes and slots (22) for passing the water coming from one storage tank (23) and taken from the water supply; among said storage tank (23) and said washing nozzles (21) there are at least two pumps (AP, BP, AP1, AP2, BP1, BP2, M1, M2, M1A, M2A), each of which is connected, by pipelines to at least one washing rotor (21), which is placed in at least two respective areas (SX, DX, SS, SD, IS, ID) of the wash chamber (3) superimposed on and/or adjacent to one another. The washing nozzles (21) placed in a first area (SX, DX, SS, SD, IS, ID) of the wash chamber (3) are actuated alternately to at least one of said washing nozzle (21) positioned in a second area (SX, DX, SS, SD, IS, ID) of the wash chamber (3).

WO 2013/111170 A3



INTERNATIONAL SEARCH REPORT

International application No
PCT/IT2013/000021

A. CLASSIFICATION OF SUBJECT MATTER
INV. A47L15/00 A47L15/42
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)
A47L

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)
EPO-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	EP 1 586 265 A1 (BONFERRARO SPA [IT]) 19 October 2005 (2005-10-19) paragraphs [0015] - [0024]; claims; figures	1,2
X	US 2 575 493 A (HILLIKER FRANK T) 20 November 1951 (1951-11-20) column 1, line 45 - column 3, line 68; figures	1,2
X	FR 2 504 381 A1 (BOSCH SIEMENS HAUSGERAETE [DE]) 29 October 1982 (1982-10-29) page 4 - page 7; figure 1	1,2
X	CH 398 906 A (SIEMENS ELEKTROGERAETE GMBH [DE]) 15 March 1966 (1966-03-15) the whole document	1,2
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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
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- "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
27 June 2013

Date of mailing of the international search report
22/10/2013

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INTERNATIONAL SEARCH REPORT

International application No
PCT/IT2013/000021

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	FR 1 287 104 A (SIEMENS ELEKTROGERAETE GMBH) 9 March 1962 (1962-03-09) the whole document -----	1,2
X	EP 1 029 499 A2 (BSH BOSCH SIEMENS HAUSGERAETE [DE]) 23 August 2000 (2000-08-23) paragraphs [0008] - [0012]; claim 2 -----	1,2
X	DE 39 11 305 A1 (CANDY IND SPA [IT]) 26 October 1989 (1989-10-26) columns 2-3; figures -----	1,2
X	DE 24 42 619 A1 (WINTERHALTER KG KARL) 25 September 1975 (1975-09-25) pages 2-4; figures 1,2 -----	1,2
A	US 2005/039777 A1 (JERG HELMUT [DE] ET AL) 24 February 2005 (2005-02-24) claims; figures -----	3

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IT2013/000021

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 additional sheet(s)

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: 1-3

Dishwasher with four pumps

2. claim: 4

Dishwasher with two pumps series-connected with servo-motor valves

3. claim: 5

Dishwasher with two pumps parallel-connected with four respective servo-motor valves

4. claim: 6

Dishwasher with power-modulated pumps

5. claim: 7

Dishwasher with programmable pre-phase wash cycles

6. claim: 8

Dishwasher with a determined volume of water remaining in the sump

7. claims: 9, 10

Dishwasher with front doors hinged on a central column

8. claims: 11, 12

Dishwasher with condensing battery

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/IT2013/000021

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1586265	A1	19-10-2005	NONE

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