



- (51) **International Patent Classification:**
A62C 37/11 (2006.01) *F24C 15/20* (2006.01)
A62C 37/48 (2006.01)
- (21) **International Application Number:**
 PCT/US2014/027703
- (22) **International Filing Date:**
 14 March 2014 (14.03.2014)
- (25) **Filing Language:** English
- (26) **Publication Language:** English
- (30) **Priority Data:**
 61/793,883 15 March 2013 (15.03.2013) US
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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, IR, IS, JP, KE, KG, 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, SA, 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,

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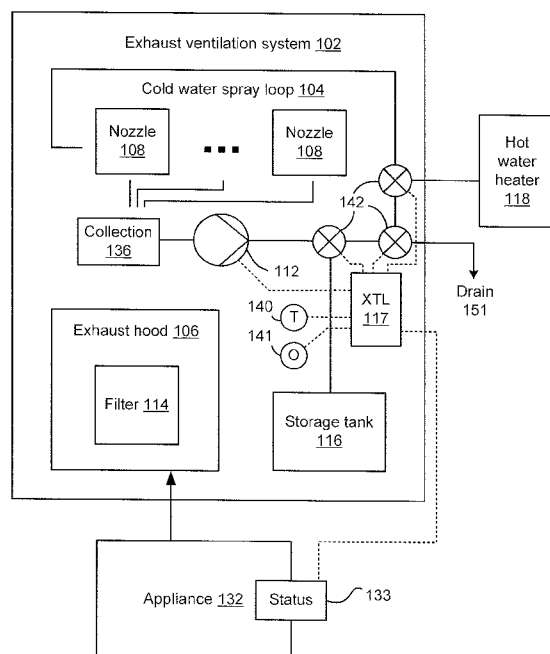
(54) **Title:** WATER SPRAY FUME CLEANSING WITH DEMAND-BASED OPERATION

Fig. 1

(57) **Abstract:** A system and method is provided for demand-based control of a cold water spray system of an exhaust ventilation system. Embodiments include determining a demand load of a cooking appliance that generates cooking effluent in a vicinity of an exhaust hood, and determining a temperature of water in the cold water spray system. The cold water spray system is controlled in response to at least one of the determined appliance demand load and the determined temperature of water in the cold water spray system to maintain a low temperature of water in the cold water spray system below a predetermined temperature threshold, thereby enabling efficient removal of contaminants from the exhaust hood by the cold water spray system.



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, KM, ML, MR, NE, SN, TD, TG).

— *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))*

Published:

— *with international search report (Art. 21(3))*

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

4 December 2014