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(71) Applicant: **ELETTRONICA S.p.A.** [IT/IT]; Via
Tiburtina Valeria KM 13.70, 00131 ROME (IT).

(72) Inventors: **PASCULLI, Nicola**; c/o ELETTRONICA
S.p.A., Via Tiburtina Valeria KM 13.70, 00131 ROMA

(IT). **MANNA, Antonio**; c/o ELETTRONICA S.p.A., Via
Tiburtina Valeria KM 13.70, 00131 Roma (IT). **LECCI,
Umberto**; c/o ELETTRONICA S.p.A., Via Tiburtina Vale-
ria KM 13.70, 00131 ROMA (IT). **TAFUTO, Antonio**; c/o
ELETTRONICA S.p.A., Via Tiburtina Valeria KM 13.70,
00131 ROMA (IT).

(74) Agent: **SORDINI, Lorenzo**; c/o STUDIO TORTA S.p.A.,
Via Viotti, 9, 10121 Torino (TO) (IT).

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(54) Title: SYSTEM FOR PROTECTING AGAINST, AND DETECTING, ELEMENTS/AGENTS HARMFUL/HAZARDOUS TO
THE HUMAN BODY PRESENT IN THE AIR

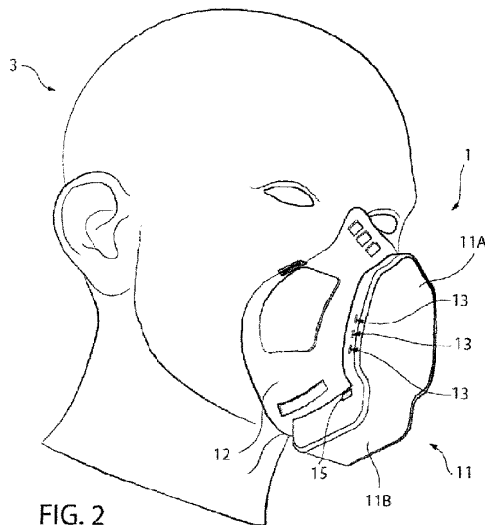


FIG. 2

(57) Abstract: System for protecting against, and detecting, ele-
ments/agents harmful/hazardous to the human body present in the
air, comprising a mask-type personal protective equipment (1) con-
figured to be worn by a user (3) so as to cover at least the user's nose
and mouth (3); said mask-type PPE (1) comprising: an outer casing
(11,12); one or more air passages configured to allow the user (3)
to inhale air from outside the outer casing (11,12) through said air
passage(s) and exhale air outside said outer casing (11,12) through
said air passage(s); filtering means housed within the outer casing
(11,12) and configured to filter out one or more elements/agents
harmful/ hazardous to the human body present in the air passing
through said air passage(s); ultraviolet illumination means (161)
housed within the outer casing (11,12) and configured to perform a
sanitising and/ or sterilising function of the filtering means and of the
air passing through said air passage(s) by ultraviolet illumination of
said filtering means and of the air passing through said air passage(s);
and means for detecting harmful/hazardous elements/agents (162)
housed within the outer casing (11,12) and configured to detect
one or more elements/agents harmful/hazardous to the human body
present in the air passing through the air passage (s). Further, the
system for protecting against, and detecting, elements/harmful/haz-
ardous agents present in the air also includes electronic processing
and communication means (2,164) configured to: generate monitor-
ing data related to elements/agents harmful/hazardous to the human
body detected by the means for detecting harmful/hazardous ele-
ments/agents (162) in the air passing through the air passage(s); and
to transmit monitoring data to remote devices/systems.

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