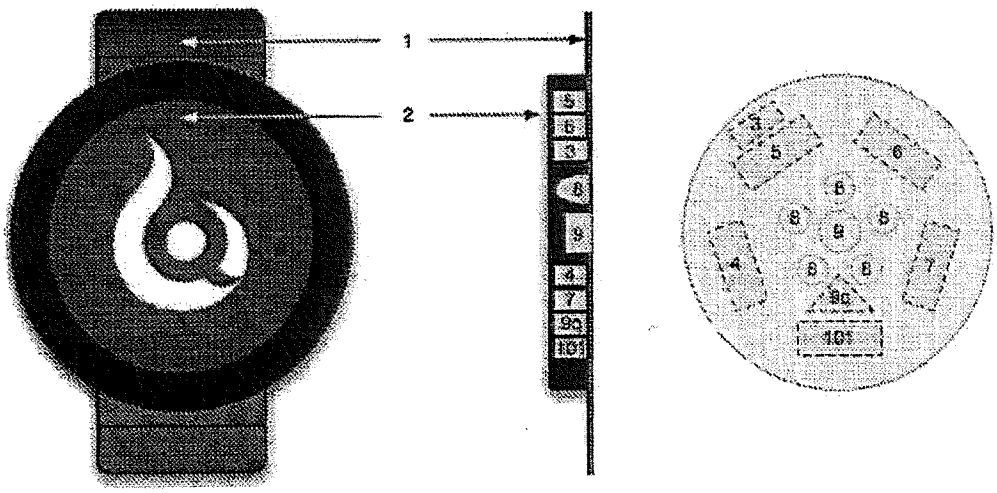


Figure 1

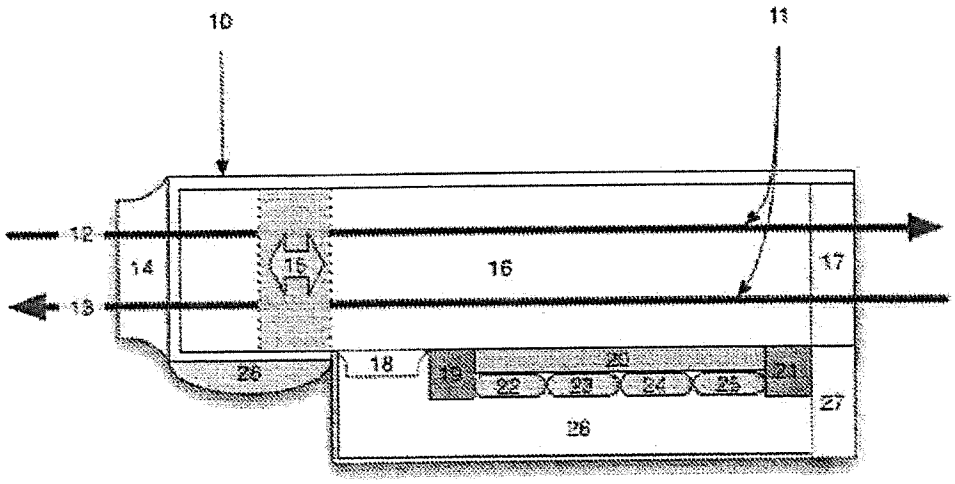


Figure 2a

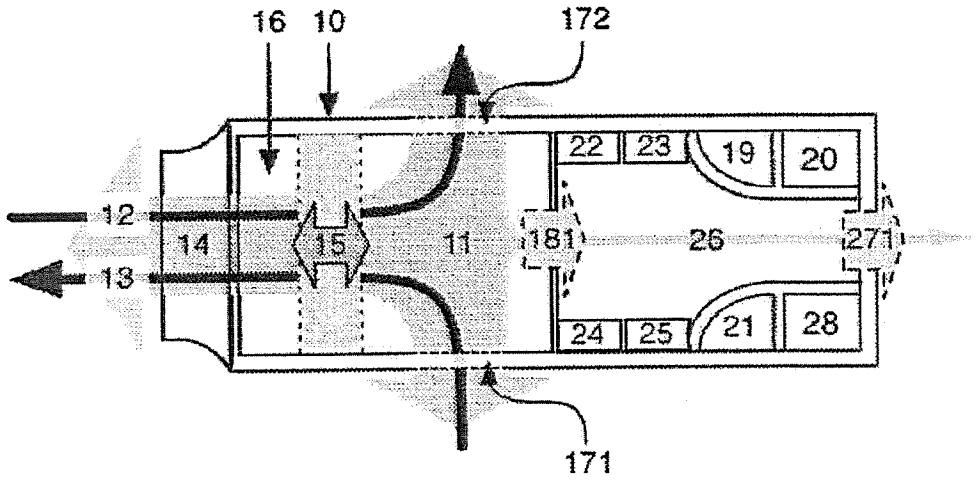
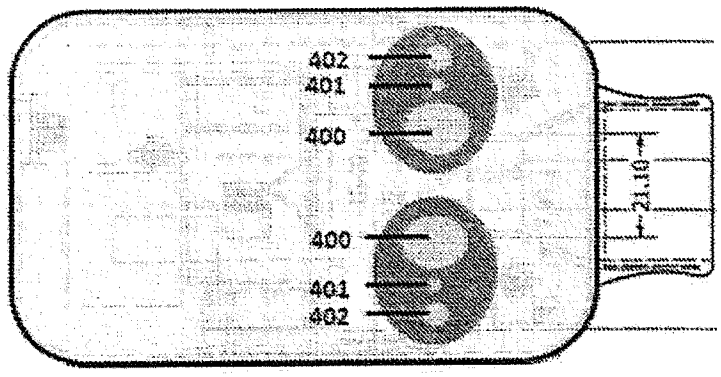
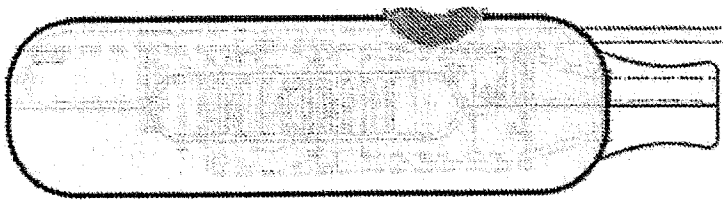


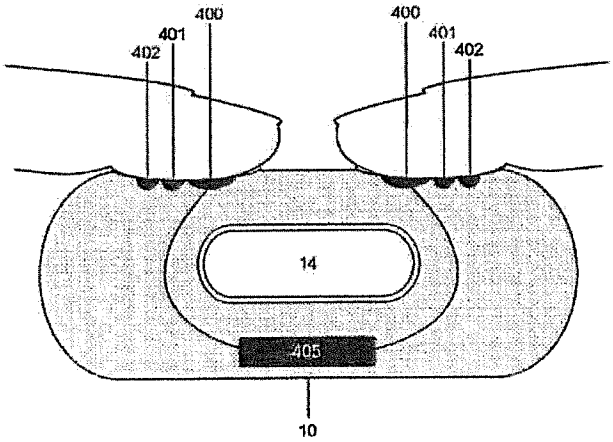
Figure 2b



Top View



Side View



Viewed From the Front

Figure 2c

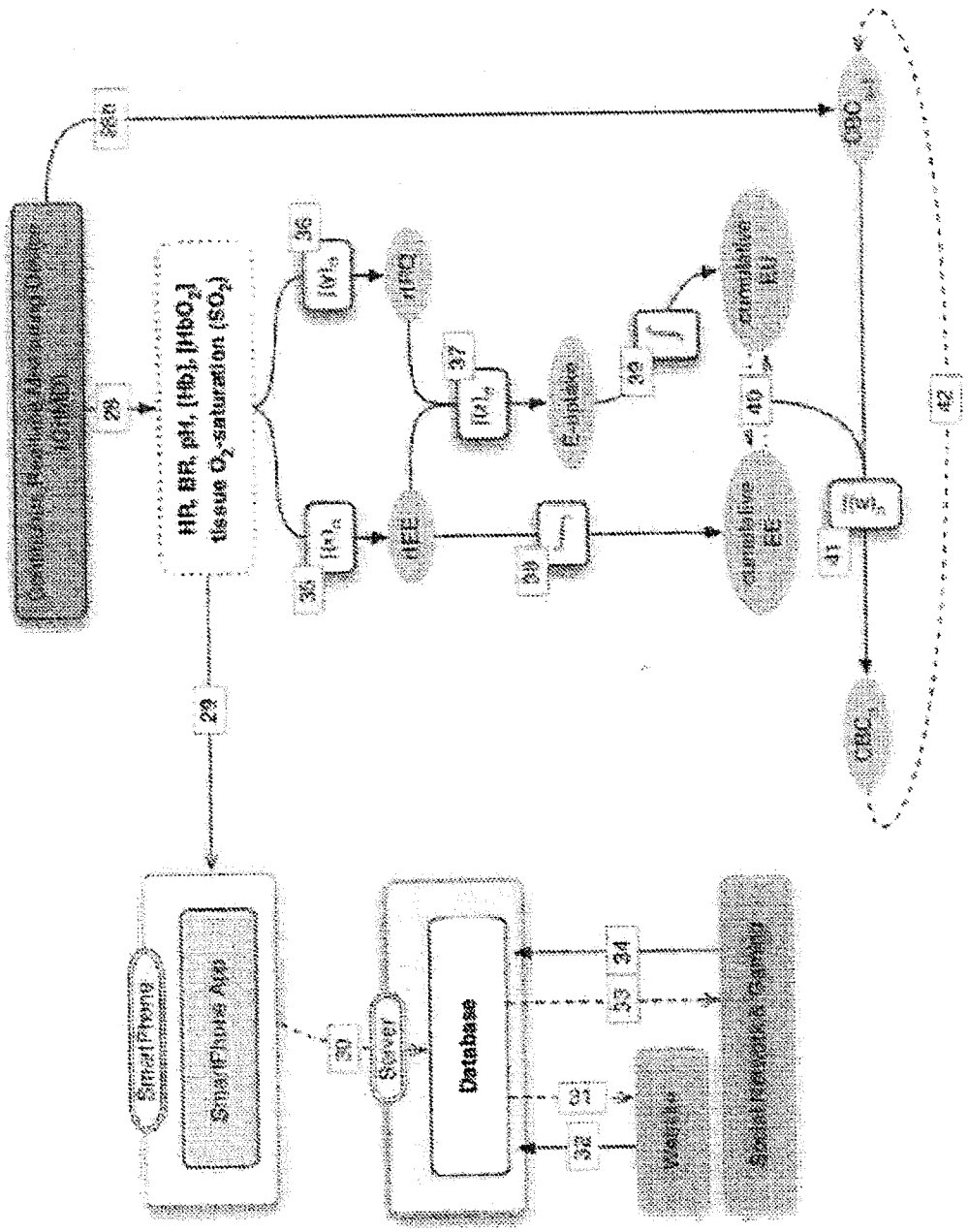

Database
Server
Website
Smartphone
SmartPhone App
HR, BR, pH, [Hb], [HbO2], tissue O2-saturation (SO2)
cumulative EE
cumulative EU
CBC
CBC

Figure 3

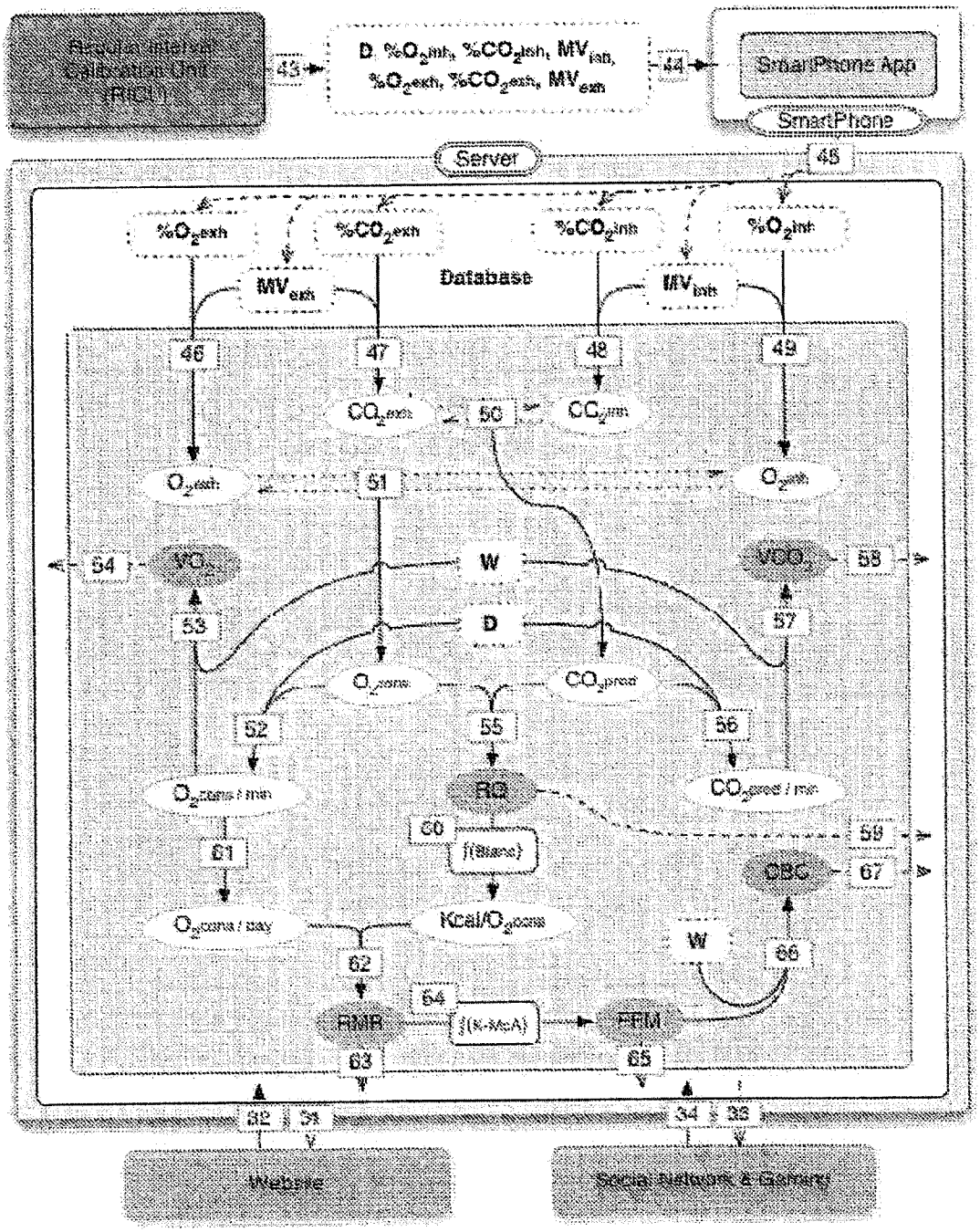

Regular Internet Calibration Unit (RICU)
43
D, %O2inh, %CO2inh, MVinh, %O2exh, %CO2exh, MVexh
44
SmartPhone App
SmartPhone
Server
45
%O2exh
%CO2exh
%CO2inh
%O2inh
MVexh
Database
MVinh
46
47
48
49
CO2exh
50
CO2inh
O2exh
51
O2inh
54
VO2
W
VCO2
58
53
D
57
O2cons
CO2prod
52
55
56
RQ
CO2prod / min
O2cons / min
60
f(Biom)
59
CBC
67
61
O2cons / day
Kcal/O2cons
W
66
62
64
RMR
f(K-McA)
FFM
63
65
32
33
34
35
Website
Social Network & Gamers

Figure 4

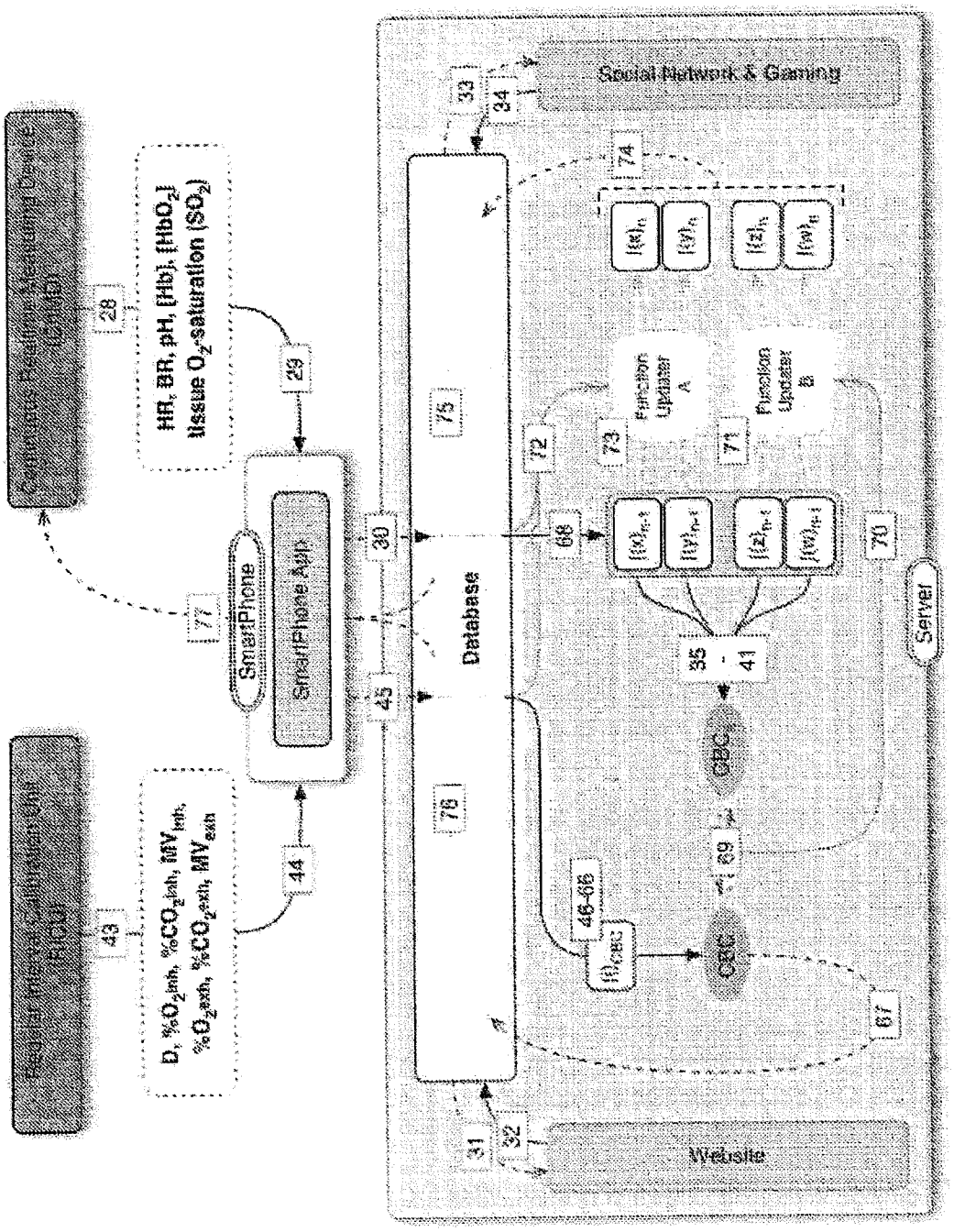

Social Network & Gaming
Website
Server
Database
SmartPhone
SmartPhone App
Function Updater A
Function Updater B
HR, BR, pH, [Hb], [HbO2], tissue O2-saturation (SO2)
D, %O2inh, %CO2inh, dV/dtinh, MVinh, %O2exh, %CO2exh, MVexh
CBC
CBC
28
29
30
31
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35 - 41
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46-66
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Figure 5

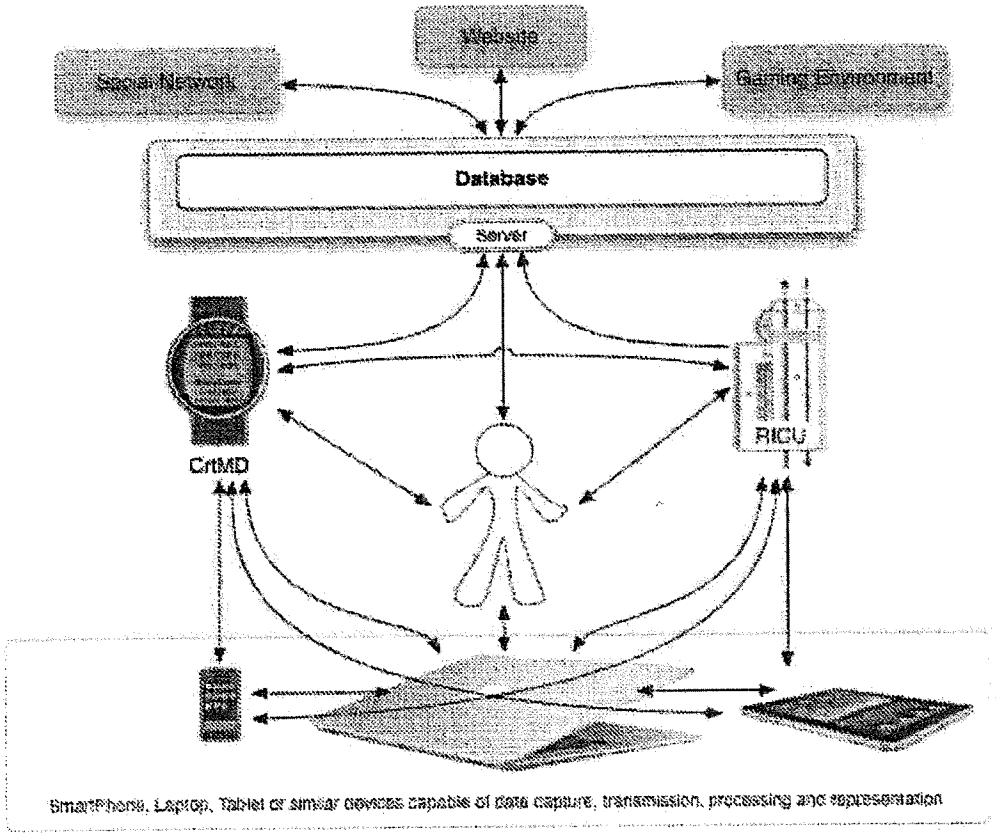


Figure 6

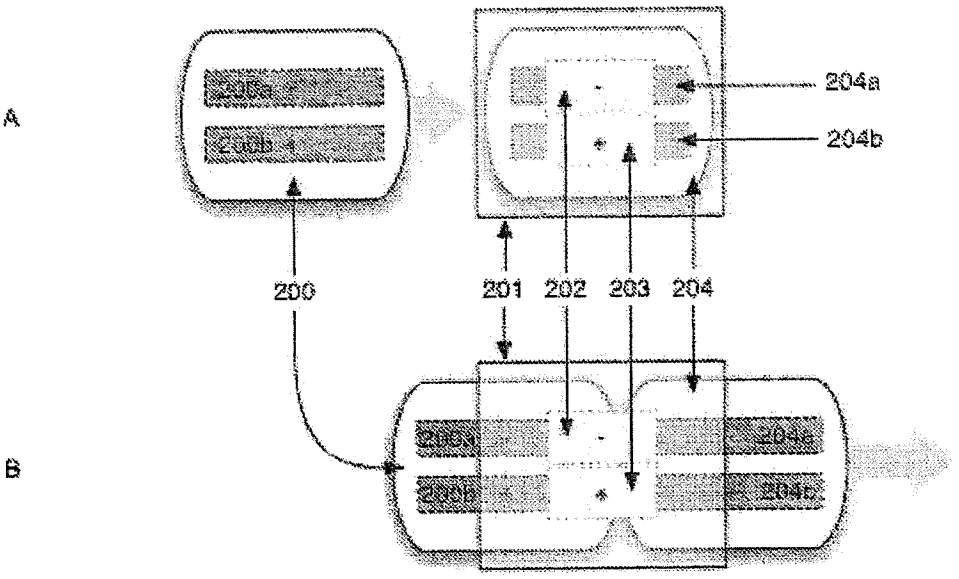


Figure 7a

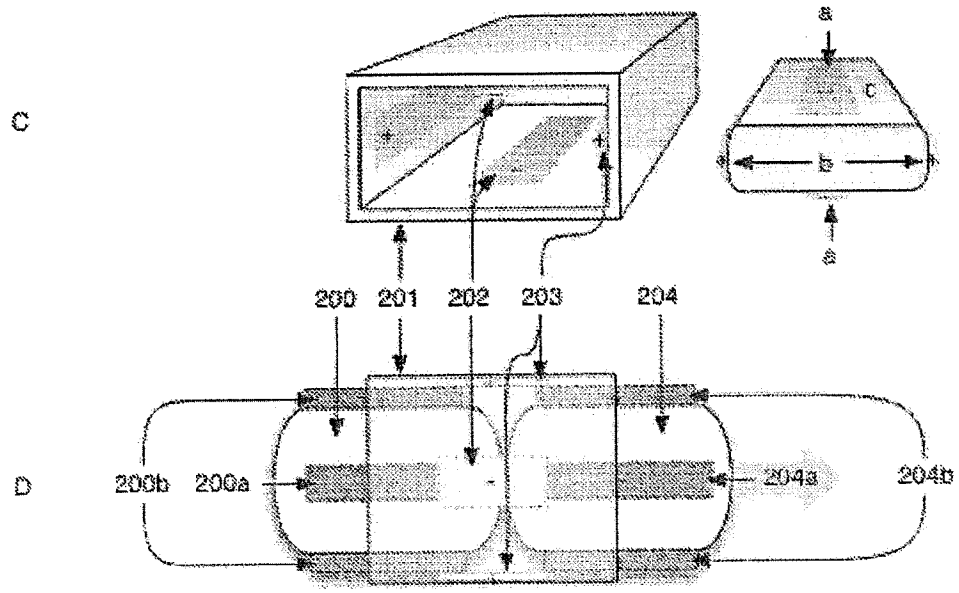


Figure 7b

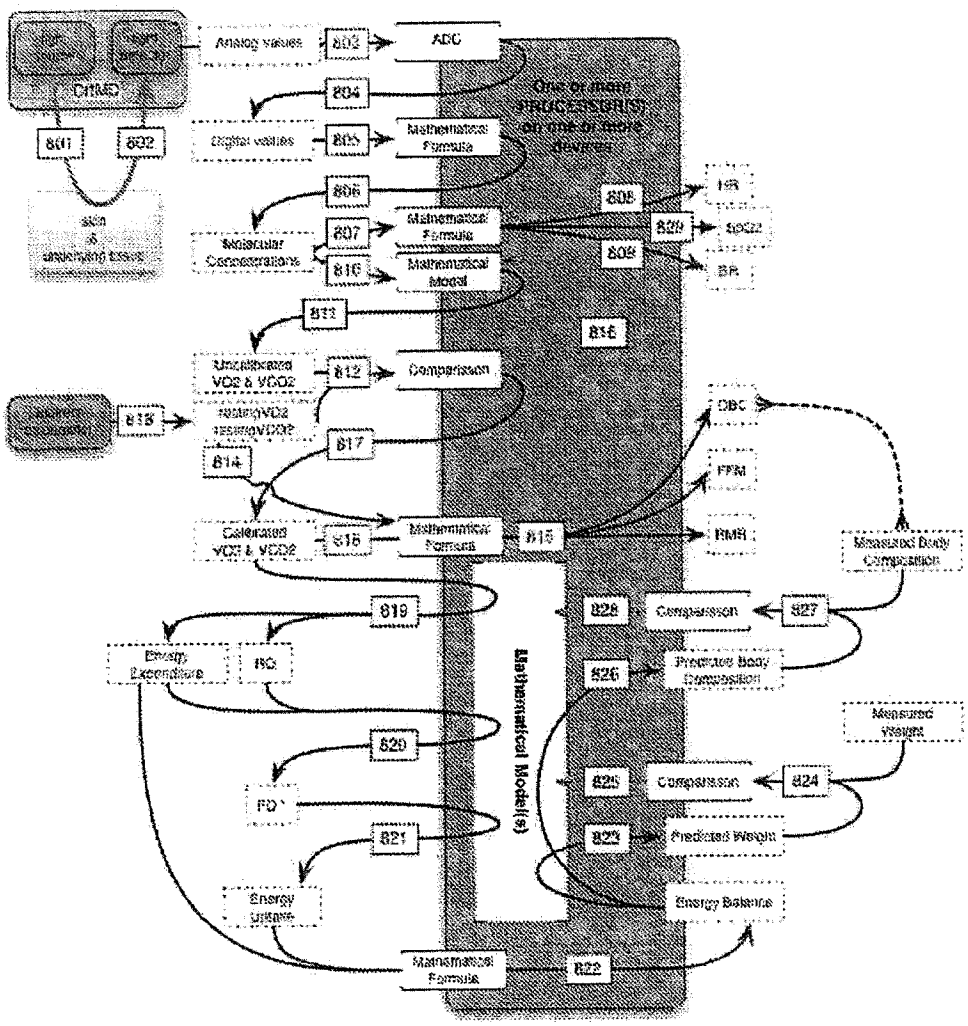

Analog values
802
ADC
804
Digital values
805
Mathematical Formula
806
807
Molecular Concentrations
816
Mathematical Model
808
809
813
Uncalibrated VO2 & VCO2
812
Comparison
815
817
814
Calibrated VO2 & VCO2
818
Mathematical Formula
819
Energy Expenditure
RQ
820
821
Energy Uptake
Mathematical Formula
822
Mathematical Model(s)
823
Predicted Weight
824
Comparison
825
826
Predicted Body Composition
827
Comparison
828
Measured Body Composition
Measured Weight
Energy Balance
DBC
FFM
BMR

Figure 8

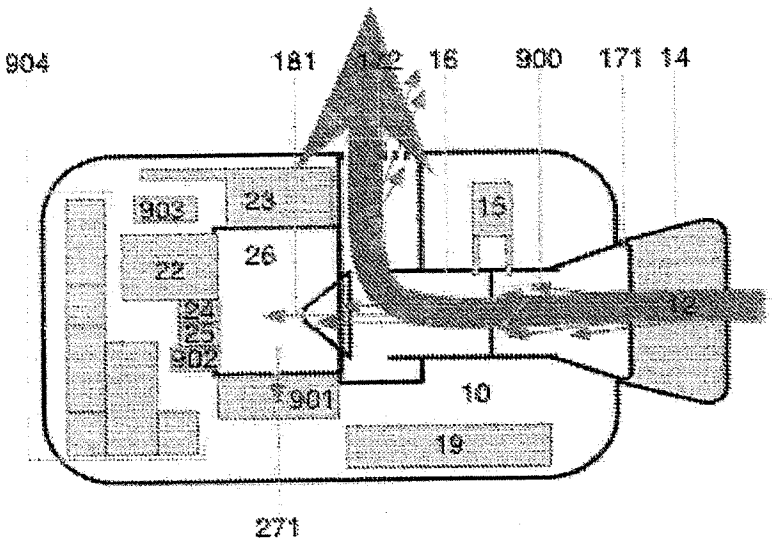


Figure 9a: Air Flow Dynamics generated by an exhalation.

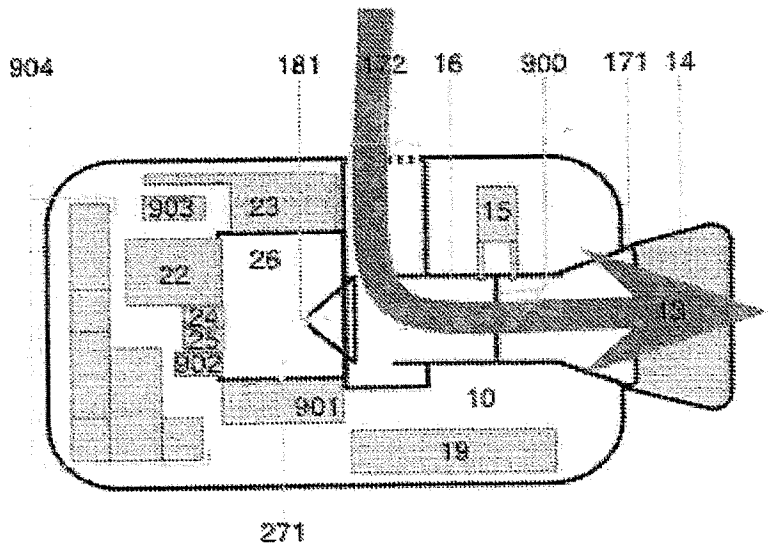


Figure 9b: Air Flow Dynamics generated by an inhalation.