



US00D772252S

(12) **United States Design Patent**  
**Myers et al.**

(10) **Patent No.:** **US D772,252 S**  
(45) **Date of Patent:** **\*\* \*Nov. 22, 2016**

(54) **PATIENT MONITORING DEVICE WITH A GRAPHICAL USER INTERFACE**

(75) Inventors: **Thomas A. Myers**, Syracuse, NY (US);  
**Michael D. Garrant**, Marcellus, NY (US); **Michele Marie Donovan**, Auburn, NY (US); **Janalee Esler**, Portland, OR (US)

(73) Assignee: **Welch Allyn, Inc.**, Skaneateles Falls, NY (US)

(\* ) Notice: This patent is subject to a terminal disclaimer.

(\*\*) Term: **14 Years**

(21) Appl. No.: **29/417,611**

(22) Filed: **Apr. 5, 2012**

(51) **LOC (10) Cl.** ..... **14-04**

(52) **U.S. Cl.**

USPC ..... **D14/486**

(58) **Field of Classification Search**

USPC ..... D14/485-495; D20/22, 23, 24, 29, 30;  
715/700, 701, 702, 703, 704, 705, 707,  
715/708, 709, 712, 716, 717, 719, 720, 721,  
715/722, 723, 726, 730, 732, 739, 756, 763,  
715/764, 781, 783, 838, 861, 864, 867, 961  
CPC .. G06F 3/0482; G06F 3/0484; G06F 3/0485;  
G06F 3/0486

See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

5,140,519 A 8/1992 Friesdorf et al.  
D366,460 S 1/1996 Jorensen

(Continued)

**FOREIGN PATENT DOCUMENTS**

CN 1356783 A 7/2002  
CN 1649538 A 8/2005

(Continued)

**OTHER PUBLICATIONS**

Adams, A.P., Breathing System Disconnections, Br. J. Anaesth, 1994, vol. 73, No. 1, pp. 46-54.

(Continued)

*Primary Examiner* — Barbara Fox

*Assistant Examiner* — Shannon Morgan

(74) *Attorney, Agent, or Firm* — Merchant & Gould P.C.

(57) **CLAIM**

The ornamental design for a patient monitoring device with a graphical user interface, as shown and described.

**DESCRIPTION**

A portion of the disclosure of this patent document contains material to which a claim for copyright is made. The copyright owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the U.S. Patent and Trademark Office patent file or records, but reserves all other copyrights whatsoever.

FIG. 1 is a front view of a first embodiment of a patient monitoring device with a graphical user interface;

FIG. 2 is a second embodiment thereof;

FIG. 3 is a third embodiment thereof;

FIG. 4 is a fourth embodiment thereof;

FIG. 5 is a fifth embodiment thereof;

FIG. 6 is a sixth embodiment thereof;

FIG. 7 is a seventh embodiment thereof;

FIG. 8 is an eighth embodiment thereof;

FIG. 9 is a ninth embodiment thereof;

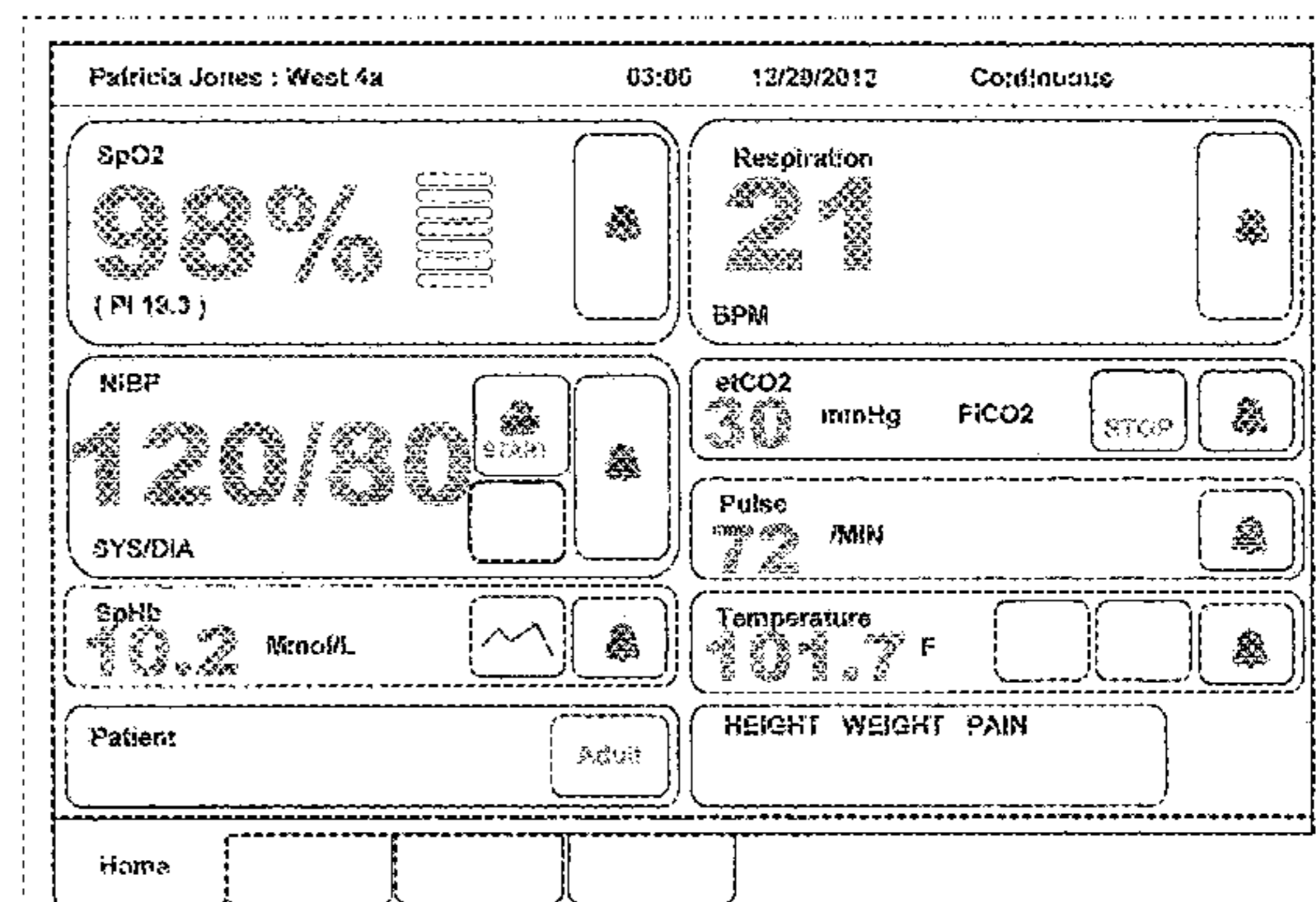
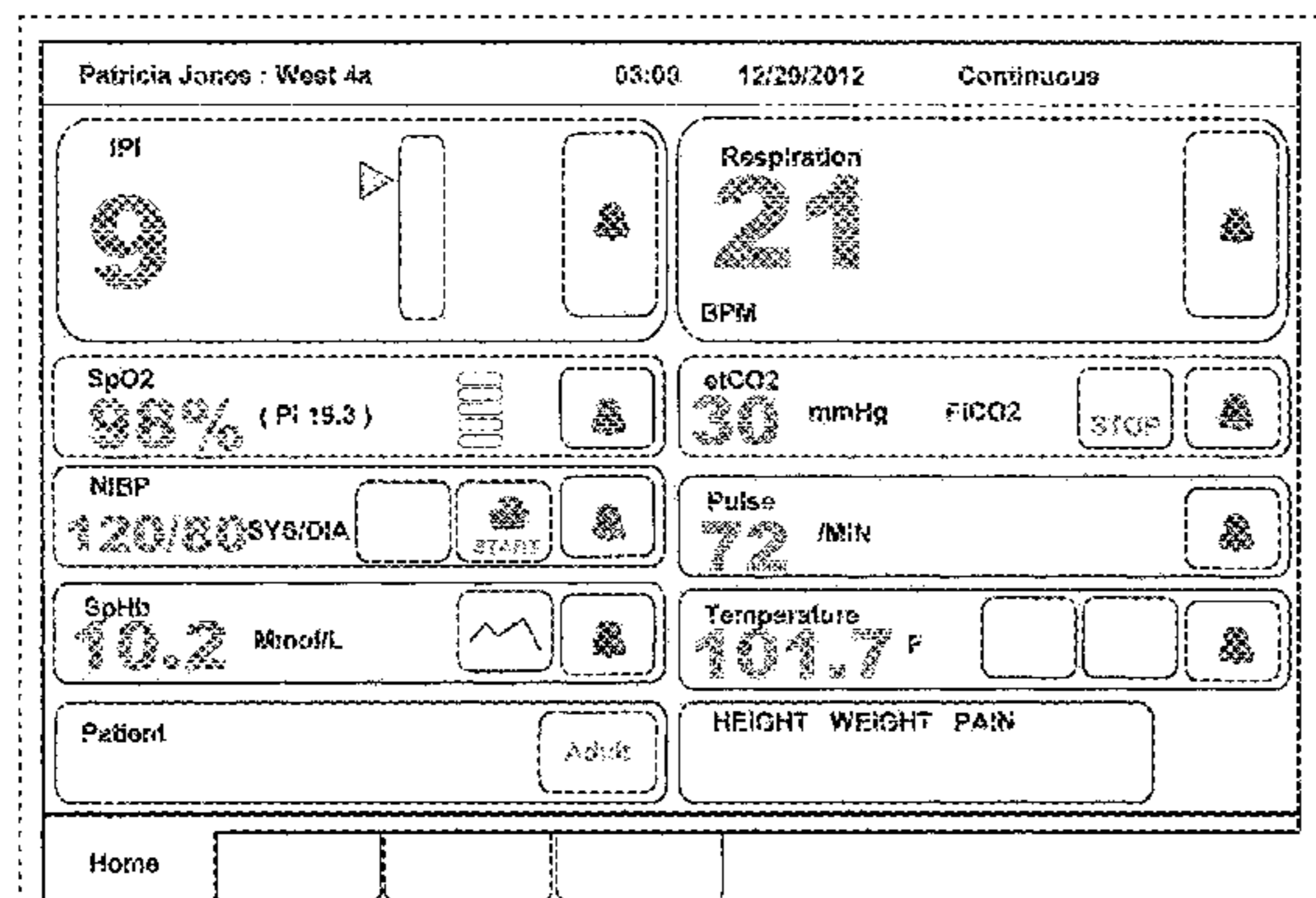
FIG. 10 is a tenth embodiment thereof;

FIG. 11 is an eleventh embodiment thereof; and,

FIG. 12 is a twelfth embodiment thereof.

The broken lines showing the patient monitoring device are included for the purpose of illustrating environmental structure and form no part of the claimed design.

**1 Claim, 12 Drawing Sheets**



(56)

References Cited

U.S. PATENT DOCUMENTS

5,701,894 A	12/1997	Cherry et al.	D658,667 S	5/2012	Cho
D427,574 S	7/2000	Sawada et al.	D662,106 S	6/2012	Mori et al.
6,219,046 B1	4/2001	Thomas et al.	D664,971 S	8/2012	Lee et al.
D454,139 S	3/2002	Feldcamp	D664,984 S	8/2012	Lee et al.
6,364,834 B1	4/2002	Reuss et al.	D666,625 S	9/2012	Gilmore et al.
6,398,727 B1	6/2002	Bui et al.	D667,837 S	9/2012	Magee
6,416,471 B1	7/2002	Kumar et al.	D667,838 S *	9/2012	Magee et al. .... D14/486
6,469,717 B1	10/2002	Wineke et al.	D674,401 S *	1/2013	Trumble et al. .... D14/486
D465,226 S	11/2002	Friedman	D675,218 S	1/2013	Arnold et al.
D468,322 S	1/2003	Walker et al.	D676,863 S	2/2013	Ho Kushner et al.
6,535,714 B2	3/2003	Melker et al.	D676,864 S	2/2013	Velasco et al.
6,658,276 B2	12/2003	Kianl et al.	D682,292 S	5/2013	Mori et al.
6,675,031 B1	1/2004	Porges et al.	D688,685 S	8/2013	Rhee et al.
6,707,476 B1	3/2004	Hochstedler	D689,899 S	9/2013	Lee et al.
6,783,573 B2	8/2004	Richardson	D695,781 S	12/2013	Edwards et al.
6,828,910 B2	12/2004	VanRyzin et al.	8,732,604 B2 *	5/2014	Okamoto et al. .... 715/772
D510,582 S	10/2005	Hoang	D708,210 S	7/2014	Capua et al.
D523,440 S	6/2006	Hernandez et al.	8,782,076 B2	7/2014	Rothman et al.
D525,982 S	8/2006	Suzuki	D710,879 S	8/2014	Elston et al.
D527,011 S	8/2006	Bixler	D711,895 S	8/2014	Inose et al.
7,124,366 B2 *	10/2006	Foreman et al. .... 715/719	D711,903 S	8/2014	Mishra et al.
7,134,994 B2	11/2006	Alpert et al.	D711,903 S	8/2014	Mishra et al.
D545,829 S	7/2007	Fletcher	8,806,366 B2	8/2014	Kim et al.
7,336,187 B2	2/2008	Hubbard, Jr. et al.	D712,420 S	9/2014	Song et al.
7,360,693 B1	4/2008	Sullivan	D714,822 S	10/2014	Capua et al.
D575,296 S	8/2008	Fairfield	D718,775 S	12/2014	Kim et al.
7,409,399 B2	8/2008	Miyamoto	D720,772 S	1/2015	Cranfill et al.
D576,634 S	9/2008	Clark et al.	D726,205 S	4/2015	Angelides
7,428,531 B2	9/2008	Barron et al.	D726,206 S	4/2015	Angelides
D579,456 S	10/2008	Chen et al.	D726,207 S	4/2015	Angelides
7,433,827 B2	10/2008	Rosenfeld et al.	D726,751 S	4/2015	Angelides
D586,818 S	2/2009	Luck	D726,756 S	4/2015	Angelides
D590,413 S	4/2009	Bhat et al.	D726,757 S	4/2015	Angelides
D590,414 S *	4/2009	Bhat et al. .... D14/486	D727,353 S	4/2015	Yokota et al.
D592,156 S *	5/2009	Drews et al. .... D13/162	D727,930 S	4/2015	Kim et al.
D592,675 S	5/2009	Bhat et al.	D730,376 S	5/2015	Ranz et al.
7,565,616 B2	7/2009	Buchmann	D730,927 S	6/2015	Lee et al.
D598,923 S	8/2009	Chen et al.	D732,562 S	6/2015	Yan et al.
D598,929 S	8/2009	Bhat et al.	9,055,870 B2	6/2015	Meador et al.
D599,358 S	9/2009	Hoefnagels et al.	D733,723 S	7/2015	Brinda et al.
D599,398 S	9/2009	Laidlaw et al.	D737,831 S	9/2015	Lee et al.
D603,416 S	11/2009	Poling et al.	9,131,904 B2 *	9/2015	Qualey ..... A61B 5/742
D607,463 S	1/2010	Krieter et al.	D740,313 S	10/2015	Seo et al.
D608,366 S	1/2010	Matas	9,173,998 B2 *	11/2015	Rosinko ..... A61M 5/16831
7,662,106 B2	2/2010	Daniels et al.	9,180,243 B2 *	11/2015	Michaud ..... A61M 5/14244
D612,860 S	3/2010	Tarara et al.	9,235,682 B2	1/2016	Vann et al.
RE41,236 E	4/2010	Seely	9,254,104 B2 *	2/2016	Judy ..... G06F 19/3418
D614,634 S	4/2010	Nilsen	9,259,526 B2 *	2/2016	Barron ..... A61M 5/007
7,765,479 B2	7/2010	Goodwin et al.	9,265,429 B2	2/2016	St. Pierre et al.
7,774,060 B2	8/2010	Westenskow et al.	2002/0054141 A1	5/2002	Yen et al.
7,782,302 B2	8/2010	Lee et al.	2002/0078097 A1	6/2002	Chen et al.
7,787,946 B2	8/2010	Stahmann et al.	2002/0126137 A1	9/2002	Kaestner, Jr.
7,810,497 B2	10/2010	Pittman et al.	2002/0177758 A1	11/2002	Schoenberg et al.
D632,699 S	2/2011	Judy et al.	2003/0060727 A1	3/2003	Kline
7,895,527 B2	2/2011	Zaleski et al.	2003/0135087 A1	7/2003	Hickle et al.
D635,150 S	3/2011	Sykes et al.	2004/0002874 A1	1/2004	Shaffer et al.
D637,603 S	5/2011	Godgart	2004/0088199 A1 *	5/2004	Childress et al. .... 705/4
7,937,134 B2	5/2011	Uber et al.	2004/0111045 A1	6/2004	Sullivan et al.
D640,264 S	6/2011	Fujii	2005/0114374 A1	5/2005	Juszkiewicz et al.
7,967,759 B2	6/2011	Couvillon, Jr.	2005/0229110 A1	10/2005	Gegner et al.
D643,043 S	8/2011	Loken	2005/0288571 A1	12/2005	Perkins et al.
8,001,967 B2	8/2011	Wallace	2006/0149597 A1	7/2006	Powell et al.
8,020,558 B2	9/2011	Christopher	2006/0200009 A1	9/2006	Wekell et al.
D646,689 S	10/2011	Ulliot	2006/0228096 A1	10/2006	Hoshino et al.
8,028,701 B2	10/2011	Al-Ali	2006/0229557 A1	10/2006	Fathallah et al.
8,038,593 B2	10/2011	Friedman	2006/0247948 A1	11/2006	Ellis et al.
8,046,705 B2	10/2011	Hunleth et al.	2007/0000494 A1	1/2007	Banner et al.
8,055,514 B2	11/2011	Elsholz	2007/0067005 A1	3/2007	Schatz et al.
8,078,983 B2	12/2011	Davis	2007/0124240 A1	5/2007	Ireland et al.
D652,051 S	1/2012	Judy	2007/0130036 A1	6/2007	Ireland et al.
D656,153 S	3/2012	Imamura	2007/0150810 A1	6/2007	Katz et al.
D656,157 S	3/2012	Khan	2007/0156456 A1	7/2007	McGillin et al.
D656,946 S	4/2012	Judy	2007/0167173 A1	7/2007	Halcrow et al.
D657,368 S	4/2012	Magee	2007/0167694 A1	7/2007	Causevic et al.
D658,196 S	4/2012	Wood et al.	2007/0174079 A1	7/2007	Kraus
			2007/0185390 A1	8/2007	Perkins et al.
			2007/0197878 A1	8/2007	Shklarski
			2007/0203744 A1	8/2007	Scholl
			2007/0215157 A1	9/2007	Straw
			2007/0276261 A1	11/2007	Banet et al.

(56)

References Cited

U.S. PATENT DOCUMENTS

2008/0012833 A1 1/2008 Beck et al.  
 2008/0021379 A1 1/2008 Hickle  
 2008/0055074 A1 3/2008 Gao et al.  
 2008/0058609 A1 3/2008 Garibaldi et al.  
 2008/0058614 A1 3/2008 Banet et al.  
 2008/0072896 A1 3/2008 Setzer et al.  
 2008/0077026 A1 3/2008 Banet et al.  
 2008/0086691 A1 4/2008 Hopermann et al.  
 2008/0103375 A1 5/2008 Kiani  
 2008/0115081 A1 5/2008 Sankaravadivelu et al.  
 2008/0155406 A1 6/2008 Naka  
 2008/0208812 A1 8/2008 Quoc et al.  
 2008/0229248 A1 9/2008 Fagans et al.  
 2008/0249377 A1 10/2008 Molducci et al.  
 2008/0249801 A1 10/2008 Zaleski  
 2008/0281168 A1 11/2008 Gibson et al.  
 2008/0281637 A1 11/2008 Matz  
 2008/0318529 A1 12/2008 Harb  
 2009/0005651 A1 1/2009 Ward et al.  
 2009/0054743 A1 2/2009 Stewart  
 2009/0112630 A1 4/2009 Collins, Jr. et al.  
 2009/0131761 A1 5/2009 Moroney, III et al.  
 2009/0132588 A1 5/2009 Mahesh et al.  
 2009/0143652 A1 6/2009 Warburton et al.  
 2009/0149927 A1 6/2009 Kneuer et al.  
 2009/0158415 A1 6/2009 Dillon  
 2009/0240116 A1 9/2009 Bluth  
 2009/0240193 A1 9/2009 Mensinger et al.  
 2009/0241958 A1 10/2009 Baker, Jr.  
 2009/0275805 A1 11/2009 Lane et al.  
 2009/0275810 A1 11/2009 Ayers et al.  
 2009/0282340 A1 11/2009 Akaike et al.  
 2009/0306482 A1 12/2009 Davis et al.  
 2009/0306488 A1 12/2009 Al-Ali et al.  
 2009/0312648 A1 12/2009 Zhang et al.  
 2010/0050075 A1\* 2/2010 Thorson et al. .... 715/702  
 2010/0069004 A1 3/2010 Bioebaum  
 2010/0094096 A1 4/2010 Petruzzelli et al.  
 2010/0097380 A1 4/2010 Daniels et al.  
 2010/0218766 A1 9/2010 Milne  
 2010/0249540 A1 9/2010 Lisogurski  
 2010/0274098 A1 10/2010 Belford et al.  
 2010/0324380 A1\* 12/2010 Perkins et al. .... 600/301  
 2011/0010621 A1\* 1/2011 Wallaert et al. .... 715/702  
 2011/0015502 A1 1/2011 Peyser  
 2011/0071420 A1\* 3/2011 St. Pierre et al. .... 600/549  
 2011/0169644 A1 7/2011 Muhsin et al.  
 2011/0190600 A1 8/2011 McKenna et al.  
 2011/0205577 A1\* 8/2011 Mori et al. .... 358/1.15  
 2011/0209707 A1 9/2011 Terhark  
 2011/0227739 A1 9/2011 Gilham et al.  
 2011/0245630 A1 10/2011 St. Pierre et al.  
 2011/0246565 A1\* 10/2011 Irwin et al. .... 709/203  
 2011/0276338 A1 11/2011 Warner et al.  
 2011/0290250 A1 12/2011 Olson et al.  
 2011/0313301 A1\* 12/2011 Lane et al. .... 600/485  
 2012/0000470 A1\* 1/2012 Milne et al. .... 128/205.23  
 2012/0016251 A1 1/2012 Zhang et al.  
 2012/0030610 A1 2/2012 DiPerna et al.  
 2012/0048090 A1\* 3/2012 Etter et al. .... 83/473  
 2012/0095778 A1 4/2012 Gross et al.  
 2012/0096367 A1\* 4/2012 DelloStritto et al. .... 715/747  
 2012/0110444 A1\* 5/2012 Li et al. .... 715/256  
 2012/0117099 A1 5/2012 Gross  
 2012/0215075 A1\* 8/2012 Surace et al. .... 600/301  
 2012/0296183 A1\* 11/2012 Kinsley et al. .... 600/324  
 2013/0151285 A1 6/2013 McLaren et al.  
 2013/0187780 A1 7/2013 Angelides  
 2013/0265327 A1 10/2013 Vann et al.  
 2013/0267792 A1\* 10/2013 Petersen et al. .... 600/301  
 2013/0267793 A1\* 10/2013 Meador et al. .... 600/301  
 2013/0267861 A1 10/2013 Vassallo et al.  
 2013/0268283 A1\* 10/2013 Vann et al. .... 705/2  
 2013/0293373 A1 11/2013 Gegner et al.  
 2013/0311926 A1\* 11/2013 Keegan et al. .... 715/771

2014/0040429 A1\* 2/2014 Irwin et al. .... 709/217  
 2014/0059436 A1 2/2014 Swenson et al.  
 2014/0098209 A1\* 4/2014 Neff ..... 348/77  
 2014/0108041 A1\* 4/2014 Bechtel et al. .... 705/2  
 2014/0135588 A1\* 5/2014 Al-Ali et al. .... 600/300  
 2014/0331189 A1 11/2014 Lee et al.  
 2015/0186023 A1 7/2015 Alisanski et al.  
 2015/0335296 A1 11/2015 Meador et al.  
 2016/0085942 A1 3/2016 Vann et al.

FOREIGN PATENT DOCUMENTS

CN 101069638 A 11/2007  
 EP 0707824 A2 4/1996  
 EP 2 093 683 A2 8/2009  
 GB 2409951 A 7/2005  
 JP 10-91687 A 4/1998  
 JP 3682617 B2 8/2005  
 JP 2010-015193 A 1/2010  
 WO 0126021 4/2001  
 WO 0189362 5/2001  
 WO 2006/076498 A2 7/2006  
 WO 2010/102069 A2 9/2010  
 WO 2011/001302 A1 1/2011

OTHER PUBLICATIONS

Capnography: An Objective Tool for Assessing Respiratory Status, Physio-Control, Inc., 2008, pages 4 pages.  
 Colin Prodigy Press-Mate Prodigy II® Portable Vital Signs Monitors, DRE, Copyright 2009, accessed at: [http://www.dremed.com/catalog/product\\_info.php/products\\_id/1181](http://www.dremed.com/catalog/product_info.php/products_id/1181); 5 pages.  
 Fingertip Pulse Oximeter SPO2 Monitor Oxygen Oximeter; Copyright 1995-2010, accessed at: [http://74.125.45.132/search?q=cache:ANfHne9je7gJ:cgi.ebay.com.sg/ws/eBayISAPI.dll%3FViewItem%26item%3D260412542031+\"Fingertip+Pulse+Oximeter+SPO2+Monitor+Oxygen+Oximeter\"&cd=2&hl=en&ct=cInk&gl=us](http://74.125.45.132/search?q=cache:ANfHne9je7gJ:cgi.ebay.com.sg/ws/eBayISAPI.dll%3FViewItem%26item%3D260412542031+\); 6 pages.  
 Handheld Pulse Oximeter PM-60A, Contec Medical System Co. Ltd., Jul. 31, 2009; accessed at: <http://www.tradeindia.com/selloffer/1858593/Handheld-Pulse-Oximeter-PM-60A.html>; 5 pages.  
 International Search Report and Written Opinion in PCT/US2010/048450 dated Apr. 12, 2011, 9 pages.  
 mCare 300 Vital Signs Monitor, Spacelabs Medical, Inc., Copyright 2006, 4 pages.  
 Multiple Vital Signs from One Non-invasive Sensor, Starr™ Life Sciences Corp., Copyright 2009, accessed at: <http://www.star-rlifesciences.com/mouseox.html>; 1 page.  
 Nag et al., Wireless E-jacket ofr Multiparameter Biophysical Monitoring and Telemedicine Applications, Medial Devices and Biosensors, 2006, 3rd IEEE/EMBS International Summer School, Sep. 4-6, 2006, pp. 40-44.  
 NTIA Handheld Pulse Oximeter, Frontline Systems; Dec. 31, 2009, accessed at: <http://www.tradeindia.com/fp385774/NTIA-Handheld-Pulse-Oximeter.html>; 3 pages.  
 O'Donoughue et al., Design and Implementation of a Framework for Monitoring Patients in Hospitals Using Wireless Sensors in Ad Hoc configuration, Engineering in Medicine and Biology Society, EMBS '06, 28th Annual International Confernece of the IEEE, vol., No., Aug. 30, 2006-Sep. 3, 2006, pp. 6449-6452.  
 Ultraview DM3—Dual Mode Vital Signs Monitor, Spacelabs Healthcare, Copyright 2010, 4 pages.  
 U.S. Appl. No. 12/751,579, filed Mar. 31, 2010.  
 U.S. Appl. No. 12/751,602, filed Mar. 31, 2010.  
 U.S. Appl. No. 61/243,872, filed Sep. 18, 2009.  
 U.S. Appl. No. 29/353,090, filed Dec. 31, 2009.  
 Al-Qutayri et al.; Framework for Secure Wireless Health monitoring and remote Access System, Inderscience Enterprises Ltd. copy-right 2010, 19 pages.  
 International Search Report and Written Opinion in PCT/US2013/031342 mailed Jun. 24, 2013, 12 pages.  
 International Search Report and Written Opinion in PCT/US2013/031458 mailed Jun. 28, 2013, 10 pages.  
 International Search Report and Written Opinion in PCT/US2013/031486 mailed Jun. 28, 2013, 10 pages.

(56)

**References Cited**

OTHER PUBLICATIONS

International Search Report and Written Opinion in PCT/US2013/031582 mailed Jun. 28, 2013, 11 pages.

Kozlovsky et al.; Network and Service Management and Diagnostics Solution of a Remote Patient Monitoring System, IEEE copyright 2011, 4 pages.

Lamberti et al.; Ubiquitous Real-Time Monitoring of Critical-Care Patients in Intensive Care Units, IEEE copyright 2003, 4 pages.

Panorama™ Central Station, Surgical Product Guide copyright 2011, 2 pages.

Portable Patient Monitors, Welch Allyn, Copyright 2005-2006 Med-Direct, Copyright 2005-2006, accessed at: <http://www.meddirect.co.nz/Product.aspx?ProductId=3476>; 1 page.

Station—Dictionary.com, [online], retrieved on Sep. 2, 2014, Retrived from, <URL: <http://dictionary.reference.com/browse/station>>, 4 pages.

U.S. Appl. No. 29/417,592, filed Apr. 5, 2012.

Zhao et al.; A Portable, Low-Cost, Batter-Powered Wireless Monitoring System for Obtaining Varying Physiologic Parameters from Multiple Subjects, IEEE copyright 2006, 4 pages.

Extended European Search Report for EP 10817686.8, Nov. 18, 2014, 7 pages.

\* cited by examiner

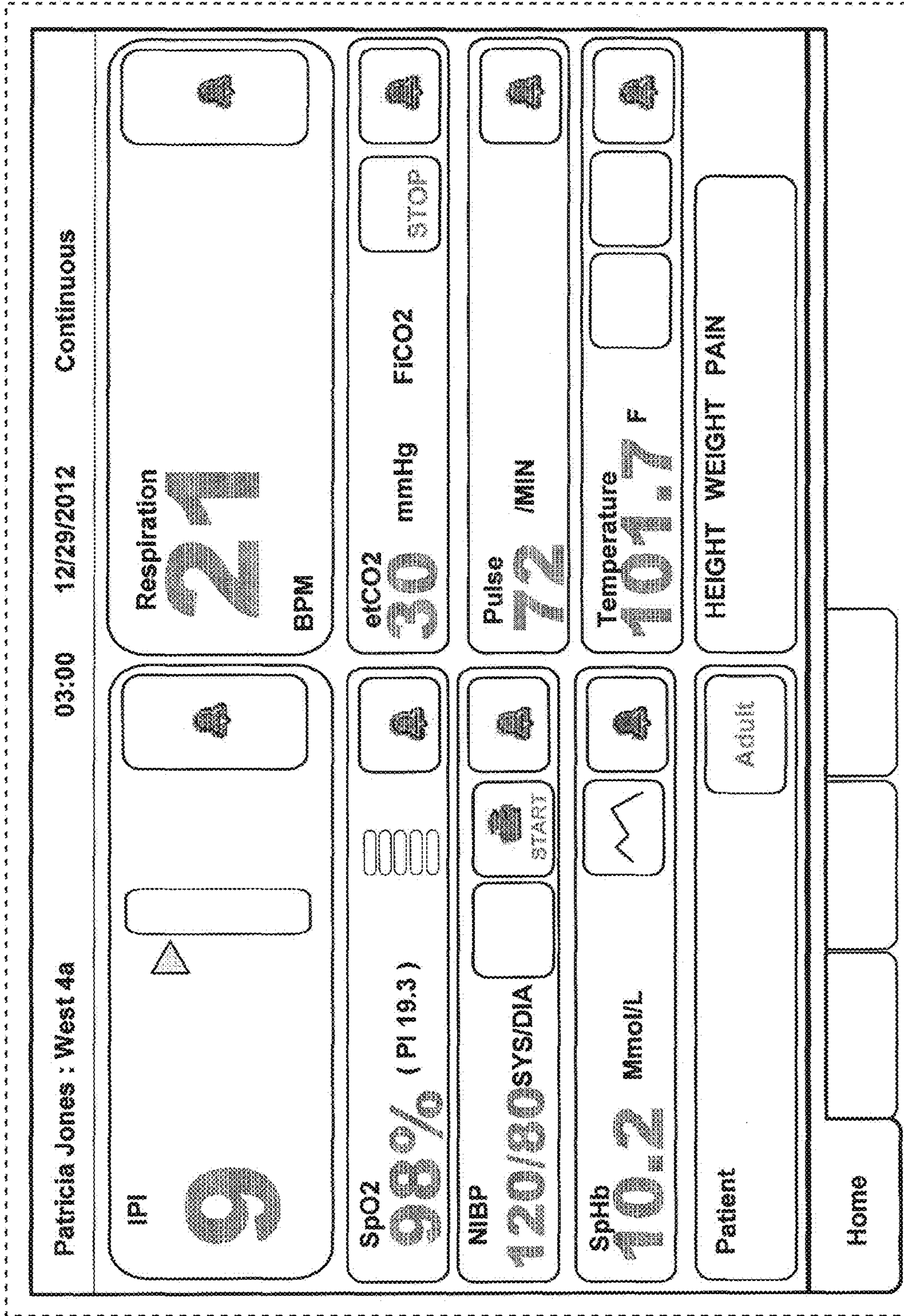


FIG. 1

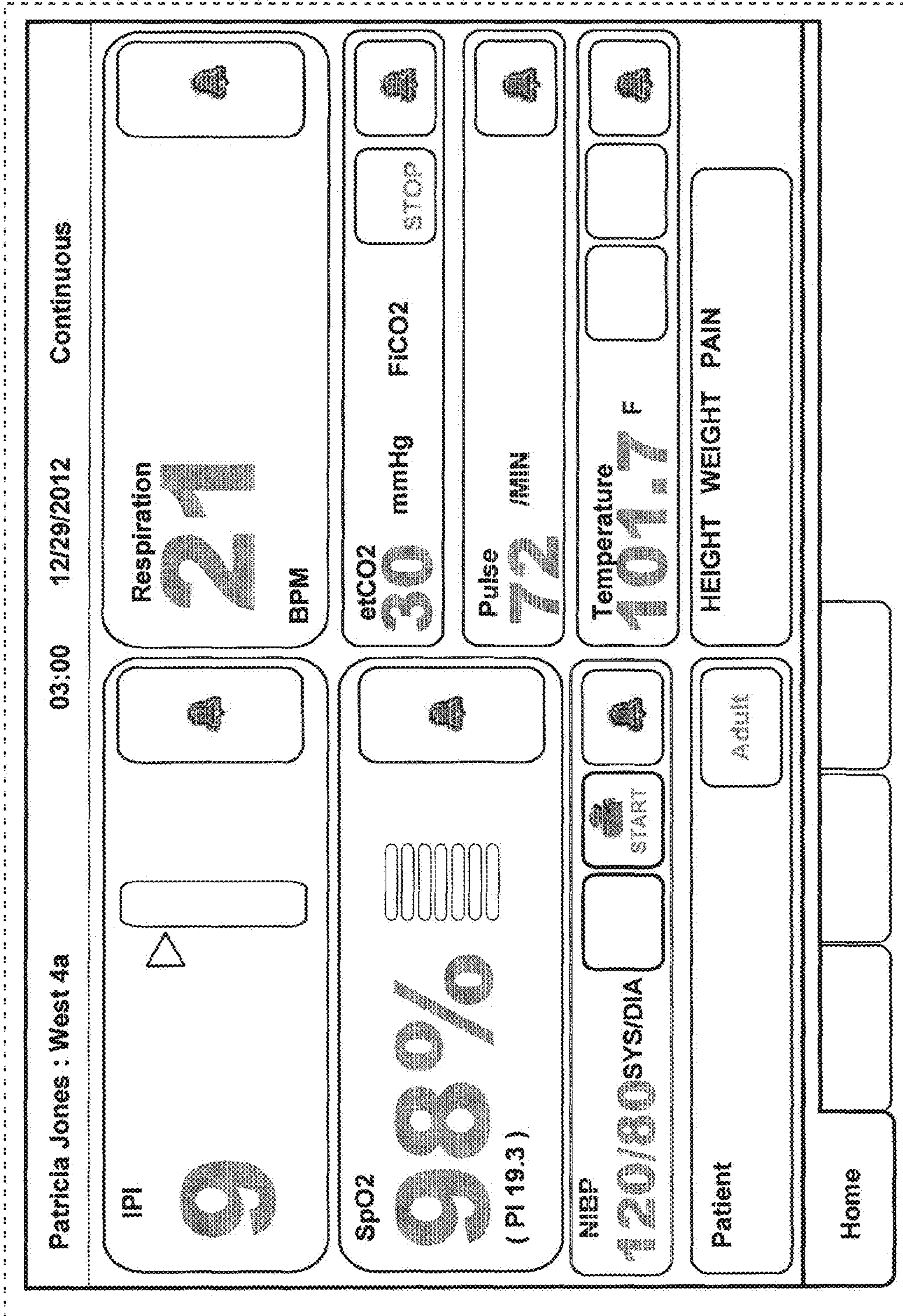


FIG. 2

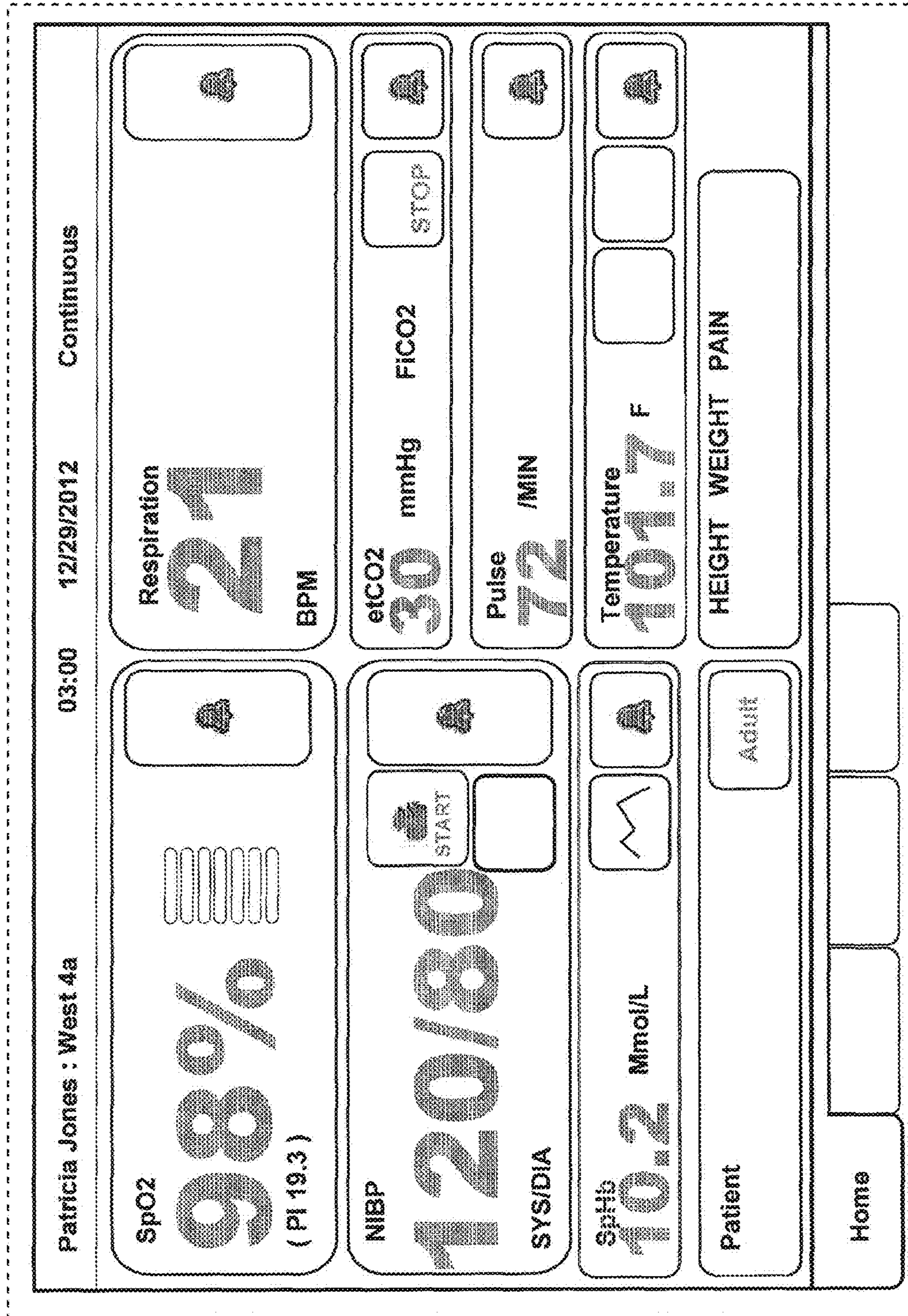


FIG. 3

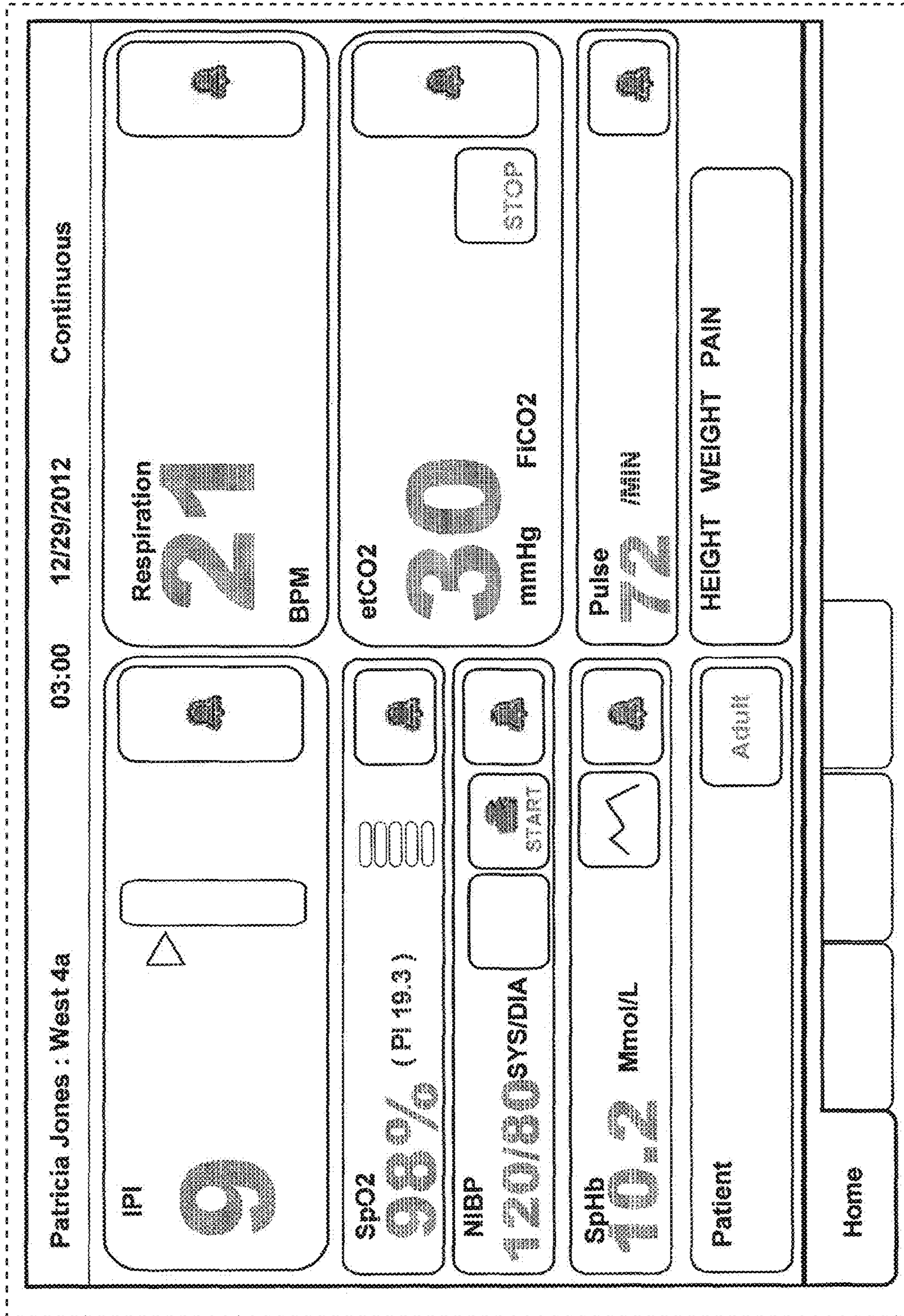


FIG. 4



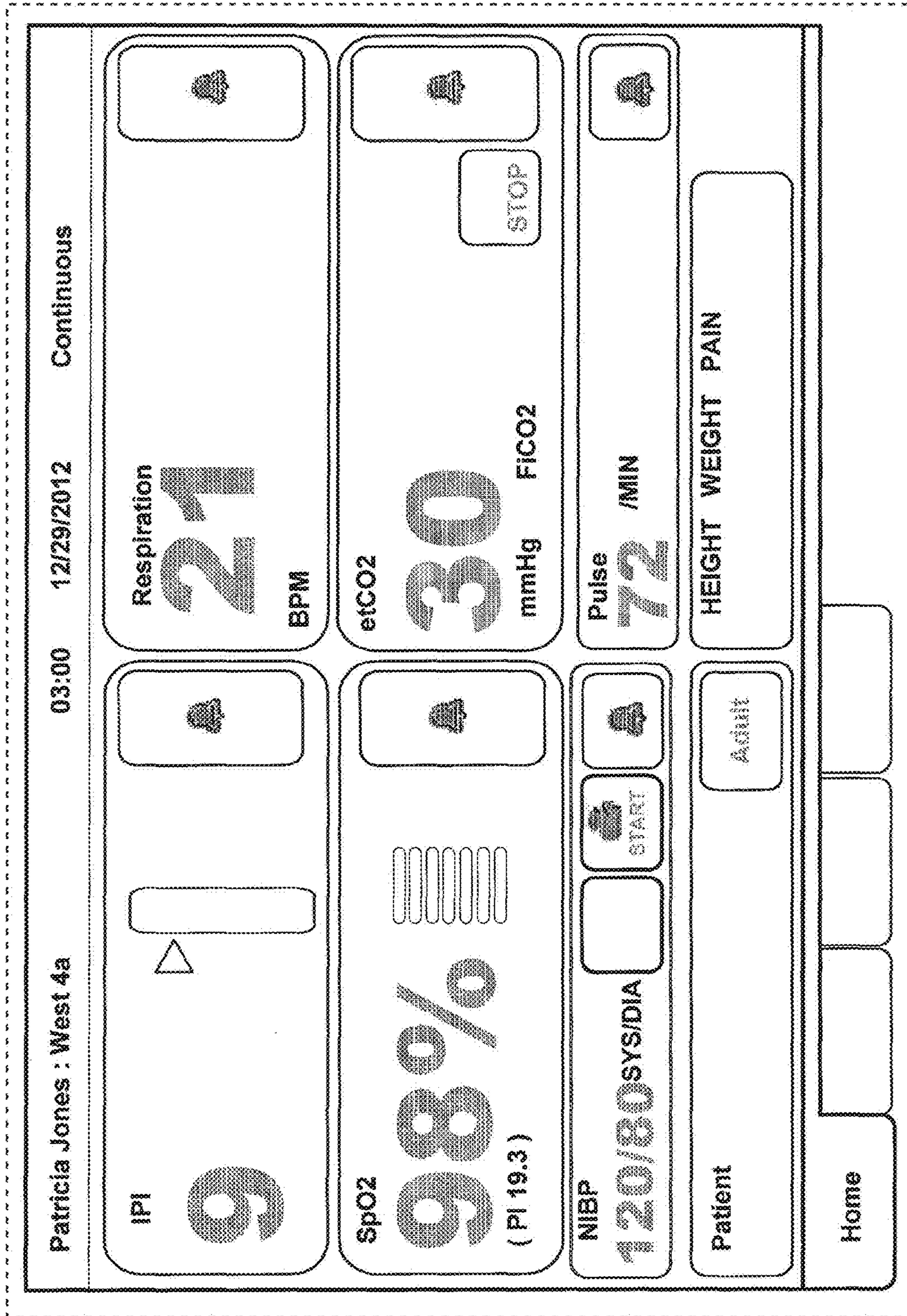


FIG. 5

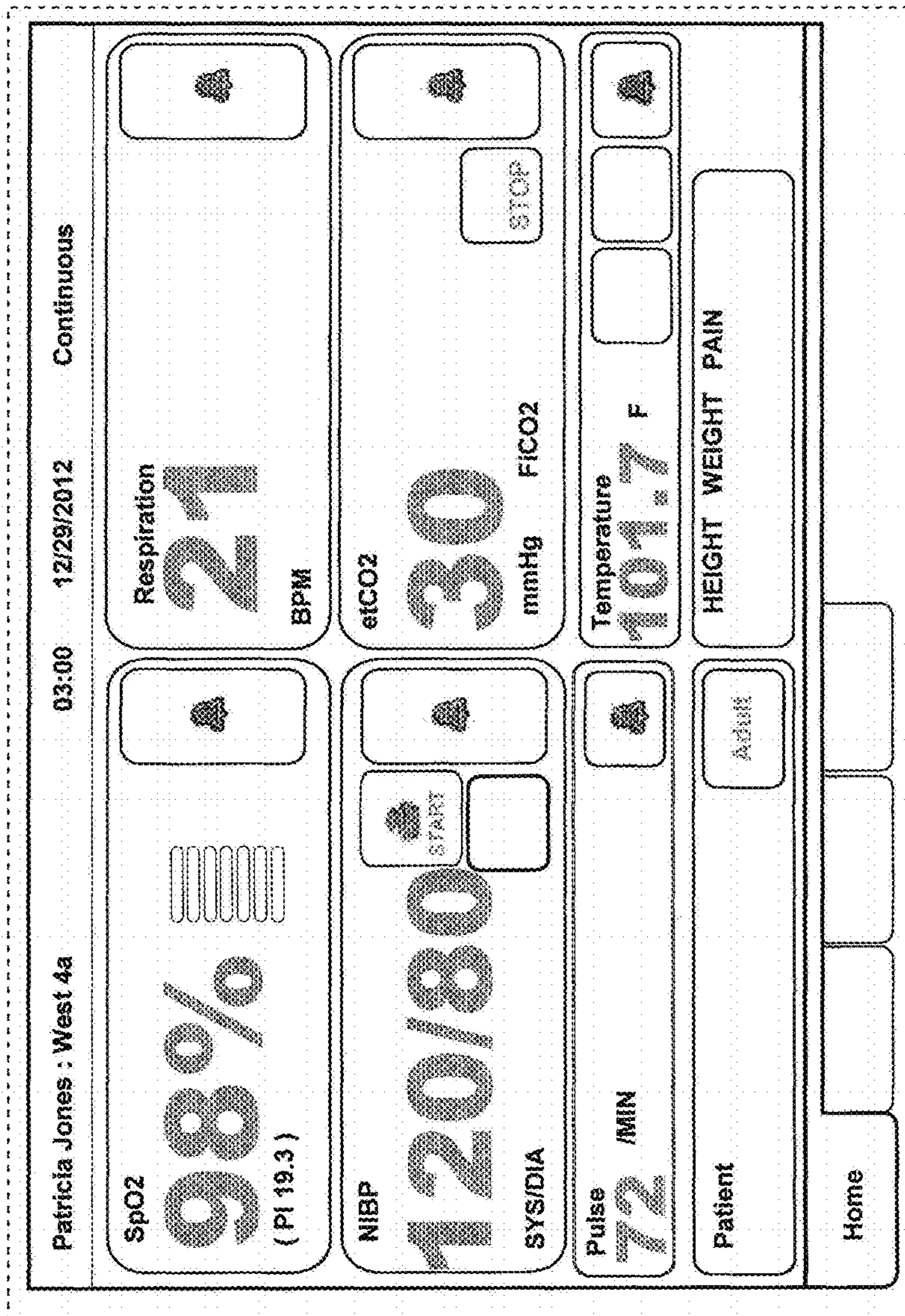


FIG. 6

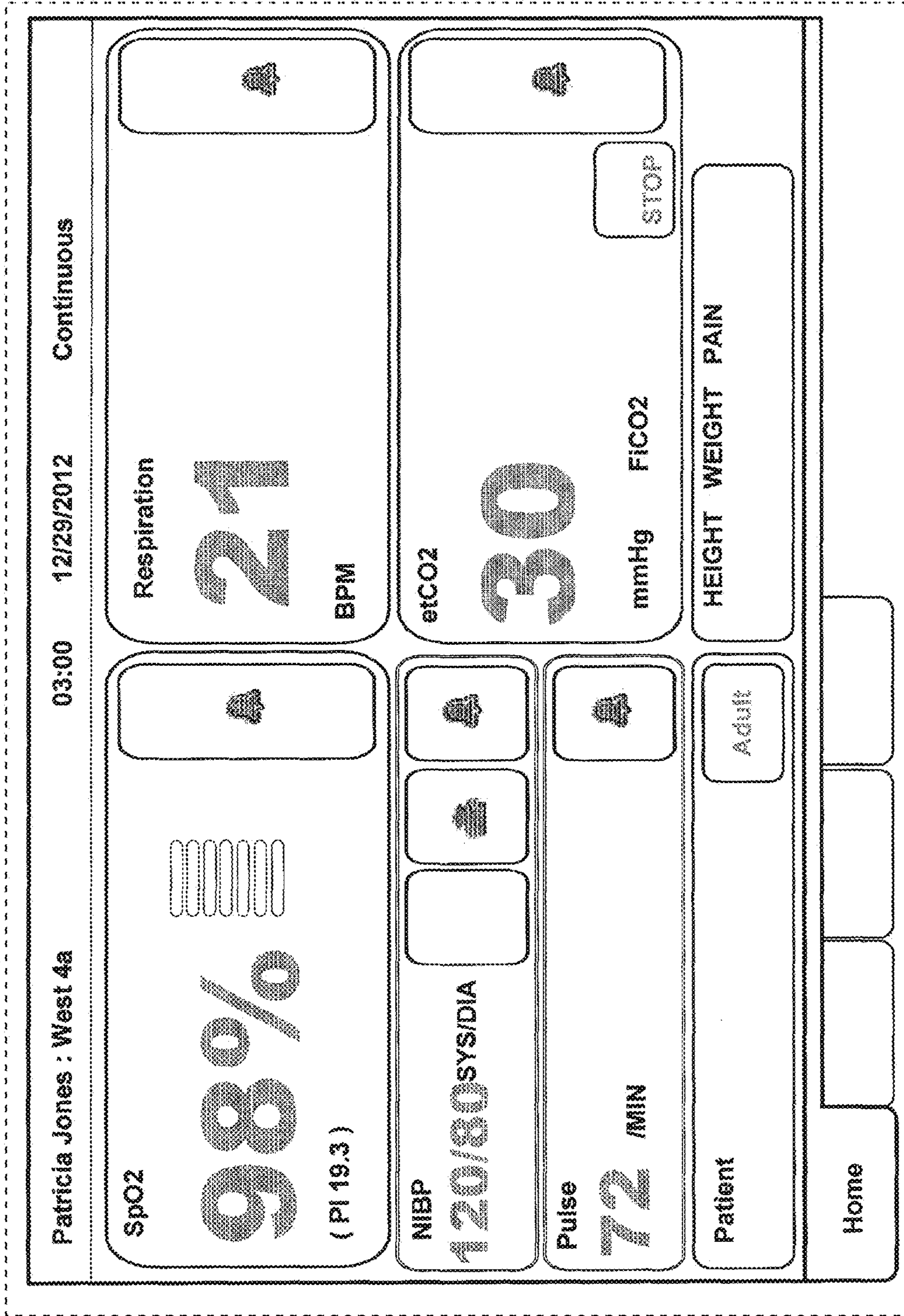


FIG. 7

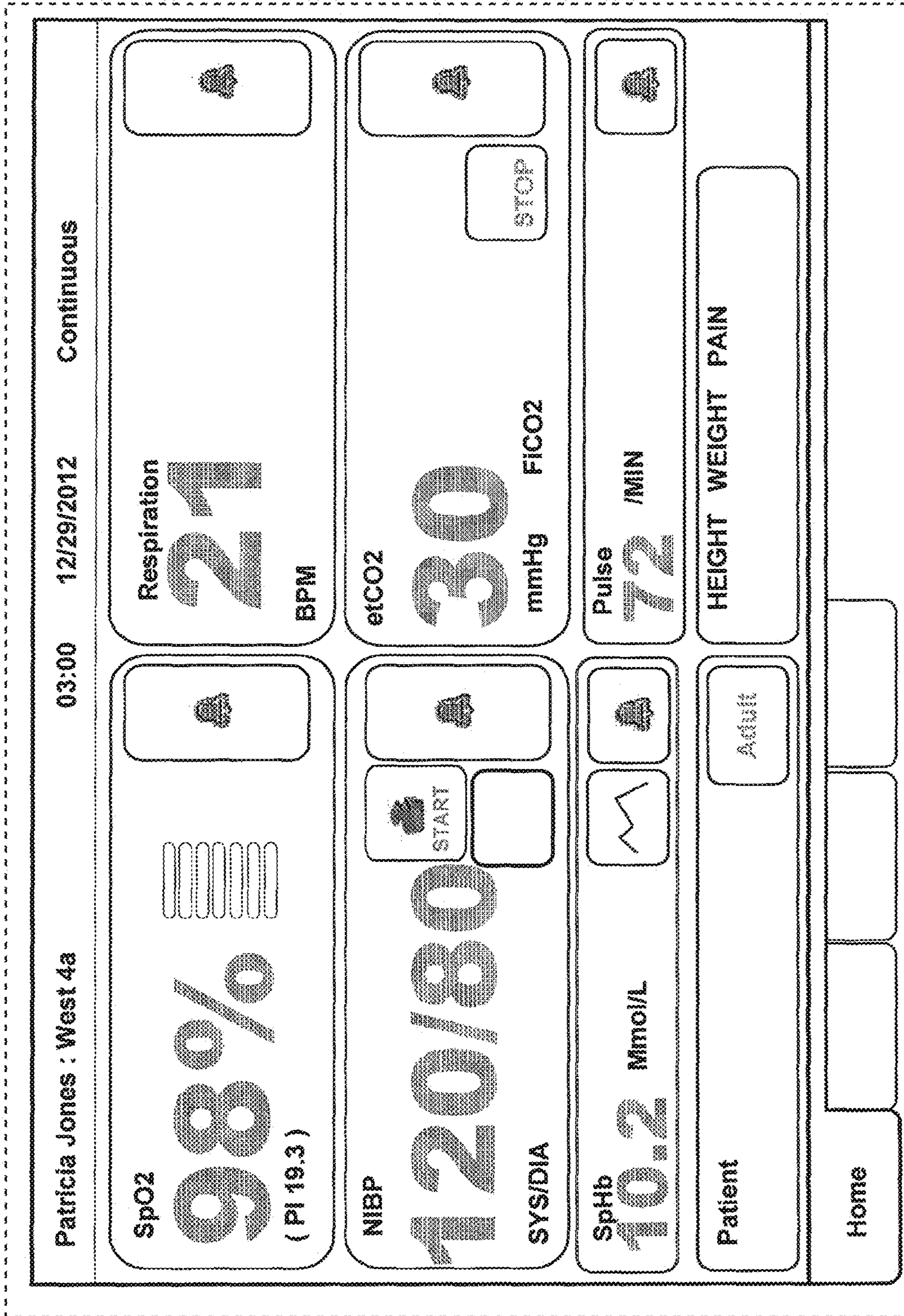


FIG. 8

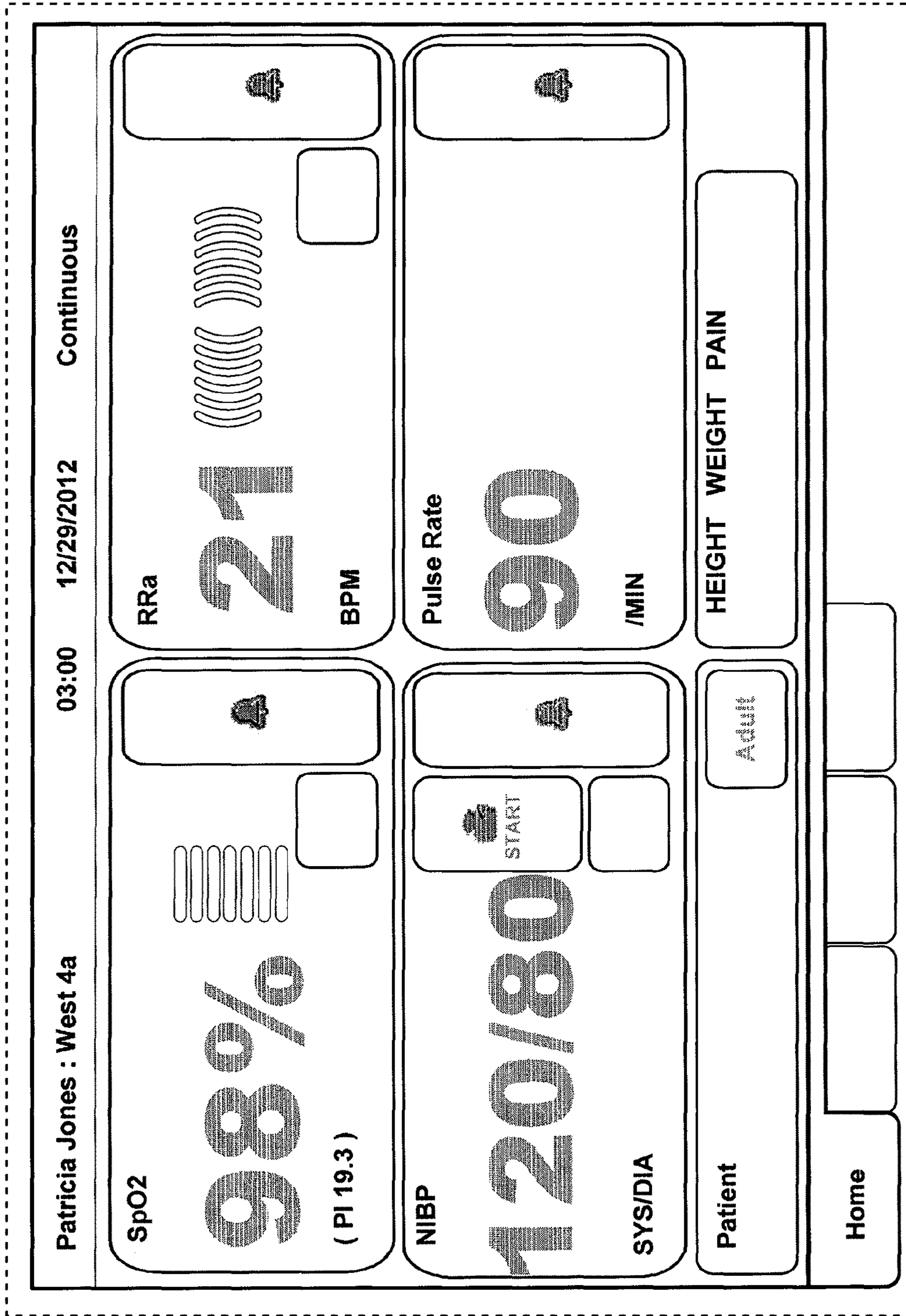


FIG. 9

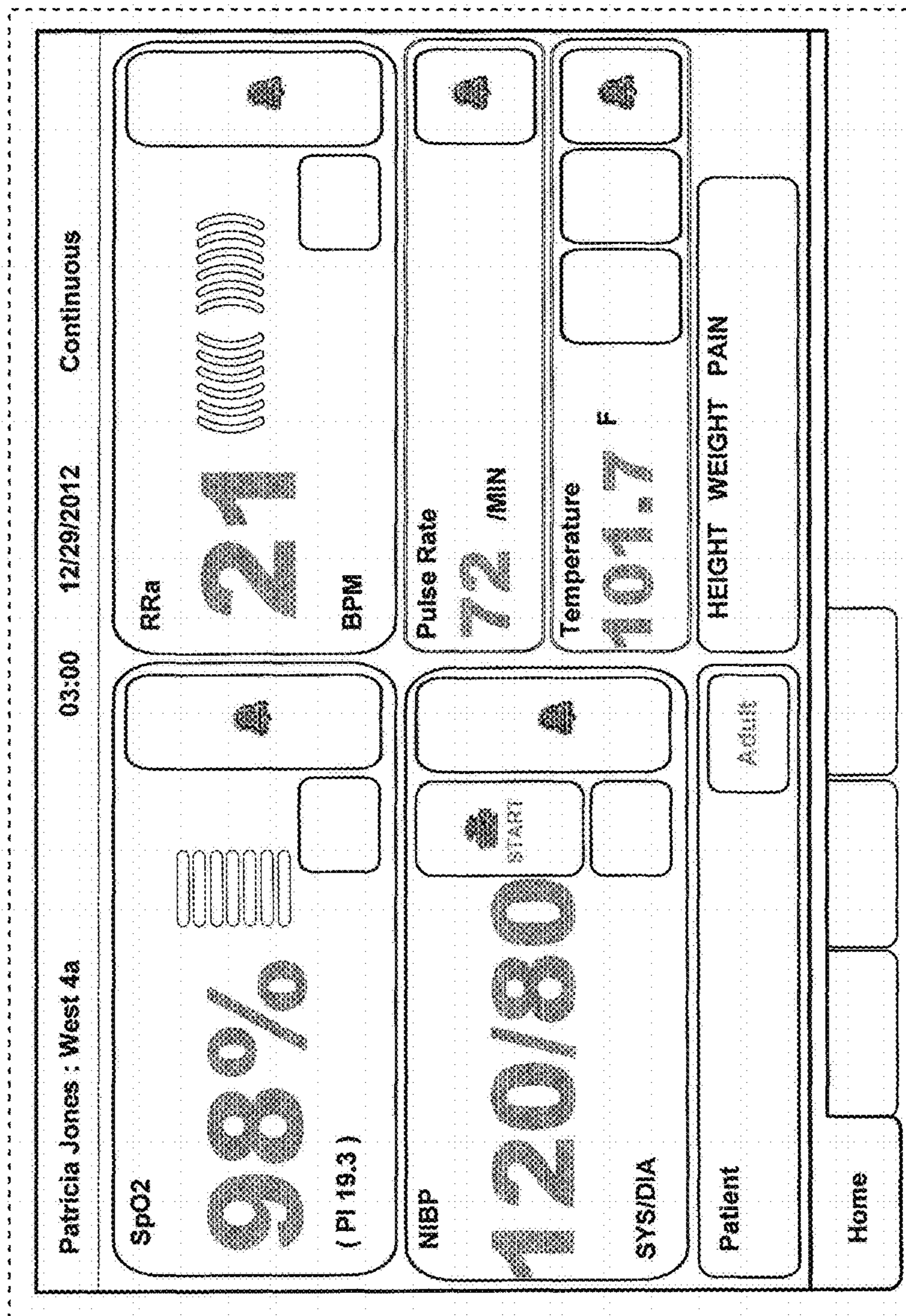


FIG. 10

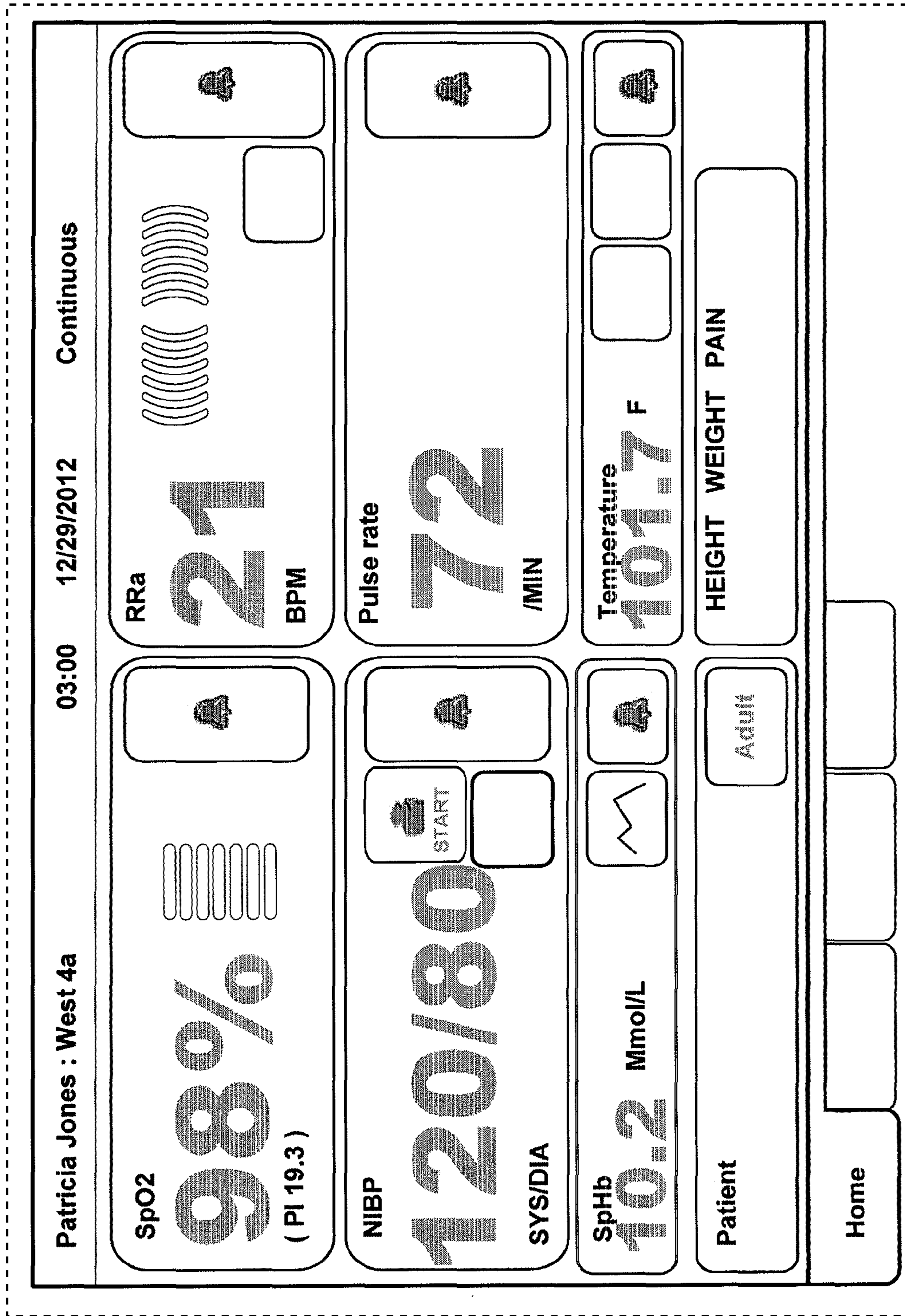


FIG. 11

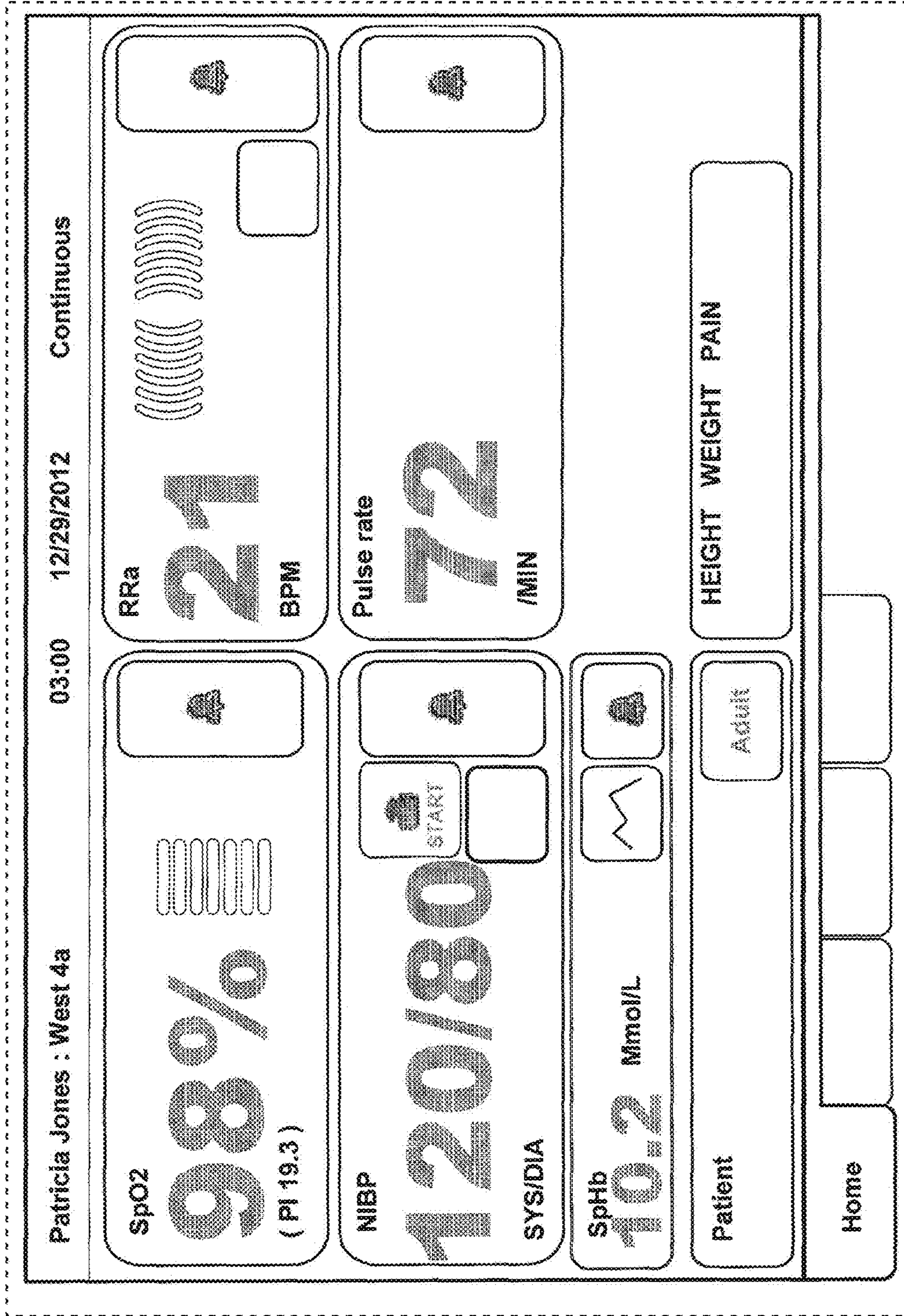


FIG. 12