



NOTICE OF ALLOWANCE AND FEE(S) DUE

40401 7590 10/12/2011
HersHKovitz & Associates, LLC
2845 Duke Street
Alexandria, VA 22314

EXAMINER
LLOYD, EMILY M
ART UNIT PAPER NUMBER

3736
DATE MAILED: 10/12/2011

Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO.

TITLE OF INVENTION: FETAL WELLBEING MONITORING APPARATUS AND PAD THEREFOR

Table with 7 columns: APPLN. TYPE, SMALL ENTITY, ISSUE FEE DUE, PUBLICATION FEE DUE, PREV. PAID ISSUE FEE, TOTAL FEE(S) DUE, DATE DUE

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

**PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE  
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 P.O. Box 1450  
 Alexandria, Virginia 22313-1450  
 or Fax (571)-273-2885**

**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

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 2845 Duke Street  
 Alexandria, VA 22314

**Certificate of Mailing or Transmission**

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

|                    |
|--------------------|
| (Depositor's name) |
| (Signature)        |
| (Date)             |

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 12/452,670      | 01/14/2010  | Avraham Berger       | PN1791165           | 4251             |

TITLE OF INVENTION: FETAL WELLBEING MONITORING APPARATUS AND PAD THEREFOR

| APPLN. TYPE    | SMALL ENTITY | ISSUE FEE DUE | PUBLICATION FEE DUE | PREV. PAID ISSUE FEE | TOTAL FEE(S) DUE | DATE DUE   |
|----------------|--------------|---------------|---------------------|----------------------|------------------|------------|
| nonprovisional | YES          | \$870         | \$300               | \$0                  | \$1170           | 01/12/2012 |

| EXAMINER       | ART UNIT | CLASS-SUBCLASS |
|----------------|----------|----------------|
| LLOYD, EMILY M | 3736     | 600-591000     |

|   |   |
|---|---|
| <p>1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).</p> <p><input type="checkbox"/> Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.</p> <p><input type="checkbox"/> "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. <b>Use of a Customer Number is required.</b></p> | <p>2. For printing on the patent front page, list</p> <p>(1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____</p> <p>(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____</p> <p>3 _____</p> |
|---|---|

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE \_\_\_\_\_ (B) RESIDENCE: (CITY and STATE OR COUNTRY) \_\_\_\_\_

Please check the appropriate assignee category or categories (will not be printed on the patent) :  Individual  Corporation or other private group entity  Government

|   |  |
|---|--|
| <p>4a. The following fee(s) are submitted:</p> <p><input type="checkbox"/> Issue Fee</p> <p><input type="checkbox"/> Publication Fee (No small entity discount permitted)</p> <p><input type="checkbox"/> Advance Order - # of Copies _____</p> | <p>4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)</p> <p><input type="checkbox"/> A check is enclosed.</p> <p><input type="checkbox"/> Payment by credit card. Form PTO-2038 is attached.</p> <p><input type="checkbox"/> The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).</p> |
|---|--|

5. Change in Entity Status (from status indicated above)

a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.  b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_

Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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12/452,670 01/14/2010 Avraham Berger PN1791165 4251

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EXAMINER

LLOYD, EMILY M

ART UNIT PAPER NUMBER

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DATE MAILED: 10/12/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)

(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 212 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 212 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

## Privacy Act Statement

**The Privacy Act of 1974 (P.L. 93-579)** requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

**Notice of Allowability**

Application No.

12/452,670

Examiner

EMILY LLOYD

Applicant(s)

BERGER ET AL.

Art Unit

3736

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

- 1.  This communication is responsive to Applicant's 14 January 2010 filing.
- 2.  An election was made by the applicant in response to a restriction requirement set forth during the interview on \_\_\_\_\_; the restriction requirement and election have been incorporated into this action.
- 3.  The allowed claim(s) is/are 1-14 and 16-34.
- 4.  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a)  All    b)  Some\*    c)  None    of the:
    - 1.  Certified copies of the priority documents have been received.
    - 2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    - 3.  Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

- 5.  A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  - 6.  CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a)  including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1)  hereto or 2)  to Paper No./Mail Date \_\_\_\_\_.
    - (b)  including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
- 7.  DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- 1.  Notice of References Cited (PTO-892)
- 2.  Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3.  Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date 20100326
- 4.  Examiner's Comment Regarding Requirement for Deposit of Biological Material
- 5.  Notice of Informal Patent Application
- 6.  Interview Summary (PTO-413), Paper No./Mail Date 20110922.
- 7.  Examiner's Amendment/Comment
- 8.  Examiner's Statement of Reasons for Allowance
- 9.  Other \_\_\_\_\_.

/Max Hindenburg/  
Supervisory Patent Examiner, Art Unit 3736

|   |                                      |                                      |  |
|---|--------------------------------------|--------------------------------------|--|
| <b>Examiner-Initiated Interview Summary</b> | <b>Application No.</b><br>12/452,670 | <b>Applicant(s)</b><br>BERGER ET AL. |  |
|   | <b>Examiner</b><br>EMILY LLOYD       | <b>Art Unit</b><br>3736              |  |

All participants (applicant, applicant's representative, PTO personnel):

- (1) EMILY LLOYD. (3)\_\_\_\_\_.
- (2) Harold Novick. (4)\_\_\_\_\_.

Date of Interview: 22 September 2011.

Type:  Telephonic  Video Conference  
 Personal [copy given to:  applicant  applicant's representative]

Exhibit shown or demonstration conducted:  Yes  No.  
If Yes, brief description: \_\_\_\_\_.

Issues Discussed 101 112 102 103 Others  
(For each of the checked box(es) above, please describe below the issue and detailed description of the discussion)

Claim(s) discussed: 1-34.

Identification of prior art discussed: None.

**Substance of Interview**

(For each issue discussed, provide a detailed description and indicate if agreement was reached. Some topics may include: identification or clarification of a reference or a portion thereof, claim interpretation, proposed amendments, arguments of any applied references etc...)

The Applicant agreed to the proposed Examiner's amendments to place the application in condition for allowance.

**Applicant recordation instructions:** It is not necessary for applicant to provide a separate record of the substance of interview.

**Examiner recordation instructions:** Examiners must summarize the substance of any interview of record. A complete and proper recordation of the substance of an interview should include the items listed in MPEP 713.04 for complete and proper recordation including the identification of the general thrust of each argument or issue discussed, a general indication of any other pertinent matters discussed regarding patentability and the general results or outcome of the interview, to include an indication as to whether or not agreement was reached on the issues raised.

Attachment

/Emily M Lloyd/  
Examiner, Art Unit 3736

### EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Harold Novick on 22 September 2011.

The application has been amended as follows:

Claim 15 is cancelled.

Claims 1-14, 16-27 and 30 are amended as follows:

1. ~~A fetal Fetal~~ Fetal wellbeing monitoring apparatus for providing fetal wellbeing information, the apparatus comprising:

(a) a generally flattened hemispherical housing having ~~a generally~~ an annular peripheral portion with an upright sloping topside and ~~a generally~~ an annular flat underside defining a central sensor aperture for respectively facing away from and towards an expectant mother's abdomen,

said housing including a fetal motor activity sensor with a rigidly mounted downward depending rounded contact protruding through said sensor aperture for indenting an expectant mother's abdomen on intimately juxtaposing said housing's underside thereagainst for sensing fetal motor activity; and

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(b) a turret-like user interface having a user ~~operated~~ operable control panel raised with respect to said housing's topside for controlling operation of the fetal wellbeing monitoring apparatus and providing fetal wellbeing information to the expectant mother.

2. The apparatus ~~Apparatus~~ according to claim 1 wherein said user interface includes an illumination arrangement for providing illumination responsive to said fetal motor activity visible along a first line of sight directed toward said user interface from above and a second line of sight ~~generally perpendicular to said first line of sight and~~ directed toward said user interface from a side direction.

3. The apparatus ~~Apparatus~~ according to claim 2 wherein said illumination arrangement surrounds said control panel.

4. The apparatus ~~Apparatus~~ according to claim 1 wherein said user interface includes a neck portion and an uppermost surface with a surround flared with respect to said neck portion for assisting manipulation of the apparatus.

5. The apparatus ~~Apparatus~~ according to claim 1 wherein said control panel includes a central display screen for providing visual indications regarding the operation of the fetal wellbeing monitoring apparatus and a peripheral arrangement of pushbuttons



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surrounding said display screen for controlling operation of the fetal wellbeing monitoring apparatus.

6. The apparatus ~~Apparatus~~ according to claim 1 wherein said housing's underside's ~~generally~~ annular peripheral portion includes a series of spaced apart rounded projections protruding less from said housing's underside than said fetal motor activity sensor's rounded contact ~~thereby enabling to enable~~ shear waves to travel across an expectant mother's abdomen.

7. The apparatus ~~Apparatus~~ according to claim 1 and further comprising a loudspeaker for issuing a first set of operation sounds regarding operation of the fetal wellbeing monitoring apparatus and a second set of movement sounds different from said first set of operation sounds and responsive to fetal motor activity.

8. The apparatus ~~Apparatus~~ according to claim 1 and further comprising a maternal body movement detection module for issuing an audible warning indicative of an expectant mother's body movement hindering fetal wellbeing monitoring.

9. The apparatus ~~Apparatus~~ according to claim 1 and further comprising a non-magnetic loudspeaker for issuing sounds.

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10. ~~The apparatus~~ Apparatus according to claim 1 wherein said fetal motor activity sensor includes a base plate with a base plate topside and a base plate underside including said rounded contact for respectively facing away from and towards an expectant mother's abdomen,

said base plate topside having at least one planar strain gauge film element defining a nominal measurement plane in a non-flexed state, and having a variable electrical property proportional to resilient elastic flexion in a transverse direction to said measurement plane on application of a bending moment,

said at least one strain gauge film element ~~assuming~~ configured to assume a nominal flexed state on intimate juxtapositioning against an expectant mother's abdomen in the absence of fetal motor activity, and further configured to flex whereupon transient abdominal movements of the expectant mother's abdomen impart corresponding flexural movements therein in said transverse direction for inducing and induce corresponding changes in said variable electrical property when transient abdominal movements of the expectant mother's abdomen impart flexural movements onto said at least one strain gauge film element; and

(c) a fetal motor activity determination module for processing time varying information from said fetal motor activity sensor ~~for determining~~ to determine fetal motor activity ~~inducing at least some of said transient abdominal movements for providing~~ and to provide fetal wellbeing information to the expectant mother.

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11. The apparatus ~~Apparatus~~ according to claim 10 wherein said base plate includes a pair of opposite elongated weakened regions for defining a major base plate surround supporting a minor base plate beam between a pair of ~~generally parallel and opposite~~ beam supports for resilient elastic flexion relative to said major base plate surround and said minor base plate beam supports said at least one elongated planar strain gauge film element.

12. The apparatus ~~Apparatus~~ according to claim 11 wherein said pair of opposite elongated weakened regions ~~is constituted by~~ comprises a pair of throughgoing slits.

13. The apparatus ~~Apparatus~~ according to claim 10 wherein said base plate topside has a pair of spaced apart planar strain gauge film elements for providing phase information regarding said transient abdominal movements.

14. A fetal ~~Fetal~~ wellbeing monitoring apparatus for providing fetal wellbeing information to an expectant mother, the apparatus comprising:

(a) a fetal motor activity sensor including a base plate with a base plate topside and a base plate underside for respectively facing away from and towards an expectant mother's abdomen,

said base plate topside having at least one planar strain gauge film element defining a nominal measurement plane in a non-flexed state, and having a variable

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electrical property proportional to resilient elastic flexion in a transverse direction to said measurement plane on application of a bending moment,

said base plate underside having a rigidly mounted downward depending protruding contact for indenting an expectant mother's abdomen on intimately juxtapositioning said base plate underside thereagainst,

said at least one planar strain gauge film element ~~assuming~~ configured to assume a nominal flexed state on intimate juxtapositioning against an expectant mother's abdomen in the absence of fetal motor activity, and further configured to flex whereupon transient abdominal movements of the expectant mother's impart corresponding flexural movements therein in said transverse direction for inducing and induce corresponding changes in said variable electrical property when transient abdominal movements of the expectant mother's abdomen impart flexural movements onto said at least one strain gauge film element; and

(b) a fetal motor activity determination module for processing time varying information from said fetal motor activity sensor ~~for determining~~ to determine fetal motor activity ~~inducing at least some of said transient abdominal movements for providing~~ and to provide fetal wellbeing information to the expectant mother;

wherein said base plate includes a pair of opposite elongated weakened regions for defining a major base plate surround supporting a minor base plate beam between a pair of opposite beam supports for resilient elastic flexion relative to said major base plate surround and said minor base plate beam supports said at least one elongated planar strain gauge film element.

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16. ~~The apparatus Apparatus~~ according to claim ~~15~~ 14 wherein said pair of opposite elongated weakened regions ~~is constituted by~~ comprises a pair of throughgoing slits.

17. ~~The apparatus Apparatus~~ according to claim 14 wherein said base plate topside has a pair of spaced apart planar strain gauge film elements for providing phase information regarding said transient abdominal movements.

18. ~~The apparatus Apparatus~~ according to claim 14 and further comprising:

(c) a generally flattened hemispherical housing having ~~a generally~~ an annular peripheral portion with an upright sloping topside and ~~a generally~~ an annular flat underside defining a central sensor aperture for respectively facing away from and towards the expectant mother's abdomen wherein said housing includes said fetal motor activity sensor with said rigidly mounted downward depending rounded contact protruding through said central sensor aperture, and

(d) a turret-like user interface having a user ~~operated~~ operable control panel raised with respect to said housing's topside for controlling operation of the fetal wellbeing monitoring apparatus and providing fetal wellbeing information to the expectant mother.

19. ~~The apparatus Apparatus~~ according to claim 18 wherein said user interface includes an illumination arrangement for providing illumination responsive to said fetal motor

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activity along a first line of sight directed toward said user interface from above and a second line of sight ~~generally perpendicular to said first line of sight and~~ directed toward said user interface from a side direction.

20. ~~The apparatus Apparatus~~ according to claim 19 wherein said illumination arrangement surrounds said control panel.

21. ~~The apparatus Apparatus~~ according to claim 18 wherein said user interface includes a neck portion and an uppermost surface with a surround flared with respect to said neck portion for assisting manipulation of the apparatus.

22. ~~The apparatus Apparatus~~ according to claim 18 wherein said control panel includes a central display screen for providing visual indications regarding operation of the fetal wellbeing monitoring apparatus and a peripheral arrangement of pushbuttons surrounding said display screen for controlling operation of the fetal wellbeing monitoring apparatus.

23. ~~The apparatus Apparatus~~ according to claim 18 wherein said housing's underside's ~~generally~~ annular peripheral portion includes a series of spaced apart rounded projections protruding less from said housing's underside than said fetal motor activity sensor's rounded contact ~~thereby enabling to enable~~ shear waves to travel across an expectant mother's abdomen.

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24. ~~The apparatus Apparatus~~ according to claim 14 further comprising a loudspeaker for issuing a first set of operation sounds regarding operation of the fetal wellbeing monitoring apparatus and a second set of movement sounds different from said first set of operation sounds and responsive to fetal motor activity.

25. ~~The apparatus Apparatus~~ according to claim 14 and further comprising a maternal body movement detection module for issuing an audible warning indicative of an expectant mother's body movement hindering fetal wellbeing monitoring.

26. ~~The apparatus Apparatus~~ according to claim 14 and including a non-magnetic loudspeaker for issuing sounds.

27. A two-ply pad for use with a fetal wellbeing monitoring apparatus including a generally flattened hemispherical housing having ~~a generally~~ an annular peripheral portion with an upright sloping topside and ~~a generally~~ an annular flat underside defining a central sensor aperture for respectively facing away from and towards an expectant mother's abdomen, and a turret-like user interface having a user ~~operated~~ operable control panel raised with respect to the housing's topside for controlling operation of the fetal wellbeing monitoring apparatus and providing fetal wellbeing information to the expectant mother, the pad comprising:

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(a) a ~~generally~~ circular base sheet with an underside for intimate juxtapositioning against the expectant mother's abdomen, ~~a generally~~ an annular top sheet overlying said base sheet, and a ~~generally annular~~ seam for attaching said top sheet to said bottom sheet, said top sheet having a central aperture whereby said top sheet and said base sheet define a ~~generally annular~~ pocket for stretchingly embracing the housing's peripheral portion with ~~it's the underside of the base sheet~~ of the base sheet facing towards the expectant mother's abdomen on dressing the pad onto the fetal wellbeing monitoring apparatus whereupon the control panel protrudes through said central aperture for enabling user access to the control panel's topside facing away from the expectant mother's abdomen; and

(b) ~~a generally~~ an annular peripheral biocompatible adhesive surface on at least said base sheet's underside for removable intimate adhesion of the pad on the expectant mother's abdomen.

30. The pad according to claim 27 wherein said seam divides said adhesive surface into a pair of concentric sections ~~of approximately equal radial length~~.

The following is an examiner's statement of reasons for allowance: a housing including a fetal motor activity sensor with a rigidly mounted downward depending rounded contact protruding through a sensor aperture and a turret-like user interface having a user operated control panel raised with respect to said housing's topside for controlling operation of the fetal wellbeing monitoring apparatus and providing fetal



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wellbeing information to the expectant mother, in addition to the other limitations of claim 1, is not disclosed or fairly taught in the prior art; a fetal motor activity sensor including a base plate, the base plate underside having a rigidly mounted downward depending rounded contact protruding through a sensor aperture and the base plate topside having a pair of spaced apart planar strain gauge film elements for providing phase information regarding transient abdominal movements, in addition to the other limitations of claim 14, is not disclosed or fairly taught in the prior art; and the pad comprising a pocket for stretchingly embracing the housing's peripheral portion and whereupon the control panel protrudes through the central aperture for enabling user access to the control panel's topside facing away from the expectant mother's abdomen, in addition to the other limitations of claim 27, is not disclosed or fairly taught in the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EMILY LLOYD whose telephone number is (571)272-2951. The examiner can normally be reached on Monday through Friday 8:30 AM - 5 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on 571-272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Emily M Lloyd  
Examiner  
Art Unit 3736

/EML/

/Max Hindenburg/  
Supervisory Patent Examiner, Art Unit 3736