UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO. : 8,424,930 B2
APPLICATION NO. : 12/568335
DATED : April 23, 2013
INVENTOR(S) : Matsubara et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the Title Page:

The first or sole Notice should read --

Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 583 days.

Signed and Sealed this
Twenty-third Day of May, 2017

Michelle K. Lee
Director of the United States Patent and Trademark Office

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

21967 7590 09/09/2014

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

EXAMINER	
LUGO, CARLOS	

ART UNIT	PAPER NUMBER
3674	

MAIL DATE	DELIVERY MODE
09/09/2014	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

In re Patent No. 8,424,930	:
Issued: April 23, 2013	: ON REDETERMINATION OF
Application No. 12/568,335	: PATENT TERM ADJUSTMENT
Filed: September 28, 2009	:
Atty. Dkt. No.: 75575.000006	:

This decision is in response to the "REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT UNDER 37 C.F.R. § 1.705(d)," filed May 16, 2013, requesting that the patent term adjustment be increased from 530 days to 656 days.

The Office has re-determined the PTA to be 583 days.

This redetermination of patent term adjustment is not the Director's decision on the applicant's request for reconsideration within the meaning of 35 U.S.C. 154(b)(4) that triggers a 180-day period for applicant disagreeing with the Office redetermination to commence a civil action in the District Court for the Eastern District of Virginia.

Relevant Procedural History

The above-identified application matured into U.S. Patent No. 8,424,930 on April 23, 2013. The patent issued with a patent term adjustment of 530 days. Patentee references Exelixis Inc. v. Kappos, Case No. 1:12cv96 (E.D. Va. November 1, 2012) and assert that the patent is entitled to 656 days of adjustment.

In view of Novartis AG v. Lee, 740 F.3d 593 (Fed. Cir. 2014), the Office has recalculated the patent term adjustment in light of the Federal Circuit decision and finds that the patent term adjustment is 583 days.

Decision

Patentee's arguments have been carefully considered. Upon review, the USPTO finds that patentee is entitled to 583 days of PTA. The Office has revisited the amount of "B" delay under 35 U.S.C. § 154(b)(1)(B) and the amount of overlapping days under 35 U.S.C. § 154(b)(2)(A) pursuant to the Federal Circuit's decision in Novartis, supra.

Patentee and the Office are in agreement regarding the amount of "A" delay under 35 U.S.C. § 154(b)(1)(A) and 37 C.F.R. 1.702(a).

Patentee and the Office are in agreement as to the total "applicant delay" under 35 U.S.C. § 154(b)(2)(C).

Patentee and the Office are not in agreement with respect to the "B" delay under 35 U.S.C. § 154(b)(1)(B)(i) and 37 C.F.R. 1.702(b). As for the amount of "B" delay, the Federal Circuit reviewed the statutory interpretation of 35 U.S.C. § 154(b)(1)(B)(i) and issued a decision regarding the effects of a Request for Continued Examination ("RCE") on "B" delay in Novartis AG v. Lee, 740 F.3d 593 (Fed. Cir. 2014). In Novartis, the Federal Circuit agreed with the Office that "no ["B" delay] adjustment time is available for any time in continued examination, even if the continued examination was initiated more than three calendar years after the application's filing." Novartis, 740 F.3d at 601. However, the Novartis court found that if the Office issues a notice of allowance after an RCE is filed, the period after the notice of allowance should not be excluded from the "B" delay period but should be counted as "B" delay. Id. at 602. The Federal Circuit issued its mandate in the Novartis appeal on March 10, 2014.

Pursuant to the Novartis decision, the UPSTO has determined that patentee is entitled to 134 days of "B" delay. In this case, the application was filed on September 28, 2009 and the patent issued on April 23, 2013. Thus, the application was pending for 1304 days. Under 35 U.S.C. § 154(b)(1)(B)(i), the first period of "B" delay was 81 days, beginning on September 29, 2012 and ending on December 18, 2012 (the day before the RCE was filed). The second period of "B" delay was 53 days, beginning March 2, 2013, the day after the Notice of Allowance was mailed, and ending April 23, 2013, the date that the patent issued. During this period, applicant filed an RCE on December 19, 2012. The Office mailed a Notice of Allowance on March 1, 2013. Under 35 USC 154(b)(1)(B)(i), the time period consumed by continued examination ("RCE period") began on December 19, 2012 and ended on March 1, 2013, i.e., 73 days. Subtracting the RCE period from the total number of days the application was pending results in 1231 days. Thus, for purposes of "B" delay, the application was pending for 1231 - 1097 [i.e., 3 years from the actual filing date (INCLUDING A LEAP YEAR)] = 134 days beyond the three-year anniversary of the filing date. The 134-day period of "B" delay extends from September 29, 2012 to December 18, 2012 (81 days) and March 2, 2013 to April 23, 2013 (53 days).

In Wyeth v. Kappos, 591 F.3d 1364 (Fed. Cir. 2010), the United States Court of Appeals for the Federal Circuit determined that overlap occurs when the calendar days overlap between the "A" and "B" delays. Under this interpretation, the Office finds that there are zero overlapping days of Office delay.

Overall PTA Calculation

Formula:

"A" delay + "B" delay + "C" delay - Overlap - applicant delay = X

USPTO's Calculation:

477 + 134 + 0 - 0 - 28 = 583

Patentee's Calculation

477 + 207 – 0 – 28 = 656

Conclusion

Patentee is entitled to PTA of 583 days. Using the formula "A" delay + "B" delay + "C" delay - overlap - applicant delay = X, the amount of PTA is calculated as following: 477 + 134 + 0 - 0 - 28 = 583 days.

Patentee has two (2) months from the date of the Office's redetermination of patent term adjustment to request reconsideration of the patent term adjustment if patentee continues to disagree with this determination (no petition fee). This two month period is extendible under 37 CFR 1.136(a). The new/renewed request for reconsideration may be filed without any additional fee. However, patentee who responds more than two months after the mail date of the redetermination is required to pay the extension of time fee. After the period of time to respond has expired, the Office will sua sponte issue a certificate of correction adjusting the PTA to 583 days.

Telephone inquiries specific to this matter should be directed to the undersigned at (571) 272-3205.

/ALESIA M. BROWN/

Alesia M. Brown
Attorney Adviser
Office of Petitions

Enclosure: Copy of DRAFT Certificate of Correction

DRAFT COPY

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT : 8,424,930

DATED : April 23, 2013

INVENTOR(S) : Matsubara, et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

On the cover page,

[*] Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 USC 154(b) by 530 days

Delete the phrase "by 530 days" and insert – by 583 days--

Office of Petitions: Routing Sheet

Application No. 12568335

This application is being forwarded to your office for further processing. A decision has been rendered on a petition filed in this application.

- [ ] **GRANTED**
- [x] **DISMISSED**
- [ ] **DENIED**

Office of Petitions: Decision Count Sheet

Mailing Month

Application No. 12568335

12568335

For US serial numbers: enter number only, no slashes or commas. Ex: 10123456
For PCT: enter "51+single digit of year of filing+last 5 numbers", Ex. for PCT/US05/12345, enter 51512345

Deciding Official: BROWN, ALESIA

Count (1) - Palm Credit 12/568,335

Decision: DISMISSED

FINANCE WORK NEEDED
☐ Select Check Box for YES

DISMISSED

Decision Type: 547 - PTA Recalculation - Novartis Decision (2014)

547

Notes:

Count (2)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Count (3)

Decision: n/a

FINANCE WORK NEEDED
☐ Select Check Box for YES

Decision Type: NONE

Notes:

Initials of Approving Official (if required)

If more than 3 decisions, attach 2nd count sheet & mark this box

Printed on: *9/8/2014*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Number	:	8,424,930	Issue Date:	April 23, 2013
Application Number	:	12/568,335	Confirmation No.:	6169
Applicant	:	Terumi Matsubara, *et al.*		
Filed	:	September 28, 2009		
Title	:	INCUBATOR		
TC/Art Unit	:	3674		
Examiner:	:	Carlos Lugo		
Docket No.	:	75575.000006		
Customer No.	:	**21967**		

MAIL STOP PATENT TERM EXT.
Commissioner for Patents
P.O. Box 1450
Alexandria, VA. 22313-1450

REQUEST FOR RECONSIDERATION OF PATENT TERM ADJUSTMENT UNDER 37 C.F.R. § 1.705(d)

Dear Sir:

Patent Owner submits herein a Request for Reconsideration of Patent Term Adjustment under 37 C.F.R. § 1.705(d) ("Request") of the 530 days indicated for the above-identified patent. Patent Owner respectfully requests that a minimum patent term adjustment of **656 days** be granted.

U.S. Patent No. 8,424,930 ("the '930 patent") issued less than two-months from the date of this Request. Accordingly, as required by 37 C.F.R. § 1.705(d), this request is timely.

In accordance with 37 C.F.R. § 1.705(b)(1), the USPTO is authorized to charge the fee of $200 as set forth in 37 C.F.R. § 1.18(e) to the undersigned's **Deposit Account No. 50-0206**.

Remarks begin on page 2.

REMARKS

Patent Owner requests reconsideration under 37 C.F.R. § 1.705(d) of the patent term adjustment for U.S. Patent No. 8,424,930 ("the '930 patent"). In view of the following, it is respectfully requested that Patent Owner be granted a minimum patent term adjustment of at least **656 days**.

Statement Under 37 C.F.R. § 1.705(b)(2)

The patent term adjustment ("PTA") under 35 U.S.C. § 154(b) listed on PAIR for the '930 patent is 530 days. *See* **Exhibit A** (USPTO Patent Term Adjustment History). This determination is in error because the USPTO failed to issue a patent within three years of the actual filing date of the above-identified patent in accordance with 37 C.F.R. § 1.702(b). *See Exelixis, Inc. v. Kappos,* No.1:12cv96, slip op. (E.D. Va. November 1, 2012) [attached]

A. *Exelixis v. Kappos*

In *Exelixis v. Kappos*, the U.S. District Court for the Eastern District of Virginia considered the USPTO's interpretation of 35 U.S.C. § 154(b)(1)(B). This section provides a guarantee of patent term adjustment ("PTA") of a one-day term extension for every day it takes the patent to issue after three years from the filing date. *See* 35 U.S.C. § 154(b)(1)(B); *see also* 37 C.F.R. § 1.702(b). The period that begins after the three-year window is referred to as the "B period."

The filing of an RCE can impact the PTA for B period under 35 U.S.C. § 154(b)(1)(B)(i):

> (B) GUARANTEE OF NO MORE THAN 3-YEAR APPLICATION PENDENCY.- Subject to the limitations under paragraph (2), if the issue of an original patent is delayed due to the failure of the United States Patent and Trademark Office to issue a patent within 3 years after the actual filing date of the application in the United States, not including-
>
> (i) any time consumed by continued examination of the application requested by the applicant under section 132(b) ....

The question considered by the court was "whether [35 U.S.C.] § 154(b)(1)(B) requires that . . . any PTA be reduced by time attributable to an RCE, where . . . the RCE is filed after the expiration of the three-year guarantee period specified in that statute." *Exelixis, Inc. v. Kappos*, No.1:12cv96, slip op. at 5 (E.D. Va. November 1,

2012). Under the USPTO's interpretation, once an RCE is filed, the patent application no longer accrues B period delays (*e.g.*, the RCE "tolls" the B period). The court disagreed. It concluded that that the filing of an RCE after the three-year time period does not toll the calculation of the PTA. *Id.* at 16. Therefore, if an RCE if filed *after* the three-year time period, the patent application continues to accrue PTA under a B period. *Id.*

Calculation of PTA Under 37 C.F.R. § 1.703

The following facts are relevant for determining PTA for the '930 patent:

- September 28, 2009— U.S. Patent Application No. 12/568,335 was filed.
- November 28, 2010— the "fourteen month date" by which an Office Action should be mailed (*i.e.*, beginning of "A period").
- March 19, 2012— Non-Final Office Action is mailed (*i.e.*, end of "A period")
- September 28, 2012— three years from filing date of application (*i.e.*, beginning of "B period").
- December 19, 2012—Request for Continued Examination filed.
- April 23, 2013—U.S. Patent No. 8,424,930 issued (*i.e.*, end of "B period").

1. "A" Period under 37 C.F.R. § 1.702(a)(2)

The number of days from the beginning of the first "A period" (November 28, 2010, *i.e.*, fourteen months from the filing day of the application) to the end of the first "A period" (March 19, 2012, *i.e.*, the day a first office action was mailed) is 477 days. This is in agreement with the USPTO's calculation. *See* Exhibit A.

2. "B" Period under 37 C.F.R. § 1.702(b)

The number of days from the beginning of the "B period" (September 28, 2012, *i.e.*, three years from the filing day of the application) to the end of the "B period" (April 23, 2013, the day the '930 patent issued) is 207 days. *See* **Exhibit A**. The USPTO has incorrectly calculated the B period as 81 days, using December 19, 2012, the day an RCE was filed as the end of the B period.

Under the correct interpretation of 35 U.S.C. § 154(b)(1)(B) outlined in the *Exelixis* decision, the B period does not toll with the filing of an RCE if filed outside the three-year period. *Exelixis, Inc. v. Kappos*, No.1:12cv96, slip op. at 16 (E.D. Va. November 1, 2012) [attached]. As noted herein, the RCE was filed outside the three-year period. Therefore, the correct end of the B period is the date the '930 patent issued—April 23, 2013. Accordingly, the B Period is 207 days.

3. "C" Periods under 37 C.F.R. § 1.702(b)

The '930 patent does not have a C period. This is in agreement with the USPTO's calculation. *See* **Exhibit A**.

4. Overlap between A Period and B Period

The B Period began on September 28, 2012 and A Period ended on March 19, 2012, prior to the commencement of the B Period. *See* Item 1. Thus, there is no overlap between the A Period and B Period. *See* **Exhibit A**; *See, also*, Wyeth v. Kappos, 591 F.3d 1364, 93 USPQ2d 1257 (Fed Cir, 2010). This is in agreement with the USPTO's calculation.

5. Delay Attributed to Applicant

The USPTO calculated Applicants' delay in the '930 patent as 28 days. *See* **Exhibit A**.

6. PTA = (A Period + B Period + C Period) – Applicants Delay – Overlap

The PTA should be calculated as follows:

A period = 477 days. *See* 1. above

B period = 207 days. *See* 2. above.

C period = 0 days. *See* 3. above.

Overlap = 0 days. *See* 4. above.

Applicant delay = 28 days. *See* 5. above.

[(477 + 207 + 0) – 0] – 28= 656 days

Accordingly, Patent Owner respectfully requests that the '930 patent be granted a PTA of at least **656 days**.

CONCLUSION

In view of the above remarks, it is respectfully requested that this Request for Reconsideration of Patent Term Adjustment be favorably considered and that a corrected Determination of Patent Term Adjustment be issued to reflect a minimum patent term adjustment of at least **656 days**.

Respectfully submitted,
HUNTON & WILLIAMS LLP

Dated: May 16, 2013

By: _____
Christopher J. Nichols, Ph.D.
Registration No. 55,984

Hunton & Williams, LLP
Litigation and Intellectual Property
2200 Pennsylvania Ave, N.W.
Washington, DC. 20037
(202) 955-1500 (telephone)
(202) 778-2201 (facsimile)

EXHIBIT A
USPTO Patent Term Adjustment History

12/568,335	INCUBATOR	75575.000006	05-16-2013::11:59:10

Patent Term Adjustments

Patent Term Adjustment (PTA) for Application Number: 12/568,335

Filing or 371(c) Date:	09-28-2009	Overlapping Days Between {A and B} or {A and C}:	0
Issue Date of Patent:	04-23-2013	Non-Overlapping USPTO Delays:	558
A Delays:	477	PTO Manual Adjustments:	0
B Delays:	81	Applicant Delays:	28
C Delays:	0	Total PTA Adjustments:	530

Patent Term Adjustment History **Explanation Of Calculations**

Number	Date	Contents Description	PTO (Days)	APPL (Days)	Start
53.5	12-18-2012	PTA 36 Months	81		0.5
53	04-23-2013	Patent Issue Date Used in PTA Calculation			0
52	03-25-2013	Export to Final Data Capture			0
51	03-22-2013	Finished Initial Data Capture			0
50	03-22-2013	Dispatch to FDC			0
49	03-15-2013	Application Is Considered Ready for Issue			0
48	03-14-2013	Issue Fee Payment Verified			0
47	03-14-2013	Issue Fee Payment Received			0
46	03-04-2013	Export to Initial Data Capture			0
45	03-01-2013	Mail Notice of Allowance			0
44	02-28-2013	Office Action Review			0
43	02-28-2013	Issue Revision Completed			0
42	02-28-2013	Document Verification			0
41	02-28-2013	Notice of Allowance Data Verification Completed			0
40	02-27-2013	Allowability Notice			0
37	12-20-2012	Date Forwarded to Examiner			0
36	12-19-2012	Amendment Submitted/Entered with Filing of CPA/RCE			0
35	12-19-2012	Request for Continued Examination (RCE)		28	31

34	12-20-2012	Disposal for a RCE / CPA / R129		0
33	12-19-2012	Request for Extension of Time - Granted		0
32	12-19-2012	Workflow - Request for RCE - Begin		0
31	08-21-2012	Mail Final Rejection (PTOL - 326)		0
30	08-20-2012	Office Action Review		0
29	08-16-2012	Final Rejection		0
28	06-21-2012	Date Forwarded to Examiner		0
27	06-19-2012	Response after Non-Final Action		0
26	03-19-2012	Mail Non-Final Rejection	477	0.5
25	03-15-2012	Office Action Review		0
24	03-14-2012	Non-Final Rejection		0
23	02-26-2010	Information Disclosure Statement considered		0
22	09-21-2011	Case Docketed to Examiner in GAU		0
21	02-16-2010	Request for Foreign Priority (Priority Papers May Be Included)		0
20	06-09-2010	Case Docketed to Examiner in GAU		0
19	05-06-2010	PG-Pub Issue Notification		0
17	02-26-2010	Reference capture on IDS		0
16	02-26-2010	Information Disclosure Statement (IDS) Filed		0
15	02-26-2010	Information Disclosure Statement (IDS) Filed		0
14	02-12-2010	Application Dispatched from OIPE		0
13	01-22-2010	Sent to Classification Contractor		0
12	01-22-2010	Filing Receipt - Updated		0
11	01-13-2010	Additional Application Filing Fees		0
10	01-13-2010	Applicant has submitted new drawings to correct Corrected Papers problems		0
9	10-15-2009	Change in Power of Attorney (May Include Associate POA)		0

8	10-15-2009	Corrected Paper	0
7	10-15-2009	Filing Receipt	0
6	09-28-2009	Request from applicant for the USPTO to retrieve the Priority Document	0
4	09-28-2009	Applicants have given acceptable permission for participating foreign	0
3	09-30-2009	Cleared by OIPE CSR	0
2	09-28-2009	IFW Scan & PACR Auto Security Review	0
1	09-28-2009	Initial Exam Team nn	0
0.5	09-28-2009	Filing date	0

Close Window

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF VIRGINIA
Alexandria Division

EXELIXIS, INC.,	)	
Plaintiff,	)	
	)	
v.	)	**Case No. 1:12cv96**
	)	
HON. DAVID J. KAPPOS, Under	)	
Secretary of Commerce for Intellectual	)	
Property and Director of the United	)	
States Patent and Trademark Office,	)	
Defendant.	)	

MEMORANDUM OPINION

In the 1990's, Congress twice significantly altered the patent law landscape. First, in 1994, Congress enacted the Uruguay Round Agreements Act,[1] which (i) required the term of a patent to be measured from the date of application, (ii) extended a patent term from 17 to 20 years, and (iii) created patent term adjustment ("PTA"), extending the length of a patent term in the event that certain delays occurred in the processing of the application. Second, in 1999, Congress again altered the patent landscape by enacting the American Inventors Protection Act of 1999 ("AIPA"),[2] which significantly amended the PTA provisions and provided for a Request for Continued Examination ("RCE"), which permits an applicant to request additional examination of the patent application. Predictably, these alterations in the patent law landscape spawned substantial litigation, of which this case is a recent example.

---

[1] Pub. L. No. 103–465, Dec. 8, 1994, 108 Stat. 4809 (codified as amended in scattered sections of 35 U.S.C.).

[2] Pub. L. No. 106–113, 113 Stat. 1536 (codified as amended in scattered sections of 35 U.S.C.).

Presented here is the following, as yet unresolved, question concerning the application of AIPA's PTA provision:

> Whether 35 § 154(b)(1)(B) requires that an applicant's PTA be reduced by the time attributable to an RCE, where, as here, the RCE is filed after the expiration of AIPA's guaranteed three year period.

For the reasons that follow, § 154's plain language neither addresses nor requires that an applicant's PTA be reduced by the time required to process an RCE that is filed after the expiration of the three year period.[3]

I.

Exelixis, Inc. ("Exelixis"), a Delaware corporation with its principal place of business in San Francisco, California, is the owner of United States Patent No. 7,989,622 ("the '622 patent"). This patent—entitled "Phosphatidylinositol 3-Kinase Inhibitors and Methods of their Use"— covers certain molecules that inhibit an enzyme associated with certain cancers that may be useful for the treatment and prevention of those cancers.

The administrative record reflects the various events that occurred in the course of the prosecution and examination of the application that led to the issuance of the patent. Only a few of these events—those pertinent to the PTA calculation and hence to the question presented—merit mention here.

First, the record reflects that the application for the '622 patent[4] was filed on January 15, 2008. The record shows that the next event of PTA significance occurred on February 22, 2010,

---

[3] Exelixis points out that if the question presented were decided to the contrary, it would be necessary to resolve a second question, namely whether the period of time between the date of the Notice of Allowance and the date of the patent issuance is properly included as "time consumed by continuing examination" under § 154(b)(1)(B)(i).

[4] This application was a national stage application of a Patent Cooperation Treaty application. The Patent Cooperation Treaty is "an international agreement allowing inventors to streamline

when the United States Patent and Trademark Office ("PTO") issued a "Restriction and/or Election Requirement," its first notice pursuant to 35 U.S.C. § 132. This filing came approximately 25 months after the application was filed. The timing of this PTO filing is important to the PTA calculation inasmuch as § 154(b)(1)(A) requires the PTO to provide at least one § 132 notice (or alternatively, a notice of allowance) not later than 14 months after the application is filed, and to the extent the § 132 misses this 14 month deadline, the applicant receives a day for day credit toward the PTA.

The next event with PTA significance occurred, as the record reflects, on March 9, 2011, approximately 38 months after the application filing date, when the PTO issued a Final Rejection of the application. Barely a month later, Exelixis, on April 11, 2011, filed the RCE at issue here. This RCE modified and supplemented the application as follows: (i) claims 1–12, 14, 15, and 17–33 were cancelled, (ii) claims 13 and 16 were amended, (iii) claims 34–38 were added, and (iv) additional support was provided for the amended and added claims.

Thereafter, the PTO, with commendable, if, with respect to this application, uncharacteristic alacrity, responded less than three weeks later by mailing to Exelixis a "Notice of Allowance & Fees Due" with respect to the application. This Notice advised Exelixis (i) that "prosecution on the merits has closed," (ii) that the application "is allowed for issuance as a patent," and (iii) that the PTA for the '622 patent was calculated as 283 days, meaning that the '622 patent term would extend 20 years plus 283 days from the date of the patent application.

The record next shows that on April 28, 2011, Exelixis paid the issue fee, but then for reasons not disclosed in the record, the PTO did not mail the "Issue Notification" to Exelixis

---

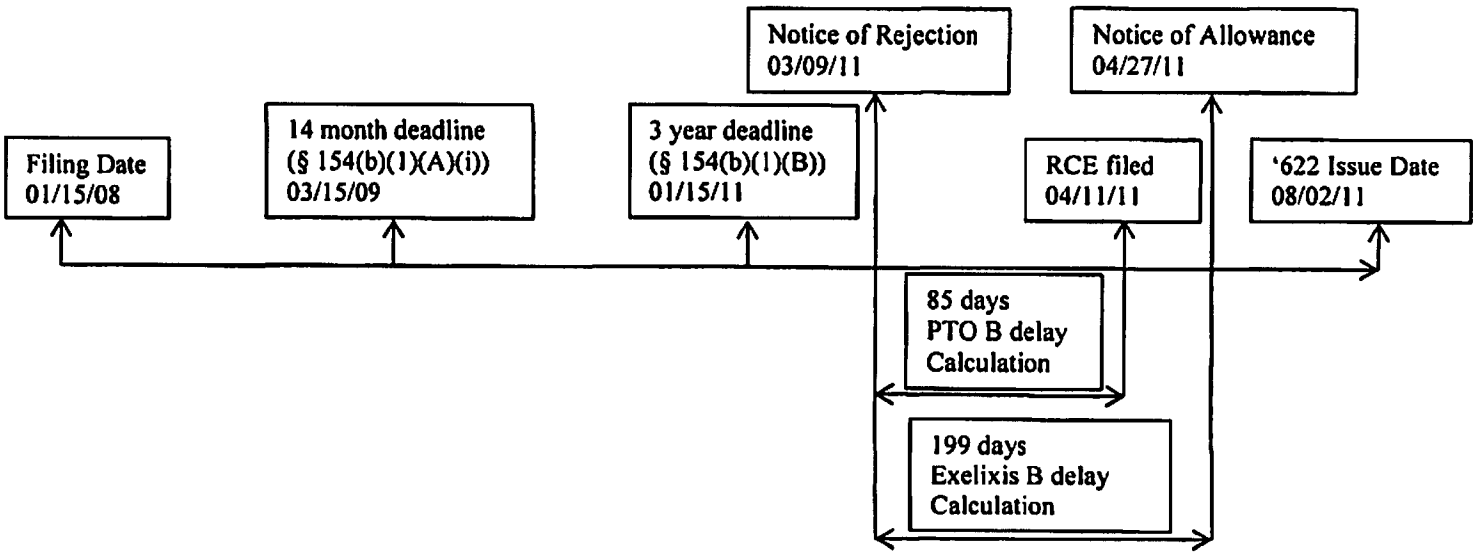
the process of obtaining patent rights across multiple member nations." *Helfgott & Karas, P.C. v. Dickenson*, 209 F.3d 1328, 1330 (Fed. Cir. 2000).

until July 17, 2011. The '622 patent issued thereafter on August 2, 2011. The Issue Notification included the PTO's final PTA calculation for the patent,[5] totaling 368 days, consisting of (i) 344 days for PTA attributable to the PTO's failure to file a § 132 notification within 14 months of the patent application date, as required by § 154(b)(1)(A) ("A delay"), (ii) 85 days of PTA attributable to the PTO for the failure of a patent to issue within 3 years of the application date, as required by § 154(b)(1)(B) ("B delay"), (iii) 0 days of PTA pursuant to § 154(b)(1)(C) ("C delay"), and (iv) a 61 day PTA reduction attributable to Exelixis' delay pursuant to § 154(b)(2)(C) ("C reduction").

Exelixis does not dispute the PTO's calculation of A delay, C delay, or C reduction; instead, the parties' dispute focuses sharply on the PTO's B delay calculation. The PTO contends that the 85 days of B delay is arrived at by subtracting the number of days attributable to the RCE, 114 days (April 11, 2011 to August 2, 2011), from 199 days (the number of days from the expiration of the three year period—January 15, 2008 to January 15, 2011—to the issuance of the patent on August 2, 2011). Exelixis disagrees with the PTO's decision to reduce the PTA by the RCE and argues instead that the proper B delay calculation is 199 days, the number of days between the end of the § 154(b)(1)(B) guaranteed three year period (January 15, 2011) and the issuance of the patent (August 2, 2011). The following time line illustrates the '622 patent's path to issuance and the parties' competing B delay calculations:

---

[5] The difference between the April 27, 2011 PTA calculation and the final PTA calculation reflects the addition of the B delay PTA.



As the timeline shows, the PTO's notice of rejection, Exelixis' RCE, the PTO's notice of allowance, and the issuance of the patent all occurred after the expiration of the three year period that commenced on the application filing date. And as the timeline also makes clear, the question that divides the parties on these facts is whether § 154(b)(1)(B) requires that, or even addresses whether, any PTA be reduced by time attributable to an RCE where, as here, the RCE is filed after the expiration of the three year guarantee period specified in that statute.

II.

Resolution of this question is informed by a brief overview of AIPA's PTA provisions. The starting point in this overview is to note that Congress, in 1994, in order to implement international agreements, amended the patent laws to extend the length of a patent term to 20 years, measured from the date of the patent application.[6] Prior to this amendment, a patent term was 17 years, measured not from the application date, but from the date of the patent issuance. Recognizing that the examination and prosecution phase might result in delays in the issuance of

[6] Uruguay Round Agreements Act, Pub. L. No. 103–465, Dec. 8, 1994, 108 Stat. 4809 (codified as amended in scattered sections of 35 U.S.C.).

a patent, Congress in the 1994 amendment provided for adjusting the patent term to account for delays that might occur owing to "interference delay," "secrecy orders," or "appellate review."[7] Then, in 1999, Congress again amended these provisions to add the PTA provisions now found in § 154(b).[8] Taken as a whole, the clear goal and purpose of these provisions is to provide a successful applicant with a patent that can be enforced against putative infringers for approximately 17 years—20 years from the date of application less the three years for prosecution and examination—and to reach this goal by providing applicants with day for day patent term extensions for delays attributable to the PTO and day for day reductions of the patent term extension for delays attributable to an applicant's failure to act with alacrity in certain circumstances.

A. The Patent Application Process

In order to patent an invention, a person must apply to the PTO for a patent. 35 U.S.C. § 111. A PTO patent examiner then determines whether the "applicant is entitled to a patent under the law," and, if so, the PTO issues a patent. 35 U.S.C. § 131. If the patent examiner makes a contrary finding, then the PTO will issue a notice of rejection that puts forth "the reasons for such rejection." 35 U.S.C. § 132(a). If the applicant receives a rejection notice, the applicant may continue to pursue the issuance of the patent as is, or may make an amendment to the patent application. On the second, or any subsequent, examination of the patent application, the patent examiner may determine that the rejection is final. 37 C.F.R. § 1.113. The applicant's options

---

[7] *Id.*

[8] AIPA, Pub. L. No. 106–113, 113 Stat. 1536 (codified as amended in scattered sections of 35 U.S.C.). The portion of the AIPA that altered the PTA regime is sometimes referred to as the Patent Term Guarantee Act of 1999. *See, e.g., Wyeth v. Dudas*, 580 F.Supp.2d 138, 139 (D.D.C. 2008).

are then limited to an "appeal in the case of rejection of any claim" or "to [an] amendment" of the application. *Id.* The RCE is one such amendment. Once a final rejection has issued, the applicant generally has up to six months to file an RCE before the application is abandoned. *See* 37 C.F.R. § 1.135. An RCE, which may consist of (but is not limited to) "an information disclosure statement, an amendment to the written description, claims, or drawings, new arguments, or new evidence in support of patentability," functions to continue the examination of the current application by reopening the prosecution. 37 C.F.R. § 1.114(b).

Once the PTO determines that the application contains patentable claims, the PTO will issue a "Notice of Allowance" that informs the applicant that he "is entitled to a patent under the law[.]" 37 C.F.R. § 1.311(a). The applicant must then pay the requisite fees within three months, otherwise the application will be deemed abandoned. *Id.* Even after the fee has been paid, up until the patent actually issues, the application may be withdrawn by either the PTO or the applicant. 37 C.F.R. § 1.313.

B. Patent Term Adjustments

Subsection 154(b) of Title 35 governs the determination and measurement of PTA. Paragraph (1) of this subsection, entitled "Patent term guarantees," sets forth three general guarantees designed to expedite the application, prosecution, and examination process. This paragraph also describes the various categories of events that generate PTA, i.e., events that result in the extension of the patent term.

First, subparagraph (A), entitled "Guarantee of prompt Patent and Trademark Office responses,"[9] extends the patent term if the PTO fails to carry out certain acts during the

---

[9] It is well settled that "'the title of a statute and the heading of a section' are 'tools available for the resolution of a doubt' about the meaning of a statute." *Almendarez-Torres v. United States*,

prosecution and examination of the patent within prescribed timelines. For example, if the PTO takes more than four months to issue a patent once the "issue fee was paid" and "all outstanding requirements were satisfied," then PTA is granted on a day for day basis for each day longer than four months until the patent is issued. § 154(b)(1)(A)(iv).

Next, subparagraph (B), entitled "Guarantee of no more than 3-year application pendency," extends the patent term on a day for day basis "for each day after the end of that 3 year period until the patent is issued." § 154(b)(1)(B). Subparagraph (B) ensures that the patent prosecution and examination process proceeds expeditiously to preserve an approximately 17 year patent term measured from the date of issuance. Certain events, such as time consumed by an RCE or by an applicant requested delay, are "not included" in the measurement, and here the parties disagree as to whether these events are "not included" in the measurement of the three year period (Exelixis' position) or in the PTA calculation (the PTO's position).

Finally, subparagraph (C), entitled "Guarantee of adjustments for delays due to interferences, secrecy orders, and appeals," extends the patent term on a day for day basis for "each day of the pendency of the proceeding, order, or review[.]" § 154(b)(1)(C). Put simply, subparagraph (C) grants PTA for time consumed by certain special proceedings that may occur during the course of the prosecution and examination of the application.

The PTA awarded under paragraph (1) is subject to certain limitations set out in paragraph (2), entitled "Limitations." Subparagraph (A) of paragraph (2) makes clear that "to

---

523 U.S. 224, 234 (1998) (quoting *Trainmen v. Baltimore & Ohio R. Co.*, 331 U.S. 519, 528–29 (1947)); *see also I.N.S. v. Nat'l Center for Immigrants' Rights, Inc.*, 502 U.S. 183, 189 (1991) ("the title of a statute or section can aid in resolving an ambiguity in the legislation's text"); *Reese v. United States*, 24 F.3d 228, 231 (Fed. Cir. 1994) (using the section title as an aid to resolving a statutory ambiguity); *United States v. Clawson*, 650 F.3d 530, 536 (4th Cir. 2011) (noting that the statute's "heading further supports [the court's] determination" of statutory meaning).

the extent that periods of delay . . . overlap, the period of any adjustment granted under this subsection shall not exceed the actual number of days the issuance of the patent was delayed." § 154(b)(2)(A).[10] In other words, the PTA calculation must not double count; the applicant may not receive more than one day of PTA for the same calendar day. Next, subparagraph (B) limits the granting of PTA for disclaimed patent terms. Finally, subparagraph (C), entitled "Reduction of period of adjustment," reduces PTA for time consumed by delays attributable to the patent applicant. This includes the reduction of PTA by "a period equal to the period of time during which the applicant failed to engage in reasonable efforts to conclude prosecution of the application." § 154(b)(2)(C)(i). The remaining paragraphs under subsection (b) set forth the procedures for the determination of PTA and for appeals of such determinations.

In this action, Exelixis contends that the PTO improperly calculated B delay by not providing a day for day PTA for time consumed by the RCE filed after the three year period had expired. In opposition, the PTO argues that the time consumed by an RCE is always excluded from the calculation of B delay because, in the PTO's view, any time consumed by an RCE is subtracted from the PTA awarded under subparagraph (B), regardless of when the RCE is filed.

III.

A case is ripe for summary judgment where "there 'is no genuine issue as to any material fact and the moving party is entitled to a judgment as a matter of law.'" *Wyeth*, 591 F.3d at 1369 (quoting Fed.R.Civ.P. 56(c)). Because in the present case both parties "perceive no genuine issues of material fact," there is only a legal determination to be made, namely whether the PTO's method for calculating PTA under § 154(b)(1)(B) is contrary to law. *See id.* The PTO's

---

[10] *See Wyeth v. Kappos*, 591 F.3d 1364, 1368–72 (rejecting the PTO's "greater-of-A-or-B rubric" and holding that § 154(b)(2)(A) applies only where there is overlap between A delay and B delay).

determination of PTA is subject to judicial review under the Administrative Procedure Act. 35 U.S.C. § 154(b)(4)(A). Thus, a district court may only set aside the PTO's decision if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). An agency abuses its discretion "where the decision is based on an erroneous interpretation of the law, on factual findings that are not supported by substantial evidence, or represents an unreasonable judgment in weighing relevant factors." *Star Fruits S.N.C. v. United States*, 393 F.3d 1277, 1281 (Fed. Cir. 2005); *Arnold Partnership v. Dudas*, 362 F.3d 1338, 1340 (Fed. Cir. 2004).

IV.

Analysis of the question presented properly begins with the plain language of the statute. As the Supreme Court has noted, "it is axiomatic that '[t]he starting point in every case involving construction of a statute is the language itself.'" *Landreth Timber Co. v. Landreth*, 471 U.S. 681, 685 (1985) (quoting *Blue Chip Stamps v. Manor Drug Stores*, 421 U.S. 723, 756 (1975) (Powell, J., concurring)).[11] Further, the Supreme Court has made clear that where "the statute's language is plain, 'the sole function of the courts is to enforce it according to its terms.'" *U.S. v. Ron Pair Enterprises, Inc.*, 489 U.S. 235, 241 (1989) (quoting *Caminettie v. United States*, 242 U.S. 470, 485 (1917)). The Supreme Court has warned, however, that there may be "rare cases [in which] the literal application of a statute will produce a result demonstrably at odds with the intentions of its drafters." *Ron Pair Enterprises*, 489 U.S. at 242 (quoting *Griffin v. Oceanic Contractors, Inc.*, 458 U.S. 564, 571 (1982)). It is only in those rare cases that "the intention of the drafters, rather than the strict language, controls." *Id.* And in the Federal Circuit, "only a 'most

---

[11] *See also Wyeth*, 591 F.3d at 1369 ("As always, the starting point in every case involving construction of a statute is the language itself.") (internal quotation marks omitted).

extraordinary showing of contrary intentions' by Congress justifies a departure from the plain language of a statute." *Wyeth*, 591 F.3d at 1371 (quoting *Garcia v. United States*, 469 U.S. 70, 75 (1984)). Thus, a court must give a statute its plain language meaning unless that meaning clearly contradicts the drafter's intent.

Here, the plain language meaning of subparagraph (B) is clear, unambiguous, and in accord with both the statute's structure and purpose. Subparagraph (B) provides in pertinent part,

> Subject to the limitations under paragraph (2), if the issue of an original patent is delayed due to the failure of the United States Patent and Trademark Office to issue a patent within 3 years after the actual filing date of the application in the United States, not including:
>
> (i) any time consumed by continued examination of the application requested by the applicant under section 132(b);
>
> . . .
>
> the term of the patent shall be extended 1 day for each day after the end of that 3-year period until the patent is issued.

35 U.S.C. § 154(b)(1)(B). Simply put, the goal of this subparagraph, as its title indicates, is a "Guarantee of no more than 3-year application pendency." It accomplishes this goal by (i) starting a three year clock on the date the application is filed, (ii) tolling the running of this clock if, within the three year period, any of three events occur, including an RCE filing, and (iii) adding a day for day PTA to the patent term for any delay in the issuance of the patent after the three year clock, less any tolling, runs out. Thus, subparagraph (B) essentially describes two calculations. The first is a description of the calculation of the three year period: The three year clock beings to run on the date the application is filed and, except for three specific potential tolling events, including the filing of an RCE, the clock runs continuously until the three year period ends. In other words, the "not including" portion of subparagraph (B), followed by (i), (ii), and (iii), clearly and unambiguously modifies and pertains to the three year period and does not apply to, or refer to, the day for day PTA remedy. Subparagraph (B)'s second calculation is

simply a day for day addition to the PTA for every day beyond the end of the three year clock until the patent issues.

Especially notable about this reading of subparagraph (B), which is commanded by the provision's plain and unambiguous language, is that it does not address the filing of an RCE after the expiration of the three year clock. To be sure, the provision makes clear that the clock is tolled for the processing of an RCE filed before the three year clock runs out, but the provision does not refer to or mention RCE's filed after the three year clock has run. Instead, subparagraph (B) makes clear that once the three year clock has run, PTA is to be awarded on a day for day basis regardless of subsequent events.

Also notable of subparagraph (B) is that the reading compelled by its plain language is firmly supported by § 154(b)'s structure and purpose. The statute's purpose is to ensure that an applicant is provided with a PTA remedy for delays in examination and processing attributable to the PTO and to reduce any PTA by delays attributable to the applicant. Significantly, § 154(b) does not treat an RCE filing as applicant delay; instead applicant delay is treated in § 154(b)(2)(C), which is captioned "Reduction of period of adjustment"[12] and does not refer to RCE's. The RCE is treated only in subparagraph (B), which specifies that an RCE filed during the running of the three year clock tolls the running of that clock while the RCE is processed. In other words, the statute does not consider an applicant's submission of an RCE as "applicant delay" that warrants reduction under § 154(b)(2)(C); rather, the statute simply treats the time devoted to an RCE as time that should not be counted against the PTO in the running of the three year clock.

---

[12] Subsection (2)(C) addresses situations where applicants have "failed to engage in reasonable efforts to conclude prosecution of the application" and, as a result, the PTA that would otherwise be added to the patent term is reduced. § 154(b)(2)(C).

In summary, the plain and unambiguous language of subparagraph (B) requires that the time devoted to an RCE serves to toll the running of the three year clock, if the RCE is filed within the three year period; subparagraph (B) does not address RCE's filed after the running of the three year period nor does it require that the time consumed by an RCE filed after the running of the three year clock be deducted from the PTA. Put simply, RCE's have no impact on the PTA after the three year deadline has passed[13] and subparagraph (B) clearly provides no basis for any RCE's to reduce PTA; instead, RCE's operate only to toll the three year guarantee deadline, if, and only if, they are filed within three years of the application filing date. Thus, the PTO erred in construing subparagraph (B) to the contrary. In doing so, the PTO, in essence, construed subparagraph (B) to punish the applicant for filing the RCE. Yet there is no basis for reading subparagraph (B) in this manner. Indeed, the PTO properly regards the RCE not as an occasion to punish the applicant, but as a "valuable tool in the patent prosecution process."[14] Nor does the PTO list an RCE as one of 11 enumerated applicant delays.[15] In sum, the PTO in this case incorrectly treats an RCE as a punitive measure, that is a measure aimed at punishing Exelixis by reducing PTA—rather than as a "valuable tool in the patent prosecution process"—where, as here, the RCE was filed after the expiration of the three year clock. Accordingly, the PTO's calculation of B delay must be set aside as "not in accordance with law" and "in excess of [its] statutory . . . authority" pursuant to 5 U.S.C. § 706(2)(A) and (C). *See also Wyeth*, 591 F.3d at 1372 (holding that because, in the context of § 154(b)(2)(C), § "154(b)'s language is clear,

---

[13] A possible exception to this may occur where an RCE in particular circumstances not present here, is properly categorized as applicant delay under § 154(b)(2)(C).

[14] Bob Stoll, *RCE Filings: The Facts*, Director's Forum: David Kappos' Public Blog, Jul. 26, 2010, http://www.uspto.gov/blog/director/entry/rce_filings_the_facts.

[15] *See* 37 C.F.R. § 1.704

unambiguous, and intolerant of the PTO's suggested interpretation," the Federal Circuit "accords no deference to the PTO's [interpretation]").

The PTO offers several arguments in support of its interpretation, none of which is persuasive.[16] First, the PTO argues that a proper reading of subparagraph (B) requires the insertion of the word "then" prior to the phrase "not including" that is followed by (i), (ii), and (iii). According to the PTO, inserting the word "then" at that point allows subparagraph (B) to be read so that time consumed by an RCE is deducted from the day for day remedy for the PTO's failure to meet the three year guarantee deadline. The short and dispositive answer to this argument is that the word "then" does not appear in the statute and the PTO's insertion of the word in its reading is not a construction of the provision but rather a re-writing of it. Neither courts nor agencies may change or alter the plain language and meaning of a statute because of a belief, however well founded, that the statute would be improved thereby.[17] In any event, there is no persuasive reason to conclude that the statute would be improved by changing the language as the PTO proposes. This is so because the statute and the PTO[18] do not regard RCE's as undesirable devices for which the applicant should be punished. Put differently, § 154(b) does not treat an RCE as an applicant's failure "to engage in reasonable efforts to conclude prosecution of the application" under § 154(b)(2)(C)(i). In effect, RCE's are something for

---

[16] Although the plain language of subparagraph (B) may result in the PTO awarding C delay less often, this simply does not, as the PTO argues, render subparagraph (C) superfluous.

[17] *See Badaracco v. Comm'r of Internal Revenue*, 464 U.S. 386, 398 (1984) ("Courts are not authorized to rewrite a statute because they might deem its effects susceptible of improvement."); *see also Allergan, Inc. v. Alcon Laboratories, Inc.*, 324 F.3d 1322, 1346 (Fed. Cir. 2003) ("it is the function of Congress, not the courts, to shape legislation in accordance with policy goals").

[18] *See* Stoll, *supra* n. 14.

which the three year clock should be tolled, but not something that reduces the PTA. To avoid the problem presented in the present case—an RCE filed after the three year clock has expired—the PTO should aim to issue any notice of rejection before the expiration of the three year period and then, by regulation, require applicants to file RCE's in response to such notices within 30 days.

Next, the PTO argues that its construction of subparagraph (B) deserves *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944), deference.[19] To be sure, when statutes, as not the case here, are unclear or ambiguous, *Skidmore* deference to the PTO's interpretation might be appropriate.[20] Again, the short answer here is that *Skidmore* deference is unwarranted, when, as here, the statute is unambiguous.

Finally, the PTO argues that its reading of subparagraph (B) avoids absurd results. Under the PTO's view, the plain language of subparagraph (B) may lead to disparate treatment of some similarly situated applicants, depending on whether the applicant files the RCE before or after the expiration of the three year period. But such disparities arise only at the margins and the

---

[19] For reasons the PTO did not make clear, the PTO explicitly declined to assert or claim *Chevron U.S.A., Inc. v. Natural Res. Def. Council, Inc.*, 467 U.S. 837 (1984), deference, notwithstanding the existence of a regulation—37 C.F.R. § 1.703—setting forth the very reading of subparagraph (B) that it advances here. In any event, *Chevron* deference is not appropriate because the statute is not ambiguous as written. Moreover, the regulation has the effect of altering the PTA and the patent term, which is a substantive alteration that the PTO is arguably unauthorized to make. *See* § 154(b)(3)(A) ("The Director shall prescribe regulations establishing procedures for the application for and determination of patent term adjustments under this subsection.") (emphasis added).

[20] Indeed, it appears that in the Federal Circuit, *Skidmore* deference carries more force than in the other circuits. *Compare Cathedral Candle Co. v. U.S. Intern'l Trade Com'n*, 400 F.3d 1352, 1366 (Fed. Cir. 2005) (interpreting *Skidmore* and subsequent cases to require deference "even if we might not have adopted that construction without the benefit of the agency's analysis") *with Shipbuilders Council of Am. V. U.S. Coast Guard*, 578 F.3d 234, 241 (4th Cir. 2009) ("Under the *Skidmore* standard, the court defers to an agency interpretation only if and to the extent that it is persuasive.").

Federal Circuit rejected similar arguments in *Wyeth*, where it explained that "[r]egardless of the potential of the statute to produce slightly different consequences for applicants in similar situations, this court does not take upon itself the role of correcting all statutory inequities." *Wyeth*, 591 F.3d at 1370. Indeed, in subparagraph (B), Congress "has put a policy in effect that this court must enforce, not criticize or correct." *See id.* It is also worth noting that the disparate treatment of applicants in these circumstances can be minimized by the PTO because the PTO controls the timing of a notice of rejection, which is a typical event that causes an applicant to file an RCE. Thus, if the PTO takes steps to issue notices of rejection well within the running of the three year clock and also requires RCE's to be filed within a fixed number of days after receipt of such notice—also within the three year period, then the time devoted to RCE's will generally count against the running of the clock and applicants will not be disparately treated.

V.

In sum, the plain and unambiguous language of subparagraph (B) requires that the time devoted to an RCE tolls the running of the three year clock if the RCE is filed within the three year period. And, put simply, RCE's have no impact on PTA if filed after the three year deadline has passed. The PTO's arguments to the contrary are not persuasive and, accordingly, the PTO's interpretation of subparagraph (B) must be set aside as "not in accordance with law" and "in excess of [its] statutory . . . authority" pursuant to 5 U.S.C. § 706(2)(A) and (C). The proper measure of B delay in the present case is from January 15, 2011 (three years after the application filing date) to August 2, 2011 (the date the patent issued). Thus, the B delay PTA for the '622 patent is properly calculated as 199 days.

An appropriate Order will issue.

T. S. Ellis, III
United States District Judge

Alexandria, VA
November 1, 2012

Electronic Patent Application Fee Transmittal

Application Number:	12568335
Filing Date:	28-Sep-2009
Title of Invention:	INCUBATOR
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Filer:	Christopher. James Nichols/Mildred Adesida
Attorney Docket Number:	75575.000006

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Application for patent term adjustment	1455	1	200	200
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**200**

Electronic Acknowledgement Receipt

EFS ID:	15792882
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	INCUBATOR
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Christopher. James Nichols/Mildred Adesida
Filer Authorized By:	Christopher. James Nichols
Attorney Docket Number:	75575.000006
Receipt Date:	16-MAY-2013
Filing Date:	28-SEP-2009
Time Stamp:	12:08:09
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$200
RAM confirmation Number	10458
Deposit Account	500206
Authorized User	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)

1	Patent Term Adjustment Petition	75575-6-PTA-Request.pdf	976464 3458936a2575da66d1d3934366e520e01ed09c04	no	26
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30130 b75e013cc06e256a970977ba77f19ec2cdcd6cbe	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	1006594	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/568,335	04/23/2013	8424930	75575.000006	6169

21967 7590 04/03/2013

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 530 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

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 Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Terumi MATSUBARA, Nerima-ku, JAPAN;
Eiji Koike, Saitama-shi, JAPAN;
Naoki Honma, Saitama-shi, JAPAN;
Yoko Nagai, Nagareyama-shi, JAPAN;
Kazuo Matsubara, Bunkyo-ku, JAPAN;

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
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)

21967 7590 03/01/2013
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

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.

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.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

TITLE OF INVENTION: INCUBATOR

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	06/03/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
LUGO, CARLOS	3674	292-121000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(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.

1 Hunton & Williams LLP
2
3

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: Atom Medical Corporation

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Tokyo, JAPAN

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

4a. The following fee(s) are submitted:
☒ Issue Fee
☒ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 50-0206 (enclose an extra copy of this form).

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 3/14/13

Typed or printed name Christopher M. First Registration No. 68,042

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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Electronic Patent Application Fee Transmittal

Application Number:	12568335
Filing Date:	28-Sep-2009
Title of Invention:	INCUBATOR
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Filer:	Christopher Michael First/Kyleen Innocent
Attorney Docket Number:	75575.000006

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl Issue Fee	1501	1	1770	1770
Publ. Fee- Early, Voluntary, or Normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**2070**

Electronic Acknowledgement Receipt

EFS ID:	15232173
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	INCUBATOR
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Christopher Michael First/Kyleen Innocent
Filer Authorized By:	Christopher Michael First
Attorney Docket Number:	75575.000006
Receipt Date:	14-MAR-2013
Filing Date:	28-SEP-2009
Time Stamp:	17:29:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$2070
RAM confirmation Number	9868
Deposit Account	500206
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	75575o000006IssueFeeasfiled.pdf	223935 deb3cff02b79d229885e0a7de8bf7861a0151c86	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	31746 7e6076e6aa00dc44c8ec215d70c0db71efaa4f1b	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	255681		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

21967 7590 03/01/2013

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

EXAMINER	
LUGO, CARLOS	
ART UNIT	PAPER NUMBER
3674	

DATE MAILED: 03/01/2013

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

TITLE OF INVENTION: INCUBATOR

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	06/03/2013

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**
Commissioner for Patents
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)

21967 7590 03/01/2013
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

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.

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.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

TITLE OF INVENTION: INCUBATOR

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1770	$300	$0	$2070	06/03/2013

EXAMINER	ART UNIT	CLASS-SUBCLASS
LUGO, CARLOS	3674	292-121000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(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.

1 _____

2 _____

3 _____

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

4a. The following fee(s) are submitted:

❑ Issue Fee

❑ Publication Fee (No small entity discount permitted)

❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

❑ A check is enclosed.

❑ Payment by credit card. Form PTO-2038 is attached.

❑ 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).

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.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

21967 7590 03/01/2013

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

EXAMINER	
LUGO, CARLOS	

ART UNIT	PAPER NUMBER
3674	

DATE MAILED: 03/01/2013

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 449 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 449 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.	Applicant(s)	
	12/568,335	MATSUBARA ET AL.	
	Examiner	Art Unit	
	CARLOS LUGO	3674	

-- 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 RCE filed on December 19, 2012*.

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 *1,2 and 10-20*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov .

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. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

   ☐ 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).

6. ☐ 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. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☐ Examiner's Amendment/Comment
6. ☐ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

/Carlos Lugo/
Primary Examiner
Art Unit: 3674

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	292/121.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:44
L2	0	292/122.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:45
L3	0	292/124.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:45
L4	0	292/127.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:45
L5	0	292/128.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:45
L6	0	292/219.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:45
L7	0	292/220.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:46
L8	0	292/224.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:46
L9	0	292/227.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:46
L10	0	292/228.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:46
L11	0	292/dig.37.ccls. and (window and door and latch and mechanism and releasing and member and shaft and spiral and opening and packing and impact).clm.	US-PGPUB	OR	OFF	2013/02/27 16:46

2/ 27/ 2013 4:47:04 PM

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	Art Unit
	CARLOS LUGO	3674

CPC- SEARCHED		
Symbol	Date	Examiner

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner
292	121, 122, 124, 127, 128, 219, 220, 224, 227, 228, dig.37		
	above updated	2/27/13	CL

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
	interference search history printout	2/27/13	CL

	/CARLOS LUGO/ Primary Examiner.Art Unit 3674

Issue Classification

Application/Control No.	Applicant(s)/Patent Under Reexamination
12568335	MATSUBARA ET AL.
Examiner	**Art Unit**
CARLOS LUGO	3674

CPC				
Symbol			Type	Version
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			
	/			

CPC Combination Sets						
Symbol			Type	Set	Ranking	Version
	/					
	/					

US ORIGINAL CLASSIFICATION	
CLASS	SUBCLASS
292	121

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
292	122	128	219	220	228
292	DIG 37				

INTERNATIONAL CLASSIFICATION									
CLAIMED					NON-CLAIMED				
E	0	5	C	19 / 10 (2006.01.01)	E	0	5	C	3 / 12 (2006.01.01)

NONE (Assistant Examiner)	(Date)	Total Claims Allowed: 13	
/CARLOS LUGO/ Primary Examiner.Art Unit 3674 (Primary Examiner)	02/27/2013 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 9

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	**Art Unit**
	CARLOS LUGO	3674

NONE		**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	13	
/CARLOS LUGO/ Primary Examiner.Art Unit 3674	02/27/2013	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	1	9

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	**Art Unit**
	CARLOS LUGO	3674

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1	7	17												
2	2	8	18												
-	3	9	19												
-	4	10	20												
-	5														
-	6														
-	7														
-	8														
-	9														
3	10														
11	11														
12	12														
13	13														
4	14														
5	15														
6	16														

NONE (Assistant Examiner)	(Date)	**Total Claims Allowed:** 13	
/CARLOS LUGO/ Primary Examiner.Art Unit 3674 (Primary Examiner)	02/27/2013 (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 9

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

BIB DATA SHEET

CONFIRMATION NO. 6169

SERIAL NUMBER	FILING or 371(c) DATE RULE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/568,335	09/28/2009	292	3674	75575.000006

APPLICANTS

Terumi MATSUBARA, Nerima-ku, JAPAN;
Eiji Koike, Saitama-shi, JAPAN;
Naoki Honma, Saitama-shi, JAPAN;
Yoko Nagai, Nagareyama-shi, JAPAN;
Kazuo Matsubara, Bunkyo-ku, JAPAN;

** CONTINUING DATA ********** CL

** FOREIGN APPLICATIONS ********** CL

JAPAN 2008-258291 10/03/2008

** IF REQUIRED, FOREIGN FILING LICENSE GRANTED **

10/09/2009

Foreign Priority claimed ☑ Yes ☐ No 35 USC 119(a-d) conditions met ☑ Yes ☐ No Verified and Acknowledged /CARLOS LUGO/ Examiner's Signature	☐ Met after Allowance CL Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		JAPAN	10	15	1

ADDRESS

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037
UNITED STATES

TITLE

Incubator

FILING FEE RECEIVED	FEES: Authority has been given in Paper	☐ All Fees
1090	No._____ to charge/credit DEPOSIT ACCOUNT	☐ 1.16 Fees (Filing)
	No._____ for following:	☐ 1.17 Fees (Processing Ext. of time)
		☐ 1.18 Fees (Issue)
		☐ Other _____
		☐ Credit

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	**Art Unit**
	CARLOS LUGO	3674

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	03/14/2012	08/16/2012	02/27/2013						
1	1	✓	✓	=						
2	2	✓	✓	=						
	3	✓	-	-						
	4	✓	-	-						
	5	✓	-	-						
	6	✓	-	-						
	7	✓	✓	-						
	8	✓	✓	-						
	9	✓	✓	-						
3	10	✓	✓	=						
11	11	✓	✓	=						
12	12	✓	✓	=						
13	13	✓	✓	=						
4	14	✓	✓	=						
5	15	✓	✓	=						
6	16			=						
7	17			=						
8	18			=						
9	19			=						
10	20			=						

PTO/SB/30 (07-09)
Approved for use through 07/31/2012. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Request for Continued Examination (RCE) Transmittal

Address to:
Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Application Number	12/568,335
Filing Date	September 28, 2009
First Named Inventor	Terumi MATSUBARA
Art Unit	3674
Examiner Name	Carlos LUGO
Attorney Docket Number	75575.000006

This is a Request for Continued Examination (RCE) under 37 CFR 1.114 of the above-identified application.
Request for Continued Examination (RCE) practice under 37 CFR 1.114 does not apply to any utility or plant application filed prior to June 8, 1995, or to any design application. See Instruction Sheet for RCEs (not to be submitted to the USPTO) on page 2.

1. Submission required under 37 CFR 1.114 Note: If the RCE is proper, any previously filed unentered amendments and amendments enclosed with the RCE will be entered in the order in which they were filed unless applicant instructs otherwise. If applicant does not wish to have any previously filed unentered amendment(s) entered, applicant must request non-entry of such amendment(s).

   a. ☐ Previously submitted. If a final Office action is outstanding, any amendments filed after the final Office action may be considered as a submission even if this box is not checked.

      i. ☐ Consider the arguments in the Appeal Brief or Reply Brief previously filed on _____

      ii. ☐ Other _____

   b. ☑ Enclosed

      i. ☑ Amendment/Reply

      ii. ☐ Affidavit(s)/ Declaration(s)

      iii. ☐ Information Disclosure Statement (IDS)

      iv. ☐ Other _____

2. Miscellaneous

   a. ☐ Suspension of action on the above-identified application is requested under 37 CFR 1.103(c) for a period of _____ months. (Period of suspension shall not exceed 3 months; Fee under 37 CFR 1.17(i) required)

   b. ☐ Other _____

3. Fees The RCE fee under 37 CFR 1.17(e) is required by 37 CFR 1.114 when the RCE is filed.

   a. ☑ The Director is hereby authorized to charge the following fees, any underpayment of fees, or credit any overpayments, to Deposit Account No. 50-0206.

      i. ☑ RCE fee required under 37 CFR 1.17(e)

      ii. ☑ Extension of time fee (37 CFR 1.136 and 1.17)

      iii. ☐ Other _____

   b. ☐ Check in the amount of $ _____ enclosed

   c. ☐ Payment by credit card (Form PTO-2038 enclosed)

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT REQUIRED

Signature		Date	December 19, 2012
Name (Print/Type)	Christopher M. First	Registration No.	68,042

CERTIFICATE OF MAILING OR TRANSMISSION

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Mail Stop RCE, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 or facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Signature			
Name (Print/Type)		Date	

Electronic Patent Application Fee Transmittal

Application Number:	12568335
Filing Date:	28-Sep-2009
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Filer:	Christopher Michael First/Kyleen Innocent@hunton.com
Attorney Docket Number:	75575.000006

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	1251	1	150	150

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Request for continued examination	1801	1	930	930
		Total in USD ($)		**1080**

Electronic Acknowledgement Receipt

EFS ID:	14517984
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Christopher Michael First/Kyleen Innocent@hunton.com
Filer Authorized By:	Christopher Michael First
Attorney Docket Number:	75575.000006
Receipt Date:	19-DEC-2012
Filing Date:	28-SEP-2009
Time Stamp:	17:06:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1080
RAM confirmation Number	8131
Deposit Account	500206
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		75575o000006ResponsetoFOAandRCEasfiled.pdf	1338639 6ffce14d505a838d9396e2ee6948192f092f5479	yes	12
	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Amendment Submitted/Entered with Filing of CPA/RCE		1	11	
	Request for Continued Examination (RCE)		12	12	
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	32156 61d8ef8f82ea18572eb606cf8375c1819a2e16f0	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1370795		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	12/568,335	Confirmation No.:	6169
Applicant	:	Terumi MATSUBARA et al.		
Filed	:	September 28, 2009		
Title	:	Incubator		
TC/Art Unit	:	3674		
Examiner:	:	Carlos LUGO		
Docket No.	:	75575.000006		
Customer No.	:	**21967**		

MAIL STOP RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Sir:

In response to the Final Office Action mailed August 21, 2012 ("Office Action"), and in conjunction with a Request for Continued Examination (RCE), Applicants respectfully request that the application be reconsidered in light of the remarks made herein.

Applicants respectfully petition for a one-month extension of time within which to submit a response, thereby extending the period to file a response up to and including December 21, 2012. Please charge the amount of $150.00 fee for this extension to **Deposit Account No. 50-0206**. It is believed that no other fees are required for entry of this amendment, but should any fees be necessary, the Commissioner is authorized to charge such fees to **Deposit Account No. 50-0206**.

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 8 of this paper.

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An apparatus comprising:

a hand insertion window formed in a side of a newborn chamber;

a hand insertion door that opens and closes the hand insertion window by rotation;

a latch mechanism that holds the hand insertion door in a closing position for closing the hand insertion window;

wherein the latch mechanism includes a latch and a releasing member,

the latch has a rotation shaft extending along the side and enabling rotation between a holding position for the holding of the hand insertion door and an releasing position for releasing the holding of the hand insertion door, and a spiral face extending to at least part of a periphery of the rotation shaft; and

the releasing member is movable along the side, and presses the spiral face by movement to cause the rotation of the latch from the holding position to the releasing position; and

an opening mechanism configured such that in the course of the rotation of the hand insertion door in the direction in which the hand insertion window is closed, the opening mechanism comes into contact with the hand insertion door before the hand insertion window is closed, and thereby urges the hand insertion door to cause the rotation in the direction in which the hand insertion window is opened,

wherein a packing is attached to an internal edge of the hand insertion window and the packing serves as the opening mechanism. further wherein the packing has a thicker portion and the thicker portion serves as the opening mechanism[[.]],

wherein the latch has a pressed portion that is pressed by the rotation of the hand insertion door, and thereby causes the rotation from the holding position to the releasing position, and

the pressed portion is made of impact-absorbent material.

2. (Previously presented) The apparatus according to claim 1, further comprising a helical compression spring urging the releasing member in a direction opposite to the direction in which the spiral face is pressed.

3. (Cancelled)

4. (Cancelled) -

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Currently amended) The apparatus according to claim ~~9~~1, wherein the impact-absorbent material is silicone rubber.

11. (Currently amended) An apparatus comprising: a hand insertion window formed in a side of a newborn chamber;

a hand insertion door that opens and closes the hand insertion window by rotation;

a latch mechanism that holds the hand insertion door in a closing position for closing the hand insertion window;

wherein the latch mechanism includes a latch and a releasing member,

the latch has a rotation shaft extending along the side and enabling rotation between a holding position for the holding of the hand insertion door and an releasing position for releasing the holding of the hand insertion door, and a spiral face extending to at least part of a periphery of the rotation shaft; and

the releasing member is movable along the side, and presses the spiral face by movement to cause the rotation of the latch from the holding position to the releasing position; and

a braking mechanism configured such that ~~from any point between the course of rotation of the hand insertion door in the direction in which the hand insertion window is opened, the braking mechanism brakes the rotation of the hand insertion door.~~ a portion of door around the

shaft is not completely circular in cross section, so there will be a separation between the door and the braking mechanism, wherein

when the door is moved to the open position, there is a time that there is no connection, and from the moment that the surface of the door makes contact with the braking mechanism to the open position, the braking mechanism is then capable of brake rotation of the door, and

the braking mechanism is located next to the shaft of the door.

12. (Previously Presented) The apparatus according to claim 11, wherein a portion around a rotation shaft for the rotation of the hand insertion door has a cross-section that is not completely circular, and

the cross-section comes into contact with the braking mechanism in the course of the rotation.

13. (Previously Presented) The apparatus according to claim 12, wherein the braking mechanism is elastically deformable, and

by the elastic deformation, the braking mechanism absorbs pressure applied due to the contact.

14. (Currently Amended) The apparatus according to claim 1, wherein the latch mechanism includes:

an urging member for urging the rotation of the latch from the releasing position to the holding position; and

a braking member for ~~braking~~ slowing the rotation of the latch.

15. (Previously Presented) The apparatus according to claim 14, wherein the latch mechanism includes a latch base plate supporting the latch and the releasing member, and

the braking member is a spacer disposed between the latch and the latch base plate and around the rotation shaft.

16. (New) The incubator according to claim 1, wherein a packing is attached to an internal edge of the hand insertion window, and

the packing serves as the opening device.

17. (New) The incubator according to claim 16, wherein the packing is made of silicone rubber.

18. (New) The incubator according to claim 16, wherein the packing has a thicker portion, and

the thicker portion serves as the opening mechanism.

19. (New) The apparatus according to claim 18, wherein disposed on the thicker portion is a projection for preventing the packing from being erroneously attached, and

the thicker portion and the projection serve as the opening mechanism.

20. (New) The apparatus according to claim 19, wherein a rotation shaft for the rotation of the hand insertion door is inserted in a helical coil spring, and

the thicker portion, the projection, and the helical coil spring serve as the opening mechanism.

REMARKS

The Office Action has been received and carefully considered. Claims 1, 2 and 7-15 are pending. Claims 1, 10, 11, and 14 have been amended. Claims 3-9 have been cancelled. Claims 16-20 have been added. No new matter has been added. Reconsideration of all claims is respectfully requested based on the above amendments and the following remarks.[1]

I. Claim Rejections under 35 U.S.C. § 112

Claims 11, 14 and 15 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Applicants respectfully disagree. As stated in MPEP § 2173.04, breadth of a claim is not to be equated with indefiniteness. *In re Miller*, 441 F.2d 689 (CCPA 1971). If the scope of the subject matter embraced by the claims is clear, and if applicants have not otherwise indicated that they intend the invention to be of a scope different from that defined in the claims, then the claims comply with 35 U.S.C. 112, second paragraph.

Notwithstanding this disagreement, Applicants have amended claims 11 and 14 as suggested by the Office Action. Further, claim 15 is dependent on claim 14 and does not contain the allegedly problematic language. In view of the foregoing, Applicant respectfully requests that the aforementioned indefiniteness rejection of claims 11, 14, and 15 be withdrawn.

---

[1] As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions in the Office Action or certain requirements that may be applicable to such rejections (*e.g.*, assertions regarding dependent claims, whether a reference constitutes prior art, whether references are legally combinable for obviousness purposes) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such in the future.

II. Claim Rejections under 35 U.S.C. § 103

Claims 1, 2, and 7 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 2,233,699 to Gorrell in view of U.S. Patent No. 2,153,819 to Van Voorhees. Claim 8 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 2,233,699 to Gorrell in view of U.S. Patent No. 2,153,819 to Van Voorhees and U.S. Patent No. 5,280,755 to Batur. Claims 14 and 15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 2,233,699 to Gorrell in view of U.S. Patent No. 2,153,819 to Van Voorhees and U.S. Patent No. 5,984,383 to Parikh. Claim 9 is objected to as allegedly being dependent upon a rejected base claim, but the Office states that it would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Similarly, the Office indicates that claim 10 would also be allowed since the claim depends from claim 9. Finally, the Office states that claim 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. § 112, 2nd paragraph, set forth in this Office action.

Applicants note with appreciation the Office Action's indication that claims 9-11 represent allowable subject matter. Applicants respectfully submit that the features of claim 9 have been incorporated into claim 1, thus amended claim 1 represents allowable subject matter. Similarly, claim 10 has been amended to depend from claim 1, and thus is allowable for the reasons set forth in the Office Action. Finally, as noted above, Applicants have amended claim 11 in an effort to expedite prosecution with regard to the issues under 35 U.S.C. § 112.

Thus, Applicants respectfully submit that each claim in the pending application is allowable for at least the reasons set forth in the "Allowable Subject Matter" section of the

Office Action. In view of the foregoing, Applicants respectfully request that the aforementioned obviousness rejections be withdrawn.

CONCLUSION

In view of the above remarks, reconsideration and allowance are respectfully requested.

If the Examiner has any questions relating to this response, or the application in general, he is respectfully requested to contact the undersigned to expedite the prosecution of this application.

In the event that a variance exists between the amount tendered and that determined by the U.S. Patent and Trademark Office to enter this Reply or to maintain the present application pending, please charge or credit such variance to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

Dated: 12/19/12

By: _____

Christopher M. First
Registration No. 68,042

Hunton & Williams LLP
Intellectual Property Department
2200 Pennsylvania Avenue, NW
Washington, DC 20037
(202) 955-1500 (telephone)
(202) 955-1804 (direct)
(202) 778-2201 (facsimile)
CMF/kbi

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/568,335	Filing Date 09/28/2009	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	12/19/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 13	Minus	** 20	= 0	X $ =		OR	X $62=	0
	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X $ =		OR	X $250=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/DIANA BATES/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

21967 7590 08/21/2012

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

EXAMINER	
LUGO, CARLOS	

ART UNIT	PAPER NUMBER
3674	

MAIL DATE	DELIVERY MODE
08/21/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	12/568,335	MATSUBARA ET AL.	
	Examiner	Art Unit	
	CARLOS LUGO	3674	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 June 2012*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ 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.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1,2 and 7-15* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1,2 and 7-15* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☒ 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:

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)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office Action is in response to applicant's amendment filed on June 19, 2012.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11, 14 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 11, the limitation a braking mechanism configured such that from any point between the course of rotation of the door in the direction in which the window is opened, the braking mechanism brakes the rotation of the door is indefinite.

As clearly described in paragraphs 35 and 36, a portion of door around the shaft 37 is not completely circular in cross section, so there will be a separation between the door and the braking mechanism 65. So, when the door is moved to the open position, there is a time that there is no connection, therefore, the braking mechanism is not capable of brake rotation of the door.

The claim uses the term at "any point" or as before, "some point". These are indefinite since it does not clearly define the points.

Therefore, in order to continue with the examination, the claim would be examined as mentioned in paragraphs 35 and 36, that a portion of door around the shaft 37 is not completely circular in cross section, so there will be a separation between the door and the braking mechanism 65. So, when the door is moved to the open position, there is a

time that there is no connection, and from the moment that the surface of the door makes contact with the braking mechanism to the open position, the braking mechanism is then capable of brake rotation of the door. Correction is required.

Furthermore, it is unclear where this mechanism with respect to the door is. As shown in the drawings, the bracking mechanism is located next to the shaft of the door. Correction is required.

As to claims 14 and 15, it is unclear how the braking member (spacer 64) can brake rotation of the latch. The word "brake" has two different meanings, one that it will slow down or the other one that it will stop. At the instant, if the applicant is trying to claim that it will slow down the movement, then appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 2,233,699 to Gorrell in view of US Pat No 2,153,819 to Van Voorhees.

Gorrell discloses an apparatus that comprises a frame (1) and a door (2) and a latching mechanism to latch the door against the frame. The latch mechanism comprises a spring biased latch (5) rotationally about an shaft and having a "spiral" face (surface of 5) and a release member (7) that contact the spiral face to unlatch the latch and open the door.

Gorrell fails to disclose that the apparatus further comprises an opening mechanism that will tend to open the door when the latch is released, wherein the opening mechanism is a packing.

Van Voorhees teaches that it is well known in the art to provide a similar device provided with a packing (31) so that when is unlatched the latch mechanism, the packing is capable of tend to open the door (21). When the door is closed, the packing will be compressed. The packing comprises a "thicker portion" and a projection (fig 7).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the apparatus described by Gorrell with a packing, as taught by Van Voorhees, in order to aid in the opening of the door.

With respect to the terms "hand insertion window" formed on a side of a newborn chamber and "hand insertion door", the terms are considered as labels. At the instant, the members are just considered as a door type element and a frame or stationary member having an opening closed by the door type element. Applicant is reminded that where there is physical identity between the subject matter of the claims and the prior art, the label given to the claimed subject matter does not distinguish the invention over the prior art.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 2,233,699 to Gorrell in view of US Pat No 2,153,819 to Van Voorhees and US Pat No 5,280,755 to Batur.

Gorrell, as modified by Van Voorhees, fails to disclose that the hinge of the door comprises a spring member to bias the door.

Batur teaches that it is well known in the art to provide a door (44) with a hinge and a spring (56) on it, so as to tend to move the door to an open position.

It would be obvious to one having ordinary skill in the art at the time the invention was made to provide the hinge described by Gorrell, as modified by Van Voorhees, with a spring, as taught by Batur, in order to bias the door.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Pat No 2,233,699 to Gorrell in view of US Pat No 2,153,819 to Van Voorhees and US Pat No 5,984,383 to Parikh et al (Parikh).

Gorrell, as modified by Van Voorhees, fails to disclose that the device comprises a braking member, i.e. a spacer.

Parikh teaches that it is well known in the art to provide a spacer (148) on a rotatable latch member (130). The spacer is capable of reducing the speed motion of the latch.

It would be obvious to one having ordinary skill in the art at the time the invention was made to provide the latch described by Gorrell, as modified by Van Voorhees, with a spacer, as taught by Parikh, for spacing the latch, capable of reducing speed movement, or other desirable function.

Allowable Subject Matter

Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 10 would also be allowed since the claim depends from claim 9.

Claim 11 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Response to Arguments

In the last Office Action, the examiner rejected the claims since it was not clear what the invention was. The invention was drawn to an incubator, but the claims fail to disclose how the claimed structure performs the incubator function (drawn to a combination or just the latch mechanism).

Also, in order to continue with the examination, the claims were examined as the combination of the incubator, including the incubator elements, with the latch mechanism.

The applicant amends the claims to now recites that the claims are drawn to an apparatus, not an incubator. Therefore, in view of the new amendment and since the claims are not drawn to an incubator, a new rejection to the claims has been made on the record.

Prosecution has been closed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARLOS LUGO whose telephone number is (571)272-7058. The examiner can normally be reached on 10-7pm EST. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Beach can be reached on 571-2726988. 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.

/Carlos Lugo/
Primary Examiner
Art Unit 3674

August 16, 2012.

Notice of References Cited	Application/Control No. 12/568,335	Applicant(s)/Patent Under Reexamination MATSUBARA ET AL.	
	Examiner CARLOS LUGO	Art Unit 3674	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2,233,699 A	03-1941	GORRELL JOHN E	292/227
*	B	US-5,280,755 A	01-1994	Batur, Dennis A.	109/59R
*	C	US-5,820,174 A	10-1998	Parikh et al.	292/126
*	D	US-5,875,795 A	03-1999	Bouix, Herve F.	132/293
*	E	US-5,984,383 A	11-1999	Parikh et al.	292/121
*	F	US-7,552,951 B2	06-2009	Kim, Keun Chul	292/113
*	G	US-7,806,446 B2	10-2010	Oh, Young Ki	292/165
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	**Art Unit**
	CARLOS LUGO	3674

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	03/14/2012	08/16/2012							
	1	✓	✓							
	2	✓	✓							
	3	✓	-							
	4	✓	-							
	5	✓	-							
	6	✓	-							
	7	✓	✓							
	8	✓	✓							
	9	✓	✓							
	10	✓	✓							
	11	✓	✓							
	12	✓	✓							
	13	✓	✓							
	14	✓	✓							
	15	✓	✓							

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	Art Unit
	CARLOS LUGO	3674

SEARCHED			
Class	Subclass	Date	Examiner
292	121, 122, 124, 127, 128, 219, 220, 224, 227, 228, dig.37		
	above updated	8/16/12	CL

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

	/CARLOS LUGO/ Primary Examiner.Art Unit 3674

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	12/568,335	Confirmation No.:	6169
Applicant	:	Terumi MATSUBARA et al.		
Filed	:	September 28, 2009		
Title	:	Incubator		
TC/Art Unit	:	3674		
Examiner:	:	Carlos LUGO		
Docket No.	:	75575.000006		
Customer No.	:	**21967**		

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE

Sir:

In response to the Non-Final Office Action mailed March 19, 2012 ("Office Action"), Applicants respectfully request that the application be reconsidered in light of the remarks made herein:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An ~~incubator~~ apparatus comprising:

a hand insertion window formed in a side of a newborn chamber;

a hand insertion door that opens and closes the hand insertion window by rotation; ~~and~~

a latch mechanism that holds the hand insertion door in a closing position for closing the hand insertion window;

wherein the latch mechanism includes a latch and a releasing member,

the latch has a rotation shaft extending along the side and enabling rotation between a holding position for the holding of the hand insertion door and an releasing position for releasing the holding of the hand insertion door, and a spiral face extending to at least part of a periphery of the rotation shaft; and

the releasing member is movable along the side, and presses the spiral face by movement to cause the rotation of the latch from the holding position to the releasing position[[.]]; and

an opening mechanism configured such that in the course of the rotation of the hand insertion door in the direction in which the hand insertion window is closed, the opening mechanism comes into contact with the hand insertion door before the hand insertion window is closed, and thereby urges the hand insertion door to cause the rotation in the direction in which the hand insertion window is opened,

wherein a packing is attached to an internal edge of the hand insertion window and the packing serves as the opening mechanism. further wherein the packing has a thicker portion and the thicker portion serves as the opening mechanism.

.

2. (Currently Amended) The ~~incubator~~ apparatus according to claim 1, further comprising a helical compression spring urging the releasing member in a direction opposite to the direction in which the spiral face is pressed.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Currently Amended) The ~~incubator~~ apparatus according to claim 6, wherein disposed on the thicker portion is a projection for preventing the packing from being erroneously attached, and

the thicker portion and the projection serve as the opening mechanism.

8. (Currently Amended) The ~~incubator~~ apparatus according to claim 7, wherein a rotation shaft for the rotation of the hand insertion door is inserted in a helical coil spring, and

the thicker portion, the projection, and the helical coil spring serve as the opening mechanism.

9. (Currently Amended) The ~~incubator~~ apparatus according to claim 1, wherein the latch has a pressed portion that is pressed by the rotation of the hand insertion door, and thereby causes the rotation from the holding position to the releasing position, and

the pressed portion is made of impact-absorbent material.

10. (Currently Amended) The ~~incubator~~ apparatus according to claim [[10]] 9, wherein the impact-absorbent material is silicone rubber.

11. (Currently Amended) ~~The incubator according to claim 1, further comprising~~ An apparatus comprising: a hand insertion window formed in a side of a newborn chamber;

a hand insertion door that opens and closes the hand insertion window by rotation; ~~and~~

a latch mechanism that holds the hand insertion door in a closing position for closing the hand insertion window;

wherein the latch mechanism includes a latch and a releasing member,

the latch has a rotation shaft extending along the side and enabling rotation between a holding position for the holding of the hand insertion door and an releasing position for releasing the holding of the hand insertion door, and a spiral face extending to at least part of a periphery of the rotation shaft; and

the releasing member is movable along the side, and presses the spiral face by movement to cause the rotation of the latch from the holding position to the releasing position; and

a braking mechanism configured such that from ~~some point in~~ any point between the course of rotation of the hand insertion door in the direction in which the hand insertion window is opened, the braking mechanism brakes the rotation of the hand insertion door.

12. (Currently Amended) The ~~incubator~~ apparatus according to claim 11, wherein a portion around a rotation shaft for the rotation of the hand insertion door has a cross-section that is not completely circular, and

the cross-section comes into contact with the braking mechanism in the course of the rotation.

13. (Currently Amended) The ~~incubator~~ apparatus according to claim 12, wherein the braking mechanism is elastically deformable, and

by the elastic deformation, the braking mechanism absorbs pressure applied due to the contact.

14. (Currently Amended) The ~~incubator~~ apparatus according to claim 1, wherein the latch mechanism includes:

an urging member for urging the rotation of the latch from the releasing position to the holding position; and

a braking member for braking the rotation of the latch.

15. (Currently Amended) The ~~incubator~~ apparatus according to claim 14, wherein the latch mechanism includes a latch base plate supporting the latch and the releasing member, and

the braking member is a spacer disposed between the latch and the latch base plate and around the rotation shaft.

REMARKS

The Office Action has been received and carefully considered. Claims 1-15 are pending. Claims 1, 2, and 7-15 have been amended. Claims 3-6 have been cancelled. No new matter has been added. Reconsideration of all claims is respectfully requested based on the above amendments and the following remarks.[1]

I. Claim Rejections under 35 U.S.C. § 112

Claims 1, 3, 11, and 14 are rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants respectfully submit that all pending claims have been amended to fully comply with 35 U.S.C. §112, thus rendering this rejection moot.

II. Allowable Subject Matter and Claim Rejections under 35 U.S.C. § 103

Claims 1, 2, 14, and 15 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over European EP 368207 to Vaccaro ("Vaccaro") in view of U.S. Patent No. 5,823,644 to Suh et al. ("Suh"). Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Vaccaro in view of Suh and U.S. Patent No. 4,896,908 to Kleefeldt ("Kleefeldt").

[1] As Applicants' remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicants' silence as to assertions in the Office Action or certain requirements that may be applicable to such rejections (*e.g.*, assertions regarding dependent claims, whether a reference constitutes prior art, whether references are legally combinable for obviousness purposes) is not a concession by Applicants that such assertions are accurate or such requirements have been met, and Applicants reserve the right to analyze and dispute such in the future.

Applicants note with appreciation the Examiner's indication that claims 3 and 11 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph, set forth in the Office Action and to include all of the limitations of the base claim and any intervening claims. *See* Office Action at 5.

Applicants respectfully submit that claim 1 has been amended to include the limitations previously set forth in dependent claim 3. Claim 11 has been amended to take independent form. In accordance with the Examiner's indication of allowable subject matter, Applicants submit that all claims in the application are presently in allowable form.

CONCLUSION

In view of the above remarks, reconsideration and allowance are respectfully requested.

If the Examiner has any questions relating to this response, or the application in general, he is respectfully requested to contact the undersigned to expedite the prosecution of this application.

In the event that a variance exists between the amount tendered and that determined by the U.S. Patent and Trademark Office to enter this Reply or to maintain the present application pending, please charge or credit such variance to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

Dated: 6/19/12

By: _____

Christopher M. First
Registration No. 68,042

Hunton & Williams LLP
Intellectual Property Department
2200 Pennsylvania Avenue, NW
Washington, DC 20037
(202) 955-1500 (telephone)
(202) 955-1804 (direct)
(202) 778-2201 (facsimile)
CMF/tmf

Electronic Acknowledgement Receipt

EFS ID:	13053594
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Christopher Michael First/Terry Ford
Filer Authorized By:	Christopher Michael First
Attorney Docket Number:	75575.000006
Receipt Date:	19-JUN-2012
Filing Date:	28-SEP-2009
Time Stamp:	16:55:22
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment/Req. Reconsideration-After Non-Final Reject	6response.pdf	235838 d4d9a7098e677ee0804beed1565b2836f61c6c5d	no	9

Warnings:	
Information:	

Total Files Size (in bytes):	235838

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/568,335	Filing Date 09/28/2009	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

AMENDMENT	06/19/2012	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 11	Minus	** 20	= 0	X $ =		OR	X $60=	0
	Independent (37 CFR 1.16(h))	* 2	Minus	***3	= 0	X $ =		OR	X $250=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	0

AMENDMENT		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/PHYLLIS CANTY/

This collection of information is required by 37 CFR 1.16. 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006	6169

21967 7590 03/19/2012

HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
2200 Pennsylvania Avenue, N.W.
WASHINGTON, DC 20037

EXAMINER	
LUGO, CARLOS	

ART UNIT	PAPER NUMBER
3674	

MAIL DATE	DELIVERY MODE
03/19/2012	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	12/568,335	MATSUBARA ET AL.	
	Examiner	Art Unit	
	CARLOS LUGO	3674	

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

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ 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.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-15* is/are pending in the application.

5a) Of the above claim(s) _____ is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-15* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☒ The drawing(s) filed on *28 September 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☒ 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:

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)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, 11 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, the claim is directed to an incubator that comprises a window, a door and a latch mechanism. However, it is unclear from these elements claimed how it will perform the function of an incubator. In order to continue with the examination, the claims will be interpreted as the combination of the incubator with the latch mechanism, plus the incubator elements that make it function as an incubator. Correction is required.

As to claim 3, the claims require an opening mechanism. The specification defines this mechanism as element 61. First, element 61 is not a mechanism, is a member. Second, element 61 is a biasing member not an opening mechanism, since by itself, the elements is not capable of moving the door toward the opening position. The element will create an elastic resilience that is capable of urging the door, when the latch mechanism is released. Furthermore, this element is part of a packing seal 56.

Therefore, in order to continue with the examination, the claim will be interpreted as the door having a packing capable of creating a seal and that the packing has apportion closed to the pivotal portion of the door that will create an elastic resilience that is

capable of urging the door, when the latch mechanism is released. Correction is required (combining stuff from claims 3, 4, 6).

As to claim 11, the limitation "at some point" is indefinite since it could be any point between the closed position of the door and the open position of the door. The bracking mechanism 65 in combination with a non-circular part of the pivoting part of the door 34, will create the bracking function. Correction is required.

Furthermore, it is unclear where this mechanism with respect to the door is. As shown in the drawings, the bracking mechanism is located in the same area as the elastic resilient member 61. Correction is required.

As to claims 14 and 15, it is unclear how the braking member (spacer 64) can brake rotation of the latch. Further, it would destroy the function of the latch of rotating between release and closed position. Therefore, a very broad interpretation will be given to the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 368207 to Vaccaro in view of US Pat No 5,823,644 to Suh et al (Suh).

Vaccaro discloses an incubator having a hand insertion window and a hand insertion door (figure 1).

The incubator has a latch mechanism composed of a latch and a releasing member (30).

However, Vaccaro fails to disclose that the members are separate members operatively connected to each other. Vaccaro discloses a one piece member.

Suh teaches that it is well known in the art to provide a latch mechanism to secure two members (120 and 130), wherein the latch (20) rotates about a shaft (43) between a holding position, holding the two members, and a release position by actuating a releasing member (22) operatively connected to the latch as a separate member. The releasing member (22) will be press against a "spiral" surface on the latch (curved outer surface of 62) in order to release the latch. The assembly further comprises a spacer (attached to the shaft, figure 2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the latch mechanism described by Vaccaro as separate members connected together, as taught by Suh, since separate elements fastened together, in place of a one-piece construction, is a design consideration within the skill of the art.

As to claim 2, the fact that the spring is helical is considered as a design consideration within the art that will not affect the biasing function to the releasing member (which is biased by spring 66).

Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 368207 to Vaccaro in view of US Pat No 5,823,644 to Suh et al (Suh) and US Pat No 4,896,908 to Kleefeldt.

Vaccaro, as modify by Suh, teaches that the latch has a pressing portion (latching mouth) that will be contacted by the member when the door is closed.

However, Vaccaro, as modified by Suh, fails to disclose the use of an impact absorbent material in that portion.

Kleefeldt teaches that it is well known in the art to provide a latch member (4) with a material (7) capable of absorbing an impact.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the latch described by Vaccaro, as modified by Suh, with an impact absorbent material, as taught by Kleefeldt, in order to prevent damage to the latch structure and other convenient features.

Allowable Subject Matter

Claims 3 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 4-8, 12 and 13 are also allowed since the claims depend from claims 3 and 11 respectively.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARLOS LUGO whose telephone number is (571)272-7058 **(interviews by phone only)**. The examiner can normally be reached on 10-7pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Beach can be reached on 571-2726988. 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.

/Carlos Lugo/
Primary Examiner
Art Unit 3674

March 14, 2012.

Notice of References Cited	Application/Control No. 12/568,335	Applicant(s)/Patent Under Reexamination MATSUBARA ET AL.	
	Examiner CARLOS LUGO	Art Unit 3674	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2,618,140 A	11-1952	CONRAD ZELLWEGER	431/152
*	B	US-4,896,908 A	01-1990	Kleefeldt, Frank	292/216
*	C	US-5,823,644 A	10-1998	Suh et al.	312/223.2
*	D	US-7,347,460 B2	03-2008	Ala, Gian Battista	292/216
*	E	US-7,441,813 B2	10-2008	Qin et al.	292/163
*	F	US-7,806,446 B2	10-2010	Oh, Young Ki	292/165
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Substitute for form 1449A/PTO			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*		**Application Number**	**12/568,335**
		Filing Date	**September 28, 2009**
		First Named Inventor	**Terumi MATSUBARA *et al.***
		Art Unit	**3673**
		Examiner Name	***Unassigned***
Sheet	**1 of 1**	**Attorney Docket Number**	**75575.000006**

U.S. PATENT DOCUMENTS

*Examiner Initials	Cite No.	DOCUMENT NUMBER Number - Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US 6,592,511	07-15-2003	HONMA et al.	

FOREIGN PATENT DOCUMENTS

*Examiner Initial	Cite No.	FOREIGN PATENT DOCUMENT Country Code Number-Kind Code (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	TRANSLATION YES	TRANSLATION NO
	2.	EP 0 368 207	05-16-1990	VACCARO		☐	☐
	3.	JP 2001/070373	09-07-1999	NAOKI		☐	☐
	4.	JP 2000/070315	03-07-2000	KAZUO		☐	☐
	5.	JP 10-248887	09-22-1998	MISAO et al.		☐	☐
	6.	JP 10-258097	09-29-1998	KAZUO		☐	☐

OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS

*Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TRANSLATION YES	TRANSLATION NO

EXAMINER SIGNATURE	/Carlos Lugo/	DATE CONSIDERED	03/14/2012

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /CL/

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	Art Unit
	CARLOS LUGO	3674

SEARCHED			
Class	Subclass	Date	Examiner
292	121, 122, 124, 127, 128, 219, 220, 224, 227, 228, dig.37	3/13/12	CL

SEARCH NOTES		
Search Notes	Date	Examiner

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

	/CARLOS LUGO/ Primary Examiner.Art Unit 3674

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12568335	MATSUBARA ET AL.
	Examiner	**Art Unit**
	CARLOS LUGO	3674

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	03/14/2012								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006

CONFIRMATION NO. 6169

21967
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

PUBLICATION NOTICE

Title: Incubator

Publication No.US-2010-0109347-A1
Publication Date:05/06/2010

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

Substitute for form 1449A/PTO		Application Number	12/568,335
INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(use as many sheets as necessary)*		Filing Date	September 28, 2009
		First Named Inventor	Terumi MATSUBARA *et al.*
		Art Unit	3673
		Examiner Name	*Unassigned*
Sheet	1 of 1	Attorney Docket Number	75575.000006

U.S. PATENT DOCUMENTS

*Examiner Initials	Cite No.	DOCUMENT NUMBER Number - Kind Code (if known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1.	US	6,592,511	07-15-2003	HONMA et al.	

FOREIGN PATENT DOCUMENTS

*Examiner Initial	Cite No.	FOREIGN PATENT DOCUMENT Country Code Number-Kind Code (if known)		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	TRANSLATION YES	TRANSLATION NO
	2.	EP	0 368 207	05-16-1990	VACCARO		☐	☐
	3.	JP	2001/070373	09-07-1999	NAOKI		☐	☐
	4.	JP	2000/070315	03-07-2000	KAZUO		☐	☐
	5.	JP	10-248887	09-22-1998	MISAO et al.		☐	☐
	6.	JP	10-258097	09-29-1998	KAZUO		☐	☐

OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS

*Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	TRANSLATION YES	TRANSLATION NO

EXAMINER SIGNATURE	DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 368 207 A2**

(12) EUROPEAN PATENT APPLICATION

(21) Application number: **89120510.6**

(51) Int. Cl.5: **A61G 11/00**

(22) Date of filing: **06.11.89**

(30) Priority: **09.11.88 US 269250**

(43) Date of publication of application:
16.05.90 Bulletin 90/20

(84) Designated Contracting States:
CH DE FR GB LI

(71) Applicant: **AIR-SHIELDS, INC.**
330 Jacksonville Road
Hatboro, PA 19040(US)

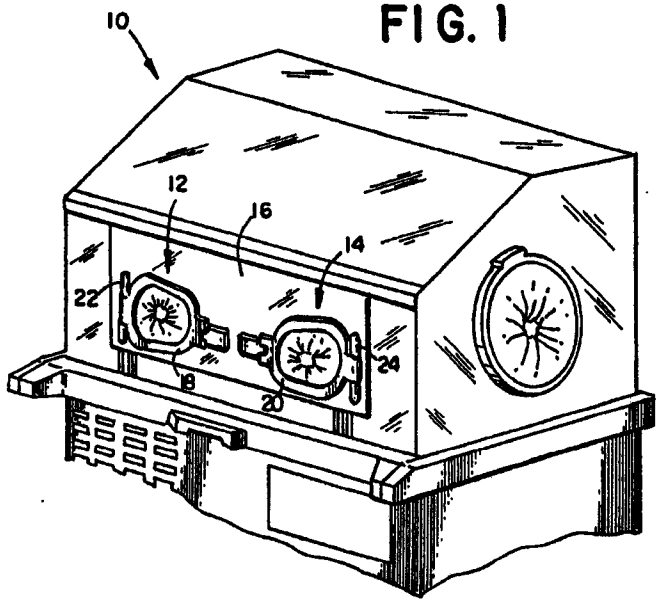
(72) Inventor: **Vaccaro, Robert K.**
6633 N. 6th Street
Philadelphia Pennsylvania 19040(US)

(74) Representative: **Patentanwälte Grünecker, Kinkeldey, Stockmair & Partner**
Maximilianstrasse 58
D-8000 München 22(DE)

(54) Door assembly.

(57) A door assembly in which an elastomeric roller, carried by a door, rolls against a latch member to pivot the latch member in one direction until the roller reaches a detent and then pivots in an opposite direction to lock the roller in the detent and the door in a closed position. The door is opened by pivoting the latch member in the first direction to release the roller from the detent.

FIG. 1



EP 0 368 207 A2

DOOR ASSEMBLY

TECHNICAL FIELD

The present invention relates, in general, door latches and, in particular, to an infant incubator port assembly.

BACKGROUND ART

Latches on infant incubator ports should possess the following features:

(1) positive closing so that the door cannot be pushed open from the inside with less than a prescribed force, typically fifteen pounds

(2) "either/or" operation, so that the door is either obviously open or latched securely closed

(3) easy to open with the elbow

(4) quiet operation in latching and opening the door

Generally, infant incubators in use at the present time have the first three above features but lack the fourth.

The canopy of an infant incubator typically is fabricated from acrylic sheet or similar material which has a hard, reflective surface. Sound which is produced on the surface of the canopy is not attenuated but rather reflected within the canopy. Peak sound levels of 90 dbA and higher have been measured within certain incubators when a door is closed. Such noise can startle and cause discomfort to an infant in the incubator.

DISCLOSURE OF THE INVENTION

A door assembly, constructed in accordance with the present invention, includes a support structure having an opening and a door mounted on the support structure for movement of the door between open and closed positions of the door. Means are provided for urging the door to move to its open position. Also included are latching means between the door and the support structure for closing the door and locking the door in its closed position. The latching means include an impact absorbing member and a latch member engaged by the impacting absorbing member as the two are urged into engagement. The latch member has (i) a contact surface engaged by contact of the impact absorbing member as the door moves to the closed position and (ii) a detent at an end of the contact surface which, when reached by the impact absorbing member as the door moves to the closed position, receives the impact absorbing member to lock the impact absorbing member in the detent and lock the door in its closed position. The latching means also include means for disengaging the impact absorbing member and the latch member to release the impact absorbing member from the detent and permit the door to move to its open position.

Although the invention will be described in connection with an infant incubator, it has potential application where results, comparable to those required in infant incubators, are desired.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a perspective view of a canopy of an infant incubator having door assemblies constructed in accordance with the present invention;

Figure 2 is a front view, partially in section, of the door hinge portion of a door assembly constructed in accordance with the present invention;

Figure 3A, 3B, and 3C are bottom views of a door assembly constructed in accordance with the present invention at three different successive positions in the sequence of closing; and

Figure 4 is a sectional view of the latching portion of a door assembly constructed in accordance with the present invention.

BEST MODE OF CARRYING OUT THE INVENTION

Figure 1 shows an infant incubator canopy 10 having a pair of door assemblies 12 and 14 constructed in accordance with the present invention installed in a front door panel 16 which serves as a support structure for the door assemblies. Door assemblies 12 and 14 each have a door 18 and 20, respectively, which cover openings in panel 16 when the doors are closed. Doors 18 and 20 are mounted on panel 16 for pivotal movement about axes defined by a pair of hinges 22 and 24, respectively.

As shown in Figure 2, a torsion spring 26 is positioned between hinge 24 and door 20. Spring 26 urges door 20 to pivot in a first direction to the open position of the door. A similar torsion spring is provided between hinge 22 and door 18.

Referring to Figures 3A, 3B and 3C, which are bottom views showing door 18 at three successive positions in the sequence of closing, a door assembly, constructed in accordance with the present invention, also includes a latching mechanism between door 18 and support structure 16 for closing the door and locking the door in its closed position. For the embodiment of the invention illustrated, the

latching mechanism includes an impact absorbing member in the form of an elastomeric roller 28 mounted on the edge of door 18 opposite from hinge 22. Roller 28 is arranged for rotational movement about an axis parallel to the axis of hinge 22.

The latching mechanism also includes a latch member 30 mounted on panel 16 at the side of the opening in panel 16 opposite from hinge 22. Latch member 30 is mounted for pivotal movement about an axis parallel to the pivot axis of hinge 22 and the rotation axis of roller 28.

Referring also to Figure 4, latch member 30 has a contact surface 30a and a detent 30b at the end of contact surface 30a. Contact surface 30a is an inclined surface which is engaged by rolling contact of roller 28 to pivot the latch member in a first direction, indicated by an arrow 32 in Figure 3A, to a position such as shown in Figure 3B, as door 18 pivots against torsion spring 26 toward the closed position of the door.

A spring 34 urges latch member 30 and roller 28 into engagement by pivoting the latch member in a second direction opposite to the direction indicated by arrow 32. Spring 34 extends between the closed end of a bore 36 in latch member 30 and a pin 38 fitted within bore 36 for sliding movement within the bore and bearing against panel 16. As latch member 30 pivots in the direction of arrow 32, spring 34 is compressed. When roller 28 reaches detent 30b, so that latch member 30 is free to pivot in the opposite direction, spring 34 is permitted to expand and causes the latch member to pass over roller 28 and lock the roller in detent 30b. This in turn locks door 18 in its closed position.

The latching mechanism also includes means for disengaging roller 28 and latch member 30 to release the roller from detent 30b and permit door 18 to pivot to its open position. Such means can include a handle 30C formed as a part of latch member 30. As handle 30C is pushed toward panel 16, latch member 30 pivots in the direction of arrow 32 shown in Figure 3A. Such movement of the latch member permits release of roller 28 from detent 30b as torsion spring 26 urges door 18 to move to its open position.

In a door assembly constructed in accordance with the present invention, there are four events that generate sound. These four events are:

(1) initial contact of the door against the latch member

(2) increasing engagement of the latch member

(3) the latch member moving into its final position

(4) the door closing against the support structure

Elastomeric roller 28 is provided to address the first two events. This roller absorbs energy which would otherwise be converted into sound and it shifts the sound that is produced to a lower frequency to which the human ear is less sensitive.

As door 18 continues to close, roller 28 forces latch member 30 to pivot further and further from its initial position. The increasing engagement of latch member 30 and roller 28, namely event (2), is a rolling contact rather than a sliding contact which produces very low noise with a soft roller.

When latch member 30 moves in an opposite direction to its final, locking position, its motion toward panel 16 is stopped by another elastomeric piece, namely a ring 40, rather than the hard surface of the latch member itself. This reduces the sound produced by event (3).

The sound produced by door 18 closing against panel 16 is minimized by the inclusion of a gasket 42 extending around the opening in panel 16 closed by the door.

With respect to the other features, identified at the outset, a door assembly, constructed in accordance with the present invention, is latched such that the door cannot be pushed open from inside the incubator because the pivot point of latch member is directly below the contact point between door 18 and the latch member when the door is in the closed position. Also, because of the rolling contact between roller 28 and latch member 30, latching is never partial. The spring loaded latch member will either close over roller 28, latching door 18, or torsion spring 26 will pivot the door to its open position. Lastly, handle 30C is large enough to be pushed by the user's elbow to open the door.

It should be pointed out that the positions of various parts of the embodiment of the invention illustrated in the drawings can be reversed. For example, instead of mounting roller 28 on door 18 and mounting latch member 30 on support structure 16, the latch member can be carried by the door and the roller can be mounted on the support structure. In addition, instead of mounting latch member 30 for pivotal movement upon engagement by roller 28, the roller can be mounted for pivotal movement.

It also should be noted that the present invention can be applied to doors mounted for sliding, linear movement as they are opened and closed.

The foregoing has set forth exemplary and preferred embodiments of the present invention. It will be understood, however, that various alternatives will occur to those of ordinary skill in the art without departure from the spirit and scope of the present invention.

Claims

1. A door assembly comprising:
a support structure having an opening:
a door;
means for mounting said door on said support structure for movement of said door between open and closed positions of said door;
means for urging said door to move to said open position of said door;
and latching means between said door and said support structure for closing said door and locking said door in said closed position, said latching means including:

(a) an impact absorbing member,

(b) a latch member having (i) a contact surface engaged by contact of said impact absorbing member as said door moves to said closed position and (ii) a detent at an end of said contact surface which, when reached by said impact absorbing member as said door moves to said closed position, receives said impact absorbing member to lock said impact absorbing member in said detent and lock said door in said closed position,

(c) means for urging said impact absorbing member and said latch member into engagement, and

(d) means for disengaging said impact absorbing member and said latch member to release said impact absorbing member from said detent and permit said door to move to said open position.

2. A door assembly according to claim 1 wherein said door is mounted for pivotal movement about a first axis, said impact absorbing member is a roller mounted for rotational movement about a second axis parallel to said first axis, and said contact surface is engaged by rolling contact of said roller as said door pivots to said closed position.

3. A door assembly according to claim 2 wherein said roller is an elastomeric material.

4. A door assembly according to claim 3 wherein said means for urging said roller and said latch member into engagement include means for mounting said latch member for pivotal movement about a third axis parallel to said first and said second axes.

5. A door assembly according to claim 4 wherein said contact surface is inclined to pivot said latch member in a first direction as said door pivots toward said closed position of said door.

6. A door assembly according to claim 5 wherein said means for urging said roller and said latch member into engagement include a spring which urges said latch member to pivot in a second direction opposite to said first direction.

7. A door assembly according to claim 4 wherein said roller is mounted on said door opposite from said door mounting means and said latch member is mounted on said support structure at a side of said opening opposite from said door mounting means.

8. A door assembly according to claim 7 wherein said latching means further include an elastomeric stop member attached to said latch member and positioned to engage said support structure upon movement of said latch member toward said support structure.

9. A door assembly according to claim 6 wherein said roller is mounted on said door opposite from said door mounting means and said latch member is mounted on said support structure at a side of said opening opposite from said door mounting means.

10. A door assembly according to claim 9 wherein said latching means further include an elastomeric stop member attached to said latch member and positioned to engage said support structure upon movement of said latch member in said second direction.

11. A door assembly comprising:
a support structure having an opening;
a door;
means for mounting said door on said support structure at a first side of said opening for pivotal movement of said door about a first axis between open and closed positions of said door;
a first spring urging said door to pivot in a first direction to said open position of said door;
an impact absorbing roller mounted on said door opposite from said mounting means for rotational movement of said impact absorbing roller about a second axis parallel to said first axis;
a latch member mounting on said support structure at a second side of said opening opposite from said first side of said opening for pivotal movement of said latch member about a third axis parallel to said first and said second axes, said latch member having (1) a contact surface engaged by rolling contact of said impact absorbing roller to pivot said latch member in a first direction as said door pivots against said first spring in a second direction opposite to said first direction of pivoting of said door toward said closed position of said door, and (2) a detent at an end of said contact surface which, when reached by said impact absorbing roller, permits said latch member to pivot in a second direction opposite to said first direction of pivoting of said latch member;
a second spring urging said latch member to pivot in said second direction of pivoting of said latch member against said impact absorbing roller to latch said impact absorbing roller in said detent in said latch member;
means for pivoting said latch member in said first

direction of pivoting of said latch member to disengage said impact absorbing roller and said latch member and release said impact absorbing roller from said detent to permit said door to pivot to said open position;
and an elastomeric stop member attached to said latch member and positioned to engage said support structure upon movement of said latch member in said second direction of pivoting of said latch member.

12. A door assembly according to claim 11 wherein said contact surface is inclined to pivot said latch member in said first direction of pivoting of said latch member.

13. An infant incubator door assembly comprising:
an incubator canopy having an opening;
a door;
means for mounting said door on said incubator canopy for movement of said door between open and closed positions of the door;
means for urging said door to move to said open position of said door;
and latching means between said door and said incubator canopy for closing said door and locking said door in said closed position, said latching means including:

(a) an impact absorbing member,

(b) a latch member having (i) a contact surface engaged by contact of said impact absorbing member as said door moves to said closed position and (ii) a detent at an end of said contact surface which, when reached by said impact absorbing member, as said door moves to said closed position, receives said impact absorbing member to lock said impact absorbing member in said detent and lock said door in said closed position,

(c) means for urging said impact absorbing member and said latch member into engagement, and

(d) means for disengaging said impact absorbing member and said latch member to release said impact absorbing member from said detent and permit said door to move to said open position.

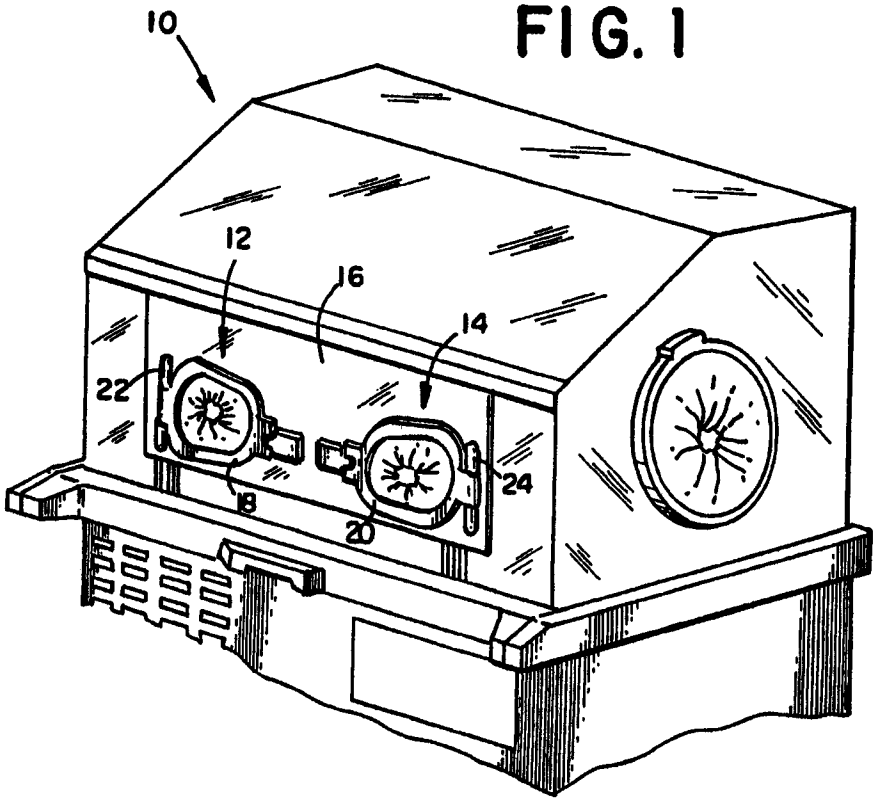
14. A door assembly according to claim 13 wherein said door is mounted for pivotal movement about a first axis, said impact absorbing member is a roller mounted for rotational movement about a second axis parallel to said first axis, and said contact surface is engaged by rolling contact of said roller as said door pivots to said closed position.

15. A door assembly according to claim 14 wherein said roller is an elastomeric material.

16. An infant incubator door assembly comprising:
an incubator canopy comprising:
a door;
means for mounting said door on said incubator canopy at a first side of said opening for pivotal movement of said door about a first axis between open and closed positions of said door;
a first spring urging said door to pivot in a first direction to said open position of said door;
an impact absorbing roller mounted on said door opposite from said mounting means for rotational movement of said impact absorbing roller about a second axis parallel to said first axis;
a latch member mounting on said incubator canopy at a second side of said opening opposite from said first side of said opening for pivotal movement of said latch member about a third axis parallel to said first and said second axes, said latch member having (1) a contact surface engaged by rolling contact of said impact absorbing roller to pivot said latch member in a first direction as said door pivots against said first spring in a second direction opposite to said first direction of pivoting of said door toward said closed position of said door, and (2) a detent at an end of said contact surface which, when reached by said impact absorbing roller, permits said latch member to pivot in a second direction opposite to said first direction of pivoting of said latch member;
a second spring urging said latch member to pivot in said second direction of pivoting of said latch member against said impact absorbing roller to latch said impact absorbing roller in said detent in said latch member;
means for pivoting said latch member in said first direction of pivoting of said latch member to disengage said impact absorbing roller and said latch member and release said impact absorbing roller from said detent to permit said door to pivot to said open position;
and an elastomeric stop member attached to said latch member and positioned to engage said incubator canopy upon movement of said latch member in said second direction of pivoting of said latch member.

17. A door assembly according to claim 16 wherein said contact surface is inclined to pivot said latch member in said first direction of pivoting of said latch member.

FIG. 1



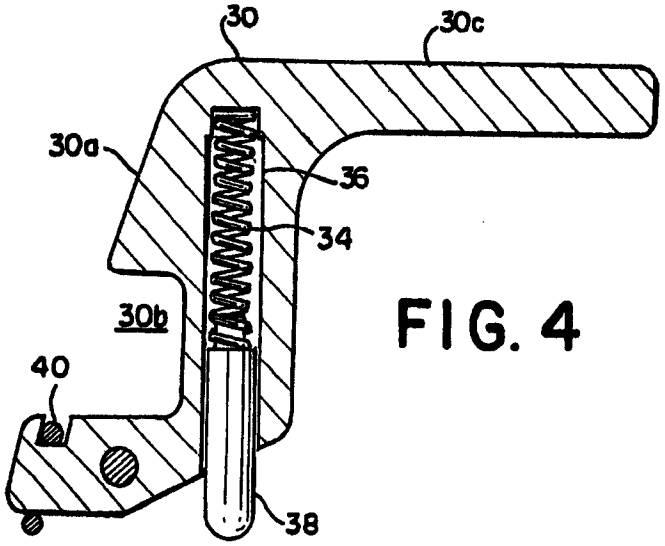


FIG. 4

FIG. 3A

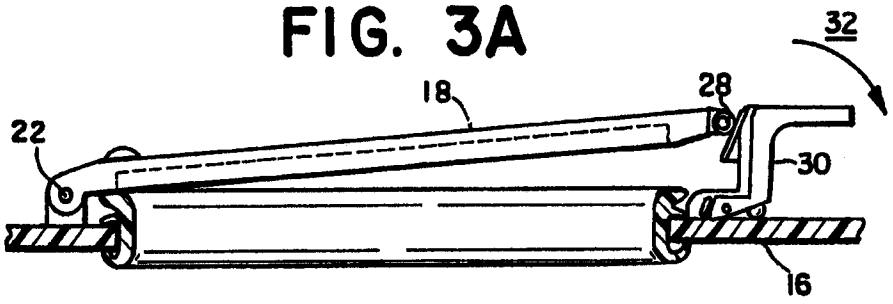


FIG. 3B

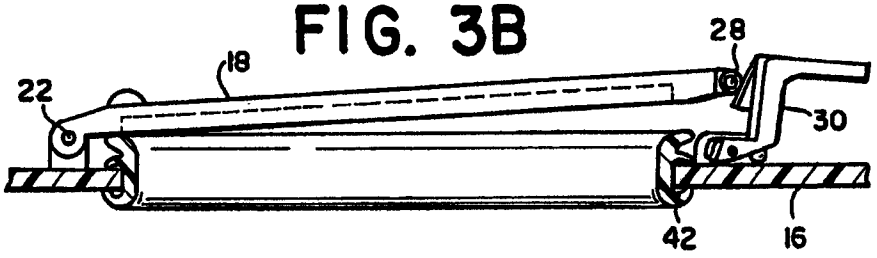
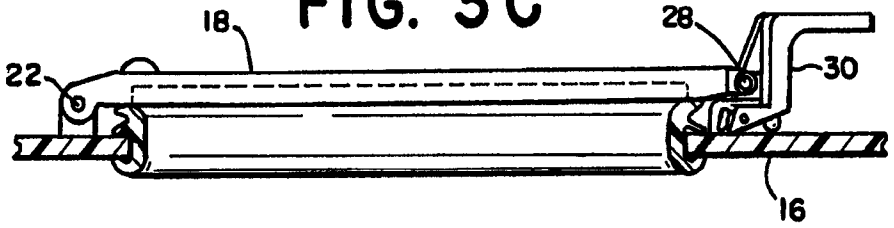


FIG. 3C



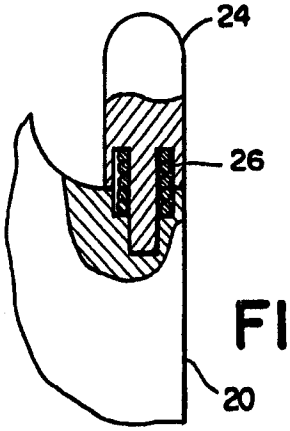


FIG.2

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2001-070373

(43)Date of publication of application : 21.03.2001

(51)Int.Cl. A61G 11/00
B65D 43/22

(21)Application number : 11-253639

(22)Date of filing : 07.09.1999

(71)Applicant : ATOM MEDICAL CORP

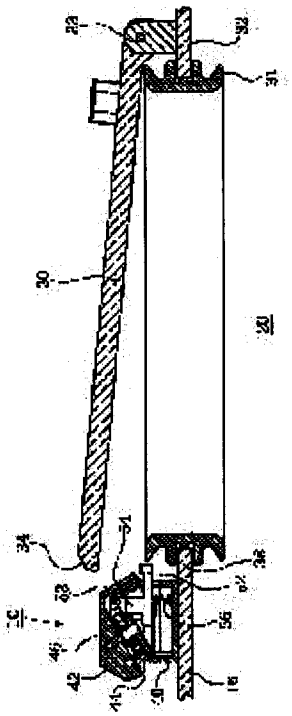
(72)Inventor : SUZUKI NAOKI
SEKI TATSUHIKO
MATSUBARA KAZUO

(54) HOOK SLIDER FOR INCUBATOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a highly reliable hook slider which is constituted in such a way that the door of a maintenance window does not open easily even when a force is applied from the inside of a hood.

SOLUTION: A hook slider 10 for incubator is provided with a maintenance window 20 made through a hood 16, a door 30 which is freely rotatably supported near one end 32 of the window 20 and has a front-side outer edge 34, and the hook slider 10 which locks the door 30 near the other end section 39 of the window 20. The slider 10 is provided with a fixing member 40 which is attached to the hood 16 near the other end of the window 20, a movable member 42 having a push-button surface 46 which is slidably attached to the fixing member 40, urged toward the locking position from a retreated position by means of a first spring 44, and moved to the retreated position upon receiving a pressing force against the elastic force of the spring 44 and a locking surface which locks the door 30 in a state where the locking surface is engaged with the front-side outer edge of the door 30 at the locking position, and a stopping member 52 which retains the movable member 42 at the retreated position when the push-button surface 46 is pressed and cancels the retention when the member 52 comes into contact with the door 30.



(19)日本国特許庁（ＪＰ）　(12)**公開特許公報**（Ａ）　(11)特許出願公開番号
特開2001－70373
（Ｐ2001－70373Ａ）
(43)公開日　平成13年３月21日(2001.3.21)

(51)Int.Cl.'	識別記号	Ｆ Ｉ		ﾃｰﾏｺｰﾄﾞ(参考)
Ａ６１Ｇ　11/00		Ａ６１Ｇ　11/00	Ｚ	３Ｅ０８４
Ｂ６５Ｄ　43/22		Ｂ６５Ｄ　43/22	Ａ	４Ｃ３４１

審査請求　未請求　請求項の数　ＯＬ　（全　６　頁）

(21)出願番号　特願平11－253639

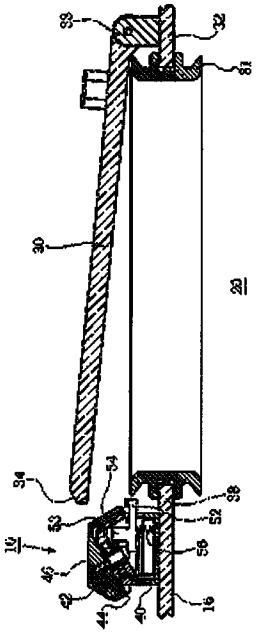
(22)出願日　平成11年９月７日(1999.9.7)

(71)出願人　390022541
アトムメディカル株式会社
東京都文京区本郷３丁目18番15号
(72)発明者　鈴木　直樹
埼玉県浦和市道場２丁目２番１号　アトムメディカル株式会社浦和工場内
(72)発明者　関　辰彦
埼玉県浦和市道場２丁目２番１号　アトムメディカル株式会社浦和工場内
(74)代理人　100065950
弁理士　土屋　勝

最終頁に続く

(54)【発明の名称】　保育器のフックスライダ

(57)【要約】
【課題】フードの内側から力が掛かっても手入れ窓のドアが容易に開かない高信頼性のフックスライダドアを提供する。
【解決手段】保育器用のフックスライダ１０は、フード１６に形成された手入れ窓２０と、この手入れ窓２０の一端側３２の近傍で回動自在に支持されて前側外縁３４を有するドア３０と、手入れ窓２０の他端側３８の近傍でドア３０をロックするフックスライダ１０とを備える。このフックスライダ１０は、手入れ窓２０の他端側３８の近傍のフード１６に取付けられる固定部材４０と、この固定部材４０に摺動自在に取付けられて第１バネ４４によって後退位置からロック位置方向に付勢されて、第１バネ４４の弾性力に抗して押圧力を受けて前記後退位置に移動させられる押し釦面４６と、前記ロック位置でドア３０の前側外縁３４に係合してドア３０をロックするロック面５０とを有する可動部材４２と、押し釦面４６の押圧時に可動部材４２を前記後退位置に保持させ、ドア３０に当接した時に前記保持を解除する停止部材５２とを備えたことを特徴とする。



JP,2001-070373,A ◉ STANDARD ○ ZOOM-UP ROTATION No Rotation ☐ REVERSAL RELOAD

PREVIOUS PAGE NEXT PAGE DETAIL

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-070315

(43)Date of publication of application : 07.03.2000

(51)Int.Cl. A61G 11/00

(21)Application number : 10-259272

(22)Date of filing : 28.08.1998

(71)Applicant : ATOM MEDICAL CORP

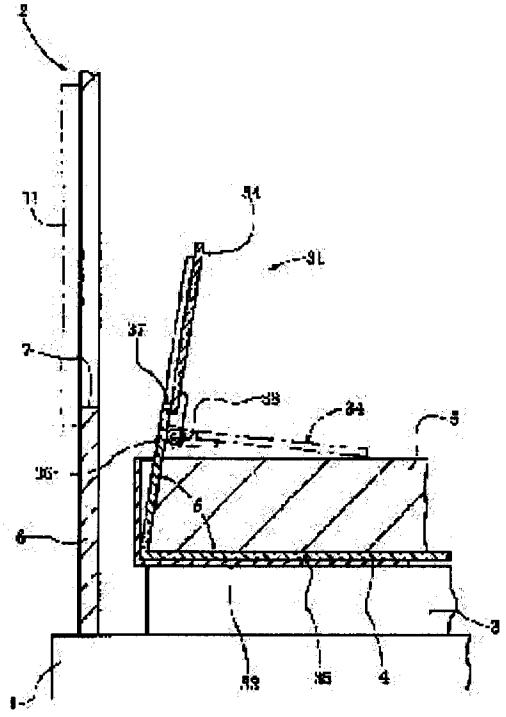
(72)Inventor : MATSUBARA KAZUO

(54) INCUBATOR AND FALL-PREVENTIVE TOOL FOR INCUBATOR

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an incubator and a fall-preventive tool for the incubator having no possibility of a baby kept on a bed in the incubator falling outside through a service window even in a condition where a nurse, or the like, can insert her hand into a hood from the service window, with a relatively simple constitution.

SOLUTION: A sealing member 34 is provided, capable of at least partially sealing a service window 7 for a head part of a baby kept in an incubator, and movable from the inner side to the outer side of the service window 7 provided on a hood 2 to surround the baby. The sealing member 34 is temporarily reciprocated to a position of evacuation by being pushed by a hand of a nurse moving inwardly from the outer side of the service window 7.



(19)日本国特許庁（ＪＰ）　(12)公開特許公報（Ａ）　(11)特許出願公開番号
特開2000－70315
（Ｐ2000－70315Ａ）
(43)公開日　平成12年３月７日(2000.3.7)

(51)Int.Cl.'	識別記号	Ｆ Ｉ	ﾃｰﾏｺｰﾄﾞ(参考)
Ａ６１Ｇ　11/00		Ａ６１Ｇ　11/00	Ｚ　４Ｃ３４１

審査請求　未請求　請求項の数５　ＦＤ　（全 12 頁）

(21)出願番号　特願平10－259272

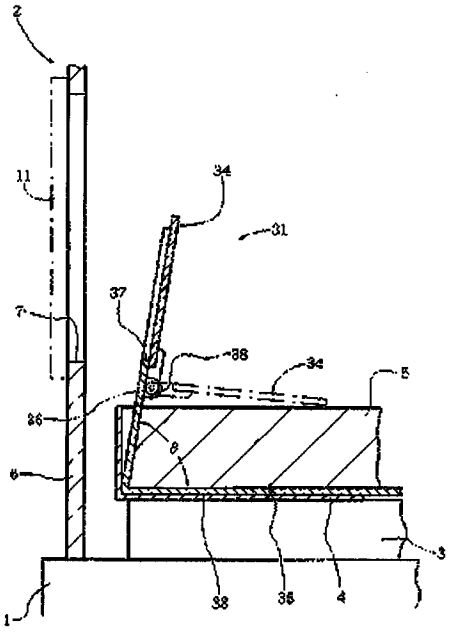
(22)出願日　平成10年８月28日(1998.8.28)

(71)出願人　390022541
アトムメディカル株式会社
東京都文京区本郷３丁目18番15号
(72)発明者　松原　一雄
東京都文京区本郷３丁目18番15号　アトムメディカル株式会社内
(74)代理人　100065950
弁理士　土屋　勝

Ｆターム(参考)　4C341 KK03 KK10

(54)【発明の名称】　保育器および保育器用転落防止具

(57)【要約】
【解決手段】収容児を包囲するためのフード２に設けられている手入れ窓７の内側から外側に向って移動する収容児の頭部などに対しては手入れ窓７を少なくとも部分的に封鎖することができる封鎖部材３４を備え．上記封鎖部材３４は．手入れ窓７の外側から内側に向って移動する看護婦の手などに対しては、この手などに押されて退避位置へと一時的に往動する。
【効果】看護婦などが手入れ窓７からフード２内に手を挿入し得る状態であっても．保育器のベッド５上の収容児が手入れ窓７を通して外部に転落する可能性はなく、その構成も比較的簡単である。



PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-258097

(43)Date of publication of application : 29.09.1998

(51)Int.Cl. A61G 11/00

(21)Application number : 09-084500

(22)Date of filing : 18.03.1997

(71)Applicant : ATOM MEDICAL KK

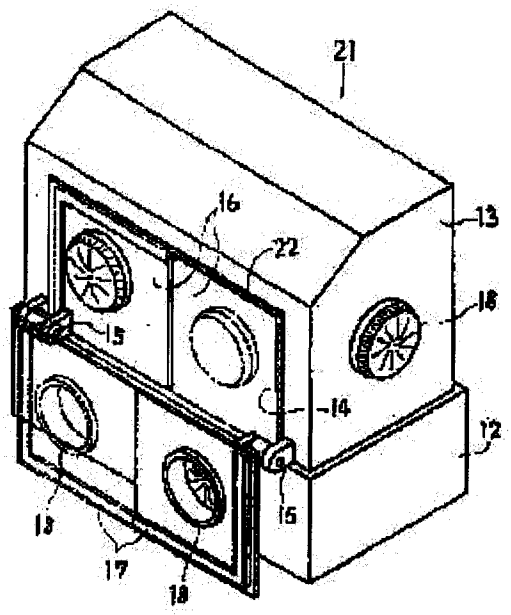
(72)Inventor : MATSUBARA KAZUO

(54) INCUBATOR

(57)Abstract:

PROBLEM TO BE SOLVED: To prevent a baby from dropping or others from a treating window neglectfully opened by hindering contact with the periphery of the treating window when carrying in or out the baby.

SOLUTION: A transparent hood 13 is provided with a treating window 14 allowing carrying in or out of a baby and a colored part 22 is provided at least at a part of the hood 13 along the periphery of the treating window 14, which enables easier recognition of the periphery of the treating window 14. This can keep the baby from contacting the periphery of the treating window 14 when carried into or out of the hood 13 through the treating window 14, thereby preventing possible injury of the baby.



(19)日本国特許庁（ＪＰ）　(12)**公開特許公報**（Ａ）　(11)特許出願公開番号

特開平10－258097

(43)公開日　平成10年(1998)９月29日

(51)Int.Cl.[6]	識別記号	ＦＩ	
Ａ６１Ｇ　11/00		Ａ６１Ｇ　11/00	Ｚ

審査請求　未請求　請求項の数４　ＦＤ　（全６頁）

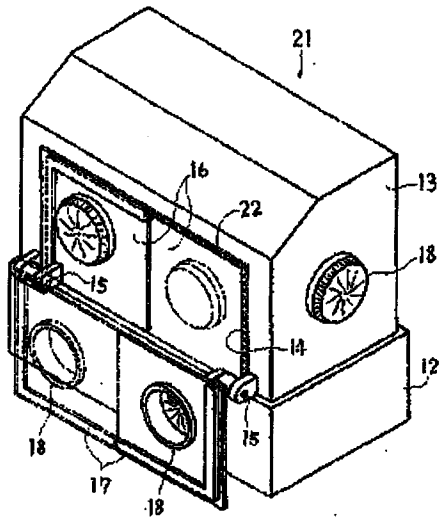
(21)出願番号　特願平9－84500

(22)出願日　平成９年(1997)３月18日

(71)出願人　390022541
アトムメディカル株式会社
東京都文京区本郷３丁目18番15号
(72)発明者　松原　一雄
東京都文京区本郷３丁目18番15号　アトムメディカル株式会社内
(74)代理人　弁理士　土量　勝

(54)【発明の名称】　保育器

(57)【要約】
【課題】　児体の搬出入時に処置窓の周縁に対する接触を防止し、閉め忘れた処置窓からの児体の転落等を防止することもできる保育器を提供する。
【解決手段】　児体を搬出入し得る処置窓１４が透明なフード１３に設けられているが、フード１３のうちで処置窓１４の周縁に沿う部分の少なくとも一部に着色部２２が設けられている。このため、処置窓１４の周縁を容易に認識することができ、処置窓１４を介して児体をフード１３内に搬入したりフード１３内から搬出したりする際に、処置窓１４の周縁に対する児体の接触を防止することができて、児体の負傷を防止することができる。



PATENT ABSTRACTS OF JAPAN

(11)Publication number : 10-248887

(43)Date of publication of application : 22.09.1998

(51)Int.Cl. A61G 11/00

(21)Application number : 09-082169

(22)Date of filing : 14.03.1997

(71)Applicant : ATOM MEDICAL KK

(72)Inventor : SEKINE MISAO

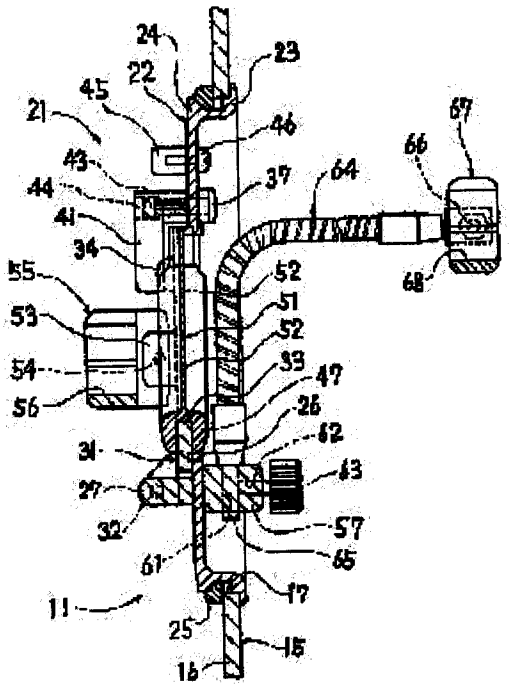
MATSUBARA KAZUO

(54) ACCESS WINDOW FOR MEDICAL CONTAINER

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an access window for a medical container, whereby medical care using a cord-shaped member inside the medical container can be performed well.

SOLUTION: This access window for a medical container is designed so that the first end of a support member 64 taking the form of a flexible rod and provided at its end with a support part 67 for a cord-shaped member is removably attached to the part of a frame 22 inside an incubator 11, and so that a support member 55 for the cord-shaped member is attached also to the part of the frame 22 outside the incubator 11. Therefore, the range within which the support member 64 can be located inside the incubator 11 is wide, the position of the cord-shaped member inside the incubator 11 is unlikely to change, and even removal of the support member 64 from the frame 22 is possible.



(19)日本国特許庁（ＪＰ）　(12)公開特許公報（Ａ）　(11)特許出願公開番号
特開平10－248887
(43)公開日　平成10年(1998)９月22日

(51)Int.Cl.[6]	識別記号	ＦＩ	
Ａ６１Ｇ　11/00		Ａ６１Ｇ　11/00	Ｚ

審査請求　未請求　請求項の数２　ＦＤ　（全　６　頁）

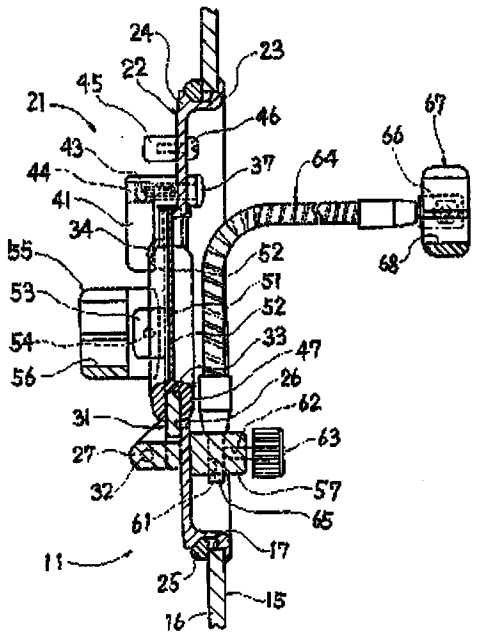
(21)出願番号　特願平9－82169

(22)出願日　平成９年(1997)３月14日

(71)出願人　390022541
アトムメディカル株式会社
東京都文京区本郷３丁目18番15号
(72)発明者　関根　誠
埼玉県浦和市道場２丁目２番１号　アトムメディカル株式会社浦和工場内
(72)発明者　松原　一雄
東京都文京区本郷３丁目18番15号　アトムメディカル株式会社内
(74)代理人　弁理士　土屋　勝

(54)【発明の名称】　医療容器用手入れ窓

(57)【要約】
【課題】　医療容器内でコード状部材を使用する医療を良好に行うことができる医療容器用手入れ窓を提供する。
【解決手段】　フレキシブルな棒状で先端部にコード状部材用の支持部６７が設けられている支持部材６４の基端部が枠体２２のうちで保育器１１の内側に着脱可能に取り付けられており、枠体２２のうちで保育器１１の外側にもコード状部材用の支持部材５５が取り付けられている。このため、支持部材６４を保育器１１内で位置させることのできる範囲が広く、保育器１１内におけるコード状部材の位置が変動しにくく、支持部材６４を枠体２２から取り外すこともできる。



Electronic Acknowledgement Receipt

EFS ID:	7094908
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Osvaldo Farres/Stefanie Chase
Filer Authorized By:	Osvaldo Farres
Attorney Docket Number:	75575.000006
Receipt Date:	26-FEB-2010
Filing Date:	28-SEP-2009
Time Stamp:	11:33:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Transmittal Letter	755756IDSTransmittal.pdf	55155 e635847e0c6e4194147fd963bdceda0e2dc29550	no	2

Warnings:	
Information:	

2	Information Disclosure Statement (IDS) Filed (SB/08)	755756SB08.pdf	51523 e707a0e292cfe6fcb737539c8e1d7228c6c4ddd8	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
3	Foreign Reference	755756ForRef1.pdf	410448 ef5a32ecf18bcfbc700726822e3cb6961424ac95	no	7
Warnings:					
Information:					
4	Foreign Reference	755756ForRef2.pdf	120934 0955399f5bce5d1829fda2897b9e841d30261d1d	no	3
Warnings:					
Information:					
5	Foreign Reference	755756ForRef3.pdf	83632 a3d254b1ce37332707c6ef016b5154c02f39d1f2	no	2
Warnings:					
Information:					
6	Foreign Reference	755756ForRef5.pdf	90057 3f2219154a842cb56dcfae69ad40dd1456f2ecdc	no	2
Warnings:					
Information:					
7	Foreign Reference	755756ForRef4.pdf	99377 7583baa0e78c3001bd9d78f14d84646507736c1a	no	2
Warnings:					
Information:					
			Total Files Size (in bytes):	911126	

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	12/568,335	Confirmation No.:	6169
Applicant	:	Terumi MATSUBARA *et al.*		
Filed	:	September 28, 2009		
Title	:	INCUBATOR		
TC/Art Unit	:	3673		
Examiner:	:	*Unassigned*		
Docket No.	:	75575.000006		
Customer No.	:	**21967**		

MAIL STOP AMENDMENT
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, and in compliance with the duty of disclosure set forth in 37 C.F.R. § 1.56, Applicants submit attached Form PTO/SB/08B (modified) for consideration and request the references cited therein be made of record by the U.S. Patent and Trademark Office ("USPTO") in the above-captioned application.

Applicants respectfully point out that the submission of the listed references in this Information Disclosure Statement ("IDS") is not an admission that they are prior art or that they are material to patentability of any claims of the application. Also, the submission of this IDS is not an indication that a search has been made by Applicants.

In accordance with 37 C.F.R. §1.98(a)(2)(ii), copies of U.S. patents and/or U.S. patent application publications cited on the attached Form PTO/SB/08B are not being provided.

Consideration of the foregoing plus the prompt return of a copy of the enclosed Form PTO/SB/08B (modified) with the Examiner's initials in the left column in accordance with MPEP 609 are respectfully requested.

In accordance with 37 C.F.R. § 1.97(b), this IDS is being submitted prior to the issuance of a first Office Action on the merits. Accordingly, no fee is required. However, in the

event the USPTO determines that a fee is due to enter and consider this IDS, the USPTO is authorized to charge such fee to the undersigned's Deposit Account No. 50-0206.

Respectfully submitted,

HUNTON & WILLIAMS LLP

Dated: 2/26/10

By: _____

Ozzie A. Farres
Registration No. 43, 606

Hunton & Williams LLP
Intellectual Property Department
1900 K Street, N.W.
Suite 1200
Washington, DC 20006
(202) 955-1500 (telephone)
(202) 778-2201 (facsimile)
OAF/mec

日　本　国　特　許　庁
JAPAN PATENT OFFICE

別紙添付の書類に記載されている事項は下記の出願書類に記載されている事項と同一であることを証明する。

This is to certify that the annexed is a true copy of the following application as filed with this Office.

出　願　年　月　日
Date of Application: ２００８年１０月　３日

出　願　番　号
Application Number: 特願２００８－２５８２９１

パリ条約による外国への出願に用いる優先権の主張の基礎となる出願の国コードと出願番号
The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is ＪＰ２００８－２５８２９１

出　願　人
Applicant(s): アトムメディカル株式会社

２０１０年　２月１６日

特許庁長官
Commissioner,
Japan Patent Office 細野哲弘

【書類名】　特許願
【整理番号】　TP0803003
【提出日】　平成20年10月 3日
【あて先】　特許庁長官　鈴木　隆史　殿
【発明者】
　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　【氏名】　松原　照巳
【発明者】
　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　【氏名】　小池　英二
【発明者】
　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　【氏名】　本間　直樹
【発明者】
　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　【氏名】　小平　陽子
【発明者】
　【住所又は居所】　東京都文京区本郷３丁目１８番１５号　アトムメディカル株式会社内
　【氏名】　松原　一雄
【特許出願人】
　【識別番号】　390022541
　【住所又は居所】　東京都文京区本郷３丁目１８番１５号
　【氏名又は名称】　アトムメディカル株式会社
【代理人】
　【識別番号】　100065950
　【住所又は居所】　東京都新宿区西新宿１の９の１８　永和ビル
　【弁理士】
　【氏名又は名称】　土屋　勝
　【電話番号】　03-3348-0222
　【ファクシミリ番号】　03-3348-1880
【手数料の表示】
　【予納台帳番号】　014225
　【納付金額】　15,000円
【提出物件の目録】
　【物件名】　特許請求の範囲　1
　【物件名】　明細書　1
　【物件名】　図面　1
　【物件名】　要約書　1
　【包括委任状番号】　9105558

【書類名】特許請求の範囲
【請求項１】
　新生児収容室の側面に設けられている手入窓と、回動によって前記手入窓を開放及び閉鎖する手入扉と、前記閉鎖のための閉鎖位置に前記手入扉を保持する掛け金機構とを備える保育器において、
　前記側面に沿っており前記保持を行う保持位置と前記保持を解除する解除位置との間の回動を可能にしている回動軸と、この回動軸の周りの少なくとも一部に延びている螺旋面とを、備える掛け金と、
　前記側面に沿って移動可能であり、この移動によって前記螺旋面を押圧して前記保持位置から前記解除位置へ前記掛け金に前記回動を生じさせる、保持解除部材と
を前記掛け金機構が具備することを特徴とする保育器。
【請求項２】
　前記閉鎖の方向への前記手入扉の前記回動中に前記閉鎖よりも前から前記手入扉と当接して前記開放の方向への前記手入扉の前記回動を付勢する開放機構を具備することを特徴とする請求項１に記載の保育器。
【請求項３】
　前記手入扉の前記回動による押圧によって前記保持位置から前記解除位置への前記回動を行うための被押圧部を前記掛け金が備えており、
　衝撃吸収材料で前記被押圧部が形成されている
ことを特徴とする請求項１に記載の保育器。
【請求項４】
　前記開放の方向への前記手入扉の前記回動中に前記開放の途中から前記手入扉の前記回動を制動する制動機構を具備することを特徴とする請求項１に記載の保育器。
【請求項５】
　前記解除位置から前記保持位置への前記掛け金の前記回動を付勢している付勢部材と、
　前記掛け金の前記回動を制動する制動部材と
を前記掛け金機構が具備することを特徴とする請求項１に記載の保育器。

【書類名】明細書
【発明の名称】保育器
【技術分野】
【０００１】
本発明は、新生児収容室の側面に設けられている手入窓と、回動によって手入窓を開放及び閉鎖する手入扉と、閉鎖位置に手入扉を保持する掛け金機構とを備える、保育器に関する。
【背景技術】
【０００２】
保育器には、自らの力では体温調節等をできない新生児に対して適切な生理的環境を提供する新生児収容室が設けられている。そして、新生児収容室内の新生児を外部から視認することができる様に新生児収容室の側面及び天面の略全域が透明材料によって形成されており、新生児収容室内では温度のみならず湿度や酸素濃度等も制御される。しかし、新生児収容室内の新生児に対して医師や看護士等の処置者が処置を施す必要のある場合もある。そこで、比較的簡単な処置のために、新生児収容室の幾つかの側面に手入窓が設けられており、更に、回動によって手入窓を開放及び閉鎖する手入扉と閉鎖位置に手入扉を保持する掛け金機構とが設けられている。
【０００３】
新生児収容室内を新生児に対して適切な生理的環境に維持するために、通常は、手入扉によって手入窓が閉鎖されており且つ手入扉が掛け金機構で閉鎖位置に保持されている。しかし、新生児に処置を施すためには手入扉を閉鎖位置から開放位置へ回動させて、手入窓を開放する必要がある。一方、処置者は新生児に処置を施すための医療機器や医薬品等を両手で持っている場合があり、消毒済の両手の汚染を防止する必要のある場合もある。そこで、従来の保育器（例えば、特許文献１、２）は、手以外の例えば肘等によって新生児収容室の側面に垂直な方向へ押圧するだけで手入窓を容易に開放することのできる、掛け金機構による保持を解除するための保持解除部材を備えている。
【特許文献１】特開２００１－７０３７３号公報
【特許文献２】特開平２－１９８５５４号公報
【発明の開示】
【発明が解決しようとする課題】
【０００４】
しかし、上述の従来の保育器では、新生児収容室の側面に垂直な方向へ保持解除部材を押圧するだけで手入窓を開放することができるので、処置者等が保持解除部材に寄り掛かったり、保育器の搬送中に保持解除部材が壁面に接触したりして、手入窓が意図に反して開放されてしまうことがあった。また、上述の従来の保育器では、手入扉が掛け金機構との接触に近い状態にあるが閉鎖位置に保持はされておらず手入窓が不完全にしか閉鎖されていない状態が生じることがあった。新生児の収容中に手入窓が開放されたり不完全にしか閉鎖されていなかったりすると、新生児収容室内が新生児に対して適切な生理的環境から逸脱してしまい、新生児の体調が変調をきたすおそれがある。
【０００５】
更に、上述の従来の保育器では、掛け金機構によって閉鎖位置に保持されていない手入扉は自由に回動可能であり、掛け金機構も手入扉を閉鎖位置に保持する時は付勢力によって急激に作動する。このため、手入扉や掛け金機構が保育器の他の部分に衝突することがあり、この衝突の際の衝撃による音や振動によって新生児収容室内の新生児にストレスを与え、このことによっても新生児の体調が変調をきたすおそれがある。従って、本発明は、手以外の例えば肘等による操作によって手入窓を容易に開放することができるにも拘らず、新生児の体調が変調をきたしにくい、保育器を提供することを目的としている。
【課題を解決するための手段】
【０００６】
請求項１に係る保育器では、新生児収容室の側面に沿う回動軸の周りの少なくとも一部

に延びている螺旋面を掛け金機構の掛け金が備えており、掛け金機構の保持解除部材が、新生児収容室の側面に沿う移動によって、掛け金の螺旋面を押圧して、手入扉の保持位置から解除位置への回動軸の周りの回動を掛け金に生じさせる。このため、新生児収容室の側面に沿う方向へ掛け金機構の保持解除部材を押圧して移動させるだけで手入窓を開放することができる。

【０００７】

しかも、手入窓を開放するためには新生児収容室の側面に沿う方向へ掛け金機構の保持解除部材を押圧する必要があるので、処置者等が保持解除部材に寄り掛かったり、保育器の搬送中に保持解除部材が壁面に接触したりしても、手入窓が開放されない。また、手入扉の保持位置と解除位置との間で掛け金機構の掛け金が回動しても保持解除部材は回動しないので、掛け金機構の作動に伴う衝撃が発生しにくい。

【０００８】

請求項２に係る保育器では、手入窓を閉鎖する方向への手入扉の回動中に、閉鎖よりも前から、開放機構が手入扉と当接して手入窓を開放する方向への手入扉の回動を付勢する。このため、手入窓の閉鎖時に閉鎖操作が完全には行われないと、手入窓が開放されて、手入窓が閉鎖されていないことが認識され易く、手入窓の閉鎖操作が再び行われる可能性が高い。

【０００９】

請求項３に係る保育器では、手入扉の回動によって押圧される掛け金機構の掛け金における被押圧部が衝撃吸収材料で形成されている。このため、手入扉を回動させて手入窓を閉鎖する時に手入扉が掛け金に衝突しても衝撃が発生しにくい。

【００１０】

請求項４に係る保育器では、手入窓を開放する方向への手入扉の回動中に、開放の途中から、制動機構が手入扉の回動を制動する。このため、手入窓の開放の完了時に手入扉が急激には停止しなくて、手入窓の開放の完了時に衝撃が発生しにくい。

【００１１】

請求項５に係る保育器では、解除位置から保持位置へ掛け金機構の付勢部材が掛け金の回動を付勢しているので、掛け金を解除位置まで回動させさえすれば、解除位置から保持位置へ掛け金を回動させる操作を行わなくても、掛け金が解除位置から保持位置まで自動的に回動して手入扉を保持する。そして、それにも拘らず、掛け金の回動を掛け金機構の制動部材が制動するので、掛け金が解除位置から保持位置まで自動的に回動しても保持位置で衝撃が発生しにくい。

【発明の効果】

【００１２】

請求項１に係る保育器では、新生児収容室の側面に沿う方向へ掛け金機構の保持解除部材を押圧して移動させるだけで手入窓を開放することができるので、手以外の例えば肘等による操作によって手入窓を容易に開放することができる。しかも、処置者等が保持解除部材に寄り掛かったり、保育器の搬送中に保持解除部材が壁面に接触したりしても、手入窓が開放されないので、新生児収容室内が新生児に対して適切な生理的環境から逸脱しにくい。また、掛け金機構の作動に伴う衝撃が発生しにくいので、掛け金機構の作動時に新生児収容室内の新生児に与えるストレスが少ない。従って、新生児の体調が変調をきたしにくい。

【００１３】

請求項２に係る保育器では、手入窓の閉鎖時に閉鎖操作が完全には行われないと、手入窓が開放されて、手入窓が閉鎖されていないことが認識され易く、手入窓の閉鎖操作が再び行われる可能性が高い。従って、新生児収容室内が新生児に対して適切な生理的環境から逸脱しにくくて、新生児の体調が変調をきたしにくい。

【００１４】

請求項３に係る保育器では、手入扉を回動させて手入窓を閉鎖する時に手入扉が掛け金に衝突しても衝撃が発生しにくい。従って、手入窓の閉鎖時に新生児収容室内の新生児に

与えるストレスが少なくて、新生児の体調が変調をきたしにくい。
【００１５】
請求項４に係る保育器では、手入窓の開放の完了時に手入扉が急激には停止しなくて、手入窓の開放の完了時に衝撃が発生しにくい。従って、手入窓の開放時に新生児収容室内の新生児に与えるストレスが少なくて、新生児の体調が変調をきたしにくい。
【００１６】
請求項５に係る保育器では、掛け金機構の掛け金を解除位置まで回動させさえすれば、解除位置から保持位置へ掛け金を回動させる操作を行わなくても、掛け金が解除位置から保持位置まで自動的に回動して手入扉を保持するので、手入扉で手入窓を閉鎖する操作が容易である。そして、それにも拘らず、掛け金が解除位置から保持位置まで自動的に回動しても保持位置で衝撃が発生しにくい。従って、手入窓の閉鎖時に新生児収容室内の新生児に与えるストレスが少なくて、新生児の体調が変調をきたしにくい。
【発明を実施するための最良の形態】
【００１７】
以下、新生児収容室の天蓋を下降及び上昇させることによって閉鎖型と開放型とに随時に切り換えることのできる切換型の保育器に適用した本発明の一実施形態を、図１～１１を参照しながら説明する。以下においては、
（１）全体の概要
（２）手入窓の開放及び閉鎖操作
（３）手入窓の非閉鎖状態の認識
（４）手入窓の開放及び閉鎖操作の静粛化
に分けて本実施形態を説明する。
【００１８】
（１）全体の概要
図１１が、閉鎖型の状態にある本実施形態の保育器を示している。この保育器１１では、架台１２に車輪１３と支柱１４とが取り付けられており、この支柱１４に基部１５が支持されている。基部１５内には温度や湿度等の制御機構（図示せず）が設けられており、基部１５上に新生児収容室１６が設けられており、基部１５下に収納用の引き出し１７が取り付けられている。架台１２には支柱１４に沿って基部１５等の高さを調節するためのペダル１８も設けられている。
【００１９】
新生児収容室１６内には臥床台（図示せず）が配置されており、この臥床台上に臥床する新生児（図示せず）の左側及び右側に位置する一対の左右側処置扉２１と足側に位置する足側処置扉２２と頭側に位置する頭側処置壁２３とが新生児収容室１６の側面に設けられている。架台１２には左右一対の支柱２４も取り付けられている。支柱２４内には別の支柱（図示せず）が入れ子状に配置されており、この別の支柱が支柱２４内を摺動することができる。
【００２０】
新生児収容室１６の天蓋２５と赤外線加熱器２６とが支柱２４内の別の左右一対の支柱の一方及び他方に夫々支持されており、これらの別の支柱が支柱２４内を摺動することによって天蓋２５と赤外線加熱器２６とは互いに独立に昇降することができる。天蓋２５も透明材料によって形成されている。支柱２４には、赤外線加熱器２６が部屋の壁面（図示せず）に衝突することを防止する保護具２７も取り付けられている。
【００２１】
（２）手入窓の開放及び閉鎖操作
左右側処置扉２１には、二重壁構造の透明な外壁３１及び内壁３２（図９）が備えられている。これらの外壁３１及び内壁３２には、左右一対の手入窓３３（図９）と、これらの手入窓３３を開放及び閉鎖する左右一対の手入扉３４と、手入窓３３を閉鎖するための閉鎖位置に手入扉３４を保持する掛け金機構３５とが備えられている。図１０は、左右一対の手入扉３４及び掛け金機構３５のうちの一方を示している。

【００２２】
新生児収容室１６の手入窓３３における外壁３１の内縁に、透明な硬質合成樹脂製で環状の手入扉基板３６が嵌合及びねじ止めされている。手入扉３４は、透明な硬質合成樹脂製であって皿に近い形状を有しており、手入扉基板３６の直径上の掛け金機構３５とは反対側の部分に支持されている。手入扉３４は、図９、１０に示されている様に手入窓３３を閉鎖している閉鎖位置と、図５に示されている様に手入窓３３を開放している開放位置との間で、回動軸３７の周りに回動可能である。上述の閉鎖位置から開放位置へ、回動軸３７に外挿されているねじりコイルばね３８によって手入扉３４が付勢されている。
【００２３】
図１は図１０、１１中の掛け金機構３５を示しており、掛け金機構３５には掛け金４１、掛け金基板４２及び保持解除部材４３が備えられている。掛け金基板４２は手入扉基板３６に固定されており、掛け金４１及び保持解除部材４３は掛け金基板４２に支持されている。掛け金４１は、図９、１０に示されている様に手入扉３４を閉鎖位置に保持している保持位置と、図８に示されている様にこの保持を解除する解除位置との間で、回動軸４４の周りに回動可能である。
【００２４】
回動軸４４に外挿されているねじりコイルばね４５が掛け金４１と掛け金基板４２との間に介装されており、上述の解除位置から保持位置へねじりコイルばね４５によって掛け金４１が付勢されている。図２に示されている様に、回動軸４４の周りの一部に延びている螺旋面４６が掛け金４１に設けられている。
【００２５】
一方、図１に示されている様に、保持解除部材４３と掛け金基板４２との間に柱体４７と圧縮コイルばね５１とが介装されており、基部１５から天蓋２５へ向かう方向つまり新生児収容室１６の外壁３１に沿う上方へ圧縮コイルばね５１によって保持解除部材４３が付勢されている。また、柱体４７及び圧縮コイルばね５１と平行な突出部５２が保持解除部材４３に一体に設けられており、この突出部５２が掛け金基板４２の開口５３内を通過して螺旋面４６の上方まで延びている。
【００２６】
図５に示されている様に手入扉３４が手入窓３３を開放している状態から図９、１０に示されている様に閉鎖している状態へ移行させるためには、ねじりコイルばね３８による付勢に抗して手入扉３４を回動させて、図７に示されている様に、手入扉３４の回動先端部である舌片部５４で、保持位置にある掛け金４１の被押圧部５５を押圧する。舌片部５４による押圧によって、ねじりコイルばね４５による付勢に抗して、図８に示されている様に掛け金４１が回動軸４４の周りを解除位置まで回動される。
【００２７】
図８に示されている解除位置から手入扉３４を更に回動させると、図９、１０に示されている様に、手入扉３４の舌片部５４が掛け金４１の被押圧部５５よりも回動軸４４側へ入り込み、ねじりコイルばね４５による付勢によって掛け金４１が保持位置まで回動される。この結果、手入扉３４が掛け金４１に保持されて、手入扉３４が手入窓３３を閉鎖している状態になる。
【００２８】
逆に、図９、１０に示されている様に手入扉３４が手入窓３３を閉鎖している状態から図５に示されている様に開放している状態へ移行させるためには、基部１５から天蓋２５へ向かう方向つまり新生児収容室１６の外壁３１に沿う上方への圧縮コイルばね５１による保持解除部材４３の付勢に抗して、天蓋２５から基部１５へ向かう方向つまり新生児収容室１６の外壁３１に沿う下方へ保持解除部材４３を押し下げる。保持解除部材４３を押し下げると、この保持解除部材４３の突出部５２が開口５３内を下降して掛け金４１の螺旋面４６を押圧する。
【００２９】
この押圧によって、ねじりコイルばね４５による付勢に抗して、掛け金４１が回動軸４

４の周りを保持位置から解除位置まで回動する。この結果、手入扉３４の舌片部５４が掛け金４１による保持から解除され、ねじりコイルばね３８による付勢によって手入扉３４が回動されて、手入扉３４が手入窓３３を開放する。保持解除部材４３の押し下げを解除すると、圧縮コイルばね５１の付勢によって保持解除部材４３の突出部５２が開口５３内を上昇する。この上昇によって突出部５２が掛け金４１の螺旋面４６から離隔し、ねじりコイルばね４５による付勢によって掛け金４１が解除位置から保持位置へ復帰する。

【００３０】

（３）手入窓の非閉鎖状態の認識

図１０（ｂ）に示されている様に、手入扉基板３６の内縁に、シリコーンゴム製で環状のパッキン５６が嵌合されている。図３に示されている様に、パッキン５６のうちで手入窓３３を閉鎖している状態にある手入扉３４との当接部の大部分はひれ状部５７になっているが、パッキン５６のうちで手入扉３４の回動軸３７の近傍部は肉厚部６１になっている。更に、この肉厚部６１上に、パッキン５６の誤装着防止用の凸部６２が設けられている。また、図４に示されている様に、手入扉３４のうちで回動軸３７の近傍部に、凸部６２の嵌入用の凹部６３が設けられている。

【００３１】

手入扉３４が手入窓３３を開放している状態から閉鎖する状態へ手入扉３４を回動させてゆくと、手入扉３４が手入窓３３を閉鎖するよりも前から、手入扉３４がパッキン５６と当接する。そして、手入扉３４を更に回動させると、掛け金４１が手入扉３４を保持するよりも前に、手入扉３４がパッキン５６を押圧して弾性変形させる。この弾性変形によって、パッキン５６による気密状態が確保されると共にパッキン５６の特に肉厚部６１及び凸部６２に弾性反発力が生じ、この弾性反発力によって、手入窓３３を開放する方向へ手入扉３４が付勢される。

【００３２】

このため、手入扉３４が手入窓３３を完全には閉鎖していないにも拘らず閉鎖したと処置者が誤認したり、その他の何らかの理由が生じたりして、手入扉３４による手入窓３３の閉鎖操作が完全には行われないと、手入窓３３を開放する方向へ手入扉３４が回動される。このため、手入窓３３が閉鎖されていないことが認識され易く、手入窓３３の閉鎖操作が再び行われる可能性が高い。なお、閉鎖位置から開放位置へねじりコイルばね３８によっても手入扉３４が付勢されているが、この付勢力が強いと手入扉３４が急激に回動するので、ねじりコイルばね３８による付勢力はあまり強くない。

【００３３】

（４）手入窓の開放及び閉鎖操作の静粛化

掛け金４１の被押圧部５５はシリコーンゴムで形成されている。また、図１に示されている様に、掛け金４１と掛け金基板４２との間であって且つ回動軸４４の周囲にスペーサ６４が介装されており、ねじりコイルばね４５の付勢による掛け金４１の回動がスペーサ６４によって制動されている。一方、図５、６に示されている様に、合成樹脂製の制動機構６５が手入扉基板３６に取り付けられており、傾斜面６６の低位側端部６７はこの制動機構６５の他の部分と一体になっているが、傾斜面６６の高位側端部６８は自由端になっている。

【００３４】

更に、図５に示されている様に、手入扉３４における回動軸３７の周囲部のうちで制動機構６５の近傍部は、真円断面ではなく、手入扉３４が手入窓３３を閉鎖している状態では制動機構６５の傾斜面６６と離隔しているが、手入扉３４が手入窓３３を開放するに連れて傾斜面６６に接近し、開放の途中から傾斜面６６と接触してこの傾斜面６６を押圧する様な、断面半径を有している。傾斜面６６が押圧されると、高位側端部６８が低位側端部６７から離隔すると共に傾斜面６６の高さが低下する様に制動機構６５が弾性変形して、押圧力が吸収される。

【００３５】

図５に示されている様に手入窓３３を開放している状態から閉鎖する状態へ手入扉３４

を回動させていくと、図７に示されている様に手入扉３４の舌片部５４が掛け金４１の被押圧部５５にまず当接する。しかし、被押圧部５５がシリコーンゴムで形成されているので、舌片部５４が被押圧部５５に勢いよく当接されても、衝撃が発生しにくい。図７の状態から手入扉３４が更に回動されると、被押圧部５５が押圧されることによって、図８に示されている様に掛け金４１が解除位置まで回動する。そして、手入扉３４が更に回動されると、図９に示されている様に舌片部５４が掛け金４１内へ入り込む。

【００３６】

舌片部５４が掛け金４１内へ入り込むことによって被押圧部５５が舌片部５４に押圧されなくなると、ねじりコイルばね４５による付勢力によって掛け金４１が解除位置から保持位置へ回動して舌片部５４を保持する。しかし、ねじりコイルばね４５の付勢による掛け金４１の回動がスペーサ６４によって制動されているので、掛け金４１が勢いよくは回動せず、回動の完了時に衝撃が発生しにくい。

【００３７】

逆に、保持解除部材４３を操作することによって掛け金４１による手入扉３４の舌片部５４の保持を解除すると、パッキン５６の特に肉厚部６１及び凸部６２の弾性反発力による付勢力とねじりコイルばね３８による付勢力とによって、図９、１０に示されている様に手入窓３３を閉鎖している状態から、図８に示されている状態を経て、図５に示されている様に手入窓３３を開放している状態へ、手入扉３４が回動していく。しかし、この開放の途中から制動機構６５によって手入扉３４の回動が制動されるので、回動の完了時に衝撃が発生しにくい。

【００３８】

なお、以上の実施形態では、掛け金４１の被押圧部５５が、シリコーンゴムで形成されているが、衝撃を吸収できる材料であればシリコーンゴム以外の材料で形成されていてもよい。また、パッキン５６も、シリコーンゴムで形成されているが、弾性反発力を有する材料であればシリコーンゴム以外の材料で形成されていてもよい。更に、以上の実施形態は切換型の保育器に本発明を適用したものであるが、本発明は閉鎖型の保育器にも適用することができる。

【産業上の利用可能性】

【００３９】

本発明は、新生児収容室の側面の手入窓とこの手入窓を開放及び閉鎖する手入扉と閉鎖位置に手入扉を保持する掛け金機構とを備える保育器の製造等に利用することができる。

【図面の簡単な説明】

【００４０】

【図１】本発明の一実施形態の保育器における掛け金機構の断面図である。

【図２】本発明の一実施形態の保育器における掛け金機構中の掛け金の斜視図である。

【図３】本発明の一実施形態の保育器における手入窓のパッキンの部分斜視図である。

【図４】本発明の一実施形態の保育器における手入扉の部分斜視図である。

【図５】本発明の一実施形態の保育器における手入窓の部分断面図であり、手入扉が開放位置にある状態を示している。

【図６】本発明の一実施形態の保育器における制動機構の斜視図である。

【図７】本発明の一実施形態の保育器における掛け金機構の断面図であり、手入扉が掛け金に当接している状態を示している。

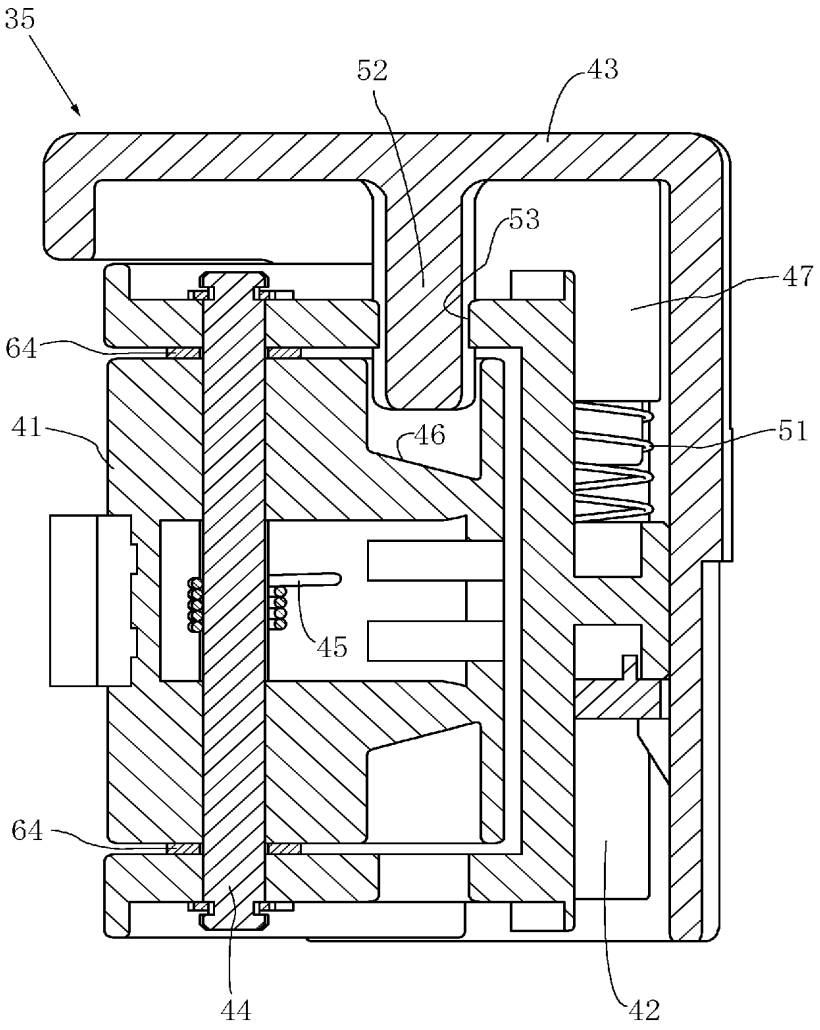
【図８】本発明の一実施形態の保育器における掛け金機構の断面図であり、掛け金が解除位置まで回動している状態を示している。

【図９】本発明の一実施形態の保育器における掛け金機構の断面図であり、手入扉が掛け金に保持されている状態を示している。

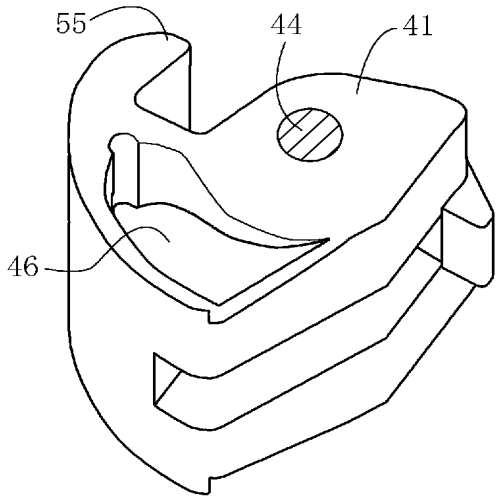
【図１０】本発明の一実施形態の保育器における左右一対の手入扉及び掛け金機構のうちの一方を示しており、（ａ）は正面図、（ｂ）は（ａ）のＢ－Ｂ線に沿う位置に

おける断面図である。
【図１１】閉鎖型の状態にある本発明の一実施形態の保育器の側面図である。
【符号の説明】
【００４１】
１１　保育器
１６　新生児収容室
３３　手入窓
３４　手入扉
３５　掛け金機構
４１　掛け金
４３　保持解除部材
４４　回動軸
４５　ねじりコイルばね（付勢部材）
４６　螺旋面
５５　被押圧部
６１　肉厚部（開放機構）
６４　スペーサ（制動部材）
６５　制動機構

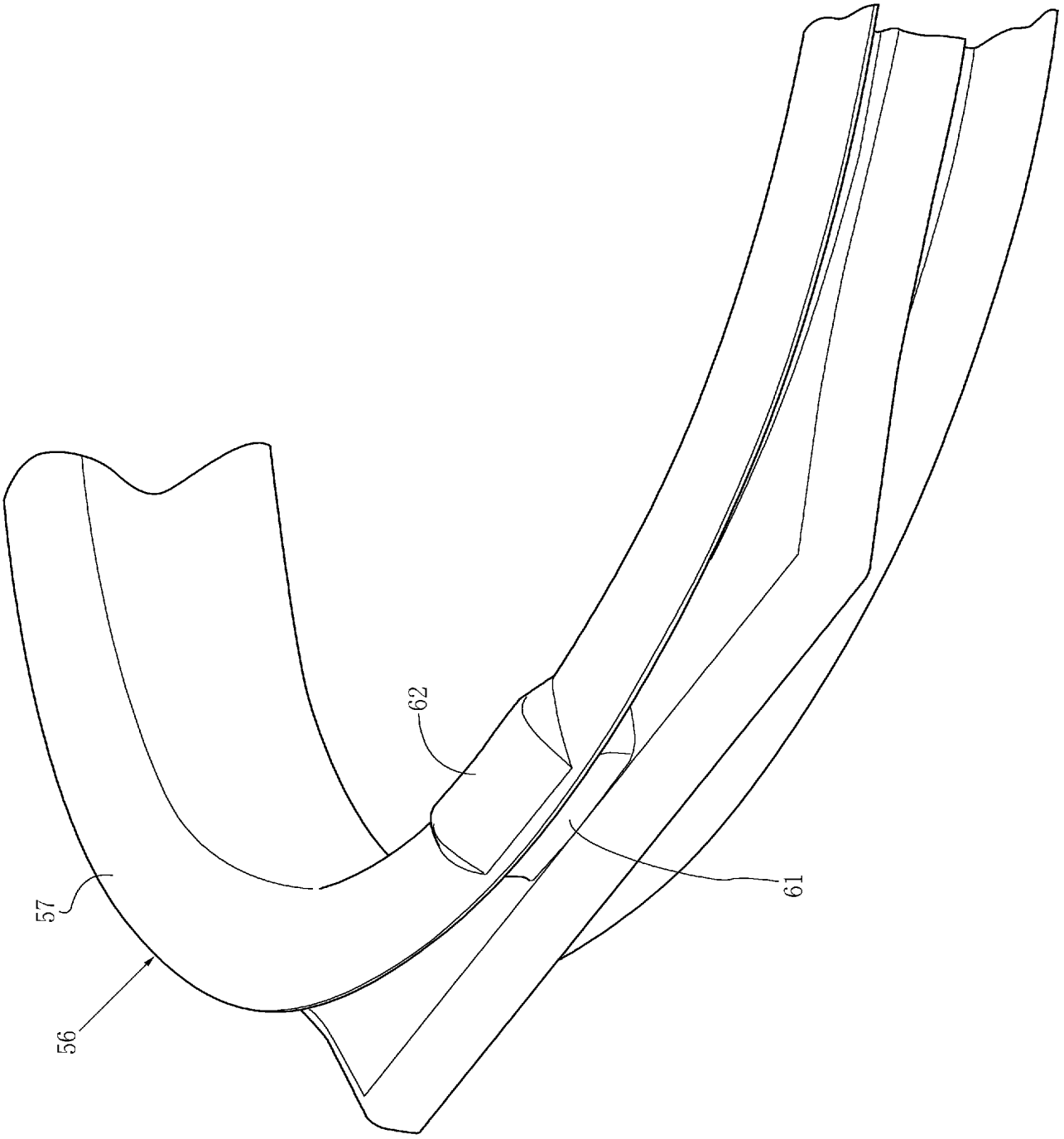
【書類名】図面
【図１】



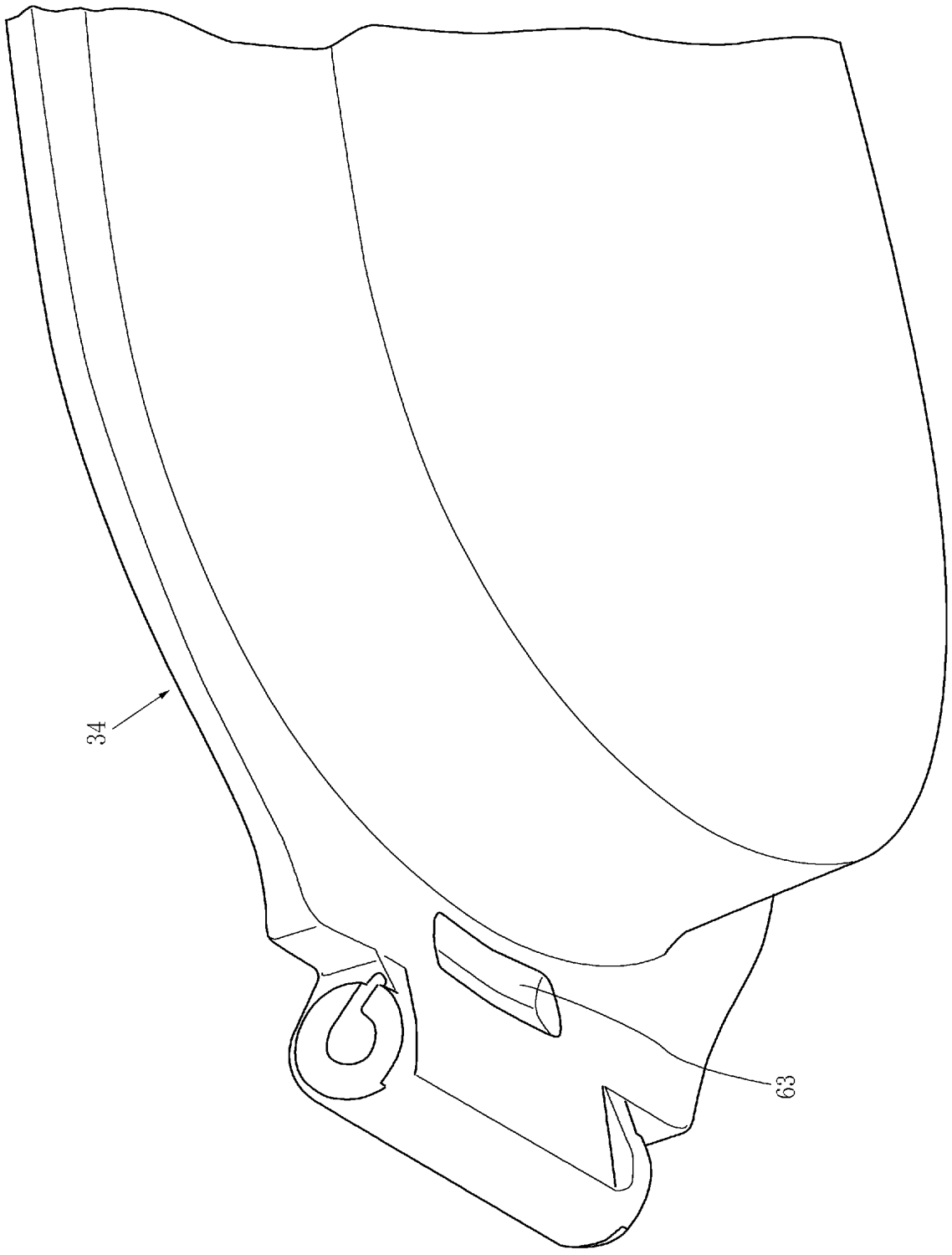
【図２】



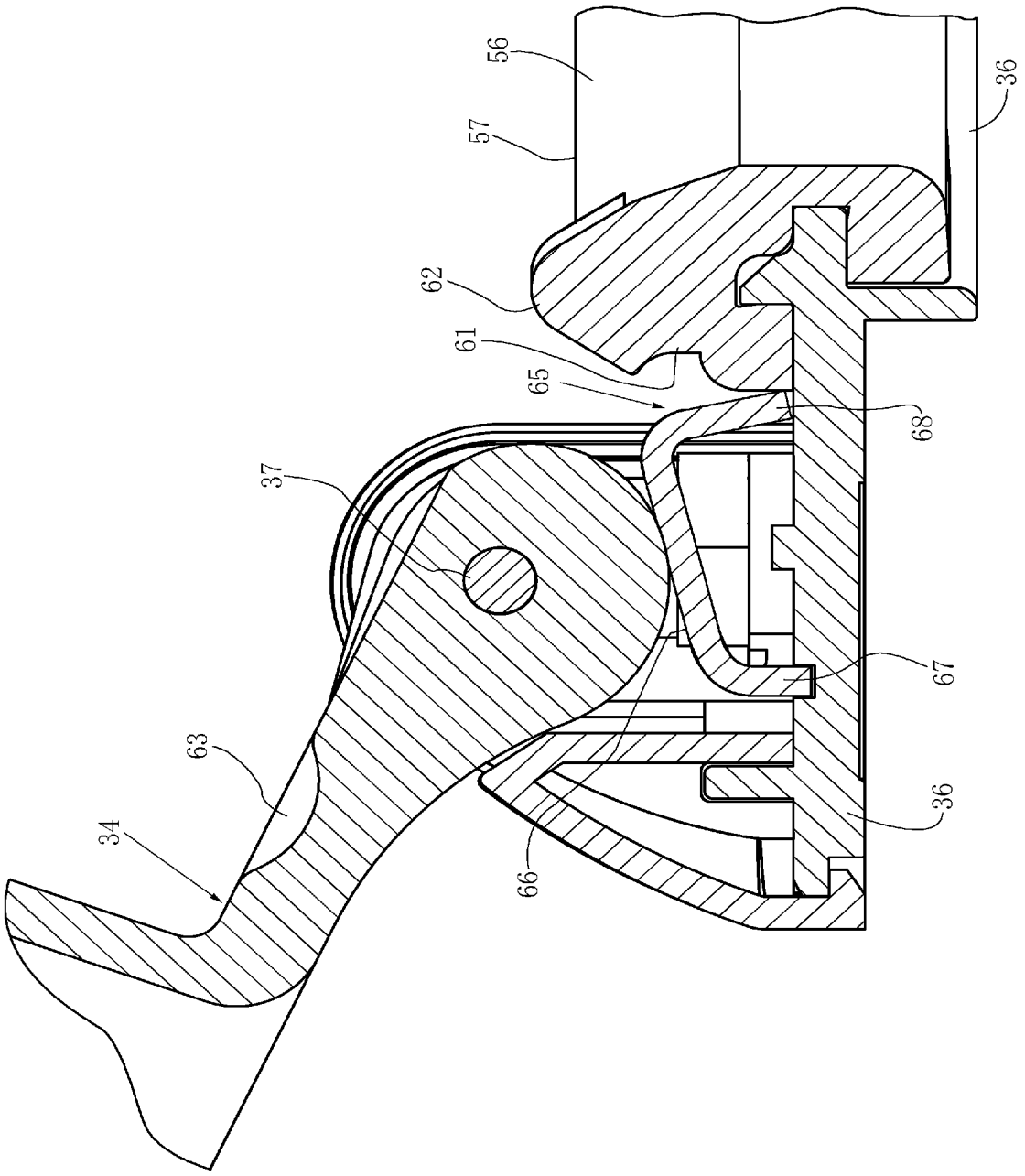
【図３】



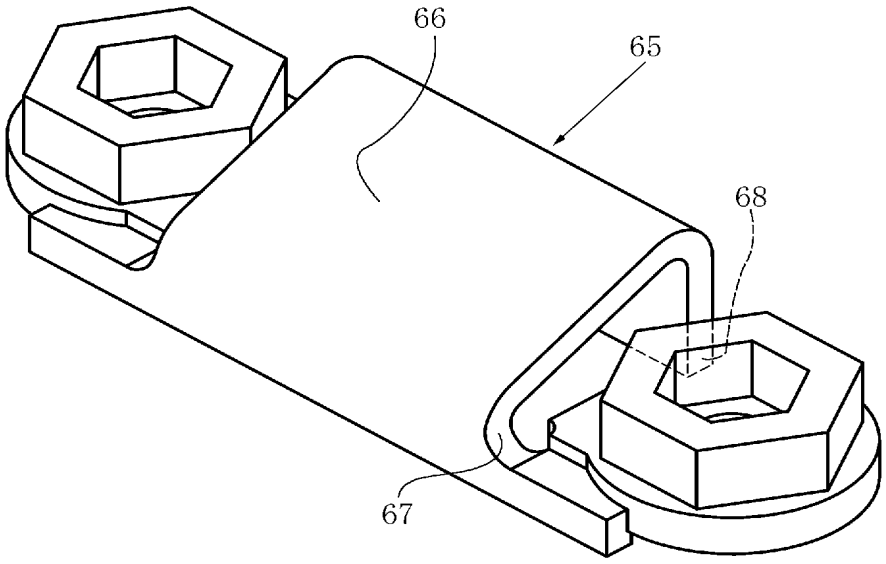
【図４】



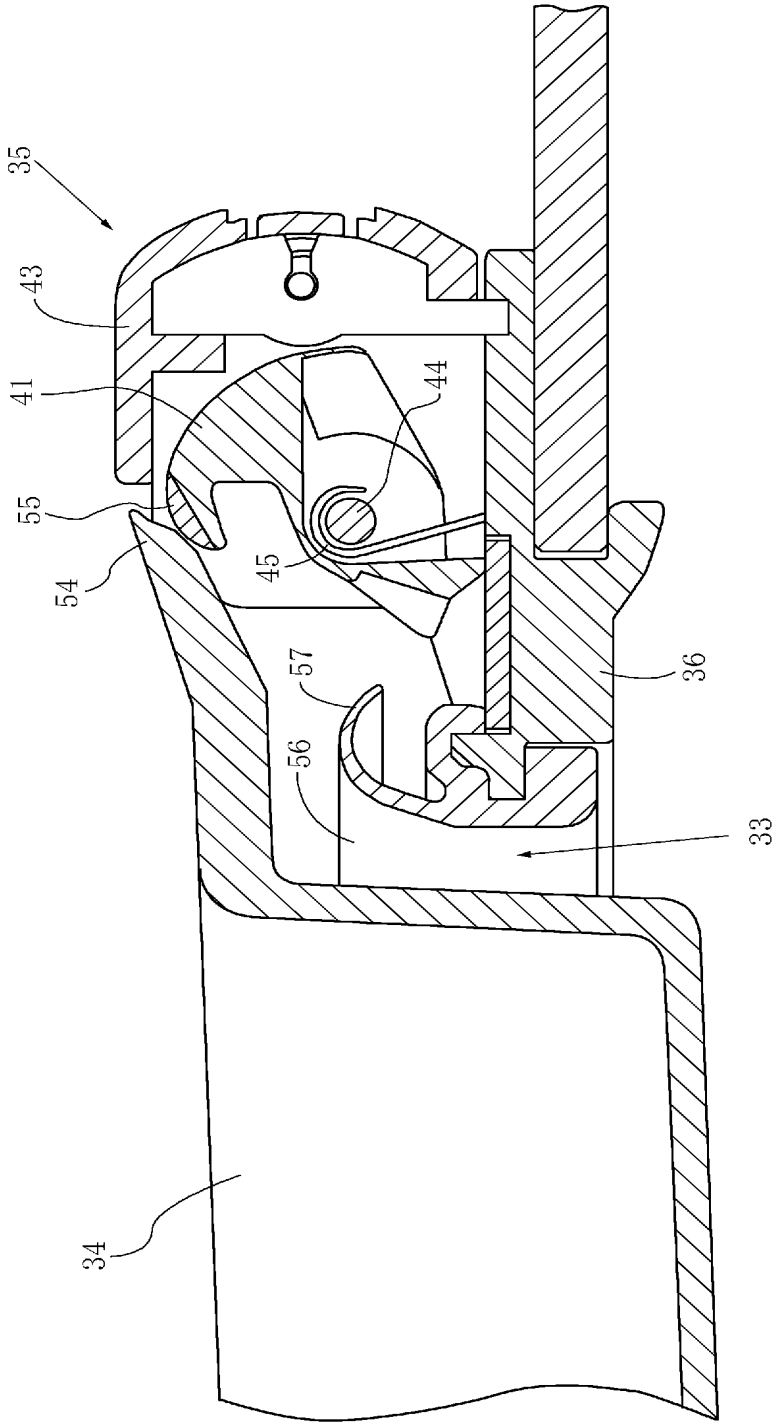
【図５】



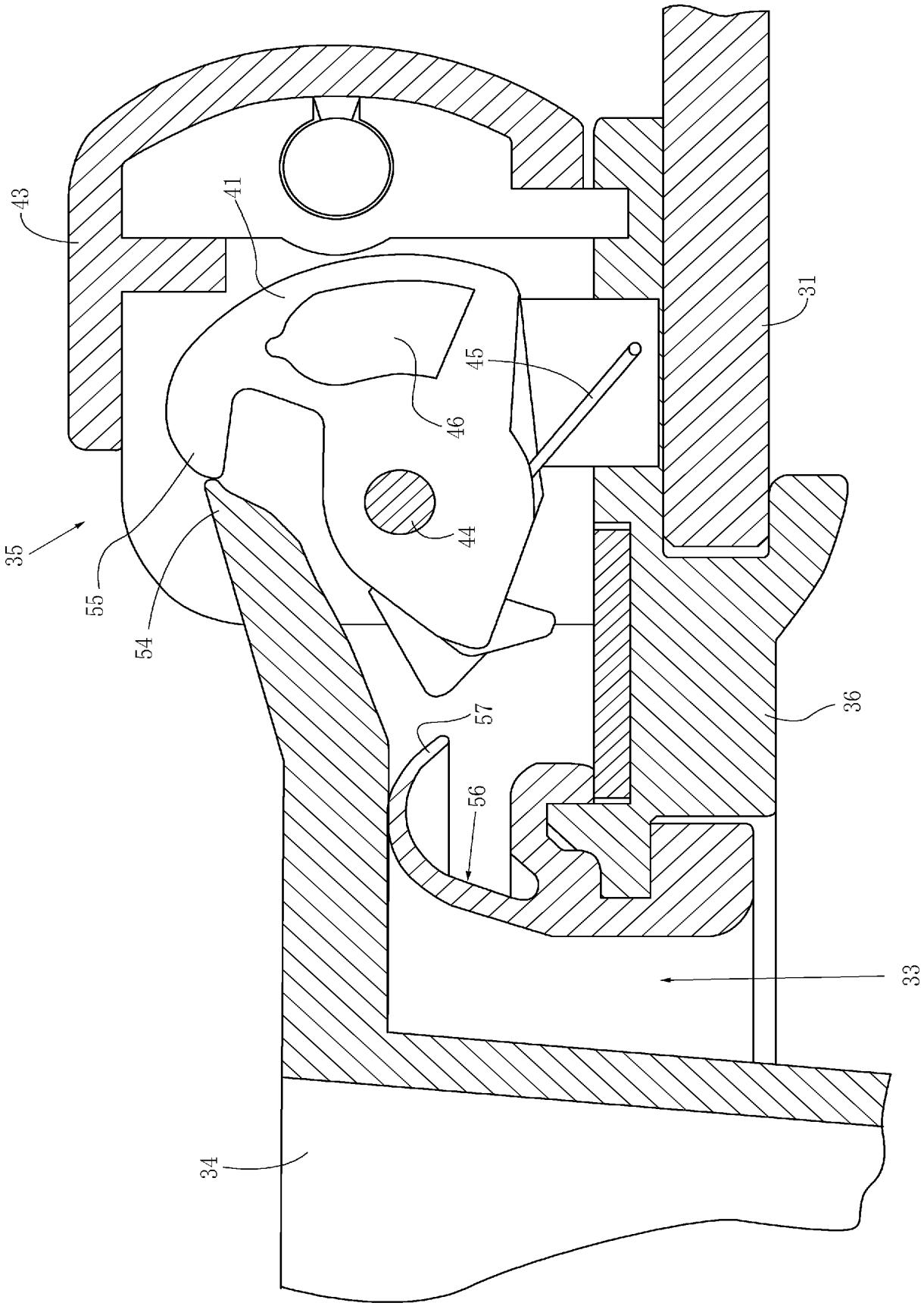
【図６】



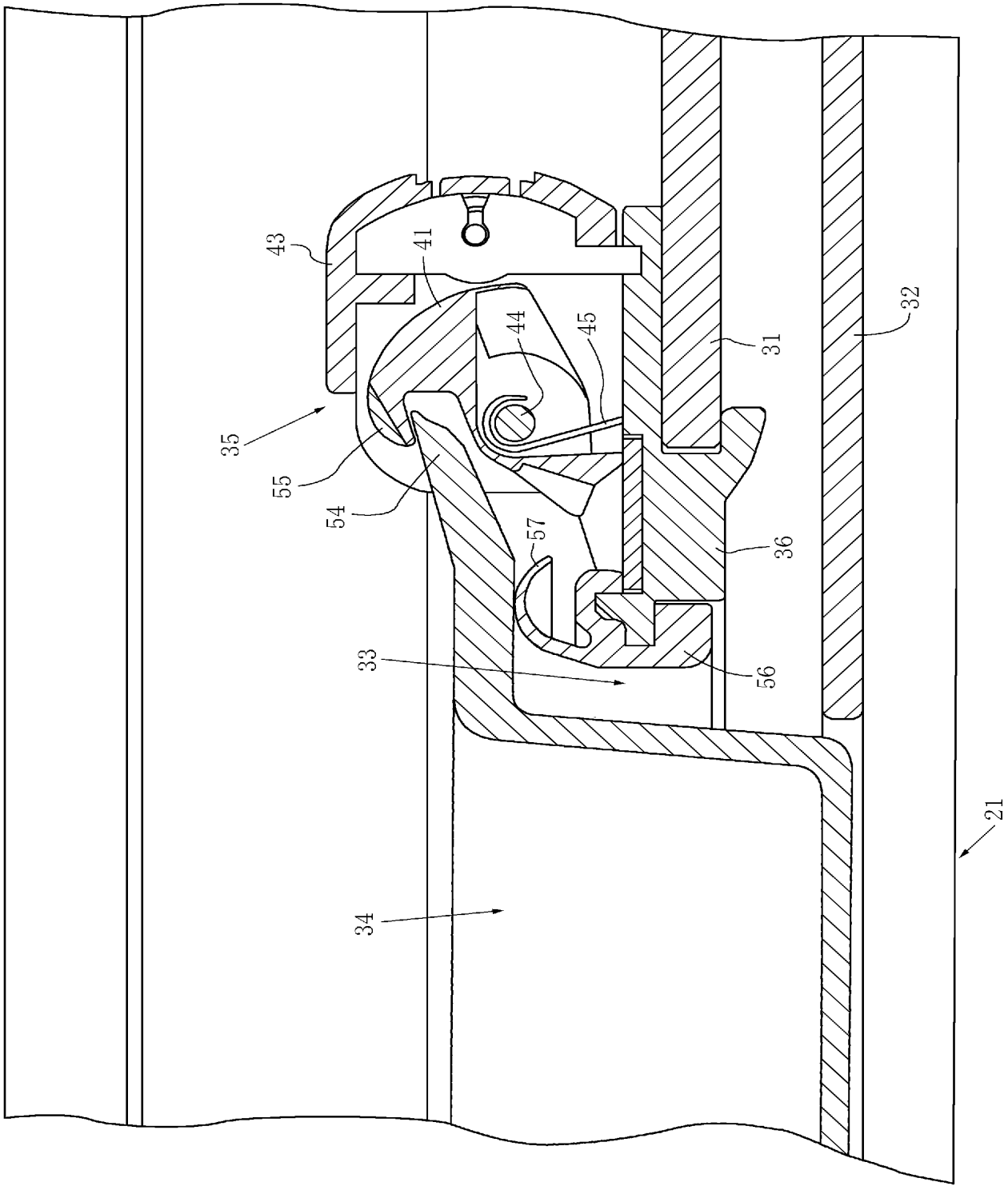
【図７】



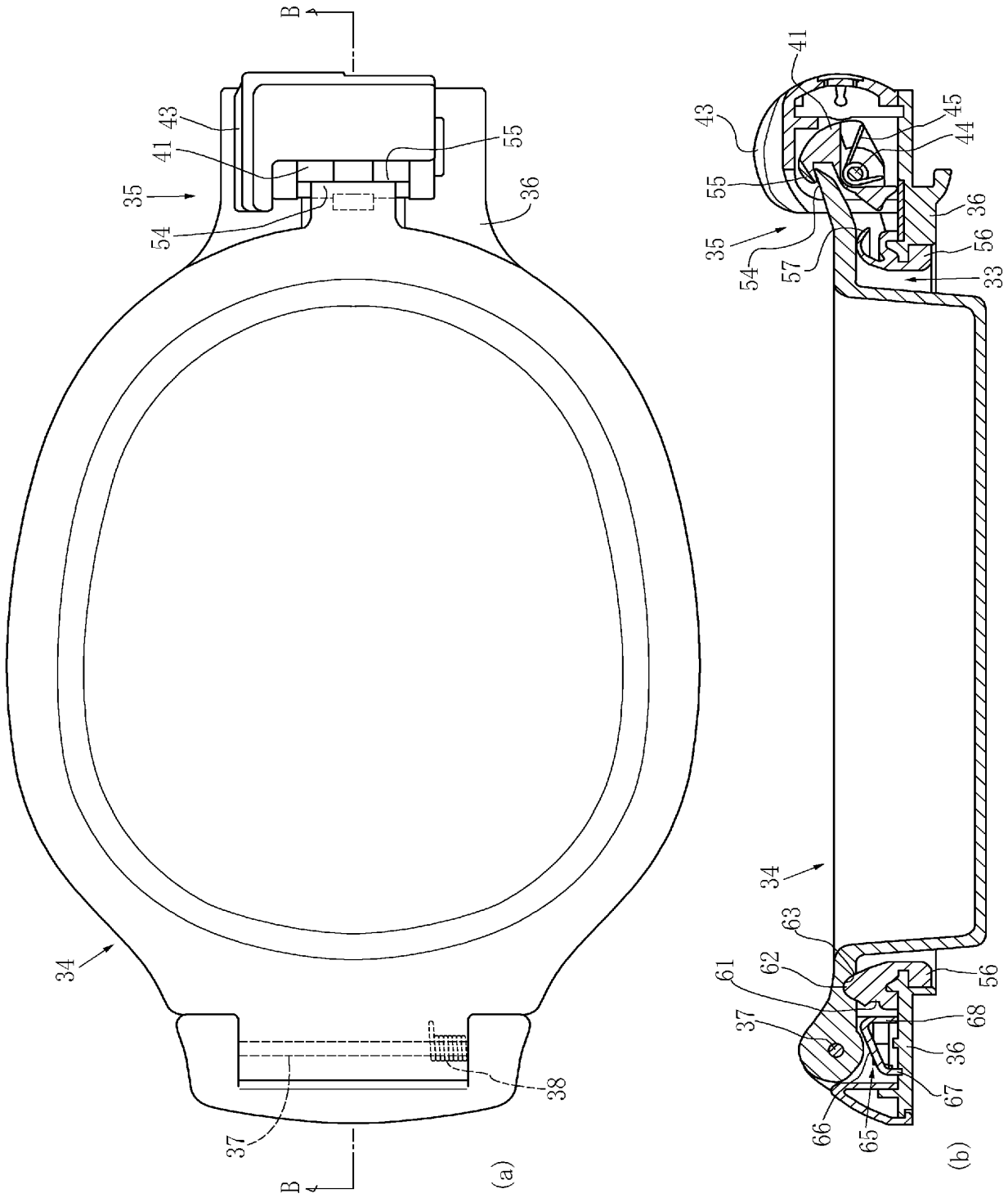
【図８】



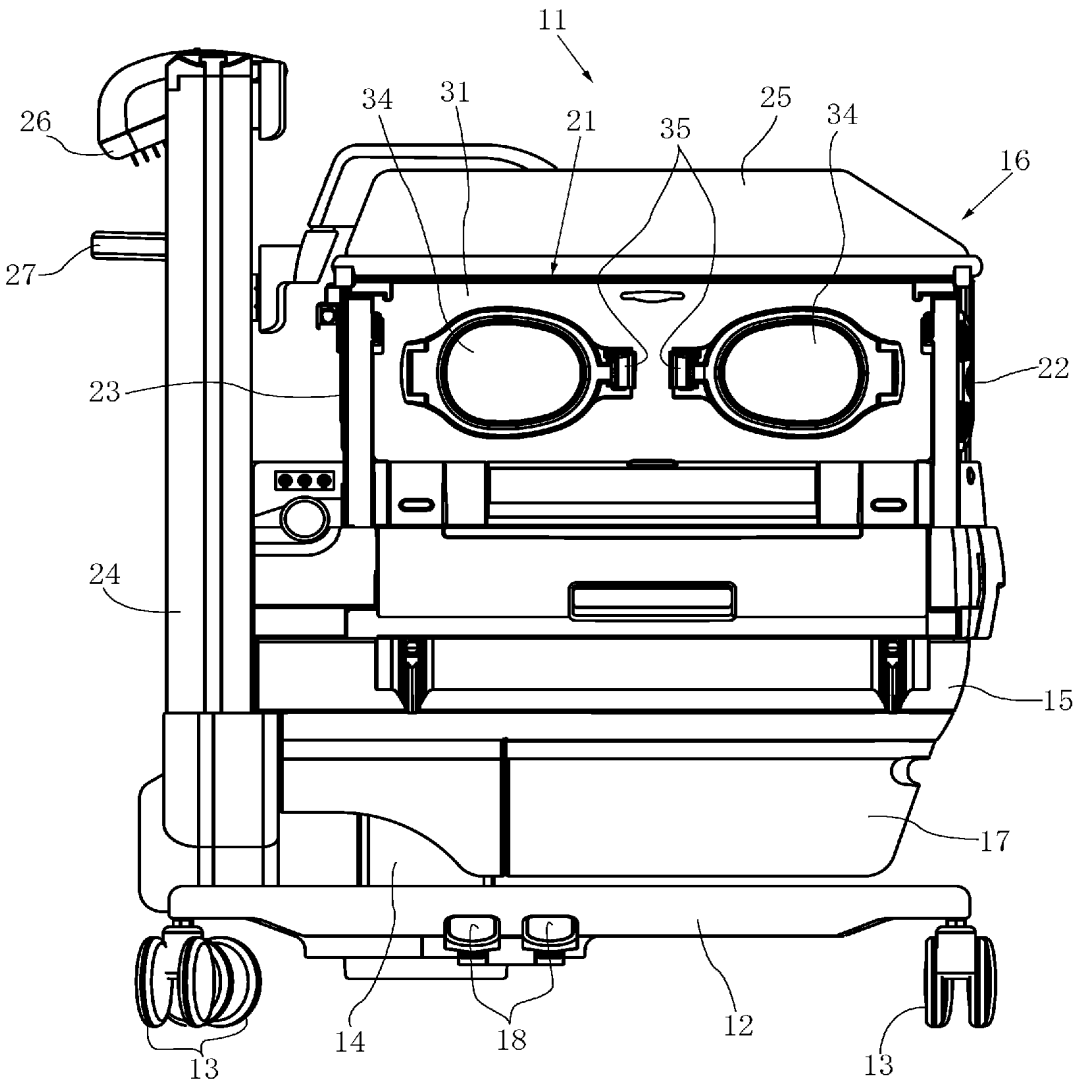
【図９】



【図１０】


B
43
41
35
54
55
36
34
37
38
B
(a)
41
43
45
44
55
35
54
57
36
56
33
34
63
61
62
56
37
68
36
67
66
65
(b)

【図１１】



【書類名】要約書
【要約】
【課題】手以外の例えば肘等による操作によって手入窓を容易に開放することができるにも拘らず、新生児の体調が変調をきたしにくい、保育器を提供する。
【解決手段】新生児収容室の側面に沿う回動軸４４の周りの少なくとも一部に延びている螺旋面４６を掛け金機構３５の掛け金４１が備えており、新生児収容室の側面に沿う移動によって掛け金４１の螺旋面４６を押圧して手入扉の保持位置から解除位置へ掛け金機構３５の保持解除部材４３が掛け金４１を回動させる。また、手入扉の保持位置と解除位置との間で掛け金機構３５の掛け金４１が回動軸４４の周りで回動しても保持解除部材４３は回動しない。
【選択図】図１

【書類名】　　手続補正書
【提出日】　　平成20年11月10日
【あて先】　　特許庁長官　鈴木　隆史　殿
【事件の表示】
　【出願番号】　　特願2008-258291
【補正をする者】
　【識別番号】　　390022541
　【住所又は居所】　東京都文京区本郷３丁目１８番１５号
　【氏名又は名称】　アトムメディカル株式会社
【代理人】
　【識別番号】　　100065950
　【住所又は居所】　東京都新宿区西新宿１の９の１８　永和ビル
　【弁理士】
　【氏名又は名称】　土屋　勝
　【電話番号】　　03-3348-0222
　【ファクシミリ番号】　03-3348-1880
【手続補正1】
　【補正対象書類名】　特許願
　【補正対象項目名】　発明者
　【補正方法】　　変更
　【補正の内容】
　　【発明者】
　　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　　【氏名】　　松原　照巳
　　【発明者】
　　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　　【氏名】　　小池　英二
　　【発明者】
　　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　　【氏名】　　本間　直樹
　　【発明者】
　　【住所又は居所】　埼玉県さいたま市桜区道場２丁目２番１号　アトムメディカル株式会社　技術開発センター内
　　【氏名】　　永井　陽子
　　【発明者】
　　【住所又は居所】　東京都文京区本郷３丁目１８番１５号　アトムメディカル株式会社内
　　【氏名】　　松原　一雄
【その他】　　特許願に記載されていた発明者のうちの一人である「小平　陽子」は「永井　陽子」の誤記であった。発明者「小平　陽子」は婚姻によって本件出願時には既に「永井　陽子」という氏名になっていたが、発明者「永井　陽子」が所属するアトムメディカル株式会社内では婚姻後も婚姻前の氏名である「小平　陽子」が使用されており、このために特許願に記載する氏名を誤記した。

出願人履歴

３９００２２５４１

19960129

名称変更

東京都文京区本郷３丁目１８番１５号

アトムメディカル株式会社

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/568,335	09/28/2009	3673	1090	75575.000006	15	1

CONFIRMATION NO. 6169

UPDATED FILING RECEIPT

21967
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

Date Mailed: 01/22/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Terumi MATSUBARA, Nerima-ku, JAPAN;
Eiji Koike, Saitama-shi, JAPAN;
Naoki Honma, Saitama-shi, JAPAN;
Yoko Nagai, Nagareyama-shi, JAPAN;
Kazuo Matsubara, Bunkyo-ku, JAPAN;

Assignment For Published Patent Application

Atom Medical Corporation

Power of Attorney: The patent practitioners associated with Customer Number 21967

Domestic Priority data as claimed by applicant

Foreign Applications

JAPAN 2008-258291 10/03/2008

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 10/09/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/568,335**

Projected Publication Date: 05/06/2010

Non-Publication Request: No

Early Publication Request: No

Title

Incubator

Preliminary Class

070

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number	:	12/568,335	Confirmation No.:	6169
Applicant	:	Terumi MATSUBARA et al.		
Filed	:	September 28, 2009		
Title	:	INCUBATOR		
TC/Art Unit	:	3673		
Examiner:	:	TBA		
Docket No.	:	75575.000006		
Customer No.	:	**21967**		

MAIL STOP MISSING PARTS
Commissioner of Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO THE NOTICE TO FILE CORRECTED APPLICATION PAPERS

Sir:

Applicants provide the following amendment and remarks in response to the Notice To File Corrected Application Papers mailed on October 15, 2009 ("Notice").

Please amend the present application as follows:

Amendments to the Drawings begin on page 2 of this paper with Replacement Sheets attached hereto; and

Remarks begin on page 3 of this paper.

In the Drawings:

Please substitute the original sheets of Figures 3-5 and 7-10 in the above-referenced patent application with the attached seven (7) replacement sheets of Figures 3-5, and 7-10. The replacement sheets replace the drawings originally submitted with the application. No new matter is added.

REMARKS

Applicants submit herewith replacement sheets for Figures 3-5, and 7-10. No new matter is added. Applicants believe these replacement drawings are in compliance with 37 C.F.R. § 1.84.

Applicants note that the Notice stated that the original drawings were not acceptable because the drawings contain figure or view numbers that have incorrect orientation. Applicants submit that they have made no amendments to the replacement drawings submitted herein and have not added new matter to the specification to identify these drawings. Applicants respectfully request entry of the replacement sheets of Figures 3-5 and 7-10.

To the extent necessary, a petition for an extension of time for one month under 37 CFR § 1.136 is hereby made.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. **50-0206**, and please credit any excess fees to the same deposit account

Respectfully submitted,

HUNTON & WILLIAMS

Dated: 1/13/10

By: _____
Ozzie A. Farres
Registration No. 43,606

HUNTON & WILLIAMS LLP
Intellectual Property Department
1900 K Street, N.W. Suite 1200
Washington, DC 20006-1109
(202) 955-1500 (telephone)
(202) 778-2201 (facsimile)

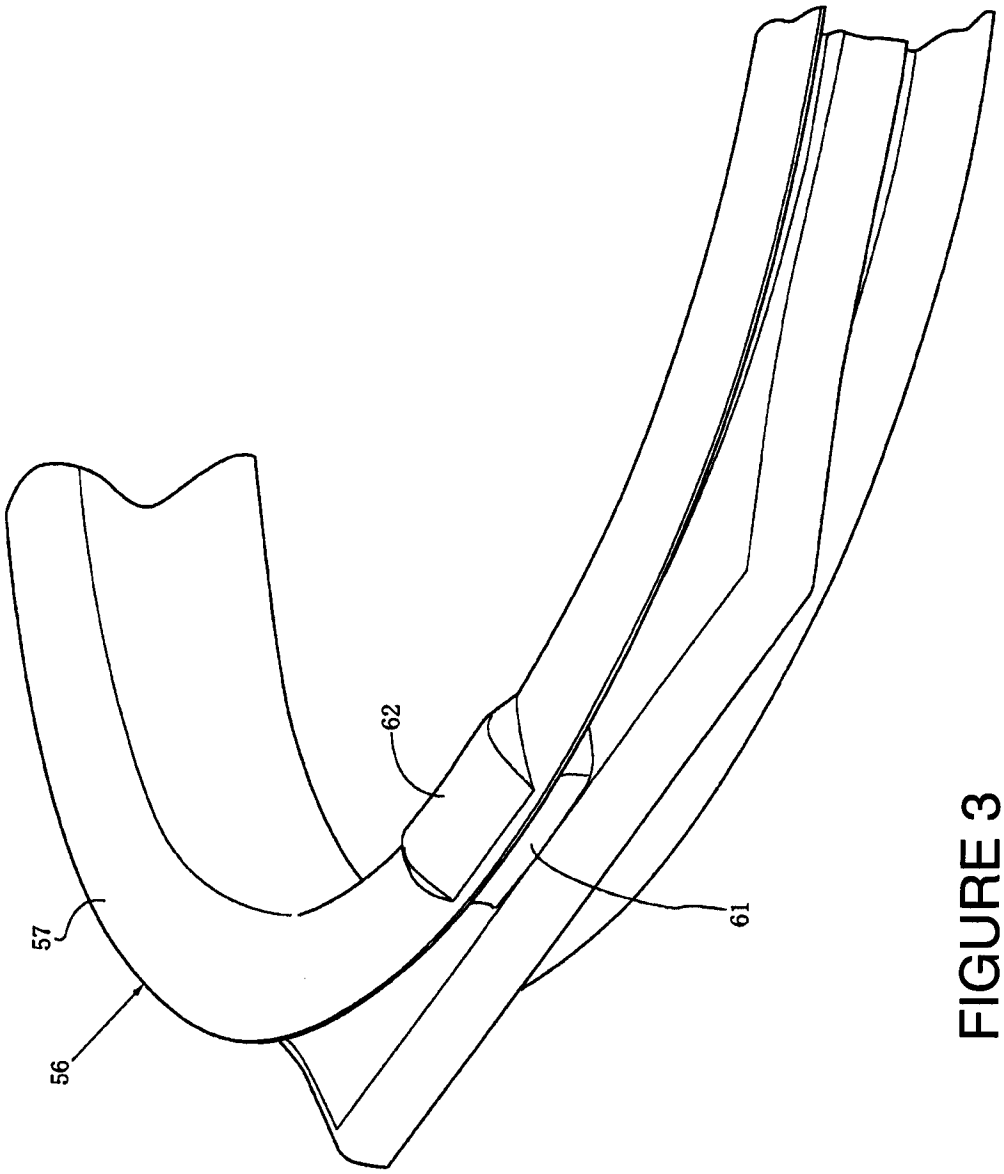


FIGURE 3

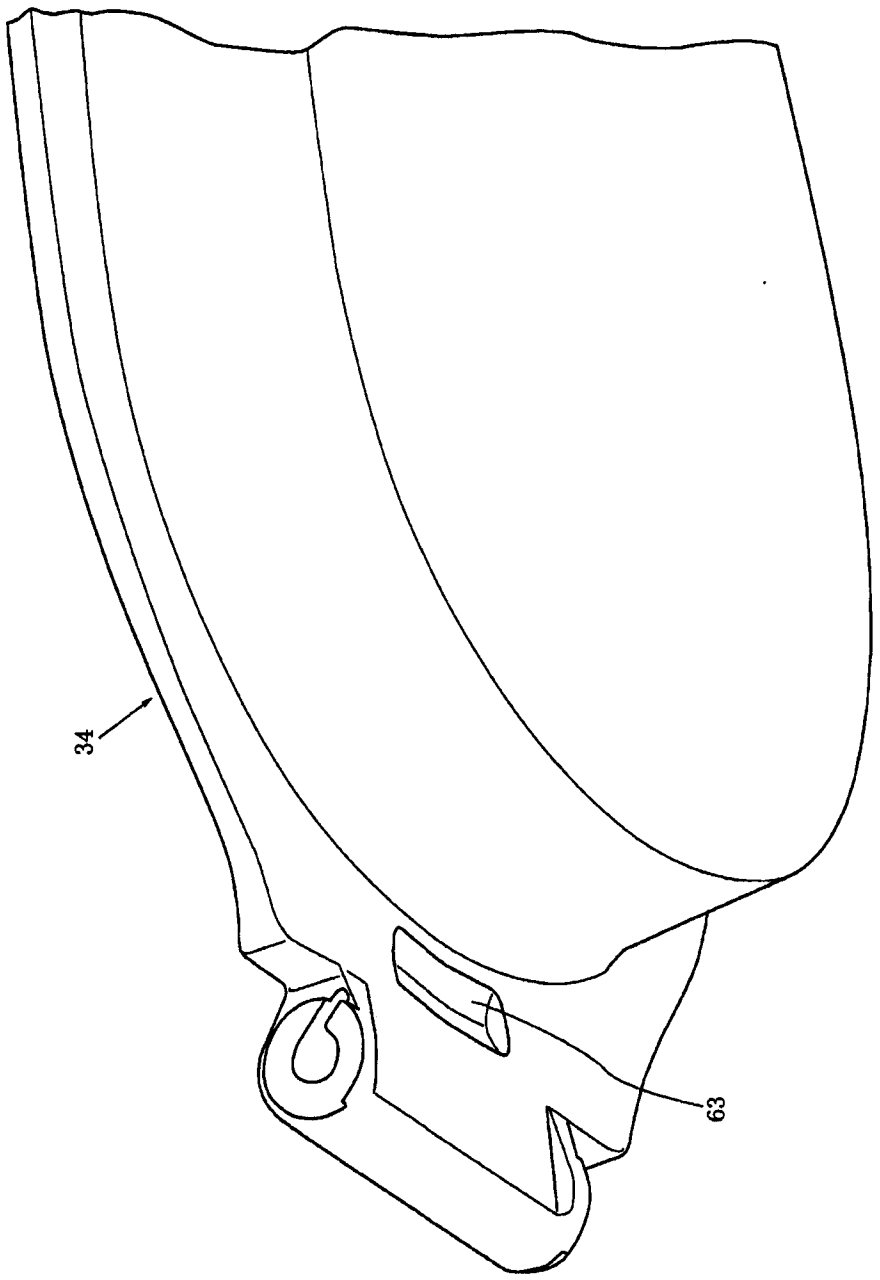


FIGURE 4

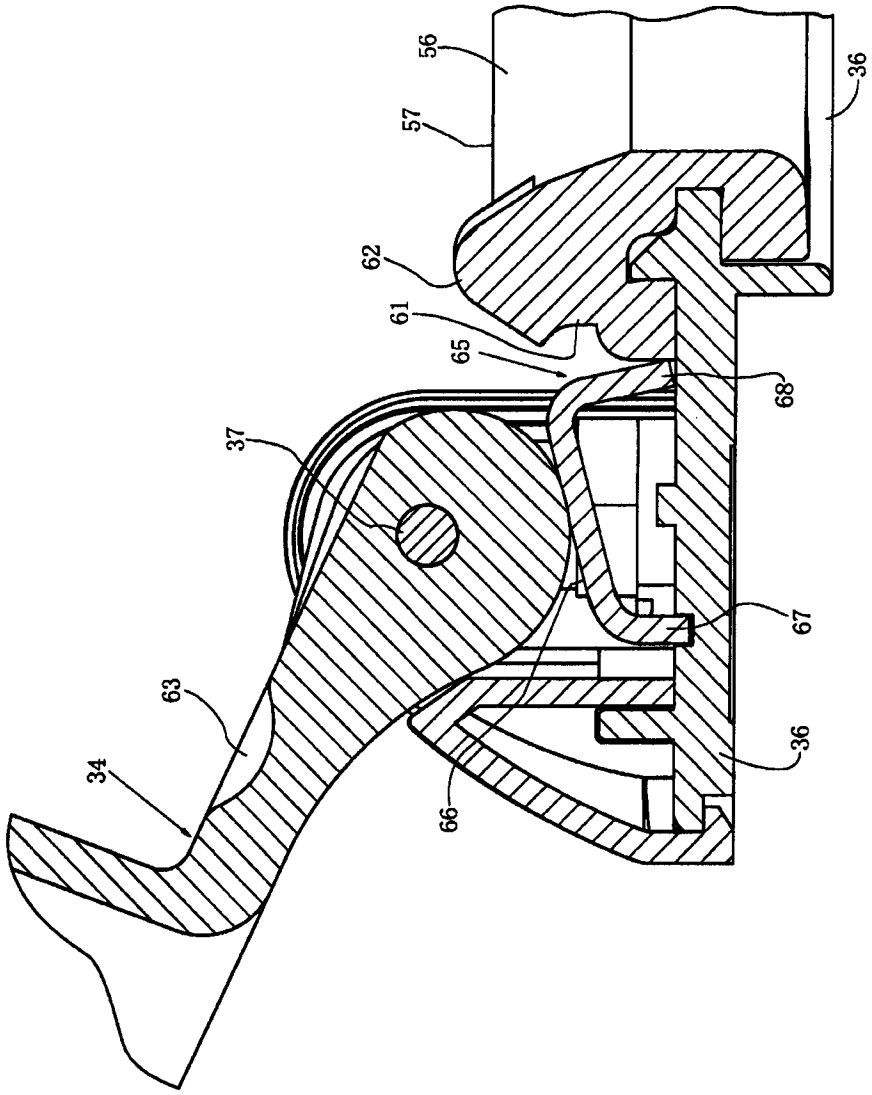


FIGURE 5

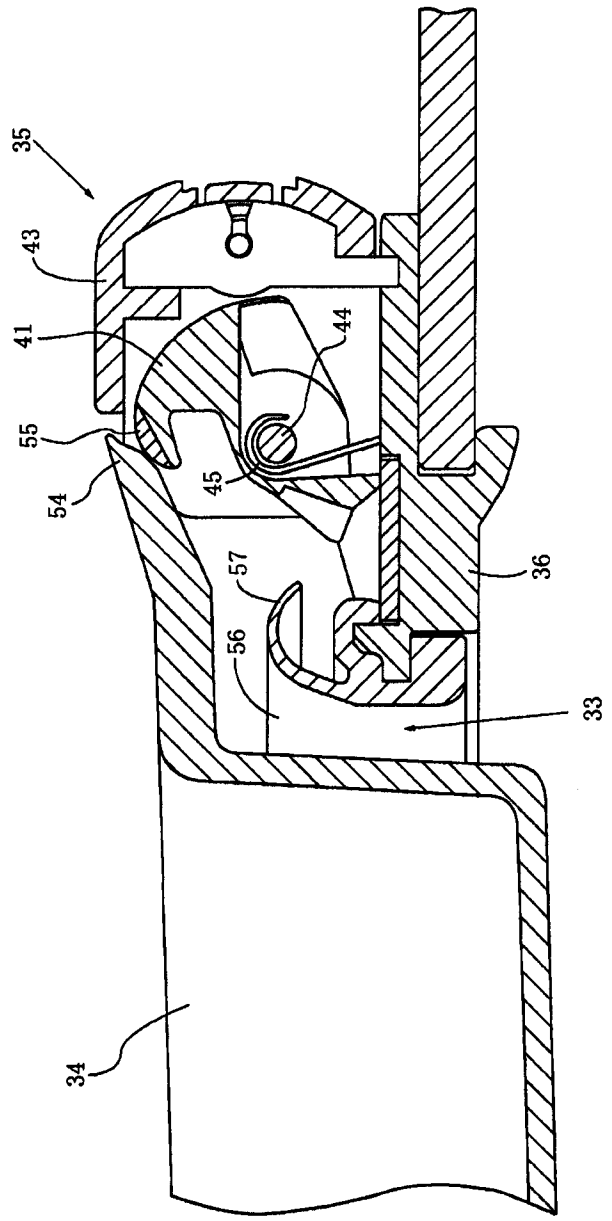


FIGURE 7

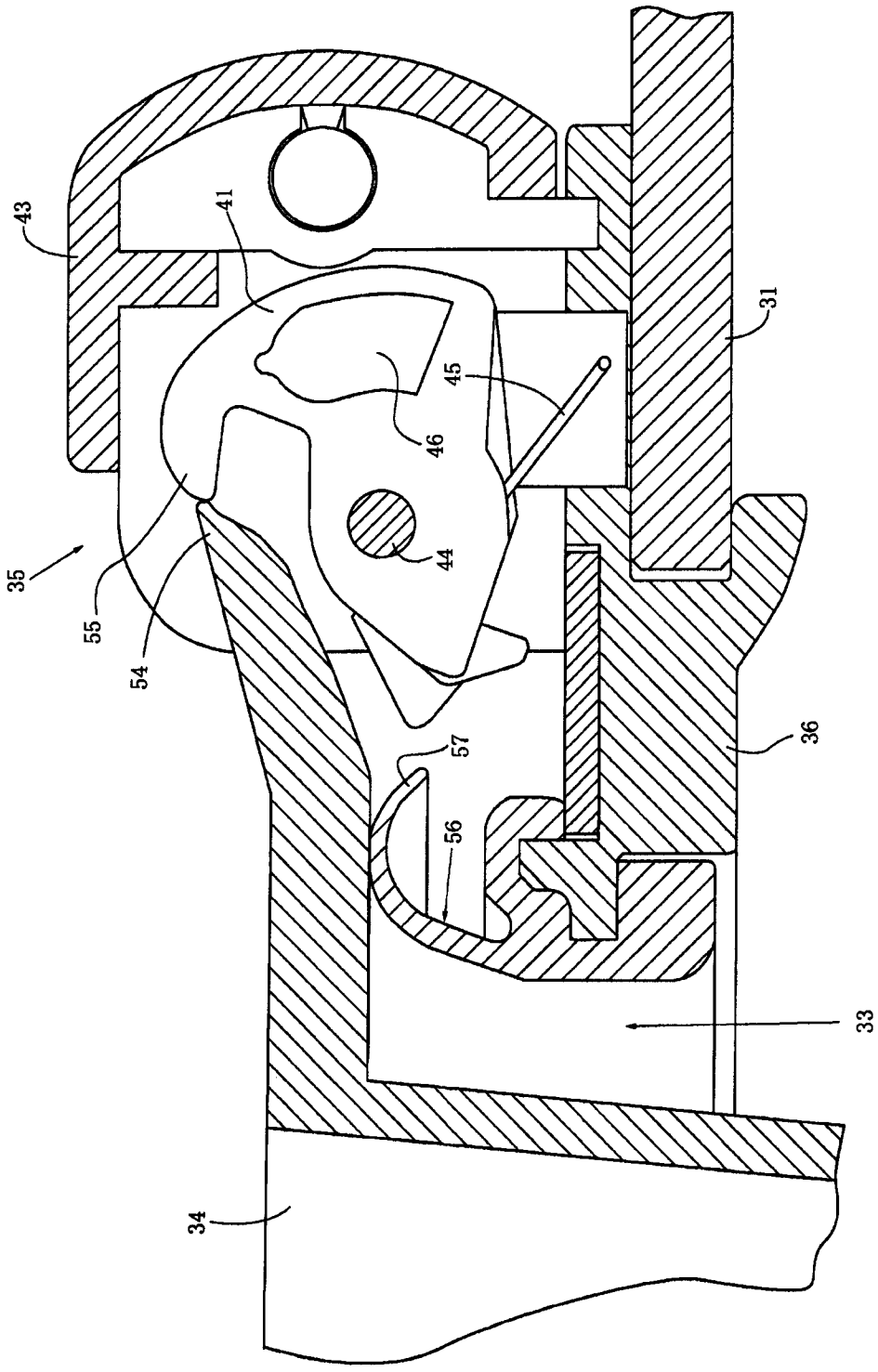


FIGURE 8

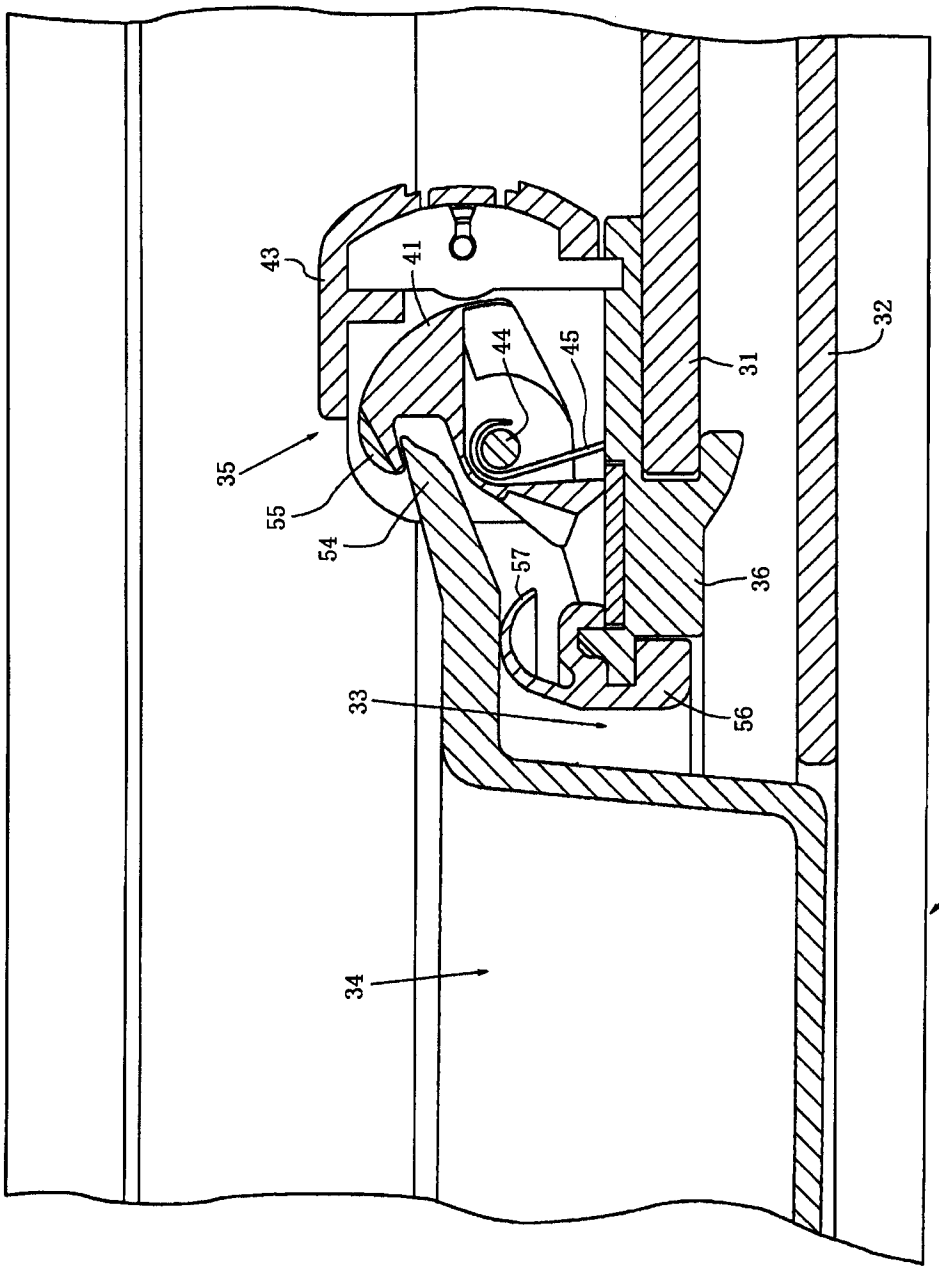


FIGURE 9

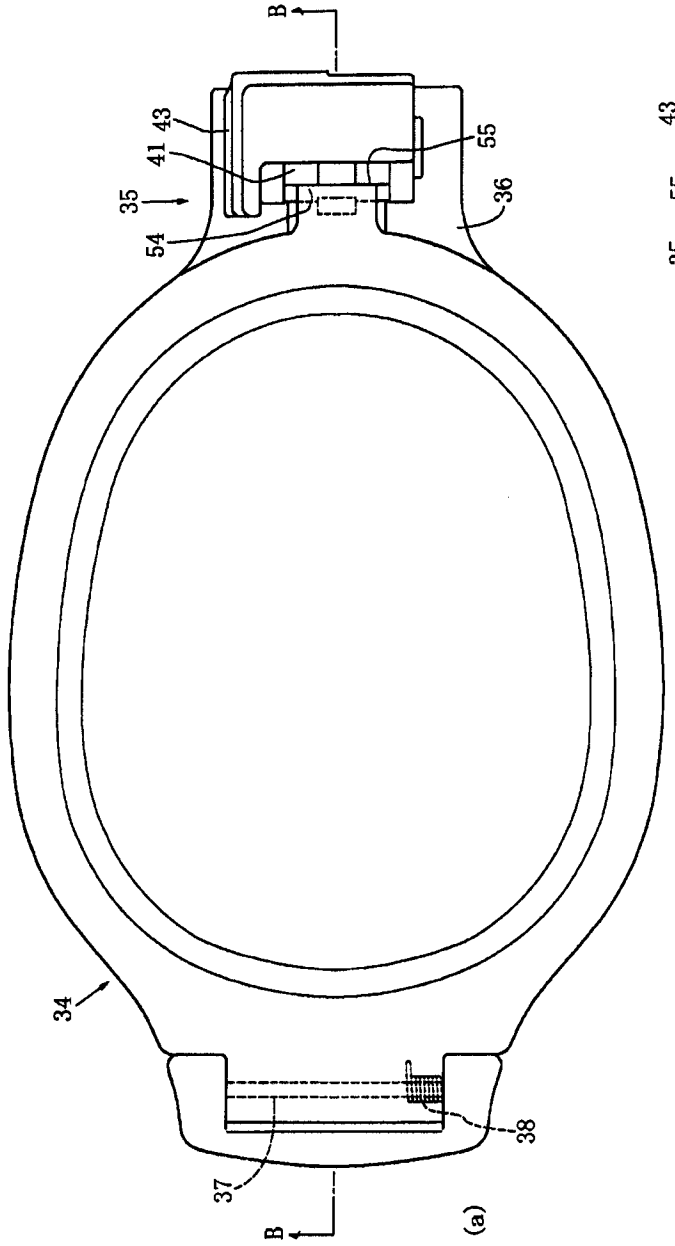

B
43
41
35
54
55
36
34
38
37
B
(a)
41
43
45
44
55
35
54
57
36
56
33
34
63
61
62
56
37
68
36
67
66
65
(b)

FIGURE 10

Electronic Patent Application Fee Transmittal

Application Number:	12568335
Filing Date:	28-Sep-2009
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Filer:	Osvaldo Farres/Stefanie Chase
Attorney Docket Number:	75575.000006

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	1251	1	130	130

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
			Total in USD ($)	**130**

Electronic Acknowledgement Receipt

EFS ID:	6804088
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Osvaldo Farres/Stefanie Chase
Filer Authorized By:	Osvaldo Farres
Attorney Docket Number:	75575.000006
Receipt Date:	13-JAN-2010
Filing Date:	28-SEP-2009
Time Stamp:	16:18:53
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$130
RAM confirmation Number	2714
Deposit Account	500206
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Applicant Response to Pre-Exam Formalities Notice	755756RespNTFCorrApp1MEOT.pdf	194200 584e102e2ad5340a69aff694669b9a24548f7fc8	no	10
Warnings:					
Information:					
2	Fee Worksheet (PTO-875)	fee-info.pdf	30228 4bfa3f5be0df4dcbf3fb408d8b6e3225a564ec6e	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	224428		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006

CONFIRMATION NO. 6169

21967
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

FORMALITIES LETTER

OC000000038214732

Date Mailed: 10/15/2009

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
  - The drawings are not in compliance with 37 CFR 1.84 because figures 3-5,7-10 contain figure or view numbers that have incorrect orientation. Reference characters, sheet numbers, and view numbers must be oriented in the same direction as the view. See 37 CFR 1.84(p)(1).

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/ldvan/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/568,335	09/28/2009	3673	1090	75575.000006	15	1

CONFIRMATION NO. 6169

21967
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

FILING RECEIPT

OC000000038214731

Date Mailed: 10/15/2009

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Terumi MATSUBARA, Nerima-ku, JAPAN;
Eiji Koike, Saitama-shi, JAPAN;
Naoki Honma, Saitama-shi, JAPAN;
Yoko Nagai, Nagareyama-shi, JAPAN;
Kazuo Matsubara, Bunkyo-ku, JAPAN;

Assignment For Published Patent Application

Atom Medical Corporation

Power of Attorney: The patent practitioners associated with Customer Number 21967

Domestic Priority data as claimed by applicant

Foreign Applications

JAPAN 2008-258291 10/03/2008

Permission to Access - A proper **Authorization to Permit Access to Application by Participating Offices** (PTO/SB/39 or its equivalent) has been received by the USPTO.

Request to Retrieve - This application either claims priority to one or more applications filed in an intellectual property Office that participates in the Priority Document Exchange (PDX) program or contains a proper **Request to Retrieve Electronic Priority Application(s)** (PTO/SB/38 or its equivalent). Consequently, the USPTO will attempt to electronically retrieve these priority documents.

If Required, Foreign Filing License Granted: 10/09/2009

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/568,335**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No

Title

Incubator

Preliminary Class

070

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/568,335	09/28/2009	Terumi MATSUBARA	75575.000006

CONFIRMATION NO. 6169

POA ACCEPTANCE LETTER

21967
HUNTON & WILLIAMS LLP
INTELLECTUAL PROPERTY DEPARTMENT
1900 K STREET, N.W.
SUITE 1200
WASHINGTON, DC 20006-1109

OC000000038214792

Date Mailed: 10/15/2009

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 09/28/2009.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/ebekele/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

HUNTON& WILLIAMS

INTELLECTUAL PROPERTY DEPARTMENT
HUNTON & WILLIAMS LLP
1900 K STREET, N.W.
WASHINGTON, D.C. 20006-1109

TEL 202 • 955 • 1500
FAX 202 • 778 • 2201

OZZIE A. FARRES
DIRECT DIAL: (202) 955-1923
EMAIL: OFARRES@HUNTON.COM

FILE NO: 75575.000006

September 28, 2009

UTILITY PATENT APPLICATION TRANSMITTAL

Attorney Docket Number: **75575.000006**
First Named Inventor: **Terumi MATSUBARA**
Title: **INCUBATOR**

Customer No. **21967**

TO: Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Attached are the following for filing with the U.S. Patent and Trademark Office:

1. ☒ Fee Transmittal Form (original and duplicate)

2. ☐ Small Entity Status Claimed: ☐ Independent Inventor
☐ Small Business Concern
☐ Non-Profit Organization

☐ Statement Enclosed

☐ Statement Filed in Prior Application; Status Still Proper and Desired

3. ☒ Specification - Total Pages: **27** (Including Abstract)

4. ☒ Drawings - Total Sheets: **10** (Fig(s). **1-11**

FEE CALCULATIONS

				Large Entity ($)	Small Entity ($)	Fees ($)
BASIC FILING FEE				330.00	165.00	**330.00**
SEARCH FEE				540.00	270.00	**540.00**
EXAMINATION FEE				220.00	110.00	**220.00**
APPLICATION SIZE FEE If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee is $250.00 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C, 41(a)(1)(G) and 37 CFR 1.16(s).						
Total Sheets	Extra Sheets	No. of Each Additional 50 or Fraction Thereof				
35 - 100	/ 50	(round up to a whole number) x		270.00	135.00	0.00
EXCESS CLAIMS FEE	Claims Filed	Basic Fee Claims	Extra			
Total Claims	15	20	0	52.00	25.00	0.00
Independent Claims	1	3	0	220.00	0.00	0.00
First Presentation of Multiple Dependent Claims				390.00	195.00	0.00
NON-ENGLISH SPECIFICATION (no small entity discount)				130.00		0.00
TOTAL FILING FEE						1090.00
Assignment Recordation Fee						0.00
TOTAL AMOUNT						**1090.00**

5. Oath or Declaration - Total Pages: 5

   a. ☒ Newly executed (original or copy)
   ☐ New (unexecuted)

   b. ☐ Copy from a prior application
   (for continuation/divisional with Box 18 completed)

      i. ☐ DELETION OF INVENTOR(s):
      Signed statement attached deleting inventor(s) named in prior application.

6. ☒ Application Data Sheet

7. ☐ CD-ROM or CD-R in duplicate, large table or Microfiche Computer Program (Appendix)

8. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)

   a. ☐ Computer Readable Form (CRF)

b. ☐ Specification Sequence Listing on:

i. ☐ CD-ROM or CD-R (two copies); or

ii. ☐ Paper Copy (identical to computer copy)

c. ☐ Statements verifying identity of above copies

9. ☒ Assignee/Applicant: **Atom Medical Corporation**

☐ Assignment and Assignment Recordation Form Submitted Herewith

☐ Assignee of Record in Prior Application No _____

10. ☐ 37 C.F.R. 3.73(b) Statement ☐ Power of Attorney

11. ☐ English Translation Document (if applicable)

12. ☐ Information Disclosure Statement with PTO-1449 and References

☐ Copies of Information Disclosure Statement Citations

13. ☐ Preliminary Amendment

14. ☐ Return Receipt Postcard

15. ☒ Priority is Claimed as Follows:
Japanese Patent Application No. 2008-258291 filed October 3, 2008

☐ Claim Benefit of the Following U.S. Provisional Application No(s).:

☐ If Foreign Priority is Claimed, Certified Copy of the Above Priority Document(s) is Submitted Herewith

16. ☐ Nonpublication Request under 35 U.S.C. § 122(b)(2)(B)(i). Applicant must attach Form PTO/SB/35 or its equivalent.

17. ☐ Other: _____

18. ☐ Continuation ☐ Divisional ☐ Continuation-in-Part of Prior Application No.: _____ filed _

Prior application information: Examiner _____
Group Art Unit _____

☐ Incorporation By Reference (useable if Box 5b is marked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 5b, is considered as being part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application papers.

☐ Application Based on Provisional Application No.: _____

19. Please address all correspondence to:

☒ **CUSTOMER NUMBER** 21967

Ozzie Farres
Intellectual Property Department
Hunton & Williams LLP
1900 K Street, N.W.
Suite 1200
Washington, DC 20006-1109

20. ☐ A new power of attorney or authorization of agent (PTO/SB/81) is as follows:

☒ The power of attorney is to: the Hunton & Williams LLP attorneys and agents associated with **CUSTOMER NUMBER 21967**

☐ Please remove as power of attorney:

☐ Please add as power of attorney:

21. ☐ A check in the amount of **$** _____ is enclosed. The Director is hereby authorized to charge any additional fee(s) or underpayments or credit any overpayments to **Deposit Account No. 50-0206**.

☒ The Director is hereby authorized to charge **$ 1,090.00,** including any additional fee(s) or underpayments, to **Deposit Account No. 50-0206**

Respectfully submitted,

By: _____
Ozzie A. Farres
Registration No. 43,606

OAF/smc
Enclosures

Electronic Patent Application Fee Transmittal

Application Number:	
Filing Date:	
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Filer:	Osvaldo Farres/Stefanie Chase
Attorney Docket Number:	75575.000006

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**1090**

Electronic Acknowledgement Receipt

EFS ID:	6158969
Application Number:	12568335
International Application Number:	
Confirmation Number:	6169
Title of Invention:	Incubator
First Named Inventor/Applicant Name:	Terumi MATSUBARA
Customer Number:	21967
Filer:	Osvaldo Farres/Stefanie Chase
Filer Authorized By:	Osvaldo Farres
Attorney Docket Number:	75575.000006
Receipt Date:	28-SEP-2009
Filing Date:	
Time Stamp:	16:42:27
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1090
RAM confirmation Number	3115
Deposit Account	500206
Authorized User	

The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Abstract	755756Abstract.pdf	21574 208e175c7f4cd66a74c393e5bc35503d2f008e8f	no	1
Warnings:					
Information:					
2	Application Data Sheet	755756ADS.pdf	136359 e60a208e6d8f9c2ec9c167cbca4ab013c0c45de1	no	7
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Claims	755756Claims.pdf	106330 6271cf7a5e42619d8c522f6b4cbbc3e783051ab5	no	4
Warnings:					
Information:					
4	Drawings-only black and white line drawings	755756Drawings.pdf	174130 11634c8c0f202ee13635361a25179f6c078555cd	no	10
Warnings:					
Information:					
5	Oath or Declaration filed	755756Declaration.pdf	245593 cbf1714f0d5a51635cb26e118d9c54c679f0da83	no	5
Warnings:					
Information:					
6	Specification	755756Specification.pdf	729401 cdcb21ec40fc4fd6f19c4b9554f85c7825f54b02	no	22
Warnings:					
Information:					
7	Power of Attorney	755756Power.pdf	285735 f77ba03097bdd04de957578ab59868eb1cfced67	no	5
Warnings:					
Information:					
8	Transmittal of New Application	755756ApplicationTransmittal.pdf	142405 e40970b82ef3ac52b2992aefdfcac03888483a36	no	5
Warnings:					
Information:					

9	Fee Worksheet (PTO-875)	fee-info.pdf	32618 da3b5cf3368a462dfb38c9c55f57ac27b6509c7e	no	2

Warnings:	
Information:	
Total Files Size (in bytes):	1874145

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

{Abstract}

In an incubator according to the present invention, physical condition of a newborn is less likely to get out of order though a hand insertion window can easily be opened by operation with, for example, an elbow instead of a hand. A latch in a latch mechanism has a spiral face that extends to at least part of the periphery of a rotation shaft that extends along a side of a newborn chamber. A releasing member in the latch mechanism presses the spiral face of the latch by movement along the side of the newborn chamber and rotates the latch from a holding position to a releasing position for a hand insertion door. In addition, even if the latch in the latch mechanism rotates about the rotation shaft between the holding and releasing positions for the hand insertion door, the releasing member does not rotate.

APPLICATION DATA SHEET

Application Information

Application Number::	TBA
Filing Date::	September 28, 2009
Application Type::	Regular
Subject Matter::	UTILITY
Suggested Classification::	
Suggested Group Art Unit::	
CD-ROM or CD-R::	
Number of CD Disks::	
Number of Copies of CDs::	
Sequence Submission?::	
Computer Readable Form (CRF)?::	
Number of Copies of CRF::	
Title::	Incubator
Attorney Docket Number::	75575.000006
Request for Early Publication?::	NO
Request for Non-Publication?::	NO
Suggested Drawing Figure::	
Total Drawing Sheets::	10
Small Entity?::	NO
Latin Name::	
Variety denomination name::	
Petition Included?::	
Petition Type::	
Licensed US Government Agency::	
Contract or Grant Numbers::	
Secrecy Order in Parent Application?::	NO

Applicant Information

Applicant Authority Type::	INVENTOR
Primary Citizenship Country::	Japan
Status::	FULL CAPACITY
Given Name::	Terumi
Middle Name::	
Family Name::	MATSUBARA
Name Suffix::	
City of Residence::	
State or Province of Residence::	Saitama
Country of Residence::	JAPAN
Street of Mailing Address::	c/oAtom Medical Corporation Research and Development
Street of Mailing Address::	2-1, Dojo 2-chome, Sakura-ku
City of Mailing Address::	
State or Province of Mailing Address::	Saitama
Country of Mailing Address::	JAPAN
Postal or Zip Code of Mailing Address::	338-0835

Application No. TBA
Filing Date: September 28, 2009

Applicant Information

Applicant Authority Type::	INVENTOR
Primary Citizenship Country::	JAPAN
Status::	FULL CAPACITY
Given Name::	Eiji
Middle Name::	
Family Name::	KOIKE
Name Suffix::	
City of Residence::	
State or Province of Residence::	Saitama
Country of Residence::	JAPAN
Street of Mailing Address::	c/o Atom Medical Corporation Research and Development
Street of Mailing Address::	2-1, Dojo 2-chome, Sakura-ku
City of Mailing Address::	
State or Province of Mailing Address::	Saitama
Country of Mailing Address::	JAPAN
Postal or Zip Code of Mailing Address::	338-0835

Applicant Information

Applicant Authority Type::	INVENTOR
Primary Citizenship Country::	JAPAN
Status::	FULL CAPACITY
Given Name::	Naoki
Middle Name::	
Family Name::	HONMA
Name Suffix::	
City of Residence::	
State or Province of Residence::	Saitama
Country of Residence::	JAPAN
Street of Mailing Address::	c/o Atom Medical Corporation Research and Development
Street of Mailing Address::	2-1 Dojo 2-chome, Sakura-ku
City of Mailing Address::	
State or Province of Mailing Address::	Saitama
Country of Mailing Address::	JAPAN
Postal or Zip Code of Mailing Address::	338-0835

Applicant Information

Applicant Authority Type::	INVENTOR
Primary Citizenship Country::	JAPAN
Status::	FULL CAPACITY
Given Name::	Yoko
Middle Name::	
Family Name::	NAGAI
Name Suffix::	
City of Residence::	

State or Province of Residence::	Chiba
Country of Residence::	JAPAN
Street of Mailing Address::	c/o Atom Medical Corporation Research and Development
Street of Mailing Address::	2-1 Dojo 2-chome, Sakura-ku
City of Mailing Address::	
State or Province of Mailing Address::	Saitama
Country of Mailing Address::	JAPAN
Postal or Zip Code of Mailing Address::	338-0835

Applicant Information

Applicant Authority Type::	INVENTOR
Primary Citizenship Country::	JAPAN
Status::	FULL CAPACITY
Given Name::	Kazuo
Middle Name::	
Family Name::	MATSUBARA
Name Suffix::	
City of Residence::	
State or Province of Residence::	Tokyo
Country of Residence::	JAPAN
Street of Mailing Address::	c/o Atom Medical Corporation
Street of Mailing Address::	18-15, Hongo, 3-chome, Bunkyo-ku
City of Mailing Address::	
State or Province of Mailing Address::	Tokyo
Country of Mailing Address::	JAPAN
Postal or Zip Code of Mailing Address::	110-0033

Correspondence Information

Correspondence Customer No.::	21967
Name::	HUNTON & WILLIAMS
Street of Mailing Address::	1900 K. STREET, N.W.
Street of Mailing Address::	SUITE 1200
City of Mailing Address:	WASHINGTON
State or Province of Mailing Address::	DISTRICT OF COLUMBIA
Country of Mailing Address::	USA
Postal or Zip Code of Mailing Address::	20006
Telephone Number::	202-955-1500
Facsimile Number::	202-778-2201
E-Mail Address::	PATDCDOCKET@HUNTON.COM

Representative Information

Representative Customer Number::	21967

Domestic Priority Information

Application::	Continuity Type::	Parent Application::	Parent Filing Date::

Foreign Priority Information

Country:	Application Number::	Filing Date::	Priority Claimed::
JAPAN	2008-258291	October 3, 2008	YES

Assignee Information

Assignee Name::	Atom Medical Corporation
Street of Mailing Address::	18-15 Hongo 3-chome Bunkyo-ku
Street of Mailing Address::	
City of Mailing Address::	
State of Province of Mailing Address::	Tokyo
Country of Mailing Address::	JAPAN
Postal or Zip Code of Mailing Address::	113-0033

{Claims}

{Claim 1} An incubator comprising:

a hand insertion window formed in a side of a newborn chamber;

a hand insertion door that opens and closes the hand insertion window by rotation; and

a latch mechanism that holds the hand insertion door in a closing position for closing the hand insertion window,

wherein the latch mechanism includes a latch and a releasing member,

the latch has a rotation shaft extending along the side and enabling rotation between a holding position for the holding of the hand insertion door and an releasing position for releasing the holding of the hand insertion door, and a spiral face extending to at least part of a periphery of the rotation shaft; and

the releasing member is movable along the side, and presses the spiral face by movement to cause the rotation of the latch from the holding position to the releasing position.

{Claim 2} The incubator according to claim 1, further comprising a helical compression spring urging the releasing member in a direction opposite to the direction in which the spiral face is pressed.

{Claim 3} The incubator according to claim 1, further comprising an opening mechanism configured such that in the course of the rotation of the hand insertion door in

the direction in which the hand insertion window is closed, the opening mechanism comes into contact with the hand insertion door before the hand insertion window is closed, and thereby urges the hand insertion door to cause the rotation in the direction in which the hand insertion window is opened.

{Claim 4} The incubator according to claim 3, wherein a packing is attached to an internal edge of the hand insertion window, and

the packing serves as the opening mechanism.

{Claim 5} The incubator according to claim 4, wherein the packing is made of silicone rubber.

{Claim 6} The incubator according to claim 4, wherein the packing has a thicker portion, and

the thicker portion serves as the opening mechanism.

{Claim 7} The incubator according to claim 6, wherein disposed on the thicker portion is a projection for preventing the packing from being erroneously attached, and

the thicker portion and the projection serve as the opening mechanism.

{Claim 8} The incubator according to claim 7, wherein a rotation shaft for the rotation of the hand insertion door is inserted in a helical coil spring, and

the thicker portion, the projection, and the helical coil spring serve as the opening mechanism.

{Claim 9} The incubator according to claim 1, wherein

the latch has a pressed portion that is pressed by the rotation of the hand insertion door, and thereby causes the rotation from the holding position to the releasing position, and

the pressed portion is made of impact-absorbent material.

{Claim 10} The incubator according to claim 10, wherein the impact-absorbent material is silicone rubber.

{Claim 11} The incubator according to claim 1, further comprising a braking mechanism configured such that from some point in the course of the rotation of the hand insertion door in the direction in which the hand insertion window is opened, the braking mechanism brakes the rotation of the hand insertion door.

{Claim 12} The incubator according to claim 11, wherein a portion around a rotation shaft for the rotation of the hand insertion door has a cross-section that is not completely circular, and

the cross-section comes into contact with the braking mechanism in the course of the rotation.

{Claim 13} The incubator according to claim 12, wherein the braking mechanism is elastically deformable, and

by the elastic deformation, the braking mechanism absorbs pressure applied due to the contact.

{Claim 14} The incubator according to claim 1, wherein the latch mechanism includes:

an urging member for urging the rotation of the latch

from the releasing position to the holding position; and

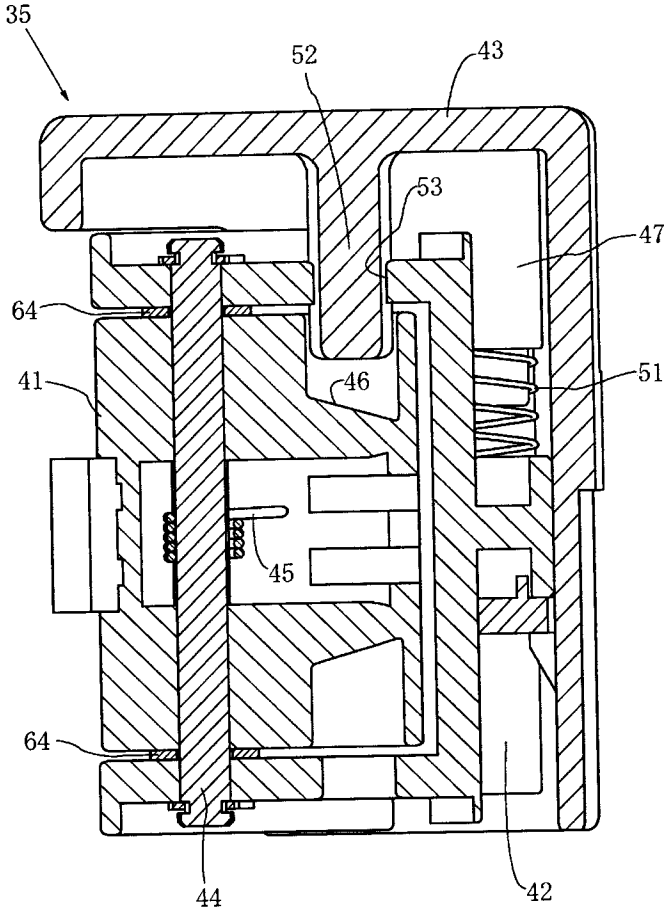
a braking member for braking the rotation of the latch.

{Claim 15} The incubator according to claim 14, wherein the latch mechanism includes a latch base plate supporting the latch and the releasing member, and

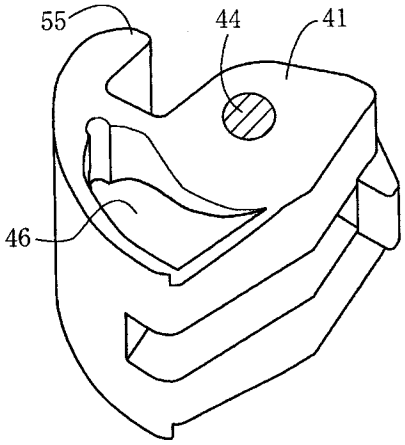
the braking member is a spacer disposed between the latch and the latch base plate and around the rotation shaft.

{Drawings}

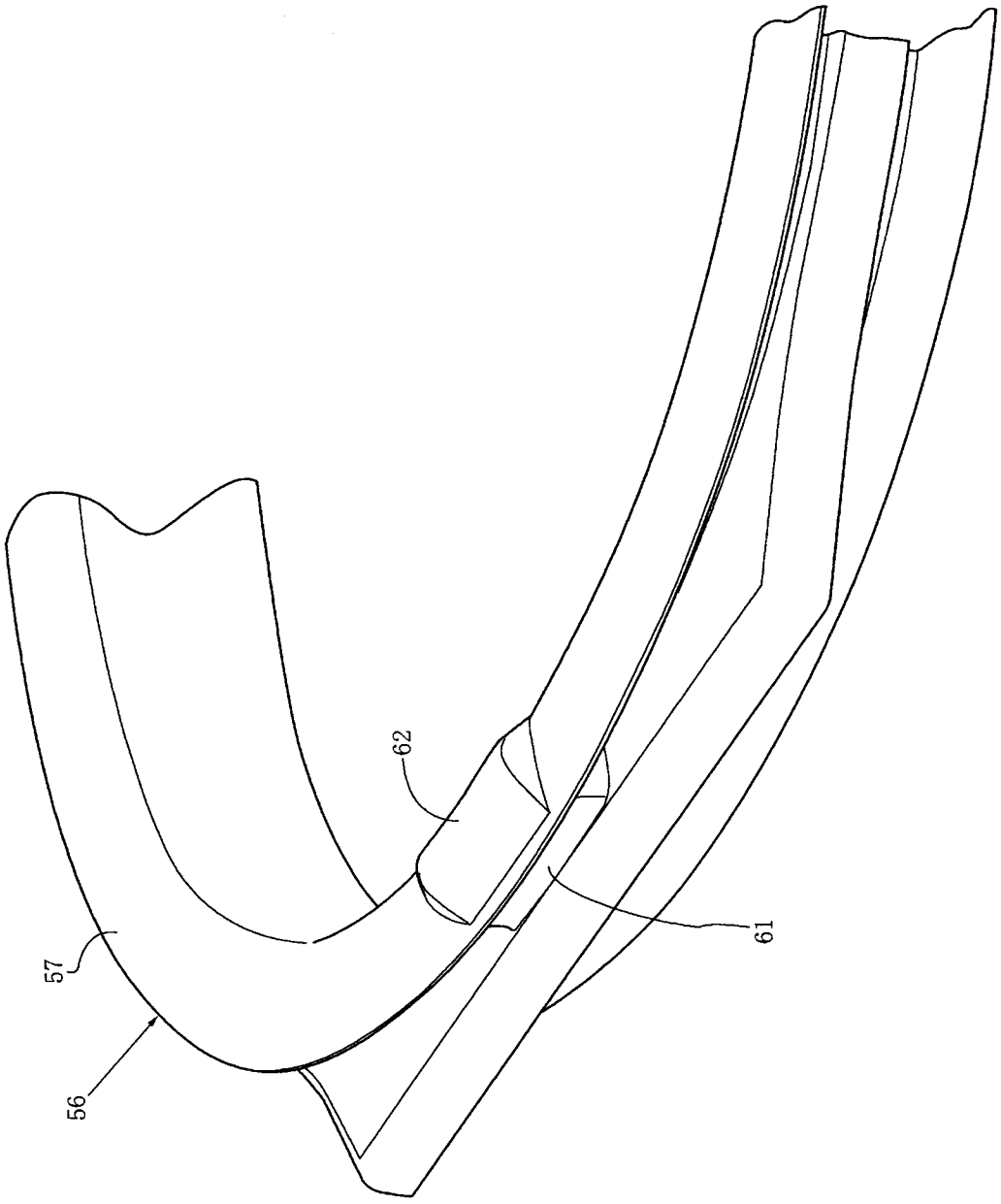
{Fig. 1}



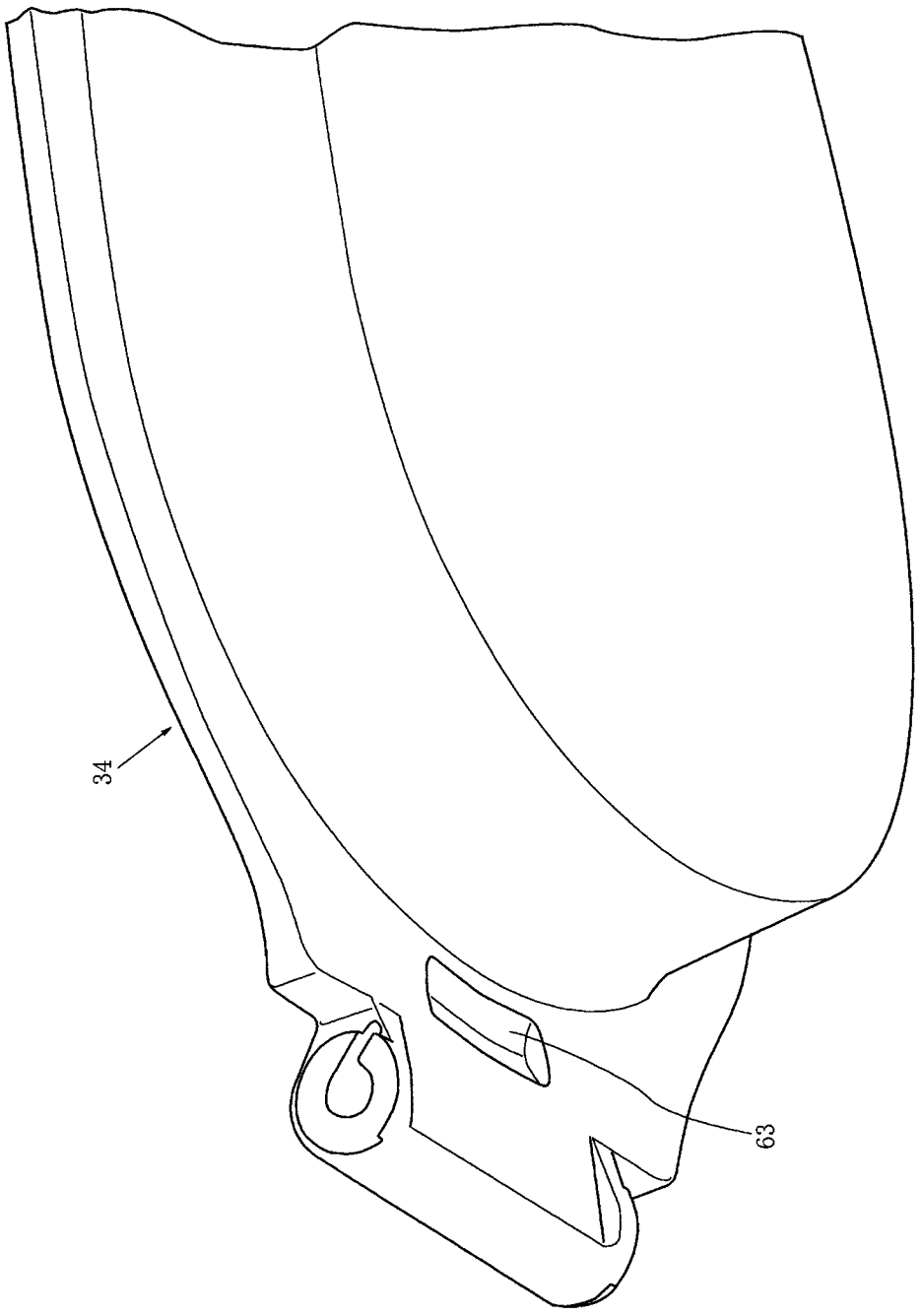
{Fig. 2}



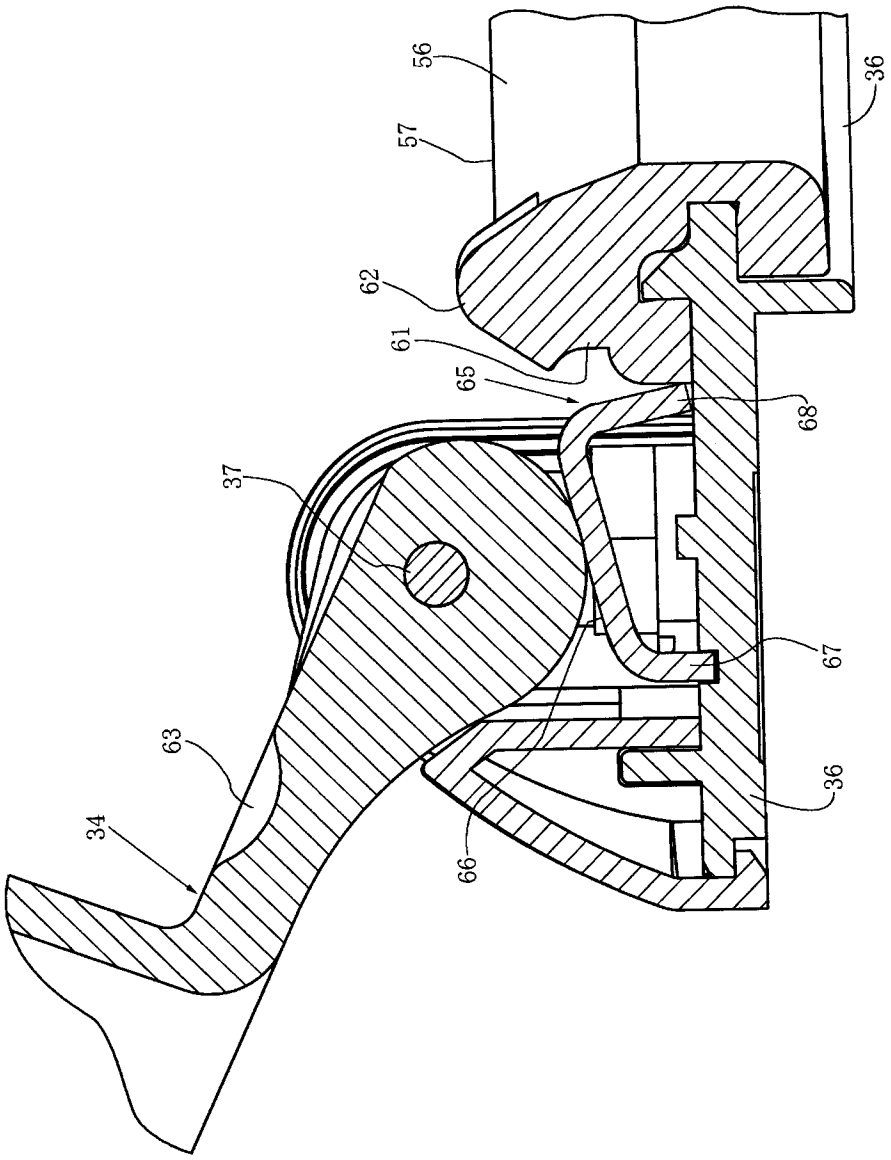
{Fig. 3}



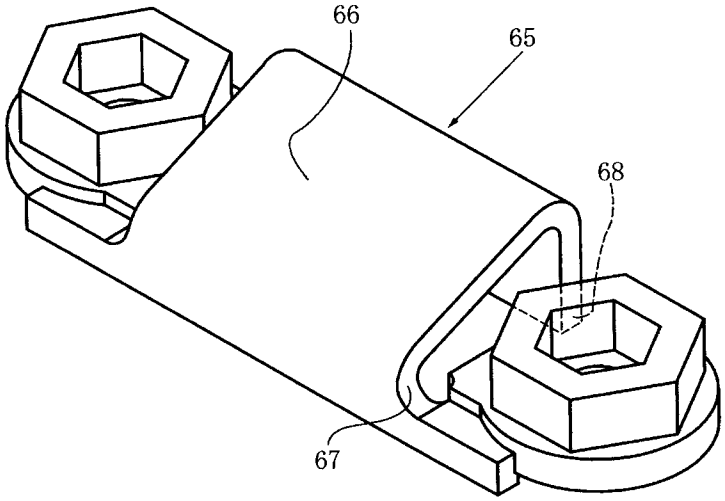
{Fig. 4}



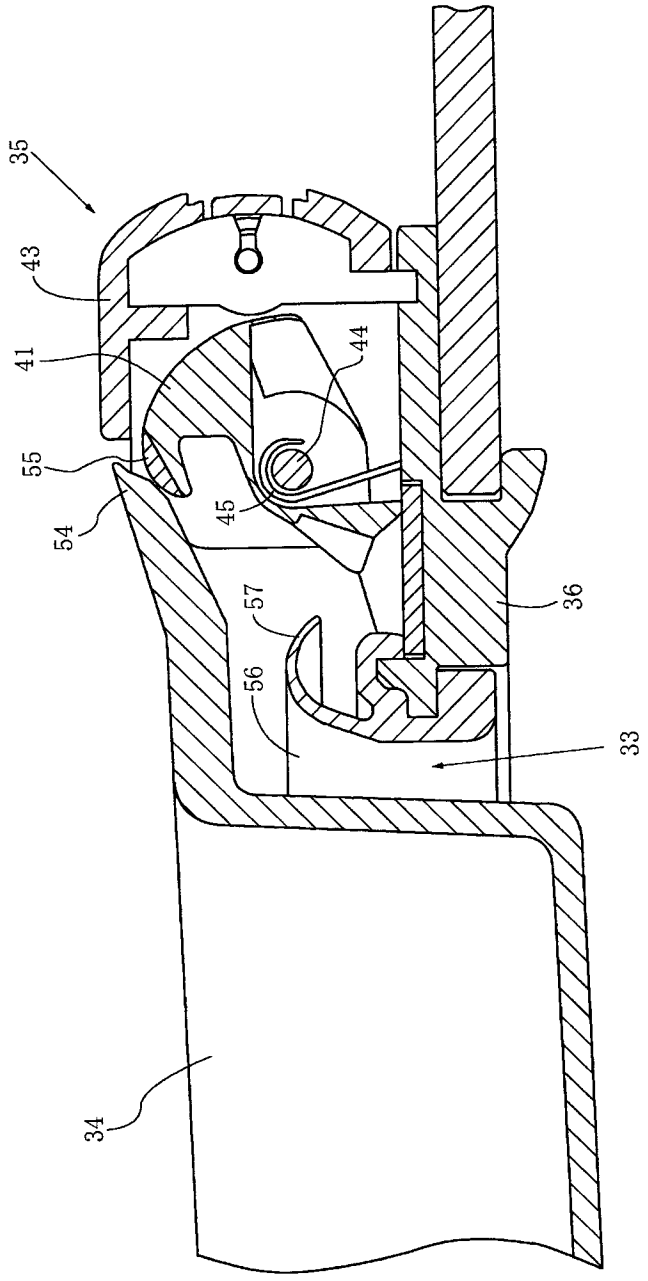
{Fig. 5}



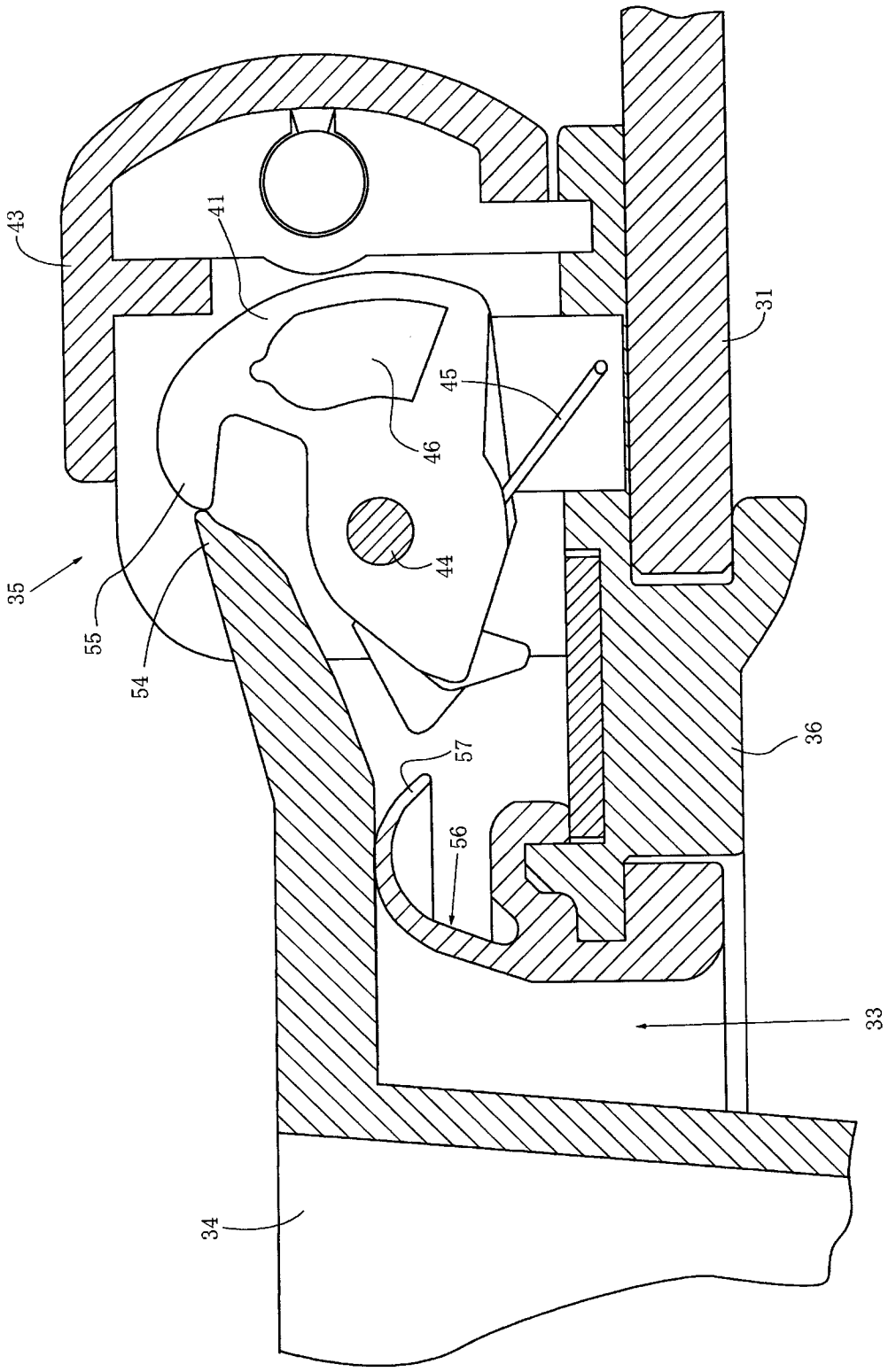
{Fig. 6}



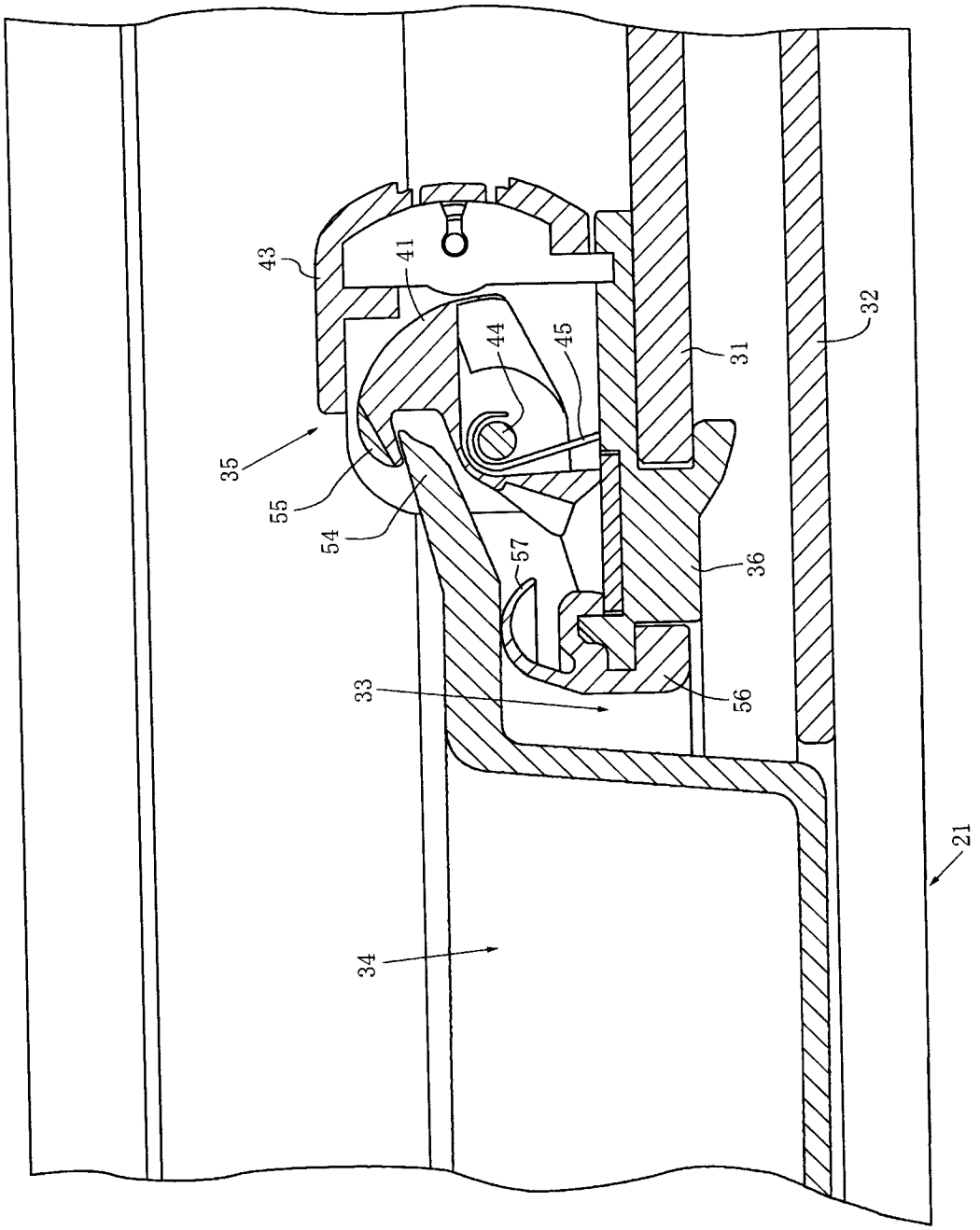
{Fig. 7}



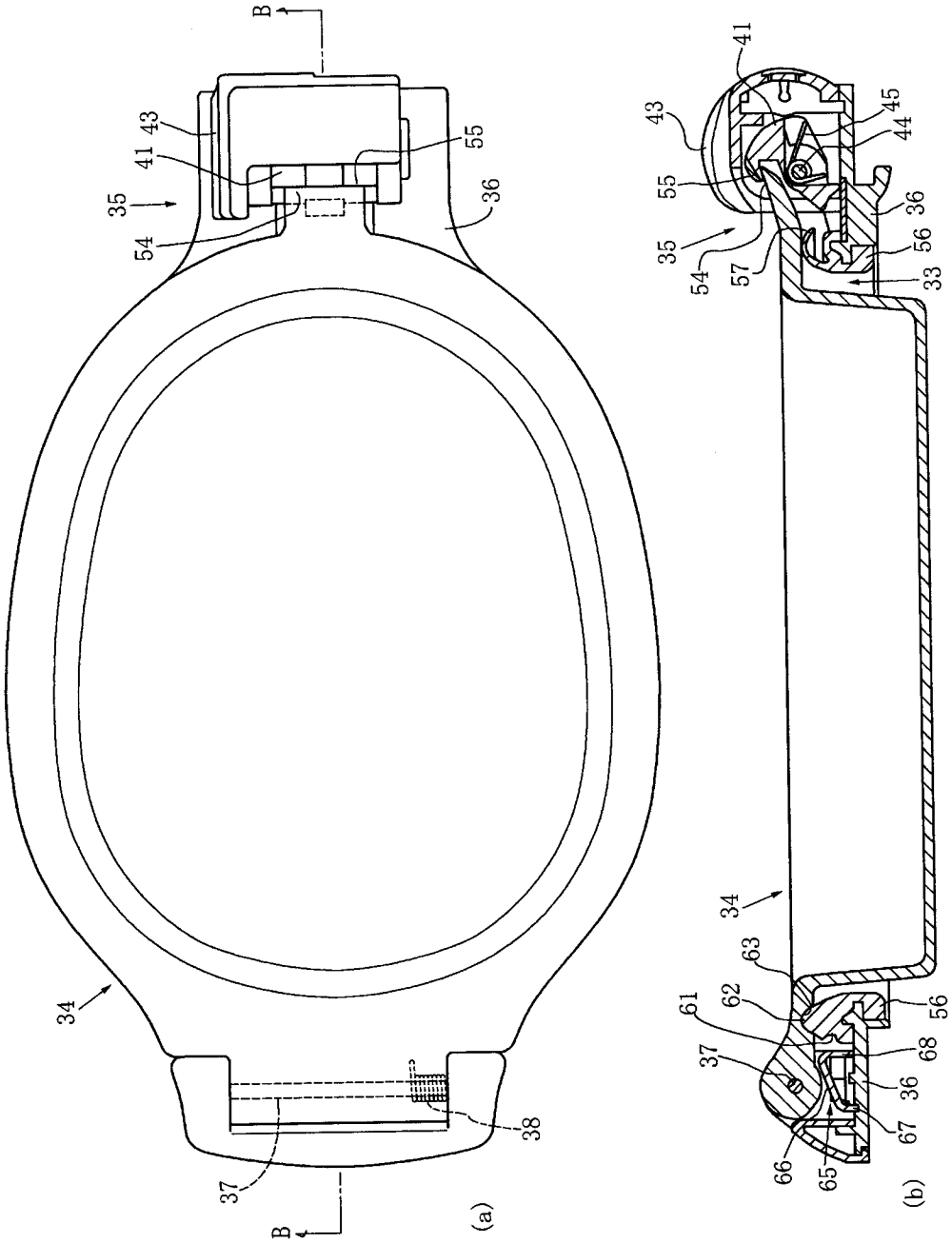
{Fig. 8}



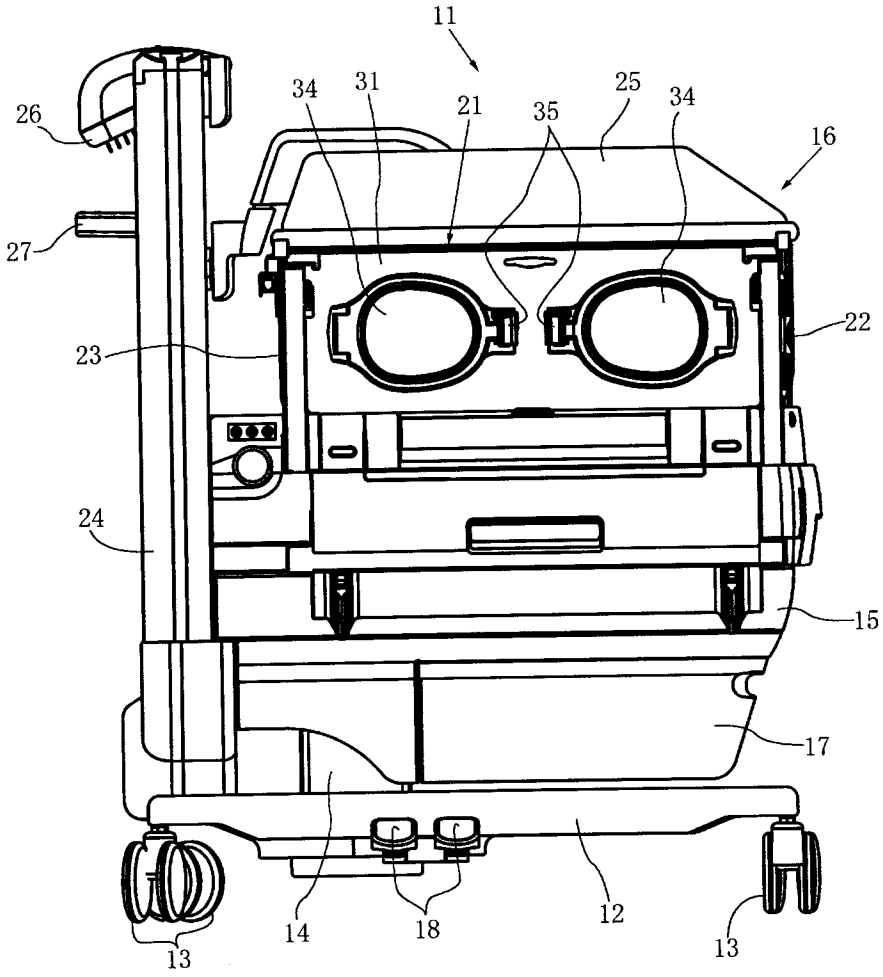
{Fig. 9}



{Fig. 10}


B
43
41
55
35
36
54
34
38
37
B
(a)
41
43
45
44
55
36
35
56
54
57
33
34
63
61
62
56
37
68
36
67
66
65
(b)

{Fig. 11}



Doc Code: Oath
Document Description: Oath or declaration filed

PTO/SB/01 (10-08)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)

[X] Declaration Submitted With Initial Filing OR [ ] Declaration Submitted after Initial Filing (surcharge (37 CFR 1.16(f)) required)

Attorney Docket Number	75575.000006
First Named Inventor	Terumi Matsubara
COMPLETE IF KNOWN	
Application Number	
Filing Date	September 28, 2009
Art Unit	
Examiner Name	

I hereby declare that: (1) Each inventor's residence, mailing address, and citizenship are as stated below next to their name; and (2) I believe the inventor(s) named below to be the original and first inventor(s) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

"Incubator"

(Title of the Invention)

the application of which

[X] is attached hereto

OR

[ ] was filed on (MM/DD/YYYY) _____ as United States Application Number or PCT International

Application Number _____ and was amended on (MM/DD/YYYY) _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Authorization To Permit Access To Application by Participating Offices

[X] If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), and any other intellectual property offices in which a foreign application claiming priority to the above-identified application is filed access to the above-identified patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, or other intellectual property office in which a foreign application claiming priority to the above-identified application is filed to have access to the application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the application-as-filed with respect to : 1) the above-identified application, 2) any foreign application to which the above-identified application claims priority under 35 USC 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the above-identified US application, and 3) any U.S. application from which benefit is sought in the above-identified application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date of filing the Authorization to Permit Access to Application by Participating Offices.

PTO/SB/01 (10-08)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION — Utility or Design Patent Application

Claim of Foreign Priority Benefits

I hereby claim foreign priority benefits under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number(s)	Country	Foreign Filing Date (MM/DD/YYYY)	Priority Not Claimed	Certified Copy Attached? YES	NO
2008-258291	Japan	10/3/2008	☐	☐	☒
			☐	☐	☐
			☐	☐	☐
			☐	☐	☐

☐ Additional foreign application numbers are listed on a supplemental priority data sheet PTO/SB/02B attached hereto.

PTO/SB/01 (10-08)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION – Utility or Design Patent Application

Direct all correspondence to: ☑ The address associated with Customer Number: 21967	OR ☐ Correspondence address below	
Name		
Address		
City State		Zip
Country	Telephone	Email

WARNING:

Petitioner/applicant is cautioned to avoid submitting personal information in documents filed in a patent application that may contribute to identity theft. Personal information such as social security numbers, bank account numbers, or credit card numbers (other than a check or credit card authorization form PTO-2038 submitted for payment purposes) is never required by the USPTO to support a petition or an application. If this type of personal information is included in documents submitted to the USPTO, petitioners/applicants should consider redacting such personal information from the documents before submitting them to the USPTO. Petitioner/applicant is advised that the record of a patent application is available to the public after publication of the application (unless a non-publication request in compliance with 37 CFR 1.213(a) is made in the application) or issuance of a patent. Furthermore, the record from an abandoned application may also be available to the public if the application is referenced in a published application or an issued patent (see 37 CFR 1.14). Checks and credit card authorization forms PTO-2038 submitted for payment purposes are not retained in the application file and therefore are not publicly available. Petitioner/applicant is advised that documents which form the record of a patent application (such as the PTO/SB/01) are placed into the Privacy Act system of records DEPARTMENT OF COMMERCE, COMMERCE-PAT-7, System name: *Patent Application Files*. Documents not retained in an application file (such as the PTO-2038) are placed into the Privacy Act system of COMMERCE/PAT-TM-10, System name: Deposit Accounts and *Electronic Funds Transfer Profiles*.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

NAME OF SOLE OR FIRST INVENTOR:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle [if any]) Terumi	Family Name or Surname Matsubara		
Inventor's Signature Terumi Matsubara	Date May 22, 2009		
Residence: City Nerima-ku	State Tokyo	Country Japan	Citizenship Japan
Mailing Address c/o Atom Medical Corporation Research and Development Dep., 2-1 Dojo 2-chome, Sakura-ku			
City Saitama-shi	State Saitama	Zip 338-0835	Country Japan

☐ Additional inventors or a legal representative are being named on the _____ supplemental sheet(s) PTO/SB/02A or 02LR attached hereto.

PTO/SB/02A (07-07)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION

ADDITIONAL INVENTOR(S)
Supplemental Sheet
Page ____ of ____

Name of Additional Joint Inventor, if any: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle (if any))	Family Name or Surname
Eiji	Koike

Inventor's Signature: Eiji Koike — Date: May 22, 2009

Residence: City	State	Country	Citizenship
Saitama-shi	Saitama	Japan	Japan

Mailing Address: c/o Atom Medical Corporation Research and Development Dep., 2-1 Dojo 2-chome, Sakura-ku

City	State	Zip	Country
Saitama-shi	Saitama	338-0835	Japan

Name of Additional Joint Inventor, if any: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle (if any))	Family Name or Surname
Naoki	Honma

Inventor's Signature: Naoki Honma — Date: May 22, 2009

Residence: City	State	Country	Citizenship
Saitama-shi	Saitama	Japan	Japan

Mailing Address: c/o Atom Medical Corporation Research and Development Dep., 2-1 Dojo 2-chome, Sakura-ku

City	State	Zip	Country
Saitama-shi	Saitama	338-0835	Japan

Name of Additional Joint Inventor, if any: ☐ A petition has been filed for this unsigned inventor

Given Name (first and middle (if any))	Family Name or Surname
Yoko	Nagai

Inventor's Signature: Yoko Nagai — Date: May 22, 2009

Residence: City	State	Country	Citizenship
Nagareyama-shi	Chiba	Japan	Japan

Mailing Address: c/o Atom Medical Corporation Research and Development Dep., 2-1 Dojo 2-chome, Sakura-ku

City	State	Zip	Country
Saitama-shi	Saitama	338-0835	Japan

PTO/SB/02A (07-07)
Approved for use through 06/30/2010. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

DECLARATION

ADDITIONAL INVENTOR(S)
Supplemental Sheet

Page _____ of _____

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Kazuo	Matsubara		
Inventor's Signature 			Date: May 22, 2009
Residence: City: Bunkyo-ku	State: Tokyo	Country: Japan	Citizenship: Japan
Mailing Address: c/o Atom Medical Corporation, 18-15, Hongo 3-chome			
City: Bunkyo-ku	State: Tokyo	Zip: 113-0033	Country: Japan

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

Name of Additional Joint Inventor, if any:	☐ A petition has been filed for this unsigned inventor		
Given Name (first and middle (if any))	Family Name or Surname		
Inventor's Signature			Date
Residence: City	State	Country	Citizenship
Mailing Address			
City	State	Zip	Country

{Description}

{Title of Invention}

INCUBATOR

{Technical Field}

{0001} The present invention relates to an incubator that includes: a hand insertion window formed in a side of a newborn chamber; a hand insertion door that opens and closes the hand insertion window by rotation; and a latch mechanism that holds the hand insertion door in a closing position.

{Background Art}

{0002} An incubator has a newborn chamber to provide appropriate physiological environment for a newborn that cannot adjust its body temperature and others by itself. Substantially entire areas of the sides and top of a newborn chamber are formed from transparent members so that a newborn in the newborn chamber can be seen from the outside. Within the newborn chamber, not only temperature but also humidity, oxygen concentration and others are controlled. A treating person, however, such as a doctor or a nurse gives treatment to a newborn in a newborn chamber, when necessary. Therefore, for relatively simple treatments, hand insertion windows are formed in certain sides of the newborn chamber. Additionally, the incubator has a hand insertion door that opens and closes the hand insertion window by rotation, and a latch mechanism that holds the hand insertion door in a closing position.

{0003} In order that appropriate physiological environment in the newborn chamber is maintained for a newborn, it is usual that hand insertion windows are closed by hand insertion doors and that the hand insertion doors are held in their closing positions by their corresponding latch mechanisms. In order to treat a newborn, however, each hand insertion window has to be opened by rotating its hand insertion door to its opening position from its closing position. On the other hand, a treating person may have in its both hands a medical device, medical drug, or others for treating a newborn. Additionally, there may be a case where contamination of sterilized both hands has to be prevented. To meet such needs, conventional incubators (e.g., Patent Literatures 1 and 2) have a releasing member for releasing a latch mechanism such that the hand insertion window can easily be opened by only pressing the releasing member in a direction perpendicular to the corresponding side face of a newborn chamber with, for example, an elbow instead of a hand.

{Citation List}

{Patent Literature}

{0004} 1. JP 2001-70373 A

2. JP 2-198554 A

{Summary of Invention}

{Technical Problem}

{0005} In the conventional incubators mentioned above, however, a hand insertion window can be opened by only

pressing each releasing member in a direction perpendicular to the corresponding side of a newborn chamber. Therefore, if a treating person or others leans on the releasing member or the releasing member comes into contact with a wall during conveyance of the incubator, the hand insertion window may be opened unintentionally. Furthermore, in the conventional incubators mentioned above, there can happen a state where, although a hand insertion door is almost in contact with a latch mechanism, this hand insertion door is not securely held in its closing position and, therefore, the corresponding hand insertion window is incompletely closed. If the hand insertion window is unintentionally opened or incompletely closed when a newborn is in the newborn chamber, the inside of the newborn chamber will deviate from appropriate physiological environment for the newborn, and there is the possibility that the physical condition of the newborn gets out of order.

{0006} Furthermore, in the conventional incubators mentioned above, the hand insertion door can rotate freely while it is not held in its closing position by the latch mechanism. Additionally, also the latch mechanism is suddenly activated by urging force when it holds the hand insertion door in its closing position. For these reasons, the hand insertion door or latch mechanism may bump against another part of the incubator. Noise and vibration by impact resulting from this bump may put stress on a

newborn in the newborn chamber, and there is the additional possibility that the physical condition of the newborn gets out of order. It is accordingly an object of the present invention to provide an incubator designed such that the physical condition of a newborn is less likely to get out of order though a hand insertion window can easily be opened by operation with, for example, an elbow instead of a hand.

{Solution to Problem}

{0007} In an incubator according to the present invention, a latch in a latch mechanism has a spiral face that extends to at least part of the periphery of a rotation shaft that extends along a side of a newborn chamber. A releasing member in the latch mechanism presses the spiral face of the latch by movement along the side of the newborn chamber, and rotates the latch about the rotation shaft from a holding position to a releasing position for a hand insertion door. Accordingly, a hand insertion window can be opened by only pressing and moving the releasing member in the latch mechanism along the side of the newborn chamber.

{0008} Additionally, in order to open the hand insertion window, the releasing member in the latch mechanism has to be pressed along the side of the newborn chamber. Accordingly, even if a treating person or others leans on the releasing member or the releasing member comes into contact with a wall during conveyance of the incubator,

the hand insertion window will not be opened. In addition, even if the latch in the latch mechanism rotates between the holding and releasing positions for the hand insertion door, the releasing member does not rotate, and therefore impact due to activation of the latch mechanism is less likely to occur.

{0009} In another incubator according to the present invention, in the course of rotation of the hand insertion door in the direction in which the hand insertion window is closed, an opening mechanism comes into contact with the hand insertion door before the hand insertion window is closed. Thereby, the opening mechanism urges the hand insertion door so as to rotate in the direction in which the hand insertion window is opened. Therefore, if the hand insertion window is not completely closed, the hand insertion window is opened, and it is easily aware that the hand insertion window is not closed. Accordingly, the hand insertion window is more likely to be again closed.

{0010} In another incubator according to the present invention, a pressed portion, which is pressed by rotation of the hand insertion door, of the latch in the latch mechanism is made of impact-absorbent material. Accordingly, even if the hand insertion door bumps against the latch when the hand insertion door is rotated to close the hand insertion window, impact is less likely to occur.

{0011} In another incubator according to the present invention, from some point in the course of rotation of

the hand insertion door in the direction in which the hand insertion window is opened, a braking mechanism brakes the rotation of the hand insertion door. Accordingly, the hand insertion door does not stop suddenly when the hand insertion window has completely been opened, and impact is less likely to occur when the hand insertion window has completely been opened.

{0012} In another incubator according to the present invention, an urging member in the latch mechanism urges the latch so as to rotate the latch from the releasing position to the holding position. Accordingly, if the latch is only rotated to the releasing position, the latch rotates automatically from the releasing position to the holding position without being manually rotated from the releasing position to the holding position and holds the hand insertion door. Nevertheless, a braking member in the latch mechanism brakes rotation of the latch. Accordingly, even if the latch rotates automatically from the releasing position to the holding position, impact is less likely to occur at the holding position.

{Advantageous Effects of Invention}

{0013} In the incubator according to the present invention, the hand insertion window can be opened by only pressing and moving the releasing member in the latch mechanism along the side of the newborn chamber. Accordingly, the hand insertion window can easily be opened by operation with, for example, an elbow instead of a hand.

Additionally, even if a treating person or others leans on the releasing member or the releasing member comes into contact with a wall during conveyance of the incubator, the hand insertion window will not be opened. Therefore, the inside of the newborn chamber is less likely to deviate from appropriate physiological environment for a newborn. Furthermore, impact due to the activation of the latch mechanism is less likely to occur. Therefore, less stress is put on a newborn in the newborn chamber when the latch mechanism is activated. Accordingly, the physical condition of the newborn is less likely to get out of order.

{0014} In the other incubator according to the present invention, if the hand insertion window is not completely closed, the hand insertion window is opened, and it is easily aware that the hand insertion window is not closed. Therefore, the hand insertion window is more likely to be again closed. Accordingly, the inside of the newborn chamber is less likely to deviate from appropriate physiological environment for a newborn, and physical condition of the newborn is less likely to get out of order.

{0015} In the other incubator according to the present invention, even if the hand insertion door bumps against the latch when the hand insertion door is rotated to close the hand insertion window, impact is less likely to occur. Accordingly, less stress is put on the newborn in the

newborn chamber when the hand insertion window is close, and physical condition of the newborn is less likely to get out of order.

{0016} In the other incubator according to the present invention, the hand insertion door does not stop suddenly when the hand insertion window has completely been opened, and impact is less likely to occur when the hand insertion window has completely been opened. Accordingly, less stress is put on the newborn in the newborn chamber when the hand insertion window is opened, and physical condition of the newborn is less likely to get out of order.

{0017} In the other incubator according to the present invention, if the latch in the latch mechanism is only rotated to the releasing position, the latch rotates automatically from the releasing position to the holding position without being manually rotated from the releasing position to the holding position and holds the hand insertion door. Accordingly, it is easy to close the hand insertion window with the hand insertion door. Nevertheless, even if the latch rotates automatically from the releasing position to the holding position, impact is less likely to occur at the holding position. Accordingly, less stress is put on the newborn in the newborn chamber when the hand insertion window is opened, and physical condition of the newborn is less likely to get out of order.

{Brief Description of Drawings}

{0018} {Fig. 1} Sectional view of a latch mechanism of an incubator according to one embodiment of the present invention.

{Fig. 2} Perspective view of a latch in the latch mechanism of the incubator according to the embodiment of the present invention.

{Fig. 3} Partial perspective view of a packing provided for a hand insertion window of the incubator according to the embodiment of the present invention.

{Fig. 4} Partial perspective view of a hand insertion door of the incubator according to the embodiment of the present invention.

{Fig. 5} Partial sectional view of the hand insertion window of the incubator according to the embodiment of the present invention, in which the hand insertion door is in an opening position.

{Fig. 6} Perspective view of a braking mechanism of the incubator according to the embodiment of the present invention.

{Fig. 7} Sectional view of a latch mechanism of the incubator according to the embodiment of the present invention, in which the hand insertion door is in contact with the latch.

{Fig. 8} Sectional view of the latch mechanism of the incubator according to the embodiment of the present invention, in which the latch has rotated to its

releasing position.

{Fig. 9} Sectional view of the latch mechanism of the incubator according to the embodiment of the present invention, in which the hand insertion door has been held by the latch.

{Fig. 10} One of a pair of left and right hand insertion doors and one of a pair of left and right latch mechanisms of the incubator according to the embodiment of the present invention, in which (a) is a front view and (b) is a sectional view taken along a line B-B in (a).

{Fig. 11} Side view of an incubator according to the embodiment of the present invention where the incubator is in a closed type.

{Description of Embodiments}

{0019} Hereinafter, referring to Figs. 1 to 11, there will be described one embodiment of the present invention applied to a switching type incubator capable of switching between a closed type and open type as required by lowering or raising a canopy of a newborn chamber. Hereinafter, the present embodiment will be described according to the following list.

(1) An Outline of the Overall Incubator

(2) Opening and Closing of the Hand Insertion Window

(3) Awareness of any Unclosed State of the Hand Insertion Window

(4) Making Operation of Opening and Closing the Hand

Insertion Window Quiet

{0020} (1) An Outline of the Overall Incubator

Fig. 11 shows an incubator of the present embodiment in a closed type. In the incubator 11, wheels 13 and a support 14 are attached to a frame 12. A base 15 is supported on the support 14. Within the base 15 is a control mechanism (not shown) for temperature, humidity and others. Disposed on the base 15 is a newborn chamber 16. A drawer 17 for use as storage is attached to the underside of the base 15. Pedals 18 are also attached to the frame 12 in order to adjust the height of the base 15 or others along the support 14.

{0021} A bed (not shown) is disposed in the newborn chamber 16. Formed in the sides of the newborn chamber 16 are: a pair of left and right treatment doors 21 which is located on the left and right sides of a newborn (not shown) lying on the bed; a foot end treatment door 22 which is located at the foot end; and a head end treatment wall 23 which is located at the head end. A pair of left and right posts 24 is also attached to the frame 12. Another post (not shown) is nested in the post 24. The other post is slidable within the post 24.

{0022} A canopy 25 of the newborn chamber 16 and an infrared heater 26 are supported respectively by one and the other of the other left and right posts nested in posts 24. By sliding these other posts within the corresponding posts 24, the canopy 25 and infrared heater 26 can be raised or

lowered independently. The canopy 25 is also made of transparent material. Attached also to the posts 24 is a protector 27 that prevents the infrared heater 26 from bumping against the wall (not shown) of a room.

{0023} (2) Opening and Closing of the Hand Insertion Window

The left and right treatment doors 21 each have an outer wall 31 and an inner wall 32 (see Fig. 9) that are transparent and form a double-wall structure. Each outer wall 31 and the corresponding inner wall 32 have: a pair of left and right hand insertion windows 33 (see Fig. 9); a pair of left and right hand insertion doors 34 for closing and opening the corresponding hand insertion windows 33; and latch mechanisms 35 for holding the corresponding hand insertion doors 34 in their closing positions for closing the corresponding hand insertion windows 33. Fig. 10 shows one of the pair of hand insertion doors 34 and the corresponding latch mechanism 35.

{0024} A hand-insertion-door base plate 36 of annular shape and made of transparent rigid synthetic resin is fitted and screwed to the internal edge of the outer wall 31 of the hand insertion window 33 of the newborn chamber 16. The hand insertion door 34 is also made of a transparent rigid synthetic resin and has a dish-like shape. The hand insertion door 34 is supported diametrically opposite the latch mechanism 35 on the edge of the hand-insertion-door base plate 36. The hand insertion door 34 is rotatable

about a rotation shaft 37 between a closing position in which the hand insertion door 34 closes the hand insertion window 33 as shown in Figs. 9 and 10 and an opening position in which it opens the hand insertion window 33 as shown in Fig. 5. The hand insertion door 34 is urged from the above-mentioned closing position toward the above-mentioned opening position by a helical coil spring 38 in which the rotation shaft 37 is inserted.

{0025} Fig. 1 shows the latch mechanism 35 in Figs. 10 and 11. The latch mechanism 35 includes a latch 41, a latch base plate 42, and a releasing member 43. The latch base plate 42 is fixed to the hand-insertion-door base plate 36. The latch 41 and the releasing member 43 are supported by the latch base plate 42. The latch 41 is rotatable about a rotation shaft 44 between a holding position in which the latch 41 holds the hand insertion door 34 in the closing position as shown in Figs. 9 and 10 and a releasing position in which it releases the holding as shown in Fig. 8.

{0026} A helical coil spring 45, in which the rotation shaft 44 is inserted, is interposed between the latch 41 and the latch base plate 42. The latch 41 is urged by the helical coil spring 45 from the releasing position to the holding position. As shown in Fig. 2, the latch 41 has a spiral face 46 that extends to part of the periphery of the rotation shaft 44.

{0027} As shown in Fig. 1, interposed between the releasing

member 43 and the latch base plate 42 are a column 47 and a helical compression spring 51. The releasing member 43 is urged by the helical compression spring 51 in a direction extending from the base 15 toward the canopy 25, that is, upward along the outer wall 31 of the newborn chamber 16. In addition, a projection 52 is formed integrally with the releasing member 43 so as to be parallel with the column 47 and the helical compression spring 51. This projection 52 extends to an area above the spiral face 46 through an opening 53 made in the latch base plate 42.

{0028} In order to shift the hand insertion door 34 from the state in which the hand insertion door 34 opens the hand insertion window 33 as shown in Fig. 5 to the state in which it closes the hand insertion window 33 as shown in Figs. 9 and 10, the hand insertion door 34 is rotated against the urge applied from the helical coil spring 38. Thereby, as shown in Fig. 7, a tongue portion 54, which is the rotating leading-end of the hand insertion door 34, presses a pressed portion 55 of the latch 41 which is in the holding position. With pressing by the tongue portion 54, the latch 41 rotates about the rotation shaft 44 to the releasing position, as shown in Fig. 8, against the urge applied from the helical coil spring 45.

{0029} With further rotation of the hand insertion door 34 from the releasing position shown in Fig. 8, the tongue portion 54 of the hand insertion door 34 moves past the

pressed portion 55 of the latch 41 towards the rotation shaft 44, and the latch 41 is rotated up to the holding position by the urge applied from the helical coil spring 45, as shown in Figs. 9 and 10. As a result, the hand insertion door 34 is held by the latch 41 and the hand insertion door 34 closes the hand insertion window 33.

{0030} On the other hand, in order to shift the hand insertion door 34 from the state in which the hand insertion door 34 closes the hand insertion window 33 as shown in Figs. 9 and 10 to the state in which it opens the hand insertion window 33 as shown in Fig. 5, the releasing member 43 is pressed down in a direction extending from the canopy 25 toward the base 15, that is, downward along the outer wall 31 of the newborn chamber 16, against the urge of the releasing member 43. The urge of the releasing member 43 is applied from the helical compression spring 51 in a direction extending from the base 15 toward the canopy 25, that is, upward along the outer wall 31 of the newborn chamber 16. When the releasing member 43 is pushed down, the projection 52 of the releasing member 43 moves downward through the opening 53 and presses the spiral face 46 of the latch 41.

{0031} As a result of pressing the releasing member 43, the latch 41 rotates about the rotation shaft 44 from the holding position to the releasing position against the urge applied from the helical coil spring 45. Consequently, the tongue portion 54 of the hand insertion

door 34 is released from being held by the latch 41, and the hand insertion door 34 is rotated by the urge applied from the helical coil spring 38. Accordingly, the hand insertion door 34 opens the hand insertion window 33. When the releasing member 43 is released from being pressed down, the projection 52 of the releasing member 43 is moved upward through the opening 53 by the urge applied from the helical compression spring 51, and the projection 52 separates from the spiral face 46 of the latch 41 due to this upward movement. Accordingly, the latch 41 returns from the releasing position to the holding position by the urge applied from the helical coil spring 45.

{0032} (3) Awareness of any Unclosed State of the Hand Insertion Window

As shown in Fig. 10 (b), a packing 56 of annular shape and made of silicone rubber is fitted along the internal edge of the hand-insertion-door base plate 36. As shown in Fig. 3, most of the portion of the packing 56 that is in contact with the hand insertion door 34 closing the hand insertion window 33 is a fin-shaped portion 57 but the portion of the packing 56 near the rotation shaft 37 of the hand insertion door 34 is a thicker portion 61. Disposed on the thicker portion 61 is a projection 62 that prevents the packing 56 from being erroneously attached. As shown in Fig. 4, a recess 63 into which the projection 62 fits is formed in the hand insertion door 34 near the rotation shaft 37.

{0033} When the hand insertion door 34 is rotated from the state in which the hand insertion door 34 opens the hand insertion window 33 to the state in which the hand insertion door 34 closes the hand insertion window 33, the hand insertion door 34 comes into contact with the packing 56 before the hand insertion door 34 closes the hand insertion window 33. When the hand insertion door 34 is further rotated, the hand insertion door 34 presses and elastically deforms the packing 56 before the latch 41 holds the hand insertion door 34. This elastic deformation ensures airtight condition by the packing 56. Additionally, elastic resilience is produced especially in the thicker portion 61 and projection 62 of the packing 56. This elastic resilience urges the hand insertion door 34 in the direction in which the hand insertion window 33 is opened.

{0034} Accordingly, if the hand insertion window 33 is not completely closed by the hand insertion door 34 due to such a situation that a treating person recognizes erroneously that the hand insertion window 33 is closed although the hand insertion window 33 is not actually completely closed, or due to any other reason, the hand insertion door 34 is rotated in the direction in which the hand insertion window 33 is opened. For this reason, it is easily aware that the hand insertion window 33 is not closed, and the hand insertion window 33 is more likely to be again closed. Incidentally, the hand insertion door 34

is urged from the closing position to the opening position by the helical coil spring 38. If, however, this urging force is too strong, the hand insertion door 34 may rotate suddenly. The urging force applied from the helical coil spring 38, therefore, should not be very strong.

{0035} (4) Making Operation of Opening and Closing the Hand Insertion Window Quiet

The pressed portion 55 of the latch 41 is made of silicone rubber. Additionally, as shown in Fig. 1, a spacer 64 is interposed between the latch 41 and the latch base plate 42 and about the rotation shaft 44. Rotation of the latch 41 by the urge applied from the helical coil spring 45 is braked by the spacer 64. On the other hand, as shown in Figs. 5 and 6, a braking mechanism 65 made of synthetic resin is mounted on the hand-insertion-door base plate 36. A lower-side edge 67 of an inclining face 66 is formed integrally with the other portion of the braking mechanism 65 whereas an upper-side edge 68 of the inclining face 66 is a free edge.

{0036} As shown in Fig. 5, a portion near the braking mechanism 65 around the rotation shaft 37 of the hand insertion door 34 is not completely circular in its cross-section but has a cross-section with radius such that when the hand insertion door 34 closes the hand insertion window 33, the portion near the braking mechanism 65 is separated from the inclining face 66 of the braking mechanism 65, and when the hand insertion door 34 opens

the hand insertion window 33, the portion approaches the inclining face 66, comes into contact with the inclining face 66 in the course of the opening of the hand insertion window 33, and consequently presses the inclining face 66. When the inclining face 66 is thus pressed, the braking mechanism 65 is elastically deformed so that the upper-side edge 68 is moved farther from the lower-side edge 67 and that the height of the inclining face 66 is decreased, and the pressing force is absorbed.

{0037} When the hand insertion door 34 is rotated from the state in which the hand insertion window 33 is opened as shown in Fig. 5 to the state in which the opening 33 is closed, the tongue portion 54 of the hand insertion door 34 first comes into contact with the pressed portion 55 of the latch 41 as shown in Fig. 7. However, since the pressed portion 55 is made of silicone rubber, impact is less likely to occur even if the tongue portion 54 comes into contact with the pressed portion 55 with great force. When the hand insertion door 34 is further rotated from the state shown in Fig. 7, the pressed portion 55 is pressed and thereby the latch 41 rotates up to the releasing position as shown in Fig. 8. When the hand insertion door 34 is further rotated, the tongue portion 54 enters the latch 41 as shown in Fig. 9.

{0038} When the tongue portion 54 enters the latch 41 and thereby the pressed portion 55 gets not to be pressed by the tongue portion 54, the latch 41 rotates from the

releasing position to the holding position by the urge applied from the helical coil spring 45 and holds the tongue portion 54. However, since rotation of the latch 41 due to the urge applied from the helical coil spring 45 is braked by the spacer 64, the latch 41 is prevented from rotating with great force and, hence, impact is less likely to occur when the rotation comes to an end.

{0039} On the other hand, when the releasing member 43 is operated and thereby the tongue portion 54 of the hand insertion door 34 is released from being held by the latch 41, the urging force due to elastic resilience of the packing 56, especially of its thicker portion 61 and projection 62, and the urging force applied from the helical coil spring 38 act in the following manner: the hand insertion door 34 rotates from the state in which the hand insertion window 33 is closed as shown in Figs. 9 and 10, through the state as shown in Fig. 8, to the state in which the hand insertion window 33 is opened as shown in Fig. 5. However, the braking mechanism 65 brakes the rotation of the hand insertion door 34 in the course of opening the hand insertion window 33, and impact is less likely to occur when the rotation comes to an end.

{0040} In the foregoing embodiment, the pressed portion 55 of the latch 41 is made of silicone rubber. However, the pressed portion 55 may be made of any impact-absorbent material in lieu of silicone rubber. Likewise, the packing 56 is also made of silicone rubber. However, the packing

56 may be made of any elastically resilient material in lieu of silicone rubber. Additionally, the foregoing embodiment is applied to a switching type incubator but it may also be applied to a closed type incubator.

{Industrial Applicability}

{0041} The present invention can be utilized for, for example, manufacturing an incubator that includes: a hand insertion window in a side of a newborn chamber, a hand insertion door that opens and closes the hand insertion window, and a latch mechanism that holds the hand insertion door in a closing position.

{Reference Signs List}

{0042} 11 Incubator

16 Newborn chamber

33 Hand insertion window

34 Hand insertion door

35 Latch mechanism

37 Rotation shaft

38 Helical coil spring

41 Latch

42 Latch base plate

43 Releasing member

44 Rotation shaft

45 Helical coil spring (urging member)

46 Spiral face

51 Helical compression spring

55 Pressed portion

56 Packing

61 Thicker portion (opening mechanism)

62 Projection

64 Spacer (braking member)

65 Braking mechanism

PTO/SB/81 (01-09)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	TBA
Filing Date	September 28, 2009
First Named Inventor	Terumi Matsubara
Title	Incubator
Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	75575.000006

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☑ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: **21967**

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☑ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

☐	Firm or Individual Name				
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☒ Applicant/Inventor.

OR

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Assignee of Record

Signature	Terumi Matsubara	Date	May 22, 2009
Name	Terumi Matsubara	Telephone	
Title and Company	Engineer of Atom Medical Corporation		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/81 (01-09)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	TBA
Filing Date	September 28, 2009
First Named Inventor	Terumi Matsubara
Title	Incubator
Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	75575.000006

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☑ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: 21967

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☑ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☒ Applicant/Inventor.

OR

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Assignee of Record

Signature	Eiji Koike	Date	May 22, 2009
Name	Eiji Koike	Telephone	
Title and Company	Engineer of Atom Medical Corporation		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

PTO/SB/81 (01-09)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	TBA
Filing Date	September 28, 2009
First Named Inventor	Terumi Matsubara
Title	Incubator
Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	75575.000006

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☑ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

21967

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☑ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☒ Applicant/Inventor.

OR

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Assignee of Record

Signature	Naoki Honma	Date	May 22, 2009
Name	Naoki Honma	Telephone	
Title and Company	Engineer of Atom Medical Corporation		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/81 (01-09)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	TBA
Filing Date	September 28, 2009
First Named Inventor	Terumi Matsubara
Title	Incubator
Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	75575.000006

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☑ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: 21967

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☑ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☒ Applicant/Inventor.

OR

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Assignee of Record

Signature	Yoko Nagai	Date	May 22, 2009
Name	Yoko Nagai	Telephone	
Title and Company	Engineer of Atom Medical Corporation		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. 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 1.11 and 1.14. This collection is estimated to take 3 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

PTO/SB/81 (01-09)
Approved for use through 11/30/2011. OMB 0651-0035
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

POWER OF ATTORNEY OR REVOCATION OF POWER OF ATTORNEY WITH A NEW POWER OF ATTORNEY AND CHANGE OF CORRESPONDENCE ADDRESS

Application Number	TBD
Filing Date	September 28 2009
First Named Inventor	Terumi Matsubara
Title	Incubator
Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	75575.000006

I hereby revoke all previous powers of attorney given in the above-identified application.

☐ A Power of Attorney is submitted herewith.

OR

☑ I hereby appoint Practitioner(s) associated with the following Customer Number as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith: **21967**

OR

☐ I hereby appoint Practitioner(s) named below as my/our attorney(s) or agent(s) to prosecute the application identified above, and to transact all business in the United States Patent and Trademark Office connected therewith:

Practitioner(s) Name	Registration Number

Please recognize or change the correspondence address for the above-identified application to:

☑ The address associated with the above-mentioned Customer Number.

OR

☐ The address associated with Customer Number:

OR

☐ Firm or Individual Name					
Address					
City		State		Zip	
Country					
Telephone		Email			

I am the:

☒ Applicant/Inventor.

OR

☐ Assignee of record of the entire interest. See 37 CFR 3.71.
Statement under 37 CFR 3.73(b) (Form PTO/SB/96) submitted herewith or filed on _____.

SIGNATURE of Applicant or Assignee of Record

Signature		Date	May 22, 2009
Name	Kazuo Matsubara	Telephone	
Title and Company	Engineer of Atom Medical Corporation		

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

PTO/SB/06 (12-04)

Filing Date: 09/28/09

Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/568,335

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	330
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	540
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	220
TOTAL CLAIMS (37 CFR 1.16(i))	15 minus 20 =		x$26		OR	x$52	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	1	2 *	x$110			x$220	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $270 ($135 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			195			390	
			TOTAL			TOTAL	1090

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

AMENDMENT A		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

AMENDMENT B		(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
	Application Size Fee (37 CFR 1.16(s))									
	FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
						TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. 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, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.