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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056	3782

22428 7590 09/30/2008
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	PAPER NUMBER
3618	

MAIL DATE	DELIVERY MODE
09/30/2008	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.

Notice of Abandonment	Application No.	Applicant(s)	
	10/783,030	ARCETA ET AL.	
	Examiner	Art Unit	
	Frank B. Vanaman	3618	

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

This application is abandoned in view of:

1. ☒ Applicant's failure to timely file a proper reply to the Office letter mailed on *19 February 2008*.
   (a) ☐ A reply was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply (including a total extension of time of _____ month(s)) which expired on _____.
   (b) ☐ A proposed reply was received on _____, but it does not constitute a proper reply under 37 CFR 1.113 (a) to the final rejection.
   (A proper reply under 37 CFR 1.113 to a final rejection consists only of: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114).
   (c) ☐ A reply was received on _____ but it does not constitute a proper reply, or a bona fide attempt at a proper reply, to the non-final rejection. See 37 CFR 1.85(a) and 1.111. (See explanation in box 7 below).
   (d) ☒ No reply has been received.

2. ☐ Applicant's failure to timely pay the required issue fee and publication fee, if applicable, within the statutory period of three months from the mailing date of the Notice of Allowance (PTOL-85).
   (a) ☐ The issue fee and publication fee, if applicable, was received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the statutory period for payment of the issue fee (and publication fee) set in the Notice of Allowance (PTOL-85).
   (b) ☐ The submitted fee of $_____ is insufficient. A balance of $_____ is due.
   The issue fee required by 37 CFR 1.18 is $_____. The publication fee, if required by 37 CFR 1.18(d), is $_____.
   (c) ☐ The issue fee and publication fee, if applicable, has not been received.

3. ☐ Applicant's failure to timely file corrected drawings as required by, and within the three-month period set in, the Notice of Allowability (PTO-37).
   (a) ☐ Proposed corrected drawings were received on _____ (with a Certificate of Mailing or Transmission dated _____), which is after the expiration of the period for reply.
   (b) ☐ No corrected drawings have been received.

4. ☐ The letter of express abandonment which is signed by the attorney or agent of record, the assignee of the entire interest, or all of the applicants.

5. ☐ The letter of express abandonment which is signed by an attorney or agent (acting in a representative capacity under 37 CFR 1.34(a)) upon the filing of a continuing application.

6. ☐ The decision by the Board of Patent Appeals and Interference rendered on _____ and because the period for seeking court review of the decision has expired and there are no allowed claims.

7. ☐ The reason(s) below:

/Frank B Vanaman/
Primary Examiner, Art Unit 3618

Petitions to revive under 37 CFR 1.137(a) or (b), or requests to withdraw the holding of abandonment under 37 CFR 1.181, should be promptly filed to minimize any negative effects on patent term.

Atty. Dkt. No 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Radmond ARCETA et al.
Title:	MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT
Appl. No.:	10/783,030
Filing Date:	2/23/2004
Examiner:	Frank Bennett Vanaman
Art Unit:	3618
Confirmation Number:	3782

PETITION FOR EXTENSION OF TIME

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

Sir:

Applicant hereby petitions the Commissioner under 37 C.F.R. §1.136(a) for a three-month extension of time for response in the above-identified application for the period required to make the attached response timely.

The extension fee for response within the third month is $1,050.00.

The above-identified fees of $1,050.00 are being paid by credit card via EFS-Web.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of

papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date August 18, 2008

By

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

Electronic Patent Application Fee Transmittal

Application Number:	10783030
Filing Date:	23-Feb-2004
Title of Invention:	Medical cart, medication module, height adjustment mechanism, and method of medication transport
First Named Inventor/Applicant Name:	Radmond Vincent Arceta
Filer:	Andrew E. Rawlins./rachel caputo
Attorney Docket Number:	086554-1056

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 - 3 months with $0 paid	1253	1	1050	1050

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
		Total in USD ($)		**1050**

Electronic Acknowledgement Receipt	
EFS ID:	3796316
Application Number:	10783030
International Application Number:	
Confirmation Number:	3782
Title of Invention:	Medical cart, medication module, height adjustment mechanism, and method of medication transport
First Named Inventor/Applicant Name:	Radmond Vincent Arceta
Customer Number:	22428
Filer:	Andrew E. Rawlins./Rachel Caputo
Filer Authorized By:	Andrew E. Rawlins.
Attorney Docket Number:	086554-1056
Receipt Date:	18-AUG-2008
Filing Date:	23-FEB-2004
Time Stamp:	15:48:57
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Credit Card
Payment was successfully received in RAM	$1050
RAM confirmation Number	1008
Deposit Account	
Authorized User	

File Listing:

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

1	Extension of Time	ExtensionofTime.pdf	52697 f78f952c68459c129474fb91849be6796ae60acb	no	2
Warnings:					
Information:					
2	Fee Worksheet (PTO-06)	fee-info.pdf	29862 aa59b2cf5effc5781db8c72381afd27780b25137	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	82559		

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.

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Office Action Summary	Application No.	Applicant(s)	
	10/783,030	ARCETA ET AL.	
	Examiner	Art Unit	
	Frank B. Vanaman	3618	

-- 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 *13 December 2007*.

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

3)☐ 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

4)☒ Claim(s) *10,23,24,35,36 and 40-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10,23,24,35,36,40 and 41* is/are allowed.

6)☒ Claim(s) *42, 43* is/are rejected.

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

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

Application Papers

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

10)☐ 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).

11)☐ 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

12)☐ 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: _____.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 13, 2007 has been entered.

Status of Claims

2. Claims 10, 23, 24, 35, 36 and 40-43 are pending. Claims 1-9, 11-22, 25-34, and 37-39 have been canceled.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US 6,721,178, cited previously) in view of Manalang et al. (US PGPub. 2002/0165641). Clark et al. teach a cart (10 in general) for use in a medical care environment (col. 1, lines 18-27), having a work platform (86) and at least one compartment (below 86, above 70), for containing an item (e.g., on 70), a base (78a, 89b) configured to be movable in forward and rearward directions, a height adjustment mechanism (22 in general) configured to position the work surface at one of a plurality of heights, the work platform and base both including portions projecting forwardly and rearwardly form the height adjustment portions, the compartment being accessible on a front face to a user facing the rear (e.g., away from the viewer, figures 4a, 4b). The reference to Clark et al. fails to explicitly teach plural compartments. It is old and well known to provide plural storage compartments on movable carts for accommodating additional items, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide at least one further compartment on the cart of Clark et al. for the purpose of accommodating or storing additional items. The reference to Clark et al. fails to teach the provision of a keyless entry system for locking and unlocking the compartments. Manalang et al. teach that it is well known to both provide (1) a plurality

of compartments (e.g., 32a, 40a, etc.) on cart for accommodating items, and further (2) an electronic keyless entry system (20, 22, 24, 70) on a cart used in a medical care environment or allowing selective access to certain compartments. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cart taught by Clark et al. with at least one further compartment for the purpose of accommodating further items, and additionally, to provide at least one further compartment which may be locked by a keyless entry/locking system as taught by Manalang et al. for the purpose of limiting access to the selectively lockable compartment to only authorized personnel.

5. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US 6,721,178, cited previously) in view of George et al. (WO 03/013307 A1, cited previously). Clark et al. teach a cart (10 in general) having a work platform (86) and at least one compartment (below 86, above 70), for containing an item (e.g., on 70), a base (78a, 89b) configured to be movable in forward and rearward directions, a height adjustment mechanism (22 in general) configured to position the work surface at one of a plurality of heights, including a stationary casing (74) connected to the base, a telescoping casing (72) connected to the platform and movable with respect to casing 74, a driver (stop element referred to at col. 9, line 57) which is operated by an actuator (42) located on the work platform, and disposed above a bottom of the compartment, the work platform and base both including portions projecting forwardly and rearwardly form the height adjustment portions, the compartment being accessible on a front face to a user facing the rear (e.g., away from the viewer, figures 4a, 4b). The reference to Clark et al. fails to explicitly teach the actuator as being positioned above the compartment. George et al. teach that it is quite well known to provide a storage or accommodation space, such as a compartment (414), for elements wherein mechanical portions not intended for storage in the space are not positioned in that space, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the compartment taught by Clark et al. to be free of a mechanical actuator, as suggested by George et al., for example locating the actuator at a location above the compartment of Clark et al. for the purpose of preventing interference

between the items located in the compartment and the actuator, thus beneficially allowing complete use of the compartment.

6. Alternatively to the above, claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US 6,721,178, cited previously) in view of Rice et al. (US 4,440,096). Clark et al. teach a cart (10 in general) having a work platform (86) and at least one compartment (below 86, above 70), for containing an item (e.g., on 70), a base (78a, 89b) configured to be movable in forward and rearward directions, a height adjustment mechanism (22 in general) configured to position the work surface at one of a plurality of heights, including a stationary casing (74) connected to the base, a telescoping casing (72) connected to the platform and movable with respect to casing 74, a driver (stop element referred to at col. 9, line 57) which is operated by an actuator (42) located on the work platform, and disposed above a bottom of the compartment, the work platform and base both including portions projecting forwardly and rearwardly from the height adjustment portions, the compartment being accessible on a front face to a user facing the rear (e.g., away from the viewer, figures 4a, 4b). The reference to Clark et al. fails to explicitly teach the actuator as being positioned above the compartment and on the work platform. Rice et al. teach that it is very old and well known to provide a work platform (18) which is vertically adjustable (see figures 2, 6, 10, etc.) with an actuator control (30) which is located on the platform (18). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the actuator taught by Clark et al. to be located on the work platform as suggested by Rice et al. for the purpose of locating the actuation control in a conveniently accessible position, rather than recessed within a compartment, the benefit resulting in a greater ease with which a user may change the platform height.

Allowable Subject Matter

7. Claims 10, 23, 24, 35, 36, 40 and 41 are allowed.

Response to Comments

8. Applicant's comments, filed with the request for continued examination and amendment have been carefully considered. Applicant has asserted that the combination of art employed to reject claim 42 is not proper because there is no

teaching to provide a plurality of compartments. The examiner expresses some substantial surprise that applicant would make such an argument. Initially the examiner notes that it is well known to provide duplicates of taught elements, and as such, the knowledge to duplicate a storage element (such as taught by Clark et al.) for the purpose of providing additional storage would be well within the skill set of the ordinary practitioner. Applicant's implication that somehow the additional compartment must also be used as a keyboard tray is noted, but is understood to be an unreasonably narrow assessment of the skill level of the ordinary practitioner, inasmuch as (1) there is no evidence that the cart taught by Clark et al. must be provided with only keyboards in the taught compartment and further (2) that it is deemed to be quite well known that identical storage devices or supports need not be limited by solely storing a single type of item (as evidenced, for example, by the exceptionally well known practices of providing a tool- or parts-carrier with plural compartments for storing disparate items, providing different books and decorative items on different shelves in a book case, or locating different articles to be stored in separate storage containers based on intended use or compatibility). Further, applicant is reminded that the modifying reference to Manalang et al. teach that it is well known to provide a cart with a plurality of compartments for storing separate and distinct items, as is clear from their presentation of numerous compartments (32a, 40a, etc.). Additionally applicant is reminded that the duplication of existing taught elements does not constitute a patentable distinction unless such a duplication brings forth a new and unexpected result. *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). In this case, the provision of plural compartments results in at least the predictable benefits of: providing additional storage space and/or allowing disparate items to be kept separate for organizational reasons. Note that Manalang et al. additionally teach different levels of access to different storage locations. As regards the changing of the function of the cart taught by Clark et al, the examiner notes that Manalang et al. teach a beneficial modification (allowing the provision of multiple storage locations and further allowing lockable access to certain of the locations) the application of which to other carts would constitute an improvement having a predictable result, which is more particularly notable in view of both the carts to

Clark et al. and Manalang et al. being explicitly taught for use in a medical/clinical environment. In this case, applicant is reminded that the proposed modification is directed to the addition of a compartment which is lockable. Applicant's comments directed to claim 43 are noted, and the examiner notes that the previous rejection based on Clark et al. alone has been withdrawn in view of these comments. The examiner additionally notes, that as regards the location of the actuator, Clark et al. place it essentially in the interior of the compartment, which limits convenient access to the actuator. George et al. (cited previously) teach that it is quite well known to provide a compartment (such as 414) which does not have an actuator in it, and it is deemed obvious to provide Clark et al.'s compartment with the actuator not positioned therein so as to allow the compartment to be fully utilized. Alternatively, Rice teaches that it is quite old and well known to locate an actuator on a work surface, and as such, it would be obvious to locate the actuator taught by Clark et al. on the surface as suggested by Rice so as to promote improved access to it. In this case, as regards Clark et al.'s actuator location, it can be deemed to be an aspect of the invention which is ready for improvement, in that access to the actuator of Clark et al. would be compromised yet further still if an article were to be located in the compartment. Rice teaches that it is quite well known to locate an actuator in a more accessible location. Applicant's comments concerning the alleged inoperability of the reference to Clark et al. as based on the previous office action is not supported by a showing of any evidence. There is no statement in the office action asserting the location of the actuator renders the cart inoperable. The actuator location may be deemed inconvenient, and/or as allowing only limited access, and/or interfering with elements placed in the compartment, however inoperability has not been asserted, and applicant is cautioned that care should be taken to avoid forming conclusions that do not represent what is actually set forth, as such conclusions are not at all helpful to meaningful prosecution. If applicant believes that the reference to Clark et al. is inoperative, then applicant should clearly and unequivocally state such a belief, and support such a statement with a showing of facts. The arguments of counsel cannot take the place of evidence in the record. In re Schulze, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kearney (US 4,894,600) and Nagy (US 5,174,223) teach that it is quite well known to provide controls for actuation of the height of a work surface on or about the work surface itself.

10. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through 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).

A response to this action should be mailed to:
Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,
Or faxed to:
PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

/Frank B Vanaman/
Primary Examiner, Art Unit 3618

Notice of References Cited	Application/Control No. 10/783,030	Applicant(s)/Patent Under Reexamination ARCETA ET AL.	
	Examiner Frank B. Vanaman	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,440,096	04-1984	Rice et al.	108/3
*	B	US-4,894,600	01-1990	Kearney, Deborah A.	318/649
*	C	US-5,174,223	12-1992	Nagy et al.	108/50.01
	D	US-			
	E	US-			
	F	US-			
	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.

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10783030	ARCETA ET AL.
	Examiner	Art Unit
	Frank B Vanaman	3618

✓	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	02/13/2008								
	1	-								
	2	-								
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	4	-								
	5	-								
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	34	-								
	35	=								
	36	=								

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CLAIM		DATE								
Final	Original	02/13/2008								
	37	-								
	38	-								
	39	-								
	40	=								
	41	=								
	42	✓								
	43	✓								

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	10783030	ARCETA ET AL.
	Examiner	Art Unit
	Frank B Vanaman	3618

SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Previous Classification Search Updated	2/13/08	FBV

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner

OIPE IAP97 DEC 13 2007 PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

RCE

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Radmond ARCETA et al.
Title:	MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT
Appl. No.:	10/783,030
Appl. Filing Date:	2/23/2004
Examiner:	Frank Bennett Vanaman
Art Unit:	3618
Confirmation No.:	3782

REQUEST FOR CONTINUED EXAMINATION (RCE) TRANSMITTAL

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

Sir:

This is a Request for Continued Examination (RCE) under 37 C.F.R. § 1.114 of the above-identified application. This RCE and the enclosed items listed below are being filed prior to the earliest of: (1) payment of the issue fee (unless a petition under 37 C.F.R. § 1.313 is granted); (2) abandonment of the application; or (3) the filing of a notice of appeal to the U.S. Court of Appeals for the Federal Circuit under 35 U.S.C. §141, or the commencement of a civil action under 35 U.S.C. §145 or §146 (unless the appeal or civil action is terminated).

1. Submission **required** under 37 C.F.R. §1.114: (check items that apply)

a. Previously submitted:

[ ] Please enter and consider the amendment and/or reply previously filed on __.

[ ] Please consider the Affidavit(s)/Declaration(s) previously filed on __ but not considered.

[ ] Please consider the arguments in the Appeal Brief or Reply previously filed on __.

b. Enclosed are:

[X] Credit Card Payment Form.

[X] Amendment Accompanying RCE.

[ ] Affidavit(s)/Declaration(s).

[ ] Information Disclosure Statement.

[ ] Form PTO/SB/08 with copies of ___ listed reference(s).

12/14/2007 JADD01 00000042 10783030
01 FC:1801 810.00 OP
02 FC:1253 1050.00 OP

Miscellaneous:

[ ] Suspension of action of the above-identified application is requested under 37 C.F.R. § 1.103(c) for a period of __ months.

The filing fee is calculated below:

	Claims as Amended		Previously Paid For		Extra Claims Present		Rate		Fee Totals
RCE Fee 1.17(e):							$810.00	=	$810.00
Total Claims:	9	-	38	=	0	x	$50.00	=	$0.00
Independents	7	-	8	=	0	x	$210.00	=	$0.00
			First presentation of any Multiple Dependent Claims:			+	$370.00	=	$0.00
							CLAIMS FEE TOTAL:	=	$810.00

[X] Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

[ ]	Extension for response filed within the first month:	$120.00	0	$0.00
[ ]	Extension for response filed within the second month:	$460.00		$0.00
[X]	Extension for response filed within the third month:	$1,050.00		$1,050.00
[ ]	Extension for response filed within the fourth month:	$1,640.00		$0.00
[ ]	Extension for response filed within the fifth month:	$2,230.00		$0.00
		EXTENSION FEE SUBTOTAL:		$1,050.00
		EXTENSION FEE ALREADY PAID:	-	$0.00
		EXTENSION FEE TOTAL		$1,050.00
		CLAIMS AND EXTENSION FEE TOTAL:		$1,860.00
[ ]		Small Entity Fees Apply (subtract ½ of above):		$0.00
[ ]		Suspension of action requested under 37 C.F.R. § 1.103(c)		$0.00
		TOTAL FEE:		$1,860.00

A credit card payment form in the amount of $1,860.00 to cover the filing fee is enclosed.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date December 12, 2007

By _____

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Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Examiner:	Frank Bennett Vanaman
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AMENDMENT ACCOMPANYING RCE

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

Sir:

This communication is responsive to the Final Office Action dated June 13, 2007, concerning the above-referenced patent application.

Applicant has enclosed with this amendment a Petition for Extension of Time to make this response timely.

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

Remarks/Arguments begin on page 8 of this document.

Amendments to the Claims:

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

Listing of Claims:

1. - 9. (Canceled)

10. (Currently Amended) A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction,

wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights,

~~The cart of claim 9,~~ wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

11. – 22. (Canceled)

23. (Previously Presented) The cart of claim 10, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

24. (Previously Presented) A cart comprising:

a work platform including a work surface and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights,

wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver, and

wherein the actuator is disposed above the compartments and on the portion of the work platform that projects in the forward direction.

25. - 34. (Canceled)

35. (Previously Presented) A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the portion of the work platform that projects in the forward direction.

36. (Previously Presented) The cart of claim 35, further comprising a handle disposed on the work platform, wherein the actuator is disposed on the handle.

37. – 39. (Canceled)

40. (Currently Amended) A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction,

~~The cart of claim 1,~~ wherein the work surface is configured to move in the leftward or rightward direction through a slot in a side of the work platform.

41. (Currently Amended) A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction,

~~The cart of claim 1,~~ wherein the work platform includes a secondary work surface that is exposed when the laptop platform moves in the forward or rearward direction.

42. (Currently Amended) A cart comprising:

a work platform including a work surface and compartments for containing items;

an electronic [[a]] keyless entry system for unlocking the compartments of the work platform;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

43. (Previously Presented) A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the work platform.

REMARKS

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. After amending the claims as set forth above, claims 10, 23-24, 35-36, and 40-43 remain pending in this application, and are submitted for reconsideration.

Claims 1-4, 7-9, 18-22, 32-34, and 37-39 are canceled.

Applicant wishes to thank the Examiner for indicating that claims 10, 40, and 41 would be allowable if rewritten into independent form including all the features of the base claim and any intervening claim. Claims 10, 40, and 41 have been so rewritten. Claims 23 depends from claim 10.

Rejection of claims 37-38 under 35 U.S.C. 112

Claims 37-38 are rejected under 35 U.S.C. 112, second paragraph. These claims have been canceled, which renders the rejection of these claims moot. For at least this reason, favorable reconsideration is respectfully requested.

Prior art rejections of claims 1-4, 7-9, 18-22, 32-34, and 37-39

Claims 1-4, 7-9, 18-22, 32-34, and 37-39 are rejected over the prior art. These claims have been canceled, which renders the rejections of these claims moot. For at least this reasons, favorable reconsideration of the rejections is respectfully requested.

Rejection of claim 42 based on Clark and Manalang

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,721,178 ("Clark") in view of U.S. Patent Application Publication 2002/0165641 ("Manalang"). This rejection is traversed because Clark, Manalang, or any reasonable combination thereof fails to teach or suggest the claimed invention.

For example, claim 42 recites a cart comprising a work platform including a work surface and compartments for containing items, an electronic keyless entry system for unlocking the compartments of the work platform, a base, and a height adjustment mechanism. Clark does not teach or suggest these features. For example, Clark does not teach a plurality of compartments but merely discloses a single pull-out keyboard tray 70. (Figs. 4A-4B and column 11, lines 40-50 of Clark.) The PTO asserts that "[i]t is old and well

known to provide plural storage compartments on movable carts for accommodating additional items, and it would have been obvious...to provide at least one further compartment on the cart of Clark...for the purpose of accommodating or storing additional items." (Paragraph 14 of the Office Action.) This rejection is improper because no prior art has been set forth to provide a teaching of a plurality of compartments used in the mobile clinical workstation of Clark.

The Supreme Court in *KSR Int'l Co. v. Teleflex, Inc.*, 127 S.Ct. 1727 (2007) has not removed the requirement that the prior art reference (or references when combined) must teach or suggest all the claim limitations. Indeed, KSR emphasized cases where all features are known.[1] Furthermore, the PTO's examination guidelines for determining obviousness in view of *KSR*[2] ("the PTO guidelines") suggests that all elements (when the references are combined) need to be known in the art to support a conclusion of obviousness.[3] The unsupported statement that a plurality of compartments is old and known in the art does not establish that such compartments in relation to the other features of the claimed invention

[1] The Supreme court noted three cases *United States v, Adams*, 383 U.S. 39 (1966), *Anderson's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57 (1969), and *Sakraida v. AG Pro, Inc.*, 425 U.S. 273 (1976) which all dealt with the issue of whether known elements combined together would be obvious. These statements reinforce the concept that the elements of the claim have to be known in the art before they are determined to be combinable or not.

[2] "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex, Inc.*" (Pages 57526-57535 of the Federal Register, Vol. 72, No. 195.)

[3] For example, if a finding that all claim elements were known in the prior art cannot be made, then the rationale of combining prior art elements according to known methods cannot be used. (Page 57529.) If a finding that the substitution of one known element for another known element (which suggests a teaching of the known elements in the prior art) cannot be made, then the rationale of simple substitution of one known element for another cannot be used. (Page 57530.) If a finding that a method of enhancing a particular class of devices, methods or products based upon the teaching of such an improvement in other situations cannot be made, then the rationale of the use of known techniques to improve similar devices in the same way cannot be used. (Page 57530.) If a finding that a particular known technique was recognized in the art (which suggests a teaching of the technique in the prior art) cannot be made, then the rationale of applying a known technique to a known device, method, or product ready for improvement cannot be used. (Page 57531.) If a finding that there are known options with the grasp of a person of ordinary skill (which suggests a teaching of the known options in the prior art) cannot be made, then the rationale of obvious to try cannot be used. (Page 57532.) If a finding that design incentives or other market forces could have prompted one of ordinary skill to vary the prior art in a predictable manner (which suggests a teaching of the predictable manner in the prior art) cannot be made, then the rationale of the known work in one field of endeavor may prompt variations of it for use in either the same field or a different one cannot be used. (Page 57533.) If a finding that a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention (which suggests that the prior art when combined teaches all the elements of the claimed invention) cannot be made, then the rationale of some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify or combine prior art reference teachings cannot be used. (Page 57534.)

exist in the prior art. Because no prior art has been set forth establishing the plurality of compartments of claim 42, a case of prima facie obviousness has not been established, and the rejection is improper.

Also, the proposed modification would seem to suggest that the plurality of compartments would presumably take the form of a plurality of pull-out keyboard trays 70 because the PTO considered the keyboard tray 70 to be the "compartment" of claim 42, and a plurality of compartments would mean a plurality of the keyboard trays. The assertion that a plurality of keyboard trays 70 are to be used to accommodate or store additional items would change the function of the keyboard tray, a situation quite different from *Ex parte Smith*, Board of Patent Appeals and Interferences (decided June 25, 2007) (precedential decision). In *Smith*, a rejection based on obviousness was upheld because the elements that were combined from various references did not change their respective functions,[4] which is not the case here. Thus, the obvious rejection is improper.

Furthermore, the PTO guidelines suggest that the combination is not obvious because of the change in function of the keyboard tray of Clark. In particular, the PTO guidelines provide that a finding of obviousness based on combining prior art elements according to known methods to yield predictable results is not established if there is no finding that each element merely would have performed the same function as it did separately. (Page 57529, vol. 72, No. 195 of the Federal Register.)

Because a plurality of compartments is not set forth in Clark, and the function of the keyboard tray would change if used as a storage compartment, the obvious rejection is improper, and should be withdrawn.

Furthermore, Clark does not teach or suggest a keyless entry system, as correctly pointed out at paragraph 14 of the Office Action. Manalang teaches a medical cart for providing a keyless locking system for drawers containing narcotics. (Abstract of Manalang.) This combination is improper because Clark and Manalang teach different apparatuses. Clark teaches a mobile clinical workstation with a keyboard tray 70 and is used for mounting a computer terminal. (Abstract and column 11, lines 40-50 of Clark.) In contrast, Manalang

[4] "[E]ach of the elements of Wyant, Dick, and Ruebens combined by the Examiner performs the same function when combined as it does in the prior art. Thus, such a combination would have yielded predictable results." *Ex Parte Smith* at 22.

teaches a medical chest with a plurality of drawers. The devices of Clark and Manalang have completely different functions, and one with ordinary skill in the art would not have a reason to use the workstation of Clark as a storage chest because it would change the function of the workstation of Clark. Thus, the rejection based on this combination is non-obvious.[5]

Also, even assuming that Clark disclosed a plurality of keyboard trays 70 (and the Applicant maintains that Clark does not), there is nothing to teach or suggest that these trays have the ability to be closed like a drawer. The keyboard tray 70 of Clark does not have such an ability (see Fig. 4A and 4B of Clark), and there is nothing to teach or suggest a keyboard tray with such an ability. The fact that the keyboard tray 70 (or a plurality of keyboard trays 70) does not have the ability to close like a drawer makes a locking mechanism inapplicable, and thus non-obvious. Also, there is no reason or teaching that would lead one with ordinary skill in the art to want to have such a locking mechanism for the keyboard trays. Why would one with ordinary skill in the art want to lock one keyboard tray but not another? Thus, Manalang does not cure the deficiencies of Clark, and the rejection is improper.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

Rejection of claim 43 based on Clark

Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark. This rejection is traversed because Clark fails to teach or suggest the claimed invention.

For example, claim 43 recites a cart comprising: a work platform; a base; and a height adjustment mechanism with a stationary casing, a telescoping casing, a driver, and an actuator for controlling the driver, wherein the actuator is disposed above the compartment and on the work platform. Clark does not teach or suggest this combination of features.

For example, Clark does not teach that the actuator is disposed above the compartments and on the work platform. The PTO asserts that "[i]t is quite well known to provide a storage or accommodation space, such as drawer, for elements wherein mechanical portions not intended for storage in the space are not positioned in that space, and as such, it would have been obvious...to provide the actuator at a location above the compartment

[5] As previously mentioned, when a modification changes the function of an element changes functions, such a modification is non-obvious.

taught by Clark...for the purpose of preventing interference between the items located in the compartment and the actuator." (Paragraph 15 of the Office Action.) This rejection is improper because no prior art has been set forth to provide a teaching of an actuator disposed above the compartment and on the work platform.

As previously mentioned, the Supreme Court in *KSR* has not removed the requirement that the prior art reference (or references when combined) must teach or suggest all the claim limitations. Furthermore, the PTO guidelines suggest that all elements (when the references are combined) need to be known in the art to support a conclusion of obviousness.[6] The unsupported statement that it is quite well known to provide a storage or accommodation space, such as drawer, for elements wherein mechanical portions not intended for storage in the space are not positioned in that space does not establish that that an actuator disposed above the compartment and on the work platform in relation to the other features of the claimed invention exist in the prior art. Because no prior art has been set forth establishing an actuator disposed above the compartment and on the work platform of claim 43, a case of prima facie obviousness has not been established, and the rejection is improper.

Also, it is noted that the rejection seems to suggest that the arrangement of the workstation of Clark is inoperable by asserting that placing the release lever above the actuator at a location above the keyboard tray 70 prevents interference between the keyboard in the keyboard tray 70 and the release lever. By implication, the PTO is asserting that the release lever 42 interferes with the keyboard placed in the keyboard tray 70. However, no evidence has been set forth to supporting such an assertion. Thus, one with ordinary skill in the art would have no reason to make the proposed modification, thus making the rejection based on such a modification improper. Because there is no reason to make the proposed modification to the device of Clark, the rejection based on Clark is improper and should be withdrawn.

For at least these reasons, favorable reconsideration of the rejection is respectfully requested.

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[6] See footnote 3.

Conclusion

Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date December 12, 2007 By _____

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PTO/SB/06 (12-04)
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PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number: D1783.030

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))							
SEARCH FEE (37 CFR 1.16(k), (l), or (m))							
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))							
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))							
			TOTAL			TOTAL	

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

12/13/07

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))	* 9	Minus	** 38	= /	x25 =		OR	x50 =	
Independent (37 CFR 1.16(h))	* 7	Minus	*** 8	= /	x100 =		OR	x200 =	
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	

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	**	=					
Independent (37 CFR 1.16(h))	*	Minus	***	=	X =		OR	X =	
Application Size Fee (37 CFR 1.16(s))					X =		OR	X =	
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.

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.

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056	3782

22428 7590 06/13/2007
FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	PAPER NUMBER
3618	
MAIL DATE	DELIVERY MODE
06/13/2007	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)	
	10/783,030	ARCETA ET AL.	
	Examiner	Art Unit	
	Frank Vanaman	3618	

-- 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 *22 March 2007*.

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

3)☐ 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

4)☒ Claim(s) *1-4,7-10,18-24 and 32-43* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *24,35 and 36* is/are allowed.

6)☒ Claim(s) *1-4,7-9,18-22,32-34,37-39,42 and 43* is/are rejected.

7)☒ Claim(s) *10,23,40 and 41* is/are objected to.

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

Application Papers

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

10)☐ 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).

11)☐ 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

12)☐ 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 *11/27/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Status of Application

1. Applicant's amendments, filed Nov. 27, 2006 and March 22, 2007 have been entered in the application. Claims 1-4, 7-10, 18-24, and 32-43 are pending, with claims 39-43 being newly added.

Claim Rejections - 35 USC § 112

2. Claims 37 and 38 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. In claim 37, line 3, "laptop surface" lacks a clear antecedent basis (compare to line 2 which recites a laptop platform).

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claim 37 is rejected under 35 U.S.C. 102(b) as being anticipated by Bonini et al. (WO 01/97745, cited by applicant). Bonini et al. teach a cart having a laptop platform (9) and a work surface (12) separate from the laptop platform, a holder supporting a barcode scanner (11) in an inverted configuration, connected to the work platform through the laptop platform and top of the cart, the base of the cart being supported for movement (through wheels 8), a distal edge of the laptop platform movable in forward and rearward directions, the work platform taught to be pivotally mounted (see page 4, lines 27-28 - in view of the presence of the top of the cart, the revolving action is understood inherently to be about a vertical axis as the cart top would not allow revolving about a horizontal axis -- as such a vertical revolving axis would allow leftward and rightward movement of an end of the surface distal from the pivot).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 8, 9, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. (WO 03/013307, cited by applicant). George et al. teach a cart (10 in general) including a work platform including a platform portion (60) which may support a laptop and a work surface (74) separate therefrom and positioned

there-below, and at least one compartment (49) for containing items; a base (12) configured to be movable in a plurality of directions (through rolling caster wheels 20), a height adjustment mechanism (14, 15, 26, 28) which may locate the platform at a plurality of different heights, the base and platform portions both having portions extending forwardly and rearwardly of the height adjustment mechanism, the platform portion which may accommodate a laptop being movable in at least a forward and rearward direction (compare figures 4, 5), the work surface being movable along an arcuate path in left and right directions (arrows 88, 84).The reference to George et al. fails to teach a plurality of compartments. It is well known to be within the skill of the ordinary practitioner to duplicate already-taught items for the purpose of duplicating the taught effect/purpose there-of, or to enhance the taught effect; as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cart taught by George et al. with plural compartments for the purpose of accommodating a greater number or variety of items.

7. Claims 2, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. in view of Murphy et al. (US 6,626,445). The reference to George et al. is discussed above and fails to teach the compartments including drawers, configured to accommodate drawers of different sizes, and further including a handle disposed above the compartments, facing a forward direction. Murphy et al. teach a movable cart (10) which includes a plurality of compartments (defined at 28, 38) which may include drawers (e.g., 48) of differing sizes, and a handle (92) facing the same forward direction. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the compartments of the cart taught by George et al. with drawers as taught by Murphy et al., and a handle located above the compartments, for the purpose of (a) allowing small objects to be accommodated in the compartments without being lost, and (b) allowing a user to easily grasp and maneuver the cart from the end proximate the compartments.

8. Claims 7, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. in view of Krichever et al. (US 5,151,581). The reference to George et al. is discussed above and fails to teach the provision of a mount for a bar code

reader, which is adjustable, and which may hold the reader in an inverted configuration. Krichever et al. teach a holder (170, 196, 170, etc) for a bar code reader (172) which may be positioned on a work surface (206) and which is adjustable (note figures 14-19), including an inverted configuration (e.g., figure 19). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the work surface taught by George et al. with a bar-code reader having an adjustable mount as taught by Krichever et al. for the purpose of allowing a user of the cart to read coded information from various items.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. in view of Chisholm (US 6,860,494). The reference to George et al. is discussed above and fails to specifically teach the provision of a refuse container. Chisholm teaches that it is well known to provide a container (not referenced, supported by 134) which may accommodate refuse, on a cart (10). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a refuse container as taught by Chisholm on the cart taught by George et al. for the purpose of allowing trash or other discarded items to be carried on the cart.

10. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over George et al. in view of McConnell (US 5,257,767). The reference to George et al. is discussed above and fails to teach the provision of the shelf which moves in a forward and backwards direction as including an element which locks the shelf in a position between forward- and backward-most positions, and/or the shelf which moves left and right along an arc facing forwardly including an element which locks the shelf in a position between left and right-most positions. McConnell teaches a well known shelf structure including a shelf (24) which is not limited from supporting a laptop, and which may move in a forward and rearward direction (along 14), as well as an arcuate direction (about 42, 44), and wherein one adjustment (between 22 and 20) may be lockable in between end points of motion (70). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide each pivotal connection of the shelves of the cart taught by George et al. with the shelf pivot-locking structure

taught by McConnell for the purpose of allowing a user to precisely and immovably position the shelf in a specific desired location, or orientation.

11. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro et al in view of Bonini et al. Santoro et al. teach a cart (10) which may accommodate a work surface, and has a base (16, 18) with a height adjustment mechanism including a stationary casing (32) connected to the base, and a telescopic casing (34) adapted to connect to the work platform, with at least two drawer slides (50, 52) including rolling members (bearings, not referenced) connecting between the stationary and telescopic casing, with a driver (68) which may be run by an actuator (motor in 69) and which, when stopped, locks the casings with respect to one another. The reference to Santoro et al. fails to explicitly teach the work surface, however in view of the reference teaching that it is intended for use with such a surface, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a work surface (e.g., on top of 23, 24, 25) for the purpose of constructing a complete cart assembly. Santoro et al. fail to teach the provision of separate work and laptop platforms wherein a laptop platform may be moved in forward and rearward directions and the work platform may be moved in left and right directions along an arcuate path. Bonini et al. teach a cart having a laptop platform (9) and a work surface (12) separate from the laptop platform, a distal edge of the laptop platform movable in forward and rearward directions, the work platform taught to be pivotally mounted (see page 4, lines 27-28 -- in view of the presence of the top of the cart, the revolving action is understood inherently to be about a vertical axis as the cart top would not allow revolving about a horizontal axis -- as such a vertical revolving axis would allow leftward and rightward movement of an end of the surface distal from the pivot). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide separate movable work and laptop platforms or surfaces to the cart of Santoro et al. for the purpose of movably supporting various items of equipment on the top of the cart.

12. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro et al. as modified by Bonini et al. as applied to claim 33 above, and further in view of Moore (US 6,578,501). The references to Santoro et al. and Bonini et al. are discussed

above and fail to teach the height adjustment as being made through the use of a gas piston in operative connection with the actuator. Moore teaches a telescoping height adjustment mechanism (22) which can lock a work surface at a plurality of heights (col. 2, lines 60-63) and includes inner (18) and outer (21) casing members, with a gas piston (20) which may allow vertical motion of the upper work surface when open, and which precludes motion when closed, the piston being controllable by an actuator (50). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the height adjustment actuator of the combined carts of Santoro et al. and Bonini as a pneumatic actuator as taught by Moore for the purpose of allowing simplified height adjustment of the work surface without requiring a power source (e.g., the motor taught by Santoro et al.)

Moore fails to specifically teach that the piston operates by an exhaust of gas therefrom when lowering and an intake of gas thereto when raising, however it is very well known in pneumatic suspensions for objects to operate a gas piston in this manner, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the piston to intake gas on raising and exhaust as on lowering for the purpose of ensuring easy operation of the height adjustment device for a user.

13. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bonini et al. (cited above). The reference to Bonini et al. fails to specifically teach the mount for the bar code scanner (11) as being adjustable, however adjustable holders for bar code scanners are very well known and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the scanner (11) taught by Bonini et al. with an adjustable mount so as to allow a user to direct the scanner at a desired orientation, while not requiring the user to continuously hold the scanner in that orientation.

14. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US 6,721,178, cited previously) in view of Manalang et al. (US PGPub. 2002/0165641). Clark et al. teach a cart (10 in general) for use in a medical care environment having a work platform (86) and at least one compartment (below 86, above 70), for containing an item (e.g., on 70), a base (78a, 89b) configured to be

movable in forward and rearward directions, a height adjustment mechanism (22 in general) configured to position the work surface at one of a plurality of heights, the work platform and base both including portions projecting forwardly and rearwardly form the height adjustment portions, the compartment being accessible on a front face to a user facing the rear (e.g., away from the viewer, figures 4a, 4b). The reference to Clark et al. fails to explicitly teach plural compartments. It is old and well known to provide plural storage compartments on movable carts for accommodating additional items, and it would have been obvious to one of ordinary skill in the art at the time of the invention to provide at least one further compartment on the cart of Clark et al. for the purpose of accommodating or storing additional items. The reference to Clark et al. fails to teach the provision of a keyless entry system for locking and unlocking the compartments. Manalang et al. teach that it is well known to provide a keyless entry system (20, 22, 24, 70) on a cart used in a medical care environment or allowing selective access to compartments. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cart taught by Clark et al. with at least one compartment which may be locked by a keyless entry/locking system as taught by Manalang et al. for the purpose of limiting access to the selectively lockable compartment to only authorized personnel.

15. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al. (US 6,721,178, cited previously). Clark et al. teach a cart (10 in general) having a work platform (86) and at least one compartment (below 86, above 70), for containing an item (e.g., on 70), a base (78a, 89b) configured to be movable in forward and rearward directions, a height adjustment mechanism (22 in general) configured to position the work surface at one of a plurality of heights, including a stationary casing (74) connected to the base, a telescoping casing (72) connected to the platform and movable with respect to casing 74, a driver (stop element referred to at col. 9, line 57) which is operated by an actuator (42) located on the work platform, and disposed above a bottom of the compartment, the work platform and base both including portions projecting forwardly and rearwardly form the height adjustment portions, the compartment being accessible on a front face to a user facing the rear (e.g., away from

the viewer, figures 4a, 4b). The reference to Clark et al. fails to explicitly teach the actuator as being positioned above the compartment. It is quite well known to provide a storage or accommodation space, such as a drawer, for elements wherein mechanical portions not intended for storage in the space are not positioned in that space, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the actuator at a location above the compartment taught by Clark et al. for the purpose of preventing interference between the items located in the compartment and the actuator.

Allowable Subject Matter

16. Claims 24, 35 and 36 are allowed.

17. Claims 10, 23, 40 and 41 are 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.

Response to Comments

18. Applicant's comments, filed with the amendment, have been carefully considered. Applicant's assertions, comparing the newly amended claims and the references applied against the claims prior to the instant amendment are noted, and the examiner agrees that the references as previously applied fail to teach the material which is now recited in the claims. Note the references to George et al., Bonini et al., Clark et al. and Manalang et al., now applied in response to applicant's amendment.

Conclusion

19. Applicant's amendment necessitated the new and/or modified 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.

20. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through 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).

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Or faxed to:
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F. VANAMAN
Primary Examiner
Art Unit 3618

6/6/07

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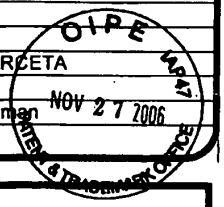
INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date Submitted: November 27, 2006

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Frank Bennett Vanaman
Attorney Docket Number	086554-1056



U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

U.S. PATENT APPLICATION DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Application Document Serial Number	U.S. Patent Application Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Filing Date of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
FV	A3	WO	01/97745	A	SCIENCE PARK RAF SPA	12-27-2001	**(Previously Cited)**	
	A4	WO	03/013307	A	HILL ROM SERVICES INC.	02-20-2003	**(Previously Cited)**	
	A5	DE	195 40 058	C	ARNOLD	06-13-1996	**(Previously Cited)**	
	A6	DE	297 01 427	U	BSW ANLAGENBAU GMBH	03-20-1997	**(Previously Cited)**	
FV	A7	DE	196 42 523	A	WAGNER	05-22-1997	**(Previously Cited)**	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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.	T[6]
FV	E1	TREMONT MEDICAL, INC., SC-2000 User Manual, October 5, 2005, pages 1-20, Aston, PA. **(Currently Cited)**	

Examiner Signature		Date Considered	6/6/07

*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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

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Notice of References Cited	Application/Control No. 10/783,030	Applicant(s)/Patent Under Reexamination ARCETA ET AL.	
	Examiner Frank Vanaman	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2002/0165641	11-2002	Manalang et al.	700/237
	B	US-			
	C	US-			
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FOREIGN PATENT DOCUMENTS

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NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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	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
10/783,030	ARCETA ET AL.
Examiner	**Art Unit**
Frank Vanaman	3618

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
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Claim		Date								
Final	Original	6/6/07								
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Search Notes

Application/Control No.	Applicant(s)/Patent under Reexamination	
10/783,030	ARCETA ET AL.	
Examiner	**Art Unit**	
Frank Vanaman	3618	

SEARCHED			
Class	Subclass	Date	Examiner
Search	Updated	6/6/2007	FBV

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR

OIPE MAR 22 2007 PATENT & TRADEMARK OFFICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Radmond ARCETA et al.
Title:	MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT
Appl. No.:	10/783,030
Filing Date:	02/23/2004
Examiner:	Frank Bennett Vanaman
Art Unit:	3618
Confirmation Number:	3782

AMENDMENT AND REPLY UNDER 37 C.F.R. 1.111

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is responsive to the Office Actions dated June 26, 2006 and February 21, 2007, concerning the above-referenced patent application.

Amendments to the Specification begin on page 2 of this document.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this document.

Amendments to the Drawings begin on page 11 of this document, and include an attached replacement drawing sheet.

Remarks begin on page 12 of this document.

Please amend the application as follows:

Amendments to the Specification:

Please amend the specification as follows:

Please replace paragraph [0001] with the following rewritten paragraph:

This application claims priority to U.S. Provisional Application Nos. 60/448,920 (filed February 24, 2003), 60/484,658 (filed July 7, 2003), and 60/518,649 (filed November 12, 2003). This application also claims priority to U.S. Design Patent Application Nos. 29/196,712, 29/196,713, 29/196,714 (all filed January 2, 2004) and to U.S. Design Patent Application Nos. 29/199,984 and 29/199,985 (both filed February 23, 2004). ~~_____; and _____ (filed concurrently herewith).~~

Amendments to the Claims:

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

Listing of Claims:

1. (Currently Amended) A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

2. (Previously Presented): The cart of claim 1, wherein the compartments include drawers, and the portion of the work platform is configured such that the drawers can be opened in the forward direction.

3. (Previously Presented): The cart of claim 2, wherein the work platform is configured to accommodate drawers of different sizes.

4. (Previously Presented): The cart according to claim 1, further comprising a handle disposed above the compartments and on the portion of the work platform that projects in the forward direction, the handle being configured such that the handle can be grasped by a user facing in the rearward direction to push the cart in the rearward direction.

5. – 6. CANCELED

7. (Original): The cart of claim 1, wherein the work platform includes a barcode scanner holder.

8. (Previously Presented): The cart of claim 1, further comprising a plurality of rolling members connected to the base, wherein the work platform includes sidewalls, and the rolling members are disposed on the base outside of the sidewalls.

9. (Previously Presented) The cart of claim 1, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights.

10. (Previously Presented) The cart of claim 9, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

11. – 17. CANCELED

18. (Previously Presented): The cart of claim 1, further comprising:
a refuse container.

19. (Currently Amended): The cart of claim 1, [[5,]] wherein the laptop platform is configured to move in both the forward and rearward directions between a forwardmost and a rearwardmost position, and wherein the work platform includes a mechanism configured to releaseably lock the laptop platform between the forwardmost and rearwardmost positions.

20. (Currently Amended): The cart of claim 1, [[6,]] wherein the work surface is configured to move in both the rightward and the leftward directions between a rightmost and a leftmost position, and wherein the work platform includes a releasable locking mechanism configured to releaseably lock the work surface between the rightmost and leftmost positions.

21. (Previously Presented): The cart of claim 7, wherein the barcode scanner holder is adjustable.

22. (Previously Presented): The cart of claim 21, wherein the adjustable barcode scanner holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform.

23. (Previously Presented): The cart of claim 10, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

24. (Currently Amended): A cart comprising:
a work platform including a work surface and compartments for containing items;
a base configured to be movable in at least a rearward direction; and
a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights,

wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver, and ~~The cart of claim 10,~~

wherein the actuator is disposed above the compartments and on the portion of the work platform that projects in the forward direction.

25. - 31. CANCELED

32. (Currently Amended): A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and at least one compartment for containing an item within the compartment;

a base; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing; and

at least two drawer slides including rolling members and being disposed between the stationary casing and the telescoping casing,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

33. (Previously Presented): The cart of claim 32, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism further comprising:

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

34. (Previously Presented): The cart of claim 33, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

35. (Previously Presented): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to

releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the portion of the work platform that projects in the forward direction.

36. (Previously Presented): The cart of claim 35, further comprising a handle disposed on the work platform, wherein the actuator is disposed on the handle.

37. (Currently Amended): A cart comprising:

a work platform <u>including a laptop platform and a work surface separate from the laptop surface</u>;

a holder for supporting a barcode scanner, wherein the holder is connected to the work platform and is adjustable to adjust the location of the scanner relative to the work platform;

a base that moveably supports the work platform,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

38. (Previously Presented): The cart of claim 37, wherein the holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform so as to enable a user to scan items without holding the barcode scanner.

39. (New): The cart of claim 1, wherein the work surface is positioned below the laptop platform.

40. (New): The cart of claim 1, wherein the work surface is configured to move in the leftward or rightward direction through a slot in a side of the work platform.

41. (New): The cart of claim 1, wherein the work platform includes a secondary work surface that is exposed when the laptop platform moves in the forward or rearward direction.

42. (New): A cart comprising:

a work platform including a work surface and compartments for containing items;

a keyless entry system for unlocking the compartments of the work platform;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment

mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

43. (New): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the work platform.

Amendments to the Drawings:

The drawing sheet attached in connection with the above-identified application containing Figures 6A, 6B and 6C is being presented as a new formal drawing sheet to be substituted for the previously submitted drawing sheet. Figure 6C has been amended.

Figure 6C has been amended to replace reference numeral "392" with the correct reference numeral ("390").

REMARKS

Claims 1-38 were pending in the application. By this paper, claims 39-43 have been added, and claims 5, 6, 11-17 and 25-31 have been canceled. Claims 1, 19, 20, 32 and 37 have been amended. Therefore, claims 1-4, 7-10, 18-24 and 32-43 are now pending in the application. Reconsideration of the application is requested for at least the reasons that follow.

Notice of Non-Responsive Amendment

The Notice of Non-Responsive Amendment mailed on February 21, 2007 indicated that there was no statement identifying the species upon which the newly added claims read and that the remarks lacked a discussion on the patentability of the newly added claims. Applicants submit that the present Amendment and Reply is fully responsive.

Applicants note that claim 44, which was added in the unentered Amendment filed on November 6, 2006, is not being added in the present Amendment.

New Claims

New claims 39-43 read on elected species I, which is illustrated in Figures 1-12.

Information Disclosure Statement

Applicants are concurrently submitting herewith a new Information Disclosure Statement and respectfully request the Examiner to consider the references cited therein.

Specification

The specification is objected to for failing to adequately identify the concurrently-filed design applications. Applicants have amended the specification to include the serial numbers of the concurrently-filed design applications. Applicants respectfully request withdrawal of the objection.

Drawings

Applicants have amended Figure 6C to correct a minor informality. A replacement drawing sheet is attached.

Allowable Subject Matter

Applicants extend thanks to Examiner Vanaman for the allowance of claims 35 and 36. Applicants also wish to extend thanks to Examiner Vanaman for the indication that claim 24 contains allowable subject matter and that this claim would be allowable if rewritten in independent form.

In order to advance prosecution, claim 24 has been placed in independent form and, therefore, is in condition for allowance.

Rejections

Claims 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,435,407 ("Fiordelisi"). Claims 1, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,578,501 ("Moore"). Claims 2, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,626,445 ("Murphy"). Claims 7, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 5,151,581 ("Krichever"). Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,682,030 ("Santoro"). Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,860,494 ("Chisholm"). Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro in view of Moore. Claims 5, 6, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 5,257,767 ("McConnell").

Claims 5 and 6 have been canceled and independent claims 1, 32 and 37 have been amended to include the subject matter of claims 5 and 6.

Each of independent claims 1, 32 and 37, as amended, recite a cart comprising, among other things, a work platform with a laptop platform and a work surface separate from the laptop platform. As now recited in the claims, the laptop platform can be moved in at least one of a forward and rearward direction, and the work surface can be moved in at least one of a leftward and rightward direction (these limitations previously appeared separately in claims 5 and 6).

None of the references discussed above, alone or in combination, teach or suggest such a cart. For example, none of the references, taken together or separately, teach or suggest a cart including a work platform with a laptop platform and a work surface separate from the laptop platform and that "the laptop platform can be moved in at least one of the forward and rearward directions, and wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction," as required by amended claims 1, 32, and 37.

For example, Fiordelisi merely discloses a computerized shopping cart. *See* Fiordelisi at Fig. 1. Fiordelisi does not disclose a cart with a laptop surface and a separate work surface. Murphy merely discloses a surgical console cart. The surgical console cart of Murphy discloses a tool tray 40 and a table 122. The tray 40 can be moved from a stored position to a use position and the table 122 can be moved from a stored position to a use position out of one side of the cart. *See* Murphy at Fig. 3. However, the tray 40 and table 122 of Murphy do not move such that one of the tray or table move in at least one of the forward and rearward directions, and the other of the tray or table move in at least one of a leftward and rightward direction along an arcuate path. The tray 40 and table 122 are each only capable of moving to *one* side or direction, not forward and rearward or leftward and rightward. Moore, as correctly stated in the Office Action, fails to disclose a cart with a shelf that moves in a forward and backward direction or a left and right direction. *See* Office Action at p. 4, lines 27-30. Krichever discloses an optical scanner. *See* Krichever at col. 3, lines 6-30. There is no disclosure in Krichever of a cart with a laptop platform and a separate work surface. Santoro discloses an adjustable workstation. The workstation can be adjusted to change its height, but does not disclose a laptop platform and a separate work surface. *See* Krichever at col. 2, lines 6-11. Chisholm discloses a collapsible cart. The maintenance cart of Chisholm does not include a laptop platform and a separate work surface.

Applicants note that the Office Action rejected claims 5 and 6 by asserting that the platform 24 of McConnell constituted a laptop platform that moves in a forward or rearward direction or a work surface that can move in a left or right direction. McConnell, however, does not provide a cart with a separate laptop platform and work surface as now required by

independent claims 1, 32, and 37. Moreover, there is not motivation for providing such separate items.

The keyboard platform assembly of McConnell is capable of retracting or extending and pivoting about rod 77 or axis 44. *See* McConnell at col. 4, lines 50-61 and col. 6, lines 37-39. However, McConnell only discloses a *single* platform 24 that is capable of moving. *See* McConnell at Figs 2 and 3. Even if the keyboard platform 24 is considered to be a "laptop platform," McConnell does not disclose a "work surface." Thus, McConnell fails to disclose a "laptop platform" that is capable of moving in a forward and rearward direction and a separate "work surface" that is capable of moving in a leftward and rightward direction. Therefore, the rejection of independent claims 1, 32, and 37 should be withdrawn.

Claims 2-4, 7-10, 18-23, 33-34, 38 and new claims 39-41 depend from claims 1, 32, or 37 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable subject matter set forth in these dependent claims.

Independent claims 42-43 have been added to provide varying claim scope. None of the references teach or suggest the subject matter of claims 42-43.

New claim 42 recites a cart comprising, among other things, a work platform with a work surface and compartments, a base, a height adjustment mechanism, and "a keyless entry system for unlocking compartments on the work platform." None of the references discussed above, alone or in combination, teach or suggest such a cart including a work platform with a work surface and compartments and a "keyless entry system." For example, Fiordelisi merely discloses a computerized shopping cart. *See* Fiordelisi at Fig. 1. Fiordelisi does not disclose a "keyless entry system for unlocking compartments on the work platform." Moore merely discloses a podium. *See* Moore at Fig. 1. Murphy merely discloses a surgical console cart with a drawer 24. *See* Murphy at Fig. 1. There is no disclosure in Murphy of a cart with a "keyless entry system for unlocking compartments on the work platform." Krichever merely discloses a point of sale system with an optical scanner and does not disclose a cart with a "keyless entry system for unlocking compartments on the work platform." *See* Krichever at col. 3, lines 6-30. Santoro discloses a height adjustable work station. *See* Santoro at Figs. 1 and 2. The collapsible cart of Chisholm does not disclose a "keyless entry system for unlocking compartments on the work platform." *See* Chisholm at Fig. 1. McConnell merely

discloses a laptop platform. McConnell does not provide a cart with a "keyless entry system for unlocking compartments on the work platform." Therefore, new claim 42 should be in condition for allowance.

New independent claim 43 recites a cart comprising, among other things, a work platform, a base, and a height adjustment mechanism for adjusting the height of the work platform that includes an actuator that is "disposed above the compartment and on the work platform." None of the references discussed above, alone or in combination, teach or suggest such a cart including a height adjustment mechanism for adjusting the height of the work platform that includes an actuator "disposed above the compartment and on the work platform."

For example, Santoro discloses a height adjustable work station. See Santoro at Figs. 1 and 2. The Examiner contends that the motor 69 of Santoro is an "actuator" and that element 68 refers to a "driver." The motor 69 is positioned in a leg 14 of the work station and thus, is clearly not positioned above the compartment and on the work platform. Fiordelisi merely discloses a computerized shopping cart and does not include a height adjustment mechanism that includes an actuator "disposed above the compartment and on the work platform.". See Fiordelisi at Fig. 1. Moore merely discloses a podium. See Moore at Fig. 1. The podium of Moore discloses an actuator 50 for a piston. The actuator 50 is positioned below surfaces 37 and 24. Thus, Moore does not disclose a cart with a height adjustment mechanism for adjusting the height of the work platform that includes an actuator "disposed above the compartment and on the work platform." Murphy merely discloses a surgical console cart with a IV holder 74, 76, 78. See Murphy at Fig. 1. There is no disclosure in Murphy of a cart with a height adjustment mechanism to adjust the height of the work platform that includes an actuator "disposed above the compartment and on the work platform." Krichever merely discloses a point of sale system with an optical scanner and does not disclose an "actuator." See Krichever at Fig. 14. The collapsible cart of Chisholm does not disclose an actuator that is "disposed above the compartment and on the work platform." *See* Chisholm at Fig. 1. McConnell merely discloses a laptop platform. McConnell does not provide a cart with a height adjustment mechanism for adjusting the

height of the work platform that includes an actuator that is "disposed above the compartment and on the work platform." Therefore, new claim 43 should be in condition for allowance.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date March 22, 2007

By Jessica M. Cahill Reg. #54,986
Jessica M. Cahill for
Andrew E. Rawlins
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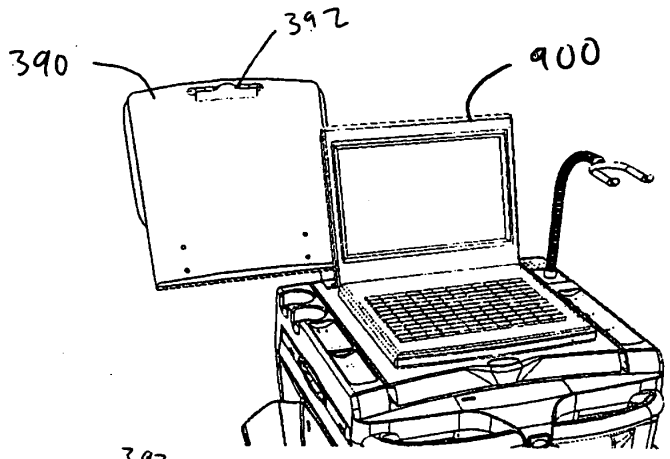


Fig. 6A

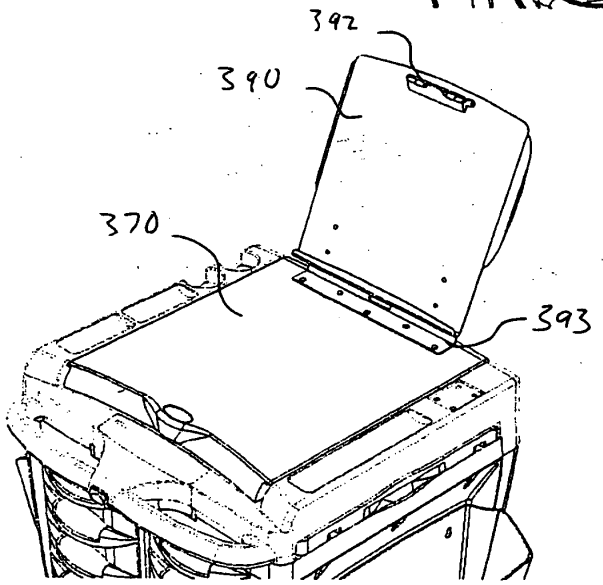


Fig. 6B

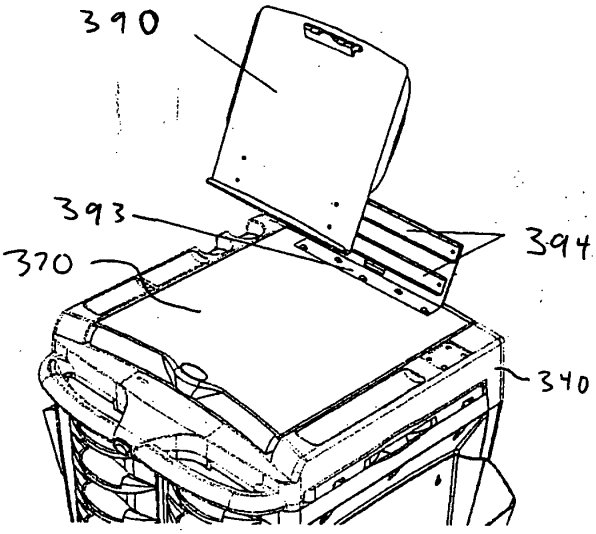


Fig. 6C

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REMARKS

Claims 1-38 were pending in the application. By this paper, claims 39-43 have been added, and claims 5, 6, 11-17 and 25-31 have been canceled. Claims 1, 19, 20, 32 and 37 have been amended. Therefore, claims 1-4, 7-10, 18-24 and 32-43 are now pending in the application. Reconsideration of the application is requested for at least the reasons that follow.

Notice of Non-Responsive Amendment

The Notice of Non-Responsive Amendment mailed on February 21, 2007 indicated that there was no statement identifying the species upon which the newly added claims read and that the remarks lacked a discussion on the patentability of the newly added claims. Applicants submit that the present Amendment and Reply is fully responsive.

Applicants note that claim 44, which was added in the unentered Amendment filed on November 6, 2006, is not being added in the present Amendment.

New Claims

New claims 39-43 read on elected species I, which is illustrated in Figures 1-12.

Information Disclosure Statement

Applicants are concurrently submitting herewith a new Information Disclosure Statement and respectfully request the Examiner to consider the references cited therein.

Specification

The specification is objected to for failing to adequately identify the concurrently-filed design applications. Applicants have amended the specification to include the serial numbers of the concurrently-filed design applications. Applicants respectfully request withdrawal of the objection.

Drawings

Applicants have amended Figure 6C to correct a minor informality. A replacement drawing sheet is attached.

Allowable Subject Matter

Applicants extend thanks to Examiner Vanaman for the allowance of claims 35 and 36. Applicants also wish to extend thanks to Examiner Vanaman for the indication that claim 24 contains allowable subject matter and that this claim would be allowable if rewritten in independent form.

In order to advance prosecution, claim 24 has been placed in independent form and, therefore, is in condition for allowance.

Rejections

Claims 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,435,407 ("Fiordelisi"). Claims 1, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,578,501 ("Moore"). Claims 2, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,626,445 ("Murphy"). Claims 7, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 5,151,581 ("Krichever"). Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,682,030 ("Santoro"). Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,860,494 ("Chisholm"). Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro in view of Moore. Claims 5, 6, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 5,257,767 ("McConnell").

Claims 5 and 6 have been canceled and independent claims 1, 32 and 37 have been amended to include the subject matter of claims 5 and 6.

Each of independent claims 1, 32 and 37, as amended, recite a cart comprising, among other things, a work platform with a laptop platform and a work surface separate from the laptop platform. As now recited in the claims, the laptop platform can be moved in at least one of a forward and rearward direction, and the work surface can be moved in at least one of a leftward and rightward direction (these limitations previously appeared separately in claims 5 and 6).

None of the references discussed above, alone or in combination, teach or suggest such a cart. For example, none of the references, taken together or separately, teach or suggest a cart including a work platform with a laptop platform and a work surface separate from the laptop platform and that "the laptop platform can be moved in at least one of the forward and rearward directions, and wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction," as required by amended claims 1, 32, and 37.

For example, Fiordelisi merely discloses a computerized shopping cart. *See* Fiordelisi at Fig. 1. Fiordelisi does not disclose a cart with a laptop surface and a separate work surface. Murphy merely discloses a surgical console cart. The surgical console cart of Murphy discloses a tool tray 40 and a table 122. The tray 40 can be moved from a stored position to a use position and the table 122 can be moved from a stored position to a use position out of one side of the cart. *See* Murphy at Fig. 3. However, the tray 40 and table 122 of Murphy do not move such that one of the tray or table move in at least one of the forward and rearward directions, and the other of the tray or table move in at least one of a leftward and rightward direction along an arcuate path. The tray 40 and table 122 are each only capable of moving to *one* side or direction, not forward and rearward or leftward and rightward. Moore, as correctly stated in the Office Action, fails to disclose a cart with a shelf that moves in a forward and backward direction or a left and right direction. *See* Office Action at p. 4, lines 27-30. Krichever discloses an optical scanner. *See* Krichever at col. 3, lines 6-30. There is no disclosure in Krichever of a cart with a laptop platform and a separate work surface. Santoro discloses an adjustable workstation. The workstation can be adjusted to change its height, but does not disclose a laptop platform and a separate work surface. *See* Krichever at col. 2, lines 6-11. Chisholm discloses a collapsible cart. The maintenance cart of Chisholm does not include a laptop platform and a separate work surface.

Applicants note that the Office Action rejected claims 5 and 6 by asserting that the platform 24 of McConnell constituted a laptop platform that moves in a forward or rearward direction or a work surface that can move in a left or right direction. McConnell, however, does not provide a cart with a separate laptop platform and work surface as now required by

independent claims 1, 32, and 37. Moreover, there is not motivation for providing such separate items.

The keyboard platform assembly of McConnell is capable of retracting or extending and pivoting about rod 77 or axis 44. *See* McConnell at col. 4, lines 50-61 and col. 6, lines 37-39. However, McConnell only discloses a *single* platform 24 that is capable of moving. *See* McConnell at Figs 2 and 3. Even if the keyboard platform 24 is considered to be a "laptop platform," McConnell does not disclose a "work surface." Thus, McConnell fails to disclose a "laptop platform" that is capable of moving in a forward and rearward direction and a separate "work surface" that is capable of moving in a leftward and rightward direction. Therefore, the rejection of independent claims 1, 32, and 37 should be withdrawn.

Claims 2-4, 7-10, 18-23, 33-34, 38 and new claims 39-41 depend from claims 1, 32, or 37 and are allowable therewith, for at least the reasons set forth above, without regard to the further patentable subject matter set forth in these dependent claims.

Independent claims 42-43 have been added to provide varying claim scope. None of the references teach or suggest the subject matter of claims 42-43.

New claim 42 recites a cart comprising, among other things, a work platform with a work surface and compartments, a base, a height adjustment mechanism, and "a keyless entry system for unlocking compartments on the work platform." None of the references discussed above, alone or in combination, teach or suggest such a cart including a work platform with a work surface and compartments and a "keyless entry system." For example, Fiordelisi merely discloses a computerized shopping cart. *See* Fiordelisi at Fig. 1. Fiordelisi does not disclose a "keyless entry system for unlocking compartments on the work platform." Moore merely discloses a podium. *See* Moore at Fig. 1. Murphy merely discloses a surgical console cart with a drawer 24. *See* Murphy at Fig. 1. There is no disclosure in Murphy of a cart with a "keyless entry system for unlocking compartments on the work platform." Krichever merely discloses a point of sale system with an optical scanner and does not disclose a cart with a "keyless entry system for unlocking compartments on the work platform." *See* Krichever at col. 3, lines 6-30. Santoro discloses a height adjustable work station. *See* Santoro at Figs. 1 and 2. The collapsible cart of Chisholm does not disclose a "keyless entry system for unlocking compartments on the work platform." *See* Chisholm at Fig. 1. McConnell merely

discloses a laptop platform. McConnell does not provide a cart with a "keyless entry system for unlocking compartments on the work platform." Therefore, new claim 42 should be in condition for allowance.

New independent claim 43 recites a cart comprising, among other things, a work platform, a base, and a height adjustment mechanism for adjusting the height of the work platform that includes an actuator that is "disposed above the compartment and on the work platform." None of the references discussed above, alone or in combination, teach or suggest such a cart including a height adjustment mechanism for adjusting the height of the work platform that includes an actuator "disposed above the compartment and on the work platform."

For example, Santoro discloses a height adjustable work station. See Santoro at Figs. 1 and 2. The Examiner contends that the motor 69 of Santoro is an "actuator" and that element 68 refers to a "driver." The motor 69 is positioned in a leg 14 of the work station and thus, is clearly not positioned above the compartment and on the work platform. Fiordelisi merely discloses a computerized shopping cart and does not include a height adjustment mechanism that includes an actuator "disposed above the compartment and on the work platform.". See Fiordelisi at Fig. 1. Moore merely discloses a podium. See Moore at Fig. 1. The podium of Moore discloses an actuator 50 for a piston. The actuator 50 is positioned below surfaces 37 and 24. Thus, Moore does not disclose a cart with a height adjustment mechanism for adjusting the height of the work platform that includes an actuator "disposed above the compartment and on the work platform." Murphy merely discloses a surgical console cart with a IV holder 74, 76, 78. See Murphy at Fig. 1. There is no disclosure in Murphy of a cart with a height adjustment mechanism to adjust the height of the work platform that includes an actuator "disposed above the compartment and on the work platform." Krichever merely discloses a point of sale system with an optical scanner and does not disclose an "actuator." See Krichever at Fig. 14. The collapsible cart of Chisholm does not disclose an actuator that is "disposed above the compartment and on the work platform." *See* Chisholm at Fig. 1. McConnell merely discloses a laptop platform. McConnell does not provide a cart with a height adjustment mechanism for adjusting the

height of the work platform that includes an actuator that is "disposed above the compartment and on the work platform." Therefore, new claim 43 should be in condition for allowance.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date March 22, 2007

By Jessica M. Cahill Reg. #54,986
Jessica M. Cahill for
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Amendments to the Claims:

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

Listing of Claims:

1. (Currently Amended) A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

2. (Previously Presented): The cart of claim 1, wherein the compartments include drawers, and the portion of the work platform is configured such that the drawers can be opened in the forward direction.

3. (Previously Presented): The cart of claim 2, wherein the work platform is configured to accommodate drawers of different sizes.

4. (Previously Presented): The cart according to claim 1, further comprising a handle disposed above the compartments and on the portion of the work platform that projects in the forward direction, the handle being configured such that the handle can be grasped by a user facing in the rearward direction to push the cart in the rearward direction.

5. – 6. CANCELED

7. (Original): The cart of claim 1, wherein the work platform includes a barcode scanner holder.

8. (Previously Presented): The cart of claim 1, further comprising a plurality of rolling members connected to the base, wherein the work platform includes sidewalls, and the rolling members are disposed on the base outside of the sidewalls.

9. (Previously Presented) The cart of claim 1, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights.

10. (Previously Presented) The cart of claim 9, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

11. – 17. CANCELED

18. (Previously Presented): The cart of claim 1, further comprising:
a refuse container.

19. (Currently Amended): The cart of claim 1, [[5,]] wherein the laptop platform is configured to move in both the forward and rearward directions between a forwardmost and a rearwardmost position, and wherein the work platform includes a mechanism configured to releaseably lock the laptop platform between the forwardmost and rearwardmost positions.

20. (Currently Amended): The cart of claim 1, [[6,]] wherein the work surface is configured to move in both the rightward and the leftward directions between a rightmost and a leftmost position, and wherein the work platform includes a releasable locking mechanism configured to releaseably lock the work surface between the rightmost and leftmost positions.

21. (Previously Presented): The cart of claim 7, wherein the barcode scanner holder is adjustable.

22. (Previously Presented): The cart of claim 21, wherein the adjustable barcode scanner holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform.

23. (Previously Presented): The cart of claim 10, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

24. (Currently Amended): A cart comprising:
a work platform including a work surface and compartments for containing items;
a base configured to be movable in at least a rearward direction; and
a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights,

wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver, and ~~The cart of claim 10,~~

wherein the actuator is disposed above the compartments and on the portion of the work platform that projects in the forward direction.

25. - 31. CANCELED

32. (Currently Amended): A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and at least one compartment for containing an item within the compartment;

a base; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing; and

at least two drawer slides including rolling members and being disposed between the stationary casing and the telescoping casing,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

33. (Previously Presented): The cart of claim 32, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism further comprising:

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

34. (Previously Presented): The cart of claim 33, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

35. (Previously Presented): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to

releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the portion of the work platform that projects in the forward direction.

36. (Previously Presented): The cart of claim 35, further comprising a handle disposed on the work platform, wherein the actuator is disposed on the handle.

37. (Currently Amended): A cart comprising:

a work platform <u>including a laptop platform and a work surface separate from the laptop surface</u>;

a holder for supporting a barcode scanner, wherein the holder is connected to the work platform and is adjustable to adjust the location of the scanner relative to the work platform;

a base that moveably supports the work platform,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

38. (Previously Presented): The cart of claim 37, wherein the holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform so as to enable a user to scan items without holding the barcode scanner.

39. (New): The cart of claim 1, wherein the work surface is positioned below the laptop platform.

40. (New): The cart of claim 1, wherein the work surface is configured to move in the leftward or rightward direction through a slot in a side of the work platform.

41. (New): The cart of claim 1, wherein the work platform includes a secondary work surface that is exposed when the laptop platform moves in the forward or rearward direction.

42. (New): A cart comprising:

a work platform including a work surface and compartments for containing items;

a keyless entry system for unlocking the compartments of the work platform;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment

mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

43. (New): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the work platform.

Amendments to the Drawings:

The drawing sheet attached in connection with the above-identified application containing Figures 6A, 6B and 6C is being presented as a new formal drawing sheet to be substituted for the previously submitted drawing sheet. Figure 6C has been amended.

Figure 6C has been amended to replace reference numeral "392" with the correct reference numeral ("390").

PTO/SB/06 (07-06)
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PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 10/783,030	Filing Date 02/23/2004	☐ 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	03/22/2007	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)		OTHER THAN SMALL ENTITY RATE ($)	ADDITIONAL FEE ($)
	Total (37 CFR 1.16(i))	* 27	Minus	** 38	= 0	X $ =		OR	X $50=	0
	Independent (37 CFR 1.16(h))	* 6	Minus	***8	= 0	X $ =		OR	X $200=	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:
peggy s. yarborough

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.**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056	3782

22428 7590 02/21/2007

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EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	PAPER NUMBER
3618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
30 DAYS	02/21/2007	PAPER

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

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Response to Amendment

The reply filed on Nov 27, 2006 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s):

(1) There is no statement identifying the species upon which the newly added claims 39-44 read. See the restriction requirement of Mar. 10, 2006 at page 3, and MPEP 809.02(a).

(2) The remarks lack a discussion of the patentability of the newly added claims, particularly independent claims 42-44. 37 CFR 1.111(b) is specific on this matter: "The reply must present arguments pointing out the specific distinctions believed to render the claims, including any newly presented claims, patentable over any applied references" (emphasis added).

In general, see 37 CFR 1.111. Since the above-mentioned reply appears to be *bona fide*, applicant is given **ONE (1) MONTH or THIRTY (30) DAYS** from the mailing date of this notice, whichever is longer, within which to supply the omission or correction in order to avoid abandonment. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

1. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through 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).

A response to this action should be mailed to:
Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,
Or faxed to:
PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

2/13/07



Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank Bennett Vanaman

Art Unit: 3618

Confirmation Number: 3782

AMENDMENT AND REPLY UNDER 37 C.F.R. 1.111

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This communication is responsive to the Non-Final Office Action dated June 26, 2006, concerning the above-referenced patent application.

Applicant has enclosed with this amendment a Petition for Extension of Time to make this response timely.

Amendments to the Specification begin on page 2 of this document.

Amendments to the Claims are reflected in the listing of claims which begins on page 3 of this document.

Amendments to the Drawings begin on page 12 of this document, and include an attached replacement drawing sheet and an annotated sheet showing changes.

Remarks begin on page 13 of this document.

Please amend the application as follows:

11/28/2006 SZEWDIE1 00000152 10783030
01 FC:1252 450.00 OP

Amendments to the Specification:

Please amend the specification as follows:

Please replace paragraph [0001] with the following rewritten paragraph:

This application claims priority to U.S. Provisional Application Nos. 60/448,920 (filed February 24, 2003), 60/484,658 (filed July 7, 2003), and 60/518,649 (filed November 12, 2003). This application also claims priority to U.S. Design Patent Application Nos. 29/196,712, 29/196,713, 29/196,714 (all filed January 2, 2004) and to U.S. Design Patent Application Nos. 29/199,984 and 29/199,985 (both filed February 23, 2004). _____, ~~and~~ _____ ~~(filed concurrently herewith).~~



Amendments to the Claims:

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

Listing of Claims:

1. (Currently Amended) A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

2. (Previously Presented): The cart of claim 1, wherein the compartments include drawers, and the portion of the work platform is configured such that the drawers can be opened in the forward direction.

3. (Previously Presented): The cart of claim 2, wherein the work platform is configured to accommodate drawers of different sizes.

4. (Previously Presented): The cart according to claim 1, further comprising a handle disposed above the compartments and on the portion of the work platform that projects in the forward direction, the handle being configured such that the handle can be grasped by a user facing in the rearward direction to push the cart in the rearward direction.

5. – 6. CANCELED

7. (Original): The cart of claim 1, wherein the work platform includes a barcode scanner holder.

8. (Previously Presented): The cart of claim 1, further comprising a plurality of rolling members connected to the base, wherein the work platform includes sidewalls, and the rolling members are disposed on the base outside of the sidewalls.

9. (Previously Presented) The cart of claim 1, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights.

10. (Previously Presented) The cart of claim 9, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

11. – 17. CANCELED

18. (Previously Presented): The cart of claim 1, further comprising:
a refuse container.

19. (Currently Amended): The cart of claim 1, [[5,]] wherein the laptop platform is configured to move in both the forward and rearward directions between a forwardmost and a rearwardmost position, and wherein the work platform includes a mechanism configured to releaseably lock the laptop platform between the forwardmost and rearwardmost positions.

20. (Currently Amended): The cart of claim 1, [[6,]] wherein the work surface is configured to move in both the rightward and the leftward directions between a rightmost and a leftmost position, and wherein the work platform includes a releasable locking mechanism configured to releaseably lock the work surface between the rightmost and leftmost positions.

21. (Previously Presented): The cart of claim 7, wherein the barcode scanner holder is adjustable.

22. (Previously Presented): The cart of claim 21, wherein the adjustable barcode scanner holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform.

23. (Previously Presented): The cart of claim 10, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

24. (Currently Amended): A cart comprising:
a work platform including a work surface and compartments for containing items;
a base configured to be movable in at least a rearward direction; and
a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights,

wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver, and ~~The cart of claim 10,~~

wherein the actuator is disposed above the compartments and on the portion of the work platform that projects in the forward direction.

25. - 31. CANCELED

32. (Currently Amended): A cart comprising:

a work platform including a laptop platform, a work surface separate from the laptop platform, and at least one compartment for containing an item within the compartment;

a base; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing; and

at least two drawer slides including rolling members and being disposed between the stationary casing and the telescoping casing,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

33. (Previously Presented): The cart of claim 32, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism further comprising:

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

34. (Previously Presented): The cart of claim 33, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

35. (Previously Presented): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to

releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the portion of the work platform that projects in the forward direction.

36. (Previously Presented): The cart of claim 35, further comprising a handle disposed on the work platform, wherein the actuator is disposed on the handle.

37. (Currently Amended): A cart comprising:

a work platform <u>including a laptop platform and a work surface separate from the laptop surface</u>;

a holder for supporting a barcode scanner, wherein the holder is connected to the work platform and is adjustable to adjust the location of the scanner relative to the work platform;

a base that moveably supports the work platform,

wherein the laptop platform can be moved in at least one of the forward and rearward directions, and

wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

38. (Previously Presented): The cart of claim 37, wherein the holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform so as to enable a user to scan items without holding the barcode scanner.

39. (New): The cart of claim 1, wherein the work surface is positioned below the laptop platform.

40. (New): The cart of claim 1, wherein the work surface is configured to move in the leftward or rightward direction through a slot in a side of the work platform.

41. (New): The cart of claim 1, wherein the work platform includes a secondary work surface that is exposed when the laptop platform moves in the forward or rearward direction.

42. (New): A cart comprising:

a work platform including a work surface and compartments for containing items;

a keyless entry system for unlocking the compartments of the work platform;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment

mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

43. (New): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the work platform.

44. (New): A cart comprising:

a work platform;

a holder for supporting a barcode scanner, wherein the holder is connected to the work platform and is adjustable to adjust the location of the scanner relative to the work platform;

a base that moveably supports the work platform; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights.

Amendments to the Drawings:

The drawing sheet attached in connection with the above-identified application containing Figures 6A, 6B and 6C is being presented as a new formal drawing sheet to be substituted for the previously submitted drawing sheet. Figure 6C has been amended.

Figure 6C has been amended to replace reference numeral "392" with the correct reference numeral ("390").

REMARKS

Claims 1-38 were pending in the application. By this paper, claims 39-44 have been added, and claims 5, 6, 11-17 and 25-31 have been canceled. Claims 1, 19, 20, 32 and 37 have been amended. Therefore, claims 1-4, 7-10, 18-24 and 32-44 are now pending in the application. Reconsideration of the application is requested for at least the reasons that follow.

Information Disclosure Statement

Applicants are concurrently submitting herewith a new Information Disclosure Statement and respectfully request the Examiner to consider the references cited therein.

Specification

The specification is objected to for failing to adequately identify the concurrently-filed design applications. Applicants have amended the specification to include the serial numbers of the concurrently-filed design applications. Applicants respectfully request withdrawal of the objection.

Drawings

Applicants have amended Figure 6C to correct a minor informality. A replacement drawing sheet is attached.

Allowable Subject Matter

Applicants extend thanks to Examiner Vanaman for the allowance of claims 35 and 36. Applicants also wish to extend thanks to Examiner Vanaman for the indication that claim 24 contains allowable subject matter and that this claim would be allowable if rewritten in independent form.

In order to advance prosecution, claim 24 has been placed in independent form and, therefore, is in condition for allowance.

Rejections

Claims 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,435,407 ("Fiordelisi"). Claims 1, 8, and 9 are rejected under 35 U.S.C. 103(a)

as being unpatentable over U.S. Patent No. 6,578,501 ("Moore"). Claims 2, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,626,445 ("Murphy"). Claims 7, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 5,151,581 ("Krichever"). Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,682,030 ("Santoro"). Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 6,860,494 ("Chisholm"). Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro in view of Moore. Claims 5, 6, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of U.S. Patent No. 5,257,767 ("McConnell").

Claims 5 and 6 have been canceled and independent claims 1, 32 and 37 have been amended to include the subject matter of claims 5 and 6.

Each of independent claims 1, 32 and 37, as amended, recite a cart comprising, among other things, a work platform with a laptop platform and a work surface separate from the laptop platform. As now recited in the claims, the laptop platform can be moved in at least one of a forward and rearward direction, and the work surface can be moved in at least one of a leftward and rightward direction (these limitations previously appeared separately in claims 5 and 6).

None of the references discussed above, alone or in combination, teach or suggest such a cart. For example, none of the references, taken together or separately, teach or suggest a cart including a work platform with a laptop platform and a work surface separate from the laptop platform and that "the laptop platform can be moved in at least one of the forward and rearward directions, and wherein the work surface can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction," as required by amended claims 1, 32, and 37.

For example, Fiordelisi merely discloses a computerized shopping cart. *See* Fiordelisi at Fig. 1. Fiordelisi does not disclose a cart with a laptop surface and a separate work surface. Murphy merely discloses a surgical console cart. The surgical console cart of Murphy discloses a tool tray 40 and a table 122. The tray 40 can be moved from a stored position to a

use position and the table 122 can be moved from a stored position to a use position out of one side of the cart. *See* Murphy at Fig. 3. However, the tray 40 and table 122 of Murphy do not move such that one of the tray or table move in at least one of the forward and rearward directions, and the other of the tray or table move in at least one of a leftward and rightward direction along an arcuate path. The tray 40 and table 122 are each only capable of moving to *one* side or direction, not forward and rearward or leftward and rightward. Moore, as correctly stated in the Office Action, fails to disclose a cart with a shelf that moves in a forward and backward direction or a left and right direction. *See* Office Action at p. 4, lines 27-30. Krichever discloses an optical scanner. *See* Krichever at col. 3, lines 6-30. There is no disclosure in Krichever of a cart with a laptop platform and a separate work surface. Santoro discloses an adjustable workstation. The workstation can be adjusted to change its height, but does not disclose a laptop platform and a separate work surface. *See* Krichever at col. 2, lines 6-11. Chisholm discloses a collapsible cart. The maintenance cart of Chisholm does not include a laptop platform and a separate work surface.

Applicants note that the Office Action rejected claims 5 and 6 by asserting that the platform 24 of McConnell constituted a laptop platform that moves in a forward or rearward direction or a work surface that can move in a left or right direction. McConnell, however, does not provide a cart with a separate laptop platform and work surface as now required by independent claims 1, 32, and 37. Moreover, there is not motivation for providing such separate items.

The keyboard platform assembly of McConnell is capable of retracting or extending and pivoting about rod 77 or axis 44. *See* McConnell at col. 4, lines 50-61 and col. 6, lines 37-39. However, McConnell only discloses a *single* platform 24 that is capable of moving. *See* McConnell at Figs 2 and 3. Even if the keyboard platform 24 is considered to be a "laptop platform," McConnell does not disclose a "work surface." Thus, McConnell fails to disclose a "laptop platform" that is capable of moving in a forward and rearward direction and a separate "work surface" that is capable of moving in a leftward and rightward direction. Therefore, the rejection of independent claims 1, 32, and 37 should be withdrawn.

Claims 2-4, 7-10, 18-23, 33-34, 38 and new claims 39-41 depend from claims 1, 32, or 37 and are allowable therewith, for at least the reasons set forth above, without regard to

the further patentable subject matter set forth in these dependent claims. Claims 42-44 have been added to provide varying claim scope.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check or credit card payment form being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date November 27, 2006

By Jessica M. Cahill

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Jessica M. Cahill
Attorney for Applicant
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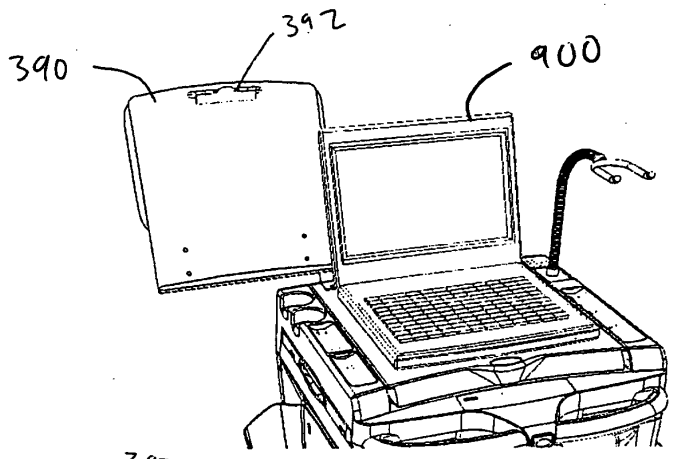


Fig. 6A

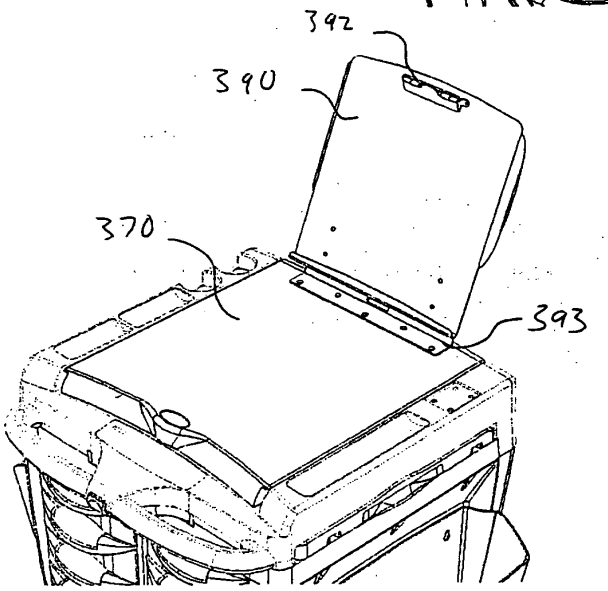


Fig. 6B

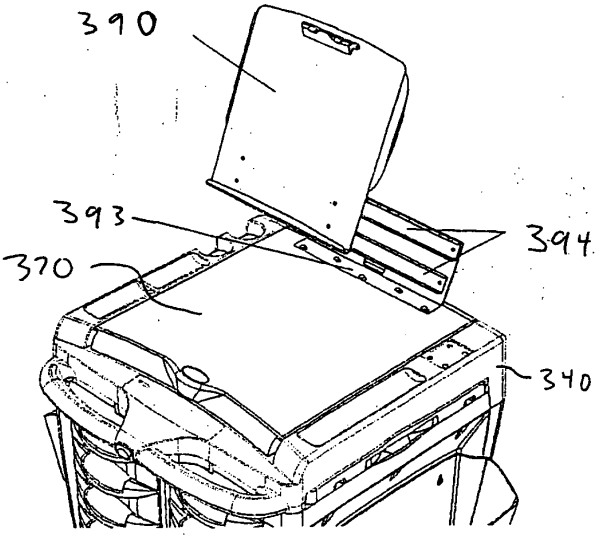


Fig. 6C

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Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank Bennett Vanaman

Art Unit: 3618

Confirmation Number: 3782

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56

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

Sir:

Submitted herewith on Form PTO/SB/08 is the listing of a document known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of the non-patent document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98.

In addition, further to the examiner's request made in the pending office action dated June 26, 2006, attached are copies of the non-U.S. patent documents, A3 through A7, as previously cited on August 16, 2004.

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The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be

appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(c), before the mailing date of either a final action under 37 CFR §1.113, a notice of allowance under 37 CFR §1.311, or an action that otherwise closes prosecution in the application.

RELEVANCE OF EACH DOCUMENT

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

FEE

A credit card payment form in the amount of $180.00 is enclosed in accordance with 37 CFR §1.17(p) to cover the fee associated with an information disclosure statement under 37 CFR §1.97(c) in the amount of $180.00.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date November 27, 2006

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				**Application Number**	10/783,030
Date Submitted: November 27, 2006				**Filing Date**	02/23/2004
				First Named Inventor	Radmond Vincent ARCETA
(use as many sheets as necessary)				**Group Art Unit**	3618
				Examiner Name	Frank Bennett Vanaman
Sheet	1	of	1	**Attorney Docket Number**	086554-1056

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U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	A3	WO	01/97745	A	SCIENCE PARK RAF SPA	12-27-2001	**(Previously Cited)**	
	A4	WO	03/013307	A	HILL ROM SERVICES INC.	02-20-2003	**(Previously Cited)**	
	A5	DE	195 40 058	C	ARNOLD	06-13-1996	**(Previously Cited)**	
	A6	DE	297 01 427	U	BSW ANLAGENBAU GMBH	03-20-1997	**(Previously Cited)**	
	A7	DE	196 42 523	A	WAGNER	05-22-1997	**(Previously Cited)**	

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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.	T[6]
	E1	TREMONT MEDICAL, INC., SC-2000 User Manual, October 5, 2005, pages 1-20, Aston, PA. **(Currently Cited)**	

Examiner Signature		Date Considered	

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[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

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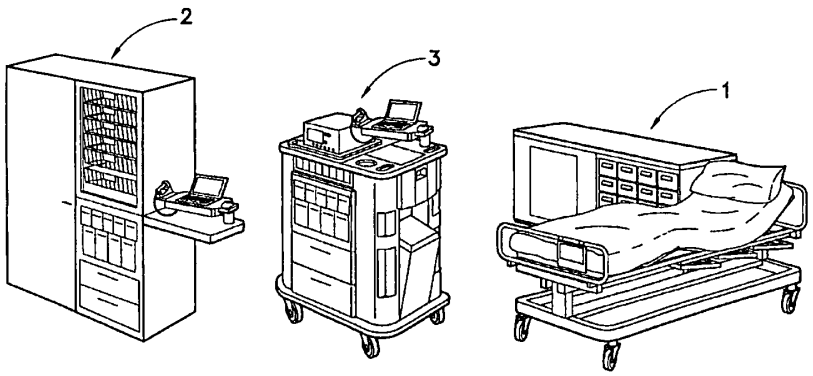
(81) Designated States *(national)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

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Declarations under Rule 4.17:
— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for the following designation US*
— *of inventorship (Rule 4.17(iv)) for US only*

[Continued on next page]

(54) Title: EQUIPMENT FOR THE MANAGEMENT OF HOSPITAL ACTIVITIES SUCH AS PHARMACEUTICAL TREATMENT



(57) Abstract: An equipment for the management of hospital activities as medical tests and pharmacological treatment in conditions of certainty against the mistaking of patients is described. The equipment comprises a bed unit (1) associated with the bed of each patient, at least one cabinet unit (2) associated with every ward and a computerised tray cart (3) hat is movable among said units (1, 2). The computerised tray cart (3) comprises a computer (10) provided with display, a reader (11) of computer data connected with said computer (10) and approachable to the bed of the patient for the reading of computer data and their transfer to said computer (10), a plurality of drawers (14-16) with opening controlled by said computer (10), and a printer (17) controlled by said computer (10). The bed unit (1) comprises a display (18) connected with a computer for the visualisation of data relative to the patient. The cabinet unit (2) comprises a computer (22), a reader (23) of computer data connected with said computer (23), containing spaces and drawers (24-27) with opening controlled by said computer (22). The computerised tray cart (3), the bed unit (1) and the cabinet unit (2) are connected to each other by a computer network.

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EQUIPMENT FOR THE MANAGEMENT OF HOSPITAL ACTIVITIES SUCH AS PHARMACEUTICAL TREATMENT

* * * * *

DESCRIPTION

The present invention concerns an equipment for the management of hospital activities as laboratory tests, pharmacological treatment, dieting and instruments diagnostic that is operating in conditions of certainty against the mistaking of patients and/or of the products destined to it.

One of the greatest risks for patients staying in a hospital or other health care institute consists in the possibility that the data relative to the tests and to the dispensing of drugs are mistaken by error between one patient and the other or that they are not objectively interpreted. Therefore, a different disease that is consequently treated in different way can be diagnosed to a patient affected by a certain disease or, even in the presence of an exact diagnosis, drugs that are suitable for a different disease can be given to him/her.

This problem has been faced in its most general aspects by European patents n. 0491900 and n. 0516782, the first one being specifically addressed to blood tests or other biological samplings, the second being addressed to the dispensing of drugs, the latter term meaning also the dispensing of blood plasma.

Both patents provide for the use of a computer data support that is applied to the patient in such a way that it cannot be removed until the end of hospitalisation, in substance a wrist-band that is fastened to the wrist of the patient. The computer data which are read on the wrist-band with appropriate optical reader allow, in the case of collection and testing of biological samples, to then mark the container of the collected biological sample in a substantially permanent way with the same data, which therefore accompany the same container until the testing laboratory, thus avoiding the

mistaking of samples between one patient and the other. In the case of dispensing of drugs the reading of the computer data on the wrist-band, in combination with the reading of additional computer data on a drug container or on the same drug, allows in turn to give the drug that was prescribed for that given patient with absolute certainty.

In European patent n. 0516782 there is also described in general terms the use of a tray cart provided with computer means for the reading, processing and confirm, that can be moved from the patient to the site where the drugs are being dispensed and vice-versa in order to assure the perfect correspondence between the prescribed therapy and the drug being taken.

In the same European patent a possible implementation of a machine is described that is capable to feed, to mark and to fill up with drugs and finally to close drug containers, once again by using computer data corresponding to the ones being read on the wrist-band of the patient.

Nothing is provided instead at the patient's bed, but the presence of a wrist-band that is fastened to the wrist of the same patient.

Scope of the present invention is now to provide an equipment that, by using the teachings provided by the two aforesaid European patents, allows to manage in a complete way the hospital activities of medical tests and pharmacological treatment (extending such concept to dieting) while preventing errors due to the mistaking of patients.

According to the invention such scope is attained with an equipment comprising a computer data support that is fastened to every patient in a substantially permanent way, a bed unit associated with the bed of every patient, at least one cabinet unit associated with each ward and a computerised tray cart that is movable among said units, characterised in that:

a) said computerised tray cart comprises a computer provided with display and mouse control for the processing of computer data, a reader of computer data connected with said computer and movable near the bed of

the patient for the reading of computer data and their transfer to said computer, a plurality of drawers with opening controlled by said computer for the housing of containers for biological samples to be collected and of drug containers to be dispensed, a printer controlled by said computer for the printing of labels with computer data corresponding to the ones being read by said reader which are destined to said biological samples containers, and sensors of the patient's vital parameters communicating with said computer;

b) said reading unit comprises a display that is connected with a computer for the visualisation of data relative to the patient, sensors for the detection of data relative to the patient (for instance: presence);

c) said cabinet unit comprises a computer, a computer data reader connected with said computer, spaces and containing drawers with opening controlled by said computer;

d) said computerised tray cart, said bed unit and said cabinet unit are connected with each other by a computer network.

The equipment according to the invention, which is obviously integrable with specific devices and instruments that are considered as being more appropriate each time, allows a safe management of all hospital activities as medical tests and pharmacological treatment and dieting, while eliminating any possibility of error due to the mistaking of patient (including not correct relationing of objective data regarding the patient) from the origin. All data are in fact taken, transmitted, verified and compared via computer without the operator being able to influence the exactness or less of the operation.

The characteristics of the present invention will become evident from the following detailed description of an embodiment thereof, that is illustrated as a non limiting example in the enclosed drawings in which:

Fig. 1 shows the schematic general assembly of an equipment according to the invention;

Fig. 2 shows the same equipment completed with a central unit for the

supply of drugs ;

Fig. 3 shows an example of computerised tray cart utilisable in the equipment according to the invention;

Fig. 4 shows an example of bed unit for the equipment according to the invention;

Fig. 5 shows an example of wrist-band for the support of computer data fastenable to the patient;

Fig. 6 shows an example of cabinet unit for the equipment according to the invention.

As schematically shown in Fig. 1, the equipment according to the invention substantially comprises a bed unit 1 for each patient hospitalised in health care institute, at least one cabinet unit 2 for every ward of the health care institute and a computerised tray cart 3 that is movable from one unit to the other. In addition, for each patient, a computer data support permanently associable with the patient is provided, preferably a wrist-band 4 with computer data 5 as shown in Fig. 5.

If the equipment is utilised for the dispensing of drugs, the health care institute can provide for a central unit 6 suitable to supply with drugs several equipments of the ward, as shown in Fig. 2.

The computerised tray cart 3, more clearly illustrated in Fig. 3, is made up of a frame 7 resting on wheels 8, on which a revolving arm 9 can rotate for the support of a portable personal computer 10 with display and mouse control and of an optical reader 11 connected with said computer and provided with wire extension (or other wireless device) in order to allow its movement near the bed of the patient for the reading of the computer data that are memorised on the wrist-band 4 and their transfer to the computer 10.

On the top plane of the frame 7 there is also arranged a revolving arm 12, which supports a device 13, controlled by the computer 10, for the monitoring of the vital parameters of the patient. The device 13 is composed of an additional display and of sensors of the patient's vital parameters such

as arterial pressure, oxygen saturation, heart frequency and temperature. The mains power supply is done by means of a easily removable multipolar connector and connected with a supply box. The same is true for the connection with the data network, which can also be obtained through wireless communication.

The body of the frame 7 provides a set of drawers on the front consisting in three rows of drawers 14, 15 and 16, part of which having opening controlled by the computer 10 through actuators and/or indicators and/or sensors; other drawers of the same typology can be present inside other spaces of the tray cart. On one side of the frame 7 a printer 17 for labels is instead provided. Additional components of the tray cart 3, such as containers of clinical charts, containers for syringes and storage spaces of various type, also are provided but not described because of minor interest to the purpose of the invention herein claimed.

The bed unit 1, better illustrated in Fig. 4, comprises a display 18 fastened to the foot of the hospitalisation bed 19 and connected via cable or by radio frequency to a computer (not shown) for the visualisation of data relative the patient. In addition sensors (not shown) connected with remote stations are provided in order to detect the presence or less of the patient on the bed. A bedside table 20 can be provided with drawers 21 with traditional opening or controlled by computer according to the same typologies already described for the tray cart.

The cabinet unit 2, at least one for unit, better shown in Fig. 6, comprises a portable personal computer 22, an optical reader 23 connected with the computer 22, a space with single door 24 and three groups of drawers 25-27 with traditional opening or controlled by the computer 22 according to the same typologies already provided for the tray cart. There is also provided, even if not shown, a refrigerator unit for the cooling of the space 24 and of the drawers 25-27.

Finally, the computerised tray cart 3, the bed unit 1 and the cabinet unit

2 are connected to each other, and possibly to the central unit 6 for the supply of drugs, by a computer network.

In the sphere of medical testing the equipment according to the invention is utilised as follows. The tray cart 3 is moved near the bed of the patient and the optical reader 11 is pointed onto the wrist-band applied to the patient in order to read the computer data (administrative and/or clinical data, etc.) that are memorised on the same; the reading is communicated to the computer 10. The operator in charge takes one or more containers of biological samples, for instance a test-tube, from one of the drawers of the tray cart that are not necessarily subject to controlled opening and submits the marking present on every container, for instance a label, to reading so as to allow to verify by computer 10 if the container is appropriate for type and characteristics (for instance: product code, batch, expiration). Such reading can possibly be avoided on the basis of precise configuration rules of the software procedures. If the verification gives positive result, the computer 10 enables to operation the printer 17, that prints, and possibly directly applies on each container a label with the patient's data that had previously been read by the reader 11. Then the collection of the biological sample of the patient and its input into the labeled container or containers, that are finally closed and sealed. The previously described modality for the identification and updating of the marker, for instance the printing and application of the label being produced, can be carried out automatically by an appropriate device to which the containers can be fed automatically or manually through a storage of containers.

As an alternative to the above described operating modality, definable as single collection modality, a multiple collection modality can be provided, according to which as many groups of containers as there are patients to be submitted to laboratory testing are prepared, each container of a group is provided with label with the data of the relative patient, etc, and inserted in a sealable casing (for instance one of the controlled opening

drawers or other container in turn labelled or otherwise marked with the data of that patient, etc). The tray cart is then brought in proximity of the bed of the first patient, where the reading of the relative wrist-band and of the label is carried out or other marking in case of the use the containers' casing and, if the comparison of the two readings is positive, the actuator/sensor/indicator relative to the opening of the drawer is controlled or else the opening of the casing marked with the same data is authorised for the access to the container to which the collection is destined.

The filled containers, possibly included in envelopes that are sealable by a label issued with the data associated with the activity just being carried out and the remaining ones, are then inserted into a drawer of the tray cart and transferred to the laboratory, where the conveyed information will be duly read through the product labels. If instead the equipment according to the invention is used for the dispensing of drugs, the way it operates is the following.

With the tray cart 3 close to the bed of the patient, the operator in charge through the reader 11 carries out the reading of the computer data of the patient and eventually those of an appropriate label fastened to the print clinical chart of the patient, while verifying the correspondence of the personal identification data. The data relative to the therapy to be followed and therefore to the drugs to be dispensed are therefore communicated through the computer 11, which applies the congruence rules of the pre-set activities and signals to the operator involved the possible not conformity alarms. Such data are generally communicated, according to set rules, to all computers connected by the computer network and to the respective operators.

The tray cart is then carried near the cabinet unit of the ward, where the opening of the drawer of the cabinet that contains the drug to be distributed and the one of a drawer of the tray cart is carried out through computer. The drug is then transferred from a drawer to the other and the two drawers are

then closed again. As an alternative, the drug can be introduced in a container sealed by a label with the data of the dispensing (for instance, patient, time, etc.) that is produced by the printer connected with the computer.

The tray cart is then brought back near the bed of the patient, where the reading of the wrist-band of the same patient is carried out and, in case of congruity with the data that are memorised in the computer, the actuator/alert/sensor relative to the opening of the drawer containing the drug to be dispensed is controlled. As an alternative, the reading of the wrist-band of the patient, in conjunction with the reading of the label placed on the sealed container, activates the computer to emit to the operator the authorization for the operation of opening and dispensing to the patient.

The modality just described regarding the drug can also be considered valid for the distribution of meals.

If desired, the same drug can momentarily be inserted in one of the drawers associated with the bedside table near the bed to be then given to the patient at the proper time, still under control given by the computer.

The flow of the drugs from the central unit or central pharmacy 6 to the single cabinets of the ward is finally regulated as follows. The database of the central pharmacy is updated in real time and it communicates with the cabinets of the ward. The drugs are distributed by the central pharmacy to the cabinets of the ward. The information regarding charge and discharge of the cabinets are updated in the database of the pharmacy and in the computers of the cabinets.

CLAIMS

1. Equipment for the management of hospital activities of medical tests and pharmacological treatment in conditions of certainty against the mistaking of patients, comprising a support (4) for computer data (5) that is attached to each patient in a substantially permanent way, a bed unit (1) associated with the bed of each patient, at least one cabinet unit (2) associated with every ward and a computerised tray cart (3) that is movable between said units (1, 2), characterised in that:

a) said computerised tray cart (3) comprises a computer (10) provided with display and mouse control for the processing of computer data, a reader (11) of computer data connected with said computer (10) and approachable to the bed of the patient for the reading of computer data and their transfer to said computer (10), a plurality of drawers (14-16) with opening controlled by said computer (10) for the housing of containers of biological samples to be collected and of drug containers to be dispensed, a printer (17) controlled by said computer (10) for the printing of labels with computer data corresponding to the ones being read by said reader (11) which are destined to said containers of biological samples, and sensors (13) of physiopathological parameters of the patient communicating with said computer (10), one or more batteries for the supply of the active devices, possibly an electric motor for the movement of the tray cart, a device for the electrical/data connection on board and a device for the electrical/data connection on the ground;

b) said bed unit (1) comprises a display (18) and sensors/actuators/indicators connected with a computer for the visualisation of data relative to the patient;

c) said cabinet unit (2) comprises a computer (22), a reader (23) of computer data connected with said computer (23), containing spaces and drawers (24-27) with opening controlled by said computer (22);

d) said computerised tray cart (3), said bed unit (1) and said cabinet unit

(2) are connected to each other by a computer network.

2. Equipment according to claim 1, characterised in that said bed unit (1) comprises in addition sensors of the presence of the patient.

3. Equipment according to claim 1, characterised in that said bed unit (1) comprises in addition a bedside table provided with drawers (21) with opening controlled by means of computer.

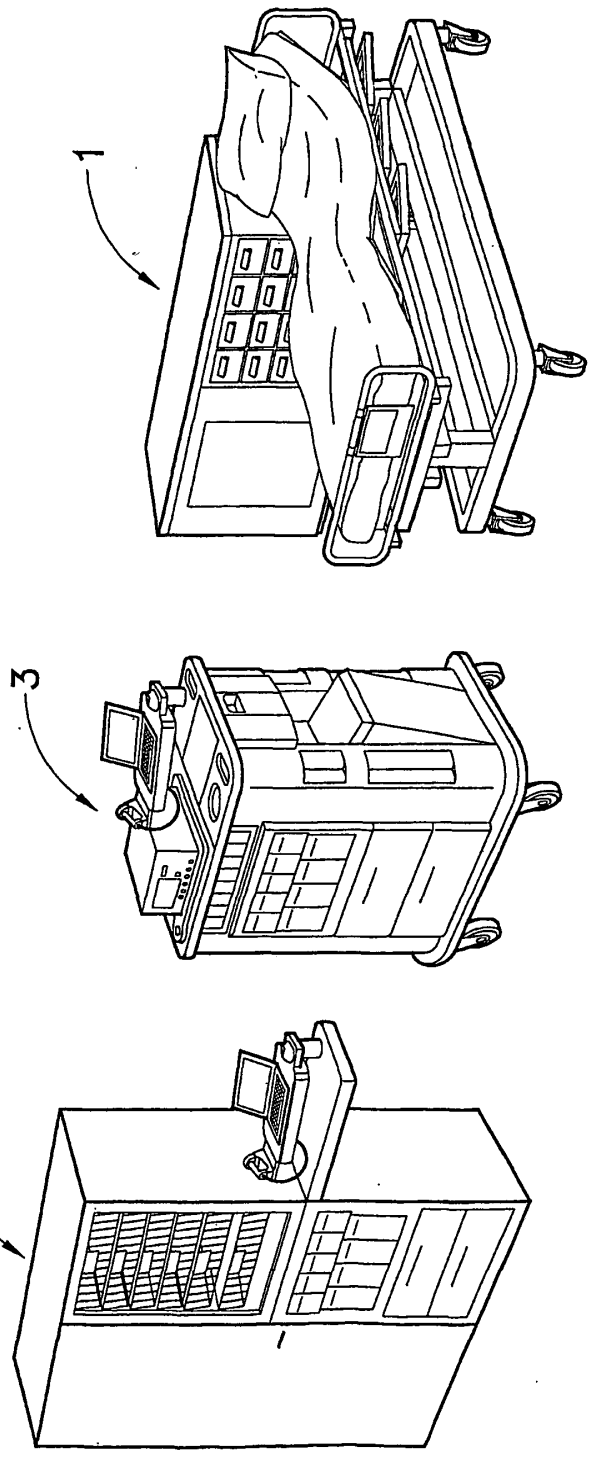


FIG.1

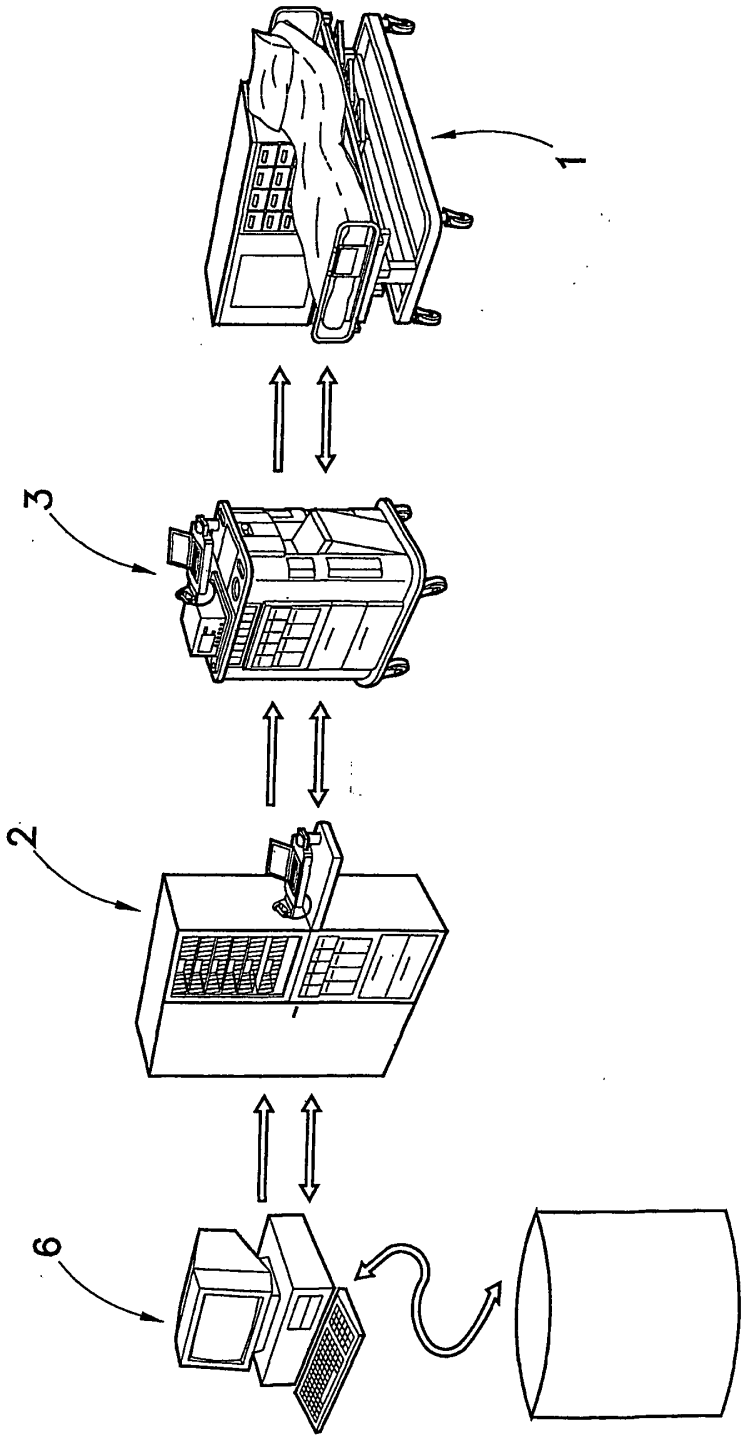


FIG.2

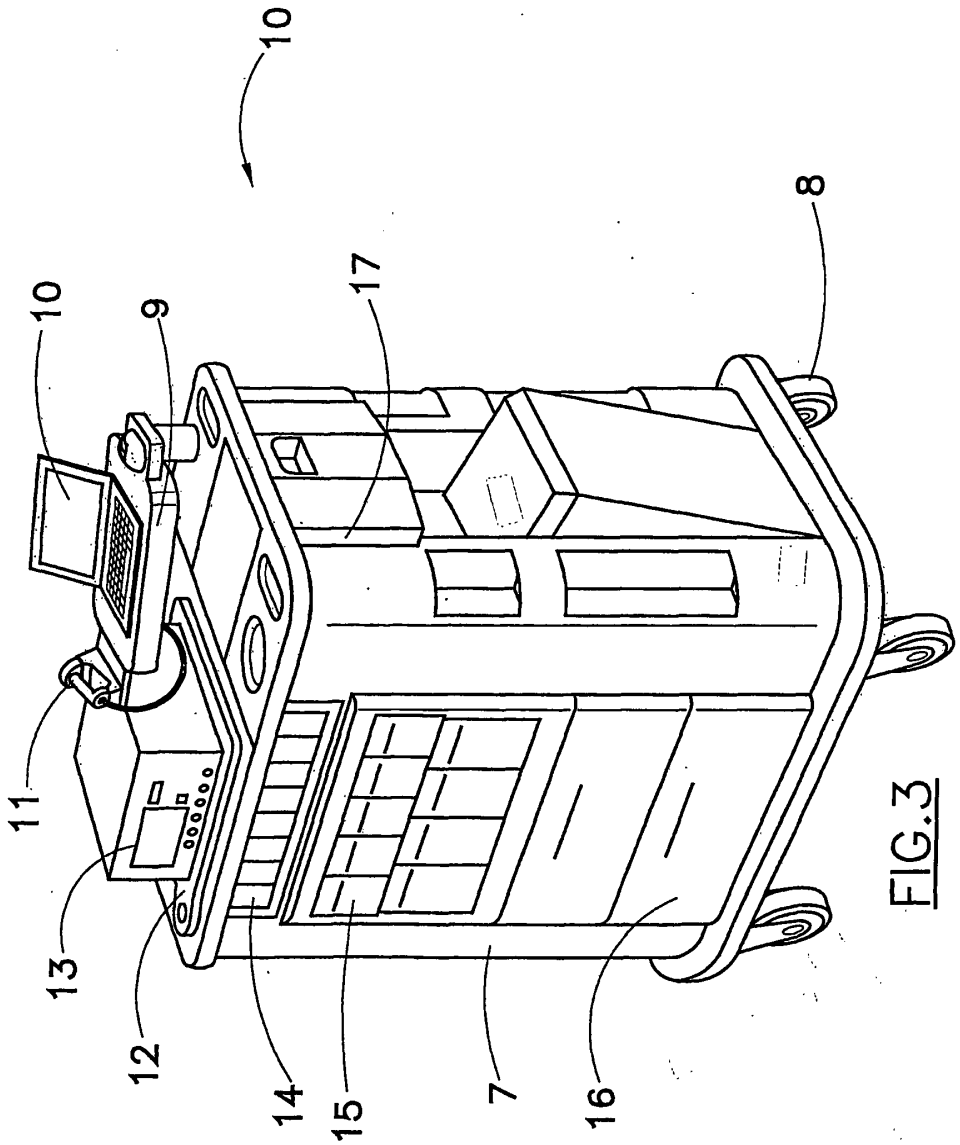


FIG.3

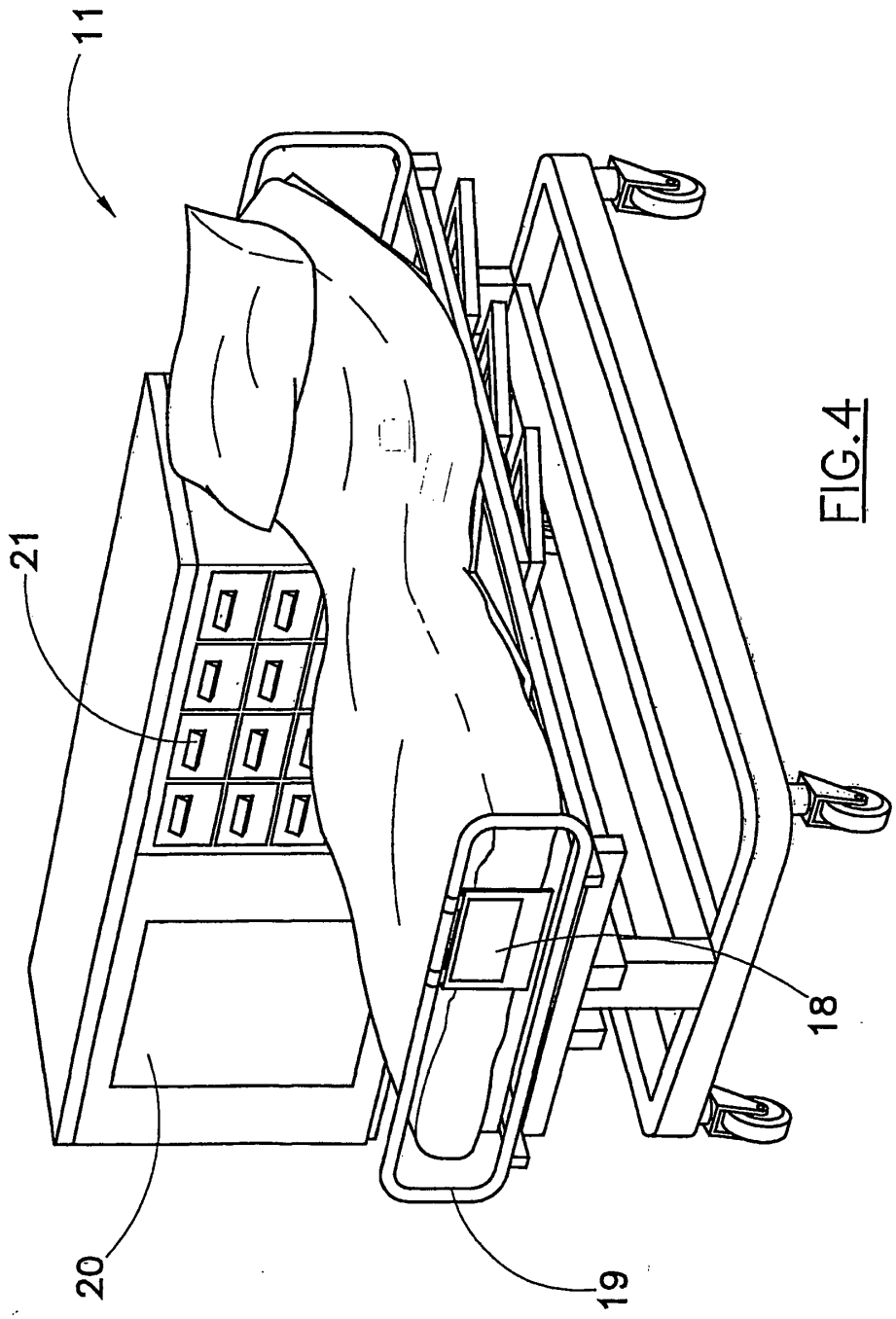


FIG.4

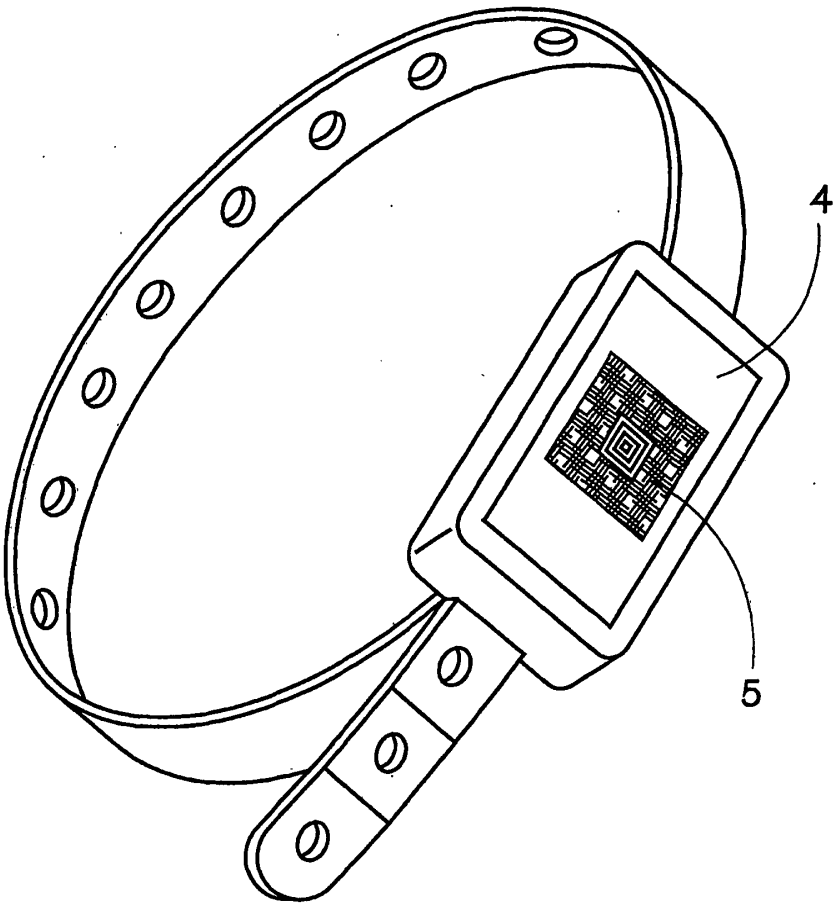


FIG.5

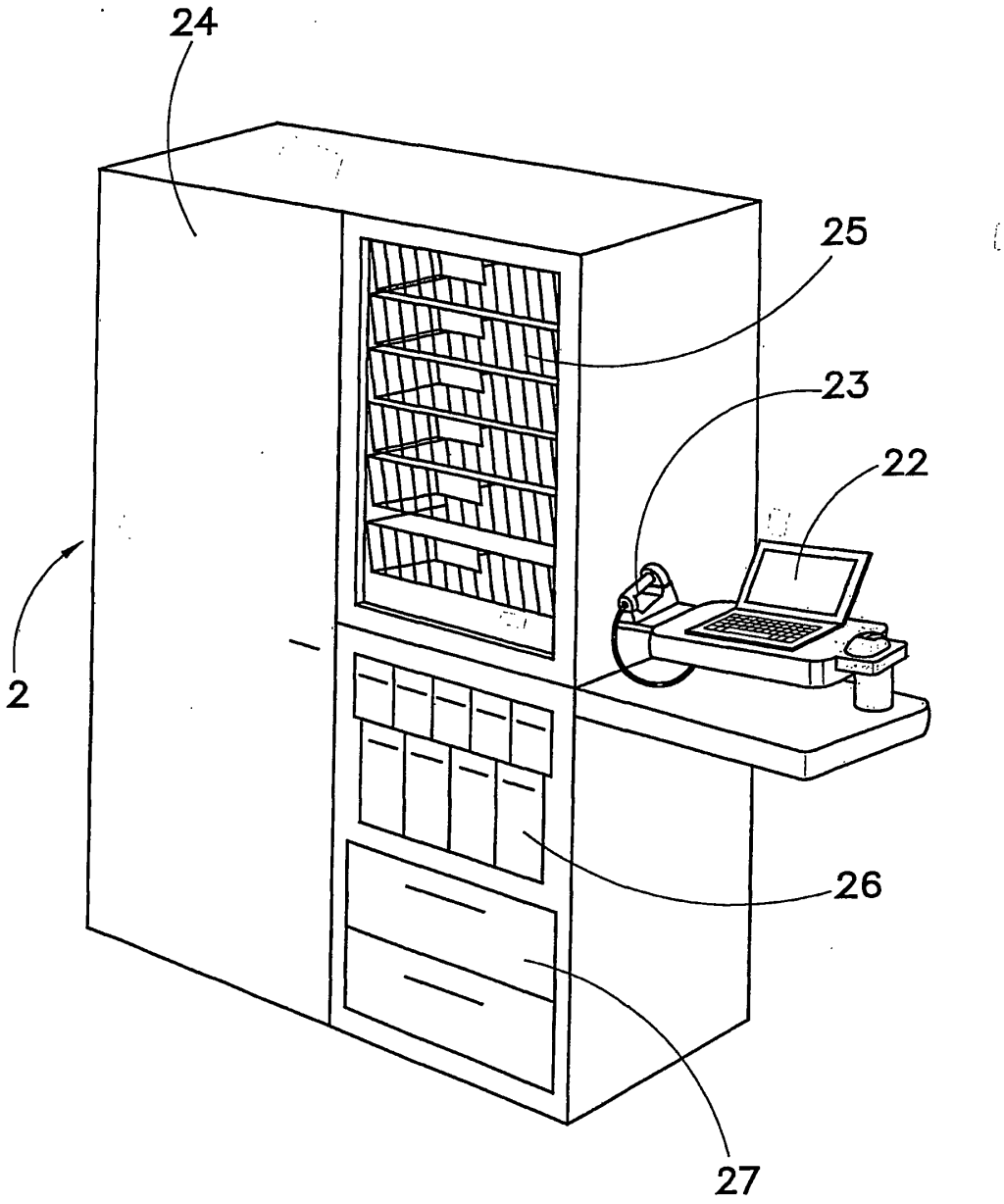


FIG.6

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61G12/00 A61J7/00 A61B5/00 G06F19/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

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[X] Further documents are listed in the continuation of box C.

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INTERNATIONAL SEARCH REPORT

	nal Application No PCT/EP 01/06463

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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(54) Title: OVERBED TABLE FOR USE WITH A PATIENT SUPPORT

(57) Abstract: An overbed table (10) configured to support a table section (16) above a patient support surface, such as a hospital bed (21). The overbed table (10) includes a frame (15) having a base (12) and a substantially vertical support column (14) for supporting the table section (16). In one illustrative embodiment, a display device (124) is supported by the overbed table (10). In a further illustrative embodiment, a camera (160) is supported by the overbed table (10).

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OVERBED TABLE FOR USE WITH A PATIENT SUPPORT

Background and Summary of the Invention

This invention relates generally to overbed tables of the type extending above a patient support surface. More particularly, the invention relates to an overbed table incorporating a display device and/or a camera configured to be used by a patient supported on a hospital bed or by a caregiver located adjacent to the bed.

The present invention provides an overbed table of the type cantilevered over a patient support, such as a hospital bed, and configured to support materials utilized by a patient.

According to an illustrative embodiment of the invention, an overbed table includes a frame coupled to first and second table sections, wherein the second table section is supported in vertically spaced relation to the first table section. A support is positioned in vertical spaced relation to the first table section and is configured to move relative to the first table section within a substantially horizontal plane. A display screen is coupled to the support and is configured to move between a substantially horizontal storage position and a substantially vertical use position.

Illustratively according to the embodiment, at least one of the first table section and the second table section is configured to move in a substantially horizontal plane with respect to the other of the second table section and the first table section. Illustratively, the second table section is coupled to the first table section and the frame such that movement of the second table section results in sliding movement of the first table section.

Further illustratively according to the embodiment, the support comprises an arm having first and second handles, wherein the display screen is supported intermediate the first and second handles.

Illustratively according to the embodiment, the support is pivotably connected to the first table section.

Illustratively according to the embodiment, the display screen is coupled to the support for pivoting movement about a substantially horizontal first axis and for pivoting movement about a second axis extending substantially perpendicular to the first axis.

Further illustratively according to the embodiment, the display screen is located intermediate the first and second table sections in the storage position and extends above the first table section in the use position.

Illustratively according to the embodiment, the display screen comprises one of a flat panel monitor and a reflective mirror.

Illustratively according to the embodiment, a camera is supported proximate the display screen.

Further illustratively according to the embodiment, the first table section is supported by the frame for movement between a generally vertical position and a generally horizontal position.

Further illustratively according to the embodiment, the second table section is releasably coupled to the first table section and the frame permits movement of the first table section between a generally vertical position and a generally horizontal position independently of the second table section.

Illustratively according to the embodiment, the first table section is supported by the frame by an inner member provided on one of the frame and the first table section and an outer member provided on the other of the frame and the first table section, the inner member extending rotatably and slidably through the outer member to permit sliding movement and pivoting movement of the first table section with respect to the frame.

Further illustratively according to the embodiment, a rest is supported by one of the frame and the first table section, the rest configured to support the first table section in the generally horizontal position.

Illustratively according to the embodiment, the frame includes a telescoping support column having an outer column portion and an inner column portion, the telescoping support column supporting the first and second table sections, and a base coupled to the telescoping support column.

Further illustratively according to the embodiment, the second table section is coupled to the first table section by a first pivotal coupling between the first and second table sections.

Illustratively according to the embodiment, the first pivotal coupling includes a first bearing provided on one of the first and second table sections and a bearing race provided on the other of the first and second table sections, the first bearing

engaging the bearing race to permit pivoting of the second table section about a first axis with respect to the first table section. The second table section is illustratively coupled to the frame by a second pivotal coupling between the second table section and the frame.

Illustratively according to the embodiment, the second pivotal coupling includes a trunnion provided on one of the frame and the second table section and a recess provided on the other of the frame and the second table section for receiving the trunnion to permit pivoting of the second table section about a second axis with respect to the first table section, the second axis being spaced from the first axis.

Illustratively according to the embodiment, the display screen is coupled to the first table section by a third pivotal coupling connected to the first table section.

Further illustratively according to the embodiment, a processor is provided in communication with the display screen.

Illustratively according to the embodiment, a connector is supported by the frame and is configured to operably connect with a bed frame for placing the display screen in communication with a processor.

According to a further embodiment of the invention, an overbed table includes a frame having a vertically extending support column, a table section supported by the frame and configured to cantilever over a patient support surface including opposing head and foot ends, and a camera supported by the frame and directed toward the head end of the patient support.

Illustratively according to the embodiment, a display screen is supported by the frame and includes a viewable surface directed toward the head end of the patient support surface. The camera is illustratively supported by the display screen.

Further illustratively according to the embodiment, a support is configured to move relative to the table section within a substantially horizontal plane, the display screen being coupled to the support and configured to move between a substantially horizontal storage position and a substantially vertical use position.

Illustratively according to the embodiment, a processor is supported by the frame and is in communication with the camera.

Further illustratively according to the embodiment, a connector is supported by the frame and is configured to operably connect with a bed frame for placing the camera in communication with a remote processor.

Illustratively according to the embodiment, at least one solar cell is supported by the frame and is operably connected to the camera, wherein the at least one solar cell is alignable with a light source connected to the patient support surface.

According to a further illustrative embodiment of the invention, an overbed table includes a frame having a vertically extending support column, and a table section supported by the frame and configured to cantilever over a patient support surface including opposing head and foot ends, and a display device supported by the frame and coupled to a power source. The display device includes first and second sides, and a viewable surface supported by the first side and directed toward the head end of the patient support.

Illustratively according to the embodiment, a camera is supported by the frame and is directed toward the head end of the patient support surface. The camera is provided in communication with the display device, thereby defining an electronic mirror.

Further illustratively according to the embodiment, the camera is supported by the display device.

Illustratively according to the embodiment, a support is configured to move relative to the table section within a substantially horizontal plane, the display device being coupled to the support and configured to move between a substantially horizontal storage position and a substantially vertical use position.

Further illustratively according to the embodiment, a processor is supported by the frame and is in communication with the display device.

Illustratively according to the embodiment, a connector is supported by the frame and is configured to operably connect to a bed frame for placing the display device in communication with a remote processor.

Further illustratively according to the embodiment, at least one solar cell is supported by the frame and is operably connected to the display device, wherein the at least one solar cell is alignable with a light source connected to the patient support surface.

Illustratively according to the embodiment, a reflective mirror is supported by the second side of the display device.

According to another illustrative embodiment of the invention, an overbed table includes a table section having upper and lower surfaces, the table section being

configured to cantilever over a patient support surface. The overbed table further includes a support positioned in vertical spaced relation to the table section, at least one of the table section and the support being configured to move relative to the other of the support and the table section, and a monitor coupled to the support and in communication with a power source.

Illustratively according to the embodiment, the monitor is coupled to the support for movement between a storage position below the lower surface of the first table section and a use position extending above the upper surface of the first table section.

Illustratively according to the embodiment, the support comprises an arm pivotally supported below the lower surface of the table section for pivoting movement about a substantially vertical axis.

Further illustratively according to the embodiment, a coupler connects the monitor and the arm, the coupler supporting the monitor for a first pivoting movement about a substantially horizontal axis and for a second pivoting movement about a second axis substantially perpendicular to the first axis.

Further illustratively according to the embodiment, a keyboard is coupled to the support.

Further illustratively according to the embodiment, the support comprises a tray slidably supported below the table section and defining a storage compartment, the monitor being supported by the tray for pivoting movement about a substantially horizontal axis. The monitor is illustratively configured to fold into the storage compartment beneath the table section.

Illustratively according to the embodiment, the monitor is supported by an arm configured to move vertically relative to the table section. The arm illustratively includes a vertical portion, a horizontal portion pivotally connected to the vertical portion, and a coupler connecting the monitor to the horizontal portion. The coupler supports the monitor for a first pivoting movement about a first axis and for a second pivoting movement about a second axis disposed substantially perpendicular to the first axis.

According to yet another illustrative embodiment of the invention, an overbed table includes a frame, a housing coupled to the frame and defining a storage compartment, and a table section coupled to the housing. The table section is

supported for movement between first and second positions, the first position substantially covering the storage compartment and the second position providing access to the storage compartment. A display screen is coupled to a power source and is removably supported within the storage compartment.

Illustratively according to the embodiment, the display screen is supported by an arm including a vertical portion. The arm illustratively includes a horizontal portion coupled to the vertical portion, and a coupler connects the display screen to the horizontal portion. The coupler supports the display screen for a first pivoting movement about a first axis and for a second pivoting movement about a second axis disposed substantially perpendicular to the first axis.

Illustratively according to the embodiment, a collapsible stand is coupled to the display screen for supporting the display screen on an upper surface of the table section.

Further illustratively according to the embodiment, the display screen comprises a flat panel monitor.

Illustratively according to the embodiment, a processor is in communication with the display screen.

Further illustratively according to the embodiment, a connector is supported by the frame and is configured to operably connect with a bed frame for placing the display screen in communication with a remote processor.

Additional features of the invention will become apparent to those skilled in the art upon consideration of the following detailed description when taken in conjunction with the accompanying drawings.

Brief Description of the Drawings

The detailed description particularly refers to the accompanying figures in which:

Fig. 1 is a perspective view of an illustrative embodiment overbed table of the present invention, illustrating the second table section and the display support in closed or storage positions;

Fig. 2 is a perspective view similar to Fig. 1, illustrating the second table section and the display support in open or use positions;

Fig. 3 is a partially exploded perspective view of the overbed table of Fig. 1;

Fig. 4 is a top plan view, with a partial cut-away, of the overbed table of Fig. 1;

Fig. 5 is a top plan view similar to Fig. 4, illustrating the second table section in an open or use position and the display support in a closed or storage position;

Fig. 6 is a top plan view similar to Fig. 4, illustrating the second table section and the display support in open or use positions;

Fig. 7 is a perspective view of the overbed table of Fig. 1 illustrating the first table section in an upright or cleaning position;

Fig. 8 is a detailed perspective view of the overbed table, with a partial cut-away of the display coupler;

Fig. 9 is a perspective view of a further illustrative embodiment overbed table of the present invention, illustrating the second table section and the display screen in open positions;

Fig. 10 is a perspective view similar to Fig. 9, illustrating the second table section in a closed position;

Fig. 11 is a perspective view of yet another illustrative embodiment overbed table of the present invention, illustrating the first table section and the display screen in open positions;

Fig. 12 is a perspective view similar to Fig. 11, illustrating the first table section in a closed position;

Fig. 13 is a perspective view of a further illustrative embodiment overbed table of the present invention, illustrating the display screen in a fully deployed or use mode of operation;

Fig. 14 is a perspective view similar to Fig. 13, illustrating the display screen in a stored mode of operation;

Fig. 15 is a perspective view of the overbed table of Fig. 13, illustrating the display screen in a first partially deployed mode of operation;

Fig. 16 is a perspective view of the overbed table of Fig. 13, illustrating the display screen in a second partially deployed mode of operation;

Fig. 17 is a perspective view of a further illustrative embodiment overbed table of the present invention, illustrating the display screen incorporated within a phone and positioned in a fully deployed or use mode of operation;

Fig. 18 is a perspective view similar to Fig. 17, illustrating the display screen in a stored mode of operation;

Fig. 19 is a perspective view of a further illustrative embodiment overbed table of the present invention, illustrating a display screen pivotally supported in a storage position within a storage compartment and positioned in a use mode of operation extending above the first table section;

Fig. 20 is a perspective view similar to Fig. 19, illustrating the display screen in a storage position below the first table section;

Fig. 21 is a front perspective view of a further illustrative embodiment overbed table of the present invention, illustrating a display screen configured to be removably supported within a storage compartment below the table section in a storage position and supported on the table section in a use position;

Fig. 22 is a perspective view of the display screen similar to that of Fig. 21 with the display screen rotated 180° about a vertical axis;

Fig. 23 is a perspective view of a further illustrative embodiment overbed table of the present invention, illustrating a docking connector and a solar power device supported by the base of the frame of the overbed table; and

Fig. 24 is a cross-sectional view illustrating the interaction of the overbed table of Fig. 23 when fully docked to a hospital bed.

Detailed Description of the Drawings

Referring initially to Figs. 1-3, an overbed table 10 according to an illustrative embodiment of the present invention includes a base 12 and a telescoping support column 14. The base 12 and the telescoping support column 14 combine to form a frame 15 which supports first and second table sections 16 and 18. In the following description, the first table section 16 may also be referred to as an upper table, and the second table section may also be referred to as a food tray. The first and second table sections 16 and 18 are mounted in vertically spaced relation proximate an upper end 17 of the support column 14. Illustratively, the first table section 16 is positioned in spaced relation above the second table section 18, thereby defining a vertical space or an open region 19 therebetween. The base 12 is generally I-shaped in plan view and is illustratively provided at its four extremities or corners with casters 20 which facilitate the convenient positioning of the overbed table 10.

The telescoping support column 14 illustratively extends upwardly from the base 12 at an angle of, for example, 0° to 10° generally to vertical to facilitate positioning of the overbed table 10 with respect to a conventional bed 21. More particularly, the support column 14 is configured to be positioned adjacent a conventional bed frame 22 including bed rail 23 supporting a mattress 24 (Figs. 23 and 24).

The support column 14 includes upper and lower telescoping portions 26 and 28, respectively. The upper portion 26 is configured to move in a generally vertical direction relative to the lower portion 28. Additional details of the support column 14 are provided in co-pending patent application Serial No. 09/835,002, which is assigned to the assignee of the present invention and is expressly incorporated by reference herein.

Referring further to Figs. 1, 3 and 4, a sleeve 30 is provided proximate the upper end 17 of the support column 14 and extends in a generally horizontal direction. The first table section 16 includes a rod or tube 32 having substantially the same cross-section transverse to its longitudinal axis as an interior channel 34 of the sleeve 30 (Fig. 3). The rod or tube 32 extends through the sleeve 30 and is slidably and rotatably movable about its longitudinal axis 36 within the sleeve 30, as illustrated in Figs. 3, 4, 5, and 7 to permit the first table section 16 to slide linearly away from the second table section 18 and to rotate between a generally upright vertical position and a horizontal table position.

Adjacent its upper end 17, the support column 14, as illustrated best in Figs. 1 and 3, is also provided with a beam 38 which forms a portion of the frame 15. A proximal end 40 of the beam 38 is mounted to the support column 14 and an opposite distal or remote end 42 extends from the support column 14 in a direction generally parallel to the base 12. As such, it may be appreciated that the first table section 16 is supported in a manner such that it cantilevers out from the support column 14. The remote end 42 of the beam 38 is provided with a rest 44 which limits the downward pivoting of the first table section 16 as the rod or tube 32 pivots within sleeve 30. An underside or lower surface 46 of the first table section 16 may include a bearing surface 48 which slides on the rest 44 to reduce wear on the lower surface 46 of the table section 16. A conventional latch (not shown) may be provided to releasably secure the table section 16 to the beam 38.

Referring now to Figs. 1-3 and 7, a storage tray or bin 49 is illustratively supported by the remote end 42 of the beam 38. The storage bin 49 includes a pair of side walls 50 and 51 and a pair of end walls 52 and 53 connected to a bottom wall 54. The end walls 52 and 53 have notches 55 formed therein to facilitate access to the storage bin 49 when the first table section 16 is positioned thereabove. A mounting tab 56 is connected to the side wall 51 and is secured to the remote end 42 of the beam 38 through a conventional fastener, such as a bolt 57 threadably received by a nut 58.

An upper surface 60 of the first table section 16 may include a plurality of recesses 61 adapted to receive and secure conventional objects that may be used by a person supported on the bed 21 or by a caregiver located adjacent to the bed 21, such as cups and plates (not shown). Additionally a bumper 62 may be secured around a peripheral edge of the first table section 16 in order to protect surfaces which may come in contact with the overbed table 10. The bumper 62 is preferably formed from a resilient material, such as an elastomer or thermoplastic.

As shown in Fig. 3, the second table section 18 includes a lower surface 63 an upper bearing 64 which is generally circular in plan view and provides a generally flat bearing surface. Intermediate the proximal end 40, adjacent the support column 14, and the distal end 42, the beam 38 is provided with a complementary lower bearing surface 66 which is also generally flat and circular. One of the second table section 18 and the beam 38 (beam 38 in the illustrated embodiment) is provided with a pivot post 68, and the other of the second table section 18 and the beam 38 (second table section 18 in the illustrated embodiment) is provided with a recess 70 for receiving the pivot post 68. The second table section 18 is releasably mounted and moves pivotally about pivot axis 72 on the pivot post 68.

On its upwardly facing surface 74 at its distal end 76 remote from the support column 14, the second table section 18 is provided with a roller bearing 78. The lower surface 46 of the first table section 16 includes a bearing track 80 for receiving the roller bearing 78 when the first table section 16 is in its lowered position resting on the rest 44. With this linkage, pivotal movement of the second table section 18 within a horizontal plane results in sliding movement of the first table section 16 along sleeve 30 in a second, parallel horizontal plane. As illustrated in Figs. 4 and 5, pivotal movement of the proximal end 82 of the second table section 18 away from

the support column 14 of the frame 15 in the direction of arrow 84 results in sliding movement of the first table section 16 in a generally opposite direction as represented by arrow 86 (Fig. 5). Pivotal movement of end 82 of second table section 18 toward outer support column 14 of frame 15 in the direction of arrow 88 results in sliding movement of the first table section 16 in a direction generally toward the second table section 18 as represented by arrow 90.

Similarly, sliding movement of the first table section 16 away from the second table section 18 in the direction of arrow 86 results in pivotal movement of the end 82 of the second table section 18 generally away from the support column 14 in the direction of arrow 84. Sliding movement of first table section 16 toward the support column 14 in the direction of arrow 90 results in pivotal movement of the end 72 of the second table section 18 toward the support column 14 and the first table section 16 in the direction of arrow 88.

Generally, it will be understood that horizontal movement in one plane of one table section 16, 18 results in similar horizontal movement in an adjacent, substantially parallel plane of the other table section 16, 18. In a storage position, as illustrated in Fig. 4, the second table section 18 is positioned below the first table section 16. In the use position, as illustrated in Figs. 5 and 6, the second table section 18 is moved at least partially out from under the first table section 16.

The second table section 18 illustratively includes a pair of handles 92 and 94 positioned proximate opposing longitudinal side edges 96 and 97 thereof to facilitate pivoting movement of the second table section 18 about the pivot post 68. The handles 92 and 94 are configured to extend outwardly from beneath opposing side edges 98 and 99 of the first table section 16. Each handle 92 and 94 may include a gripping portion 100 and 102 to be utilized by a patient in deploying the second table section 18 from the storage position (Fig. 4) to the use position (Fig. 5). The gripping portions 100 and 102 are illustratively formed from a high friction resilient material such as an elastomer.

With reference to Figs. 2-4 and 6-8, a support arm 104 is supported within the open region 19 in vertically spaced relation to both the first and second table sections 16 and 18. More particularly, the arm 104 is positioned intermediate, or sandwiched between, the first and second table sections 16 and 18. The arm 104 is supported for pivoting movement within a substantially horizontal plane about a pivot axis 106 (Fig.

3). The lower surface 46 of the first table section 16 illustratively includes a bearing 108 which is generally circular in plan view and provides a generally flat bearing surface for the arm 104. A pivot post 110 is received within a recess 112 formed within the bearing 108. The pivot post 110 may comprise a conventional fastener passing through an opening 114 formed within the arm 104 and threadably received within the recess 112. The arm 104 moves pivotally about the pivot post 110, and hence the pivot axis 106, between a storage position (Figs. 4 and 5) and a use position (Fig. 6).

The arm 104 illustratively includes a substantially U-shaped portion 116 and a connecting portion 118. The U-shaped portion 116 supports a pair of handles 120 and 122 to facilitate pivoting movement of the arm 104 by a patient. The handles 120 and 122 are configured to extend outwardly from beneath the opposing side edges 98 and 99 of the first table section 16. A display screen or device 124 is supported by the U-shaped portion 116 of the arm 104 by a coupler 126.

With reference to Fig. 8, the coupler 126 includes a first body portion 128 supported for pivoting movement about a substantially horizontal first pivot axis 130. A first pin 132 couples the first body portion 128 to the U-shaped portion 116 of the arm 104. A second body portion 134 is supported by the first body portion 128 for pivoting movement about a second pivot axis 136 disposed substantially perpendicular to the first pivot axis 130. A second pin 138 couples the second body portion 134 to the first body portion 128. In turn, the display device 124 is fixed to the second body portion 134.

The display device 124 includes first and second sides 142 and 144, with the first side 142 supporting a viewable surface 146 and configured to face toward a head end 148 of the bed 21 (Fig. 23). The display device 124 illustratively comprises a conventional computer monitor wherein the viewable surface 146 comprises an electronic display 150 (Fig. 8). A conventional mirror 152 may be supported by the second side 144 of the display device 124 (Fig. 4). As may be appreciated, the user may alternatively use the electronic display 150 and the mirror 152 by simply rotating the display device 124 about the second pivot axis 136 by moving the second body portion 134 around the second pin 138. In an illustrated embodiment, the display device 124 comprises a flat panel monitor and the electronic display 150 comprises a high resolution liquid crystal display. The viewable surface 146 of the display device

124 may be defined by other conventional screens including, but not limited to, a television screen, or a projection screen, or a conventional mirror. If the display 150 comprises a projection screen, then images may be projected from a remote location onto the viewable surface 146. More particularly, a conventional projector (not shown) may be supported by a structure (such as a ceiling) remote from the overbed table 10 and is configured to project information onto the viewable surface 146.

A processor 154 is supported by the frame 15 and most preferably is fixed proximate the upper end 17 of the support column 14. The processor 154 is in communication with the display device 124 through conventional transmission means, which may include wires or wireless transmitter and receiver (not shown). A power source in the form of a battery 156 may likewise be secured proximate an upper end 17 of the support column 14 and is in communication with the display device 124. It should be appreciated that both the processor 154 and the battery 156 may be located remote from the overbed table 10 wherein communication means are provided in order for the display device 124 to interact with the processor 154 and the battery 156, such as detailed below.

A camera 160, such as a video or digital still image camera, is illustratively supported by the display device 124. The camera 160 is in communication with the processor 154 and may have power supplied by the battery 156. In one illustrative embodiment, the camera 160 provides images to the processor 154 which are then transmitted to the electronic display 150. As such, the electronic display 150, the processor 154, and the camera 160 define an electronic mirror. In other words, the patient facing the camera 160 will see his or her image electronically generated in the electronic display 150.

A further illustrative embodiment of an overbed table 210 is shown in Figs. 9 and 10. The overbed table 210 illustratively includes a first table section 212 positioned in vertical spaced relation above a second table section 214. The first table section 212 is supported for sliding movement and the second table section 214 is supported for pivoting movement relative to the first table section 212 in the manner described above with respect to the first table section 16 and the second table section 18 of the illustrative embodiment overbed table 10.

A recess 216 extends downwardly from an upper surface 218 of the second table section 214. The display device 124 is supported by the second table section

214 illustratively through a hinge 220 for pivoting movement about a substantially horizontal pivot axis 222. The display device 124 is adapted to pivot about the pivot axis 222 defined by the hinge 220 between a substantially upright use position (Fig. 9) and a substantially horizontal storage position (Fig. 10). In the storage position, the display device 124 is received within the recess 216 such that the rear or second side 144 of the display device 124 is substantially flush with the upper surface 218 of the second table section 214. In the embodiment of Figs. 9 and 10, no separate support arm is required for the display device 124.

Turning now to Figs. 11 and 12, a further embodiment overbed table 310 including a frame 15 supporting a first table section 312. A storage tray 314 is supported in vertical spaced relation below the first table section 312 and is configured to move within a substantially horizontal plane in a direction generally perpendicular to a longitudinal axis 315 of the first table section 312. The display device 124 is coupled to first and second spaced apart arms 316 and 318 which provide for pivoting movement of the display device 124 from an open or use position where the display device 124 is extending upwardly out of the storage tray 314 (Fig. 11) to a closed or storage position where the display device 124 is received within the storage tray 314 below the horizontal plane defined by the first table section 312 (Fig. 12). As illustrated in Fig. 11, first ends 320 and 322 of the arms 316 and 318 are pivotally connected to longitudinally extending side walls 324 and 326 of the storage tray 314, while opposing second ends 328 and 330 of the arms 316 and 318 are pivotally connected to an upper portion of the display device 124. The first ends 320 and 322 of the arms 316 and 318 may be slidably received with channels 332 extending within the side walls 324 and 326 to facilitate folding of the display device 124 into the storage tray 314.

In operation, the display device 124 may be moved between an open position (Fig. 11) and a closed position (Fig. 12) by folding the arms 320 and 322 downwardly into the storage tray 314 such that the display device 124 is nested intermediate the side walls 324 and 326. The storage tray 314 may then be slidably moved in a direction toward the first table section 312 and into the storage position where the storage tray 314 is located in vertically spaced relation immediately below the first table section 312.

Referring now to Figs. 13-16, a further embodiment of the overbed table 410 of the present invention is illustrated as including a frame 15 supporting a storage unit 412. The storage unit 412 may include a plurality of shelves 414 for use by the patient or a caregiver. It should be appreciated that the shelves 414 may be enclosed by doors (not shown), or replaced with sliding drawers or removable bins (not shown).

A first or upper table section 416 is slidably supported by the storage unit 412 for movement substantially parallel to the longitudinal axis 417 of the first table section 416 (Fig. 14). Moreover, the first table section 416 may include a first or inner guide member 418 supported by the first table section 416, and a second or outer guide member 420 supported by the storage unit 412. As such, the table section 416 may be moved back and forth within a substantially horizontal plane in the direction of double headed arrow 422 to provide access to a storage recess 424 defined by the storage unit 412. The display device 124 is supported within the storage recess 424 when in a storage position (Fig. 14). The display device 124 is supported by an arm 426 configured to move vertically relative to the table section 416. The arm 426 includes a vertical portion 428 supported by the storage unit 412 and pivotable about a substantially vertical axis 430. A horizontal portion 432 is pivotally connected to the vertical portion 428 and a coupler 434 connects the display device 124 to the horizontal portion 432. The coupler 434 supports the display device 124 for a first pivoting movement about a first axis 436 and for second pivoting movement about a second axis 438 which is disposed substantially perpendicular to the first axis 436 (Fig. 16).

Referring further to Fig. 16, the coupler 434 includes a first member 440 rotatable about the first axis 436 and a second member 442 rotatable about the second axis 438. The arm 426 in combination with the coupler 434 provides for movement of the display device 124 into any one of a plurality of different positions as illustrated in Figs. 13-16.

As illustrated in the alternative illustrative embodiment of Figs. 17 and 18, a communication device, such as a telephone 444 may be supported by the arm 426′ adjacent the display device 124. Moreover, the display device 124 and the telephone 444 may be part of an overall computer system 446 coupled to a computer support 448. Fig. 17 illustrates the overbed table 410′ in a use position so that the computer

system 446 is accessible to a patient. As such, the patient has access to email, the internet, a care plan, or other items such as computer games which are readily accessible through a computer network. The patient may also conduct business or transmit emails to caregivers asking questions. Fig. 18 illustrates the overbed table 410' in a storage position where the computer system 446 is received within the storage recess 424 below the horizontal plane of the table section 416.

Turning now to Figs. 19 and 20, a further embodiment of overbed table 510 is illustrated as including a storage unit 412 including a storage cavity or recess 424 similar to that disclosed above with respect to the overbed table 410. The display device 124 in the overbed table 510 is pivotally connected to the storage unit 412 through a hinge 512. As such, the display device 124 may be pivoted about a horizontal axis 514 between a use position where the display device 124 is positioned vertically above the table section 416 (Fig. 19) and a storage position wherein the display device 124 is received within the storage cavity 424 and below the horizontal plane of the table section 416 (Fig. 20).

Turning now to Figs. 21 and 22, a further embodiment of overbed table 610 is illustrated as again including a storage unit 412 including a storage cavity 424 similar to that detailed above with respect to the overbed table 410. The display device 124 is removably supported within the storage cavity 424. Moreover, the display device 124 may be physically removed from the storage cavity 424 and supported upon an upper surface 611 of the first table section 416 when in a use position (Figs. 21 and 22). The display device includes a collapsible stand 612 including a base 614 and at least one upright 618 connected to a rear surface 616 of the display device 124. The base 614 and the upright 618 are operably connected through a pair of pivots or hinges 620 and 622 so that the base 614 may be folded into proximity with the uprights 616 and 618 for storage within the storage cavity 424. A conventional wire or cable 624 operably connects the display device 124 to the processor 154.

Another embodiment of the present invention is illustrated in Figs. 23 and 24. The base 12 of the overbed table 710 includes a first docking connector 712 which mates with a second docking connector 714 coupled to the frame 22 of the bed 21 below the mattress 24. The first docking connector 712 coupled with second docking connector 714 may be utilized to supply electrical power to the display device 124 and to transmit information or signals thereto in a conventional manner. In a further

embodiment, a retractable cord 718 is utilized to supply power to the display device 124. More particularly, the retractable cord 718 is receivable within a housing 720 supported by the bed frame 22. In a further embodiment, the overbed table 710 includes a plurality of upwardly-facing solar cells 722 supported on the base 12. The solar cells 722 are utilized to power components such as the display device 124 supported on the overbed table 710. The battery 156 may be charged through ambient light by the solar cells 720 using a conventional trickle charge. For nighttime use, a night light 724 may be provided in communication with the solar cells 722. Moreover, the night light 724 is supported by the bed frame 22 and directs light downwardly toward the solar cells 722. As such, at nighttime, the night light 724 provides a source of energy to the solar cells 722 to maintain the power for the electrical components on the overbed table 710.

Additional details regarding interaction between the overbed table 10, 710 and an external computer system are provided in pending U.S. Patent Application Serial No. 09/849,580, filed May 4, 2001, U.S. Patent Application entitled "PATIENT POINT-OF-CARE COMPUTER SYSTEM" (Attorney Docket 8266-0709), filed concurrently herewith, and U.S. Provisional Application Serial No. 60/310,092, filed August 3, 2001, all of which are assigned to the assignee of the present invention.

Although the invention has been described in detail with reference to certain illustrated embodiments, variations and modifications exist within the scope and spirit of the invention as described and as defined in the following claims.

CLAIMS:

1. An overbed table comprising:

a frame;

a first table section coupled to said frame;

a second table section coupled to said frame in vertical spaced relation to said first table section;

a support positioned in vertical spaced relation to said first table section, said support configured to move relative to said first table section within a substantially horizontal plane; and

a display screen coupled to said support and configured to move between a substantially horizontal storage position and a substantially vertical use position.

2. The overbed table of claim 1, wherein at least one of said first table section and said second table section is configured to move in a substantially horizontal plane with respect to the other of said second table section and said first table section.

3. The overbed table of claim 2, wherein said second table section is coupled to said first table section such that movement of said second table section results in sliding movement of said first table section.

4. The overbed table of claim 1, wherein said support comprises an arm including at least one handle.

5. The overbed table of claim 4, wherein said arm includes first and second handles, and said display screen is supported intermediate said first and second handles.

6. The overbed table of claim 1, wherein said support is pivotably connected to said first table section.

7. The overbed table of claim 1, wherein said display screen is coupled to said support for pivoting movement about a substantially horizontal first axis.

8. The overbed table of claim 7, wherein said display screen is coupled to said support for pivoting movement about a second axis extending substantially perpendicular to said first axis.

9. The overbed table of claim 1, wherein said display screen is located intermediate said first and second table sections in said storage position and extends above said first table section in said use position.

10. The overbed table of claim 1, wherein said display screen comprises a flat panel monitor.

11. The overbed table of claim 1, wherein said display screen comprises a reflective mirror.

12. The overbed table of claim 1, further comprising a camera supported proximate said display screen.

13. The overbed table of claim 1, wherein said first table section is supported by said frame for movement between a generally vertical position and a generally horizontal position.

14. The overbed table of claim 13, wherein said second table section is releasably coupled to said first table section and said frame permits movement of said first table section between a generally vertical position and a generally horizontal position independently of said second table section.

15. The overbed table of claim 14, wherein said first table section is supported by said frame by an inner member provided on one of said frame and said first table section and an outer member provided on the other of said frame and said first table section, said inner member extending rotatably and slidably through said outer member to permit sliding movement and pivoting movement of said first table section with respect to said frame.

16. The overbed table of claim 13, further comprising a rest supported by one of said frame and said first table section, said rest configured to support said first table section in said generally horizontal position.

17. The overbed table of claim 1, wherein said frame includes a telescoping support column has an outer column portion and an inner column portion, the telescoping support column supporting said first and second table sections, and a base coupled to the telescoping support column.

18. The overbed table of claim 1, wherein said second table section is coupled to said first table section by a first pivotal coupling between said first and second table sections.

19. The overbed table of claim 18, wherein said first pivotal coupling includes a first bearing provided on one of said first and second table sections and a bearing race provided on said other of said first and second table sections, said first bearing engaging said bearing race to permit pivoting of said second table section about a first axis with respect to said first table section.

20. The overbed table of claim 19, wherein said second table section is coupled to said frame by a second pivotal coupling between said second table section and said frame.

21. The overbed table of claim 20, wherein said second pivotal coupling includes a trunnion provided on one of said frame and said second table section and a recess provided on the other of said frame and said second table section for receiving said trunnion to permit pivoting of said second table section about a second axis with respect to said first table section, said second axis being spaced from said first axis.

22. The overbed table of claim 21, wherein said display screen is coupled to said first table section by a third pivotal coupling connected to said first table section.

23. The overbed table of claim 1, further comprising a processor in communication with said display screen.

24. The overbed table of claim 1, further comprising a connector supported by said frame and configured to operably connect with a bed frame for placing the display screen in communication with a processor.

25. An overbed table comprising:

a frame including a vertically extending support column;

a table section supported by said frame and configured to cantilever over a patient support surface including opposing head and foot ends; and

a camera supported by said frame and directed toward the head end of the patient support surface.

26. The overbed table of claim 25, further comprising a display screen supported by said frame, said display screen including a viewable surface directed toward the head end of the patient support surface.

27. The overbed table of claim 26, wherein said camera is supported by said display screen.

28. The overbed table of claim 26, further comprising a support configured to move relative to said table section within a substantially horizontal plane, said display screen being coupled to said support and configured to move between a substantially horizontal storage position and a substantially vertical use position.

29. The overbed table of claim 25, further comprising a processor supported by said frame and in communication with said camera.

30. The overbed table of claim 25, further comprising a connector supported by said frame and configured to operably connect with a bed frame for placing the camera in communication with a remote processor.

31. The overbed table of claim 25, further comprising at least one solar cell supported by said frame and operably connected to said camera.

32. The overbed table of claim 31, wherein said at least one solar cell is alignable with a light source connected to the patient support surface.

33. An overbed table comprising:

a frame including a vertically extending support column;

a table section supported by said frame and configured to cantilever over a patient support surface including opposing head and foot ends; and

a display device supported by said frame and coupled to a power source, said display device including first and second sides, and a viewable surface supported by said first side and directed toward the head end of the patient support surface.

34. The overbed table of claim 33, further comprising a camera supported by said frame and directed toward the head end of the patient support.

35. The overbed table of claim 34, wherein said camera is in communication with said display device to define an electronic mirror.

36. The overbed table of claim 34, wherein said camera is supported by said display device.

37. The overbed table of claim 33, further comprising a support configured to move relative to said table section within a substantially horizontal plane, said display device being coupled to said support and configured to move between a substantially horizontal storage position and a substantially vertical use position.

38. The overbed table of claim 33, further comprising a processor supported by said frame and in communication with said display device.

39. The overbed table of claim 33, further comprising a connector supported by said frame and configured to operably connect with a bed frame for placing the display device in communication with a remote processor.

40. The overbed table of claim 33, further comprising at least one solar cell supported by said frame and operably connected to said display device.

41. The overbed table of claim 40, wherein said at least one solar cell is alignable with a light source connected to the patient support surface.

42. The overbed table of claim 33, further comprising a reflective mirror supported by said second side of said display device.

43. An overbed table comprising:

a table section including upper and lower surfaces, said table section being configured to cantilever over a patient support surface;

a support positioned in vertical spaced relation to said table section, at least one of said table section and said support being configured to move relative to the other of said support and said table section; and

a monitor coupled to said support and in communication with a power source.

44. The overbed table of claim 43, wherein said monitor is coupled to said support for movement between a storage position below said lower surface of said first table section and a use position extending above said upper surface of said first table section.

45. The overbed table of claim 42, wherein said support comprises an arm pivotally supported below said lower surface of said table section for pivoting movement about a substantially vertical axis.

46. The overbed table of claim 45, further comprising a coupler connecting said monitor and said arm, said coupler supporting said monitor for a first pivoting movement about a substantially horizontal axis and for a second pivoting movement about a second axis substantially perpendicular to said first axis.

47. The overbed table of claim 43, further comprising a keyboard coupled to said support.

48. The overbed table of claim 43, wherein said support comprises a tray slidably supported below said table section and defining a storage compartment, said

monitor supported by said tray for pivoting movement about a substantially horizontal axis.

49. The overbed table of claim 48, wherein said monitor is configured to fold into said storage compartment beneath said table section.

50. The overbed table of claim 43, wherein said monitor is supported by an arm configured to move vertically relative to said table section.

51. The overbed table of claim 50, wherein said arm includes a vertical portion, a horizontal portion pivotably connected to said vertical portion, and a coupler connecting said monitor to said horizontal portion, said coupler supporting said monitor for a first pivoting movement about a first axis and for a second pivoting movement about a second axis disposed substantially perpendicular to said first axis.

52. An overbed table comprising:

a frame;

a housing coupled to said frame and defining a storage compartment;

a table section coupled to said housing, said table section supported for movement between first and second positions, said first position substantially covering said storage compartment and said second position providing access to said storage compartment; and

a display screen coupled to a power source and removably supported within said storage compartment.

53. The overbed table of claim 52, wherein said display screen is supported by an arm including a vertical portion.

54. The overbed table of claim 53, wherein said arm includes a horizontal portion coupled to said vertical portion, and a coupler connects said display screen to said horizontal portion, said coupler supporting said display screen for a first pivoting movement about a first axis and for a second pivoting movement about a second axis disposed substantially perpendicular to said first axis.

55. The overbed table of claim 52, further comprising a collapsible stand coupled to said display screen for supporting said display screen on said table section.

56. The overbed table of claim 52, wherein said display screen comprises a flat panel monitor.

57. The overbed table of claim 52, further comprising a processor in communication with said display screen.

58. The overbed table of claim 52, further comprising a connector supported by said frame and configured to operably connect with a bed frame for placing the display screen in communication with a remote processor.

FIG-1

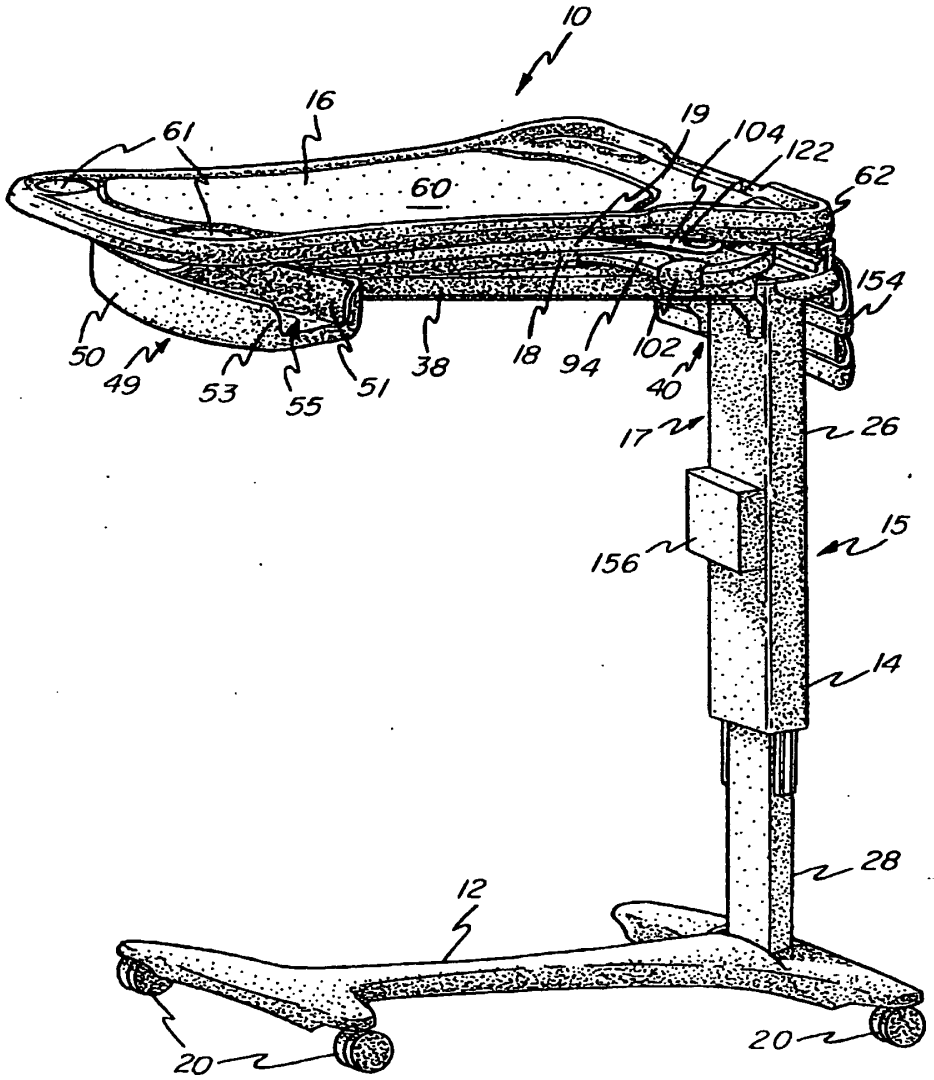

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FIG - 2

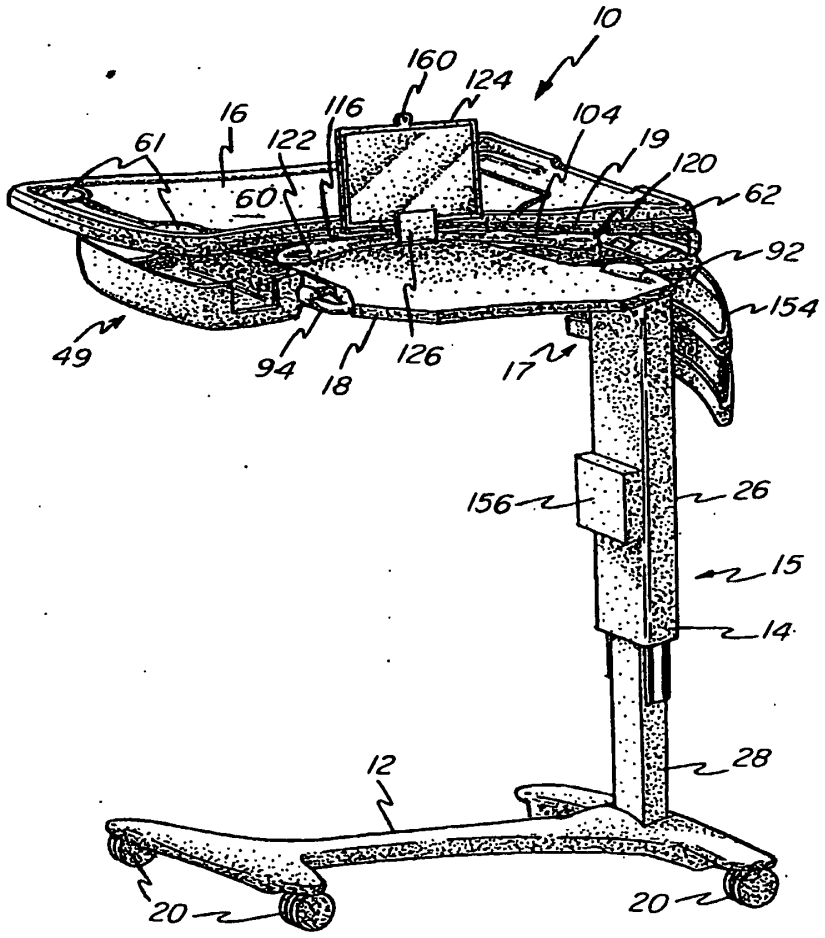

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FIG - 3

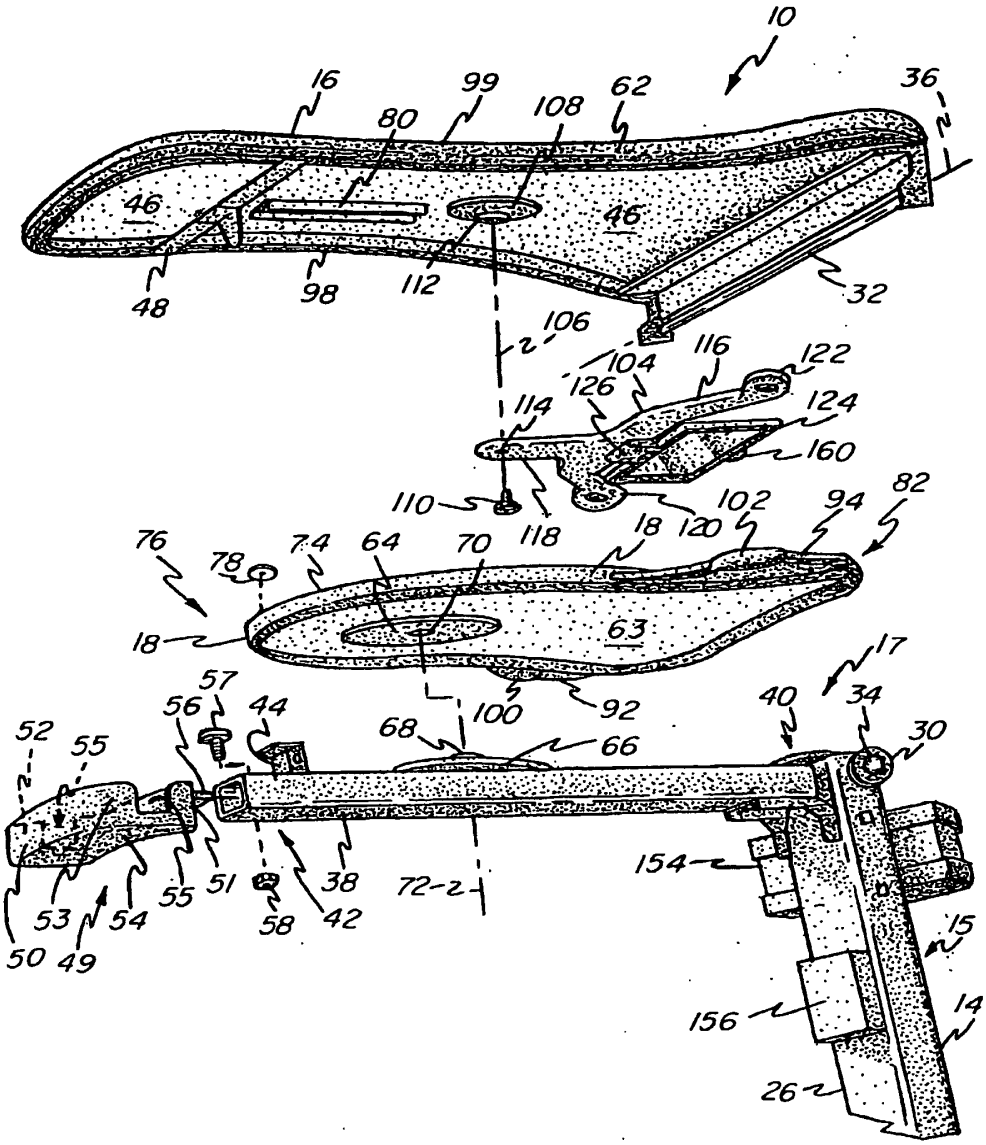

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FIG - 4

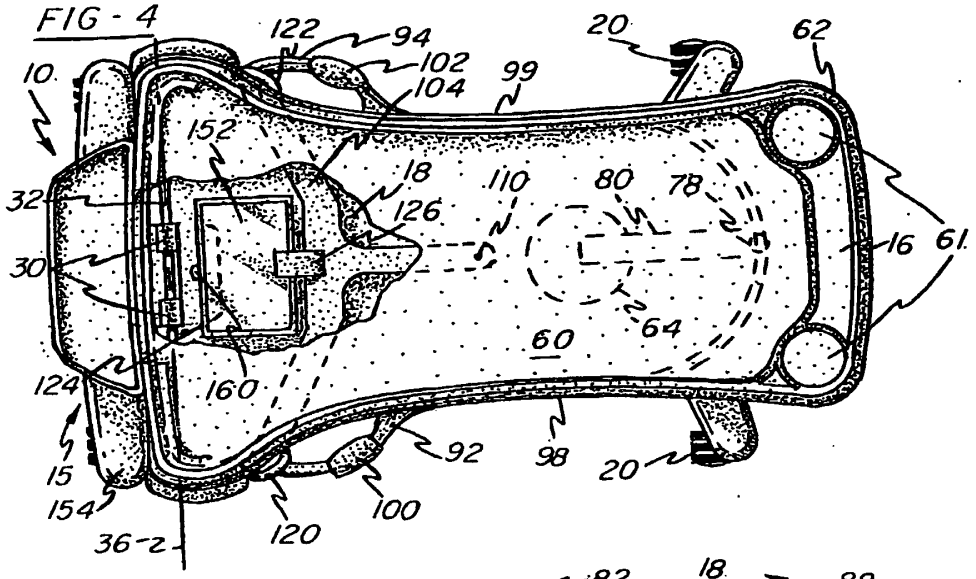
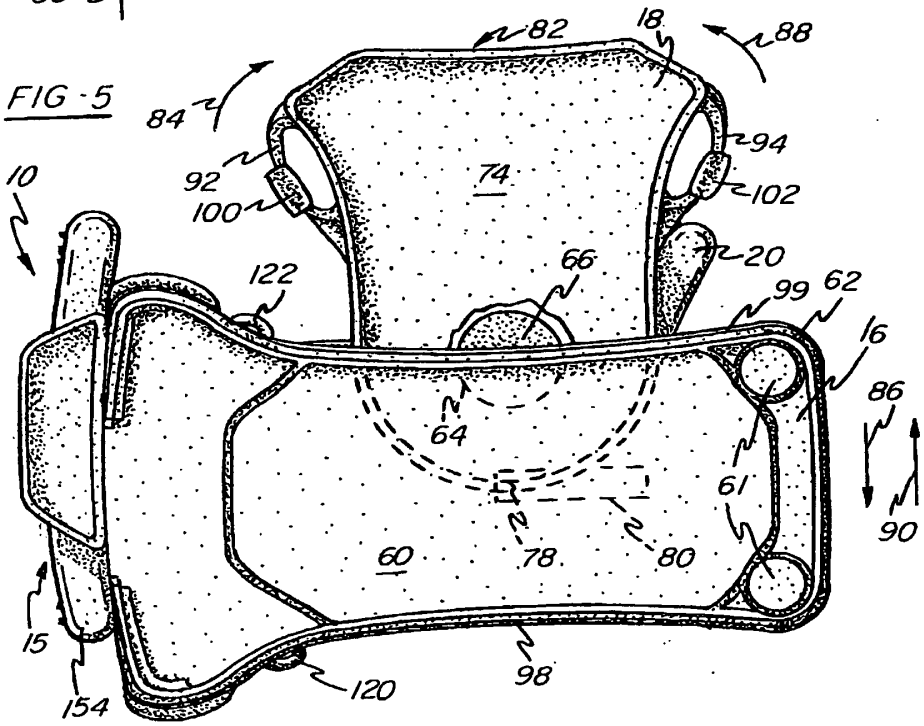
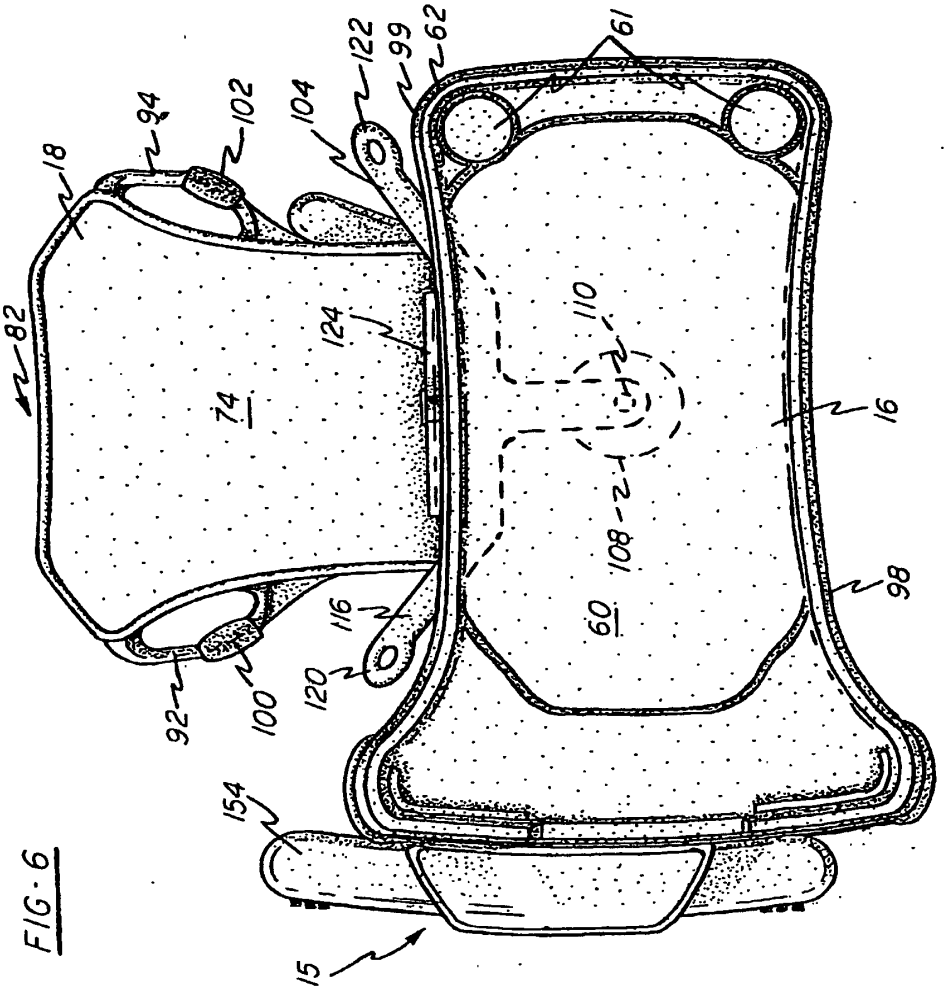

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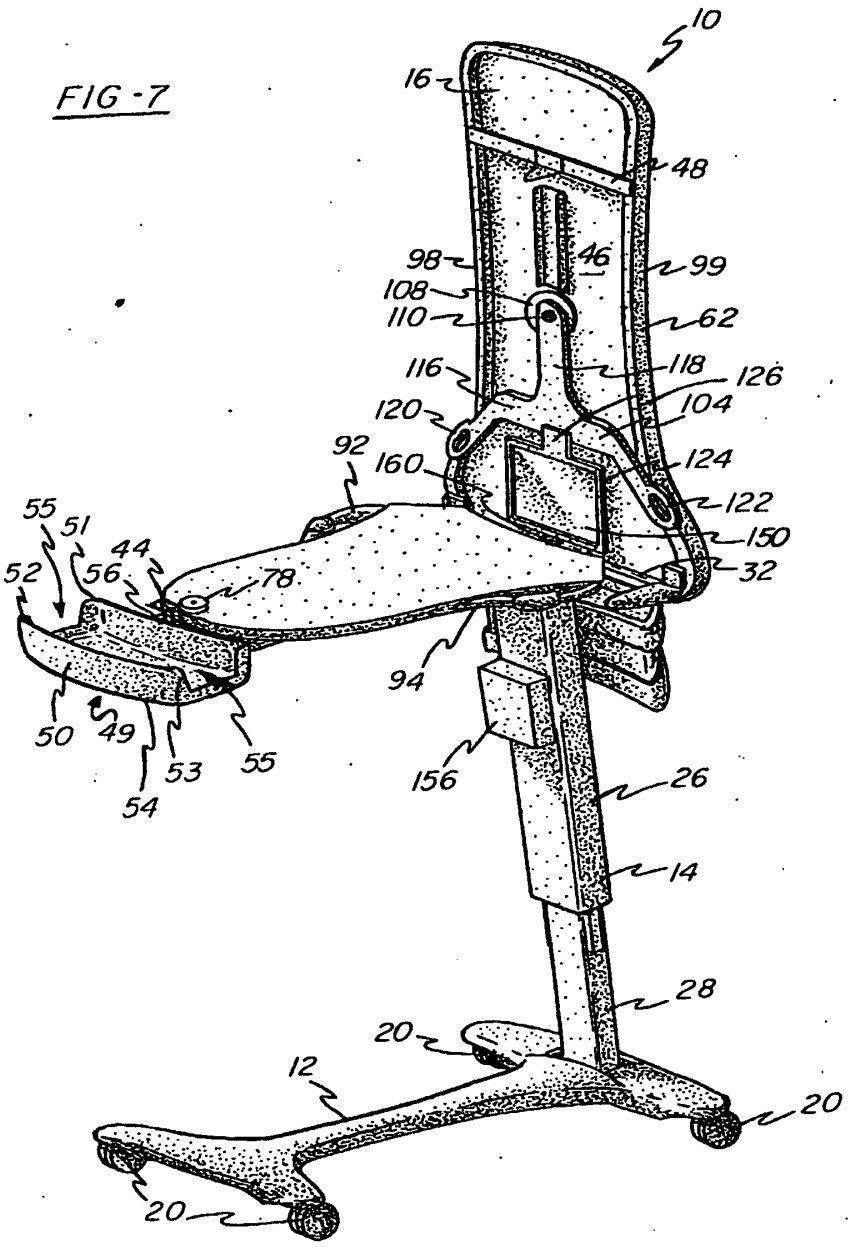
FIG - 5


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FIG·6

FIG -7


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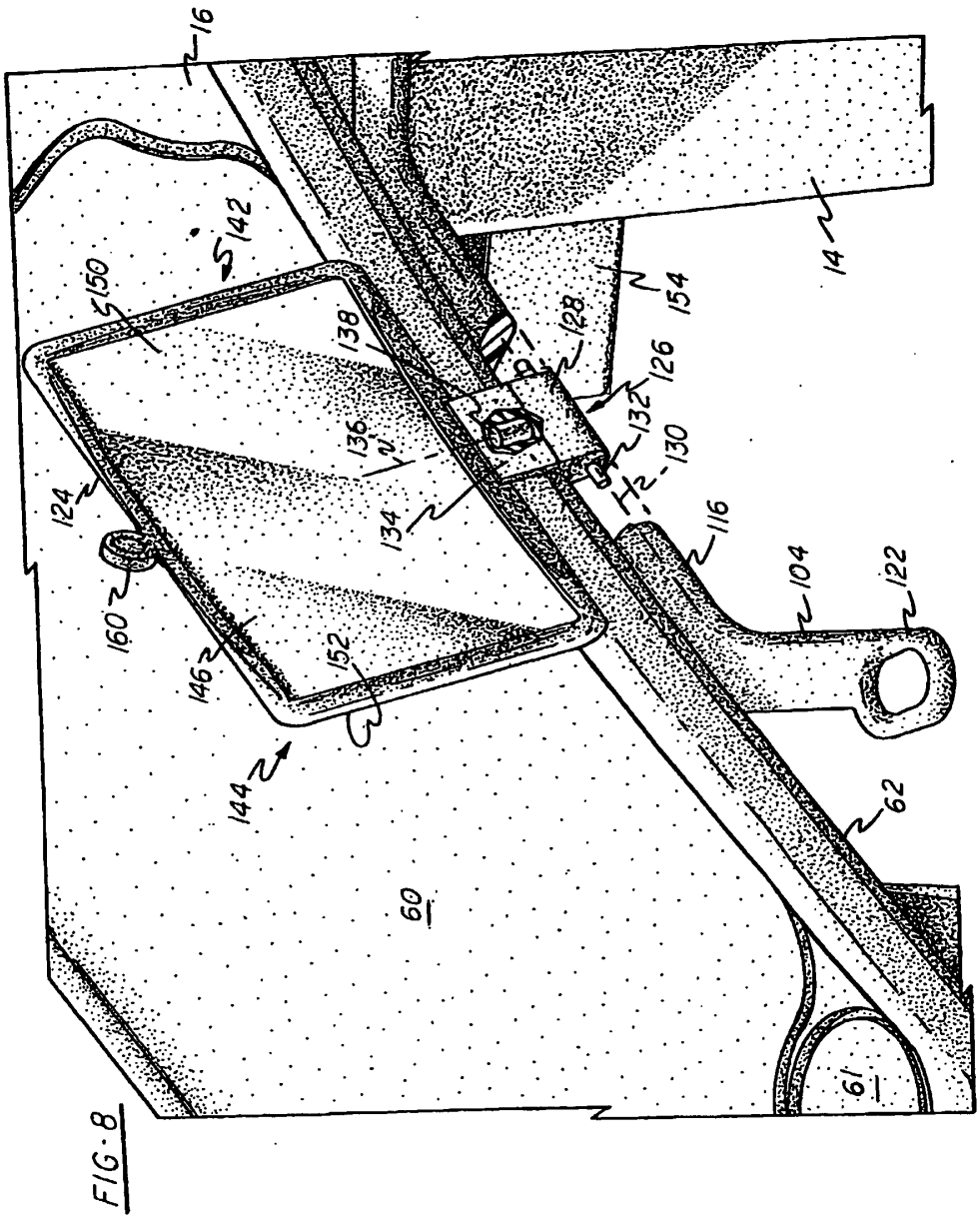

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FIG. 8

FIG - 9

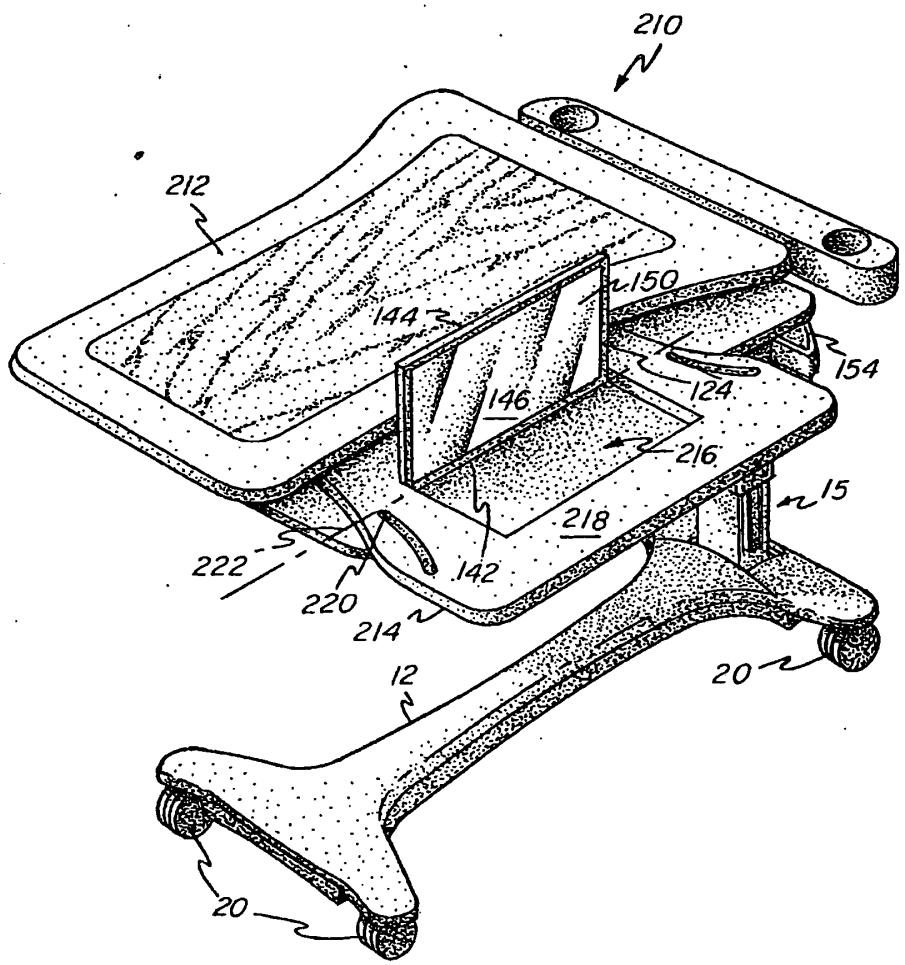


FIG-10

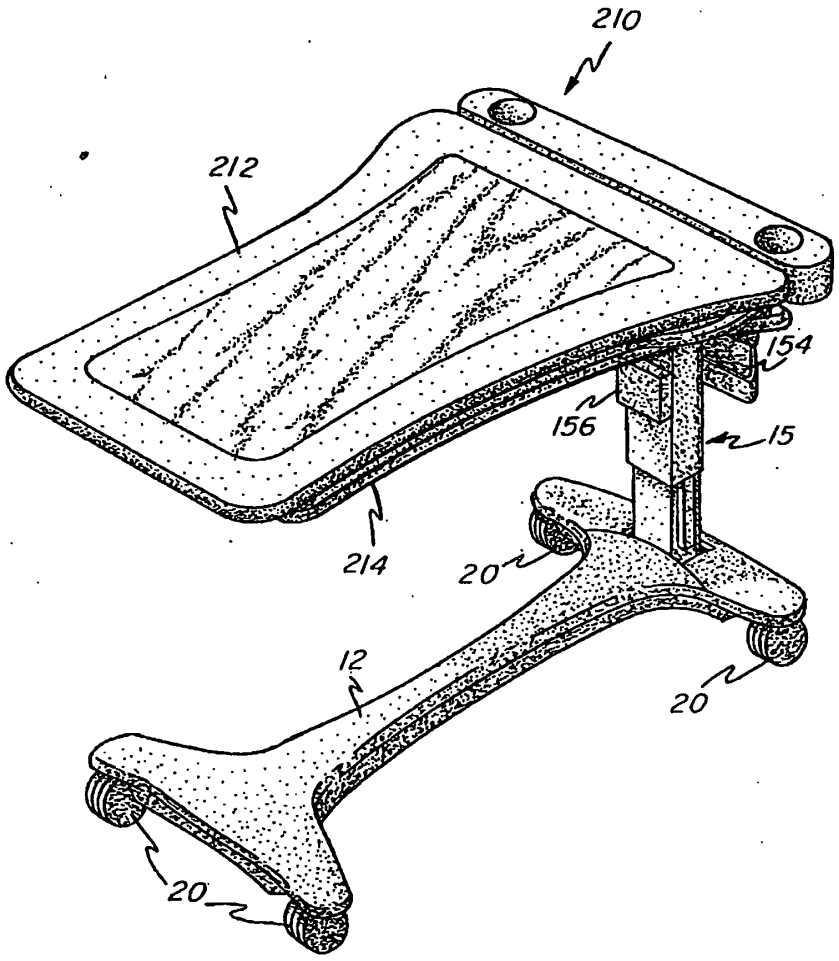


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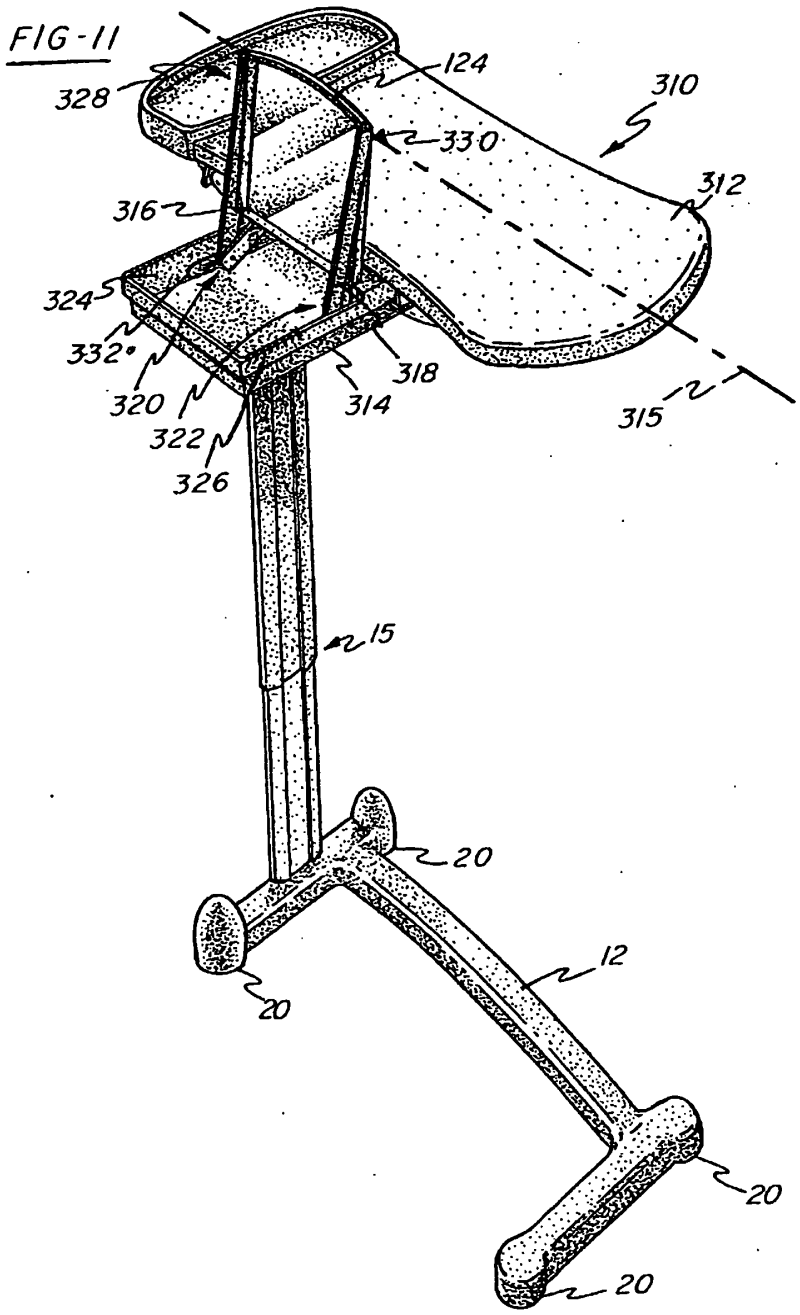

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FIG -12

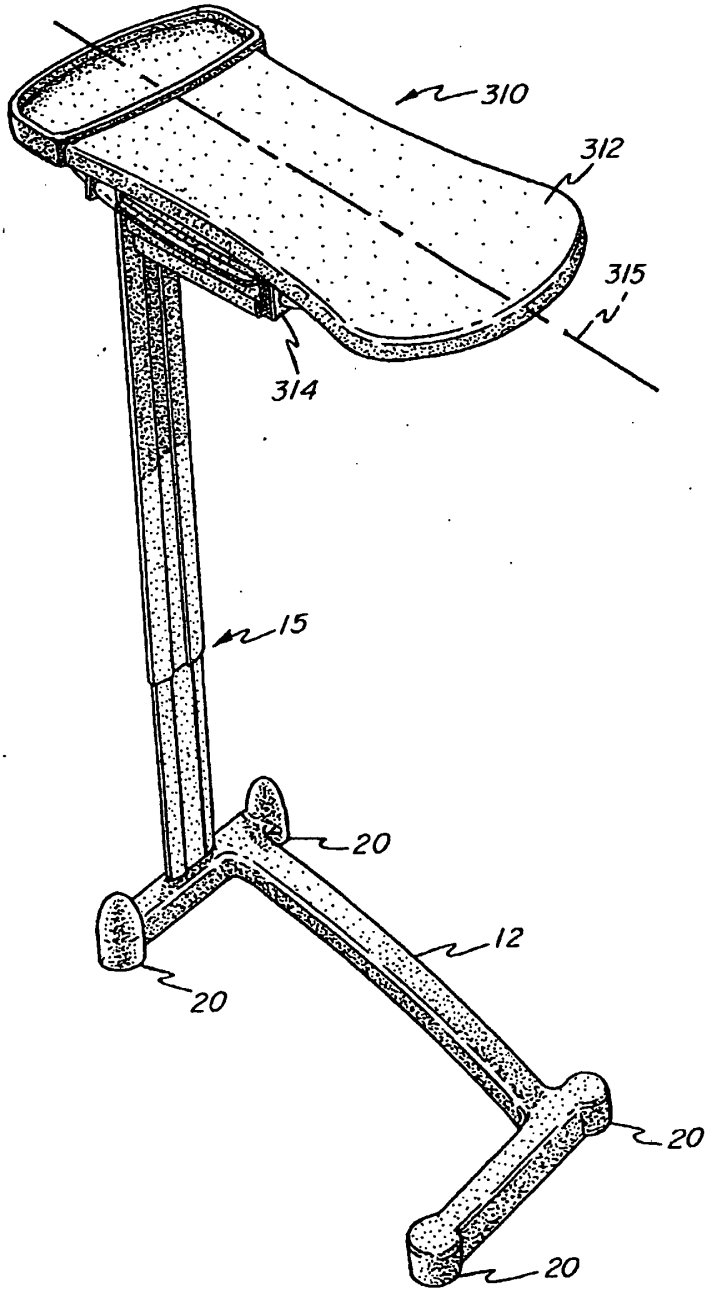
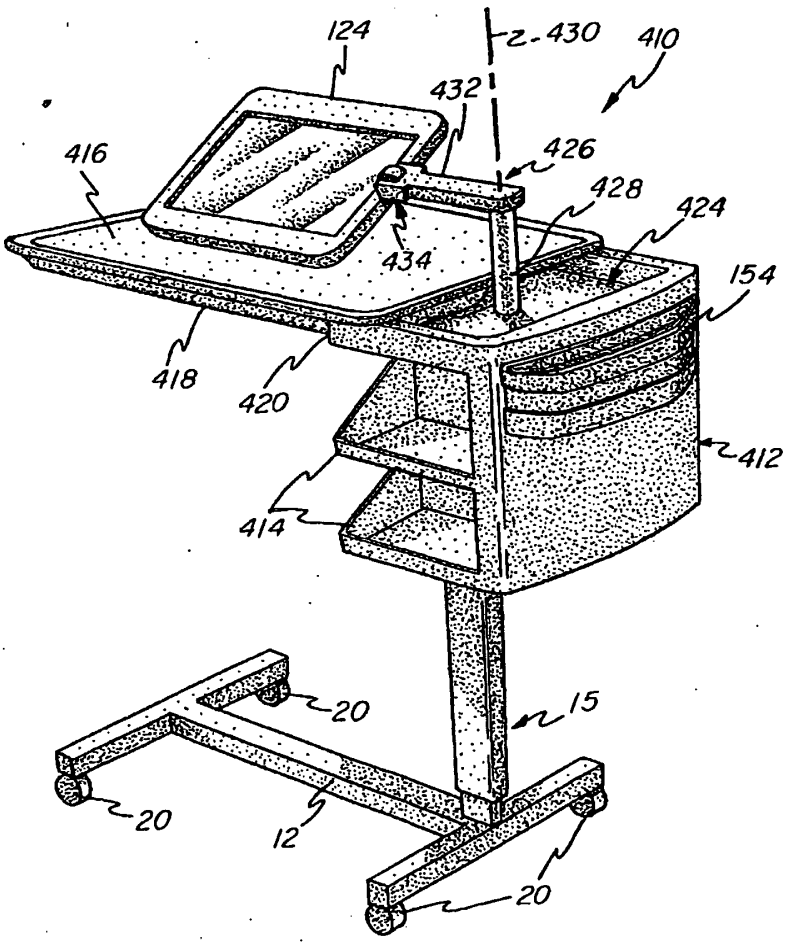


FIG-13


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FIG·14

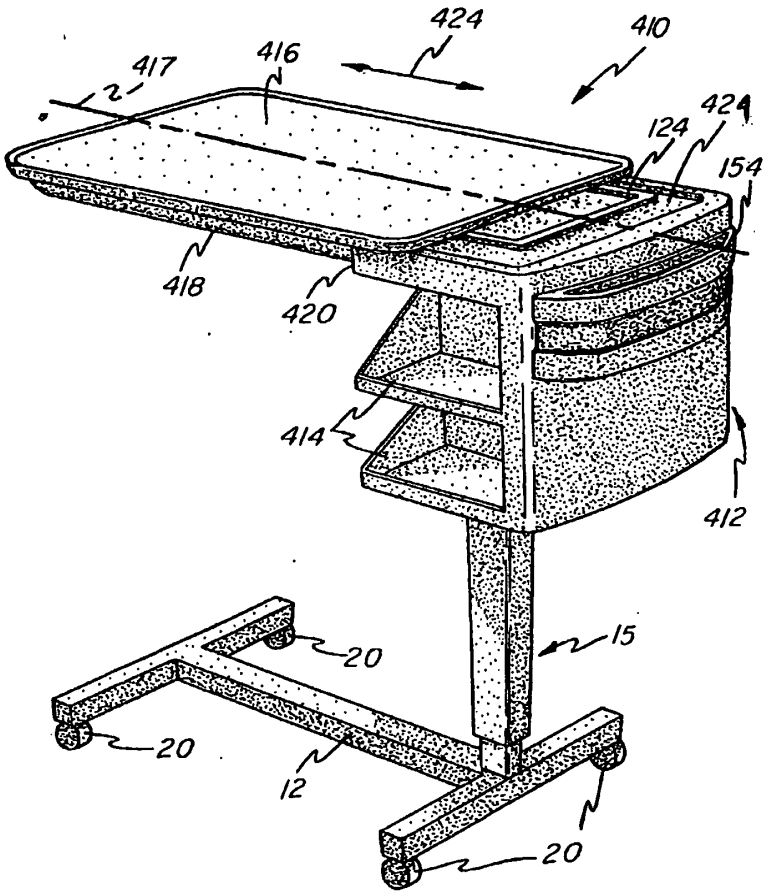


FIG-15

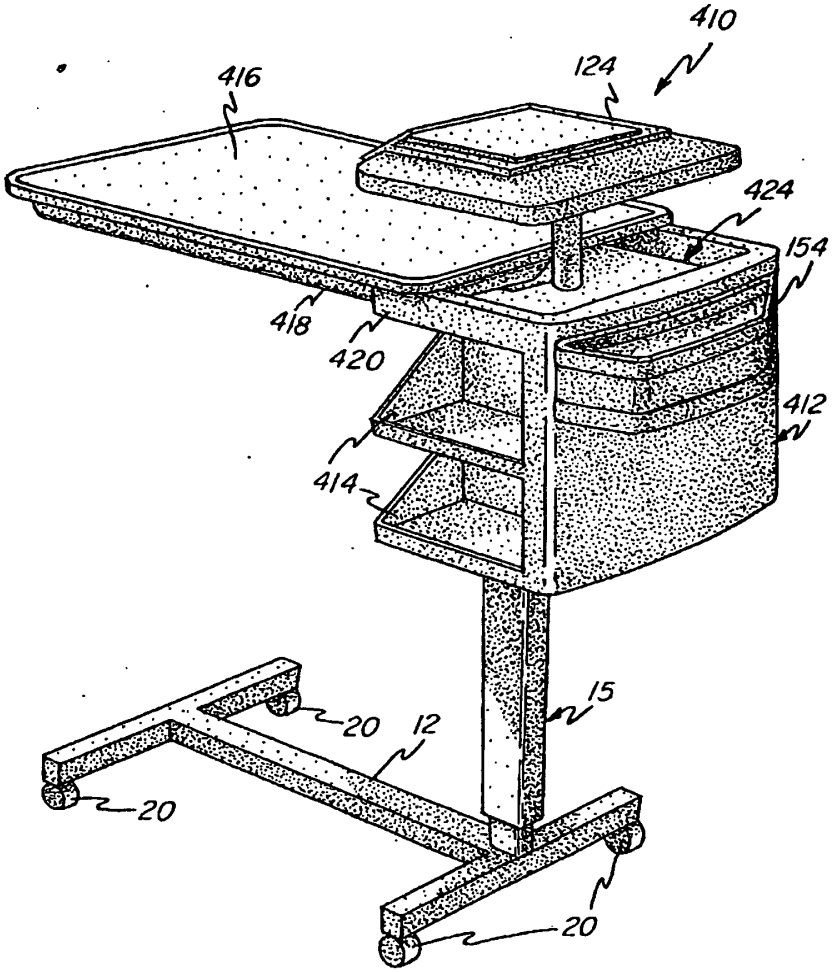
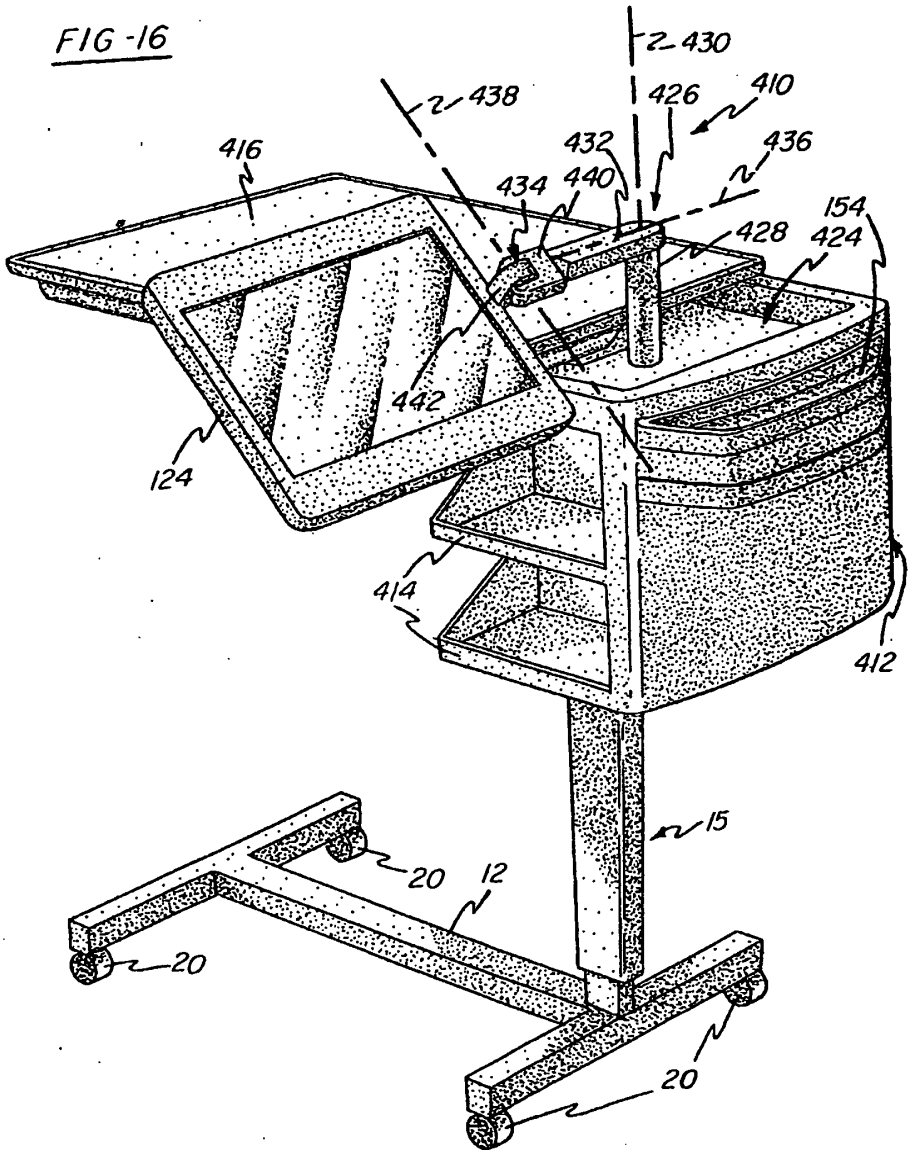


FIG -16


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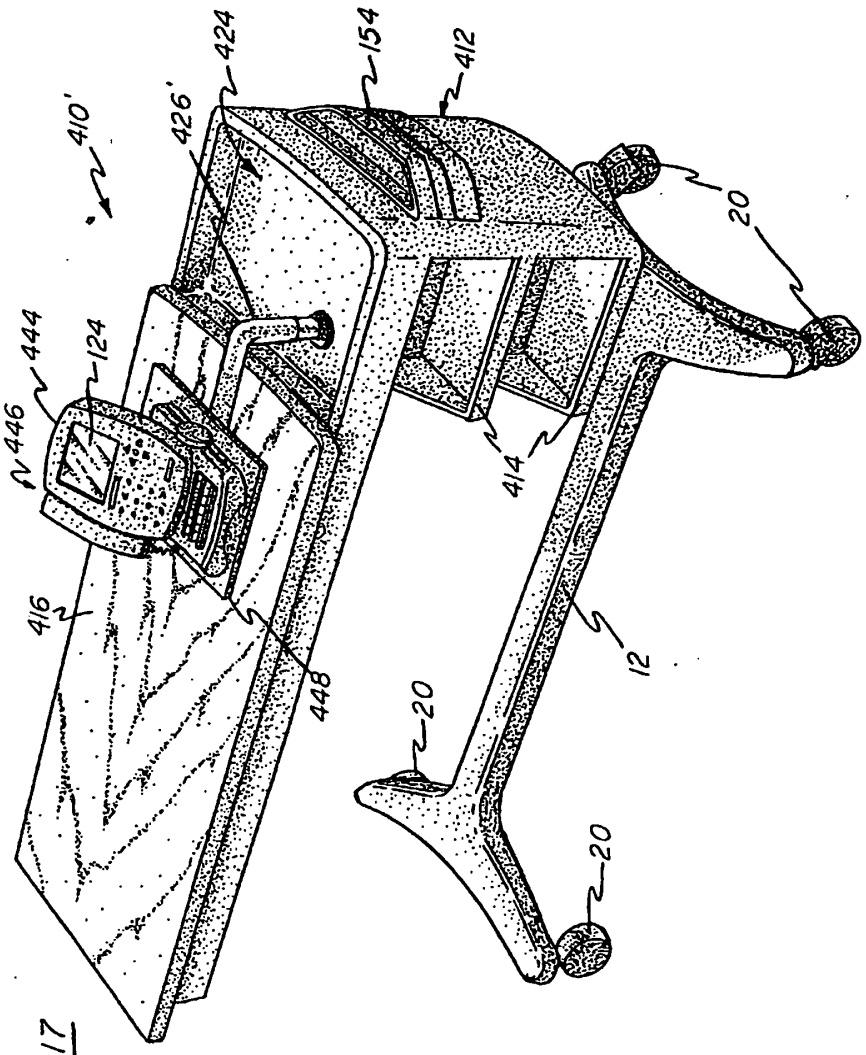


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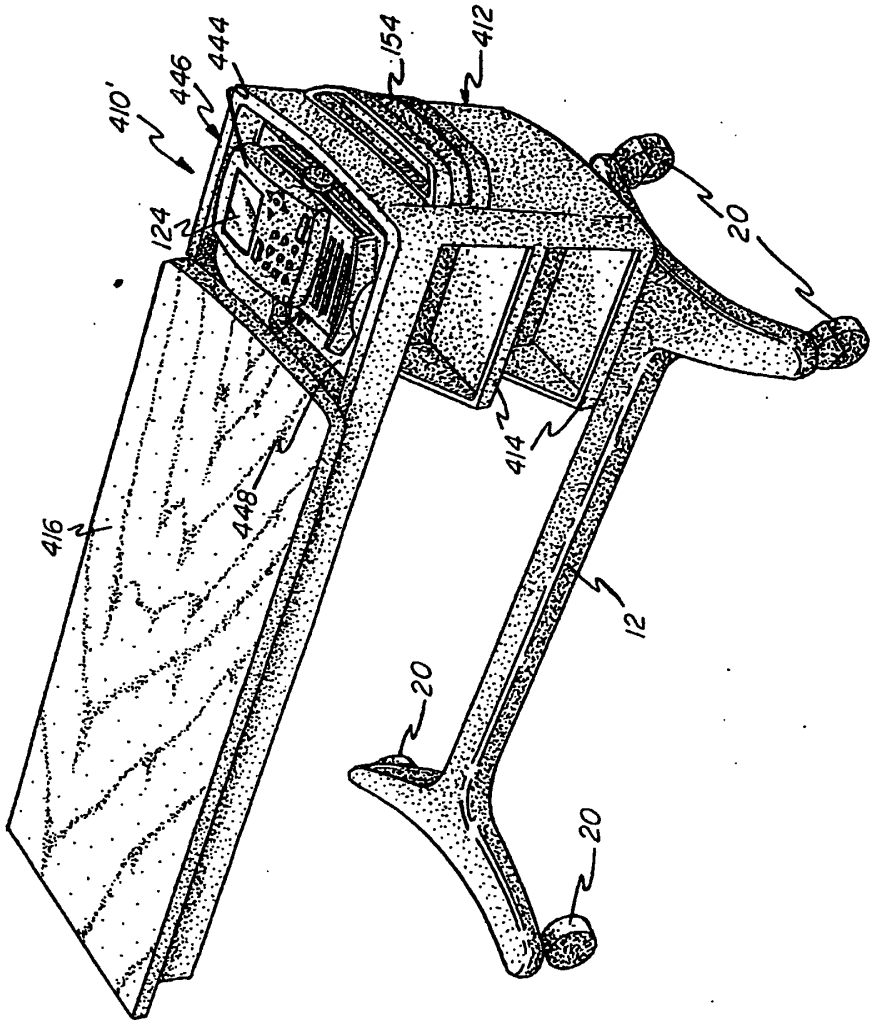


FIG-18

FIG - 19

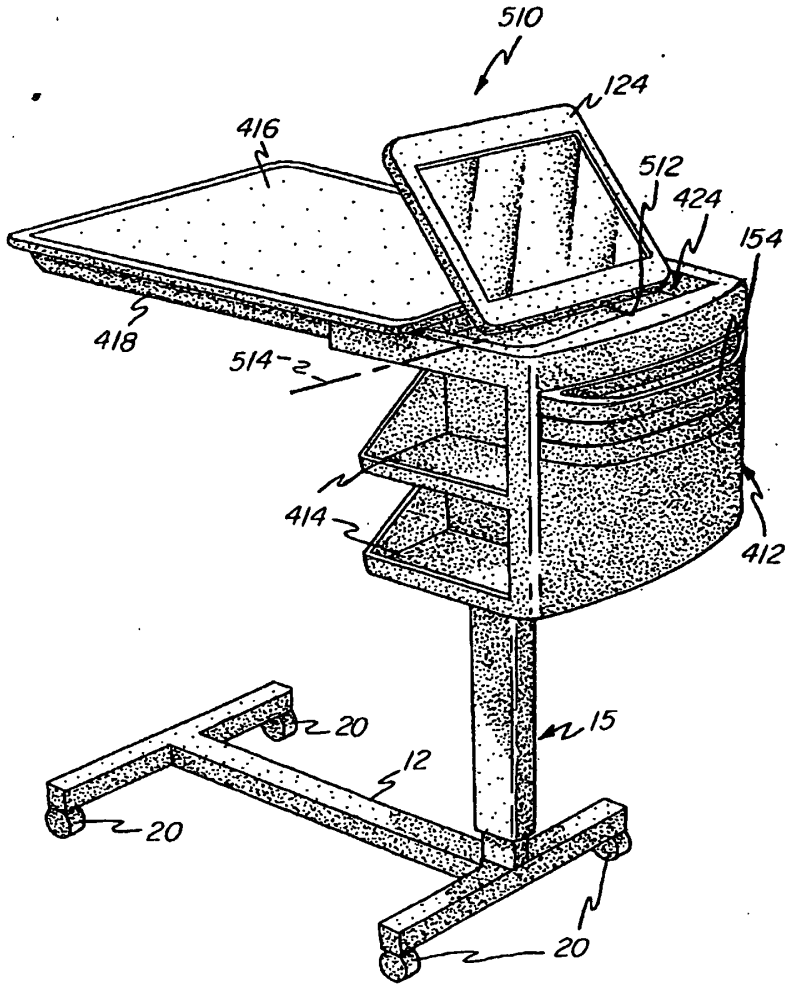


FIG - 20

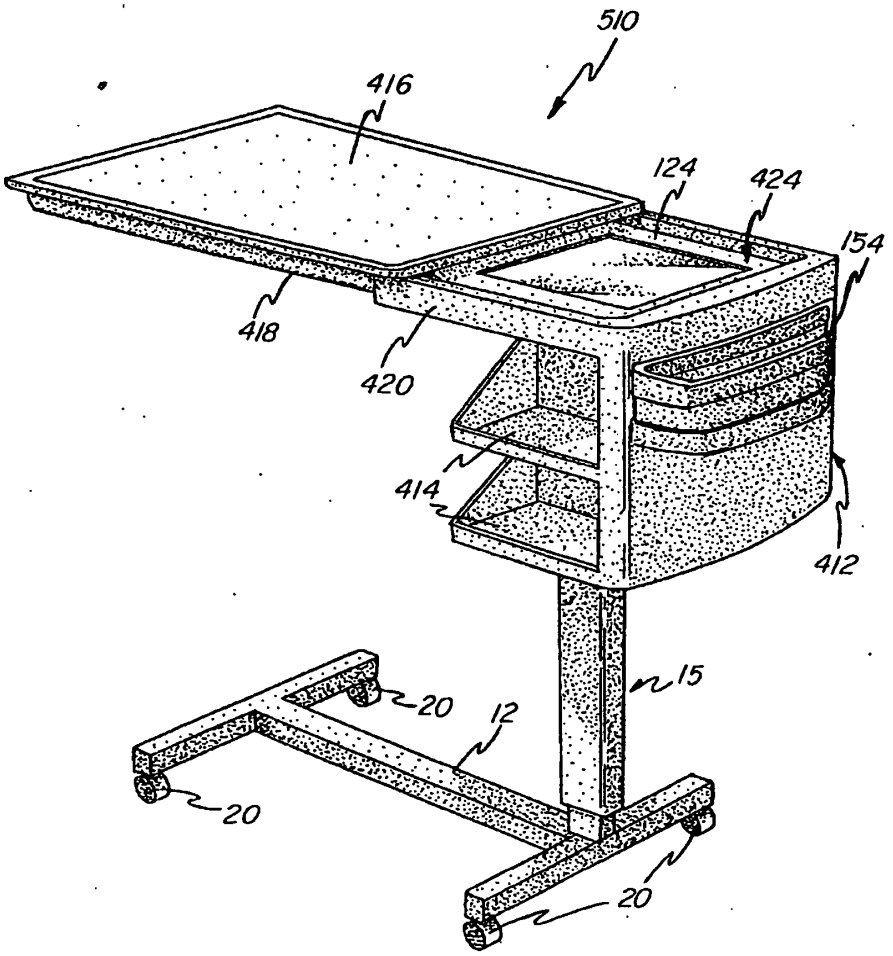


FIG-21

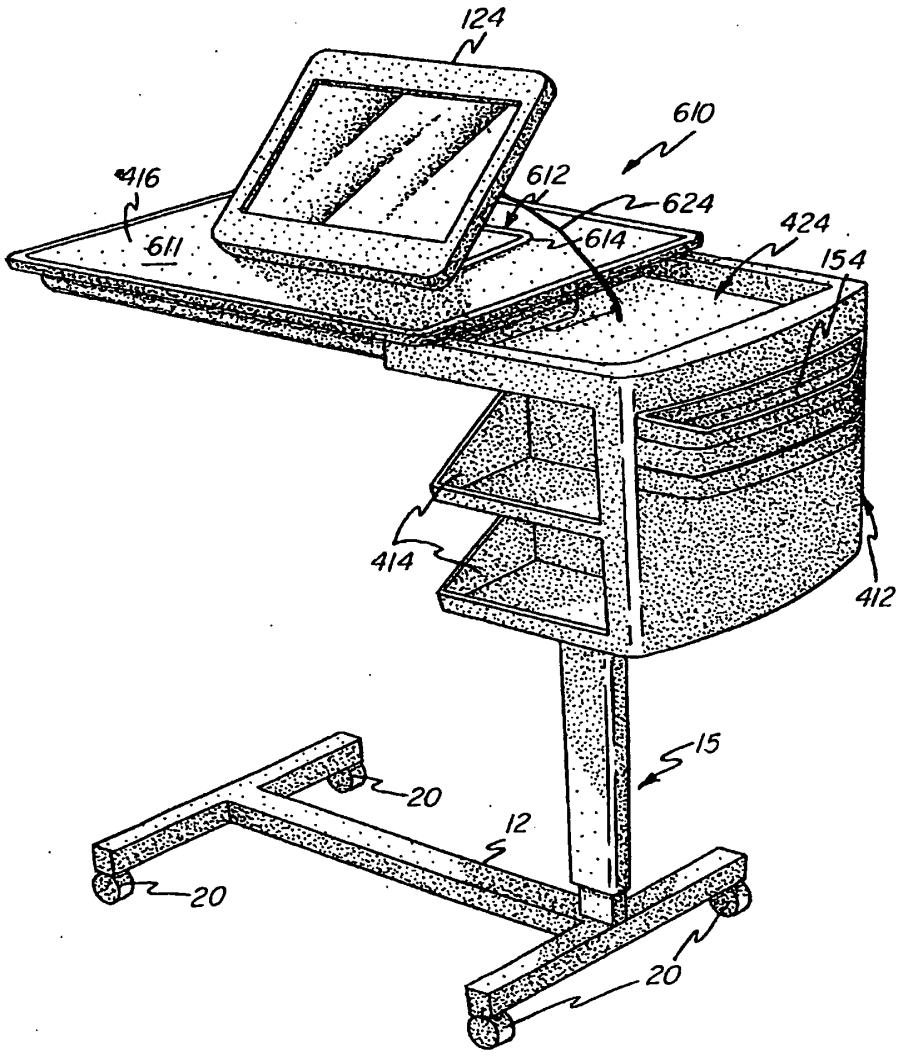
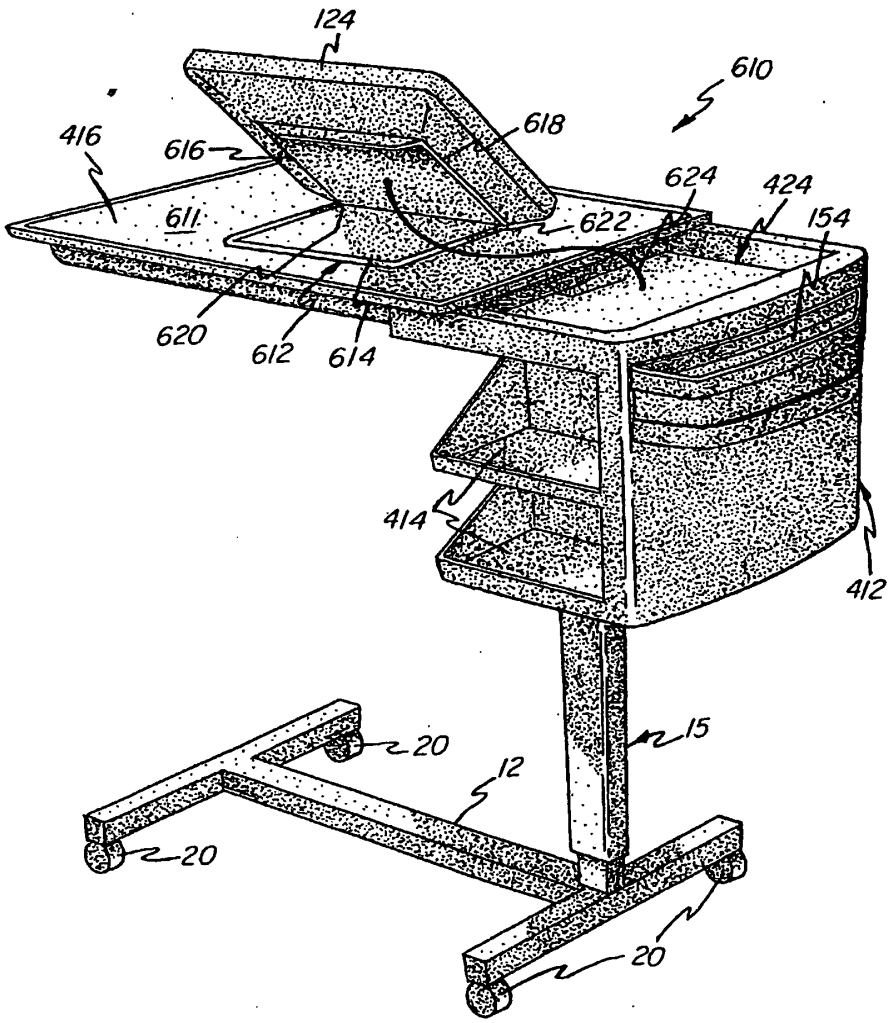


FIG - 22


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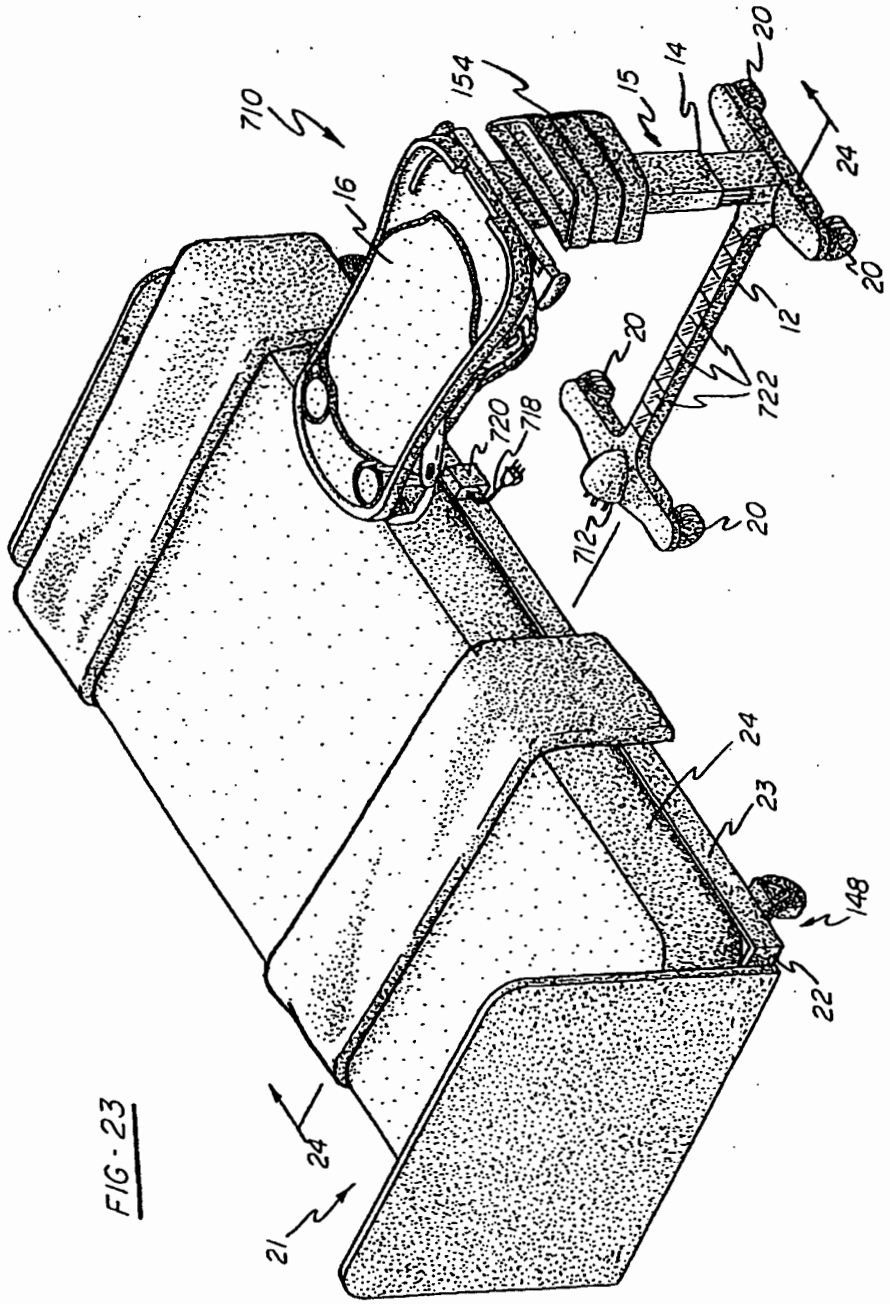


FIG-23

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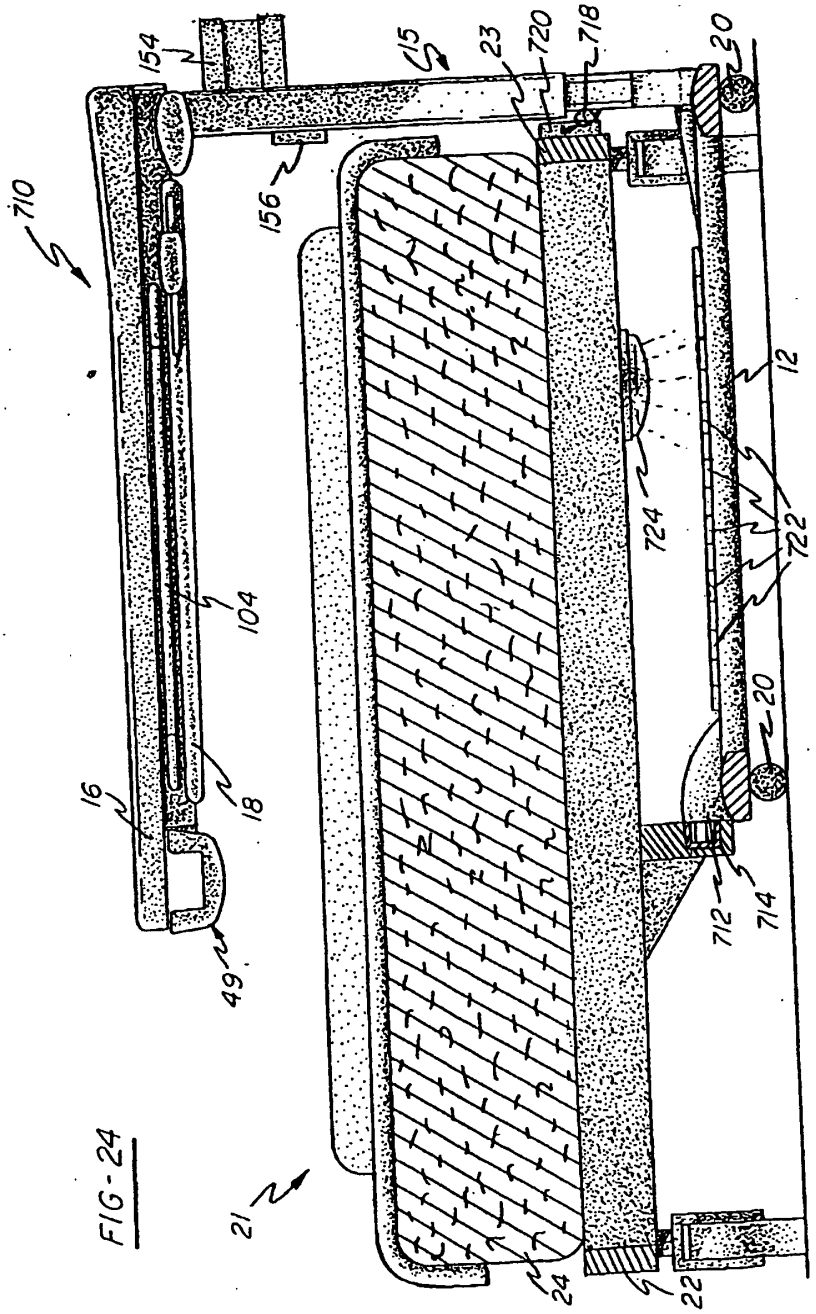

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FIG - 24

INTERNATIONAL SEARCH REPORT

Int ional Application No
PCT/US 02/24619

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A47B23/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A47B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 3 910 659 A (JOERNS FURNITURE COMPANY) 7 October 1975 (1975-10-07) column 1, line 62 -column 2, line 63; figures 1-4	1,11,17, 26,28
A	EP 0 168 158 A (HAUSERMAN INC) 15 January 1986 (1986-01-15) abstract figures 1-6	1,43,45, 47
A	US 4 848 710 A (NEWMAN) 18 July 1989 (1989-07-18) abstract, figures 3,4	1,33,52
A	US 5 473 997 A (SOLOMON) 12 December 1995 (1995-12-12) column 3 -column 6, line 40	1

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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'O' document referring to an oral disclosure, use, exhibition or other means

'P' document published prior to the international filing date but later than the priority date claimed

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'&' document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 November 2002	21/11/2002

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Noesen, R

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

Int ional Application No
PCT/US 02/24619

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3910659 A	07-10-1975	NONE	
EP 168158 A	15-01-1986	AU 4316585 A	12-12-1985
		EP 0168158 A2	15-01-1986
		ES 287268 U	16-11-1985
		JP 61076105 A	18-04-1986
		KR 9403452 B1	22-04-1994
		NZ 212279 A	29-04-1988
US 4848710 A	18-07-1989	CA 1314585 A1	16-03-1993
US 5473997 A	12-12-1995	NONE	

Form PCT/ISA/210 (patent family annex) (July 1992)

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(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENTAMT

(12) **Patentschrift**

(10) **DE 195 40 058 C 1**

(51) Int. Cl.[6]:
A 47 B 79/00
A 47 B 96/14
A 61 G 7/05
// A47B 46/00,88/00

(21) Aktenzeichen: 195 40 058.5-44
(22) Anmeldetag: 27. 10. 95
(43) Offenlegungstag: –
(45) Veröffentlichungstag der Patenterteilung: 13. 6. 96

Innerhalb von 3 Monaten nach Veröffentlichung der Erteilung kann Einspruch erhoben werden

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(74) Vertreter:
Beyer, R., Dipl.-Ing., Pat.-Anw., 40883 Ratingen

(72) Erfinder:
Pahl, Gerrit, Ing.(grad.), 80638 München, DE

(56) Für die Beurteilung der Patentfähigkeit in Betracht gezogene Druckschriften:
NICHTS ERMITTELT

(54) Kombinierter Bett-Nachttisch

(57) Die Erfindung betrifft einen kombinierten Bett-Nachttisch, bei welchem Schubladen, Nachttischkorpus oder Ablageböden an einem Schlitten, zum Beispiel adaptierbar angeordnet sind. Der Schlitten ist in vertikaler Richtung höhenverstellbar und arretierbar, verstellt also bei seiner Höhenverstellung die an ihm unverrückbar befestigten Gegenstände wie Schubladen, Korpusteil oder Bettischplatte ebenfalls mit. Die an dem Schlitten angeordneten Teile bilden zusammen mit dem vertikalen Führungssteg für den Schlitten und Teilen des Nachttisches eine etwa "C"- oder "M"-Form.

DE 195 40 058 C 1

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BUNDESDRUCKEREI 04. 96 602 124/298 31

DE 195 40 058 C1

Beschreibung

Gattung

Die Erfindung betrifft einen kombinierten Bett-Nachttisch zur Verwendung in Krankenhäusern Pflegeheimen oder Reha-Kliniken.

Stand der Technik

Kombinierte Bett-Nachttische der vorausgesetzten Gattung sind in mannigfaltigen Konstruktionen vorbekannt.

Bei einer durch die DE-PS 19 08 438 vorbekannten Konstruktion besteht der kombinierte Bett-Nachttisch aus einem Bettischteil, der aus zwei senkrecht, parallel mit Abstand nebeneinander angeordneten, durch ein Querrohr verbundenen und mittels einer als Feder ausgebildeten Hubhilfe teleskopartig höhenverstellbaren Säulen, wobei parallel zu den zwei Säulen zwei Führungen zum Herauf- und Herabschwenken einer Bettischplatte aus einer senkrechten Ruhestellung in eine waagerechte Gebrauchsstellung — und umgekehrt — angeordnet sind. Die Führungen sind als geschlitzte Führungsrohre ausgebildet, in deren Schlitz je ein über eine Traverse mit der Bettischplatte in Verbindung stehender Zapfen seitlich geführt und drehbar ist. Eine Energie speichernde, als Feder ausgebildete Hubhilfe für die Bettischplatte ist mit dem Zapfen innerhalb des Führungsrohres kraftschlüssig verbunden.

Durch die DE-PS 19 51 980 ist ein Nachttisch mit einer sich im wesentlichen über die Höhe und Tiefe des Korpus erstreckenden Nische an einer Seitenwand vorbekannt, mit einer schwenkbaren Bett-Tischplatte mit einer im unteren Bereich der Nische kippbar befestigten Führungs- und Halteeinrichtung, bei dem in Nichtgebrauchsstellung der Bett-Tischplatte die Nische die Führungs- und Halterungseinrichtung aufnimmt und von der Bett-Tischplatte abgedeckt wird. Die Bett-Tischplatte ist aus dieser Stellung durch begrenztes Herauskippen aus der Nische, Hochbewegen an der Führung und Schwenken in eine waagerechte Gebrauchsstellung zu bringen. Es ist ferner mindestens eine auf seiner einen Seite mit Teilen der Nische und auf seiner anderen Seite mit der Führungseinrichtung verbundene Vorrichtung für das Begrenzen des Herauskippens vorgesehen, mit einer in der Gebrauchsstellung der Tischplatte wirksamen Sperre gegen ein Zurückkippen, wobei Einrichtungen vorgesehen sind, die beim Zurückbewegen der Tischplatte in die Nichtgebrauchsstellung die Sperre aufheben. Diese Vorrichtung besteht aus einem zweiarmigen, nach Art eines Scharniers gestalteten Kniegelenkhebel mit gelenkigen Verbindungsstellen, dessen Arme bei herausgekippter Führungs- und Halterungseinrichtung so gestreckt gehalten sind, daß er die Sperre bildet, und bei dem der mit Teilen der Nische verbundene Arm über die Verbindungsstelle mit dem anderen Arm bis in den Bereich der Führungs- und Halterungseinrichtung reichend verlängert ist wobei an dem die Tischplatte tragenden und mit ihr hoch- und herunterbewegten Teil der Führungs- und Halterungseinrichtung ein Vorsprung vorgesehen ist, der beim Herunterbewegen des Teils mit der Tischplatte auf den verlängerten Arm trifft, den Hebel einknickt und so mit dem verlängerten Arm zusammen die die Sperre aufhebende Einrichtung bildet.

Durch die DE-PS 21 18 277 ist ein Krankenhaus-

Nachttisch, vorzugsweise kombiniert mit einem ausschwenkbaren Bett-Tisch, vorbekannt, mit einer Oberplatte und einer Unterplatte und einem nach drei Seiten hin zumindest teilweise offenen Korpus, wobei die Oberplatte frei überstehend an der vierten Korpusseite angeordnet und unterhalb mit einer Schublade versehen ist, während sich weitere Laden in der Projektion dieser oberen Schublade und im unteren Bereich des Nachttisches befinden und zwischen den oberen und unteren Laden ein unausgefüllter Bereich vorhanden ist. Mindestens eine der Laden ist unterhalb der Schublade als nach zwei Seiten des Nachttisches hin um je eine senkrechte Schwenkachse herausschwenkbare Schwenklade eingerichtet, wobei im Bereich der einen Ecke der Schwenklade nahe dem geschlossenen Seitenteil des Nachttischkorpus eine der Schwenkachsen angeordnet ist und an dieser Achse wenigstens ein Querstab gelagert ist, dessen Länge im wesentlichen der Breite des Nachttisches an dessen geschlossener Seite entspricht und der an seinem freien Ende die andere Schwenkachse trägt an welcher die Schwenklade drehbeweglich angeordnet ist, wobei zwischen dem Querstab und der Schwenklade nahe der erstgenannten Schwenkachse und zwischen dem Querstab und dem Nachttischkorpus nahe der letztgenannten zweiten Schwenkachse je eine Verbindungseinrichtung angeordnet ist, mittels derer die jeweiligen Teile durch Angriff an der Schwenklade leicht verbindbar und voneinander lösbar sind.

Die DE-PS 22 16 756 zeigt einen Krankenhaus-Nachttisch mit einem nach drei Seiten hin teilweise offenen Korpus mit einer Oberplatte, wobei die Oberplatte frei überstehend an der vierten Korpusseite angeordnet und unterhalb der Oberplatte mindestens eine Lade angeordnet ist, die als Schwenklade ausgebildet und nach zwei Seiten des Nachttisches hin herausschwenkbar eingerichtet ist, wobei im Bereich der einen Ecke der jeweiligen Schwenklade, und zwar nahe dem geschlossenen Teil des Nachttischkorpus, eine erste senkrechte Schwenkachse angeordnet ist, an der wenigstens ein Querstab gelagert ist, dessen Länge im wesentlichen der Breite des Nachttisches entspricht und der an seinem freien Ende eine zweite senkrechte Schwenkachse trägt, an welcher die Schwenklade herausschwenkbar angreift, so daß die Schwenklade wahlweise sowohl um die erste Schwenkachse als auch um die zweite Schwenkachse schwenkbeweglich ist, wobei zwischen Querstab und der Schwenklade und zwischen dem Querstab und der geschlossenen Seite des Nachttischkorpus je eine durch auf die Schwenklade auszuübende Handzugkraft lösbare und mit dem Einschwenken der Schwenklade in den Korpus ebenso leicht auch wieder arretierbare Verbindungsvorrichtung angeordnet ist, die nach Lösen die Schwenklade in der gewünschten Schwenkrichtung freigeben und in Einschwenkstellung der Schwenklade einerseits den Querstab mit dem geschlossenen Teil des Nachttischkorpus und andererseits den Querstab mit der Schwenklade verriegeln. Die Verbindungsvorrichtungen sind durch im Bereich des mittleren Längenbereiches des Querstabes angeordnete Hakenverriegelungsvorrichtungen gebildet, mit mindestens je einem Haken, von denen der eine Haken mit dem geschlossenen Teil des Nachttischkorpus über eine senkrechte Achse um ein begrenztes Maß federnd schwenkbeweglich und der andere Haken über eine senkrechte Achse federnd schwenkbeweglich mit der Schwenklade verbunden ist und beide Haken ein am Querstab befindliches Rastwiderlager in Einschwenkstellung der Schwenklade teilweise umgreifen, derart, daß in der ei-

nen Schwenkrichtung der Schwenklade der an dem geschlossenen Teil des Nachttischkorpus angeordnete Haken das Rastwiderlager freigibt und die Schwenklade um die erste Schwenkachse schwenkt, während beim Ausschwenken der Schwenklade zur anderen Seite des Nachttisches der an der Schwenklade angeordnete Haken das Rastwiderlager freigibt und der an dem geschlossenen Teil des Nachttischkorpus angeordnete Haken das Rastwiderlager verriegelnd hintergreift.

Die DE-PS 22 21 430 betrifft ebenfalls einen kombinierten Bett-Nachttisch für Krankenhäuser mit einem Bettischteil der aus zwei senkrecht, parallel und mit Abstand nebeneinander angeordneten, durch ein Querrohr verbundenen, teleskopartig verstellbaren Säulen besteht, und bei dem parallel zwischen diesen beiden Säulen zwei mit Abstand nebeneinander angeordnete, mit dem aus den Säulen und dem Querrohr gebildeten umgekehrt U-förmigen Bügeln verbundene Gleitstangen vorgesehen sind, die als Führungen zum Herauf- und Herabschwenken einer an einer Traverse befestigten Bettischplatte aus einer senkrechten Ruhestellung in eine waagerechte Gebrauchsstellung und umgekehrt dienen und mindestens einer Gleitstange eine drehbeweglich an der Traverse befestigte Bremsvorrichtung mit einem Bremsengehäuse zugeordnet ist, welche beim Aufwärtsziehen der Bettischplatte und bei deren Umlegen in die waagerechte Gebrauchsstellung durch ihr Gewicht in ihrer nicht bremsenden Stellung gehalten ist und beim Herabschwenken der Bettischplatte von der betreffenden Gleitstange durch Reibung nach oben gezogen wird und zwischen der Gleitstange verspannbar ist und dadurch die Abwärtsbewegung der Bettischplatte gebremst ist. Der betreffenden Gleitstange ist ein in einer Aussparung des Bremsengehäuses beweglich angeordneter Bremsklotz zugeordnet, der durch die Wände des Bremsengehäuses seitlich geführt und zwischen der Gleitstange und einem lagenverstellbaren Widerlager entsprechend der Bewegungsrichtung der Bettischplatte verspannbar und entspannbar ist, wobei das Bremsengehäuse sekantenförmig auf der dem Widerlager diametral gegenüberliegenden Seite von einer Führungsbohrung für die betreffende Gleitstange durchsetzt ist, und wobei das Bremsengehäuse in allen Stellungen der Bettischplatte gegenüber der betreffende Gleitstange dieselbe Lage in Bezug auf diese Gleitstange beibehält.

Die DE-PS 22 59 494 zeigt einen Krankenhaus-Nachttisch mit Korpus und Oberplatte, unterhalb welcher mindestens eine Schwenklade angeordnet ist, die mittels einer Scharnierarmkonstruktion wahlweise nach zwei einander gegenüberliegenden Seiten des Nachttisches um je eine senkrechte Achse herausschwenkbar ist, wobei die eine Achse einem Scharnier zwischen Schwenklade und Scharnierarm und die andere Achse einem Scharnier zwischen Scharnierarm und Korpusrückwand zugeordnet sind. Zwei übereinanderliegende, gegeneinander schwenkende Scharnierarme sind bei dieser Konstruktion vorgesehen, die an entgegengesetzten Enden mittels entsprechender Scharniere an der Korpusrückwand angelenkt sind, während die diesen Anlenkstellen jeweils entgegengesetzten Enden der Scharnierarme mittels entsprechender Scharniere mit Achsen mit der Schwenklade gelenkbeweglich gekuppelt sind, wobei die an der Korpusrückwand festsitzenden Achsen bei in den Korpus eingeschwenkter Schwenklade jeweils koaxial mit den an der Schwenklade festsitzenden Achsen verlaufen und der Schwenklade ein vorspringender Anschlag zugeordnet ist.

Aus der DE-PS 39 17 094 ist ein Krankenhaus-Nachttisch mit einer Oberplatte, die aus einer waagerechten Gebrauchslage zum Zugänglichmachen des darunter befindlichen Raumes wegbewegbar ist vorbekannt, die sowohl in der Gebrauchs- als auch in der wegbewegten Lage arretierbar ist, wobei die Oberplatte in vertikaler Ebene wegschwenkbar angeordnet ist. Am Nachttischkorpus ist eine Doppel-Drehfeder vorgesehen, deren einer Schenkel an der Unterseite der Oberplatte und deren anderer Schenkel an der einem korpusfesten Widerlager an liegt, während die Doppel-Drehfeder mit einem Auge auf einer Stange gelagert ist, die am Nachttischkorpus angeordnet ist, derart, daß ihre Längsachse parallel zur Schwenkachse für die Oberplatte verläuft, wobei das Verriegelungsteil ein plattenförmiges Element ist, das entweder auf einem Längenabschnitt selbst federelastisch ausgebildet ist, oder aber über ein Federteil mit der Unterseite der Oberplatte verbunden ist, wobei das Verriegelungsteil eine Rastnase aufweist, die unter eine korpusfeste Rastleiste in Verriegelungsstellung einrastet.

Die US-PS 2 666 679 zeigt ebenfalls einen kombinierten Bett-Nachttisch mit vertikal höhenverstellbarer Bettischplatte, die um horizontal angeordnete Scharniergelenke auf die Oberplatte flach aufklappbar ist.

Alle beschriebenen kombinierten Bett-Nachttische weisen ein Fußteil mit Rollen auf. Die Fußteile bestehen in der Regel aus waagerecht angeordneten, brettartigen Gebilden, in deren Eckpunkten die Rollen, zum Beispiel um je eine vertikale Achse, drehbar gelagert sind.

Aufgabe

Der Erfindung liegt die Aufgabe zugrunde, einen kombinierten Bett-Nachttisch der vorausgesetzten Art dahingehend erheblich zu verbessern, daß seine Einsatzmöglichkeiten und auch seine Handhabung erheblich verbessert werden.

Lösung

Die Aufgabe wird durch die in Patentanspruch 1 wiedergegebenen Merkmale gelöst.

Einige Vorteile

Bei dem erfindungsgemäßen kombinierten Bett-Nachttisch sind alle für den Gebrauch notwendigen Teile, also nicht nur das Ausziehtablett, sondern auch etwaige Schubladen, Ablageböden und dergleichen zusammen und gleichzeitig ohne ihre räumliche Zuordnung zueinander zu verändern in vertikaler Richtung höhenverstellbar an einem Schlitten angeordnet. Dadurch wird nicht nur die Möglichkeit eröffnet, das Ausziehtablett in geeigneter Weise über den zum Beispiel im Bett liegenden Patienten in der erforderlichen Höhe anzuordnen, sondern es wird erstmalig auch die Möglichkeit eröffnet, gleichzeitig hiermit auch die Schublade oder die Schubladen und Ablageböden zu verstellen, so daß der Patient oder die Pflegeperson sie besser erreichen können. Hierzu dient ein mit dem Fußteil einstükkig verbundener Steg, der zusammen mit einem an diesem geführten Schlitten eine etwa umgekehrt T-förmige Gestalt aufweist. Der Flansch oder Kopf des "T" ist dabei horizontal — in Bezug auf den Aufstellboden — angeordnet und trägt die Rollen, während der Steg die Führung für den Schlitten bildet. An dem Schlitten können die verschiedenen Schubladen oder Ablageböden je

nach Kundenwunsch adaptierbar angeordnet werden. Man hat es also in der Hand, entweder werkseitig oder beim Benutzer selbst Schubladen und/oder Ablageböden an dem Schlitten anzuordnen, also den Schlitten unterschiedlich zu bestücken.

Während das ausziehbare Teil des Ausziehtablettes mit dem Schlitten und dem Steg des "T" eine L-artige Gestalt aufweisen, bildet die Oberplatte des Tisches mit dem Schlitten oder der Führung, also mit dem Steg des umgekehrt "T"-förmigen Fußteils etwa eine "C"-Gestalt.

Werden unterhalb der Oberplatte eine Schublade und im Abstand zu dieser eine Oberplatte oder Schublade angeordnet, so bilden diese Teile mit dem Schlitten und dem Steg eine etwa "M"-Gestalt, wobei zum Beispiel die unterhalb der Oberplatte angeordnete obere Schublade einem Balken des "M", eine darunter angeordnete weitere Schublade oder ihre Oberplatte einen anderen Abschnitt des "M" und der Kopf oder Flansch des umgekehrt "T"-förmigen Fußteils einen weiteren Teil des "M" bilden. Das "M" wird damit auf einer Seitenfläche stehen. Diese Gestalt ist vorteilhaft im Gebrauch besonders in Krankenhäusern, Reha-Kliniken und Pflegeheimen, da sie einen geringen Platzbedarf aufweist, aber andererseits es ermöglicht, das Ausziehtablett in der erforderlichen Weise komfortabel über einem Krankenbett anzuordnen. Die umgekehrt "T"-förmige Gestalt des Fußteils ergibt hohe Kippstabilität, wobei der zum Beispiel aus einem Ablageboden und Schubladen gebildete Korpus innerhalb der senkrechten Umrißprojektionsflächen des "T"-förmigen Fußteils liegt, also wenig Raum beansprucht.

Weitere erfinderische Ausgestaltungen

In Patentanspruch 2 ist eine sehr vorteilhafte Ausführungsform der Erfindung beschrieben, bei welcher der Schlitten an beabstandeten Säulen in vertikaler Richtung geführt ist. Diese Säulen bilden zum Beispiel den Steg des umgekehrt T-förmigen Fußteils.

Bei der Ausführungsform nach Patentanspruch 3 ist der Flansch, also der Kopf des Fußteiles als nach oben und zu den Seiten hin als offene Ablagewanne ausgebildet.

Patentanspruch 4 beschreibt eine bevorzugte Ausführungsform der Erfindung.

Hierfür beschreibt Patentanspruch 5 eine weitere Alternative.

Wird eine Ausführungsform gemäß Patentanspruch 6 gewählt, so ergibt sich eine besonders leichtgängige Führung für den Schlitten an dem vertikalen Steg des umgekehrt T-förmigen Fußteils.

Eine weitere vorteilhafte Ausführungsform beschreibt Patentanspruch 7.

In der Zeichnung ist die Erfindung — teils schematisch — beispielsweise veranschaulicht. Es zeigen:

Fig. 1 eine Seitenansicht eines kombinierten Bett-Nachttisches, in Tiefstellung gefahren, bei eingeschobenem Ausziehtablett;

Fig. 2 eine Draufsicht zu **Fig. 1**;

Fig. 3 den aus **Fig. 1** ersichtlichen kombinierten Bett-Nachttisch; allerdings bei vollständig horizontal ausgezogenem Ausziehtablett;

Fig. 4 eine Draufsicht zu **Fig. 3**;

Fig. 5 den aus den **Fig. 1** bis 4 ersichtlichen kombinierten Bett-Nachttisch, in hochgefahrenem Zustand, ebenfalls in der Seitenansicht und bei ausgezogenem Ausziehtablett;

Fig. 6 eine Darstellung entsprechend **Fig. 5** bei eingeschobenem Ausziehtablett;

Fig. 7 eine Darstellung entsprechend **Fig. 3**, allerdings einen Längsschnitt nach der Linie VII-VII der **Fig. 2**, bei ausgezogenem Ausziehtablett;

Fig. 8 den aus **Fig. 7** ersichtlichen kombinierten Bett-Nachttisch, allerdings bei eingeschobenem Tablett;

Fig. 9 einen Querschnitt nach der Linie IX-IX der **Fig. 1**;

Fig. 10 eine Rückansicht eines in Hochstellung gefahrenen kombinierten Bett-Nachttisches;

Fig. 11 eine Darstellung entsprechend **Fig. 10**, allerdings bei abgenommener Abdeckung für den Schlitten;

Fig. 12 eine Darstellung entsprechend **Fig. 10**, in Tiefstellung des Nachttisches;

Fig. 13 eine Rückansicht entsprechend **Fig. 12**, allerdings bei abgenommenen Abdeckungen, unter anderem für den Schlitten, ebenfalls in Tiefstellung des Nachttisches;

Fig. 14 einen Querschnitt durch einen Nachttisch im Bereich des Fußteils mit Bremshebel auf einer Seite des Nachttisches;

Fig. 15 das Fußteil mit dem Schlitten, teils im Querschnitt, teils mit geschnittener Rolle, teils in der Ansicht;

Fig. 16 einen Teilquerschnitt durch einen kombinierten Bett-Nachttisch gemäß der Erfindung im Bereich des Fußteils und im Bereich der Bremshebel, wobei eine Abdeckung zum Teil weggebrochen ist;

Fig. 17 eine teilweise Draufsicht auf das Fußteil;

Fig. 18 einen Schnitt nach der Linie XVIII-XVIII der **Fig. 17**;

Fig. 19 eine Ansicht von oben, allerdings ohne Ausziehtablett, ohne Oberplatte und ohne Rastknopf, ohne Abdeckung für das Tablett, teils im Schnitt;

Fig. 20 eine Ansicht von oben, allerdings ohne Ausziehtablett, ohne Oberplatte und ohne Rastknopf mit Abdeckung für das Tablett;

Fig. 21 eine Einzelheit aus einem kombinierten Bett-Nachttisch, teils herausgebrochen dargestellt, mit Spindeltrieben, Getriebehaube und Klemmbügel, in größerem Maßstab;

Fig. 22 eine Ansicht von oben mit rechts und links angeordneten Getrieben;

Fig. 23 eine Einzelheit im Bereich eines Getriebes mit Spindeltrieb sowie Zwischenboden, in größerem Maßstab;

Fig. 24 einen Schnitt nach der Linie XXIV-XXIV der **Fig. 21**, in abermals größerem Maßstab;

Fig. 25 eine Rolle in der Ansicht;

Fig. 26 die aus **Fig. 25** ersichtliche Rolle, teils herausgebrochen dargestellt;

Fig. 27 die aus **Fig. 25** ersichtliche Rolle, teils herausgebrochen dargestellt, gegenüber **Fig. 26** um 90 Grad gedreht;

Fig. 28 einen Schnitt nach der Linie XXVIII-XXVIII der **Fig. 27**;

Fig. 29 eine Draufsicht auf die aus **Fig. 26** ersichtliche Rolle;

Fig. 30 ein komplettes Kupplungsrohr, teils im Schnitt, teils herausgebrochen dargestellt, in größerem Maßstab;

Fig. 31 eine Seitenansicht zu **Fig. 30**;

Fig. 32 eine Sperrwippe für die Schubladen, in der Seitenansicht;

Fig. 33 einen Querschnitt nach der Linie XXXIII-XXXIII der **Fig. 32**;

Fig. 34 eine Draufsicht zu **Fig. 32**, teils herausgebrochen dargestellt;

Fig. 35 eine Rückansicht der aus **Fig. 32** ersichtlichen

Sperrwippe;

Fig. 36 eine Stirnansicht zu Fig. 35;

Fig. 37 ein Tragprofil, teils abgebrochen dargestellt, in der Seitenansicht

Fig. 38 eine Stirnansicht zu Fig. 37;

Fig. 39 eine Draufsicht zu Fig. 37, teils im Schnitt;

Fig. 40 eine Mutter in der Stirnansicht;

Fig. 41 eine Draufsicht zu Fig. 40;

Fig. 42 eine Ansicht auf die Mutter;

Fig. 43 eine Draufsicht zu Fig. 41;

Fig. 44 einen Schnitt nach der Linie XXXXIV-XXXXIV der Fig. 41;

Fig. 45 einen Schnitt nach der Linie XXXXV-XXXXV der Fig. 41;

Fig. 46 einen Schnitt nach der Linie XXXXVI-XXXXVI der Fig. 49;

Fig. 47 eine Draufsicht zu Fig. 46;

Fig. 48 eine Seitenansicht zu Fig. 47;

Fig. 49 eine Draufsicht entsprechend Fig. 47, teils herausgebrochen dargestellt;

Fig. 50 das aus den Fig. 46 bis 49 ersichtliche Ausziehtablett in eingeschobenem Zustand, im Längsschnitt ähnlich Fig. 46;

Fig. 51 eine Einzelheit;

Fig. 52 eine Schraubspindel in der Ansicht;

Fig. 53 einen Anschlag in der Draufsicht;

Fig. 54 eine Schraubspindel in der Ansicht, allerdings gegenüber Fig. 52 mit einem montierten Kegelrad mit Wälzlager;

Fig. 55 eine Handkurbel in der Seitenansicht;

Fig. 56 eine Stirnansicht zu Fig. 55;

Fig. 57 eine Ansicht in Richtung des Pfeiles L der Fig. 55;

Fig. 58 einen Kupplungshebel in der Seitenansicht;

Fig. 59 eine Ansicht in Richtung des Pfeiles K der Fig. 58 und

Fig. 60 eine Draufsicht zur Fig. 58.

In der Zeichnung ist die Erfindung in Anwendung auf einen kombinierten Bett-Nachttisch dargestellt, wie er bevorzugt in Krankenhäusern, Pflegeheimen und Reha-Kliniken zur Anwendung gelangt.

Der Nachttisch besteht im wesentlichen aus einem insgesamt mit dem Bezugszeichen 1 bezeichneten Fußteil, einem in Bezug auf den Aufstellboden vertikal, also in Richtung X bzw. Y verstellbaren Schlitten 2 und diesem Schlitten 2 zugeordneter, mit Zwischenraum 3 zueinander angeordneter Schubladen 4 bzw. 5, denen ein ebenfalls mit dem Schlitten 2 verbundener und als Abdeckung für die Schublade 4 dienender horizontaler Zwischenboden 6 zugeordnet ist.

Die obere Schublade 5 wird von einem Ausziehtablett horizontal übergriffen, das insgesamt mit dem Bezugszeichen 7 bezeichnet ist. Auch das Ausziehtablett 7 ist dem Schlitten 2 zugeordnet und mit diesem ebenfalls in Richtung X bzw. Y höhenverstellbar und — ebenso wie die Schubladen 4 und 5 und der Zwischenboden 6 — in der jeweils gewünschten Höhenstellung auch arretierbar. Bei der dargestellten Ausführungsform geschieht die Arretierung über die Selbsthemmung der Schraubspindeln.

Dem Fußteil 1 sind insgesamt vier Rollen zugeordnet, von denen lediglich eine mit dem Bezugszeichen 8 bezeichnet ist. Die Rollen 8 sind etwa in den Eckbereichen des Fußteiles 1 um je eine vertikale Achse 9 unendlich schwenkbeweglich angeordnet.

Dem Fußteil ist eine Bodenwanne 10 zugeordnet, die je nach Höheneinstellung des Bett-Nachttisches entweder von vorne, von rechts und links und von oben, oder aber in der Tiefstellung (z. B. Fig. 1) nur von vorne zugänglich ist. Die Bodenwanne 10 erstreckt sich etwa bis zu dem Schlitten 2 und unterhalb der unteren Schublade 4. In der unteren Stellung des Schlittens 2 und damit der Schublade 4 ist die Bodenwanne 10 mit Freiraum 11 zu der Unterseite der Schublade 4 angeordnet, so daß die Bodenwanne 10 zumindest von vorn gut zugänglich bleibt. Diese Bodenwanne 10 kann zur Ablage von Gegenständen dienen. Ihr Boden ist geneigt und kann gegebenenfalls auch mit Löchern versehen sein, damit beim Desinfizieren die Flüssigkeit gut ablaufen kann.

In der Zeichnung ist die Erfindung beispielsweise dadurch veranschaulicht worden, daß die Schubladen 4 und 5 unterschiedliche Abmessungen und damit unterschiedliche Volumina haben. Selbstverständlich können diese Schubladen 4 und 5 auch gleich groß sein. Es ist außerdem möglich, eine größere Schublade anstelle der Schublade 5 und eine kleinere Schublade anstelle der Schublade 4 vorzusehen.

Außerdem ist die Anzahl auf zwei Schubladen nicht beschränkt. Es können statt dessen zum Beispiel auch drei oder vier Schubladen vorgesehen werden. Statt eine Schublade 5 kann auch nur ein Ablageboden vorgesehen werden, der mit dem Schlitten 2 verbunden ist und dadurch ebenfalls höhenverstellbar ist. Das gleiche gilt auch für die Schublade 4. Hier können statt einer Schublade mehrere Ablageböden mit Höhenabstand zueinander angeordnet sein, die ebenfalls mit dem Schlitten 2 höhenverstellbar gekuppelt sind.

Der gesamte Aufbau des dargestellten Nachttisches kann modular aufgebaut sein, daß heißt je nach Kundenwunsch läßt sich der Nachttisch adaptieren. Diese Adaption kann zum Beispiel dadurch geschehen, daß dem Schlitten 2 die vom Kunden jeweils gewünschten Einzelteile, zum Beispiel eine Schublade und mehrere Ablageböden, drei Schubladen, zwei Schubladen 4 und 5 — wie dargestellt — zugeordnet werden.

Alle diese modularmäßig vorzufertigenden, adaptierbaren Einzelteile lassen sich relativ einfach mit dem Schlitten 2, gegebenenfalls auswechselbar, verbinden, um die verschiedenen Kundenwünsche befriedigen zu können. Hierzu kann der Schlitten 2 geeignete Kupplungsöffnungen aufweisen, die zum Beispiel durch Blindstopfen verschlossen werden können. Diese verschiedenen Öffnungen können in verschiedenen Höhenabständen am Schlitten angeordnet werden, so daß verschieden große Schubladen, gleich große Schubladen, Zwischenböden, im Bedarfsfalle auch gemischt, angeordnet werden können.

Wie zum Beispiel aus den Fig. 1, 3, 5, 6 und 9 hervorgeht, weisen die beiden Schubladen 5 auf gegenüberliegenden Seiten Griffmulden auf, von denen lediglich die Griffmulden 12, 13 und 14 (Fig. 9) mit Bezugszeichen versehen sind. Die Griffmulden 12, 13 und 14 können alle die gleichen Formen und die gleichen Abmessungen besitzen. Die Vorderwand 15 (Fig. 9) der betreffenden Schublade, zum Beispiel 4 und 5, ist einwärts nach einer Kurve 16 verlaufend gekrümmt, die über einen Kreisbogen oder über eine Kurve 17 in einen Wandabschnitt 18 zurückgeführt wird, der auf der Begrenzungsfläche 19 der Vorderwand 15 liegt. Der Wandabschnitt 18 ist gegenüber der Kurve 17 etwas nach vorne gezogen, so daß die Griffmulden 12, 13 und 14 hinsichtlich ihrer inneren Begrenzungsflächen eine etwa tropfenförmige oder stromlinienartige Gestaltung im Querschnitt aufweisen. Die Griffmulden 12, 13 und 14 und alle anderen, nicht ersichtlichen Griffmulden sind somit nach innen verlagert und ragen nach außen nicht hervor. Desinfek-

tionsflüssigkeit kann leicht ablaufen, da die Griffmulden auch in einer Schnittebene, die zum Beispiel orthogonal zu der aus Fig. 9 ersichtlichen Schnittebene geführt ist, allmählich in die Begrenzungsfläche 19 zurückgeführt werden, so daß sich eine insgesamt sprunglose, hohlflächige Umgrenzung der Griffmulden 12, 13 und 14 ergibt, in die der Benutzer mit mehreren Fingern hereingreifen und die Schublade entweder schieben oder ziehen kann.

Wie insbesondere aus den Fig. 7 und 8, aber auch aus den Fig. 1, 3 sowie 5 und 6 zu erkennen ist, ist die Schublade 4 an Führungen 20 und 21 geführt. Hierfür können Teleskopzüge, geführt auf Rollen oder Gleitführungen, verwendet werden, um Leichtgängigkeit zu erreichen. Die Führung 20 kann von dem Zwischenboden 6 getragen werden, während die Führung 21 dem Schlitten 2 zugeordnet ist. Die Führungen 20 und 21 verlaufen horizontal und parallel zueinander.

Auch die Schublade 5 ist durch Führungen 22 bzw. 23, die ebenfalls als Gleit- oder Rollenführungen ausgebildet sein können, geführt und gelagert. Die Führungen 22 und 23 verlaufen parallel zu den Führungen 20 und 21 unterhalb des Tabletts 7 und sind mit dem Schlitten 2 indirekt verbunden, so daß sie mit diesem in Richtung X und Y mit der Schublade 5 höhenverstellbar sind.

Wie insbesondere die Fig. 7 und 8 erkennen lassen, ist die Höhe H der Schublade über ihre gesamte Tiefe unterschiedlich, und zwar ist im vorderen Bereich die Schubladenhöhe H erheblich größer als im hinteren, dem Schieber 2 zugekehrten Bereich. Hier hat die Schublade nur noch die Höhe h. Dadurch brauchen Gegenstände, zum Beispiel Flaschen nicht über die volle Höhe H vom Benutzer, also von einem Patienten, aus der Schublade herausgehoben zu werden. Vielmehr ist es einfacher, diese Gegenstände nur über die Höhe h nach vorne herauszuheben.

Dagegen ist die Höhe der Schublade 5 über den Querschnitt gleichmäßig ausgebildet. Diese Höhe ist auch erheblich geringer als die Höhe H bzw. h der Schublade 4.

Der Zwischenboden 6 ist ebenflächig an seiner Oberseite ausgebildet und kann ebenfalls zum Ablegen von Gegenständen dienen, da der Zwischenraum 3 bei der dargestellten Ausführungsform so groß bemessen ist, daß hier Gegenstände wie Bücher, Schüsseln, Schalen oder persönliche Utensilien abgelegt werden können.

Die Schubladen 4 und 5 können mit nicht dargestellten Öffnungen im Bereich ihres Bodens versehen sein, so daß Desinfektionsflüssigkeit ablaufen kann.

Der Schlitten 2 ist im einzelnen aus den Fig. 21 bis 24 näher zu erkennen. Fig. 23 zeigt zum Beispiel, daß mit dem Schlitten 2 am oberen Ende ein Rahmen 24 durch mehrere Schrauben verbunden ist, die an der oberen Stirnseite des Schlittens 2 angeordnet sind.

Der Zwischenboden 6 ist bei der dargestellten Ausführungsform durch vier Schrauben mit dem Schlitten 2 verbunden, von dem nur die Schraube 25 zu erkennen ist. Deutlich ist aus Fig. 23 auch ein leistenartiges Frontteil 26 der Führung 20 für die Schublade 4 zu erkennen. An der Innenseite des Schlittens ist unterhalb des Zwischenbodens 6 ein Profil 27 angeschraubt, in dessen Bereich die Führung 21 angeordnet ist. In diesem Bereich ist ein Tragprofil 28 (Fig. 9 sowie 37 und 39) vorgesehen, das durch mehrere Schrauben 29 mit einer Schiene links 30 bzw. einer Schiene rechts 31 einstückig verbunden ist. Die Schienen 30 und 31 sind im Querschnitt etwa doppelt U-förmig ausgebildet und weisen mit ihren Schenkeln gegeneinander, und zwar nach innen zur Längsachse des Schlittens 2. Am oberen Ende des Schlittens 2 sind auf diametral einander gegenüberliegenden Seiten gekapselte Getriebe angeordnet, und zwar ein Getriebe rechts 32 und ein Getriebe links 33, denen jeweils eine Handkurbel 34 bzw. 35 zugeordnet ist.

Mit 36 bzw. 37 ist je ein Kegelzahnrad bezeichnet, das jeweils über ein Ritzel 38 bzw. 39 mit je einem als Antriebsrad ausgebildeten Lagerbock 40 bzw. 41 für die Handkurbel 34 bzw. 35 kraftschlüssig zu verbinden ist.

Das Kegelrad 36 bzw. 37 ist über jeweils eine Hohlwelle 42 bzw. 43 an einem Ende in je einem Muffenrohr 44 bzw. 45 und am anderen Ende auf einem Zapfenlager 46 bzw. 47 drehbar gelagert.

Jedes Ritzel 38 und 39 ist über je ein Wälzlager 48 bzw. 49 reibungsarm gelagert. Auch jeder Lagerbock 40 und 41 ist über je ein Wälzlager 50 bzw. 51 leicht drehbar gelagert. Außerdem erkennt man insbesondere aus Fig. 24, das die Lagerböcke 40 und 41 zum Inneren hin gekapselt sind, so daß die gesamte Konstruktion naßdesinfektionsfähig ist.

Bei 52 ist ein Nocken angeordnet, der mit einer Bremsenwelle 53 fest verbunden ist. Die Bremsenwelle 53 ist als Hohlwelle ausgebildet.

Koaxial zur Bremsenwelle 53 ist innerhalb derselben eine ebenfalls als Hohlwelle ausgebildete Handkurbelwelle 54 angeordnet, mit der die Handkurbeln 34 und 35 zusammenwirken. Die Handkurbeln 34 und 35 besitzen je ein kreisbogenförmiges Teil 55 bzw. 56, die mit ihren Enden einander entgegengerichtet sind und an angefasten oder konisch zulaufenden Enden je eine Bohrung 57 bzw. 58 aufweisen, durch die je ein Auge einer Zugfeder 59 hindurchgreift, die in der Handkurbelwelle 54 angeordnet ist und die die Tendenz hat, die Handkurbeln 34 und 35 in die Handkurbelwelle 54 hineinzuziehen.

Die kreisbogenförmigen Teile 55 und 56 sind in Lagerböcken 60 bzw. 61 angeordnet, die kanalartige Öffnungen 62 und 63 aufweisen, die den kreisbogenförmigen Teilen 55 und 56 der Handkurbeln 34 und 35 formmäßig angepaßt sind, so daß diese Teile 55 und 56 darin gleiten können, allerdings nur bis in die aus Fig. 24, links, dargestellte Endlage. Die rechte Darstellung in Fig. 24 zeigt eine Stellung der Handkurbelwelle 54, in der die Handkurbelwelle in einer tassenförmigen Aussparung 64 mit ihrem Griffteil 66 annähernd vollständig angeordnet ist, so daß sie nach außen nicht hervorragt. Der Lagerbock 60 weist ebenfalls eine derartige tassenförmige oder napfförmige Aussparung 65 auf. Die napfförmigen Aussparungen 64 und 65 sind nach innen und gegeneinander gerichtet. Mit 67 ist ebenfalls ein Griffteil der Handkurbel 35 bezeichnet. Werden die Handkurbeln 34 und 35 nicht gebraucht, werden sie durch die Zugfeder 59 in die rohrförmige Handkurbelwelle 54 hineingezogen und stören dann beide nicht. Soll eine der Handkurbeln benutzt werden, wird sie gegen die Rückstellkraft der Zugfeder 59 durch Aufbringung einer Zugkraft auf die betreffende Handkurbel herausgezogen, zum Beispiel bis in die aus Fig. 24, links, dargestellte Lage. Die kreisbogenförmigen Teile 55 und 56 sind im Querschnitt bei der dargestellten Ausführungsform flachoval ausgebildet, während die freien Enden 68 bzw. 69 im Querschnitt rechteckförmig sind und orthogonal zur langen Achse des Ovales verlaufen. Da die kanalartigen Öffnungen 62 und 63 der ovalen Querschnittsform der kreisbogenförmigen Teile 55 und 56 angepaßt sind, begrenzen die im Querschnitt rechteckförmigen Teile 68 und 69 die Auszugsbewegung der kreisbogenförmigen Teile 55 und 56. Durch die besondere Form der kanalförmigen Öffnungen 62 und 63 einerseits und der

hierin gleitend beweglich angeordneten kreisbogenförmigen Teile 55 und 56 der Handkurbeln 34 und 35 andererseits wird somit ein Kraftschluß zwischen den kreisbogenförmigen Teilen 55 und 56 und den betreffenden Lagerbock 60 bzw. 61 hergestellt, so daß bei Aufbringung eines Drehmomentes auf die Handkurbeln 34 und 35 die Lagerböcke 60 und 61 und über diese die mit ihnen getrieblich verbundenen Ritzel 38 und 39 und hierüber das betreffende Kegelzahnrad 36 bzw. 37 gedreht wird.

Die Kegelzahnräder 36 und 37 kämmen mit jeweils einem weiteren Ritzel 70 bzw. 71, dessen Drehachse orthogonal zur Drehachse der Kegelzahnräder 36 bzw. 37 verläuft, wobei sich die Drehachsen des Kegelzahnrades 36 einerseits und des Ritzels 70 sowie die Drehachse des Kegelzahnrades 37 und die Drehachse des Ritzels 71 jeweils in einem Punkt schneiden. Diese Punkte liegen im übrigen auf einer geraden Verbindungslinie, die jeweils orthogonal zur Längsdrehachse der Ritzel 70 und 71 verläuft und die mit dem Bezugszeichen 72 (Fig. 24) bezeichnet ist.

Auf jeder Seite der vertikalen Symmetrielinie 73 (Fig. 11) des Nachttisches ist je eine selbsthemmende Schraubspindel 74 bzw. 75 angeordnet, die parallel zur Symmetrielinie 73 und vertikal zum Aufstellboden verlaufen. Außerdem laufen die Längsachsen dieser Schraubspindeln 74 und 75 parallel zueinander.

Mit 76 bzw. 77 sind Klemmbügel bezeichnet, die die gewindefreien oberen Enden der Schraubspindeln 74 und 75 umgreifen. Hier können Wälzlager vorgesehen sein, um eine Leichtgängigkeit der Drehbewegung der Schraubspindeln 74 und 75 zu erreichen. Die Klemmbügel 76 und 77 verbinden die Spindeln mit dem Schlitten 2.

An jedem Ende jeder Schraubspindel 74 und 75 ist eines der Ritzel 70 bzw. 71 drehfest, beispielsweise durch eine stirnseitig eingesetzte Schraube, gelagert, so daß jede der Spindeln 74 und 75 durch Drehung einer der Handkurbeln 34 bzw. 35, zum Beispiel der Kurbel 35 synchron und gleichzeitig über die Handkurbelwelle 54 in Drehbewegung versetzt wird.

Jede der Spindeln 74 und 75 durchgreift eine in einer Quertraverse 78 angeordnete Schraubenmutter 79, die im einzelnen aus den Fig. 41 bis 45 zu ersehen ist. Jeder Schraubenmutter 79 jeder der Schraubspindeln 74 und 75 ist je ein Anschlag 80 bzw. 81 (Fig. 53) zugeordnet, der zwei Durchgangsbohrungen 82 und 83 aufweist. Außerdem ist der plattenförmige Anschlag 80 und 81 an der einen Seite durch eine gerade Seitenwand 84 und durch zwei orthogonal dazu verlaufende Seitenwände 85 und 86 begrenzt, während er auf der der Seitenwand 84 gegenüberliegenden Seite mit einer hohlkehlenartigen Aussparung 87 versehen ist, die etwa dem Außendurchmesser der Schraubenmutter 79 angepaßt ist. Diese hohlkehlenartige Aussparung 87 besitzt mehrere zahnförmige Aussparungen 88, die durch die hohlkehlenartige Aussparung 87 gebildeten Kreisbogen in gleichmäßigen Abständen verteilt angeordnet sind.

Die Schraubenmutter 79 ist im Querschnitt (Fig. 45) nach Art eines Dreiecks ausgebildet mit abgerundeten Eckbereichen 89, 90, 91. Die übrigen Dreieckseiten sind geradlinig verlaufend ausgebildet. Über diese Dreieckseiten greifen einstückig ausgebildete Arretierlappen 92, 93 und 94 in die gleiche Richtung hervor.

Mit 95 ist ein Flansch bezeichnet, während 96 einen Sechskantkopf darstellt.

Die zahnförmigen Ausnehmungen 88 greifen über ein oder zwei Arretierlappen 92 bis 94 und verhindern dadurch ein Verdrehen der betreffenden Schraubenmutter 79, die in einer geeigneten Aussparung der Quertraverse 78 angeordnet sind.

Nach Lösen der Anschläge 80 und 81 lassen sich die Schraubspindeln 74 und 75 und damit auch die betreffenden Schraubenmuttern 79 entsprechend höheneinstellen.

Die Spindeln 74 und 75 sind durch die Getriebeausbildungen bedingt unterschiedlich gängig ausgebildet, und zwar ist die Schraubspindel 74 linksgängig und die Schraubspindel 75 rechtsgängig.

Die Anschläge 80 und 81 verhindern auch das Herausfahren des Schlittens 2 nach oben hin.

Zwischen den beiden Schraubspindeln 74 und 75, und zwar bei der dargestellten Ausführungsform koaxial zur Symmetrielinie 73, ist eine Gasdruckfeder 97 angeordnet, die mit ihrem oberen Teleskopteil 98 mit einer Traverse 99 gekuppelt ist, die dem Ausziehtablett 7 zugeordnet ist. Das untere Teleskopteil 100 ist über ein balliges oder kugeliges Ende 101 (Fig. 7) in einer Kugelgelenkpfanne 102 raumgelenkbeweglich angeordnet. Die Kugelgelenkpfanne 102 ist am Fußteil 1 einstückig angeordnet.

Die Gasdruckfeder 97 ist so bemessen, daß sie im wesentlichen das resultierende Gewicht des Ausziehtablettes 7, der Schubladen 4 und 5 und der damit verbundenen Teile kompensiert, so daß die Bedienungsperson ohne großen Kraftaufwand eine Höhenverstellung in Richtung X bzw. Y vornehmen kann, und zwar auch dann, wenn sich in den Schubladen 4 und 5 und auf dem Zwischenboden 6 Gegenstände befinden sollten. Es können auch mehrere Gasdruckfedern vorgesehen sein.

Mit dem Bezugszeichen 103 ist ein Bowdenzug bezeichnet, der mit einem Hebel 104 (Fig. 23) in Verbindung steht. Diesem Hebel 104 ist ein nach außen aus einem der Getriebegehäuse, zum Beispiel aus dem Getriebe 33, hervorragender Betätigungshebel 105 zugeordnet, über den sich der Bowdenzug 103 und damit eine nachfolgend noch zu beschreibende Bremse für eine oder mehrere der Rollen 8 betätigen läßt.

Mit 106 ist ein dem Bowdenzug 103 zugeordnetes Rohr bezeichnet, das an der Quertraverse 78 angeordnet ist.

Bei der dargestellten Ausführungsform sind alle vier Räder 8 gebremst. Wird der Betätigungshebel 105 losgelassen, befinden sich alle Rollen 8 in gebremster Stellung. Zu diesem Zweck ist unterhalb des Fußteils 1 eine Art Rahmen 107 angeordnet, der im wesentlichen aus einem neben der Bodenwanne 10 und quer zu dieser verlaufenden Querbalken 108 (Fig. 7 und 8) und orthogonal zu diesem verlaufenden Bremshebel besteht. Je ein Betätigungshebel ist jeweils im Bereich einer Längsseite des Fußteils 1 angeordnet und verläuft zwischen dem Fußteil 1 und dem Querbalken 108. Aus Gründen der Übersicht wurde lediglich ein Bremshebel mit dem Bezugszeichen 109 versehen. Der auf der gegenüberliegenden Seite angeordnete Bremshebel 109 ist dementsprechend ausgebildet. Der Querbalken 108 und die beiden Bremshebel 109 bilden somit eine Art H-förmigen Rahmen 107, wobei der Querbalken 108 nicht genau auf der Mittellinie der Bremsbalken 109, sondern etwas aus der Mitte einseitig verschoben ist (Fig. 7 und 8). Die Bremshebel 109 und damit indirekt auch der Querbalken 108 sind gegen die Rückstellkraft von Federn 110, 111 gelagert, die im Bereich der Eckpunkte des Fußteils 1 angeordnet sind und die die Tendenz haben, die Bremse stets in Sperrstellung zu belassen, so daß diese bei Nichtbetätigung stets im Eingriff ist. Diese Federn 110,

111 sind auf den Achsen 9 der Rollen 8 gelagert. Diese Achsen ergeben sich deutlich aus den Fig. 25 bis 29.

In einem Rollenkörper 112 jeder Rolle 8 ist je ein Zylinderstift 113 längsverschieblich also gleitbeweglich, angeordnet. Die Längsachse des Zylinderstiftes 113 und damit auch der Bohrung verläuft parallel zur Längsachse der Achse 9 der betreffenden Rolle 8, also orthogonal zum Aufstellboden des Nachttisches.

Der Zylinderstift 113 ist mit seinem freien, unteren Ende in einer Gelenkpfanne eines Bremshebels 114 gelagert, das einen Winkelhebel darstellt, der um eine orthogonal zur Längsachse der Achse 9 und damit auch des Zylinderstiftes 113 verlaufende Schwenkachse 115 in Richtung A bzw. B um ein begrenztes Maß schwenkbeweglich angeordnet ist. Beim Schwenken in Richtung A muß die Rückstellkraft einer Druckfeder 117 überwunden werden, die die Tendenz hat, den Bremshebel 114 in Richtung B zu schwenken.

Mit dem Bremshebel 114 sind jeweils Bremsnocken 118 verbunden, die in entsprechend angepaßte zahnförmige Aussparungen 119 (Fig. 26) der betreffenden Rolle 8 eingreifen können. Über den Umfang jeder Rolle 8 ist eine Vielzahl solcher zahnförmigen Aussparungen 119 angeordnet. Alle zahnförmigen Aussparungen 119 besitzen die gleiche Form und die gleichen Abmessungen und sind über den Umfang der Rolle in gleichmäßigen Abständen verteilt angeordnet. Dadurch ist es möglich, nach einem sehr geringen Verschiebeweg des Nachttisches die Rollen 8 durch Formschluß zu blockieren.

Selbstverständlich kann auch nur einer Rolle 8 oder zwei paarweise gegenüberliegenden Rollen 8 je eine Bremse zugeordnet werden.

Sollen die Bremsen gelöst werden, dann werden über den Betätigungshebel 105 und den Bowdenzug 103 gegen die Rückstellkraft der Federn 110, 111 des Rahmens 107 die Zylinderstifte 113 durch die Druckfeder 117 nach oben gedrückt, wodurch die Bremshebel 114 entsprechend in Richtung B geschwenkt werden, so daß die Bremsnocken 118 aus den zahnförmigen Aussparungen 119 freikommen. Danach ist die betreffende Rolle 8 frei drehbar.

Mit den Bezugszeichen 122 und 123 (Fig. 16) sind Säulen bezeichnet, die orthogonal zum Boden verlaufen. Zwischen den Säulen ist an der dem Korpus bzw. den Schubladen 4 und 5 zugekehrten Seite ein Abdeckblech zugeordnet. Eine weitere Abdeckung ist mit 125 bezeichnet. Die Abdeckungen überbrücken den Zwischenraum zwischen den Säulen 122 und 123, so daß der Schlitten ein geschlossenes Äußeres aufweist.

Bei 126 ist eine untere Quertraverse angeordnet, die ebenso wie die obere Quertraverse 78 und die rechte Säule 122 und die linke Säule 123 aus Hohlprofilkörpern besteht, die bei relativ geringem Gewicht ein hohes Trägheitsmoment aufweisen.

An ihren oberen Enden tragen die Säulen 122 und 123 auf ihren einander abgewandten, nach außen gekehrten Seitenflächen jeweils acht Rollen, die zu jeweils vier Rollen 128, 129 bzw. 130, 131 mit Abstand übereinander angeordnet sind. Diese Rollen 128 bis 131 greifen in vertikal verlaufende Kanäle 132, 133 bzw. 134, 135 von als Säulen ausgebildeten Führungsprofilen 136 bzw. 137 (Fig. 9) ein, so daß der Schlitten 2 in vertikaler Richtung (X-Y) leichtgängig, im wesentlichen spielfrei bei seiner Verstellung in Richtung X bzw. Y geführt und gelagert ist. Das Bezugszeichen 124 bezeichnet Schrauben, durch die die Säulen 136, 137 mit dem Fußteil 1 verbunden sind.

Mit 78 ist eine Quertraverse bezeichnet. Auf der gegenüberliegenden Seite ist eine ebensolche Traverse (Fig. 16) angeordnet.

Jeder Schublade 4 und 5 ist eine Schubladenarretierung zugeordnet, die umschaltbar ist und den Ausschiebeweg der betreffenden Schublade 4 und 5 einseitig begrenzt, so daß die Schublade 4, 5 über ihre Einschubstellung nicht weiter, zum Beispiel zur entgegengesetzten Seite, ausgeschoben werden kann. Die Betätigungsrichtung kann durch die betreffende Schubladenarretierung für Rechts- oder Linksgebrauch umgestellt werden.

Aus den Fig. 9 sowie 32 bis 36 ist erkennbar, daß die Schubladenarretierung eine doppelarmige Sperrwippe 139 aufweist, die im mittleren Bereich um eine Schwenkachse 140 (Fig. 9) um ein begrenztes Maß in vertikaler Richtung schwenkbeweglich ist, das heißt die Schwenkachse 140 verläuft bei horizontal verlaufendem Aufstellboden für den Nachttisch ebenfalls horizontal. Die Sperrwippe 139 weist an ihren Enden je einen Sperrnokken 141 bzw. 142 auf. Die Sperrnocken sind zur gleichen Seite der Sperrwippe hin gerichtet und verlaufen mit ihren Längsachsen parallel zueinander und sind gleich groß und gleich geformt, vorliegend als im Querschnitt kreisförmige Nocken ausgebildet.

Jedes Tragprofil 28 für die Schublade 4 bzw. 5 weist an ihrer der Sperrwippe 139 zugeführten Stirnseite mehrere Auskröpfungen 143, 144 bzw. 145, 146 auf (Fig. 37), wodurch durch Ausstanzen Blechlappen des betreffenden Tragprofils 28 gebildet sind, die gleich groß und um das gleiche Maß aus der Seitenwandung des Tragprofils 28 in Richtung auf die Sperrwippe 139 hervorragen. Je nach gewünschter Einschubrichtung und damit auch Blockierrichtung der betreffenden Schublade 4 oder 5 wird die Sperrwippe 139 um ihre Schwenkachse 140 geschwenkt. Dann stoßen die Nokken 141, 142 an die Auskröpfungen 143, 144 bzw. 145, 146, je nach Schwenkrichtung der Sperrwippe 139 und blockieren in Einschubstellung dann die Schublade 4 bzw. 5 in der jeweils gewünschten Richtung.

Die Sperrwippe 139 kann nach etwas Herausziehen der betreffenden Schublade 4 oder 5 ohne Werkzeuge geschwenkt werden. Dabei kann die Anordnung so getroffen werden, daß die Sperrwippe 139 unter Überwindung eines gewissen Kraftschlusses in die jeweilige Schwenkstellung durch Reiben an den Auskröpfungen 143, 146 bzw. 144, 145 gelangt, sich also nicht selbständig verstellen kann, auch dann nicht, wenn die Schublade 4, 5 mit größerem Kraftaufwand geschlossen werden sollte.

Wie insbesondere aus den Fig. 7 und 8 sowie 46 bis 50 hervorgeht, besteht das Ausziehtablett 7 im wesentlichen aus zwei Tabletteilen 147 und 148, die teleskopförmig ineinanderschiebbar sind, das heißt das Tabletteil 148 befindet sich in der aus Fig. 8 ersichtlichen eingeschobenen Lage vollkommen im Inneren des Tabletteils 147.

Mit dem Bezugszeichen 149 (Fig. 46) ist eine Zugstange bezeichnet, die über eine Schraube 150 eine zentrische Bohrung eines Kolbens 151 durchdringt und mit diesem verschraubt ist. Der Kolben 151 wird von einem Hohlkolben 152 umgriffen, der an seiner der Zugstange 149 abgekehrten Stirnseite mit einem einseitig offenen Rohrstutzen 153 einstückig verbunden ist, in dem eine Druckfeder 154 angeordnet ist, die sich gegen einen orthogonal zur Längsachse der Zugstange 149 gerichteten Wandabschnitt 155 des Tabletteils 148 federnd abstützt und dadurch die Ausziehbewegung federnd abfängt.

Im axialen Abstand von dem Wandabschnitt 155 ist eine Ausziehnase 156 angeordnet, die nach unten und orthogonal zum Tabletteil 148 hervorsteht und von unten, vorn, ergriffen werden kann, um das Ausziehtablett 7 auszuziehen (Fig. 7).

Der Hohlkolben 152 ist im Inneren des Tabletteils 148 abgestützt und über ein Rohr 157 einstückig mit einem Muffenteil 158 verbunden, das das Tabletteil 148 endstirnseitig an der dem Tabletteil 147 zugekehrten Stirnseite begrenzt.

Die Zugstange 149 ist an ihrem dem Hohlkolben 152 abgekehrten Längenabschnitt über einen Kolben 159 verbunden und durchdringt ihn mit Freilauf. Am Ende der Zugstange 149 ist ein Konuskörper 160 einstückig mit der Zugstange 149 ausgebildet angeordnet, der im Durchmesser größer gemessen ist als eine sich konisch in Richtung auf den Konuskörper 160 verengende Durchgangsöffnung 161 in dem Kolben 159. Auf diese Weise vermag die Zugstange 149 über einen gewissen Längenabschnitt durch die Durchgangsöffnung 161 des Kolbens 159 hindurchzugleiten.

Der Kolben 159 ist einstückig in der Stirnseite eines Kupplungsrohres 162 angeordnet, das seinerseits in dem Rohr 157 teleskopförmig längsbeweglich angeordnet ist. Dieses Kupplungsrohr 162 ist mit einem Sperrflansch 163 versehen, der orthogonal zur Längsachse 164 des Tabletteils 148 verläuft.

Das Bezugszeichen 165 bezeichnet eine untere Abdeckung des Tabletteils 148. Die Abdeckung 165 ist über zahlreiche Schrauben 166 mit dem Tabletteil 148 verbunden.

Die Linien 167 und 168 bezeichnen sickenförmige, kanalförmige Einprägungen der Abdeckung 165. Weitere Ausprägungen sind im Bereich der paarweise sowie symmetrisch zur Längsachse 164 angeordneten Bohrungen für die Schrauben 166 angeordnet und nehmen hier das Rohr 157 nach Art von Lagerpfannen auf.

Mit 169 ist ein weiteres Rohr bezeichnet, das teleskopförmig in dem Rohr 162 um ein begrenztes Maß längsverschieblich geführt ist. Das Rohr 169 weist an seinem dem Tabletteil 147 zugekehrten Endabschnitt eine Platte 170 auf, die es bündig verschließt, die allerdings eine hervorragende Nase 171 mit mindestens einem Längsschlitz 172 aufweist, durch den mindestens eine, vorzugsweise mehrere Schrauben 173 (Fig. 7) orthogonal zur Längsachse 164 hindurchgreifen und das Rohr gegen Verdrehen sichern. Die Schraube 173 oder die Schrauben sind in eine wulstförmig verdickten Randbereich 174 (Fig. 7) des Tabletteils 147 eingeschraubt. Die Bohrungen sind von unten zugänglich, nachdem die Abdeckung 165 entfernt ist.

Auf die Mündungsöffnung des Kupplungsrohres 162 ist ein Anschlagstopfen 175 zugeordnet, der den Ausziehhub durch Anschlag an eine Schulter 176 (Fig. 7) begrenzt.

Wie aus Fig. 7 zu erkennen ist, schließt der Randbereich 177 in vollkommen ausgezogenem Zustand des Ausziehteils 148 mit dem Sperrflansch 163 unmittelbar ab. Dabei ist die Anordnung so getroffen worden, daß der Sperrflansch 163 im Bereich des Randbereiches 179 an seiner Unterseite über eine Schräge auf eine Erhöhung oder Verdickung 178 aufläuft, die so bemessen ist, daß das Ausziehteil 148 von seiner horizontalen Lage um einige Winkelgrade nach oben verschoben wird, und bei Belastung einerseits durch das Ausziehteil 148, andererseits durch das Aufsetzen von Gegenständen in seine horizontale oder annähernd horizontale Lage gelangt. Ein Randbereich 179 des Ausziehteils 148 gleitet beim Einschieben unter den Randbereich 177 des Ausziehteils 147, so daß das Ausziehteil 148 in eingeschobenem Zustand (Fig. 8) vollkommen unterhalb des Ausziehteils 147 zu liegen kommt und vollkommen in diesem eingeschoben ist. Man erkennt außerdem, daß die frei oben zugängliche Ablagefläche des Ausziehteils 148 hundert Prozent oder annähernd hundert Prozent der frei oben zugänglichen Fläche (Länge) des Ausziehteils 147 entspricht oder nur geringfügig kürzer bemessen ist.

Beiderseits an dem Ausziehteil 148 sind in dessen Endbereich Schieberrasten 180 bzw. 181 angeordnet, die über einen zweiarmigen Kupplungshebel 182 und 183 gegen die Rückstellkraft einer Druckfeder 154 verschieblich ist.

Jeder der Kupplungshebel 182 und 183 weist an seinem Ende ein annähernd vollkreisförmiges Kupplungsteil 184 bzw. 185 auf, das als flache Scheibe ausgebildet ist und auf gegenüberliegenden Seiten ebenflächig begrenzt ist und dessen Längsachse jeweils um 90 Grad gegenüber der Längsachse 164 gedreht ist. Die Kupplungsteile 184 und 185 sind über dementsprechend geformte kreisförmige Mitnehmerausnehmungen mit der jeweiligen Schieberraste 180 bzw. 181 um ein begrenztes Maß schwenkbeweglich bzw. drehbar gekuppelt. Eine dieser Ausnehmungen ist bei 186 in Fig. 49 mit einem Bezugszeichen bezeichnet.

Der Rohrstutzen 153 ist einstückig mit dem mittleren Teil des zweiarmigen Kupplungshebels 182, 183 verbunden, derart, daß die Längsachse 164 koaxial zur Längsachse des Rohrstutzens 153 verläuft und damit auch koaxial zur Längsachse der Druckfeder 154.

Mit der dem Rohrstutzen 153 gegenüberliegenden Seite des zweiarmigen Kupplungshebels 182, 183 ist der im Durchmesser vergrößerte Hohlkolben 152 angeordnet, der mit einer axial verlaufenden Stirnverzahnung 187 versehen ist.

Die Stirnverzahnung 187 greift in eine formmäßig angepaßte Stirnverzahnung 188 einer Stirnradkupplung 189 des Rohres 157 ein, das mit dem Sperrflansch 163 einstückig verbunden ist. Die Längsachse 190 des Rohres 157 verläuft koaxial zur Längsachse 164 des Tabletteils 148. Das Rohr 157 ist durch drei Lager und Klemmschellen mit der Abdeckung 165 des Tabletteils 148 einstückig verbunden. Von diesen Klemmschellen und Lagern sind lediglich die Mittellinien 191, 192 und 193 in Fig. 47 dargestellt. Dargestellt sind außerdem jeweils Schraubenpaare 194, 195 und 196, durch die die Klemmschellen und Lager mit der Abdeckung 165 fest, aber lösbar verbunden sind, um das Rohr 157 zu haltern. Das Rohr untergreift also das Ausziehteil 148 des Tabletts praktisch auf seiner gesamten Länge.

Durch Betätigen einer der Schieberrasten 180 oder 181 wird über den Kupplungshebel 182, 183, der Hohlkolben 152 und dessen Stirnverzahnung 187 außer Kupplungseingriff mit der Stirnverzahnung 188 des Rohres 157 gebracht. Solange dies geschieht, läßt sich das Ausziehteil 148 des Ausziehtablettes 7 um die Längsachse 164, 190 in beiden Richtungen um 360 Grad drehen. Nach Loslassen der betreffenden Schieberraste 180, 181 rastet die Stirnverzahnung 187 wiederum in die Stirnverzahnung 188 ein und arretiert das Ausziehteil 148 des Ausziehtabletts 7. Auf diese Weise läßt sich das Ausziehteil 148 in zahlreichen Winkelstellungen gegenüber der Horizontalen einstellen und arretieren.

Man erkennt außerdem deutlich aus Fig. 49, daß die Wanddicke der Hebel 182 und 183 gegenüber dem Hohlkolben 182 erheblich dünner bemessen ist. Auf diese Weise vermögen die Hebel 182 und 183 in gewisser

Weise zu federn bzw. sich durchzubiegen.

Das Rohr **157** wird von dem Rohr **162** teleskopförmig verschieblich durchgriffen.

Die **Fig. 8** läßt den Nachttisch in seiner vollkommen heruntergefahrenen Stellung bei eingeschobenem Ausziehtablett **7** erkennen.

Im Gegensatz zu der dargestellten Ausführungsform können statt Schraubspindeln zur Höhenverstellung des Nachttisches auch andere geeignete mechanische Antriebe, zum Beispiel abwechselnd beidseitig durch Druckmitteldruck, insbesondere durch Hydraulikdruck, beaufschlagbare Kolben-Zylinder-Einheiten vorgesehen sein.

Außerdem ist es möglich, die Schraubspindeln durch andere Linearmotoren, zum Beispiel Elektroeinheiten, zu ersetzen, beispielsweise durch Spindeln, die durch Elektromotoren oder Motorspindeln angetrieben werden. Motorspindeln können einen die Spindel konzentrisch umgebenden Motor aufweisen.

Des weiteren ist es möglich, statt Spindeln Zahnstangen zu verwenden, die über Ritzel angetrieben werden oder die Ritzel werden angetrieben und die Zahnstangen bleiben stationär.

Statt zwei Schraubspindeln können auch nur eine dementsprechend dimensionierte mittlere Spindel oder nur ein anderer motorischer Antrieb, zum Beispiel ein Linearmotor, vorgesehen werden.

Statt die Handbetätigung für manuelle Antriebe unmittelbar unterhalb des Ausziehtabletts **7** auf der normalerweise dem Krankenbett zugeordneten Seite anzuordnen, kann dieser Antrieb auch im mittleren Höhenbereich des Nachttisches vorgesehen sein.

Des weiteren ist es möglich, statt einer manuellen Betätigung zusätzlich oder statt dessen einen motorischen Antrieb zu verwenden, der mit Elektromotoren funktioniert. Dabei ist es möglich, zusätzlich oder statt dessen eine Pufferbatterie, zum Beispiel in der unteren Schublade **4**, vorzusehen, die den motorischen Antrieb für die Höhenverstellung des kombinierten Bett-Nachttisches betätigt. Die Energie kann aber auch über eine oder mehrere Solarzellen bereitgestellt werden.

Statt zwei Schieberrasten auf beiden Seiten des Ausziehteiles **148** vorzusehen, ist es auch möglich, nur eine Schieberraste auf einer Seite oder eine Betätigungstaste, zum Beispiel stirnseitig des Ausziehteils **148** vorzusehen.

Statt Bremsen zu verwenden, die auf jede einzelne Rolle **8** einwirken, kann auch eine Bremse verwendet werden, die nur auf eine Rolle oder auf ein paar Rollen einwirkt.

Statt einer formschlüssigen Bremse kann auch eine Bremse vorgesehen sein, die über einen Bowdenzug und über ein oder mehrere Bremsklötze sich gegen den Boden unmittelbar abstützt und hierdurch einen Kraftschluß (Reibschluß) zwischen der betreffenden Bremsbacke und dem Aufstellboden für den Nachttisch herstellt. Dabei kann nur ein Bremsklotz oder auch mehrere Bremsklötze, zum Beispiel jeder der Rollen, zugeordnet sein, ohne aber auf die Rollen selbst einzuwirken.

Zur Energiebereitstellung kann auch eine motorangetriebene oder fußangetriebene Hydraulikpumpe dem kombinierten Bettnachttisch zugeordnet werden, der einen entsprechenden hydraulischen Antrieb, zum Beispiel eine abwechselnd beidseitig mit Hydraulikdruck zu beaufschlagende Kolben-Zylinder-Einheit mit Hydraulikdruck versorgt.

Statt — wie zum Beispiel in **Fig. 24** dargestellt — Handkurbeln mit kreisbogenförmigen Handkurbeln **34** und **35** und kreisbogenförmigen Teilen **55** und **56** zu versehen, ist es auch möglich, versenkbare Kurbelarme auf Schrägen, also nicht auf Kreisbögen, vorzusehen, die den Kraftschluß zwischen der Handkurbel und der Schrägen herstellen.

Statt einer teleskopförmig ausziehbaren Bettischplatte mit den Tabletteilen **147** und **148** kann auch ein Klapprahmen verwendet werden. Dieser kann im wesentlichen aus zwei parallel zueinander verlaufenden Stützen oder Rohren bestehen, auf denen die Bettischplattenteile um ihre Quer- oder Längsachse klappbar und damit aufeinanderfaltbar angeordnet sind. Es ist zum Beispiel möglich, das Ausziehteil **148** um eine Querachse auf das Teil **147** aufzuklappen und flächig in Nichtgebrauchsstellung des Teils **148** so anzuordnen.

Die Schubladen **4** und **5** brauchen nicht auf parallelen Schienen, sondern können auch auf kreisbogenförmig verlaufenden Schienen geführt sein, die die Schubladen nach ihrem Herausziehen auf einem Kreisbogen zum Benutzer hinführen und in Nichtgebrauchsstellung die Schubladen auf einer zum Beispiel nach oben konvex verlaufenden kreisbogenförmig verlaufenden Schiene in Nichtgebrauchsstellung führen.

Man erkennt außerdem deutlich aus der Zeichnung, daß der kombinierte Bett-Nachttisch in der Seitenansicht (**Fig. 1**) eine etwa C- oder U-förmige Grundgestalt aufweist, wobei der eine Schenkel des "U" durch die Schublade zusammen mit dem darüber befindlichen Tabletteil, der andere U-Schenkel durch die untere Schublade bzw. den darüber angeordneten Zwischenboden **6** und der die U-Schenkel verbindende Verbindungssteg durch den Schlitten **2** gebildet werden.

Das Fußteil **1** bildet dagegen mit den Säulen **122** und **123** in der Seitenansicht gemäß **Fig. 5** eine etwa umgekehrt T-förmige Form.

Die Ausziehplatte **7** ist um den Drehpunkt des Getriebes **32** und **33**, also um eine in der Zeichnung dargestellte horizontale, gedachte Achse im ausgezogenen Zustand der Tabletteile **147, 148** in Richtung X, also in Richtung auf den Aufstellboden, um ein begrenztes spitzwinkliges Maß neigungsverstellbar und in der jeweils gewünschten Stellung auch arretierbar. Auf diese Weise sind Tabletteile **147** und **148** waschbar und desinfizierbar, wobei die Flüssigkeit gut ablaufen kann. Außerdem wird nicht soviel Platz benötigt, da auf diese Weise der Stauraum verkleinert wird. Anderenfalls würde der Stauraum womöglich nicht ausreichend sein.

Die in der Zusammenfassung, in den Patentansprüchen und in der Beschreibung beschriebenen Merkmale können sowohl einzeln als auch in beliebigen Kombinationen für die Verwirklichung der Erfindung wesentlich sein.

Bezugszeichenliste

1 Fußteil
2 Schlitten
3 Zwischenraum
4 Schublade
5 Schublade
6 Zwischenboden, Ablageboden
7 Ausziehtablett
8 Rolle
9 Achse, vertikale
10 Bodenwanne
11 Freiraum
12 Griffmulde
13 Griffmulde

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14 Griffmulde
15 Vorderwand
16 Kurve
17 Kurve
18 Wandabschnitt
19 Begrenzungsfläche
20 Führung
21 Führung
22 Führung
23 Führung
24 Rahmen
25 Schraube
26 Frontteil
27 Profil
28 Tragprofil
29 Schraube
30 Schiene, links
31 Schiene, rechts
32 Getriebe, rechts
33 Getriebe, links
34 Handkurbel
35 Handkurbel
36 Kegelzahnrad
37 Kegelzahnrad
38 Ritzel
39 Ritzel
40 Lagerbock
41 Lagerbock
42 Hohlwelle
43 Hohlwelle
44 Muffenrohr
45 Muffenrohr
46 Zapfenlager
47 Zapfenlager
48 Wälzlager
49 Wälzlager
50 Wälzlager
51 Wälzlager
52 Nocken
53 Bremsenwelle
54 Handkurbelwelle
55 Teil, kreisbogenförmiges
56 Teil, kreisbogenförmiges
57 Bohrung
58 Bohrung
59 Zugfeder
60 Lagerbock
61 Lagerbock
62 Öffnung, kanalartige
63 Öffnung, kanalartige
64 Aussparung, napfförmige, tassenförmige
65 Aussparung, napfförmige, tassenförmige
66 Griffteil
67 Griffteil
68 Ende, rechteckförmiges
69 Ende, rechteckförmiges
70 Ritzel
71 Ritzel
72 Mittellinie
73 Symmetrielinie
74 Schraubspindel
75 Schraubspindel
76 Klemmbügel
77 Klemmbügel
78 Quertraverse
79 Schraubenmutter
80 Anschlag
81 Anschlag
82 Durchgangsbohrung
83 Durchgangsbohrung
84 Seitenwand
85 Seitenwand
86 Seitenwand
87 Aussparung, hohlkehlenartige
88 Ausnehmung, zahnartige
89 Eckbereich
90 Eckbereich
91 Eckbereich
92 Arretierlappen
93 Arretierlappen
94 Arretierlappen
95 Flansch
96 Sechskantkopf
97 Gasdruckfeder
98 Teleskopteil
99 Traverse
100 Teleskopteil
101 Ende, kugeliges, balliges
102 Kugelgelenkpfanne
103 Bowdenzug
104 Hebel
105 Betätigungshebel
106 Rohr
107 Rahmen
108 Querbalken
109 Bremshebel
110 Feder
111 Feder
112 Rollenkörper
113 Zylinderstift
114 Bremshebel
115 Schwenkachse
116 Bohrung
117 Druckfeder
118 Bremsnocken
119 Aussparung
120
121
122 Säule
123 Säule
124 Schraube
125 Abdeckung
126 Quertraverse
127 Führungsrolle, Führung
128 Führungsrolle, Führung
129 Führungsrolle, Führung
130 Führungsrolle, Führung
131 Führungsrolle, Führung
132 Kanal
133 Kanal
134 Kanal
135 Kanal
136 Führungsprofil, Säule
137 Führungsprofil, Säule
138
139 Sperrwippe
140 Schwenkachse
141 Sperrnocken
142 Sperrnocken
143 Auskröpfung
144 Auskröpfung
145 Auskröpfung
146 Auskröpfung
147 Tabletteil
148 Tabletteil
149 Zugstange

150 Schraube
151 Kolben
152 Hohlkolben
153 Rohrstutzen
154 Druckfeder
155 Wandabschnitt
156 Ausziehnase
157 Rohr
158 Muffenteil
159 Kolben
160 Konuskörper
161 Durchgangsöffnung
162 Kupplungsrohr
163 Sperrflansch
164 Längsachse
165 Abdeckung
166 Schraube
167 Linie
168 Linie
169 Rohr
170 Platte
171 Nase
172 Schlitz
173 Schraube
174 Randbereich
175 Anschlagstopfen
176 Schulter
177 Randbereich
178 Verdickung
179 Randbereich
180 Schieberraste
181 Schieberraste
182 Kupplungshebel
183 Kupplungshebel
184 Kupplungsteil
185 Kupplungsteil
186 Ausnehmung
187 Stirnverzahnung
188 Stirnverzahnung
189 Stirnradkupplung
190 Längsachse
191 Mittellinie, Klemmschelle, Lager
192 Mittellinie, Klemmschelle, Lager
193 Mittellinie, Klemmschelle, Lager
194 Schraubenpaar
195 Schraubenpaar
196 Schraubenpaar
A Schwenkrichtung
B Schwenkrichtung des Schlittens 2
H Schubladenhöhe im vorderen Bereich
h Schubladenhöhe im hinteren Bereich
L Ansichtsrichtung
K Ansichtsrichtung
X Hubrichtung
Y Hubrichtung

Patentansprüche

1. Kombinierter Bett-Nachttisch zur Verwendung in Krankenhäusern, Pflegeheimen oder Reha-Kliniken, mit höhenverstellbaren, als Ausziehtablett (7) ausgebildeten Bettischplatte, die in Gebrauchsstellung über dem Bett auskragt, einem auf Rollen verfahrbar angeordneten Fußteil (1) und einem Korpus, wobei ein Tabletteil (147), das eine Schublade (5), oder ein Ablageboden (6) beinhalten kann und das Korpusteil, das eine weitere Schublade (4) beinhalten kann, übereinander auf der gleichen Seite des Bettnachttisches angeordnet sind, und daß das Fußteil (1) mit einem höhenverstellbaren Schlitten (2) und dessen Führungsteil umgekehrt T-förmig gestaltet sind, wobei der Flansch oder Kopf des "T" das Fußteil (1) und das orthogonal dazu verlaufende Führungsteil einen Führungssteg für den Schlitten (2) bildet und daß der Schlitten (2) die Schublade (5), die einen Zwischenboden (6) haben kann und den Korpusteil, der ggf. eine weitere Schublade (4) trägt und diese Teile zusammen mit dem Schlitten (2) höhenverstellbar (X-Y) sind, wobei wenigstens ein ausziehbares Tabletteil (148) und der Schlitten (2) bzw. der Führungssteg in der Seitenansicht ein "L" bilden, während das stationäre Tabletteil (147) mit dem Schlitten (2), der Oberseite einer unteren Schublade (4) oder dem Ablageboden (6) zusammen eine "C"- oder "M"-artige Form bilden.

2. Kombinierter Bett-Nachttisch nach Anspruch 1, dadurch gekennzeichnet, daß der senkrechte Steg für die Führung des Schlittens (2) aus zwei beabstandeten Säulen (136, 137) gebildet ist, an denen der Schlitten (2) reibungsarm ggf. mittels Führungsrollen (128, 129 bzw. 130, 131) vertikal beweglich geführt ist.

3. Kombinierter Bett-Nachttisch nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß der Flansch (Kopf) des umgekehrt T-förmigen Fußteils (1) eine seitlich und nach oben offene Bodenwanne (10) zur Ablage von Gegenständen bildet.

4. Kombinierter Bett-Nachttisch nach Anspruch 1 oder einem der folgenden, dadurch gekennzeichnet, daß etwaige Schubladen (4, 5), und/oder Ablageböden (6) sowohl in unterschiedlichen Höhen als auch in ihrer unterschiedlichen mischverwendbaren Anordnung adaptierbar am Schlitten (2) angeordnet sind.

5. Kombinierter Bett-Nachttisch nach Anspruch 4, dadurch gekennzeichnet, daß dem Schlitten (2) und/oder den adaptierbaren Gegenständen, z. B. Schubladen (4, 5) Ablageböden (6), Kupplungen zur lösbaren Befestigung dieser Gegenstände (4, 5, 6) an dem Schlitten (2) zugeordnet sind.

6. Kombinierter Bett-Nachttisch nach Anspruch 2 oder einem der folgenden, dadurch gekennzeichnet, daß die Führungsrollen (127 bis 131) in Kanälen, (132, 133 bzw. 134, 135) der als Führungsprofile ausgebildeten Säulen (136, 137) geführt sind und daß jeweils mehrere Rollen, ggf. auch paarweise an den Säulen (122, 123), in vertikaler Richtung übereinander angeordnet sind.

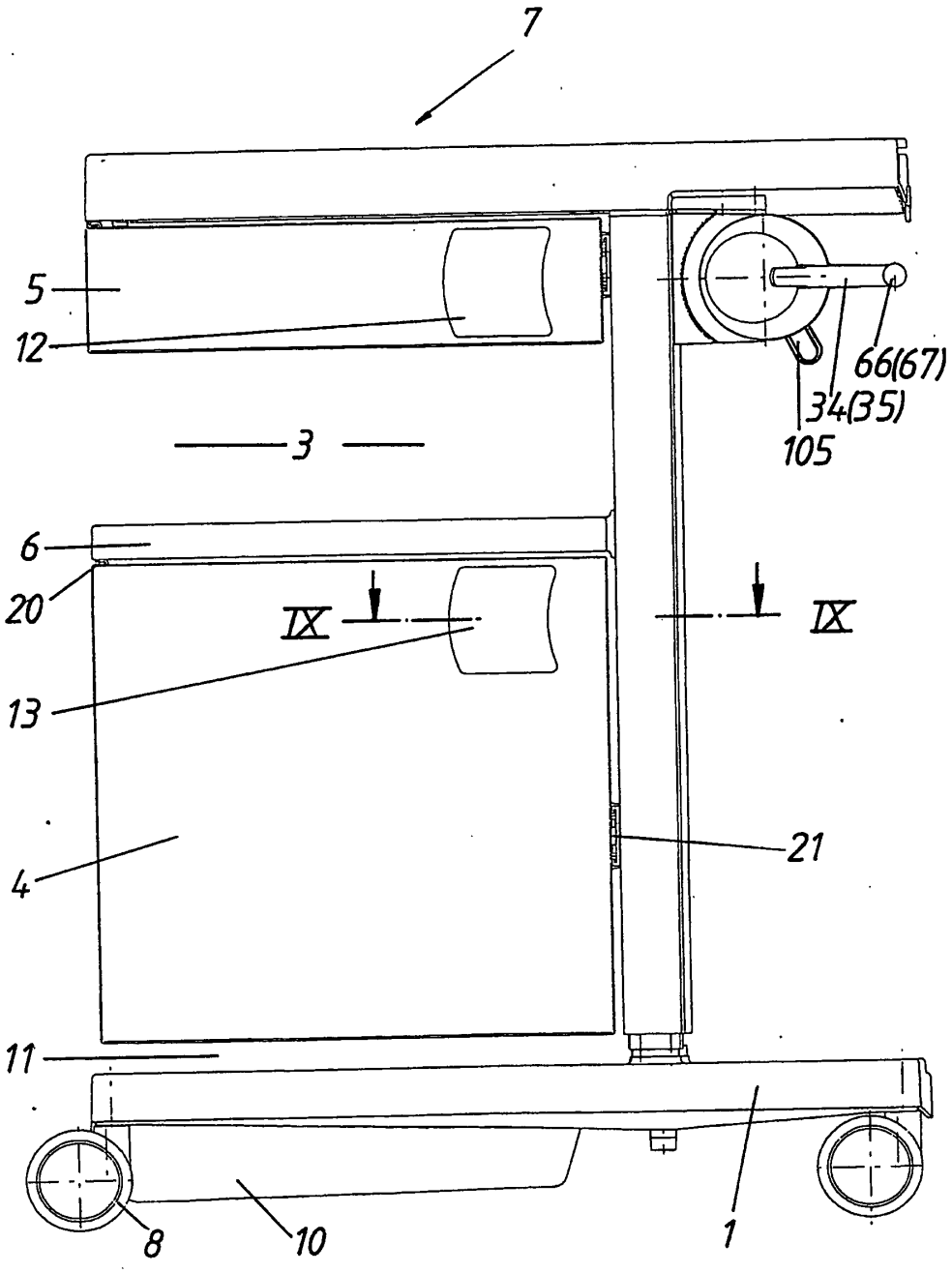
7. Kombinierter Bett-Nachttisch nach Anspruch 2 oder einem der folgenden, dadurch gekennzeichnet, daß der Schlitten (2) beabstandete, parallel zu den als Führungsprofile ausgebildeten Säulen (136, 137) verlaufende, profilartige Säulen aufweist, die einerseits über das Fußteil (1) einstückig miteinander verbunden sind und sowohl an ihrer dem Nachttischkorpus zugekehrten Seite als auch an ihrer nach außen gekehrten Seite durch eine Abdeckung (125) abgedeckt sind, derart, daß diese Abdeckung (zum Beispiel 125) den Zwischenraum zwischen den Säulen (122, 123) überbrücken.

Hierzu 42 Seite(n) Zeichnungen

ZEICHNUNGEN SEITE 1

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Veröffentlichungstag: 13. Juni 1996

Fig.1



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ZEICHNUNGEN SEITE 2

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Veröffentlichungstag: 13. Juni 1996

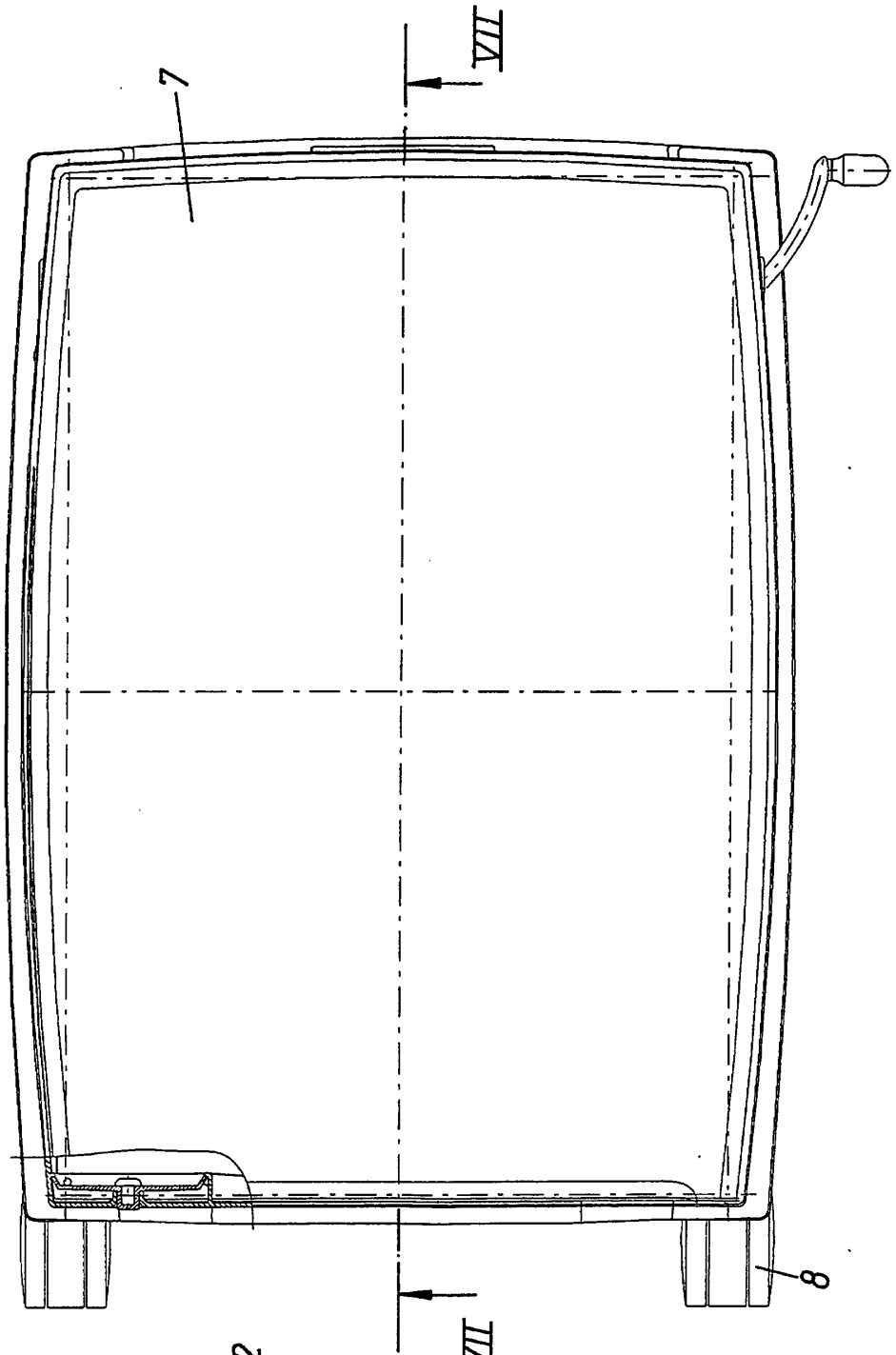


Fig.2

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ZEICHNUNGEN SEITE 3

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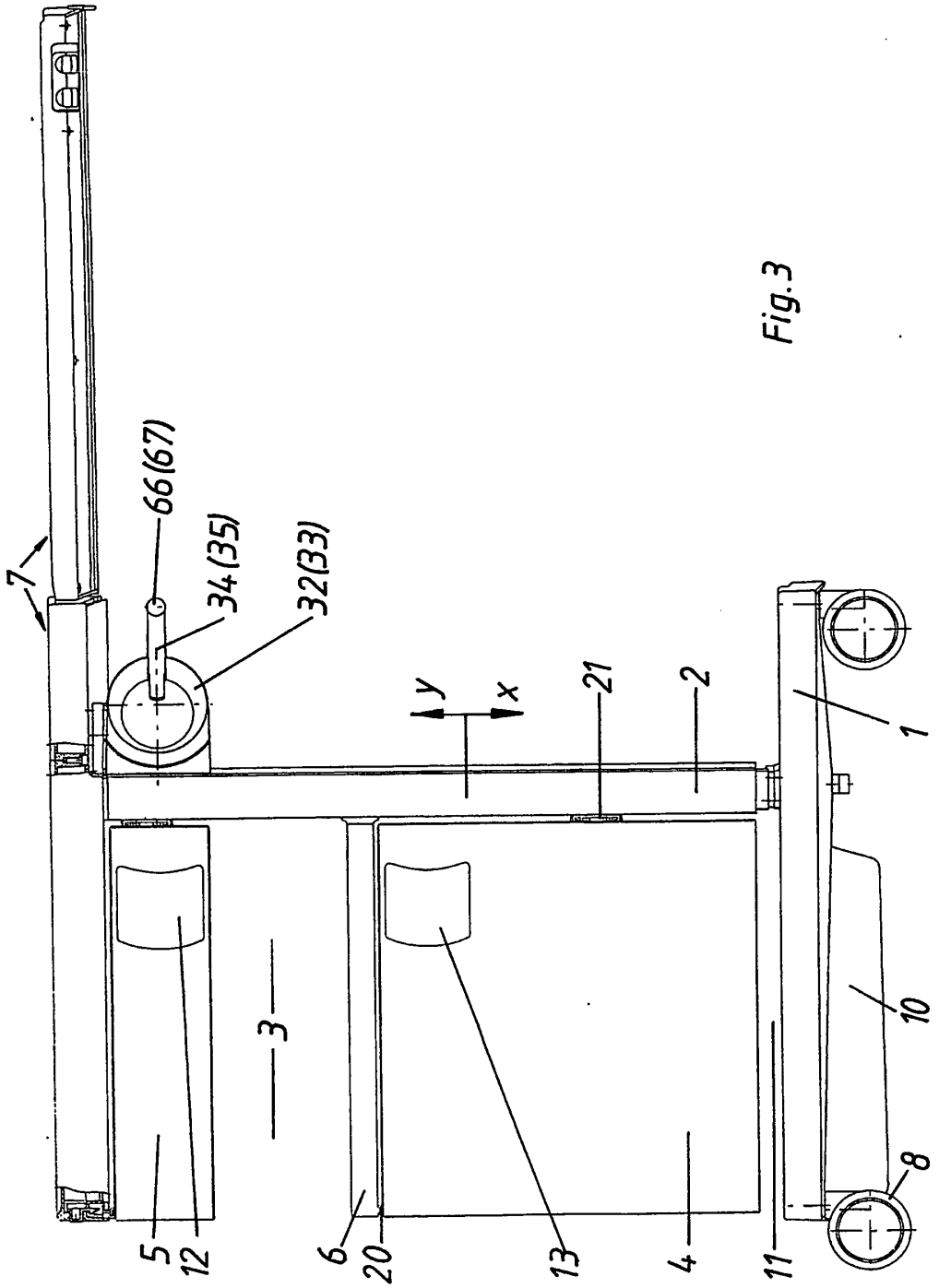


Fig. 3

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ZEICHNUNGEN SEITE 4

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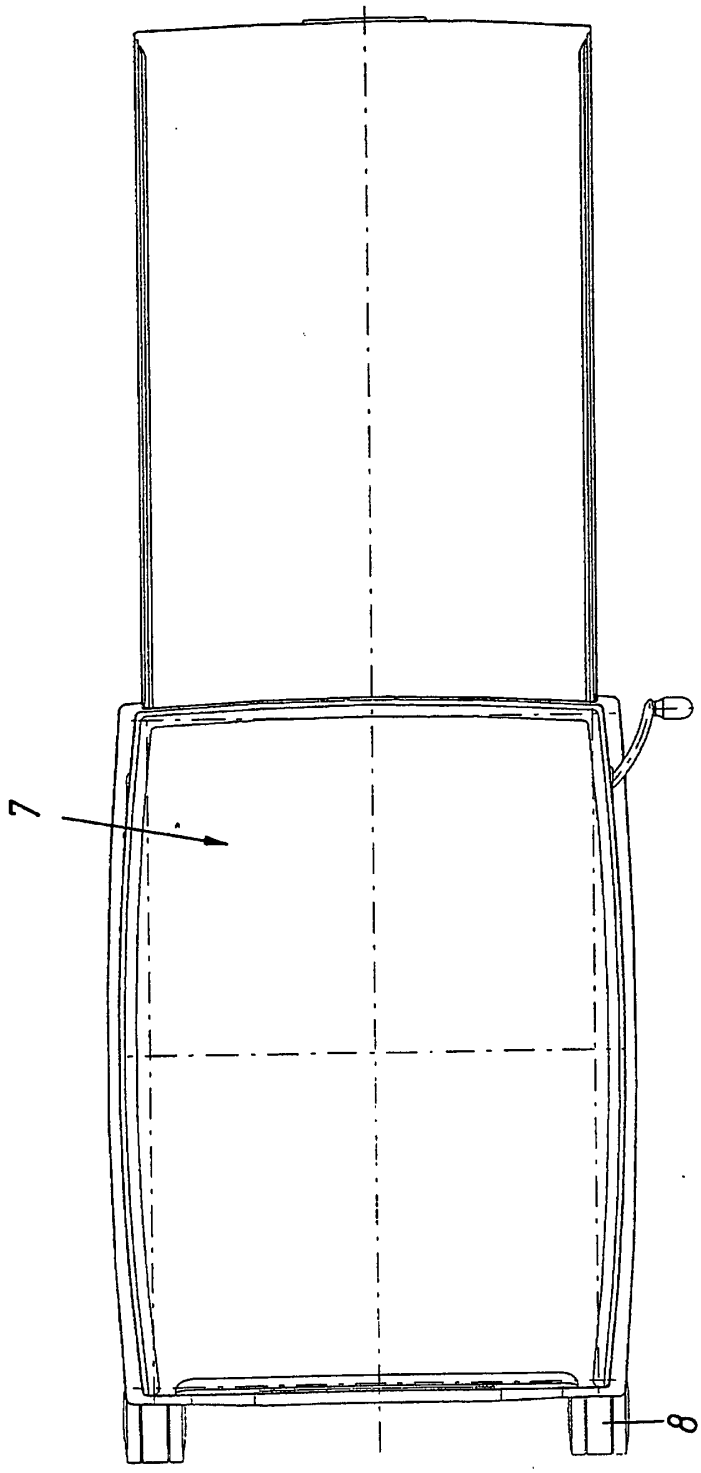


Fig.4

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ZEICHNUNGEN SEITE 5

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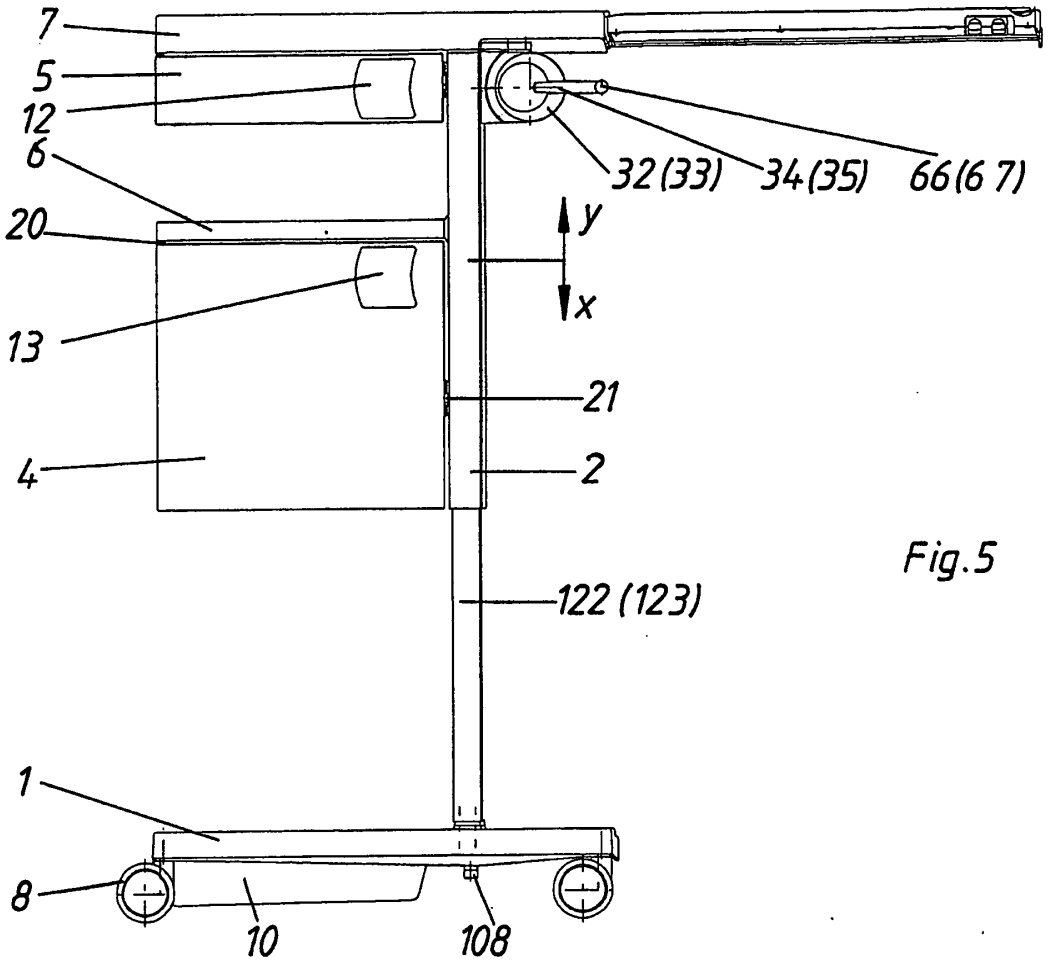


Fig. 5

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ZEICHNUNGEN SEITE 6

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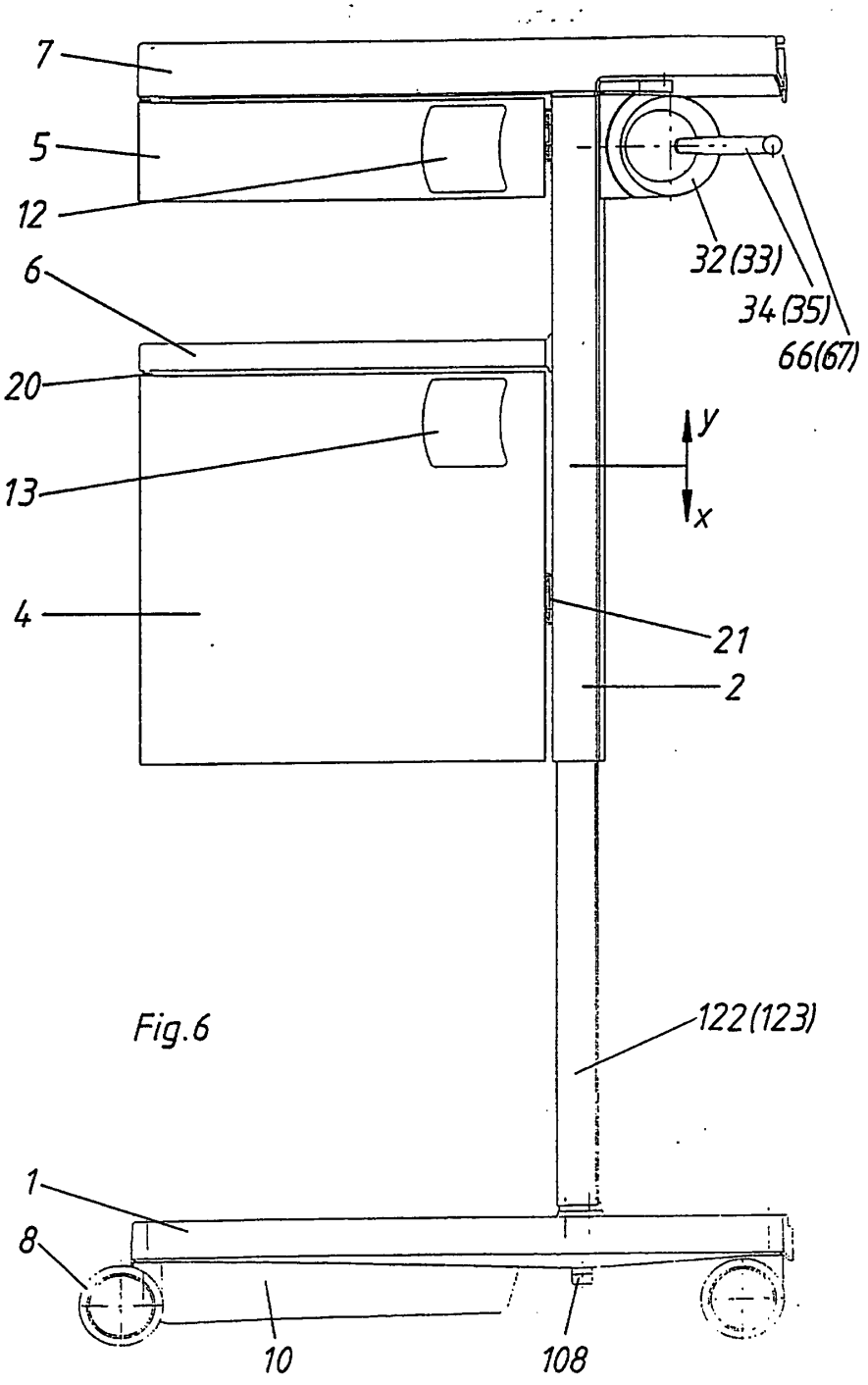


Fig.6

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ZEICHNUNGEN SEITE 7

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Int. Cl.[6]: A 47 B 79/00
Veröffentlichungstag: 13. Juni 1996

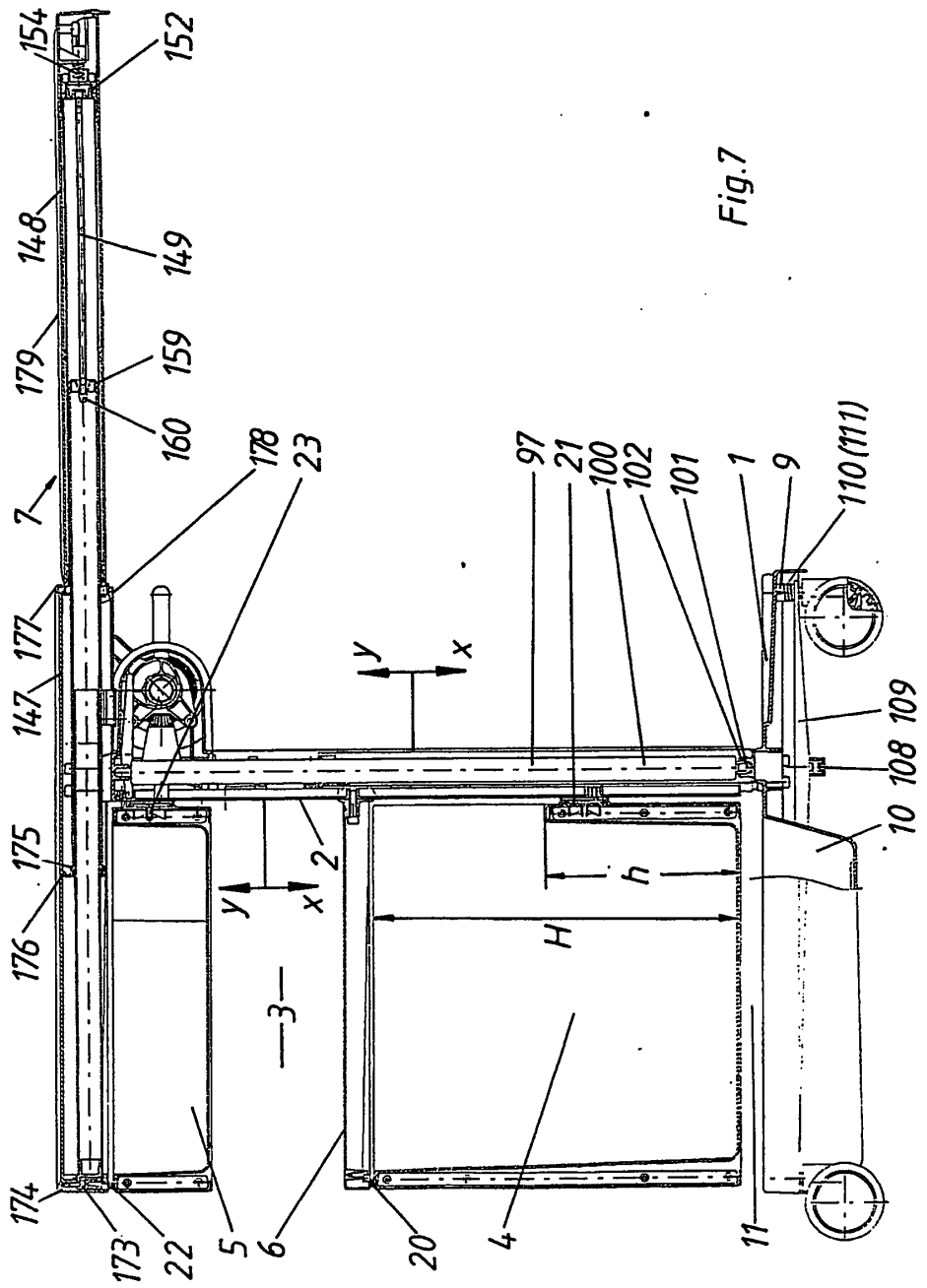


Fig.7

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ZEICHNUNGEN SEITE 8

Nummer: DE 195 40 058 C1
Int. Cl.[6]: A 47 B 79/00
Veröffentlichungstag: 13. Juni 1996

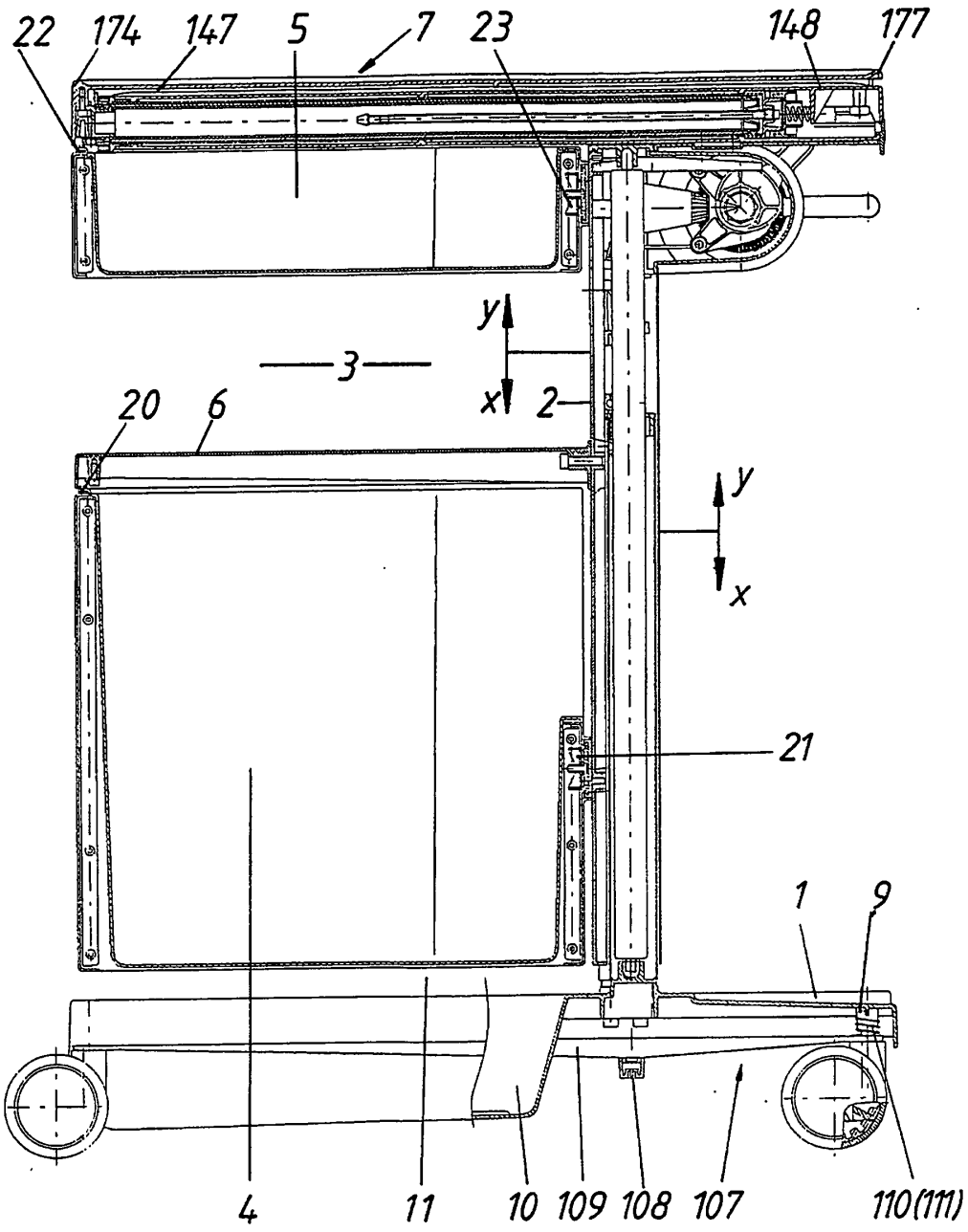


Fig.8

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ZEICHNUNGEN SEITE 9

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Veröffentlichungstag: 13. Juni 1996

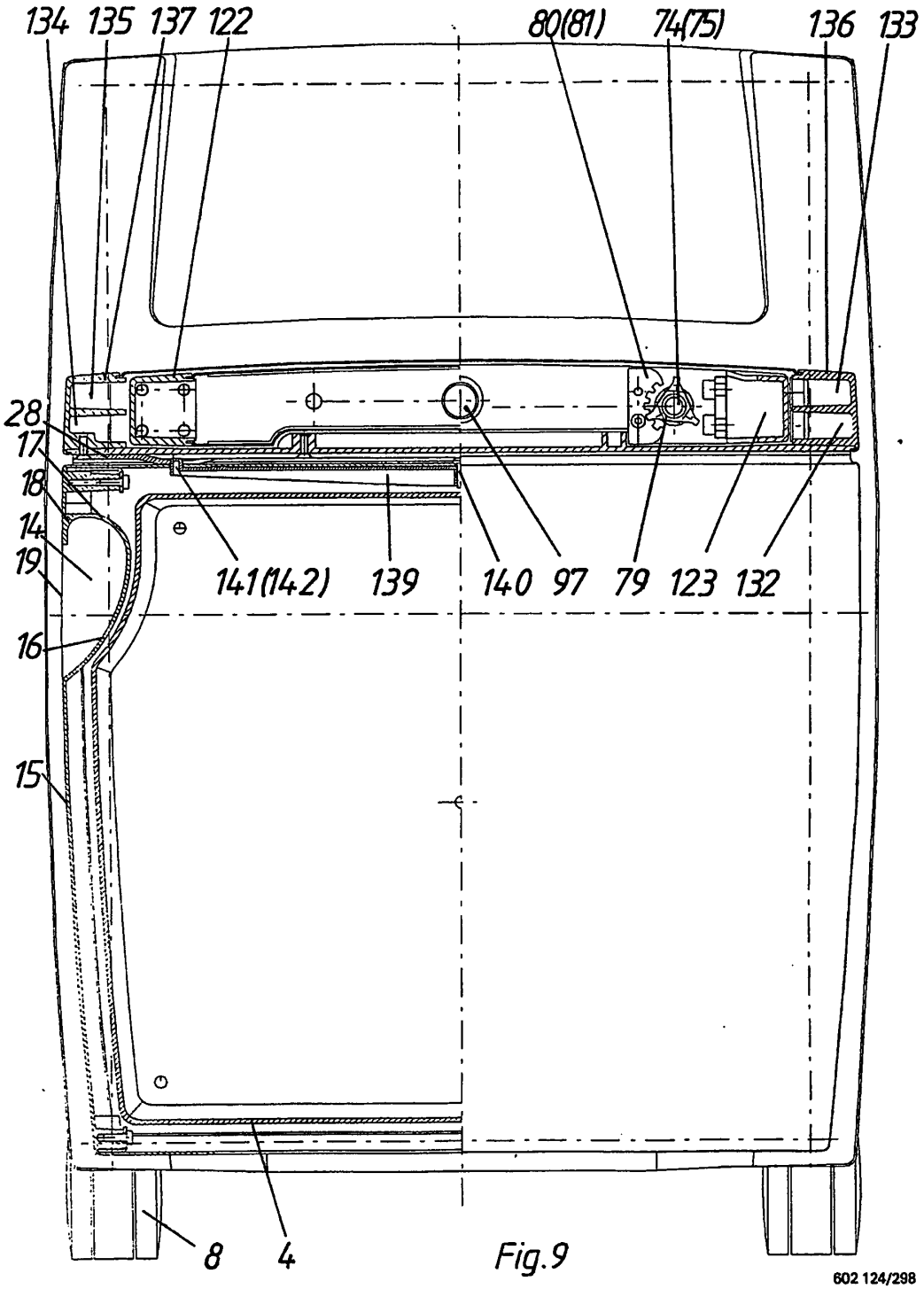


Fig.9

602 124/298

ZEICHNUNGEN SEITE 10

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Int. Cl.[6]: A 47 B 79/00
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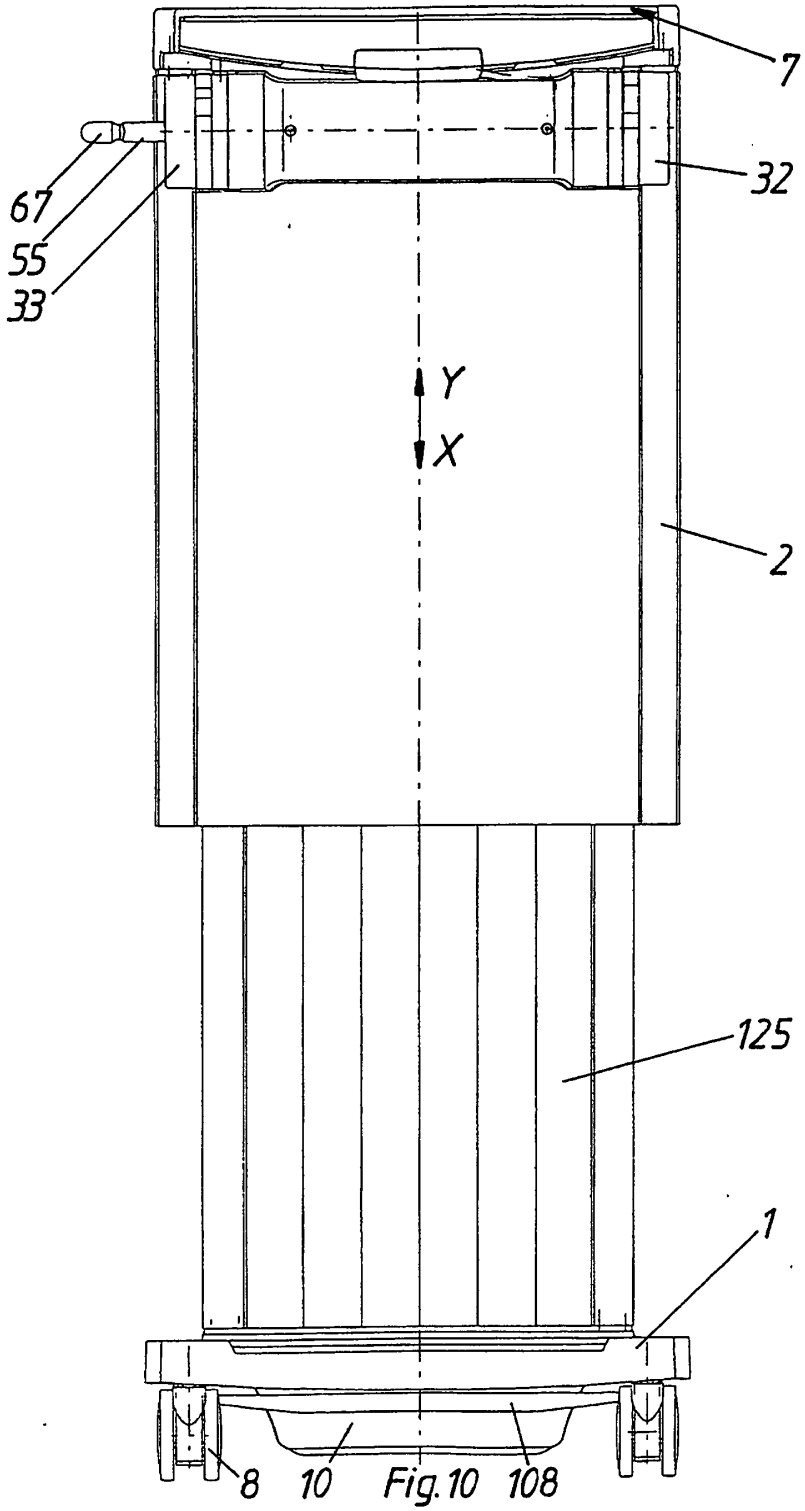


Fig. 10

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ZEICHNUNGEN SEITE 11

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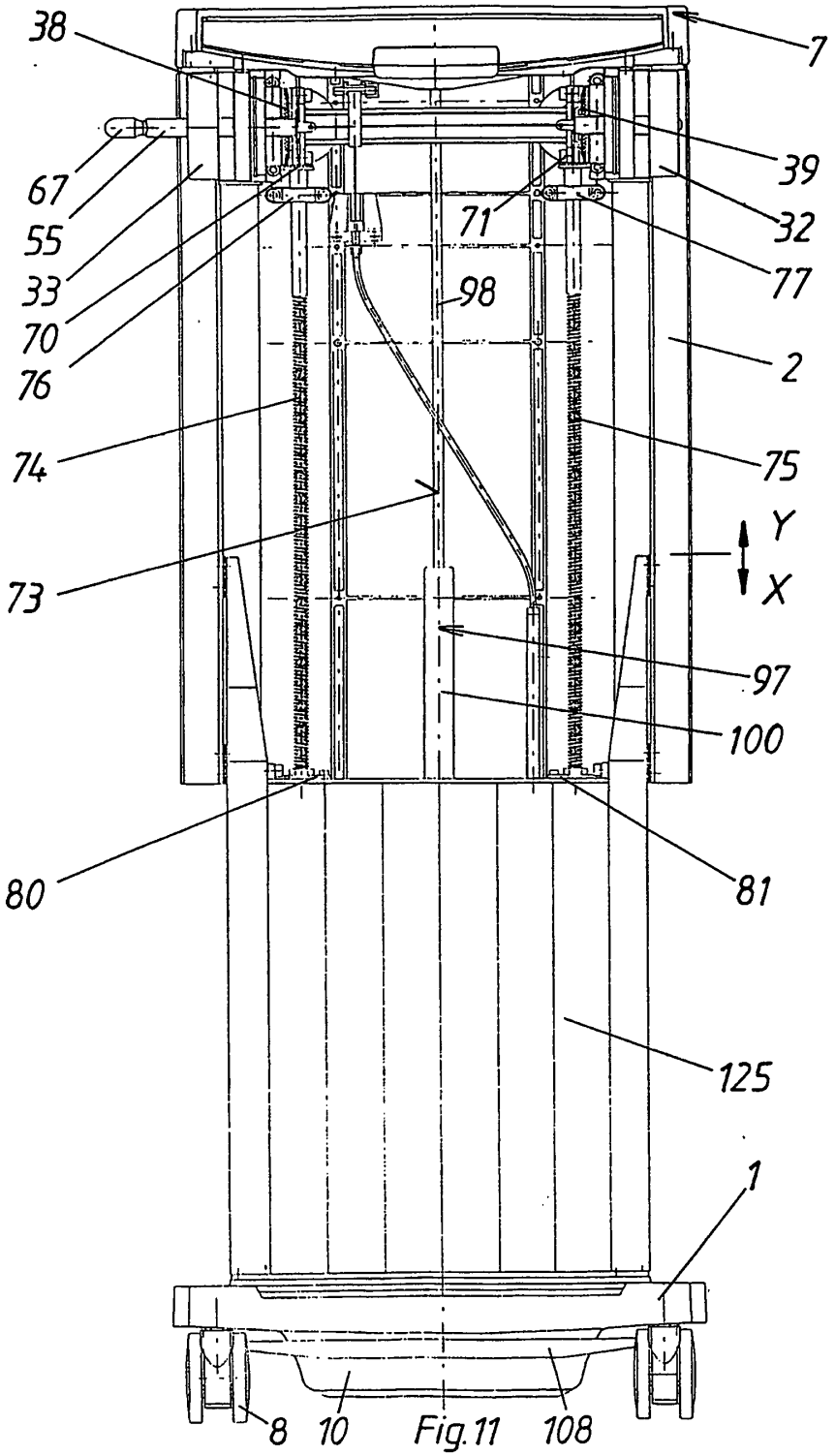


Fig. 11

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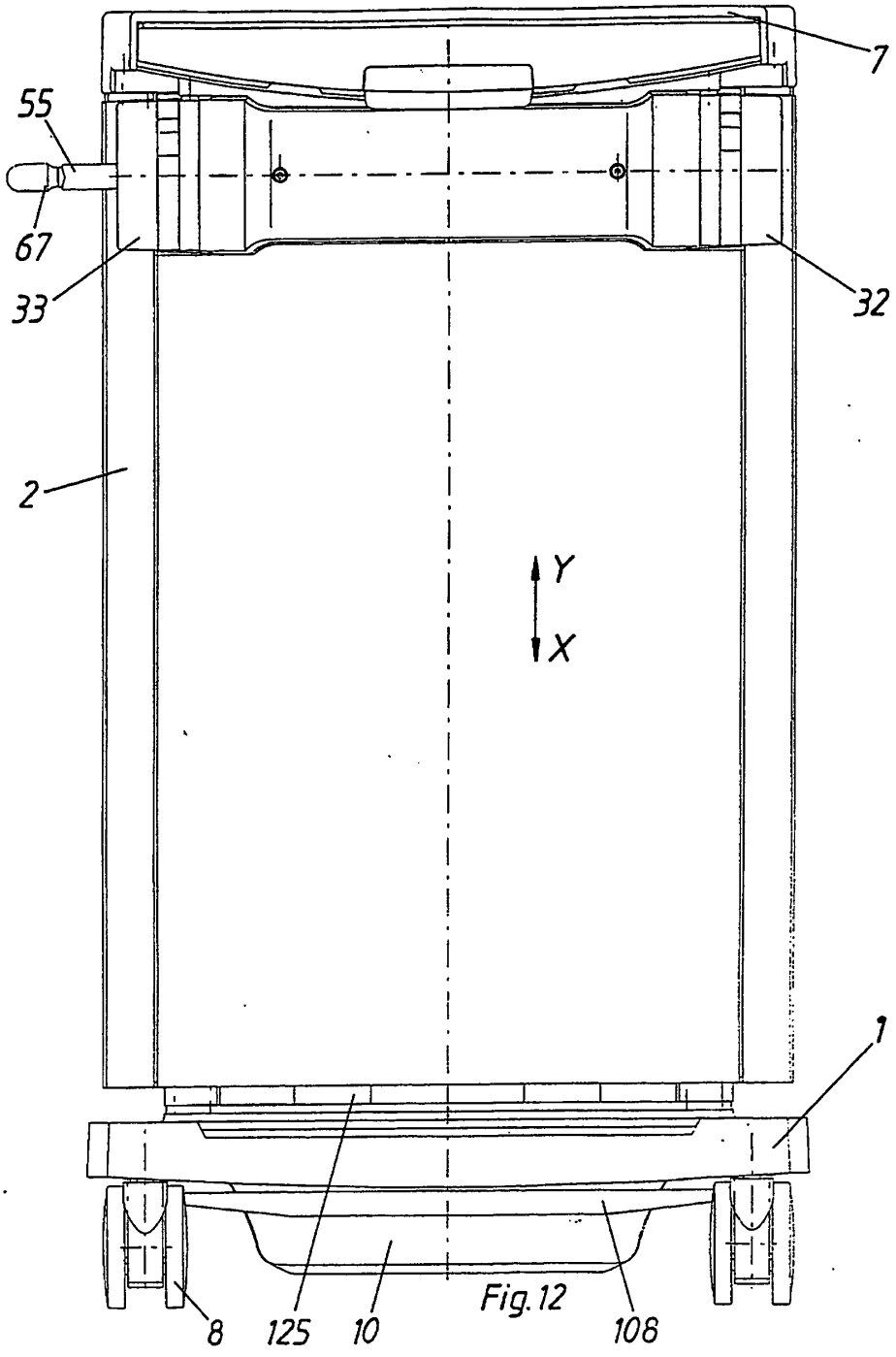


Fig. 12

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ZEICHNUNGEN SEITE 13

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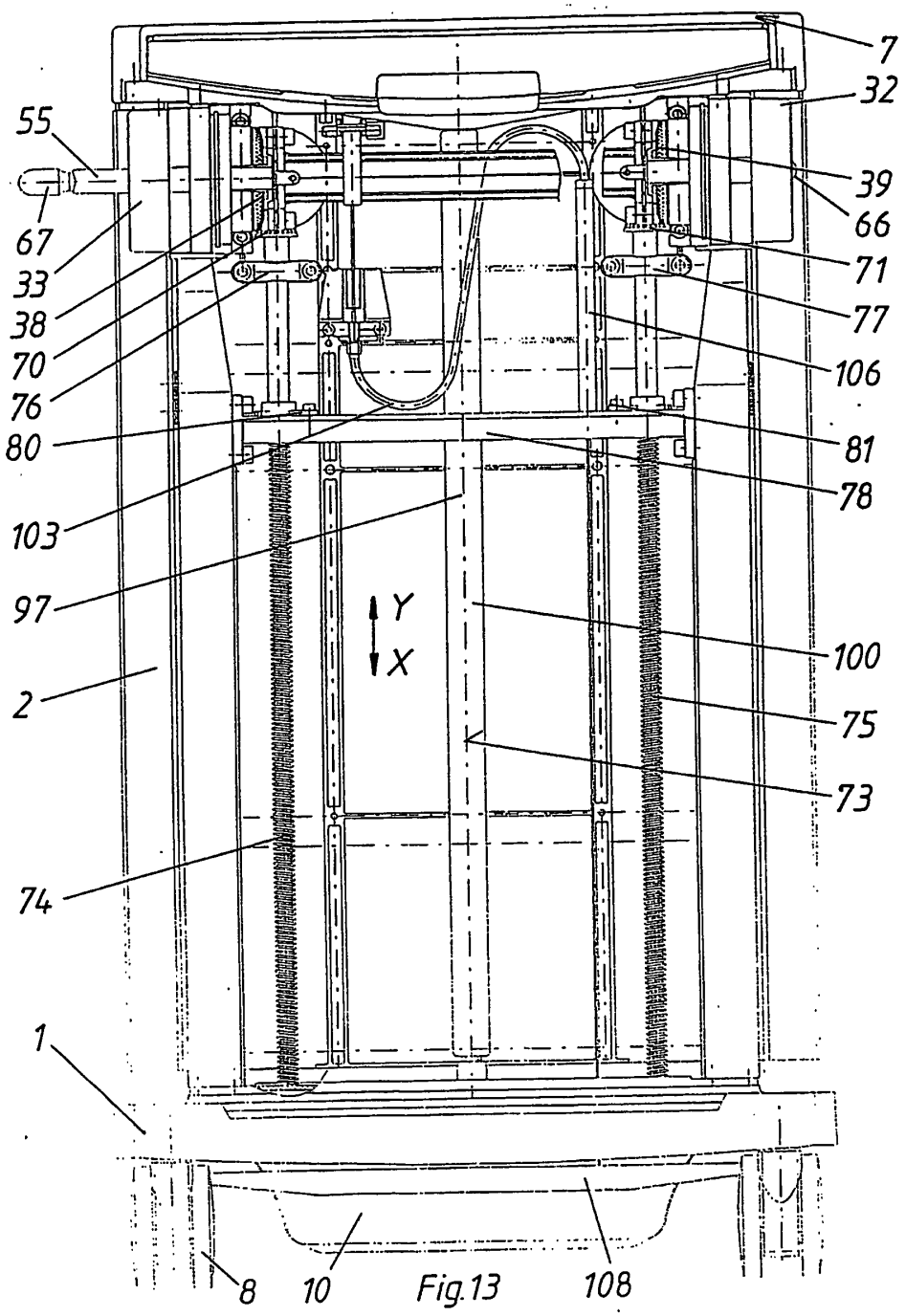


Fig.13

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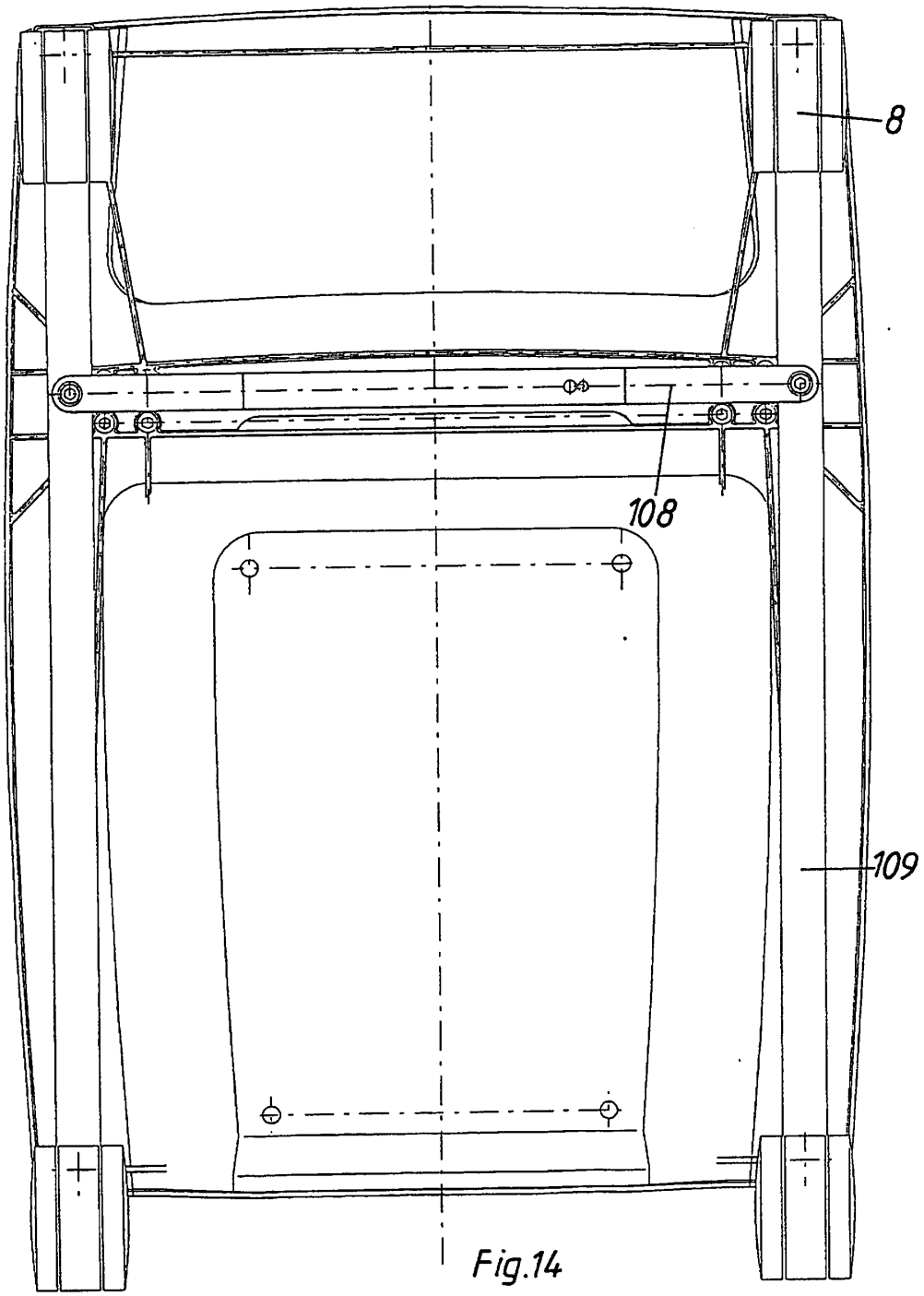


Fig.14

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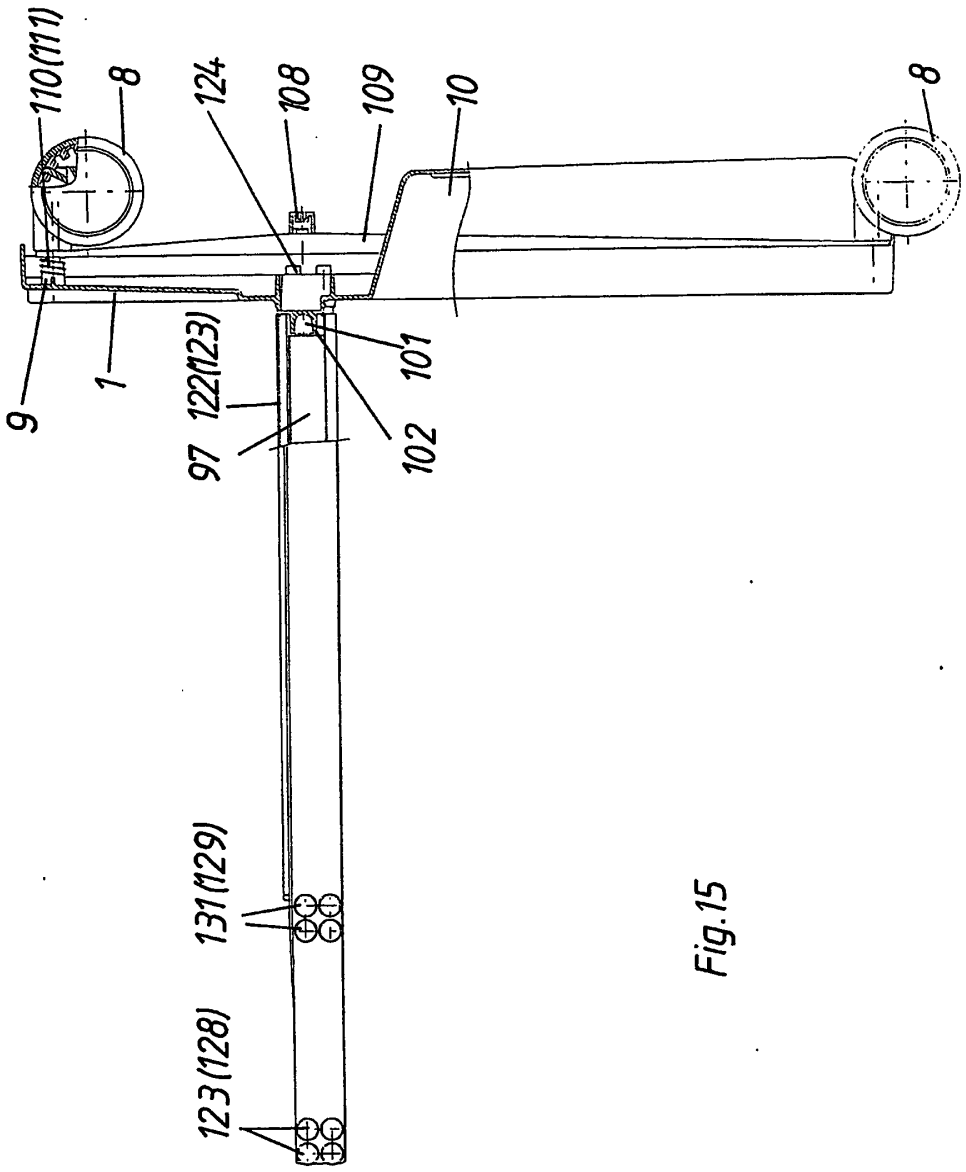


Fig.15

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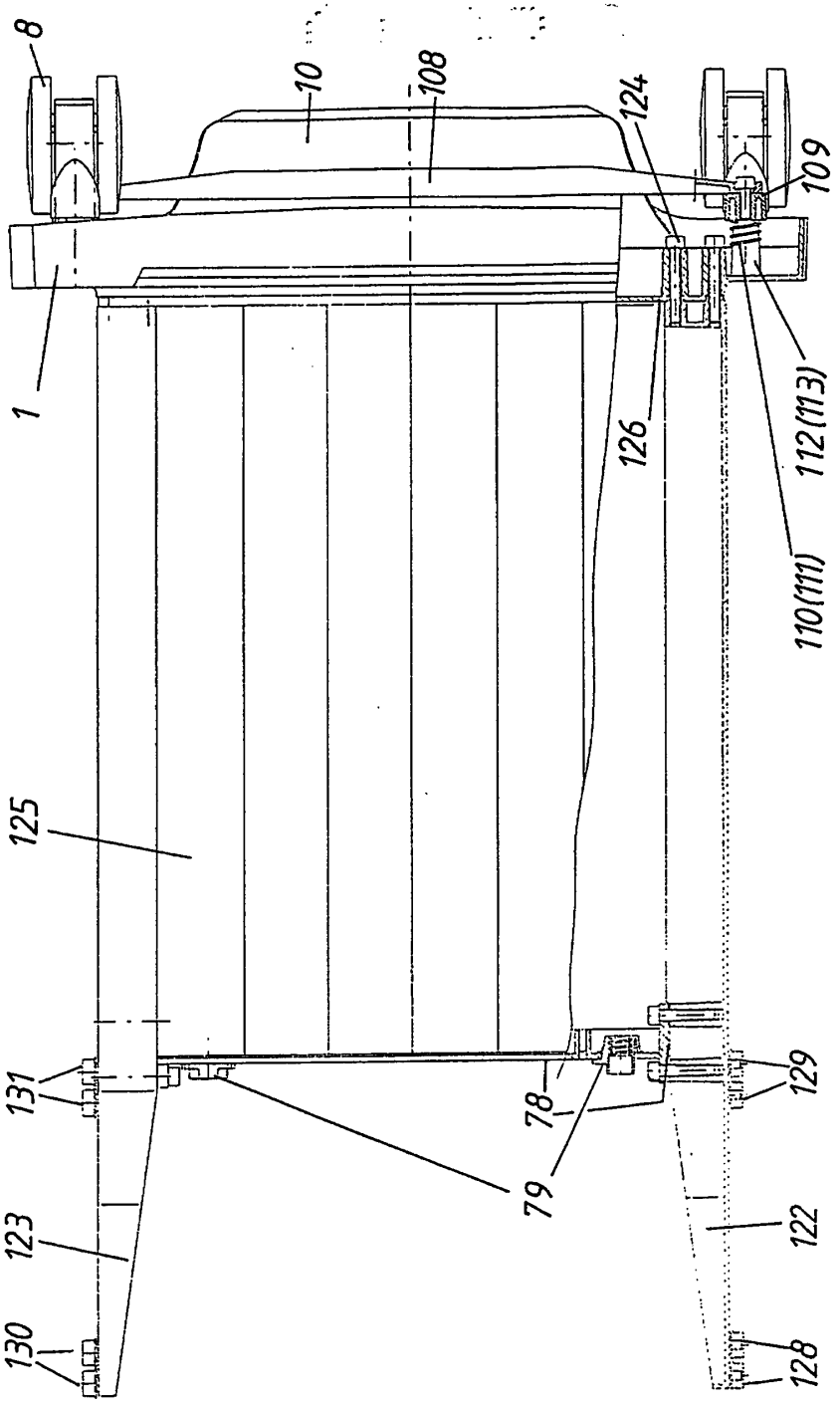


Fig.16

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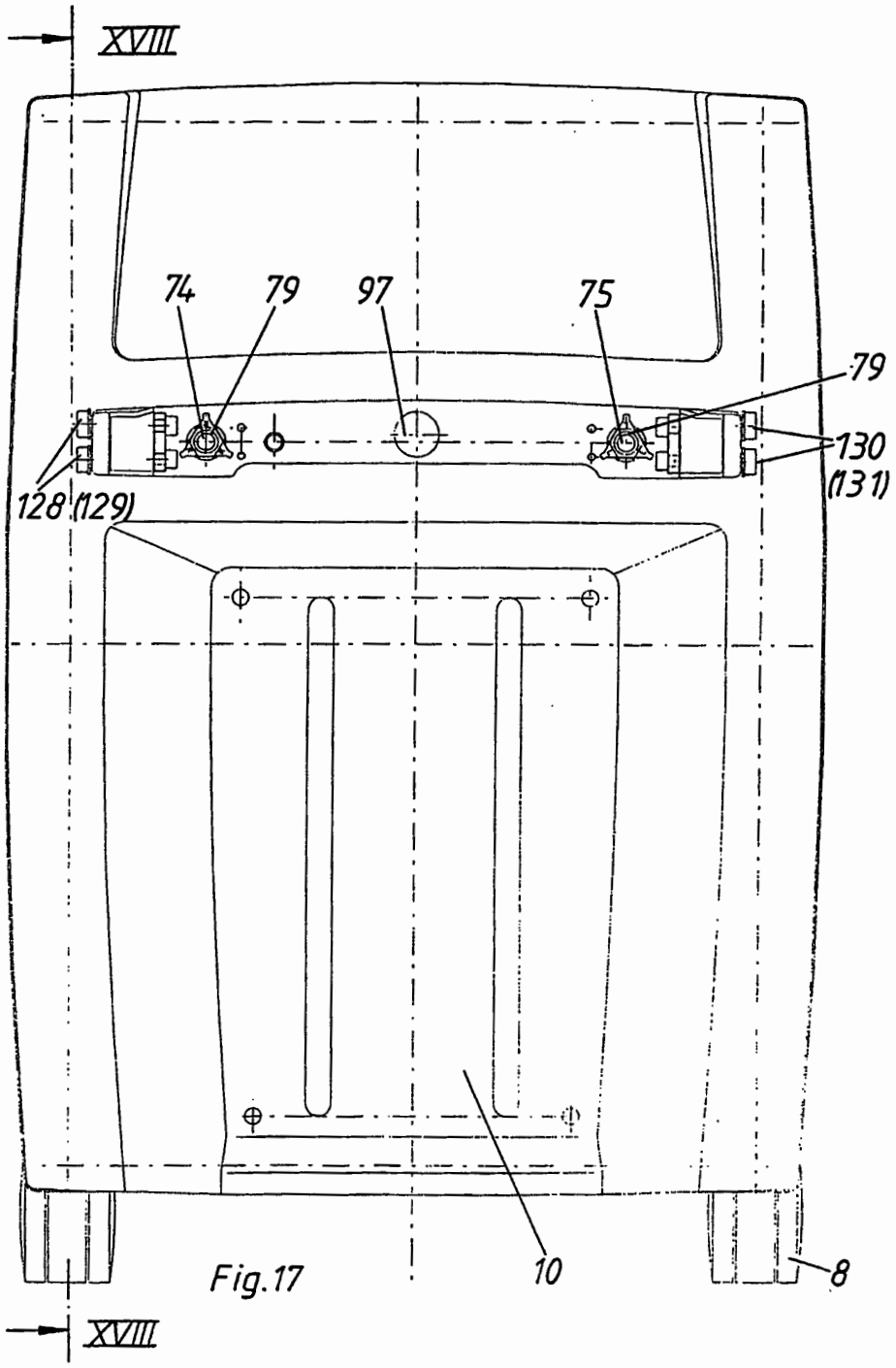


Fig.17

602 124/296

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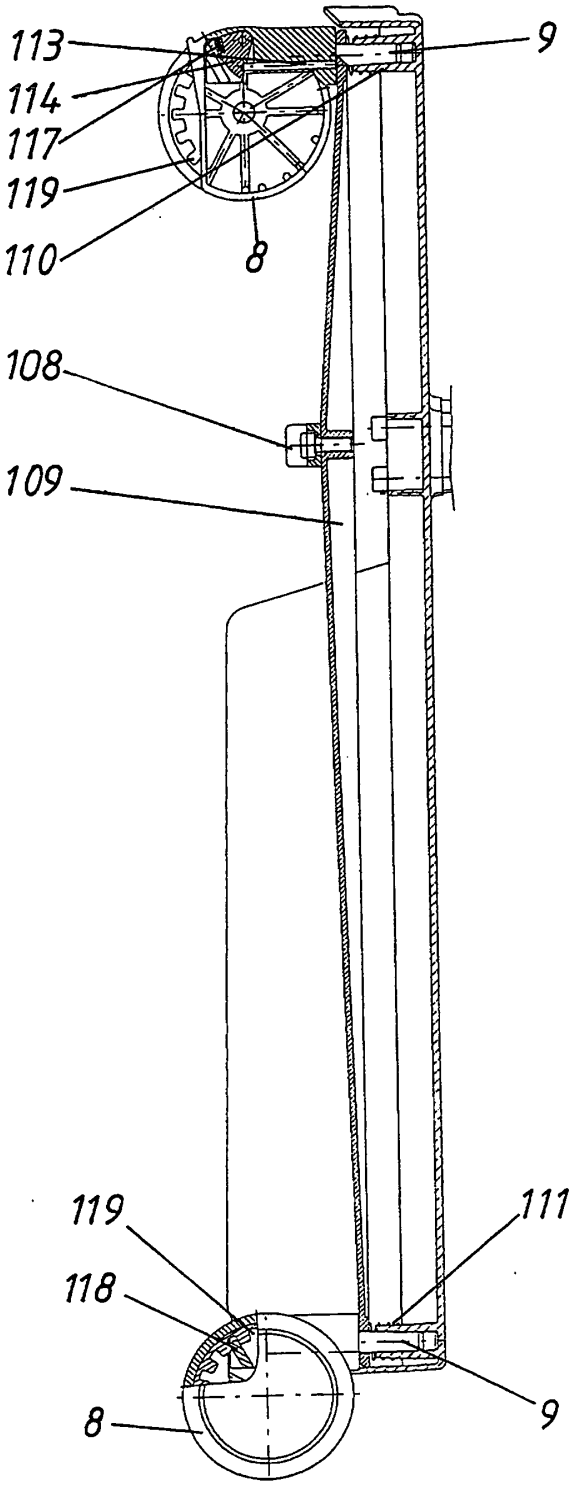


Fig.18

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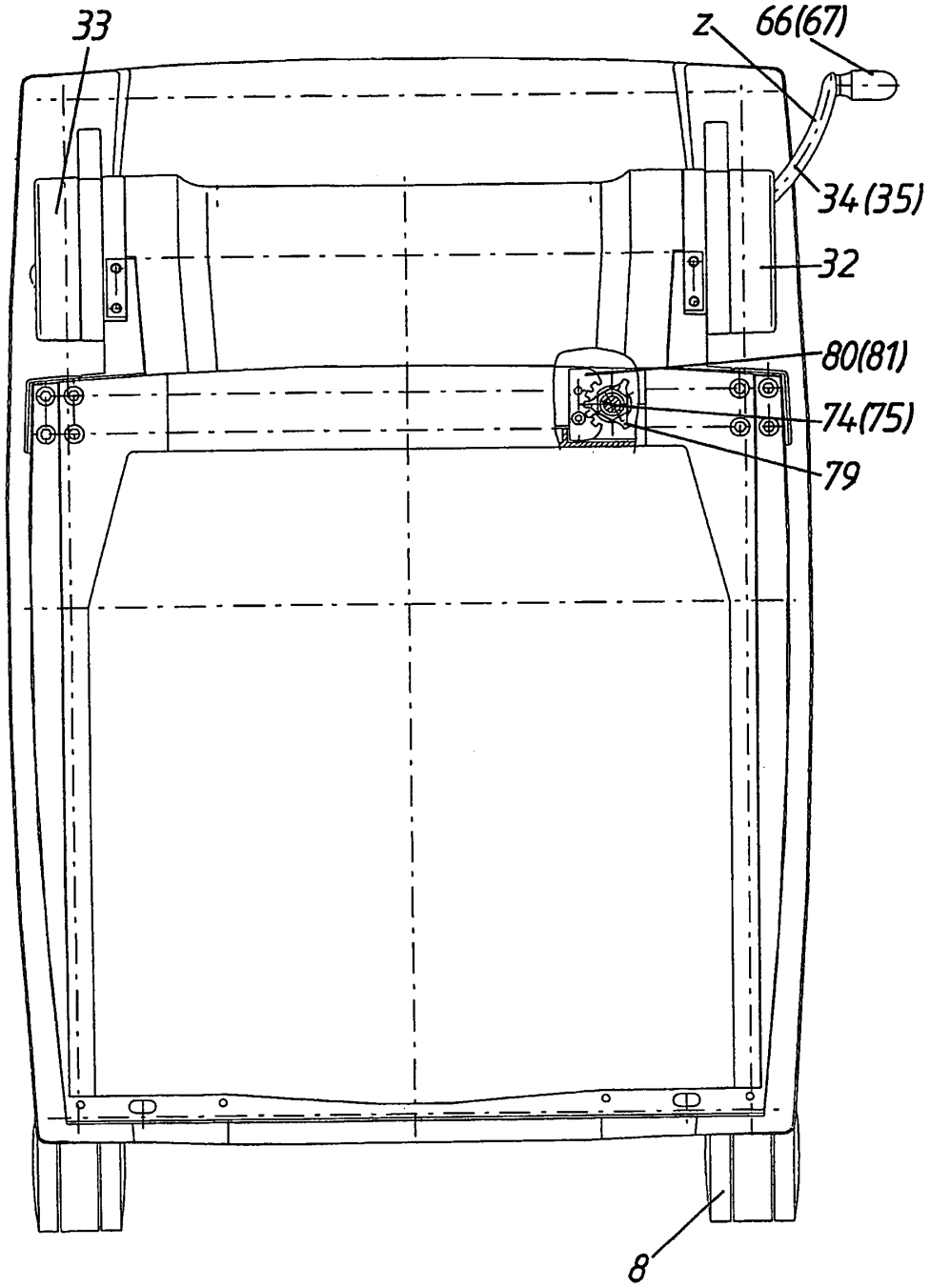


Fig.19

602 124/298

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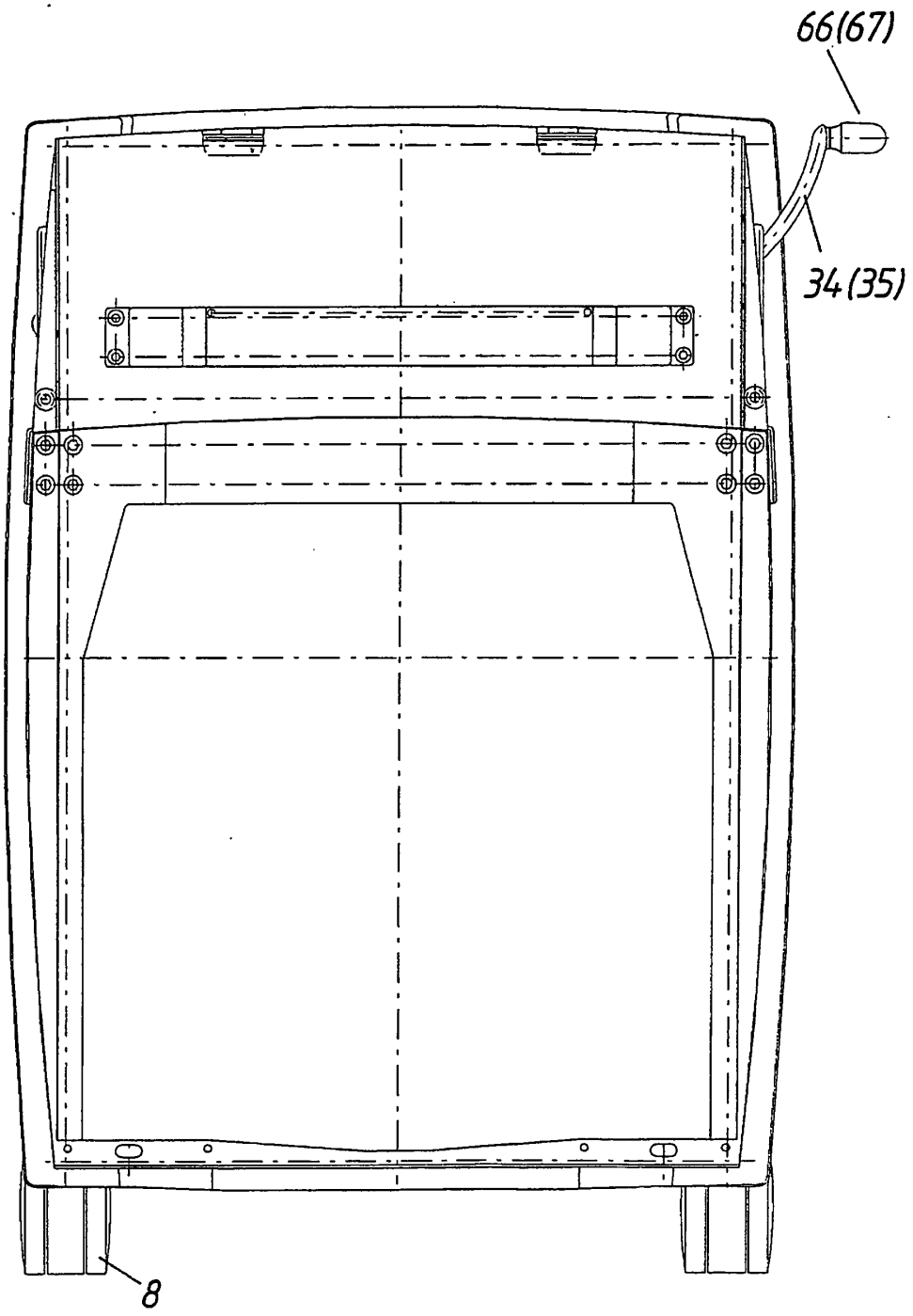


Fig. 20

602 124/298

ZEICHNUNGEN SEITE 21

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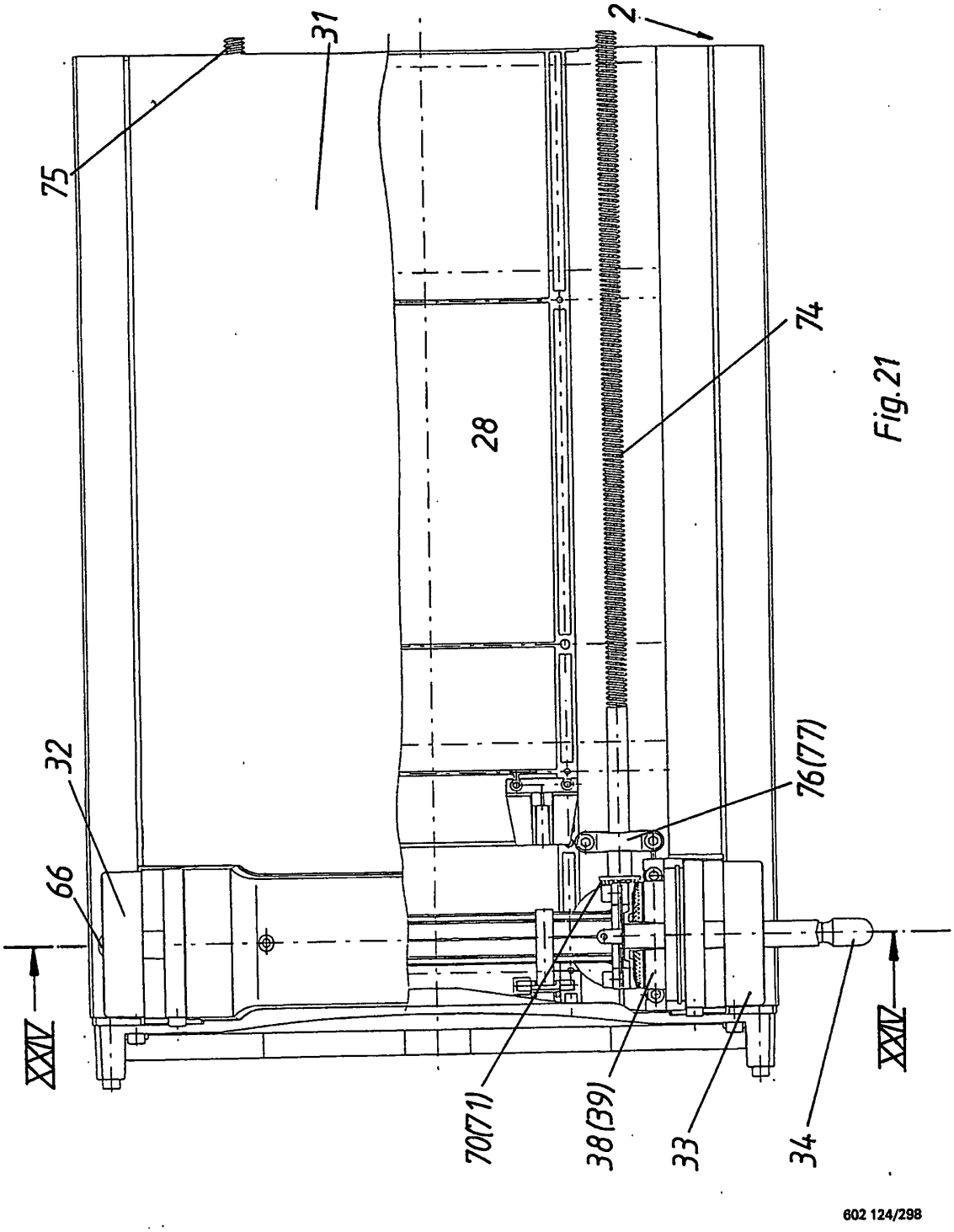


Fig.21

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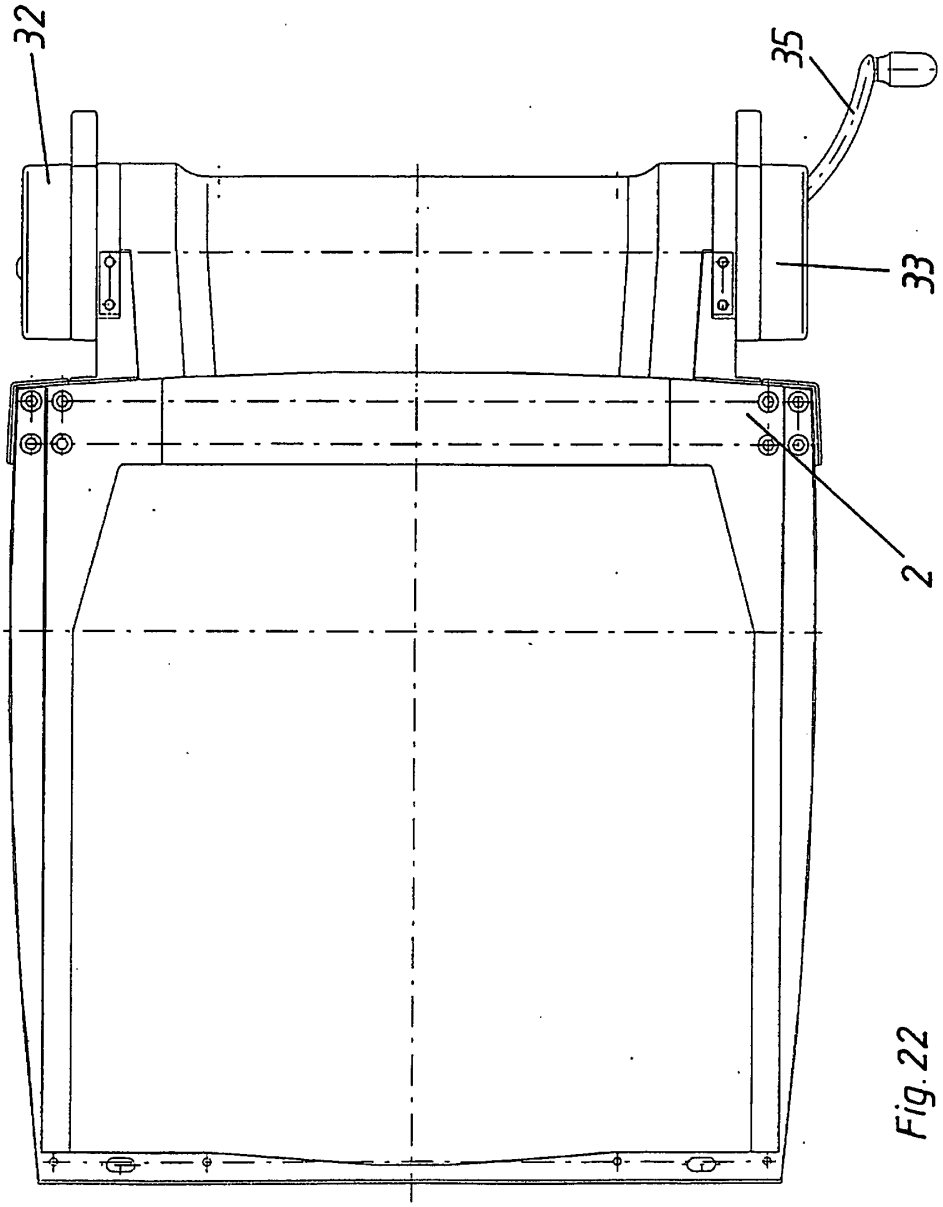


Fig. 22

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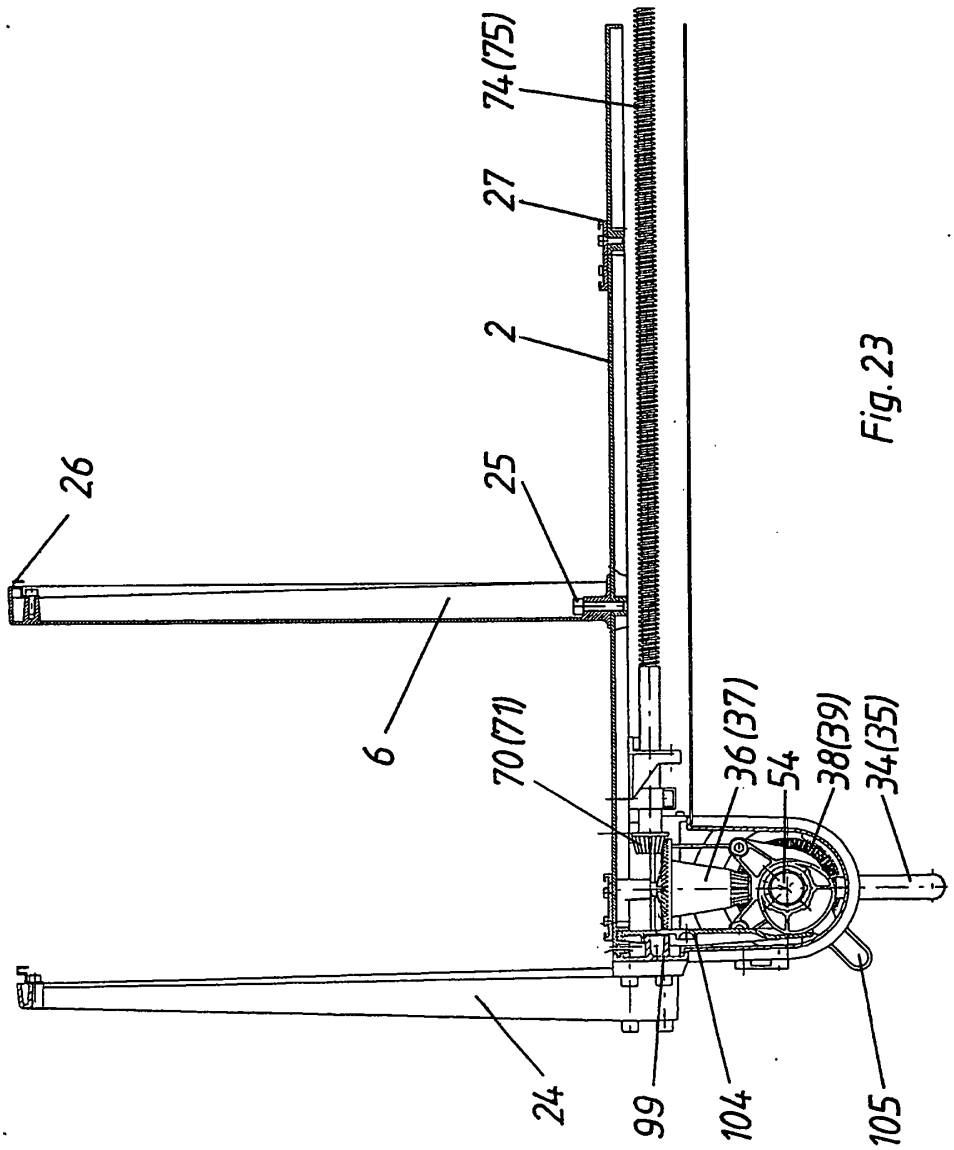


Fig. 23

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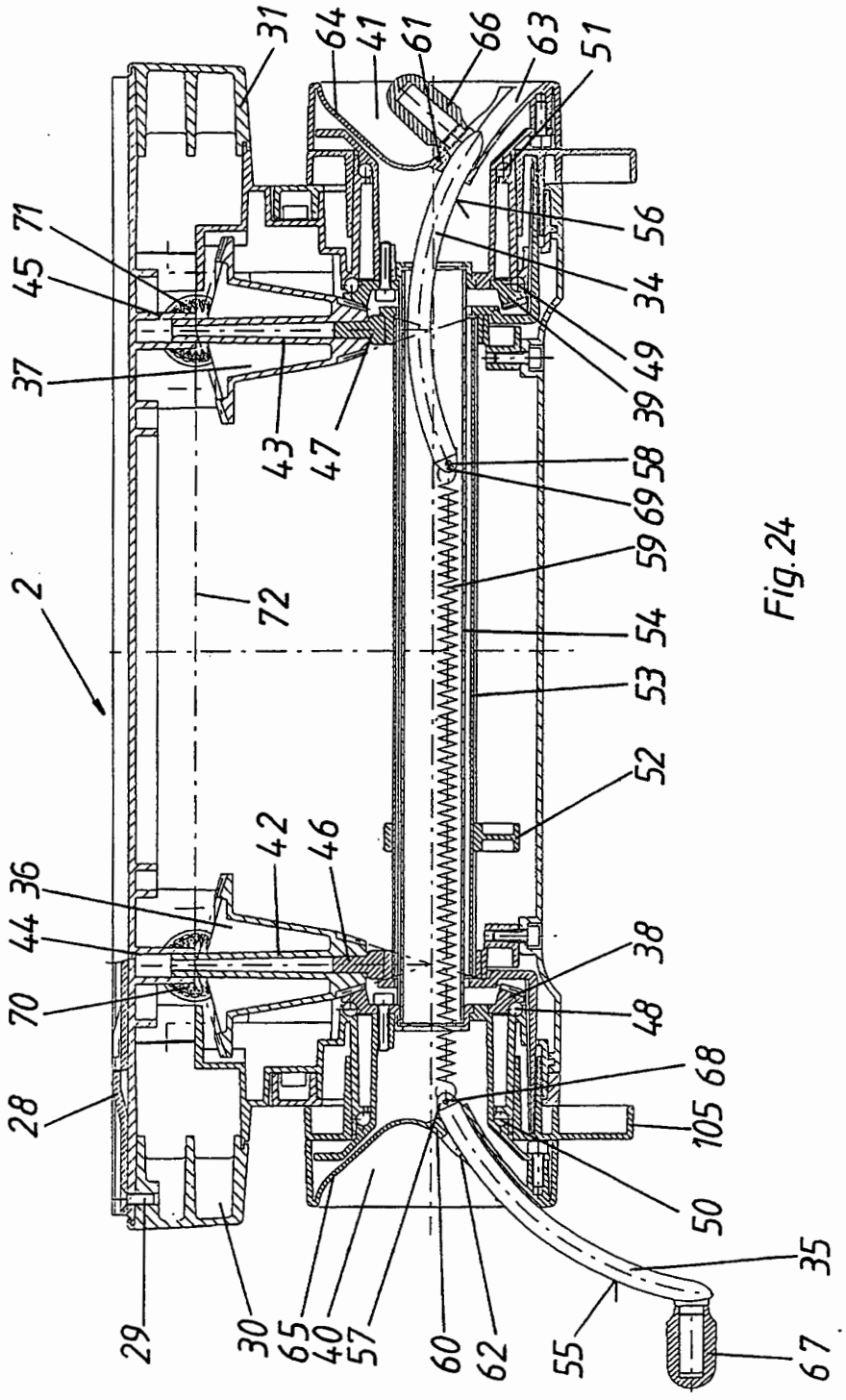


Fig. 24

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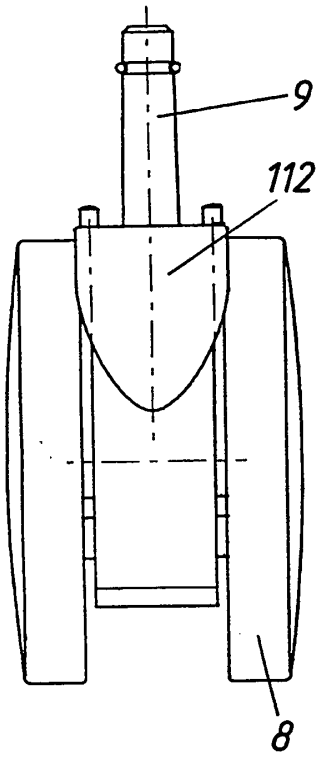


Fig. 25

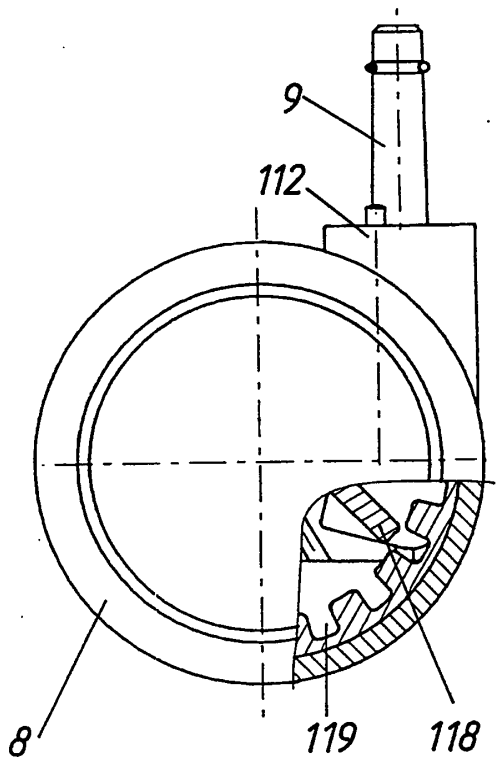


Fig. 26

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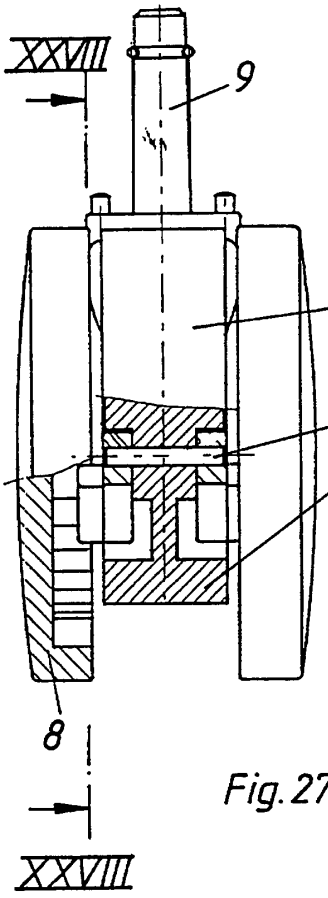


Fig. 27

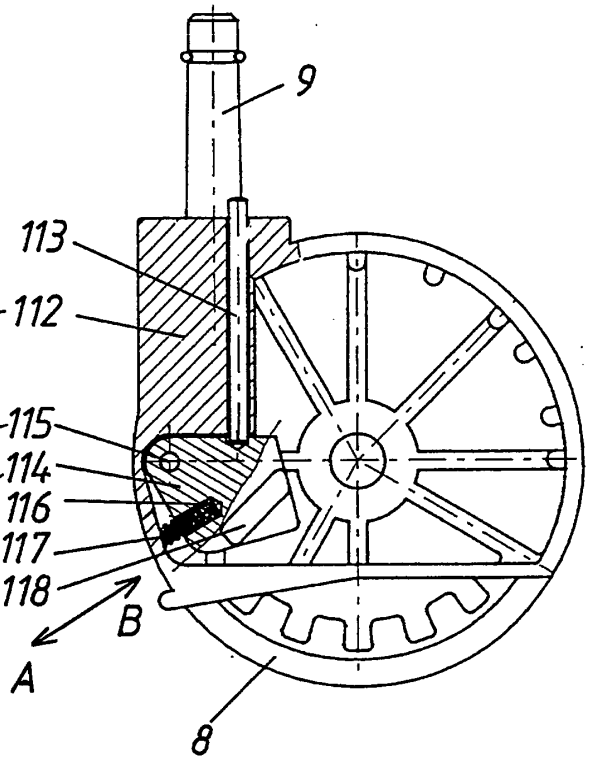


Fig. 28

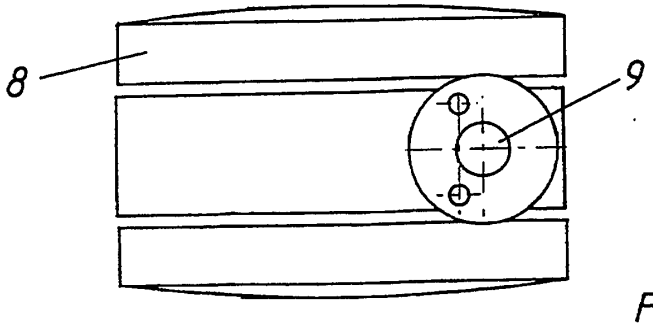


Fig. 29

602 124/298

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Veröffentlichungstag: 13. Juni 1996

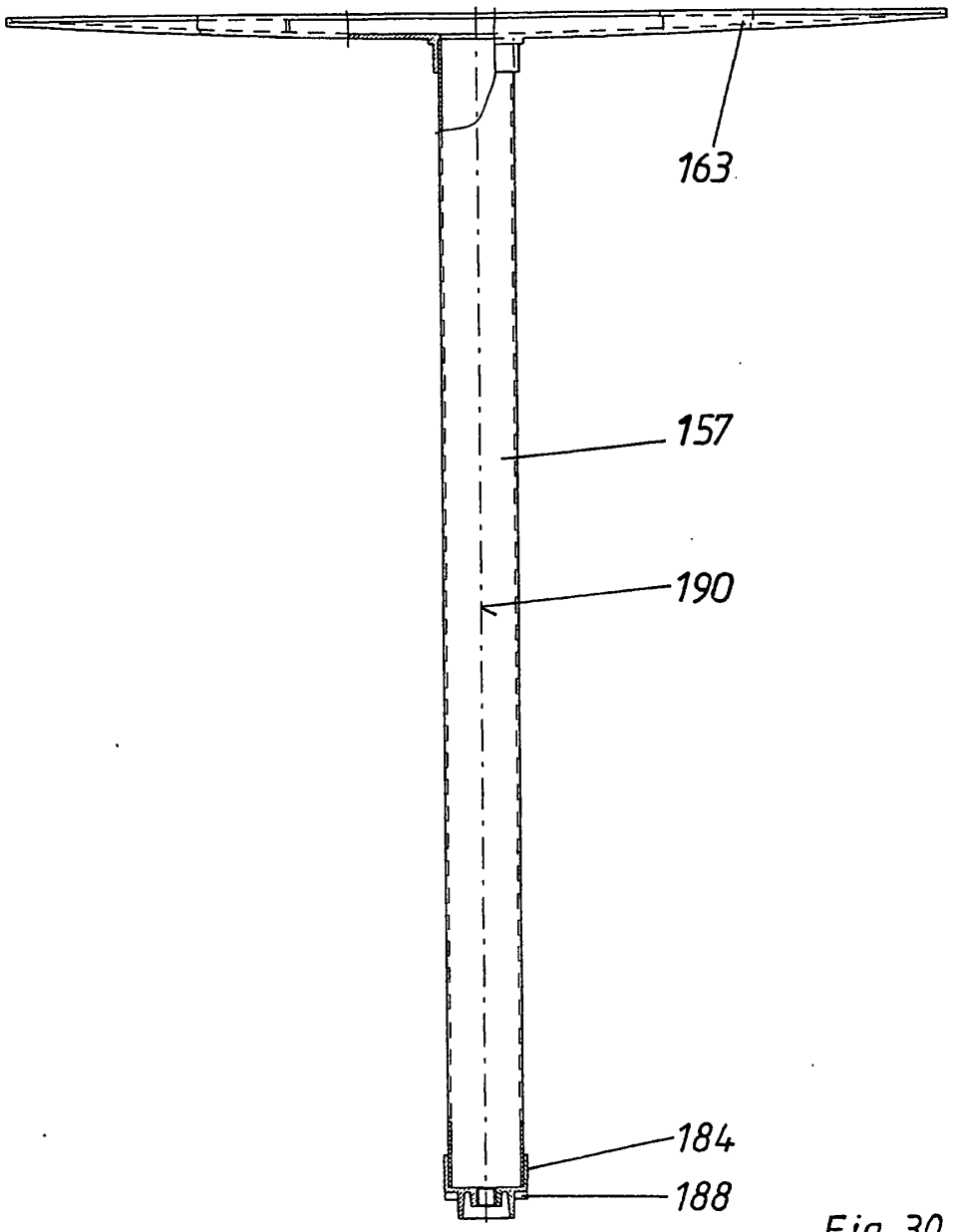


Fig. 30

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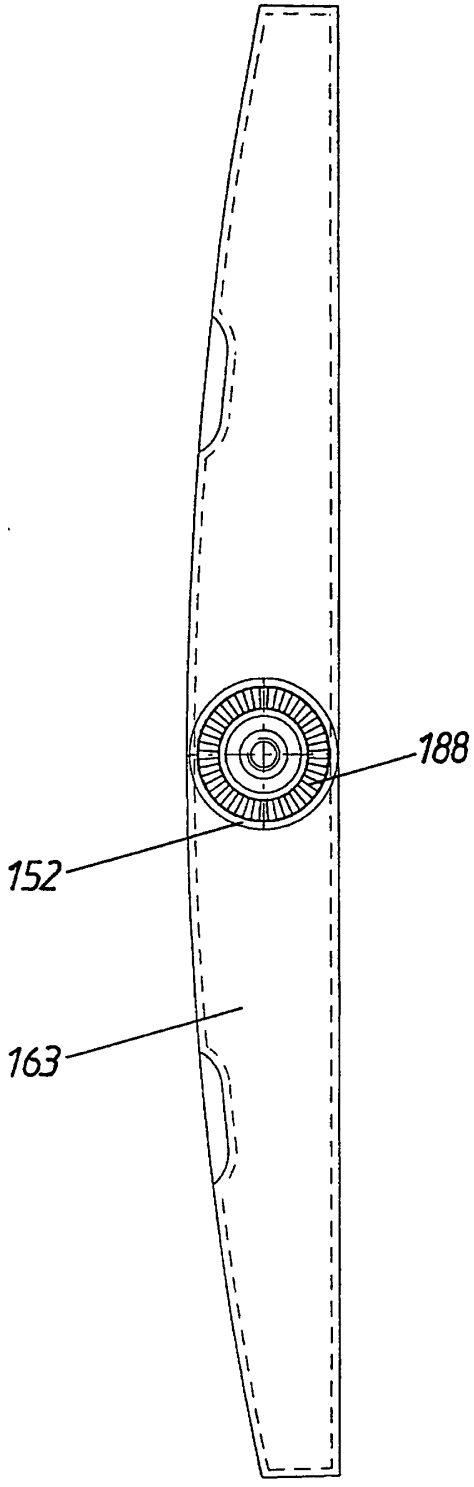
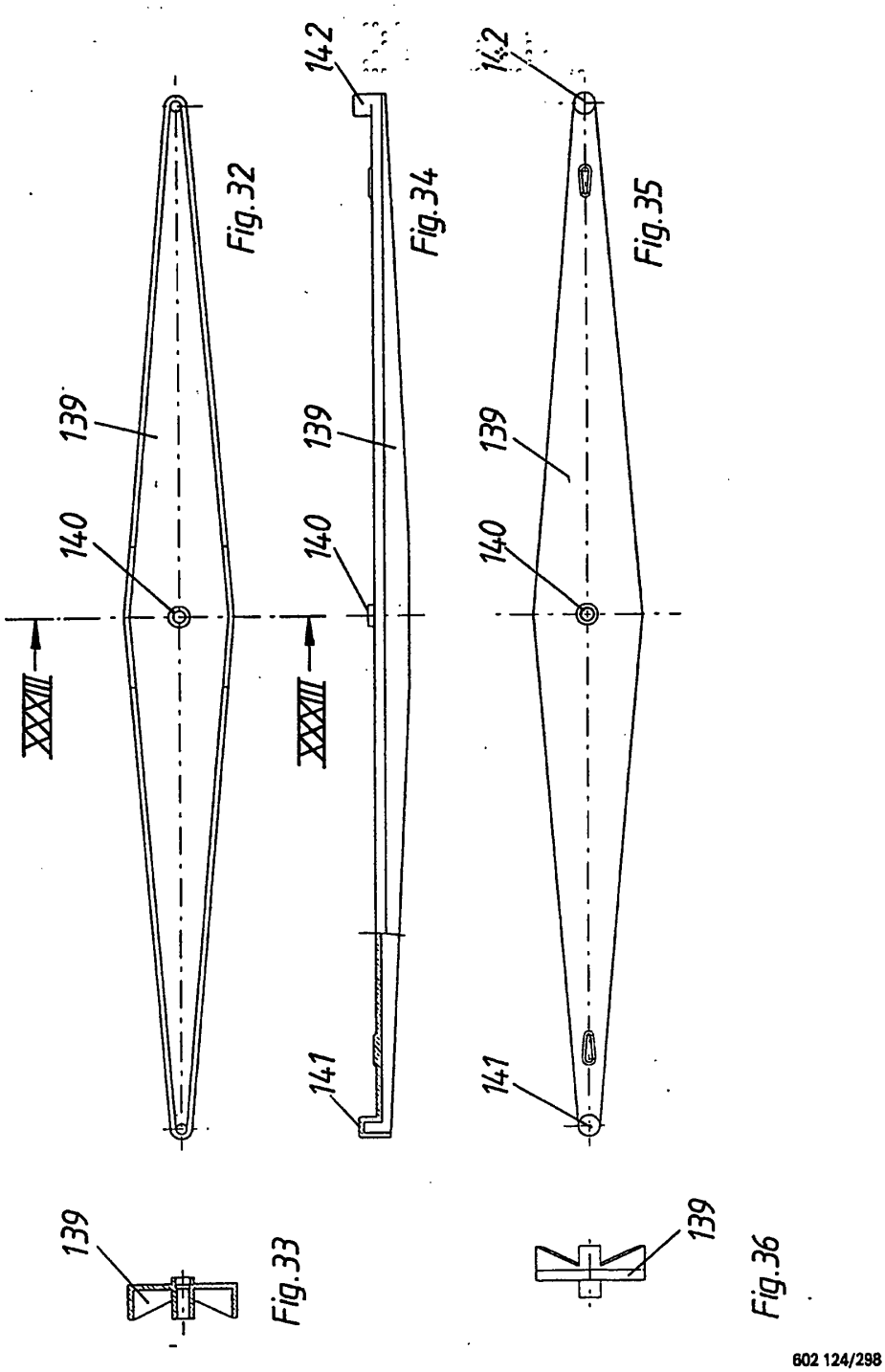


Fig. 31

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ZEICHNUNGEN SEITE 29

Nummer: DE 195 40 058 C1
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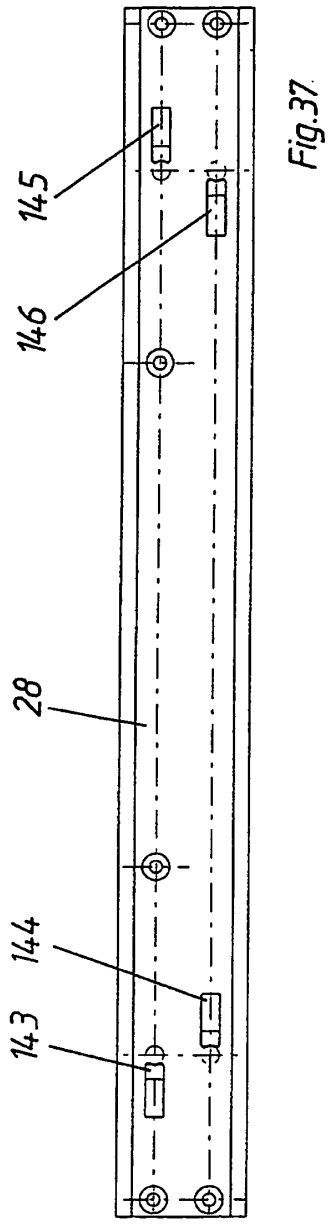


Fig.37



Fig.38

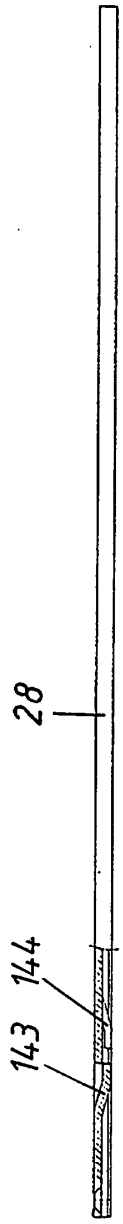
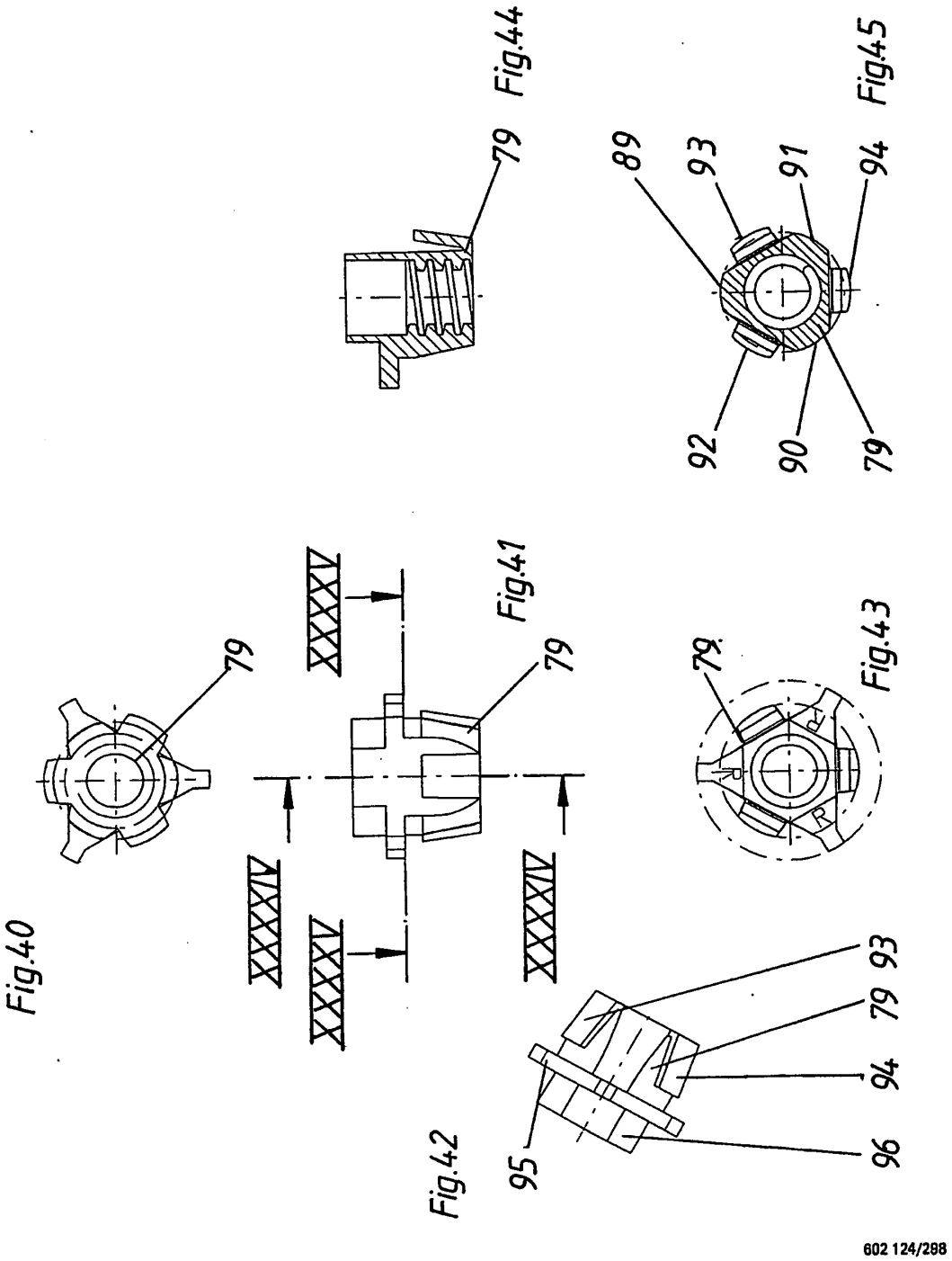


Fig.39

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ZEICHNUNGEN SEITE 31

Nummer: DE 195 40 058 C1
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Veröffentlichungstag: 13. Juni 1996

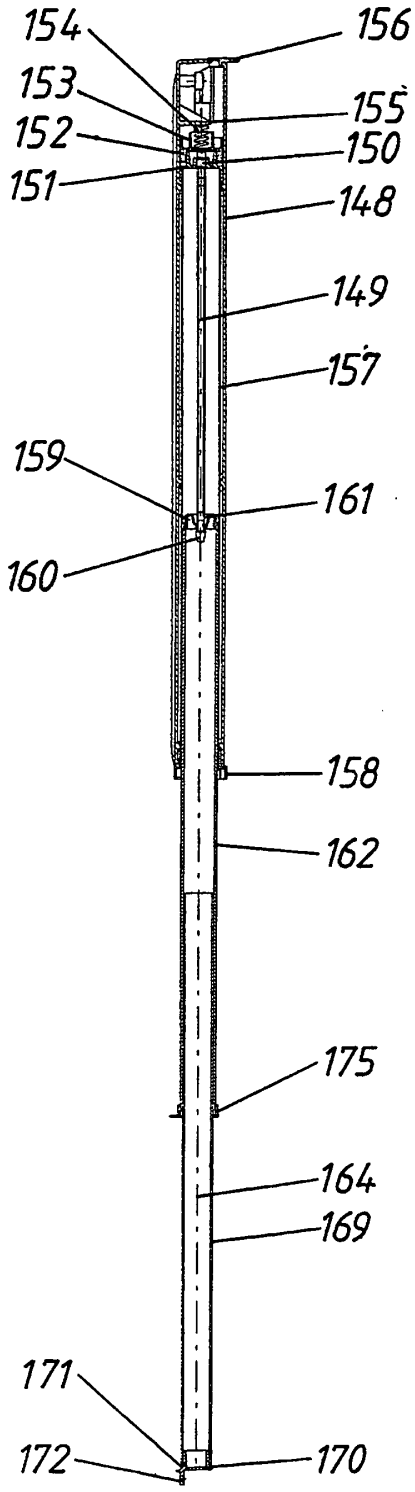


Fig. 46

602 124/298

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Veröffentlichungstag: 13. Juni 1996

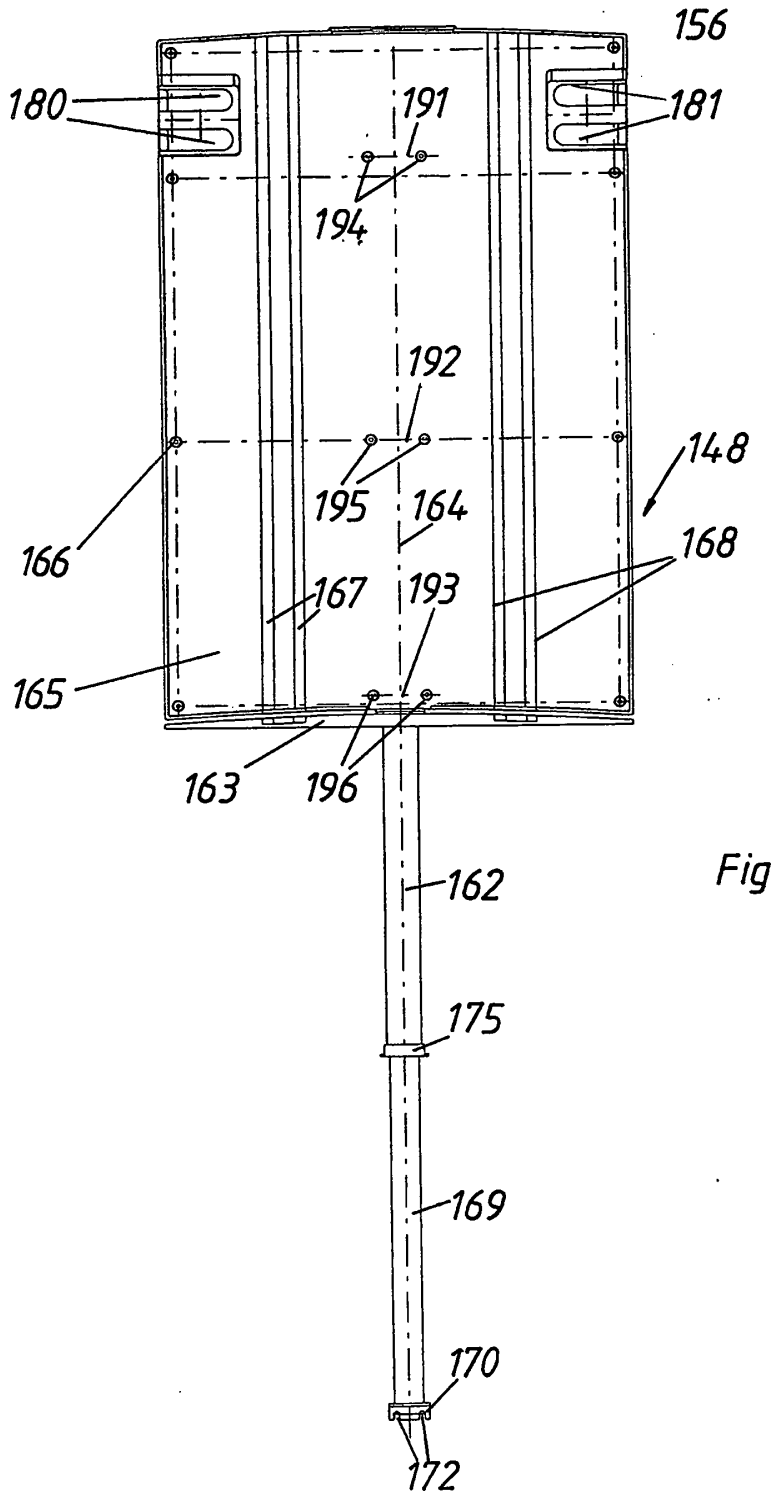


Fig. 47

602 124/298

ZEICHNUNGEN SEITE 34

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Veröffentlichungstag: 13. Juni 1996

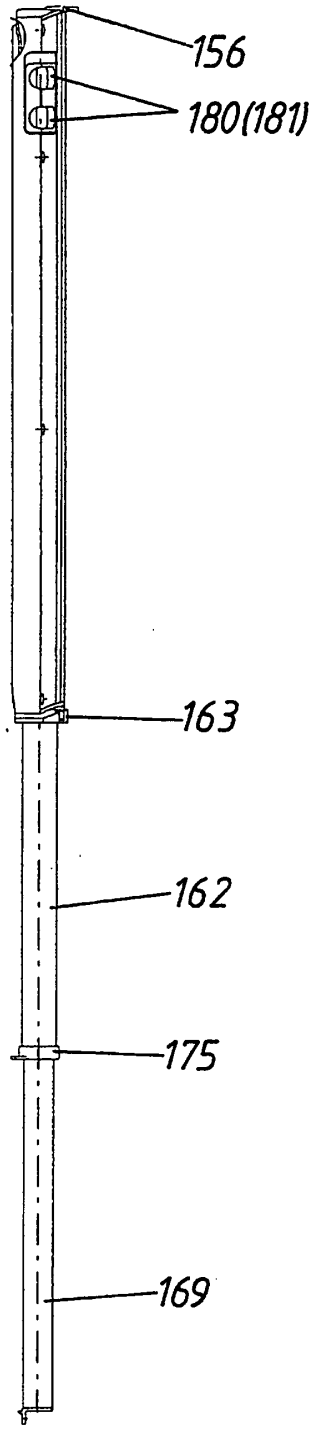


Fig. 48

602 124/298

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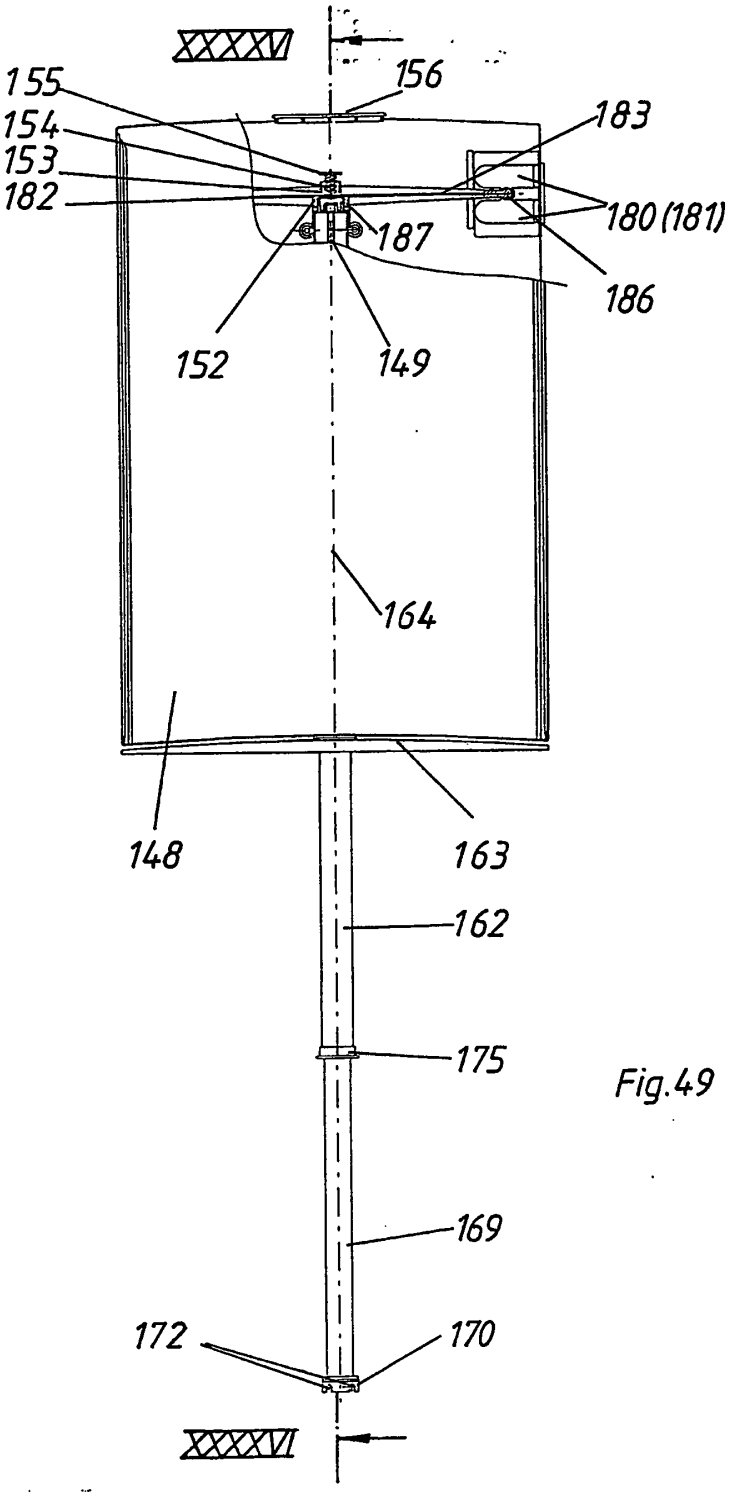


Fig.49

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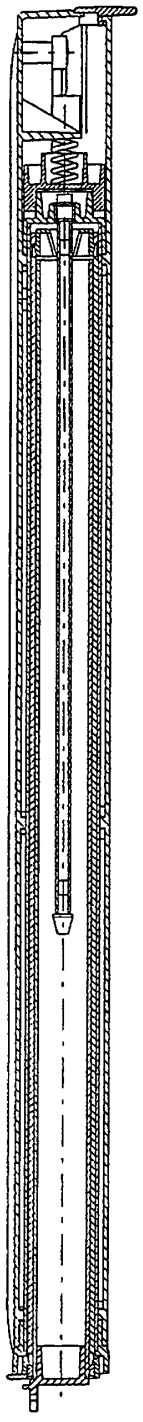


Fig. 50

602 124/288

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Veröffentlichungstag: 13. Juni 1996

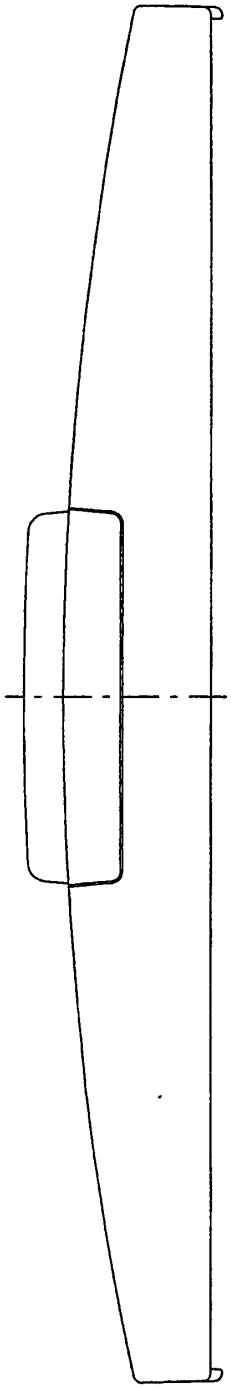


Fig. 51

602 124/298

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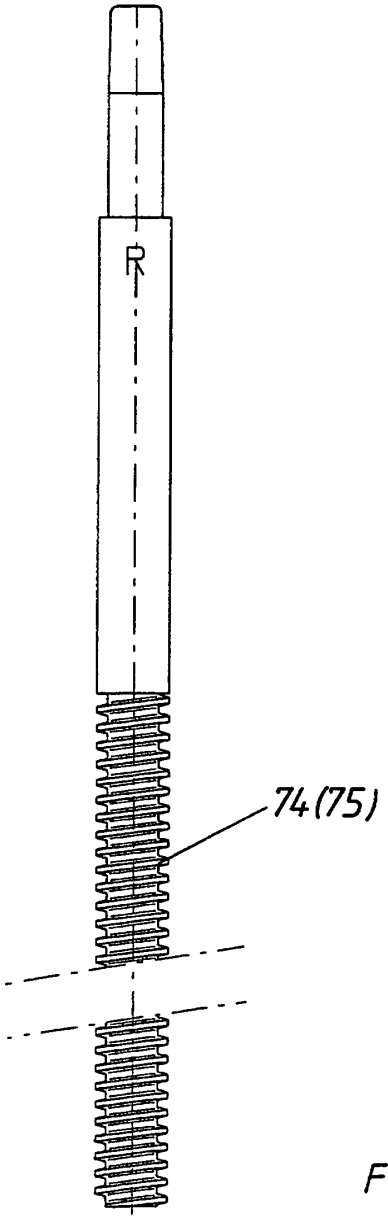


Fig. 52

602 124/298

ZEICHNUNGEN SEITE 39

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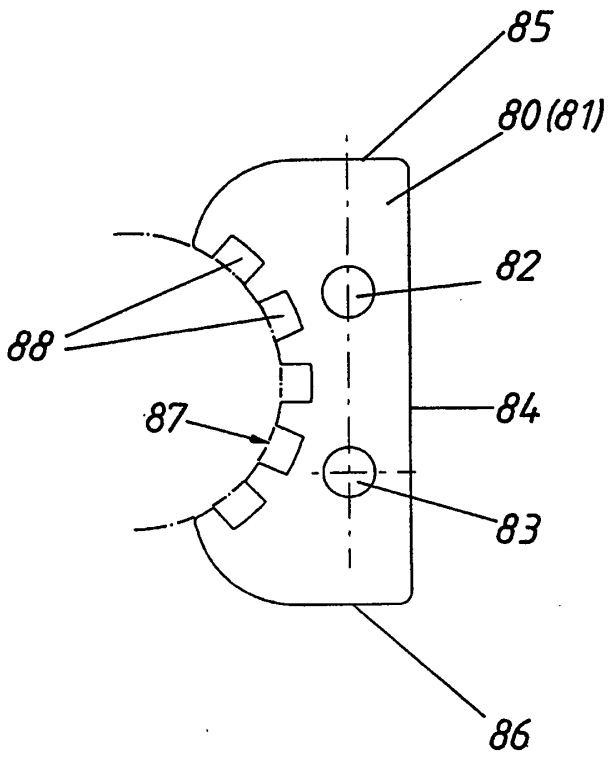


Fig.53

602 124/298

ZEICHNUNGEN SEITE 40

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Veröffentlichungstag: 13. Juni 1996

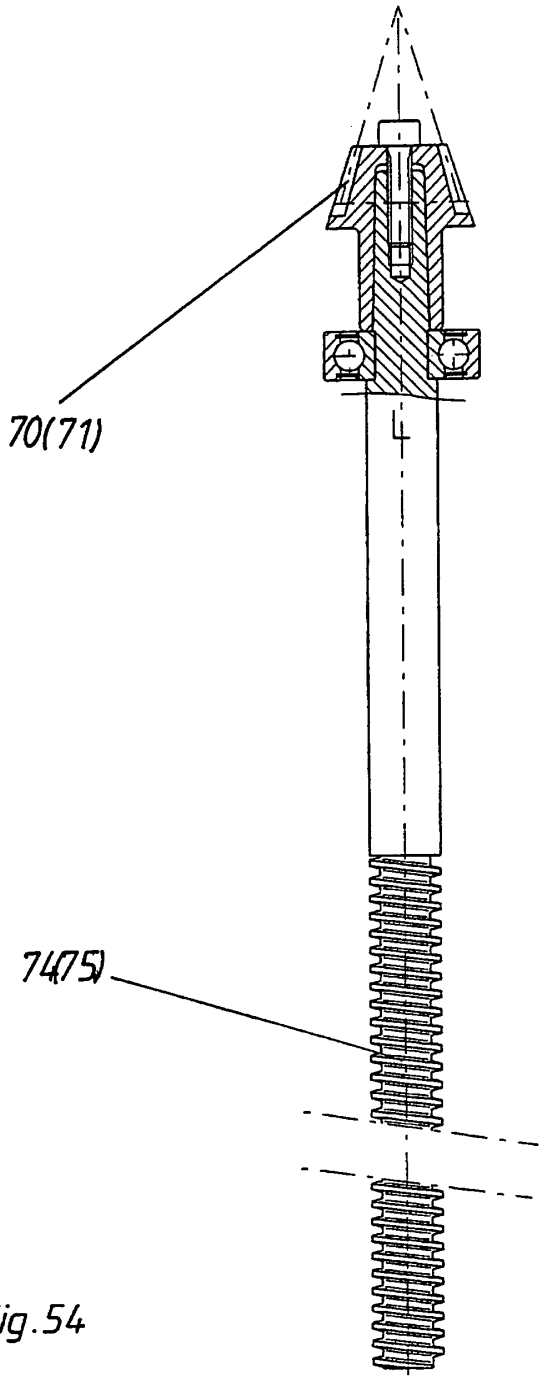


Fig. 54

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ZEICHNUNGEN SEITE 41

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Int. Cl.[6]: A 47 B 79/00
Veröffentlichungstag: 13. Juni 1996

Fig.56

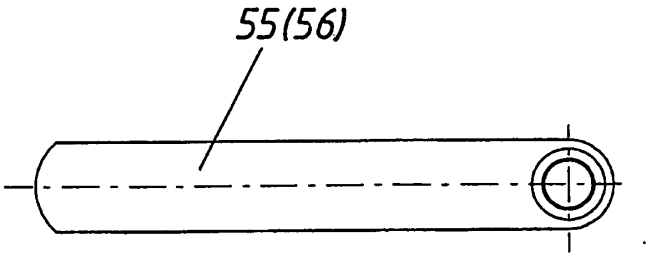


Fig.55

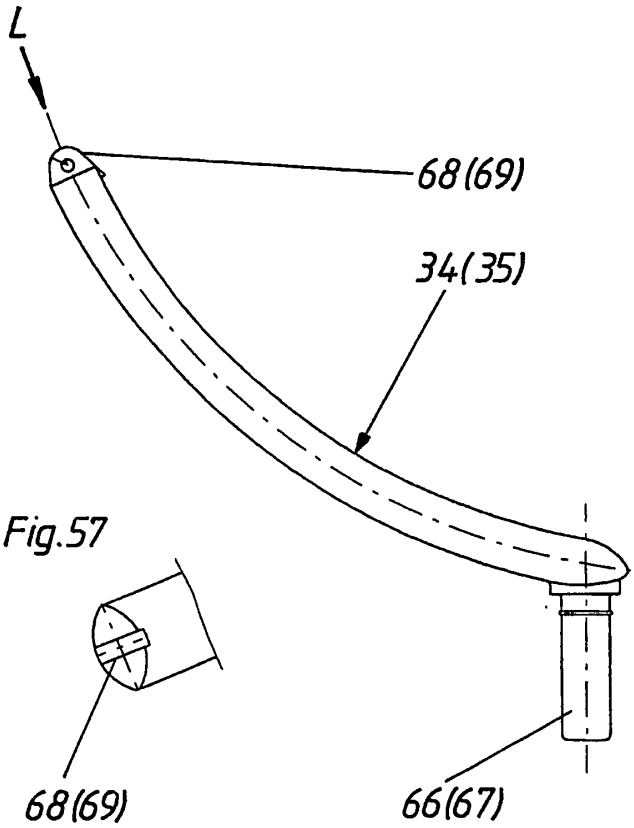


Fig.57

602 124/298

ZEICHNUNGEN SEITE 42

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Int. Cl.[6]: A 47 B 79/00
Veröffentlichungstag: 13. Juni 1996

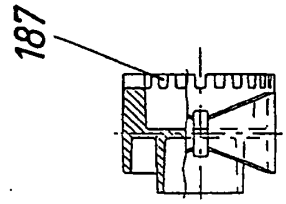


Fig.59

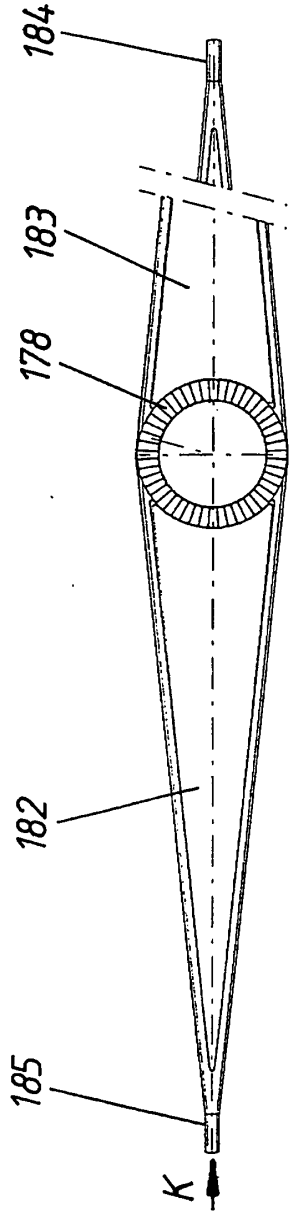


Fig.58

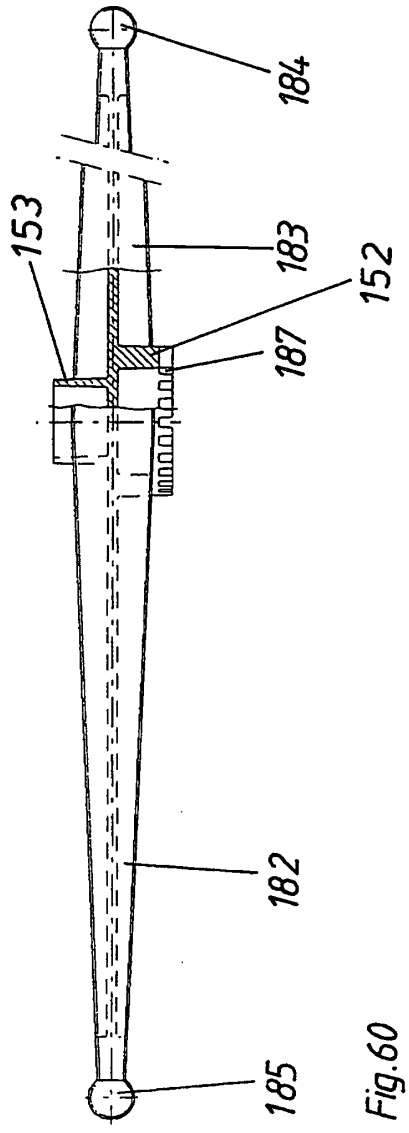


Fig.60

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DEUTSCHES PATENTAMT

(12) **Gebrauchsmuster**

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(54) Krankenhaus-Nachttisch mit gegeneinander verriegelbaren Schubladen

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(BZG01_T1)

Krankenhaus-Nachttisch mit gegeneinander verriegelbaren Schubladen

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Die Erfindung betrifft ein Schrankmöbel, insbesondere Krankenhaus-Nachttisch, mit einem Möbelhohlkörper, der wenigstens zwei übereinanderliegende und ausziehbare Schubladen mit wenigstens einem Seitenteilelement aufweist.

Ein Schrankmöbel, insbesondere ein Krankenhaus-Nachttisch der eingangs genannten Art ist aus der DE 94 08 780 U1 bzw. DE 94 08 782 U1 bekannt. Der Nachttisch besteht aus einem Nachttischkörper mit einer Nachttischplatte, der mit Hilfe von Rollen fahrbar ist. Er weist ein Kühlfach auf, über dem zwei übereinander liegende und ausziehbare Schubladen angeordnet sind. Eingesetzt werden derartige Nachttische dort, wo sich bettlägrigen Menschen befinden, insbesondere in Krankenhäusern.

Als nachteilig erweist sich bei den bekannten Nachttischen, daß beide Schubfächer gleichzeitig herausgezogen werden können. Bettlägrige Personen bringen im Nachttisch und insbesondere den beiden für sie zugänglich gemachten, übereinanderliegenden Schubfächern die Dinge unter, die sie während ihrer Verweildauer besonders oft

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benötigen. Das können Bücher, Zeitschriften, Geldbörse, Brille, Walkman oder dergleichen sein. Werden nun die beiden überladenen und schweren Laden gleichzeitig aus dem Nachttischkörper herausgezogen, kann das zu einer Veränderung des Schwerpunkts und damit zu einem Umstürzen des Nachttisches führen. Hierdurch werden nicht nur persönliche Wertgegenstände beschädigt, sondern es besteht, was noch viel ernster ist, die Gefahr einer größeren Verletzung.

Ausgehend von einem Schrankmöbel, insbesondere einem Krankenhaus-Nachttisch mit wenigstens zwei übereinanderliegenden Schubladen der eingangs genannten Art liegt der Erfindung die Aufgabe zugrunde, die Ausziehmöglichkeit dieser beiden Schubladen so zu verbessern, daß die Gefahr eines Umstürzens gebannt wird.

Erfindungsgemäß wird diese Aufgabe dadurch gelöst, daß an wenigstens einem der Seitenteilelemente der Schubladen ein Verriegelungs-U-Profil eines Verriegelungsteleskops angeordnet ist, die wechselseitig kontaktierend und sperrend an je einem Anschlagverriegelungselement eines Sperr-Dreiecks anliegen, das verstellbar im Inneren des Möbelhohlkörpers angeordnet ist.

Die mit der Erfindung erzielten Vorteile bestehen insbesondere darin, daß das verstellbare Sperr-Dreieck das Herausziehen einer Schublade ermöglicht. Hierbei kontaktiert das Verriegelungs-U-Profil das Anschlagverriegelungselement so, daß das gegenüberliegende zweite Anschlagverriegelungselement gegen das zweite Verriegelungs-U-Profil gedrückt wird. Hierdurch wird ein Herausziehen der anderen Schublade wirksam verhindert. Die in der herausgezogenen Schublade abgelegten persönlichen Gegenstände wirken zwar schwerpunktverlagernd, aber nicht in einem solchen Maße, daß es zu einem Umstürzen des gesamten Nachttisches kommen kann. Durch das Gegen-

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einander-Verriegeln der beiden Schubladen wird darüber hinaus ein Einklemmen der Finger der bedienenden Person vermieden, das bei einem gleichzeitigen Herausziehen beider Schubladen möglich ist.

Das gegenseitige Verriegeln ist nicht nur auf zwei übereinanderliegende Schubladen begrenzt. Vielmehr können mehrere Schubladen, die übereinander in einem Schrankkörper ausziehbar angeordnet sind, in gleichem Maße verriegelt werden. Verriegelt werden können auch Auszieh-paletten mit schweren Werkzeugen bzw. anderen Gegenständen. Anwendbar ist diese Verriegelung immer dann, wo ein mehrfaches Ausziehen bestückter flächenförmiger Tragelemente verhindert werden soll, um ein Umkippen des sie haltenden Standkörpers verhindert werden soll.

Das Sperr-Dreieck kann aus einem Dreieckflachkörper bestehen, an dessen zwei sich gegenüberliegenden Ecken je ein Anschlagverriegelungselement und in dessen dritter Ecke eine Drehachse angeordnet ist. Der Dreieck-Flachkörper hat vorzugsweise die Form eines gleichseitigen Dreiecks. Das Anbringen der Drehachse in der dritten freien Ecke ermöglicht gemeinsam mit der gewählten Dreieckform das zu erreichende Verriegelungsziel. Anstelle eines Dreieck-Flachkörpers kann ein Flachkörper beliebiger polygoner Gestaltung, wie rund, viereckig, sechseckig zum Einsatz kommen.

Die Anschlagverriegelungselemente können ein L-förmig ausgebildetes Winkelprofil sein. Das Winkelprofil ist im Bereich der Winkelecke außen gerundet. Hierdurch ist ein einwandfreies Ansteuern und Gleiten durch und innerhalb der Verriegelungs-U-Profile gewährleistet. Die ebenen Flächen des Winkelprofils sorgen darüber hinaus für einen sicheren Anschlag des zweiten Verriegelungs-U-Profils.

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Die Drehachse des Sperr-Dreiecks kann an einer im Inneren mit dem Möbelhohlkörper verbundenen Funktionsplatte angeordnet sein. Hierdurch ist eine wirksame Trennung zwischen dem stehenden Nachttisch und den bewegbaren Schubladen gegeben. Darüber hinaus können die Verriegelungs-U-Profile sicher angesteuert werden.

Sie sind dabei Teil des Verriegelungsteleskops und sind über einem Teleskopleitprofil verschiebbar. Dieses Teleskopgleitprofil ist an der Funktionsplatte angeordnet. Hierdurch wird eine gute Führung der Verriegelungs-U-Profile als Teil der Verriegelungseinrichtung gewährleistet.

Die Funktionsplatte selbst kann gegenüber einer Innenseite einer Körperseitenwand des Möbelhohlkörpers an zwei der Innenseite gegenüberliegenden Körperholmen angeordnet sein. Das Befestigen der Funktionsplatte an den Körperholmen sichert deren stabilen Halt, so daß sämtliche im Zusammenhang mit der Verriegelung auftretenden Kräfte wirksam aufgenommen werden können.

Die Funktionsplatte kann einen Fixierhaken aufweisen, an dem wenigstens eine Sperrfeder eingehakt ist. Diese Sperrfeder ist mit ihrem gegenüberliegenden Ende mit einem Federhaken des Sperr-Dreiecks verspannbar verbunden. Durch die federnde Verbindung des Sperr-Dreiecks mit der Funktionsplatte wird ein Einnehmen des Sperr-Dreiecks nach jeder Sperrposition in die Ausgangsposition gewährleistet. Damit ist eine leichte und einwandfreie Funktion der Verriegelungseinrichtung gewährleistet.

Ein Ausführungsbeispiel der Erfindung ist in der Zeichnung dargestellt und wird im folgenden näher beschrieben. Es zeigen

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Fig. 1 eine Schubladenverriegelungseinrichtung für einen Krankenhaus-Nachttisch in einer auseinandergezogenen, perspektivischen Teildarstellung,

Fig. 2 eine perspektivische Gesamtdarstellung eines Krankenhaus-Nachttisches gemäß Fig. 1,

Fig. 3 eine Schubladenverriegelungseinrichtung für einen Krankenhaus-Nachttisch gemäß Fig. 1 in einer schematischen Seitenansicht,

Fig. 4 eine Schubladenverriegelungseinrichtung gemäß Fig. 3 bei ausgezogener oberer Schublade und

Fig. 5 eine Schubladenverriegelungseinrichtung gemäß Fig. 3 bei ausgezogener unterer Schublade.

Eine Schubladenverriegelungseinrichtung für einen Krankenhaus-Nachttisch ist in Fig. 1 gezeigt.

Sie besteht aus einem Sperr-Dreieck 21. Es weist einen Dreieck-Flachkörper 21' auf, der die Form eines gleichschenkligen Dreiecks hat. In einer Dreieckspitze ist eine Drehachse 21.1 angeordnet. An den beiden anderen, sich gegenüberliegenden Dreieckspitzen ist jeweils ein Anschlagverriegelungselement 21.2, 21.3 angebracht. Jedes Anschlagverriegelungselement 21.1, 21.3 ist als Winkelprofil ausgebildet, dessen Winkelecke in Richtung Drehachse 21.1 zeigt. Die äußere Winkelecke ist leicht gerundet.

Das Sperr-Dreieck 21 wird mit seiner Drehachse 21.1 in einer Drehausnehmung 27 einer Funktionsplatte 26 gehalten. Die Funktionsplatte 26 ist rechteckig ausgebildet. Sie weist darüber hinaus eine Ausnehmung 28 auf, durch die frei beweglich das Anschlagverriegelungselement 21.3 hindurch ragt. Darüber hinaus ist sie mit einem Fixier-

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haken 35 versehen. Am Fixierhaken 35 sind die Enden zweier sich gegenüberliegender Sperrfedern 24, 25 befestigt. Das gegenüberliegende freie Ende ist an einem Federhaken 36, 37 des Dreieck-Flachkörpers 21' eingehakt.

Die Funktionsplatte 26 ist im Inneren eines Nachttischhohlkörpers 1 angeordnet. Der Nachttischhohlkörper 1 ist, wie Fig. 2 zeigt, das tragende Element des Krankenhaus-Nachttisches - im folgenden Nachttisch genannt -. Tragende Elemente des Nachttischkörpers sind Körperholme 13, die an seinen Ecken angeordnet sind. An jedem Körperholm 13 ist eine Rolle 11 angeordnet. Die Körperholme 13 werden von Körperseitenwänden 14 überbrückt. Aus dem Nachttischkörper 1 sind zwei nach beiden Seiten ausziehbare Tischplatten 4 und 5 angeordnet. An der nach vorne zeigenden Bedienseite sind unter einer Nachttischplatte 7 übereinanderliegend jeweils eine Schublade 2 und 3 positioniert. Die beiden Schubladen 2 und 3 sind ausziehbar. Unter den Schubladen befindet sich eine Tür 12, die einen Kühlschrank oder ein anderes Behältnis abdecken kann. Am untersten Ende der Vorderfront ist als weitere Schublade eine Bodenschublade 6 angeordnet. Hier können Schieber oder eine Urin-Ente oder Schuhe oder Pantoffel untergebracht werden.

Wie Fig. 1 zeigt, ist die Funktionsplatte 26 an den sich gegenüberliegenden Holmen 13 gegenüber einer Wandinnenfläche 14.3 der Körperseitenwand 14 befestigt. Als Befestigungsmittel werden Schrauben verwendet. Die Funktionsplatte kann aber auch angeschweißt werden. Wie aus der Fig. 1 ersichtlich ist, ist damit das bewegliche Sperr-Dreieck geschützt zwischen der Wandinnenfläche 14.1 der Körperseitenwand 14 und der Funktionsplatte 26 angeordnet. Das Anschlagverriegelungselement 21.3 ragt dabei durch eine Ausnehmung 28 der Funktionsplatte 26 (vgl. Fig. 3), während das Anschlagverriegelungselement

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21.2 über ihr liegt.

Mit der Funktionsplatte 26 sind darüber hinaus Teleskopgleitprofile 29.2 und 30.2 eines Verriegelungs-Teleskops 29, 30 befestigt. Über jedes Teleskopgleitprofil 29.2, 30.2 eines Verriegelungs-Teleskops 29, 30 wird verschiebbar ein Verriegelungs-U-Profil gehalten.

Das Verriegelungs-U-Profil 29.1 ist an einer Schubladenseitenwand 22 der oberen Schublade 2 befestigt. Das Verriegelungs-U-Profil 30.3 ist an einer Schubladenseitenwand 23 der unteren Schublade 3 angebracht. Beide Schubladen 2, 3 sind in Schubladengleitwinkeln 33, 34 verschiebbar. An der Funktionsplatte 26 sind zwei Schubladenführungselemente 31, 32 angeordnet.

Die Funktionsweise der Schubladenverriegelungseinrichtung, wie sie sich aus dem dargestellten Ausführungsbeispiel ergibt, sei anhand der Fig. 2, 3 und 5 erläutert.

Fig. 3 zeigt die Schubladen 2 und 3 im eingeschobenen Zustand. Die beiden Sperrfedern 24, 25 sorgen dafür, daß sich die Anschlagverriegelungselemente 21.2, 21.3 im Ruhezustand befinden. Hierbei liegt die Ebene der Verriegelungs-U-Profile 29.1, 30.1 über der der Anschlagverriegelungselemente 21.2, 21.3.

Wird nun die obere Schublade 2, wie in Fig. 4 dargestellt, herausgezogen, kontaktiert das Verriegelungs-U-Profil 29.1 das Anschlagverriegelungselement 21.1. Das als Winkel ausgebildete Anschlagverriegelungselement 21.1 greift dabei in das Verriegelungs-U-Profil 29.1 ein und drückt mit seinem U-Schenkel das Sperr-Dreieck 21 in Richtung der unteren Schublade 3. Das Sperr-Dreieck 21 wird in der Drehachse 21.1 so weit ausgelenkt, daß das Anschlagverriegelungselement 21.3 sich vor das Verriegelungs-U-Profil 30.1 stellt. Erfolgt ein Griff in eine

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Griffausnehmung 39 der unteren Schublade 3, kontaktiert das Verriegelungs-U-Profil 30.1 das Anschlagverriegelungselement 21.3 des Sperr-Dreiecks 21. Dadurch, daß das Verriegelungselement 21.2 im Inneren des oberen Verriegelungs-U-Profils 29.1 gehalten wird, wird einem Herausziehen der Schublade 3 ein wirksamer Widerstand entgegengesetzt. Mit einem Griff in eine Griffausnehmung 38 der oberen Schublade 2 wird diese wieder in den Nachttischkörper 1 zurückgeschoben. Hierbei sorgt die Federspannung der Sperrfeder 25 dafür, daß das Sperr-Dreieck mit seinen Anschlagsverriegelungselementen wieder in die "Nullstellung" gebracht wird.

Mit einem Griff in die Griffausnehmung 39 wird nun die Schublade 5, wie Fig. 5 zeigt, aus dem Nachttischkörper 1 herausgezogen. Hierbei kontaktiert das Verriegelungs-U-Profil 30.1 und das Anschlagverriegelungselement 21.3 lenkt das Sperr-Dreieck 21 um die Drehachse 21.1 aus. Das Sperr-Dreieck 21 gleitet beim Herausziehen der Schublade 3 auf dem U-Schenkel des Verriegelungs-U-Profils 30.1. Wird bei ausgezogener Schublade 3 versucht, durch einen Griff in die Griffausnehmung 38 auch die obere Schublade 2 herauszuziehen, stößt das Verriegelungs-U-Profil, das an der Schubladenseitenwand 22 der oberen Schublade 2 befestigt ist, gegen das vor ihm stehende Anschlagverriegelungselement 21.2. Das auf dem Verriegelungs-U-Profil stehende Anschlagverriegelungselement 21.3 setzt einem weiteren Herausziehen der oberen Schublade einen wirksamen Widerstand entgegen, so daß die Schublade 2 im Nachttischkörper 1 verbleibt. Wird die untere Schublade 3 in den Nachttischkörper 1 hineingeschoben, zieht die Sperrfeder 24 das Sperr-Dreieck 21 in die "Nullstellung" zurück.

Wesentlich ist, daß das Anschlagverriegelungselement wechselseitig kraftschlüssig das obere Verriegelungs-U-Profil 29.1 und das untere Verriegelungs-U-Profil 30.1

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kontaktiert. Das Kontaktieren mit dem oberen Verriegelungs-U-Profil 29.1 wird dabei so vorgenommen, daß das Anschlagverriegelungselement 21.2 in das Verriegelungs-U-Profil 29.1 eingreift, während das Kontaktieren mit dem Verriegelungs-U-Profil 30.1 durch ein Aufsetzen auf das untere Verriegelungs-U-Profil 30.1 erfolgt. Durch dieses Kontaktieren wird gesichert, daß in beiden Fällen das Sperr-Dreieck 21 seine jeweilige Verriegelungsfunktion gegenüber der in dem Nachttischkörper 1 verbleibenden Schublade 2, 3 ausübt. Hierdurch wird ein gleichseitiges Herausziehen beider Schubladen vermieden und damit ein Umstürzen des Krankenhaus-Nachttisches verhindert.

Eine Sicherung der auf der Nachttischplatte 7 befindlichen Gegenstände wird jeweils durch eine schwenkbare Reling 10.1, 10.2 vorgenommen. Die schwenkbaren Relingen 10.1, 10.2 sind in einer Umrandung 9, die eine Stellfläche 8 auf der Nachttischplatte 7 umfassen, angeordnet. Durch ein Anheben und Verdrehen lassen sich die schwenkbare Reling 10.1 und die schwenkbare Reling 10.2 in unterschiedlichste Stellungen bringen. So können sie so verstellt werden, daß sie mit ihren Kugeln aneinanderstoßend eine umrandete Teilstellfläche innerhalb der Stellfläche 8 bilden. In dieser Teilstellfläche kann eine Blumenvase aufgestellt werden. Die zusammengeführten schwenkbaren Relingen 10.1, 10.2 sorgen dafür, daß die Blumenvase bei einem Betätigen der Schubladen 2, 3 nicht über die gesamte Stellfläche 8 wandern kann.

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A1

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Schutzansprüche:

1. Schrankmöbel, insbesondere Krankenhaus-Nachttisch, mit einem Möbelhohlkörper (Nachttischkörper 1), der wenigstens zwei übereinanderliegende und ausziehbare Schubladen (2, 3) mit wenigstens einem Seitenteilelement (Schubladenseitenwand 22, 23) aufweist, dadurch gekennzeichnet, daß an wenigstens einem der Seitenteilelemente der Schubladen ein Verriegelungs-U-Profil (29.1, 30.1) eines Verriegelungsteleskops (29, 30) angeordnet ist, die wechselseitig kontaktierend und sperrend an je einem Anschlagverriegelungselement (21.2, 21.3) eines Sperr-Dreiecks (21) anliegen, das verstellbar im Inneren des Möbelhohlkörpers (1) angeordnet ist.

2. Schrankmöbel nach Anspruch 1, dadurch gekennzeichnet, daß das Sperr-Dreieck (21) aus einem Dreieckflachkörper (21') besteht, an dessen zwei sich gegenüberliegenden Ecken je ein Anschlagverriegelungselement (21.2, 21.3) und in dessen dritter Ecke eine Drehachse (21.1) angeordnet ist.

3. Schrankmöbel nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Anschlagverriegelungselemente (21.2, 21.3) ein L-förmig ausgebildetes Winkelprofil sind.

4. Schrankmöbel nach einem der Ansprüche 1 bis 3, dadurch gekennzeichnet, daß die Drehachse (21.1) des Sperr-Dreiecks (21) an einer im Inneren mit dem Möbelhohlkörper (1) verbundenen Funktionsplatte (26) angeordnet ist.

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A2

5. Schrankmöbel nach einem der Ansprüche 1 bis 4, dadurch gekennzeichnet, daß das Verriegelungsteleskop (29, 30) aus einem Teleskopleitprofil (29.2, 30.2) besteht, über dem das Verriegelungs-U-Profil (29.1, 30.1) verschiebbar ist.

6. Schrankmöbel nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß das Teleskopgleitprofil (29.2, 30.2) an der Funktionsplatte (26) angeordnet ist.

7. Schrankmöbel nach einem der Ansprüche 1 bis 6, dadurch gekennzeichnet, daß die Funktionsplatte (26) einen Fixierhaken (35) aufweist, an dem wenigstens eine Sperrfeder (24, 25) eingehakt ist, die mit einem Federhaken (36, 37) des Sperr-Dreiecks (21) verspannbar ist.

8. Schrankmöbel nach einem der Ansprüche 1 bis 7, dadurch gekennzeichnet, daß die Funktionsplatte (26) gegenüber einer Innenseite (14.1) einer Körperseitenwand (14) an zwei dieser gegenüberliegenden Körperholmen (13) angeordnet ist.

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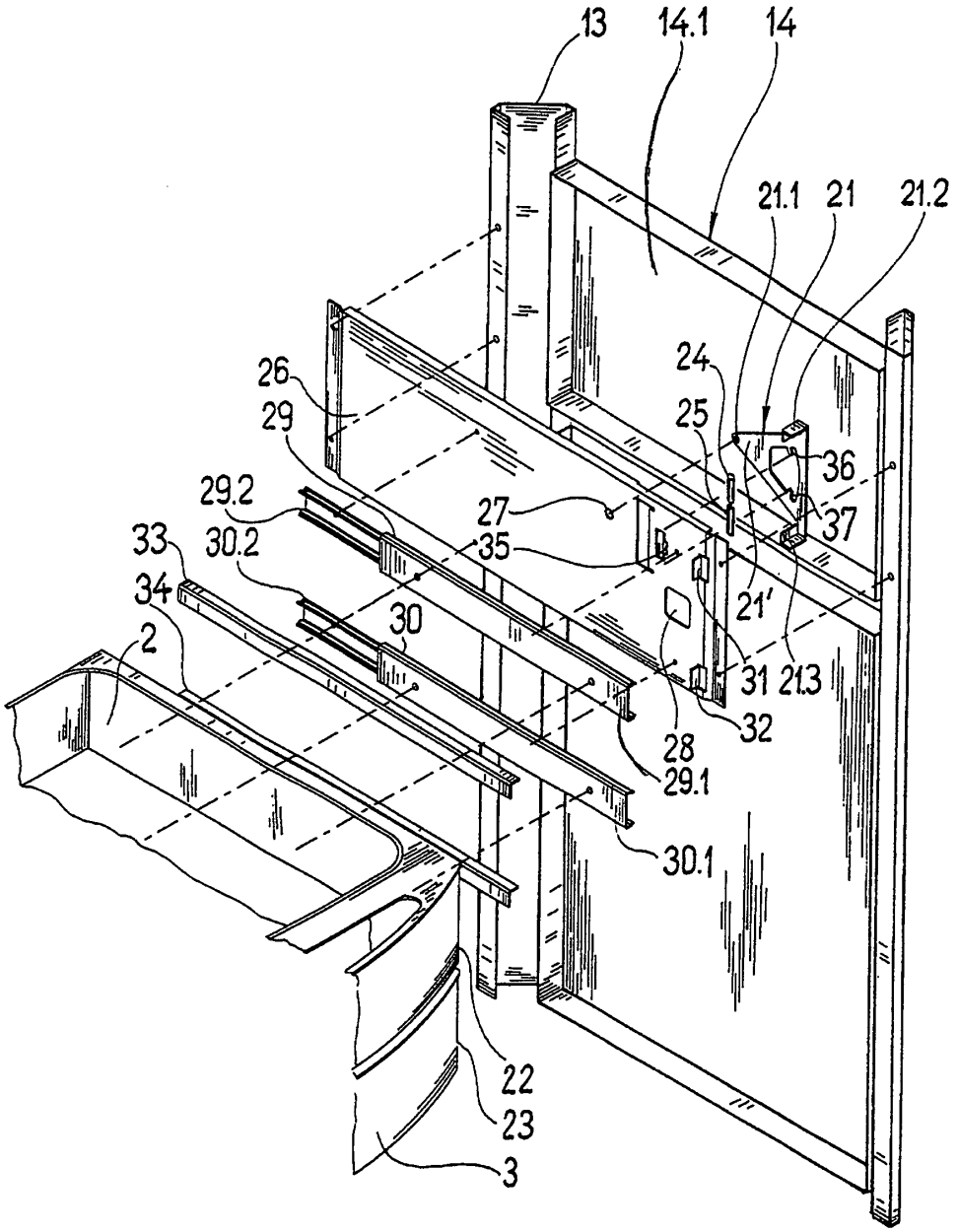

13
14.1
14
21.1
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21.2
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24
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36
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37
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Fig.1

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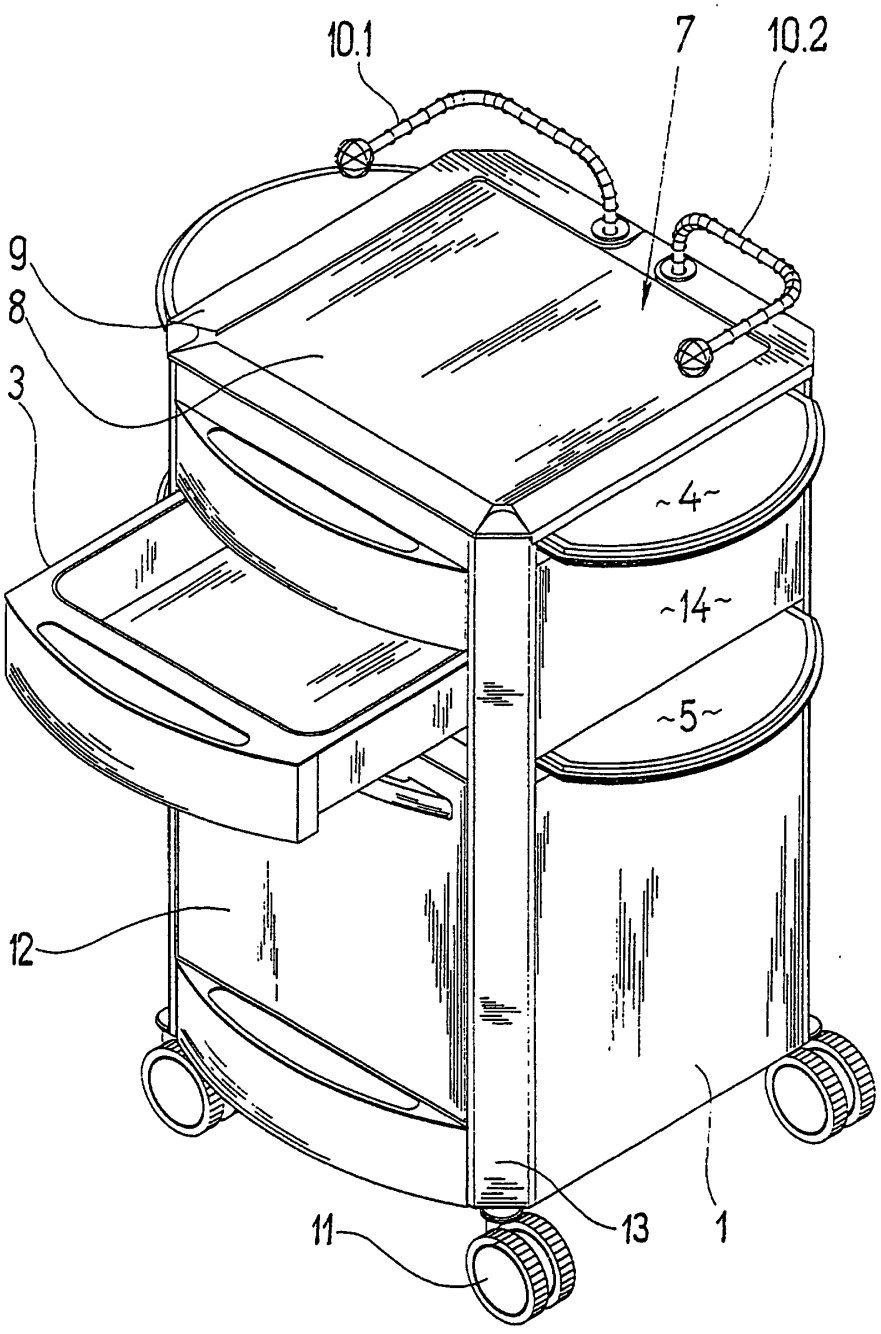


Fig. 2

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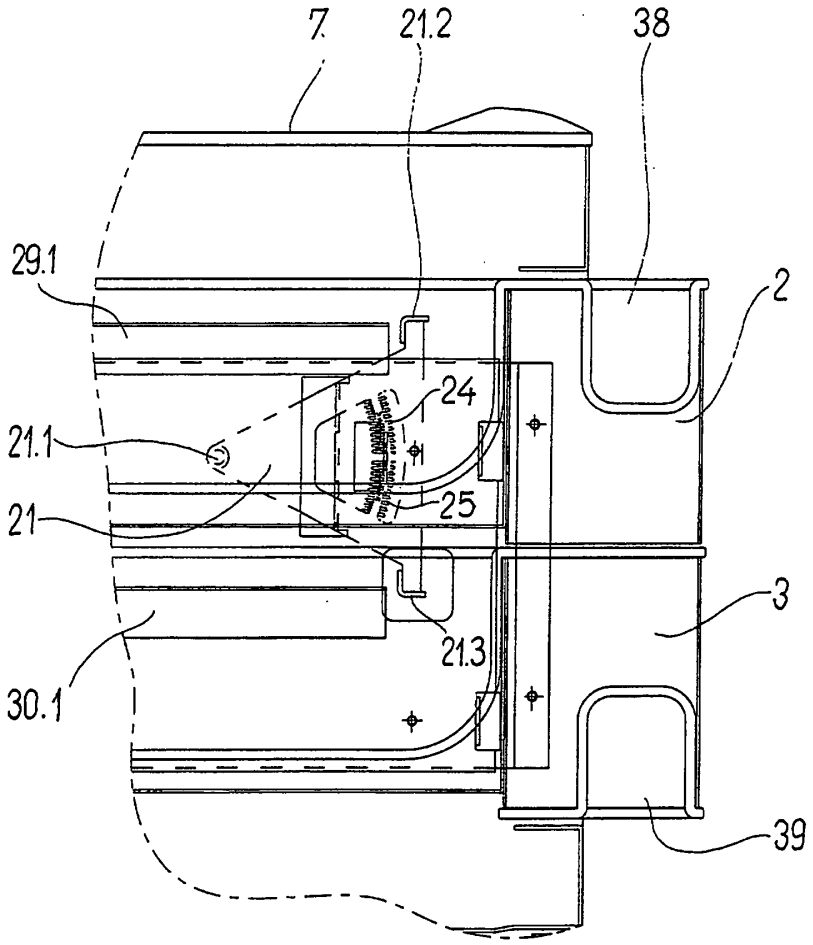


Fig. 3

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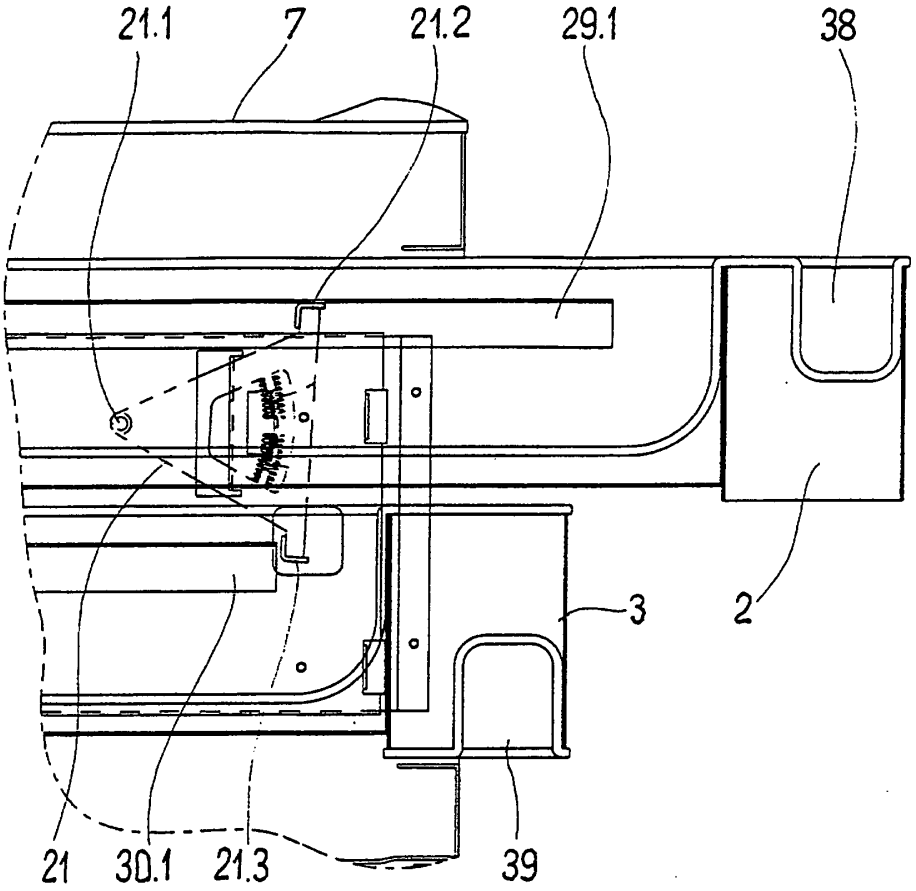


Fig. 4

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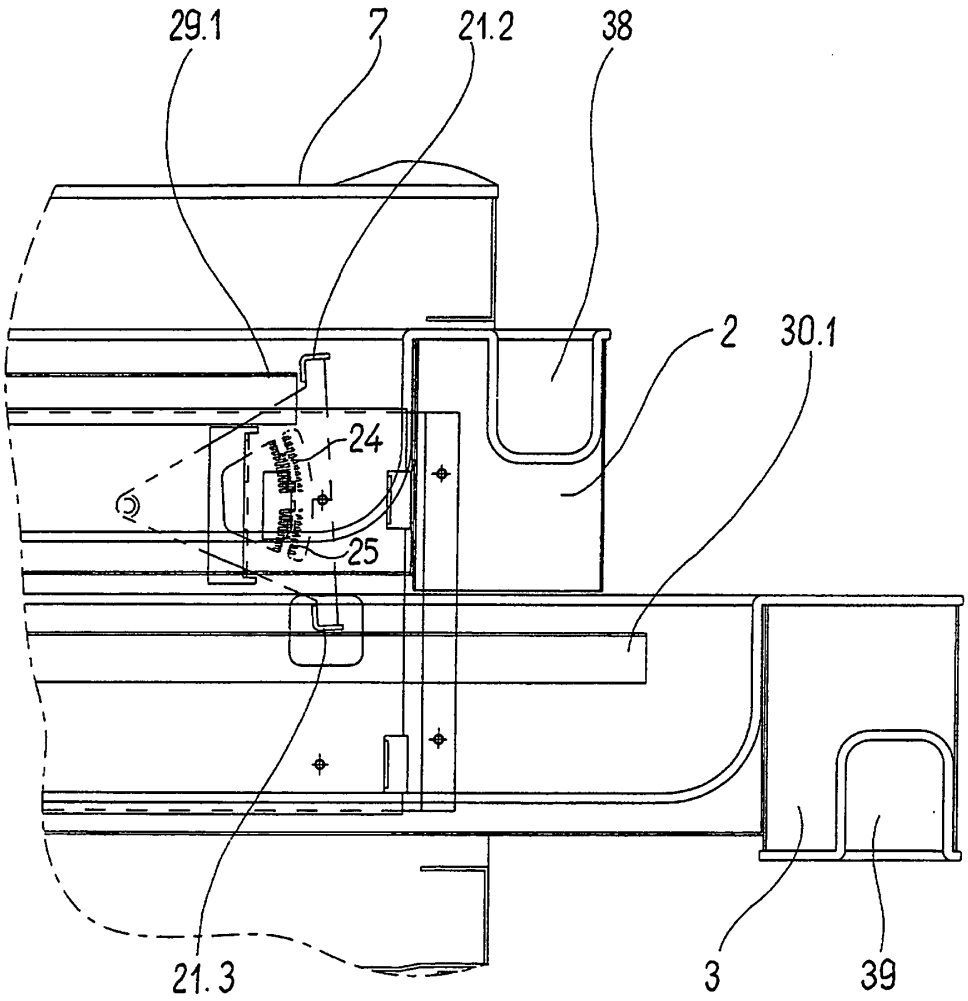


Fig. 5

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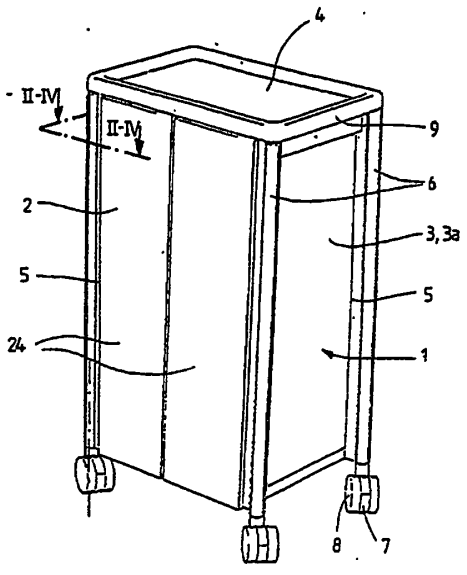
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gleich Anmelder

Prüfungsantrag gem. § 44 PatG ist gestellt

(54) **Pflegewagen**

(57) Die Erfindung betrifft einen Pflegewagen für Krankenhäuser, Pflegeheime und dgl. Institutionen mit einem aus offenen oder geschlossenen Vorder- und Rückseiten sowie zwei Seitenwänden bestehenden Schrankkorpus, einer den Schrankkorpus nach oben hin abdeckenden Ablage sowie mit Rollenblöcken gelagerten Laufrollen. Um einen einfach zu montierenden Pflegewagen mit guten Fahr- und Rangiereigenschaften zu schaffen, wird vorgeschlagen, daß außen auf den Seitenwänden (3, 3a) entlang jeder der vier vertikalen Kanten (5) des Schrankkorpus (1) ein langgestrecktes Profil (6) angeordnet ist, daß das Profil (6) mindestens einen sich über die gesamte Länge des Profils (6) erstreckenden Hohlraum (10) aufweist, und daß in das nach unten offene Ende des Hohlraums (10) ein an dem Rollenblock (7) ausgebildeter Zapfen (11) eingesteckt ist.



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Beschreibung

Die Erfindung betrifft einen Pflegewagen für Krankenhäuser, Pflegeheime und dgl. Institutionen mit einem aus offenen oder geschlossenen Vorder- und Rückseiten sowie zwei Seitenwänden bestehenden Schrankkorpus, einer den Schrankkorpus nach oben hin abdeckenden Ablage sowie mit Rollenblöcken gelagerten Laufrollen.

Im Klinik- und Pflegebereich sind Visitewagen und einfache Transportwagen für Pflegedienste bekannt. Visitewagen begleiten den Arzt bei seiner täglichen Visite in Klinik oder Krankenhaus. Sie sind reine Bürowagen, in denen Krankenakten, Befundmappen, Ordner oder dgl. der einzelnen Patienten aufbewahrt werden. Transportwagen für den Pflegebereich sind entsprechend den jeweiligen Aufgabenstellungen und Belangen ausgestaltet. Sämtliche Wagen haben einen fahrbaren Untersatz und sind nach oben hin durch eine Arbeitsfläche in körpergerechter Arbeitshöhe abgeschlossen.

Um das Fahren und Rangieren dieser beiden Arten von Pflegewagen zu erleichtern, kann an mindestens einer Seitenwand des Wagens ein Bügelgriff montiert sein. Derartige Pflegewagen sind z. B. aus den Gebrauchsmusterschriften G 78 34 222 und G 87 16 473 bekannt. Die Bügelgriffe erfordern allerdings zusätzlichen Platz, der z. B. dann fehlt, wenn die Pflegewagen bei Nichtbenutzung möglichst raumsparend abgestellt werden sollen. Nachteilig bei den bekannten Pflegewagen ist ferner, daß abhängig von der Fahr- bzw. Rangiersituation der Bügelgriff nicht immer sofort greifbar ist. Um hier Abhilfe zu schaffen, müßten eigentlich Bügelgriffe an allen vier Seiten des Pflegewagens befestigt werden, was jedoch wiederum zu einer Vergrößerung der Stellfläche führt, und zudem Nachteile für die Gestaltungsfreiheit bei der Anordnung der einzelnen Schubladen, Schranköffnungen etc. hat.

Auch hinsichtlich der Fahrstabilität können die bekannten Pflegewagen nicht überzeugen. Die Rollenblöcke mit den Laufrollen befinden sich unterhalb des Korpus, wodurch sie zwar im Falle von Kollisionen relativ geschützt angeordnet sind, sich aber eine relativ kleine Aufstandsfläche ergibt, so daß es zu einem unbeabsichtigten Verkanten und Kippen des Pflegewagens kommen kann.

Der Erfindung liegt die Aufgabe zugrunde, einen einfach zu montierenden Pflegewagen mit guten Fahr- und Rangiereigenschaften zu schaffen.

Zur Lösung wird bei einem Pflegewagen der eingangs genannten Art vorgeschlagen, daß außen auf den Seitenwänden entlang jeder der vier vertikalen Kanten des Schrankkorpus ein langgestrecktes Profil angeordnet ist, daß das Profil mindestens einen sich über die gesamte Länge des Profils erstreckenden Hohlraum aufweist, und daß in das nach unten offene Ende des Hohlraums ein an dem Rollenblock ausgebildeter Zapfen eingesteckt ist.

Ein solcher Pflegewagen läßt sich aus wenigen Teilen und besonders einfach montieren. Der Schrankkorpus wird an seinen Seitenwänden mit vier langgestreckten Profilen versehen. Getrennte Befestigungen für die Rollenblöcke sind nicht erforderlich, vielmehr werden diese mit jeweils daran ausgebildeten Zapfen von unten in die Profile eingesteckt. Die Profile sind hierzu mit einem sich über die gesamte Länge erstreckenden Hohlraum versehen, in dessen nach unten offenes Ende sich die Zapfen einfügen lassen.

Die Profile befinden sich außen auf den Seitenwänden des Schrankkorpus, so daß sich diese als Rangierhilfen

sehr gut von Hand ergreifen lassen. Ein solcher Pflegewagen kann daher auch ohne Bügelgriffe oder andere Handhabungshilfen eingesetzt werden. Da die Rollenblöcke in die Profile von unten eingesteckt sind, und sich ferner die Profile außen auf den Seitenwänden des Schrankkorpus befinden, ergibt sich eine relativ große Aufstandsfläche des Pflegewagens, d. h. die einzelnen Laufrollen stehen sehr weit außen. Der erfindungsgemäße Pflegewagen ist daher auch besonders kippsicher.

Von wesentlicher Bedeutung im Rahmen der Erfindung sind die außen auf den Seitenwänden angeordneten Profile. Diese übernehmen zugleich mehrere Funktionen:

1. Die Profile stützen und tragen den Schrankkorpus, und verleihen diesem zusätzliche Stabilität,
2. die Profile nehmen die Zapfen der Rollenblöcke auf,
3. die Profile können leicht von Hand ergriffen werden, und dienen daher als Fahr- bzw. Rangierhilfe und
4. die Profile tragen aufgrund ihrer Anordnung außerhalb des Schrankkorpus dazu bei, die Aufstandsfläche des Pflegewagens zu vergrößern, und auf diese Weise dessen Fahrstabilität zu verbessern.

Bei dem Profil handelt es sich vorzugsweise um ein Hohlprofil, dessen Querschnittsfläche überwiegend kreisförmig ist, wobei die Kreismittelpunktsachse mit der Längsachse des Hohlraums übereinstimmt. Zur Verstärkung des Profils können sich zwischen dem Hohlraum und der kreisförmigen Mantelfläche des Profils mehrere Hohlkammern erstrecken, die ferner durch radialen Stege voneinander getrennt sein können. Hierdurch ergibt sich eine Vergrößerung der Querschnittsfläche des Profils, so daß dieses zusätzlich zur Erhöhung der Stabilität auch besser greifbar ist.

Gemäß einer ersten Ausgestaltung kann das Profil über seine gesamte Länge mit einer zur Seite offenen Ausnehmung versehen sein, wobei die Ausnehmung eine Verbindungsleiste aufnimmt, die mit der Seitenwand des Schrankkorpus verschraubt ist.

Gemäß einer zweiten Ausgestaltung kann an dem Profil einstückig eine Verbindungsleiste angeformt sein, die mit der Seitenwand des Schrankkorpus verschraubt ist.

Bezüglich beider vorgenannter Ausgestaltungen wird vorgeschlagen, daß die Verbindungsleiste ein langgestrecktes Hohlprofil ist. Durch Verwendung dieses Hohlprofils läßt sich der Abstand zwischen dem Schrankkorpus und dem Profil vergrößern, wodurch letzteres besonders gut von Hand greifbar ist.

Sofern Profil und Verbindungsleiste getrennte Bauteile sind, kann gemäß einer bevorzugten Ausgestaltung das Profil in der Ausnehmung mit der Verbindungsleiste verschraubt sein. Hierbei ist es von Vorteil, wenn die die Ausnehmung begrenzenden Flächen des Profils die Verbindungsleiste an mindestens drei Seiten bündig umschließen. Hierdurch wird ein Formschluß zwischen Profil und Verbindungsleiste mit dem Ergebnis einer großen Quersteifigkeit erreicht. Ferner wird die Montage des Pflegewagens insgesamt vereinfacht.

Die Stabilität des Pflegewagens läßt sich zusätzlich verbessern, wenn die Verbindungsleiste mit einem Steg versehen ist, der die Stirnfläche der Seitenwand abdeckt. Auf diese Weise wird der Schrankkorpus im Bereich der vertikalen Kanten von zwei Seiten umgriffen

und abgestützt.

Schließlich wird mit einer bevorzugten Ausgestaltung vorgeschlagen, daß an der Verbindungsleiste Scharniere einer Schranktür befestigt sind. Auf diese Weise wird eine besonders gute Verankerung der Scharniere in dem Material der vorzugsweise aus einem Aluminiumprofil bestehenden Verbindungsleiste erreicht. Diese Verankerung ist besser als eine Verankerung des Scharniers in der aus Sperrholz oder einer Kunststoffplatte bestehenden Seitenwand.

Weitere Einzelheiten und Vorteile des Pflegewagens werden nachfolgend anhand der Zeichnung erläutert. Darin zeigen:

Fig. 1a in einer perspektivischen Gesamtdarstellung einen Pflegewagen;

Fig. 1b einen vergrößerten Rollenblock in Einbaurichtung zu dem Pflegewagen nach **Fig. 1a**;

Fig. 2 einen Teilschnitt im Eckenbereich durch den Pflegewagen in der Ebene II-II der **Fig. 1a**;

Fig. 3 einen Teilschnitt in der Ebene III-III gemäß **Fig. 1a**;

Fig. 4 einen von der Vorderseite bis zur Rückseite des Pflegewagens reichenden Teilschnitt in der Ebene IV-IV gemäß **Fig. 1a** und

Fig. 5 einen Schnitt durch ein Kombinationsprofil zur Verwendung bei dem Pflegewagen gemäß **Fig. 1a**.

Der Pflegewagen besteht aus einem Korpus **1** mit Vorderseite **2**, Rückseite sowie zwei Seitenwänden **3**. Die einzelnen Wände können aus beschichteter Spanplatte bestehen, ebenso lassen sich Schichtstoffplatten oder andere Kunststoffplatten verwenden. Der Schrankkorpus **1** ist nach oben hin durch eine Ablage **4** abgedeckt. Die Ablage **4** kann aus einer tiefgezogenen Kunststoffschale bestehen.

Der Schrankkorpus **1** ist in erster Linie quaderförmig, wobei sich entlang sämtlicher vertikaler Kanten **5** Profile **6** erstrecken, die an ihrem unteren Ende mit Rollenblöcken **7** mit darin eingesetzten Laufrollen **8** versehen sind. Bei den Profilen **6** handelt es sich um Hohlprofile aus Strangguß-Aluminium, die in nachfolgend näher erläuterter Art und Weise mit den Seitenwänden **3** verbunden sind. Die Profile **6** weisen einen im wesentlichen kreisförmigen Querschnitt auf, und befinden sich außerhalb des Schrankkorpus **1**, wodurch der Pflegewagen zum Verfahren bzw. Rangieren an jeweils zweien der Profile **6** ergriffen werden kann. Zusätzlich ist es möglich, den Pflegewagen auch am Rand **9** der Ablage **4** zu ergreifen, wozu dieser Rand **9** wulstförmig gestaltet ist.

Die Schnittdarstellungen gemäß den **Fig. 2** bis **5** lassen erkennen, daß die gezogenen Profile **6** eine überwiegend kreisförmige Querschnittsfläche aufweisen, wobei sich zentral innerhalb der so definierten Kreisfläche ein Hohlraum **10** in Gestalt eines langgestreckten Kanals befindet. Der Hohlraum **10** ist vorzugsweise von kreisförmigem Querschnitt und zumindest nach unten hin offen, so daß in dieses offene Ende von unten der Rollenblock **7** eingesetzt werden kann. Zu diesem Zweck ist der Rollenblock **7**, wie **Fig. 1b** erkennen läßt, mit einem Zapfen **11** versehen, der genau in die Bohrung **12** des Hohlraums **10** paßt. Er kann dort mittels einer Schraube gesichert sein, die analog der in **Fig. 3** dargestellten Schraube **20** in das Material des Zapfens **11** greift.

Da Zapfen **11** sowie Hohlraum **10** bzw. Bohrung **12** nur einen geringen Durchmesser von etwa 2 cm aufweisen, zum besseren Ergreifen des Profils **6** dieses jedoch einen größeren Durchmesser aufweisen muß, gruppieren sich um den zentralen Hohlraum **10** des Strangprofils weitere Hohlkammern **13**. Diese werden durch radiale Stege **14** voneinander getrennt. Der Vorteil dieses Aufbaus des Profils **6** besteht neben der Volumenvergrößerung in der erheblichen Steifigkeit.

Bei den Ausführungsbeispielen gemäß den **Fig. 2, 3** und **4** ist das Profil **6** mit einer zur Seite hin offenen Ausnehmung **15** versehen, wobei diese Ausnehmung **15** in Richtung auf die Seitenwand **3** gerichtet ist. In die Ausnehmung **15** paßt exakt eine mit der Seitenwand **3** verschraubte Verbindungsleiste **16** hinein. Auch bei der Verbindungsleiste **16** handelt es sich um ein Hohlprofil von im wesentlichen rechteckigem Querschnitt, welches aus Strangguß-Aluminium oder aus Stahl bestehen kann. Die Verbindungsleiste **16** ist mit nachträglich eingebrachten Bohrungen **17** versehen, durch die sich Schrauben **18** zur Verbindung mit der Seitenwand **3** hindurchführen lassen. Die **Fig. 2** und **3** lassen erkennen, daß sich die Verbindungsleiste **16** entlang der vertikalen Kante **5** des Schrankkorpus **1** erstreckt, wobei die vordere Stirnfläche der Verbindungsleiste **16** mit der Stirnfläche **19** der Seitenwand **3** bündig abschließt.

Die Verbindung zwischen der Verbindungsleiste **16** und dem Profil **6** kann z. B. formschlüssig über eine Schwalbenschwanzführung erfolgen. Beim Ausführungsbeispiel hingegen erfolgt diese Verbindung über einen weiteren Satz von Schrauben **20**, die sich von der Hohlkammer der Verbindungsleiste **16** aus bis in die Hohlkammer **13** des Profils **6** erstrecken. Der Kopf **21** der Schrauben **20** ist über Bohrungen **22** erreichbar, die sich in der Seitenwand **3** des Schrankkorpus **1** in Verlängerung der Schrauben **20** befinden. Es versteht sich, daß die in **Fig. 3** dargestellten Schrauben **20**, die der Verbindung zwischen Profil **6** und Verbindungsleiste **16** dienen, in anderer Höhe angeordnet sind als die in **Fig. 2** dargestellten Schrauben **18**, die der Verbindung zwischen Seitenwand **3** und Verbindungsleiste **16** dienen. Die Schrauben **18** und **20** können beispielsweise im Wechsel übereinander angeordnet sein. Die in Richtung der Schraube **20** gerichteten Flächen des Profils **6** einerseits und der Verbindungsleiste **16** andererseits sind in Gestalt von Kreisabschnitten exakt aneinander angepaßt, wie insbesondere die **Fig. 3** und **4** erkennen lassen. Hierdurch wird zusammen mit den seitlichen Flächen der Ausnehmung ein sehr guter Formschluß der Verbindungsleiste **16** innerhalb der Ausnehmung **15** des Profils **6** erreicht, ferner wird die Montage verbessert.

Eine im Vergleich zu den **Fig. 2** und **3** andere Gestaltungsform der Verbindungsleiste **16** ist in **Fig. 4** dargestellt. Die Verbindungsleiste **16** ist in diesem Fall breiter, so daß sich ein Abstand A zwischen Profil **6** und Seitenwand **3a** einstellt. Diese Gestaltung der Verbindungsleiste **16** bei unverändertem Profil **6** wird dann eingesetzt, wenn die Seitenwand **3a** relativ dünn ist, z. B. weil diese aus einer relativ dünnwandigen Kunststoffplatte besteht, z. B. einer Schichtstoffplatte HPL. Bei der Ausführungsform nach **Fig. 4** ist ferner vorgesehen, daß an der Verbindungsleiste **16** in der dem Profil **6** abgewandten Richtung ein Steg **23** angeformt ist. Der Steg **23** deckt die Stirnfläche **19** der Seitenwand **3a** ab und verstärkt diese zudem.

In **Fig. 4** ist ferner dargestellt, daß neben der Seitenwand **3a** auch die Rückwand **27** dünnwandig gestaltet ist, und vorzugsweise ebenfalls aus einer Schichtstoffplatte HPL besteht. An der Rückseite des Pflegewagens ist die Rückwand **27** mit ihrem Rand **28** in eine umlaufende Nut eingesetzt, die sich zwischen der rückwärtigen Stirnfläche der Seitenwand **3a** und dem Steg **23** der hinteren Verbindungsleiste **16** befindet. Die hintere Verbindungsleiste **16** ist zu der vorderen Verbindungsleiste

16 symmetrisch gestaltet. Der Vorteil dieser Anordnung besteht darin, daß die Stirnflächen von Seitenwand 3a und Rückwand 27 nicht sichtbar sind. Diese brauchen daher nicht nachbearbeitet zu sein, so daß eine preisgünstige Fertigung möglich ist. Wenn die Seitenwand 3a sowie die Rückwand 27 aus einem Material wie HPL (Hochpreß-Leimstoffplatte) besteht, und ferner Profil 6 und Verbindungsleiste 16 aus Aluminium bestehen, läßt sich der Pflegewagen auch sterilisieren, z. B. für den Einsatz im OP-Bereich.

Bei allen Ausführungsbeispielen ist die Vorderseite 2 des Schrankkorpus 1 durch eine schwenkbare Tür 24 abgedeckt. Bei den Ausführungsbeispielen Fig. 2 und 3 ist das Scharnier 25 für die Tür 24 an der Stirnfläche 19 der Seitenwand 3 befestigt, während bei den Ausführungsformen Fig. 4 und Fig. 5 das Scharnier 25 an der nach vorne gerichteten Fläche 26 der Verbindungsleiste 16 befestigt ist.

Die Ausführungsform gemäß Fig. 5 unterscheidet sich von der in den Ausmaßen identischen Ausführungsform gemäß der Fig. 4 dadurch, daß hier Profil 6 und Verbindungsleiste 16 einstückig in Gestalt eines einzigen Strangprofils ausgebildet sind.

Bezugszeichenliste

1 Schrankkorpus
2 Vorderseite
3 Seitenwand
3a Seitenwand
4 Ablage
5 vertikale Kante
6 Profil
7 Rollenblock
8 Laufrolle
9 Rand
10 Hohlraum
11 Zapfen
12 Bohrung
13 Hohlkammer
14 radialer Steg
15 Ausnehmung
16 Verbindungsleiste
17 Bohrung
18 Schraube
19 Stirnfläche der Seitenwand
20 Schraube
21 Kopf
22 Bohrung
23 Steg
24 Tür
25 Scharnier
26 Fläche
27 Rückwand
28 Rand
30 kreissegmentförmig gebogene Fläche
A Abstand

Patentansprüche

1. Pflegewagen für Krankenhäuser, Pflegeheime und dgl. Institutionen mit einem aus offenen oder geschlossenen Vorder- und Rückseiten sowie zwei Seitenwänden bestehenden Schrankkorpus, einer den Schrankkorpus nach oben hin abdeckenden Ablage sowie mit in Rollenblöcken gelagerten Laufrollen, **dadurch gekennzeichnet**, daß außen auf den Seitenwänden (3, 3a) entlang jeder der vier vertikalen Kanten (5) des Schrankkorpus (1) ein langgestrecktes Profil (6) angeordnet ist, daß das Profil (6) mindestens einen sich über die gesamte Länge des Profils (6) erstreckenden Hohlraum (10) aufweist, und daß in das nach unten offene Ende des Hohlraums (10) ein an dem Rollenblock (7) ausgebildeter Zapfen (11) eingesteckt ist.

2. Pflegewagen nach Anspruch 1, dadurch gekennzeichnet, daß der Zapfen (11) zugleich die vertikale Drehachse des Rollenblocks (7) bildet.

3. Pflegewagen nach Anspruch 1 oder Anspruch 2, dadurch gekennzeichnet, daß das Profil (6) ein Hohlprofil ist, dessen Querschnittsfläche überwiegend kreisförmig ist, und daß die Kreismittelpunktsachse mit der Längsachse des Hohlraums (10) übereinstimmt.

4. Pflegewagen nach Anspruch 3, dadurch gekennzeichnet, daß sich zwischen Hohlraum (10) und kreisförmiger Mantelfläche des Profils (6) mehrere Hohlkammern (13) erstrecken.

5. Pflegewagen nach Anspruch 4, dadurch gekennzeichnet, daß die Hohlkammern (13) durch radiale Stege (14) voneinander getrennt sind.

6. Pflegewagen nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß das Profil (6) über seine gesamte Länge mit einer zur Seite offenen Ausnehmung (15) versehen ist, und daß die Ausnehmung (15) eine Verbindungsleiste (16) aufnimmt, die mit der Seitenwand (3, 3a) des Schrankkorpus (1) verschraubt ist.

7. Pflegewagen nach einem der Ansprüche 1 bis 5, dadurch gekennzeichnet, daß an dem Profil (6) einstückig eine Verbindungsleiste (16) angeformt ist, die mit der Seitenwand des Schrankkorpus (1) verschraubt ist.

8. Pflegewagen nach Anspruch 6 oder Anspruch 7, dadurch gekennzeichnet, daß die Verbindungsleiste (16) ein langgestrecktes Hohlprofil ist.

9. Pflegewagen nach Anspruch 6, dadurch gekennzeichnet, daß das Profil (6) in der Ausnehmung (15) mit der Verbindungsleiste (16) verschraubt ist.

10. Pflegewagen nach Anspruch 6, dadurch gekennzeichnet, daß die die Ausnehmung (15) begrenzenden Flächen des Profils (6) die Verbindungsleiste (16) an mindestens drei Seiten bündig umschließen.

11. Pflegewagen nach Anspruch 6 oder Anspruch 7, dadurch gekennzeichnet, daß die Verbindungsleiste (16) mit einem Steg (23) versehen ist, der die Stirnfläche (19) der Seitenwand (3a) abdeckt.

12. Pflegewagen nach Anspruch 6 oder Anspruch 7, dadurch gekennzeichnet, daß an der Verbindungsleiste (16) Scharniere (25) einer Schranktür (24) befestigt sind.

13. Pflegewagen nach einem der Ansprüche 6 bis 12, dadurch gekennzeichnet, daß die Ausnehmung (15) teilweise die Gestalt eines Kreissegmentes aufweist, an dem die Verbindungsleiste (16) mit einer ebenfalls kreissegmentförmig gebogenen Fläche (30) anliegt.

14. Pflegewagen nach Anspruch 11, dadurch gekennzeichnet, daß sich zwischen dem Steg (23) und der Verbindungsleiste (16) und der Stirnfläche (19) der Seitenwand (3a) der Rand (28) einer Rückwand (27) befindet.

Hierzu 4 Seite(n) Zeichnungen

ZEICHNUNGEN SEITE 1

Nummer: DE 196 42 523 A1
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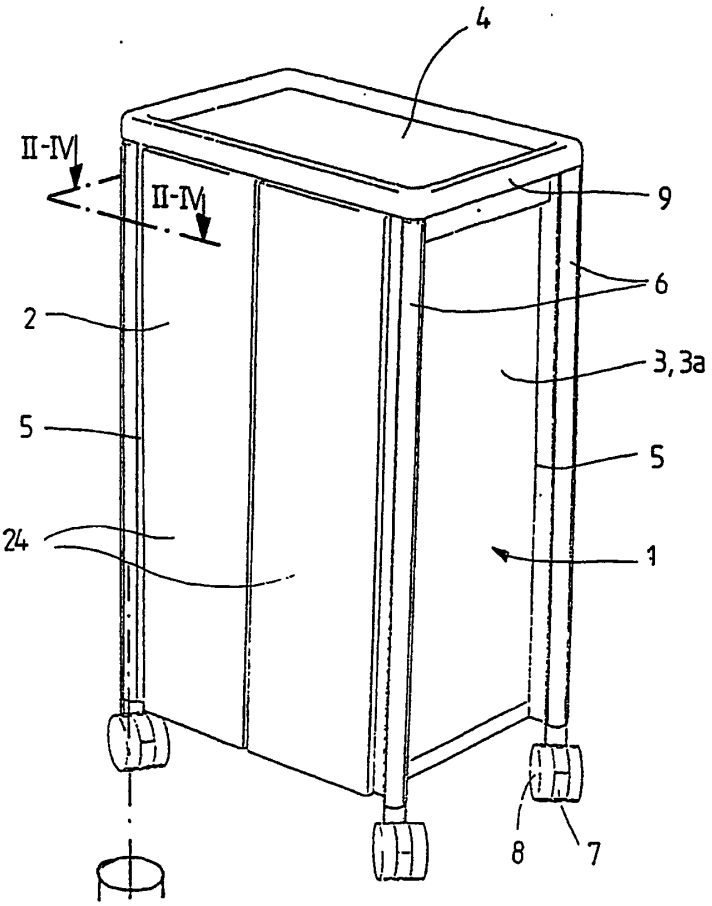


Fig. 1a

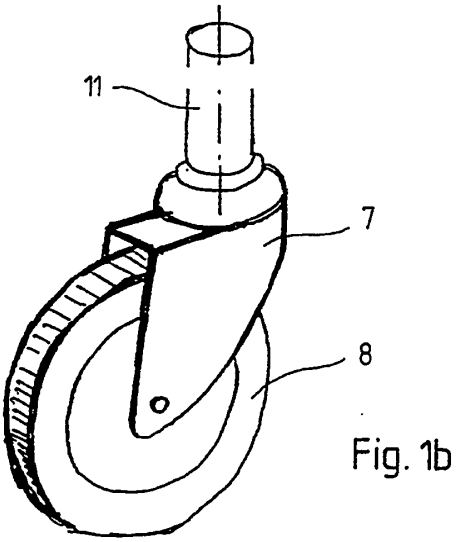


Fig. 1b

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ZEICHNUNGEN SEITE 2

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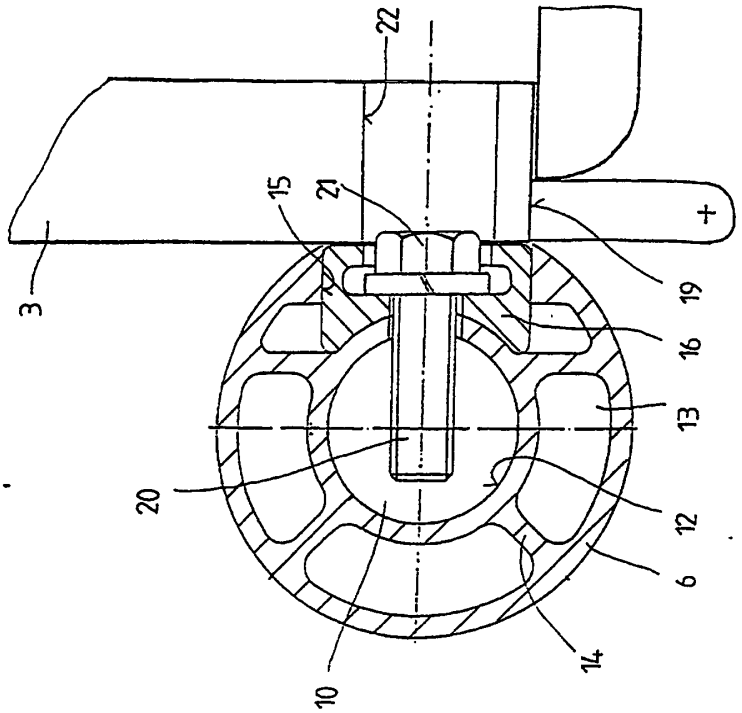


Fig. 3

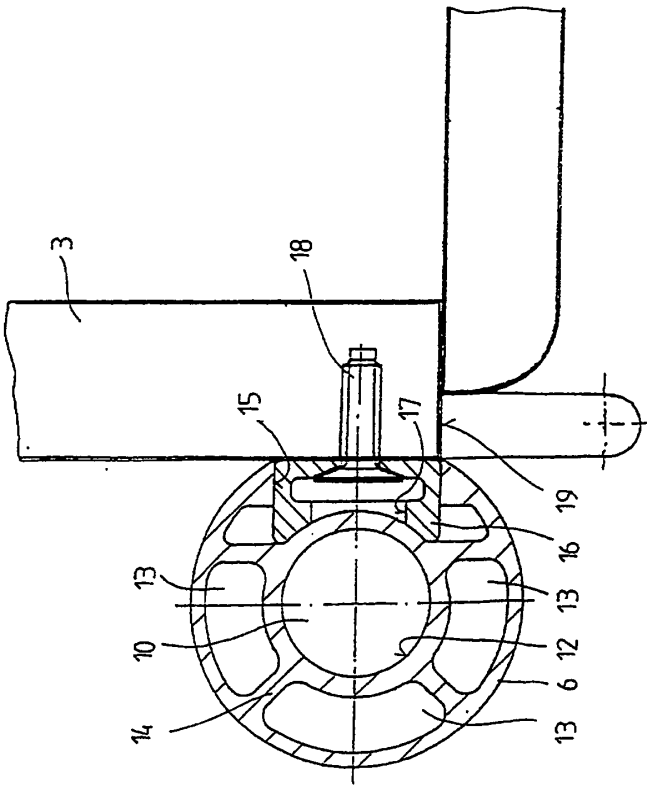


Fig. 2

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ZEICHNUNGEN SEITE 3

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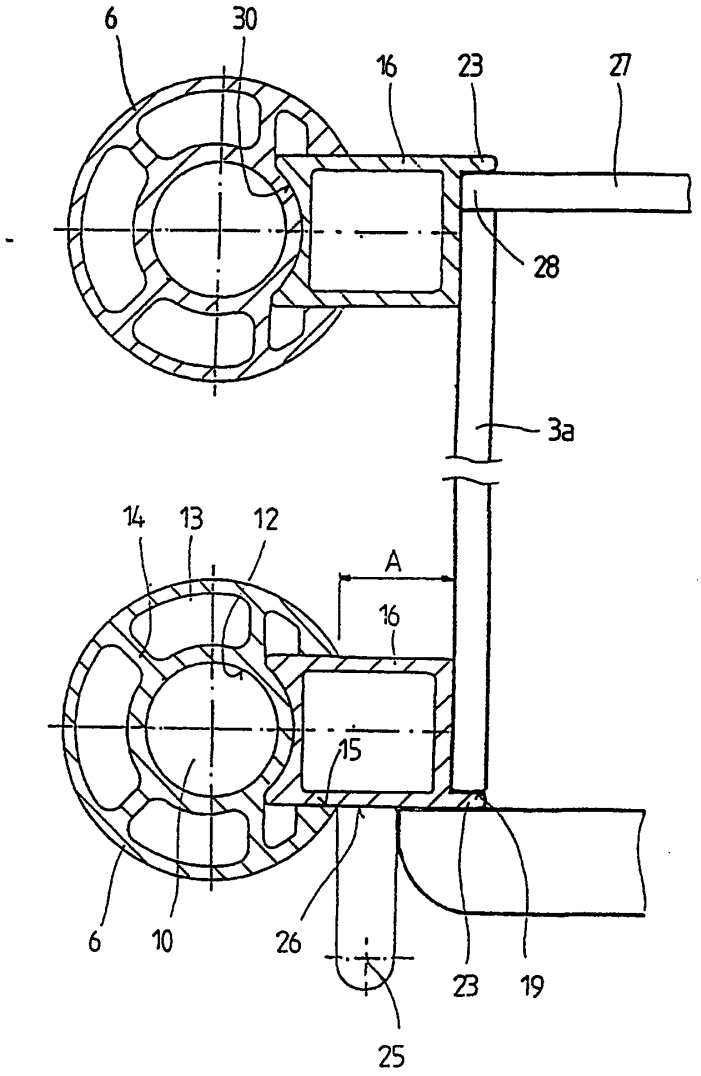


Fig. 4

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ZEICHNUNGEN SEITE 4

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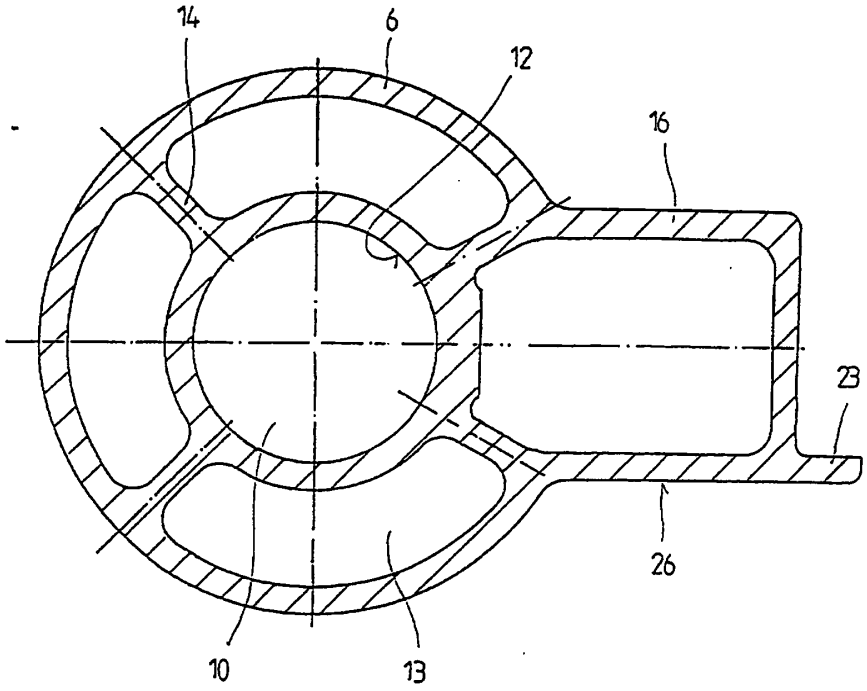


Fig. 5

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OIPE
NOV 27 2006
PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank Bennett Vanaman

Art Unit: 3618

Confirmation Number: 3782

AMENDMENT TRANSMITTAL

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an amendment in the above-identified application.

[X] Information Disclosure Statement and PTO/SB/08.

[X] The fee required for additional claims is calculated below:

	Claims As Amended		Previously Paid For		Extra Claims Present		Rate		Additional Claims Fee
Total Claims:	28	-	38	=	0	x	$50.00	=	$0.00
Independent Claims:	8	-	8	=	0	x	$200.00	=	$0.00
First presentation of any Multiple Dependent Claims:						+	$360.00	=	$0.00

CLAIMS FEE TOTAL =	$0.00

[ ] Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

[ ]	Extension for response filed within the first month:	$120.00	$0.00
[X]	Extension for response filed within the second month:	$450.00	$450.00
[ ]	Extension for response filed within the third month:	$1,020.00	$0.00
[ ]	Extension for response filed within the fourth month:	$1,590.00	$0.00
[ ]	Extension for response filed within the fifth month:	$2,160.00	$0.00
		EXTENSION FEE TOTAL:	$450.00
[X]	Information Disclosure Statement:	$180.00	$180.00
		CLAIMS, EXTENSION AND DISCLAIMER FEE TOTAL:	$630.00
		TOTAL FEE:	**$630.00**

A credit card payment form in the amount of $630.00 is enclosed. The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date November 27, 2006

By Jessica M. Cahill

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 295-4776
Facsimile: (202) 672-5399

Jessica M. Cahill
Attorney for Applicant
Registration No. 56,986

PATENT APPLICATION FEE DETERMINATION RECORD
Effective December 8, 2004

10/783,030

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS		
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	minus 20=	*
INDEPENDENT CLAIMS	minus 3 =	*
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	150.00	OR	BASIC FEE	300.00
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL		OR	TOTAL	

AMD 11/27/06

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 28	Minus	** 37	=
Independent	* 8	Minus	*** 8	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDI-TIONAL FEE		RATE	ADDI-TIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDI-TIONAL FEE		RATE	ADDI-TIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDI-TIONAL FEE		RATE	ADDI-TIONAL FEE
X$ 25=		OR	X$50=	
X100=		OR	X200=	
+180=		OR	+360=	



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www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056	3782

22428 7590 06/26/2006

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	PAPER NUMBER
3618	

DATE MAILED: 06/26/2006

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

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/783,030	ARCETA ET AL.	
	Examiner	Art Unit	
	Frank Vanaman	3618	

-- 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 *10 April 2006*.

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

3)☐ 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

4)☒ Claim(s) *1-38* is/are pending in the application.

4a) Of the above claim(s) *11-17 and 25-31* is/are withdrawn from consideration.

5)☒ Claim(s) *35 and 36* is/are allowed.

6)☐ Claim(s) *1-10,18-23,32-34,37 and 38* is/are rejected.

7)☐ Claim(s) *24* is/are objected to.

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

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ 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).

11)☐ 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

12)☐ 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-1449 or PTO/SB/08) Paper No(s)/Mail Date *8/16/04 - 7/28/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Election/Restriction

1. Applicant's election of Invention I (claims 1-10, 18-38) and Species I (as illustrated in figures 1-12) in the reply filed on April 10, 2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Applicant has commented that applicant "believes certain claims are generic" however applicant has neither provided evidence that the examiner's analysis is incorrect, nor identified claims deemed generic. Applicant has asserted that elected claims 1-10 and 18-38 are readable in the elected species. The examiner disagrees. Claims 25-31 are directed to subject matter associated with an embodiment shown in figures 22-23, which are not associated with species I. The examiner has identified species I as being illustrated in figures 1-12, and applicant has not argued otherwise.

Claims 11-17 and 25-31 are withdrawn from consideration as being directed to non elected inventions or species.

An office action on claims 1-10, 18-24, and 32-38 follows.

Information Disclosure Statement

2. The information disclosure statement filed Aug. 16, 2004 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein (as regards to those foreign references for which copies have not been received) has not been considered.

The examiner additionally notes that both of the statements filed on Feb. 17, 2005 and July 28, 2005 employ the citation prefix "D", and as such, citation designators "D1", "D2", and "D3" have been used twice.

Specification

3. The disclosure is objected to because of the following informalities: In parpagraph 0001, the concurrently-filed design applications are not adequately

identified. Applicant's preliminary amendment, filed April 13, 2005, is noted, however the preliminary amendment does not appear to have treated the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 37 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Fiordelisi (US 6,435,407). Fiordelisi teaches a cart comprising a work platform (5a1), a holder (7c) for adjustably supporting a bar-code scanner (7a), the holder connected to the platform, the cart including a base (1a) which movably supports the platform, the holder including an adjustable position wherein the scanner is in an inverted condition (solid 7a, figure 4a) so a user can scan items without holding the scanner.

Claim Rejections - 35 USC § 103

6. 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.

7. Claims 1, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (US 6,578,501). Moore teaches a cart having a work platform (30, 41) having side walls (29), and a plurality of compartments (formed by 24, 36) which may be used to contain items, a base (10) which may be movable in plural directions through rolling members (12a, 12b, etc.) which are located outside the side walls, a telescoping height adjustment mechanism (22) which can lock the work surface at a plurality of heights (col. 2, lines 60-63) and includes inner (18) and outer (21) casing members, with a gas piston (20) which may allow vertical motion of the upper work surface when open,

and which precludes motion when closed, the piston being controllable by an actuator (50), the base having a portion (i.e., forwardly of 18) which is forward of the height adjustment mechanism, and the work platform having a portion (i.e., forwardly of 21) extending forwardly of the height adjustment portion, at least one compartment (formed by 24) extending forwardly so that a user facing a rearward direction can access contents of the compartments. The reference to Moore fails to teach plural compartments extending forwardly of the height adjustment mechanism. It is well known to increase storage space by increasing shelf depth, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to increase the depth of the lower compartment forming element (36) forwardly of the height adjustment mechanism, for the purpose of increasing the storage space allowed by the lower compartment forming shelf.

8. Claims 2, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Murphy et al. (US 6,626,445). The reference to Moore is discussed above and fails to teach the compartments including drawers, configured to accommodate drawers of different sizes, and further including a handle disposed above the compartments, facing a forward direction. Murphy et al. teach a movable cart (10) which includes a plurality of compartments (defined at 28, 38) which may include drawers (e.g., 48) of differing sizes, and a handle (92) facing the same forward direction. It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the compartments of the cart taught by Moore with drawers as taught by Murphy et al., and a handle, for the purpose of (a) allowing small objects to be accommodated in the compartments without being lost, and (b) allowing a user to easily grasp and maneuver the cart.

9. Claims 5, 6, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of McConnell (US 5,257,767). The reference to Moore is discussed above and fails to teach the provision of a shelf which moves in a forward and backwards direction including an element which locks the shelf in a position between forward- and backward-most positions, and/or a shelf which moved left and right along an arc facing forwardly including an element which locks the shelf in a

position between left and right-most positions. McConnell teaches a well known shelf structure including a shelf (24) which is not limited from supporting a laptop, and which may move in a forward and rearward direction (along 14), as well as an arcuate direction (about 42, 44), and wherein one adjustment (between 22 and 20) may be lockable in between end points of motion (70). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the cart taught by Moore with the movable shelf structure taught by McConnell for the purpose of allowing a highly adjustable support shelf to accommodate an electronic device. As regards the locking in a mid-position of the forward-rearward and left-right mechanisms, in view of McConnell teaching a locking adjustment for one degree of freedom of the shelf mount (the orientation of 20, 22), further it would have been obvious to one of ordinary skill in the art at the time of the invention to provide a lock for the forward-rearward and left-right degrees of freedom of the shelf mount for the purpose of allowing a user to precisely and immovably position the shelf in a specific desired location, or orientation.

10. Claims 7, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Krichever et al. (US 5,151,581). The reference to Moore is discussed above and fails to teach the provision of a mount for a bar code reader, which is adjustable, and which may hold the reader in an inverted configuration. Krichever et al. teach a holder (170, 196, 170, etc) for a bar code reader (172) which may be positioned on a work surface (206) and which is adjustable (note figures 14-19), including an inverted configuration (e.g., figure 19). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the work surface taught by Moore with a bar-code reader having an adjustable mount as taught by Krichever et al. for the purpose of allowing a user of the cart to read coded information from various items.

11. Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Santoro et al. (US 6,682,030). The reference to Moore is discussed above and fails to teach the provision of a pair of drawer slides positioned between the inner and outer casing elements. Santoro et al. teach a vertical adjusting arrangement wherein inner (32) and outer (34) casings are supported with respect to

one another by a pair of drawer slides (50, 52). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a pair of slides as taught by Santoro et al. between the inner and outer telescopic members of the height adjustment device taught by Moore for the purpose of ensuring smooth relative motion between the elements when the height is changed.

As more specifically regards claim 23, the reference to Moore fails to specifically teach that the piston operates by an exhaust of gas therefrom when lowering and an intake of gas thereto when raising, however it is very well known in pneumatic suspensions for objects to operate a gas piston in this manner, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the piston to intake gas on raising and exhaust as on lowering for the purpose of ensuring easy operation of the height adjustment device for a user.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moore in view of Chisholm (US 6,860,494). The reference to Moore is discussed above and fails to specifically teach the provision of a refuse container. Chisholm teaches that it is well known to provide a container (not referenced, supported by 134) which may accommodate refuse, on a cart (10). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide a refuse container as taught by Chisholm on the cart taught by Moore for the purpose of allowing trash or other discarded items to be carried on the cart.

13. Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro et al. Santoro et al. teach a cart (10) which may accommodate a work surface, and has a base (16, 18) with a height adjustment mechanism including a stationary casing (32) connected to the base, and a telescopic casing (34) adapted to connect to the work platform, with at least two drawer slides (50, 52) including rolling members (bearings, not referenced) connecting between the stationary and telescopic casing, with a driver (68) which may be run by an actuator (motor in 69) and which, when stopped, locks the casings with respect to one another. The reference to Santoro et al. fails to explicitly teach the work surface, however in view of the reference teaching that it is intended for use with such a surface, it would have been obvious to one of

ordinary skill in the art at the time of the invention to provide a work surface (e.g., on top of 23, 24, 25) for the purpose of constructing a complete cart assembly.

14. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Santoro et al. in view of Moore. The reference to Santoro et al. is discussed above and fails to teach the driver and actuator as comprising a gas piston and actuator. Santoro et al. do teach, however, that a number of different driver/actuation combinations may be used (motor drive, figures 5, 6; hand crank, figures 7, 8; hand slide, figures 9, 10). Moore teaches the use of a height adjustment device including a gas piston (20) with controlling actuator (50). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the height adjustment device taught by Santoro et al. with a pneumatic piston device and actuator as taught by Moore for controlling surface height, for the purpose of providing a mid-cost option for the height adjustment (i.e., less expensive than a motor drive, more expensive than a manual-slide arrangement).

Moore fails to specifically teach that the piston operates by an exhaust of gas therefrom when lowering and an intake of gas thereto when raising, however it is very well known in pneumatic suspensions for objects to operate a gas piston in this manner, and as such, it would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the piston to intake gas on raising and exhaust as on lowering for the purpose of ensuring easy operation of the height adjustment device for a user.

Allowable Subject Matter

15. Claims 35 and 36 are allowed.

16. Claim 24 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.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gogulski (US 4,071,740), Hunter et al. (US 5,058,911), Enoki et al. (US 5,734,839), Blaeuer (US 6,484,939) and Hamlin (US 6,722,673) teach structures of pertinence.

18. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through 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).

A response to this action should be mailed to:
Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,
Or faxed to:
PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618



MODIFIED PTO/SB/08 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

PTO TRAFFIC JC98 AUG 16 2004 PATENT & TRADEMARK OFFICE

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Unassigned
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
FBV	A1	3,910,659	A	PETERSON	10-07-1975	
FBV	A2	5,841,361	A	HOFFMAN	11-24-1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
NO COPY	~~A3~~	~~WO~~	~~01/97745~~	~~A~~	~~SCIENCE PARK RAF SPA~~	~~12-27-2001~~		
NO COPY	~~A4~~	~~WO~~	~~03/013307~~	~~A~~	~~HILL ROM SERVICES~~ INC.	~~02-20-2003~~		
NO COPY	~~A5~~	~~DE~~	~~195 40 058~~	~~C~~	~~ARNOLD~~	~~06-13-1996~~		
NO COPY	~~A6~~	~~DE~~	~~297 01 427~~	~~U~~	~~BSW ANLAGENBAU~~ GMBH	~~03-20-1997~~		
NO COPY	~~A7~~	~~DE~~	~~196 42 523~~	~~A~~	~~WAGNER~~	~~05-22-1997~~		

NON PATENT LITERATURE DOCUMENTS

Examiner Signature		Date Considered	6/21/06

*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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 2

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Unassigned
Attorney Docket Number	086554-1056

Examiner Initials*	Cite No.[1]	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.	T[6]
FBV	A8	QuickMedical, Midmark, Ritter Special Procedures Cart, http://quickmedical.com/Midmark/casework/ritter/345.html	
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	A13	Lionville Systems, Inc., Carts::Extended Care, http://www.lionville.com/carts_extendedcare.html	
	A14	Lionville Systems, Inc., Carts, http://www.lionville.com	
	A15	Lionville Systems, Inc., Carts::Acute Care, http://www.lionville.com/carts_acute.html	
	A16	Lionville Systems, Inc., Carts, http://www.lionville.com/carts.html	
	A17	Lionville Systems, Inc., iCart™ Brochure	
	A18	Lionville Systems, Inc., Medication Carts Brochure (400 Series, 600 Series, 800 Series)	
	A19	Lionville Systems, Inc., Anesthesia Cart Brochure	
V	A20	Lionville Systems, Inc., Medication Carts Brochure	
FBV	A21	Lionville Systems, Inc., Healthcare Carts Brochure	

Examiner Signature		Date Considered	6/24/06

*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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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.

JUL 28 2005
TRADEMARK OFFICE

MODIFIED PTO/SB/08 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Frank B. Vanaman
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
FBV	D1	Des. 240,629		COPE	07-20-1976	
	D2	Des. 349,594		BONAZZA	08-09-1994	
	D3	Des. 387,168		EDELMAN et al.	12-02-1997	
	D4	Des. 389,917		HORNBACK et al.	01-27-1998	
	D5	6,050,660	A	GURLEY	04-18-2000	
	D6	D438,952	S	CIMINO et al.	03-13-2001	
	D7	D441,513	S	MULLEN et al.	05-01-2001	
	D8	D459,477	S	STOCKS et al.	06-25-2002	
	D9	D465,895	S	PFEFFERLE et al.	11-19-2002	
	D10	D468,420	S	BOLMSJO	01-07-2003	
	D11	D486,915	S	WARSCHEWSKE et al.	02-17-2004	
	D12	D487,178	S	CUZZOCREA	02-24-2004	
	D13	D497,462	S	RYAN	10-19-2004	
FBV	D14	D500,575	S	LUCAS	01-04-2005	

Examiner Signature		Date Considered	6/21/06

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

OIPE
FEB 17 2005
U.S. PATENT & TRADEMARK OFFICE

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Unassigned
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
FBV	D1	3,715,148	A	BEALS	02-06-1973	
FBV	D2	6,073,942	A	HENEVELD	06-13-2000	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
FBV	D3	DE	196 49 982	C	HINZ FABRIK GMBH	06-10-1998		

Examiner Signature		Date Considered	6/21/06

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JAN 11 2005
PATENT AND TRADEMARK OFFICE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

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FBV	C1	D146,375	S	OBRIG	02-18-1947	
	C2	D367,381	S	LICARI	02-27-1996	
	C3	D390,733	S	BRUNNER et al.	02-17-1998	
	C4	D402,529	S	HUSTED	12-15-1998	
	C5	D410,230	S	WITTE	05-25-1999	
	C6	D458,780	S	SIEPMANN et al.	06-18-2002	
	C7	D462,674	S	SIEPMANN et al.	09-10-2002	
	C8	D481,847	S	VAN LANDINGHAM, JR.	11-04-2003	
FBV	C9	D482,173	S	VAN LANDINGHAM, JR.	11-11-2003	

Examiner Signature		Date Considered	6/21/06

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date Submitted: April 13, 2005

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Sheet 1 of 1

PATENT & TRADEMARK OFFICE APR 13 2005

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Frank Bennett Vanaman
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
FBV	1	6,493,220	B1	Clark et al.	12-10-2002	
FBV	2	6,615,744	B1	Eckstein et al.	09-09-2003	
FBV	3	6,721,178	B1	Clark et al.	04-13-2003	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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.	T[6]

Examiner Signature		Date Considered	6/21/06

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Notice of References Cited	Application/Control No. 10/783,030	Applicant(s)/Patent Under Reexamination ARCETA ET AL.	
	Examiner Frank Vanaman	Art Unit 3618	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-4,071,740	01-1978	Gogulski, Paul	235/431
*	B	US-5,058,911	10-1991	Hunter et al.	280/47.35
*	C	US-5,151,581 A	09-1992	Krichever et al.	235/454
*	D	US-5,257,767 A	11-1993	McConnell, Dale K.	248/284.1
*	E	US-5,734,839	03-1998	Enoki et al.	705/20
*	F	US-6,435,407 B1	08-2002	Fiordelisi, Luigi	235/383
*	G	US-6,484,939 B1	11-2002	Blaeuer, Dennis C.	235/383
*	H	US-6,578,501 B1	06-2003	Moore, Lorraine	108/147
*	I	US-6,626,445 B2	09-2003	Murphy et al.	280/47.34
*	J	US-6,682,030 B2	01-2004	Santoro et al.	248/188.5
*	K	US-6,722,673 B1	04-2004	Hamlin, H. L. Roy	280/47.35
*	L	US-6,860,494 B1	03-2005	Chisholm, Karan L.	280/47.35
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
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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.

Search Notes	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/783,030	ARCETA ET AL.	
	Examiner	Art Unit	
	Frank Vanaman	3618	

SEARCHED			
Class	Subclass	Date	Examiner
280	47.34, 47.35, 79.11, 79.3,	6/21/2006	FBV
280	638 651	6/21/2006	FBV
280	33.992	6/21/2006	FBV
108	147.19	6/21/2006	FBV
108	147.21	6/21/2006	FBV
235	431	6/21/2006	FBV

INTERFERENCE SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES (INCLUDING SEARCH STRATEGY)		
	DATE	EXMR

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/783,030	ARCETA ET AL.
Examiner	**Art Unit**
Frank Vanaman	3618

X	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

Claim		Date								
Final	Original	6/21/06								
	1	X								
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Bib Data Sheet

CONFIRMATION NO. 3782

SERIAL NUMBER	FILING OR 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
10/783,030	02/23/2004 RULE	280	3618	086554-1056

APPLICANTS

Radmond Vincent Arceta, Manassas, VA;
Craig Kevin Rogers, Stephens City, VA;
Kevin Thomas Fitzpatrick, Winchester, VA;
Bryan Scott Ritchie, Clear Brook, VA;
Marin John Philpott, Winchester, VA;
Christina Louise Fortner, Stephens City, VA;

**** CONTINUING DATA **************************** FBV

This appln claims benefit of 60/448,920 02/24/2003 and claims benefit of 60/484,658 07/07/2003
and claims benefit of 60/518,649 11/12/2003
and claims benefit of 60/532,900 12/30/2003

**** FOREIGN APPLICATIONS ******************** FBV

IF REQUIRED, FOREIGN FILING LICENSE GRANTED
** 05/13/2004

Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☐ yes ☐ no	VA	20	17	4

35 USC 119 (a-d) conditions met ☐ yes ☐ no ☐ Met after Allowance

Verified and Acknowledged _____ Examiner's Signature Initials

ADDRESS
22428

TITLE

Medical cart, medication module, height adjustment mechanism, and method of medication transport

FILING FEE RECEIVED		
2686	FEES: Authority has been given in Paper No. _____ to charge/credit DEPOSIT ACCOUNT No. _____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

OIPE IAP13 APR 10 2006 PATENT & TRADEMARK OFFICE

DFW

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank Bennett Vanaman

Art Unit: 3618

RESPONSE TO RESTRICTION REQUIREMENT AND REQUIREMENT FOR ELECTION OF SPECIES

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the restriction requirement set forth in the Office Action mailed March 10, 2006, Applicants hereby provisionally elect Group I, Claims 1-10 and 18-38, for examination, with traverse. In response to the election of species requirement, Applicants elect Species I, illustrated in Figures 1 through 12 for prosecution in the subject application. Elected claims 1-10 and 18-38 are readable on the elected species. The Examiner has indicated that no claim is generic; however, Applicant believes that certain claims are generic.

Applicants, of course, reserve the right to file divisional applications covering the non-elected subject matter.

If fees are due in connection with the filing of this response and no proper payment is enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If an extension of time under 37 C.F.R. §

1.136 is required and has not been accounted for, such extension is hereby requested and the fee should be charged to Deposit Account No. 19-0741.

Respectfully submitted,

Date April 10, 2006

By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056	3782

22428 7590 03/10/2006

FOLEY AND LARDNER LLP
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER	
VANAMAN, FRANK BENNETT	
ART UNIT	**PAPER NUMBER**
3618	

DATE MAILED: 03/10/2006

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

PTO-90C (Rev. 10/03)

Office Action Summary	Application No.	Applicant(s)	
	10/783,030	ARCETA ET AL.	
	Examiner	Art Unit	
	Frank Vanaman	3618	

-- 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 1 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 _____.

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

3)☐ 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

4)☒ Claim(s) 1-38 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

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

8)☒ Claim(s) 1-38 are subject to restriction and/or election requirement.

Application Papers

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

10)☐ 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).

11)☐ 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

12)☐ 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-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Restriction

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
   I. Claims 1-10 and 18-38, drawn to a load carrying cart, classified in class 280, subclass 47.35.
   II. Claims 11-15, drawn to a multiple nesting cart system and claims 16-17, directed to a method for using the cart system, classified in class 280, subclass 33.991.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombination and combination (the method of using the combination is grouped with the combination in this case). Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because it supports separate patentability for example in view of its use with nesting carts having specific structure allowing the nesting, and further does not require a cart having a lift mechanism. The subcombination has separate utility such as a parts carrier.

Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art in view of their different classification, and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Election of Species

3. This application contains claims directed to the following patentably distinct species:

Species I, illustrated in figures 1-12, directed to a height-adjustable cart having a multiple element storage arrangement thereon;

Species II, illustrated in figures 13, 14 and 16, directed to a cart lacking a multiple element storage arrangement;

Species III, illustrated in figures 17-20, directed to a non height-adjustable cart with multiple storage elements.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, the claims do not appear generic.

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Conclusion

4. Any inquiry specifically concerning this communication or earlier communications from the examiner should be directed to F. Vanaman whose telephone number is 571-272-6701.

Any inquiries of a general nature or relating to the status of this application may be made through 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).

A response to this action should be mailed to:
Mail Stop _____
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450,
Or faxed to:
PTO Central Fax: 571-273-8300

F. VANAMAN
Primary Examiner
Art Unit 3618

3/6/06

Index of Claims

Application/Control No.	Applicant(s)/Patent under Reexamination
10/783,030	ARCETA ET AL.
Examiner	**Art Unit**
Frank Vanaman	3618

√	Rejected	–	(Through numeral) Cancelled	N	Non-Elected	A	Appeal
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OIPE JC98 JUL 28 2005 PATENT & TRADEMARK OFFICE

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Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank B. Vanaman

Art Unit: 3618

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56

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

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

RELEVANCE OF EACH DOCUMENT

The documents listed on the attached PTO/SB/08 were cited by the Examiner as being relevant during the prosecution of U.S. Design application No. 29/196,712.

Applicants respectfully request that the listed documents be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date July 28, 2005 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

OIPE JC98 JUL 28 2005 PATENT & TRADEMARK OFFICE

MODIFIED PTO/SB/08 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Frank B. Vanaman
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	D1	Des. 240,629		COPE	07-20-1976	
	D2	Des. 349,594		BONAZZA	08-09-1994	
	D3	Des. 387,168		EDELMAN et al.	12-02-1997	
	D4	Des. 389,917		HORNBACK et al.	01-27-1998	
	D5	6,050,660	A	GURLEY	04-18-2000	
	D6	D438,952	S	CIMINO et al.	03-13-2001	
	D7	D441,513	S	MULLEN et al.	05-01-2001	
	D8	D459,477	S	STOCKS et al.	06-25-2002	
	D9	D465,895	S	PFEFFERLE et al.	11-19-2002	
	D10	D468,420	S	BOLMSJO	01-07-2003	
	D11	D486,915	S	WARSCHEWSKE et al.	02-17-2004	
	D12	D487,178	S	CUZZOCREA	02-24-2004	
	D13	D497,462	S	RYAN	10-19-2004	
	D14	D500,575	S	LUCAS	01-04-2005	

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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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.

OIPE JC98
APR 13 2005
PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank B. Vanaman

Art Unit: 3618

PRELIMINARY AMENDMENT UNDER 37 C.F.R. § 1.115

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Prior to examination of the present application, Applicants respectfully request that the application be amended as follows.

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

Remarks/Arguments begin on page 11 of this document.

Please amend the application as follows:

04/14/2005 SZEMDIE1 00000111 10783030
01 FC:1201 800.00 OP
02 FC:1202 900.00 OP

Amendments to the Claims:

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

Listing of Claims:

1. (Currently Amended) A cart comprising:

a work platform including a work surface and ~~at least one compartment~~ compartments for containing items;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartments are disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartments are configured to permit a user facing in the rearward direction to access an item within the compartments.

2. (Currently Amended): The cart of claim 1, wherein the ~~compartment~~ compartments ~~includes a drawer~~ include drawers, and the portion of the work platform is configured such that the drawers can be opened in the forward direction.

3. (Currently Amended): The cart of claim ~~1~~ 2, wherein the work platform ~~can~~ is configured to accommodate drawers of different sizes.

4. (Currently Amended): The cart according to claim 1, ~~wherein the compartment is configured to be unlocked via a keyless entry system~~ further comprising a handle disposed above the compartments and on the portion of the work platform that projects in the forward

direction, the handle being configured such that the handle can be grasped by a user facing in the rearward direction to push the cart in the rearward direction.

5. (Currently Amended): The cart of claim 1, wherein the work platform includes a laptop platform that can be moved in at least one of ~~a~~ the forward and ~~a~~ rearward ~~direction~~ directions.

6. (Currently Amended) The cart of claim 1, wherein the work platform includes a work surface that can be moved in at least one of a leftward and rightward direction along an arcuate path that faces the forward direction.

7. (Original): The cart of claim 1, wherein the work platform includes a barcode scanner holder.

8. (Currently Amended): The cart of claim 1, further comprising a plurality of rolling members connected to the base, wherein the work platform includes sidewalls, and the rolling members are disposed on the base outside of the sidewalls.

9. (Currently Amended) The cart of claim ~~8~~ 1, ~~wherein the work platform includes sidewalls and the rolling members are disposed on the base outside of the sidewalls~~ wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights.

10. (Currently Amended) The cart of claim ~~1~~ 9, wherein the height adjustment mechanism ~~wherein the height adjustment mechanism is configured to lock the work platform at a plurality of heights between a lowest position and a highest position inclusive~~ comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

at least two drawer slides disposed between the stationary casing and the telescoping

casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

11. (Currently Amended): A cart system comprising:

a first cart including:

at least one compartment; and

a base having rolling members to permit movement of the first cart;

a second cart including:

a housing having sidewalls;

a plurality of compartments supported in the housing; and

a base having rolling members to permit movement of the second cart, wherein the base includes portions that project outside of the sidewalls of the housing, the rolling members are disposed on the portions of the base projecting outside of the sidewalls, and the base of the second cart is configured to nest with the base of the first cart such that at least one of the portions of the base of the second cart is disposed under the first cart,

wherein the first and second cart ~~including~~ each include linking structure that permits the first and second carts to be connected together for movement.

12. (Original): The cart system of claim 11, wherein the first cart further includes a work platform having a work surface and that houses the at least one compartment.

13. (Original): The cart system of claim 11, wherein the first cart includes a plurality of compartments.

14. (Currently Amended): The cart system of claim 11, wherein ~~the base of the first~~

~~cart is configured to nest with the base of the second cart~~ the linking structure of the first cart is provided on the base of the first cart and the linking structure of the second cart is provided on the base of the second cart.

15. (Currently Amended): The cart system of claim ~~11~~ 14, wherein ~~the second cart further includes a housing for supporting the plurality of compartments and the rolling members are disposed on the base outside of the sidewalls~~ the second cart includes a foot pedal actuator configured to cause the linking structure of the second cart to release the linking structure of the first cart.

16. (Currently Amended): A method of medication transport comprising the steps of:

(a) loading, at a first location, medication into first and second carts;

(b) connecting the first and second carts to form a cart train;

(c) moving the cart train to a second location when loaded with medication;

(d) separating the first and second carts after moving the cart train to the second location;

(e) moving the first cart from the second location to a third location;

(f) removing medication from the first cart at the third location; and

(g) returning the first and second carts to the first location.

17. (Original): A method of medication transport comprising the steps of:

(a) loading, at a first location, medication into a compartment in a medication module;

(b) moving the medication module to a second location;

(c) transferring medication from the medication module to a medical cart; and

(d) administering medicine from the medical cart to a patient.

18. (New): The cart of claim 1, further comprising:

a refuse container.

19. (New): The cart of claim 5, wherein the laptop platform is configured to move in

both the forward and rearward directions between a forwardmost and a rearwardmost position, and wherein the work platform includes a mechanism configured to releaseably lock the laptop platform between the forwardmost and rearwardmost positions.

20. (New): The cart of claim 6, wherein the work surface is configured to move in both the rightward and the leftward directions between a rightmost and a leftmost position, and wherein the work platform includes a releasable locking mechanism configured to releaseably lock the work surface between the rightmost and leftmost positions.

21. (New): The cart of claim 7, wherein the barcode scanner holder is adjustable.

22. (New): The cart of claim 21, wherein the adjustable barcode scanner holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform.

23. (New): The cart of claim 10, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

24. (New): The cart of claim 10, wherein the actuator is disposed above the compartments and on the portion of the work platform that projects in the forward direction.

25. (New) A cart comprising:

at least one movable compartment including a notch;

a housing for supporting the movable compartment such that the movable compartment can be moved in and out relative to the housing;

a hinge having a stationary side connected to the housing and an active side biased toward an engagement position in which the active side is disposed in the notch of the movable compartment to prevent the movable compartment from

being moved out relative to the housing; and

a driver configured to move the active side of the hinge to a disengagement position in which the active side is not disposed in the notch of the movable compartment.

26. (New): The cart of claim 25, wherein the movable compartment includes a sloped surfaced positioned behind the notch such that, when the movable compartment is moved in relative to the housing while the active side of the hinge is in the engagement position, the sloped surface will temporarily engage the active side and force it into the disengagement position to permit the movable compartment to continue to move in relative to the housing.

27. (New): The cart of claim 25, wherein the hinge is a piano hinge.

28. (New): The cart of claim 25, wherein the driver includes:

an actuating lever that engages the active side of the hinge and pivots about an axis to move the active side of the hinge to the disengagement position; and

a solenoid that drives the actuating lever.

29. (New): The cart of claim 25, further comprising:

a circuit configured to control the driver; and

a keypad connected to the circuit,

wherein, when a user enters an unlock code on the keypad, the keypad is configured to send an unlock signal to the circuit which is configured to cause the driver to move the active side of the hinge to the disengagement position.

30. (New): The cart of claim 29, further comprising:

a timer configured to count to a predetermined time count after the hinge is moved to the disengagement position, wherein, after the predetermined time has been counted, the timer is configured to instruct the driver to allow the active side of the hinge to move to the engagement position.

31. (New): The cart of claim 25, further comprising a plurality of movable compartments that can each be maintained in positioned by the hinge.

32. (New): A cart comprising:

a work platform including a work surface and at least one compartment for containing an item within the compartment;

a base; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism comprises:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing; and

at least two drawer slides including rolling members and being disposed between the stationary casing and the telescoping casing.

33. (New): The cart of claim 32, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism further comprising:

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver.

34. (New): The cart of claim 33, wherein the driver includes a piston that, in response to a user's actuation of the actuator, permits gas to flow out of the piston during lowering of the height of the work platform, and that, in response to a user's actuation of the actuator, permits gas to flow into the piston during increasing of the height of the work platform.

35. (New): A cart comprising:

a work platform including a work surface and at least one compartment for containing

an item within the compartment;

a base configured to be movable in at least a rearward direction; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base, wherein the height adjustment mechanism is configured to releasably lock the work platform at a plurality of heights, the height adjustment mechanism comprising:

a stationary casing connected to the base;

a telescoping casing connected to the work platform and configured to move relative to the stationary casing;

a driver configured to releasably lock the telescoping casing relative to the stationary casing; and

an actuator for controlling the driver,

wherein the base includes a portion that projects from the height adjustment mechanism in a forward direction that is substantially opposite to the rearward direction,

wherein the work platform includes a portion that projects from the height adjustment mechanism in the forward direction, the compartment is disposed in the portion of the work platform that projects from the height adjustment mechanism in the forward direction, and the compartment is configured to permit a user facing in the rearward direction to access an item within the compartment,

wherein the actuator is disposed above the compartment and on the portion of the work platform that projects in the forward direction.

36. (New): The cart of claim 35, further comprising a handle disposed on the work platform, wherein the actuator is disposed on the handle.

37. (New): A cart comprising:

a work platform;

a holder for supporting a barcode scanner, wherein the holder is connected to the work

platform and is adjustable to adjust the location of the scanner relative to the work platform;

a base that moveably supports the work platform.

38. (New): The cart of claim 37, wherein the holder can be adjusted to hold a barcode scanner in an inverted orientation above the work platform so as to enable a user to scan items without holding the barcode scanner.

REMARKS

Applicant respectfully requests that the foregoing amendments be made prior to examination of the present application. Claims 1-6, 8-11, and 14-16 have been amended, and claims 18-38 have been added.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier.

After amending the claims as set forth above, claims 1-38 are now pending in the application.

Applicant believes that the present application is now in condition for allowance. Favorable consideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is believed that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date April 13, 2005 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

OIPE
APR 13 2005
PATENT & TRADEMARK OFFICE
JC88

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank B. Vanaman

Art Unit: 3618

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.56

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

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

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TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 C.F.R. §1.97(b), before the mailing date of the first Office Action on the merits.

RELEVANCE OF EACH DOCUMENT

All of the documents are in English.

Applicants respectfully request that each listed document be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date Apr. 13, 2005 By 

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
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Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

MODIFIED PTO/SB/08 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date Submitted: April 13, 2005

(use as many sheets as necessary)

Sheet | 1 | of | 1

PTO APR 13 2005 PATENT & TRADEMARK

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Frank Bennett Vanaman
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (*if known*)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		6,493,220	B1	Clark et al.	12-10-2002	
		6,615,744	B1	Eckstein et al.	09-09-2003	
		6,721,178	B1	Clark et al.	04-13-2003	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (*if known*)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	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.	T[6]

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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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.

OIPE JC98
APR 13 2005
PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Frank B. Vanaman

Art Unit: 3618

AMENDMENT TRANSMITTAL

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Transmitted herewith is an amendment in the above-identified application.

[X] The fee required for additional claims is calculated below:

	Claims As Amended		Previously Paid For		Extra Claims Present		Rate		Additional Claims Fee
Total Claims:	38	-	20	=	18	x	$50.00	=	$900.00
Independent Claims:	8	-	4	=	4	x	$200.00	=	$800.00
First presentation of any Multiple Dependent Claims:						+	$360.00	=	$0.00
							CLAIMS FEE TOTAL	=	$1700.00

[ ] Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

[ ] Extension for response filed within the first month:	$120.00	$0.00
[ ] Extension for response filed within the second month:	$450.00	$0.00
[ ] Extension for response filed within the third month:	$1,020.00	$0.00
	EXTENSION FEE TOTAL:	$0.00
	CLAIMS, EXTENSION AND DISCLAIMER FEE TOTAL:	$1700.00
[ ]	Small Entity Fees Apply (subtract ½ of above):	$0.00
	TOTAL FEE:	$1700.00

Enclosures:

[X] Information Disclosure Statement and Form PTO/SB/08.

[X] A check in the amount of $1700.00.

[X] The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date Apr. 13, 2005

By

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

Application or Docket Number
10/783,030

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

CLAIMS AS FILED - PART I

	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA
TOTAL CLAIMS	17	
FOR		
TOTAL CHARGEABLE CLAIMS	17 minus 20=	* 0
INDEPENDENT CLAIMS	4 minus 3 =	* 1
MULTIPLE DEPENDENT CLAIM PRESENT		☐

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	
X43=		OR	X86=	86
+145=		OR	+290=	
TOTAL	✓	OR	TOTAL	856

04/13/05

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	* 38	Minus	** 20	= 18
Independent	* 7	Minus	*** 4	= 3
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

1, 11, 16, 25, 32, 35, 37, 17

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	900
X43=		OR	X86=	800
+145=		OR	+290=	—
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	1700

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM				☐

RATE	ADDITIONAL FEE	OR	RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT FEE		OR	TOTAL ADDIT 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

...PTO-875 ... DEPARTMENT OF COMMERCE



IFW

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Unassigned

Art Unit: 3618

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56

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

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicants in order to comply with Applicants' duty of disclosure pursuant to 37 CFR §1.56.

A copy of the non-U.S. patent document is filed herewith.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicants do not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits, and within three (3) months of the mailing date of the foreign search report.

RELEVANCE OF EACH DOCUMENT

The documents listed on the attached PTO/SB/08 were cited as being relevant during the prosecution of International application, PCT/2004/005282. A copy of the International Search Report setting forth the portion of each reference considered relevant by the examiner is attached.

Applicants respectfully request that the listed documents be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

STATEMENT

The undersigned hereby states in accordance with 37 CFR §1.704(d) that each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR §1.56(c) more than thirty days prior to the filing of the information disclosure statement.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date February 17, 2005 By _____

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MODIFIED PTO/SB/08 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

PTO FEB 17 2005 PATENT & TRADEMARK OFFICE

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Unassigned
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	D1	3,715,148	A	BEALS	02-06-1973	
	D2	6,073,942	A	HENEVELD	06-13-2000	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (if known)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	D3	DE	196 49 982	C	HINZ FABRIK GMBH	06-10-1998		

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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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.

(19) BUNDESREPUBLIK DEUTSCHLAND

DEUTSCHES PATENTAMT

(12) **Patentschrift**

(10) **DE 196 49 982 C 1**

(51) Int. Cl.[6]:
A 47 B 81/00
A 47 B 79/00
B 62 B 3/10
A 61 G 12/00

(21) Aktenzeichen: 196 49 982.8-44
(22) Anmeldetag: 22. 11. 96
(43) Offenlegungstag: –
(45) Veröffentlichungstag der Patenterteilung: 10. 6. 98

DE 196 49 982 C 1

Innerhalb von 3 Monaten nach Veröffentlichung der Erteilung kann Einspruch erhoben werden

(73) Patentinhaber:
Hinz Fabrik GmbH, 12107 Berlin, DE

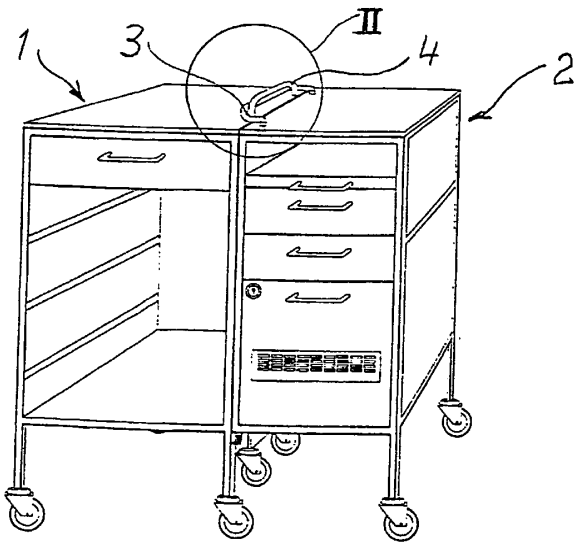
(74) Vertreter:
Böning, M., Dr.-Ing., Pat.-Anw., 14050 Berlin

(72) Erfinder:
Schmidt, geb. Steinröx, Ellen, 12107 Berlin, DE

(56) Für die Beurteilung der Patentfähigkeit in Betracht gezogene Druckschriften:
NICHTS ERMITTELT

(54) Wagen

(57) Zur Erleichterung des Verfahrens von fahrbaren Einzelmöbeln (1, 2) wird vorgeschlagen, die Einzelmöbel (1, 2) durch von U-förmigen Bügeln (3, 4) gebildete Kupplungselemente zu einer Schubeinheit zu koppeln.



DE 196 49 982 C 1

Beschreibung

Die Erfindung betrifft einen Wagen in Form eines fahrbaren, insbesondere mit Fächern, Schubladen und/oder sonstigen Einsätzen ausgestatteten Möbels.

Wagen der vorstehenden Art begegnet man überall dort, wo das jeweilige Möbel an unterschiedlichen Orten benötigt wird. Typische Beispiele für einschlägige Wagen bilden mit Schubladen ausgestattete Werkzeugwagen in Werkstätten sowie in Krankenhäusern zum Einsatz gelangende Pflegearbeits- oder Wäschewagen. Insbesondere im zuletzt genannten Bereich kommt es häufig vor, daß nicht ein einzelner wagen, sondern vornehmlich zwei Wagen von Zimmer zu Zimmer oder auch von Station zu Station gefahren werden müssen, wobei ein Wagen beispielsweise zur Unterbringung von Utensilien für die Patientenversorgung und ein Wagen zur Aufnahme von Geräten oder Unterlagen für die Patientendokumentation dient. In der Praxis bedeutet dies, daß das Heran- und Wegschaffen der Wagen mit der Zurücklegung doppelter Wege und einem erhöhten Zeitaufwand verbunden ist.

Der Erfindung liegt die Aufgabe zugrunde, die angedeuteten Mängel zu eliminieren, d. h. vermeidbare Totzeiten auszuschalten. Gelöst wird die gestellte Aufgabe bei einem Wagen der in Betracht gezogenen Gattung erfindungsgemäß dadurch, daß er aus mindestens zwei Einzelmöbeln besteht, die zwecks Bildung einer Schubeinheit durch Kupplungselemente lösbar miteinander verbunden sind und von denen ein jedes mit einem seine selbständige Verfahrbarkeit im voneinander getrennten Zustand sicherstellenden Satz von Rädern ausgestattet ist.

Der erfindungsgemäße Wagen stellt eine Art Verbundmöbel dar, das als Einheit bewegbar ist, bei Bedarf jedoch gleichwohl problemlos und schnell in selbständig verfahrbare Einzelmöbel verwandelt werden kann.

Als besonders vorteilhaft, weil bequem handhabbar und mit einfachen Mitteln realisierbar, erweist sich eine Ausführungsform, bei der die einander zugewandten Seitenwände der Einzelmöbel im gekoppelten Zustand aneinander liegen und bei der die Kupplungselemente von mindestens einem Paar U-förmiger Bügel gebildet weiden, von denen jeweils einer über den anderen klappbar ist.

Weitere Einzelheiten und Merkmale der Erfindung ergeben sich aus den Unteransprüchen und der nachstehenden Beschreibung eines in der beigefügten Zeichnung dargestellten bevorzugten Ausführungsbeispiels. Es zeigen:

Fig. 1 einen aus zwei Einzelmöbeln zu einer Schubeinheit zusammengekoppelten Wagen,

Fig. 2 in vergrößertem Maßstab eine Einzelheit des Wagens gemäß **Fig.** 1 im Bereich des Kreises II in **Fig.** 1,

Fig. 3 die entkoppelten Einzelmöbel des Wagens gemäß **Fig.** 1,

Fig. 4 das rechte der beiden in **Fig.** 3 dargestellten Einzelmöbel in einer durch eine ausfahrbare Stütze gesicherten Position,

Fig. 5 in vergrößertem Maßstab Einzelheiten der Ausbildung und Halterung der in **Fig.** 4 gezeigten Stütze in ihrer eingefahrenen Position und

Fig. 6 eine der **Fig.** 5 entsprechende Ansicht des Einzelmöbels bei ausgefahrener Stütze.

Der in **Fig.** 1 dargestellte Wagen besteht aus zwei Einzelmö beln **1** und **2**, die durch von U-förmigen Bügeln **3** und **4** gebildete Kupplungselemente miteinander verbunden sind. Beide Bü gel **3** und **4** sind an der eine Ablagefläche bildenden Oberseite **5** der Einzelmöbel **1**, **2** angeordnet. Während der Bügel **4** als starrer Bügel ausgebildet ist, läßt sich der Bügel **5** zum Zwecke der Kopplung oder Entkopplung der Einzelmöbel um Zap fen **6**, **7** schwenken.

Fig. 3 zeigt die Einzelmöbel **1** und **2** des Wagens im entkoppelten Zustand. Man erkennt anhand dieser Figur, daß jedes der beiden Einzelmöbel **1**, **2** mit jeweils einem Satz von Rädern **8**, **9**, **10**, **11** und **12**, **13**, **14**, **15** ausgestattet ist. Um Kollisionen zwischen den Rädern **10**, **11** des Einzelmöbels **2** zu verhindern, ist der Radstand a der Räder **10**, **11** größer als der Radstand b der Räder **12**, **13**.

Im Falle des Einzelmöbels **2** handelt es sich um einen Wagen mit einem EDV-System zur Patientendokumentation, in dessen unterer Schublade **16** ein vergleichsweise schweres EDV-Gerät untergebracht ist. Um zu verhindern, daß das Einzelmöbel **2** bei zu Wartungszwecken herausgezogener Schublade **16** nach vorn kippt, bedient man sich einer ausfahrbaren Stütze **17**, die im vorderen Eckpfosten **18** der Seitenwand **19** des Einzelmöbels **2** geführt ist, das im gekoppelten Zustand der Einzelmöbel **1**, **2** gegen die Seitenwand **20** des Einzelmöbels **1** anliegt.

Wie der **Fig.** 5 entnehmbar ist, wird die Stütze **17** durch den Riegel **21** eines Schlosses **22** für die Schublade **16** in ihrer eingefahrenen Position gehalten. Beim Aufschließen des Schlosses **22** gibt der Riegel **21** die Stütze **17** frei, und diese fällt automatisch nach unten. Ein federnd gelagerter Stift **23** springt nach außen, sobald er den Eckpfosten **18** verläßt, um die Stütze **17** in ihrer Stützposition zu arretieren. Die Schublade **16** kann anschließend problemlos herausgezogen werden. Um die Stütze **17** in ihre Ausgangslage zurückzubewegen, wird der Stift **23** gegen die Wirkung der ihn beaufschlagenden Feder in seine Ausgangsposition zurückgedrückt und die Stütze **17** anschließend nach oben verschoben, um danach erneut durch den Riegel **21** des Schlosses **22** in ihrer Ruheposition arretiert zu werden.

Patentansprüche

1. Wagen in Form eines fahrbaren, insbesondere mit Fächern, Schubladen und/oder sonstigen Einsätzen ausgestatteten Möbels, **dadurch gekennzeichnet**, daß er aus mindestens zwei Ein zelmöbeln (**1**, **2**) besteht, die zwecks Bildung einer Schubeinheit durch Kupplungselemente (**3**, **4**) lösbar miteinander verbunden sind und von denen ein jedes mit einem seine selbständige Verfahrbarkeit im voneinander getrennten Zustand sicherstellenden Satz von Rädern (**8–11** bzw. **12–15**) ausgestattet ist.
2. Wagen nach Anspruch 1, dadurch gekennzeichnet, daß die einander zugewandten Seitenwände (**19**, **20**) der Einzelmöbel (**1**, **2**) im gekoppelten Zustand aneinander anliegen.
3. Wagen nach Anspruch 1 oder 2, dadurch gekennzeichnet, daß die Kupplungselemente von mindestens einem Paar U-förmiger Bügel (**3**, **4**) gebildet werden, von denen jeweils einer über den anderen klappbar ist.
4. Wagen nach Anspruch 2 oder 3, dadurch gekennzeichnet, daß die als Bügel (**3**, **4**) ausgebildeten Kupplungselemente in der Nähe der im gekoppelten Zustand aneinanderliegenden Seiten wände (**19**, **20**) der Einzelmöbel (**1**, **2**) an deren Oberseite angeordnet sind.
5. Wagen nach Anspruch 4, dadurch gekennzeichnet, daß die Radstände (a, b) der Räder (**10**, **11** bzw. **12**, **13**) der Einzelmöbel (**1**, **2**), die die Einzelmöbel (**1**, **2**) im gekoppelten Zustand im Bereich ihrer aneinander anliegenden Seitenwände (**19**, **20**) abstützen, ungleich groß sind.
6. Wagen nach Anspruch 5, dadurch gekennzeichnet, daß an der Vorderseite des das Radpaar mit dem kleineren Radstand (b) aufweisenden Einzelmöbels (**2**) eine im getrennten Zustand des Einzelmöbels (**2**) ausfahrbare Stütze (**17**) zur zusätzlichen Abstützung des Ein-

zelmöbels (**2**) auf seiner vom Radpaar mit kleinerem Radstand (b) getragenen Seite angeordnet ist.

7. Wagen nach Anspruch 6, dadurch gekennzeichnet, daß die Stütze (**17**) im eingefahrenen Zustand durch den Riegel (**21**) des Schlosses (**22**) einer Schublade (**16**) arretierbar ist.

8. Wagen nach einem oder mehreren der Ansprüche 1 bis 7, dadurch gekennzeichnet, daß beide Einzelmöbel (**1**, **2**) unterschiedliche Innenausstattungen aufweisen.

9. Wagen nach Anspruch 8, dadurch gekennzeichnet, daß ein Einzelmöbel (**1**) als Pflegearbeits- und/oder Wäschewagen für Krankenhäuser, Rehabilitationseinrichtungen oder Alten- und Pflegeheime und ein Einzelmöbel (**2**) als Dokumentationswagen mit oder ohne EDV-Ausstattung ausgebildet ist.

Hierzu 1 Seite(n) Zeichnungen

Int. Cl.[6]: **A 47 B 81/00**
Veröffentlichungstag: 10. Juni 1998

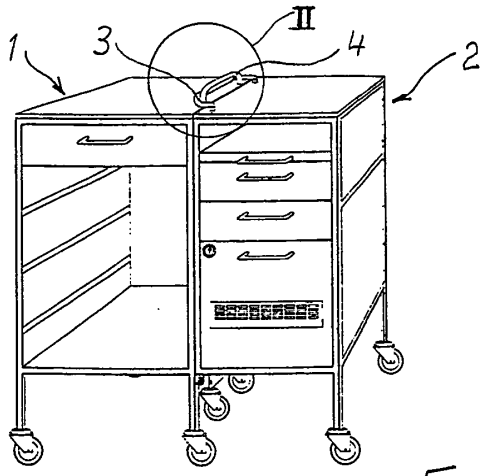


Fig. 1

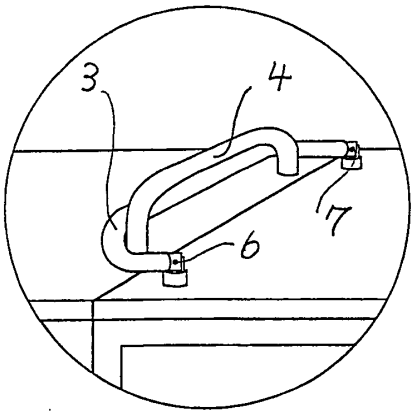


Fig. 2

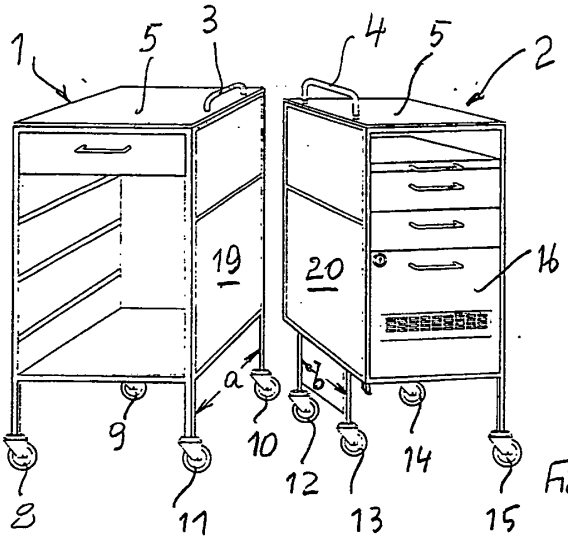


Fig. 3

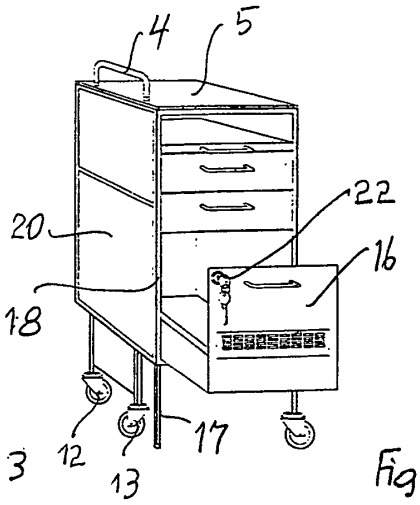


Fig 4

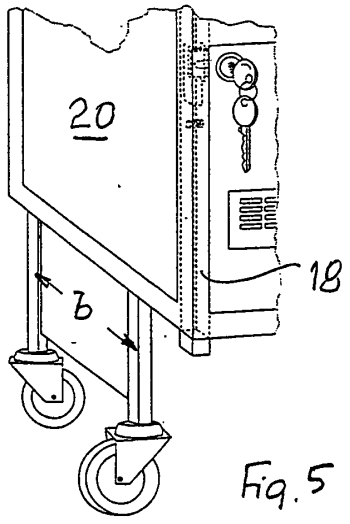


Fig. 5

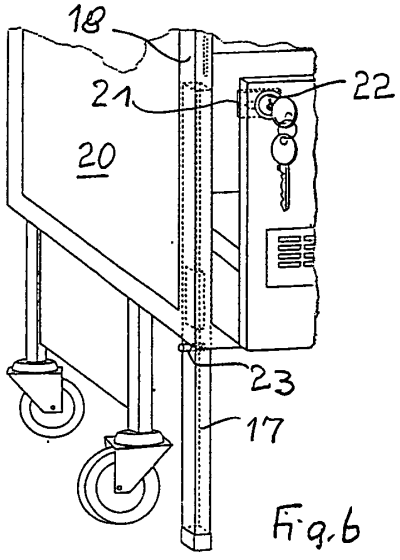


Fig. 6

802 124/184

PATENT APPLICATION FEE DETERMINATION RECORD
Effective October 1, 2003

Application or Docket Number
10/783,030

CLAIMS AS FILED - PART I

	(Column 1)	(Column 2)
TOTAL CLAIMS	17	
FOR	NUMBER FILED	NUMBER EXTRA
TOTAL CHARGEABLE CLAIMS	17 minus 20=	* 0
INDEPENDENT CLAIMS	4 minus 3 =	* 1
MULTIPLE DEPENDENT CLAIM PRESENT	☐	

* If the difference in column 1 is less than zero, enter "0" in column 2

SMALL ENTITY TYPE ☐		OR	OTHER THAN SMALL ENTITY	
RATE	FEE		RATE	FEE
BASIC FEE	385.00	OR	BASIC FEE	770.00
XS 9=		OR	XS18=	
X43=		OR	X86=	86
+145=		OR	+290=	
TOTAL		OR	TOTAL	856

CLAIMS AS AMENDED - PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT. FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT FEE		OR	TOTAL ADDIT. FEE	

AMENDMENT C

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA
Total	*	Minus	**	=
Independent	*	Minus	***	=
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM ☐				

RATE	ADDITIONAL FEE		RATE	ADDITIONAL FEE
XS 9=		OR	XS18=	
X43=		OR	X86=	
+145=		OR	+290=	
TOTAL ADDIT FEE		OR	TOTAL ADDIT 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

OIPE JC98 JAN 11 2005 PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond Vincent ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Unassigned

Art Unit: 3618

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56

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

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 CFR §1.56.

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits.

RELEVANCE OF EACH DOCUMENT

The documents listed on the attached PTO/SB/08 were cited by the Examiner as being relevant during the prosecution of U.S. Design application, 29/199,985.

Applicant respectfully requests that the listed documents be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date January 10, 2005

By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

OIPE JC98 JAN 11 2005 PATENT & TRADEMARK OFFICE

MODIFIED PTO/SB/08 (08-00)
Approved for use through 10/31/2002. OMB 0651-0031
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.

Substitute for form 1449/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Unassigned
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	C1	D146,375	S	OBRIG	02-18-1947	
	C2	D367,381	S	LICARI	02-27-1996	
	C3	D390,733	S	BRUNNER et al.	02-17-1998	
	C4	D402,529	S	HUSTED	12-15-1998	
	C5	D410,230	S	WITTE	05-25-1999	
	C6	D458,780	S	SIEPMANN et al.	06-18-2002	
	C7	D462,674	S	SIEPMANN et al.	09-10-2002	
	C8	D481,847	S	VAN LANDINGHAM, JR.	11-04-2003	
	C9	D482,173	S	VAN LANDINGHAM, JR.	11-11-2003	

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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, 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.

IFW

AUG 16 2004 JC98 PATENT & 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 NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056

CONFIRMATION NO. 3782

FORMALITIES LETTER

OC000000012667952

22428
FOLEY AND LARDNER
SUITE 500
3000 K STREET NW
WASHINGTON, DC 20007

Date Mailed: 05/14/2004

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. 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 statutory basic filing fee is missing.
  Applicant must submit $ **770** *to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*
- The oath or declaration is missing.
  A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

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 are required. The drawings submitted are not acceptable because:
  - The drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch).See Figures(s) 2B.
  - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 1,3C,4A,4B,7,8,9A,11-21B,23,24.

08/18/2004 MAHMED1 00000056 10783030
01 FC:1001 770.00 DP
02 FC:1051 130.00 DP
03 FC:1201 86.00 DP

The applicant needs to satisfy supplemental fees problems indicated below.

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

- Additional claim fees of **$86** as a non-small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **$986** for a Large Entity

- **$770** Statutory basic filing fee.
- **$130** Late oath or declaration Surcharge.

- Total additional claim fee(s) for this application is **$86**
  - **$86** for **1** independent claims over 3.

Replies should be mailed to: Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

A copy of this notice MUST be returned with the reply.

Freeman

Customer Service Center
Initial Patent Examination Division (703) 308-1202
PART 2 - COPY TO BE RETURNED WITH RESPONSE

OIPE
AUG 16 2004
PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Unassigned

Art Unit: 3618

TRANSMITTAL OF MISSING PARTS OF PATENT APPLICATION

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

Sir:

In response to the Notice to File Missing Parts of Application mailed 05/14/2004, in the above-identified application, transmitted herewith are the missing parts to complete the filing of the subject patent application.

Enclosed are:

[X] Return Copy of Notice to File Missing Parts (2 pages)

[X] Executed Declaration and Power of Attorney (5 pages)

[X] Transmittal of Formal Drawings (1 page)

[X] Formal Drawings (20 Sheets, Figs. 1 – 24)

[X] Information Disclosure Statement (3 pages)

[X] Copy of Invitation to Pay Additional Fees with Partial International Search Report (6 pages)

[X] PTO/SB/08 listing 21 documents (2 pages)

[X] Copies of 14 listed documents (Documents A8 – A21)

08/18/2004 MAHMED1 00000056 10783030
04 FC:1251 110.00 OP

002.1247303.1

[X] Applicant hereby petitions for an extension of time under 37 C.F.R. §1.136(a) for the total number of months checked below:

[X] Extension for response filed within the first month
[ ] Extension for response filed within the second month
[ ] Extension for response filed within the third month
[ ] Extension for response filed within the fourth month
[ ] Extension for response filed within the fifth month

The filing fee is calculated below:

	Claims as Filed		Included in Basic Fee		Extra Claims		Rate		Fee Totals
Basic Fee							$770.00		$770.00
Total Claims:	17	-	20	=	0	x	$18.00	=	$0.00
Independents:	4	-	3	=	1	x	$86.00	=	$86.00
If any Multiple Dependent Claim(s) present:						+	$290.00	=	$0.00
Surcharge under 37 CFR 1.16(e) for late filing of Executed Declaration and late payment of filing fee						+	$130.00	=	$130.00
[X] Extension fee for response filed within the first month:						+	$110.00	=	$ 110.00
							SUBTOTAL:	=	$1,096.00
[ ] Small Entity Fees Apply (subtract ½ of above):								=	$0.00
							TOTAL FILING FEE:	=	$1,096.00
							TOTAL FEE	=	$1,096.00
Difference to pay:						-	$0.00	-	$1,096.00

[**X**] Check in the amount of $1,096.00 in payment of surcharge fee (37 C.F.R. § 1.16(e))

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date August 16, 2004

By

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

OIPE JC20
AUG 16 2004
PATENT & TRADEMARK OFFICE

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Unassigned

Art Unit: 3618

TRANSMITTAL OF FORMAL DRAWINGS

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

ATTENTION: DRAWING REVIEW BRANCH

Sir:

Transmitted herewith are the formal drawings (20 sheets, Figures 1-24) for the above-identified application. The Official Draftsperson is respectfully requested to approve these drawings for entry into the application.

Respectfully submitted,

Date August 16, 2004

By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

002.1247311.1

OIPE JC09 AUG 16 2004 PATENT & TRADEMARK OFFICE U.S.

Atty. Dkt. No. 086554-1056

DECLARATION AND POWER OF ATTORNEY

As a below named inventor, I HEREBY DECLARE:

THAT my residence, post office address, and citizenship are as stated below next to my name;

THAT I believe I am the original, first, and sole inventor (if only one inventor is named below) or an original, first, and joint inventor (if plural inventors are named below or in an attached Declaration) of the subject matter which is claimed and for which a patent is sought on the invention entitled

MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

(Attorney Docket No. 086554-1056)

the specification of which (check one)

___ is attached hereto.

_X_ was filed on _02/23/2004_ as United States Application Number or PCT International Application Number _10/783,030_ and was amended on ____ (if applicable).

THAT I do not know and do not believe that the same invention was ever known or used by others in the United States of America, or was patented or described in any printed publication in any country, before I (we) invented it;

THAT I do not know and do not believe that the same invention was patented or described in any printed publication in any country, or in public use or on sale in the United States of America, for more than one year prior to the filing date of this United States application;

THAT I do not know and do not believe that the same invention was first patented or made the subject of an inventor's certificate that issued in any country foreign to the United States of America before the filing date of this United States application if the foreign application was filed by me (us), or by my (our) legal representatives or assigns, more than twelve months (six months for design patents) prior to the filing date of this United States application;

THAT I have reviewed and understand the contents of the above-identified specification, including the claim(s), as amended by any amendment specifically referred to above;

THAT I believe that the above-identified specification contains a written description of the invention, and of the manner and process of making and using it, in such full, clear,

concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention, and sets forth the best mode contemplated by me of carrying out the invention; and

THAT I acknowledge the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, §1.56.

I HEREBY CLAIM foreign priority benefits under Title 35, United States Code §119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, 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 any foreign application for patent or inventor's certificate or of any PCT international application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application Number	Country	Foreign Filing Date	Priority Claimed?	Certified Copy Attached?

I HEREBY CLAIM the benefit under Title 35, United States Code § 119(e) of any United States provisional application(s) listed below.

U.S. Provisional Application Number	Filing Date
60/448,920	02/24/2003
60/484,658	07/07/2003
60/518,649	11/12/2003
60/532,900	12/30/2003

I HEREBY CLAIM the benefit under Title 35, United States Code, §120 of any United States application(s), or § 365(c) of any PCT international application designating the United States of America, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, § 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application.

U.S. Parent Application Number	PCT Parent Application Number	Parent Filing Date	Parent Patent Number
29/196,714		01/02/2004	
29/196,713		01/02/2004	
29/196,712		01/02/2004	

I HEREBY APPOINT the registered attorneys and agents at Customer Number 22428

Customer Number: 22428

to have full power to prosecute this application and any continuations, divisions, reissues, and reexaminations thereof, to receive the patent, and to transact all business in the United States Patent and Trademark Office connected therewith.

I request that all correspondence be directed to:

Andrew E. Rawlins
FOLEY & LARDNER LLP
Customer Number: 22428

Telephone: (202) 672-5349
Facsimile: (202) 672-5399

I UNDERSTAND AND AGREE THAT the foregoing attorneys and agents appointed by me to prosecute this application do not personally represent me or my legal interests, but instead represent the interests of the legal owner(s) of the invention described in this application.

I FURTHER 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 Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Name of first inventor	Radmond Vincent ARCETA
Residence	Manassas, Virginia
Citizenship	USA
Post Office Address	10503 Lariat Lane, Apt. 12 Manassas, Virginia 20109
Inventor's signature	
Date	7/20/04

Name of second inventor	Craig Kevin ROGERS
Residence	Stephens City, Virginia
Citizenship	USA
Post Office Address	102 Lariat Court Stephens City, Virginia 22655
Inventor's signature	Craig Kevin Rogers
Date	7/20/04

Name of third inventor	Kevin Thomas FITZPATRICK
Residence	Winchester, Virginia
Citizenship	USA
Post Office Address	325 George Street Winchester, Virginia 22601
Inventor's signature	
Date	07/20/04

Name of fourth inventor	Bryan Scott RITCHIE
Residence	Clear Brook, Virginia
Citizenship	USA
Post Office Address	779 Ruebuck Road Clear Brook, Virginia 22624
Inventor's signature	
Date	7/20/04

Name of fifth inventor	Marin John PHILPOTT
Residence	Winchester, Virginia
Citizenship	USA
Post Office Address	611 Manito Trail Winchester, Virginia 22602
Inventor's signature	Marin John Philpott
Date	7/20/04
Name of sixth inventor	Christina Louise FORTNER
Residence	Stephens City, Virginia
Citizenship	USA
Post Office Address	151 Lexington Court Stephens City, Virginia 22655
Inventor's signature	
Date	July 29 2004

OIPE JC
AUG 16 2004
PATENT & TRADEMARK OFFICE

Fig. 1

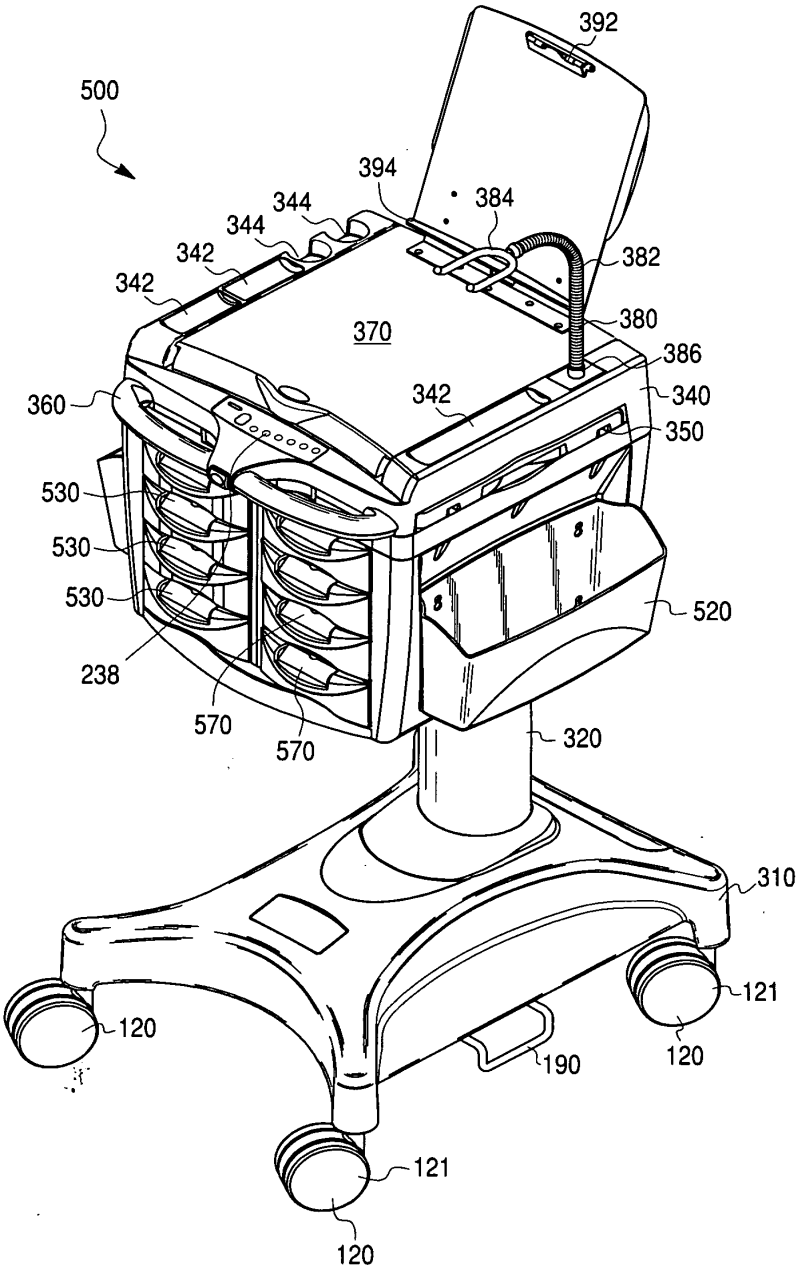


Fig. 2A

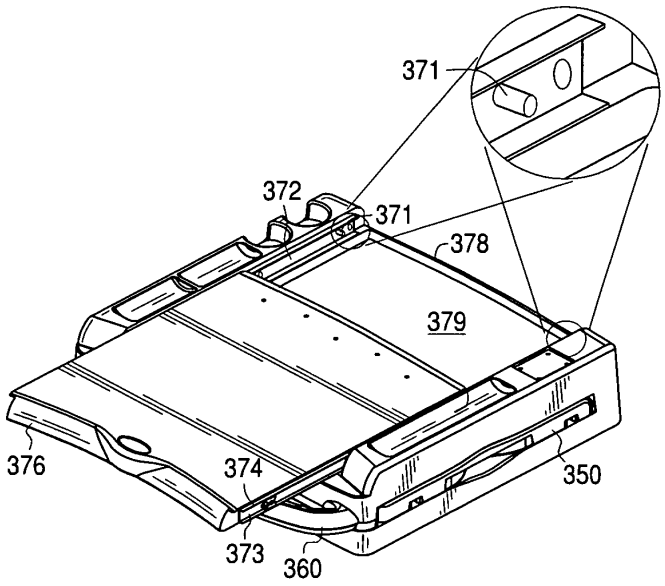

371
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Fig. 2B

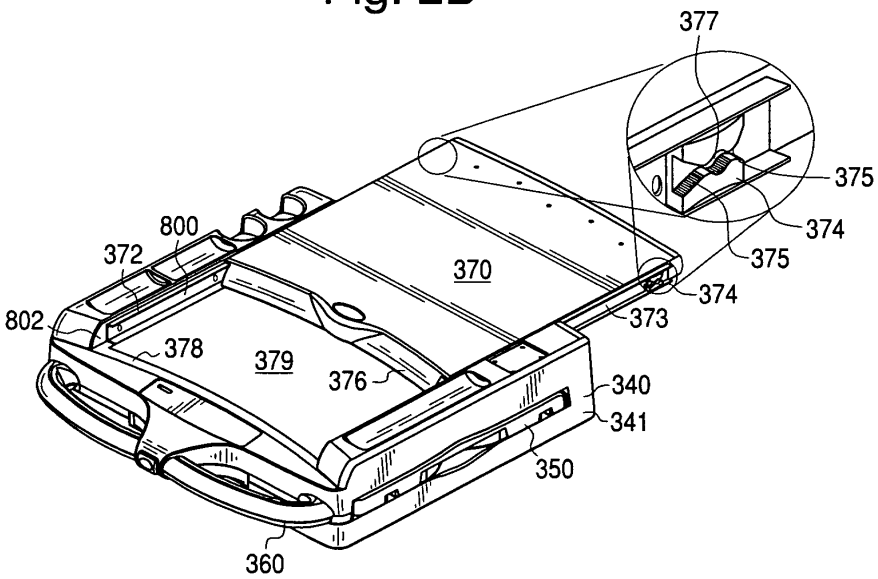

377
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Fig. 3A

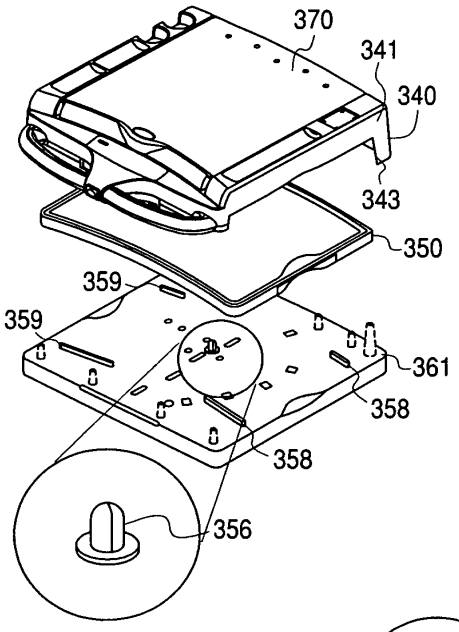
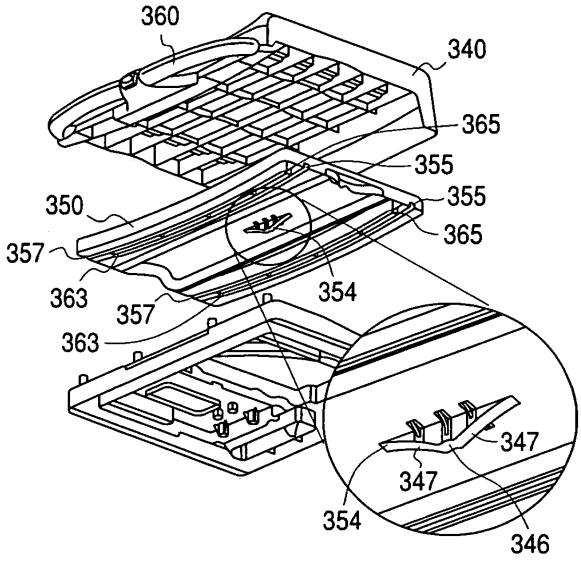


Fig. 3B



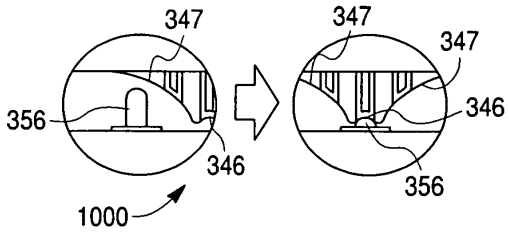


Fig. 3C

Fig. 4A

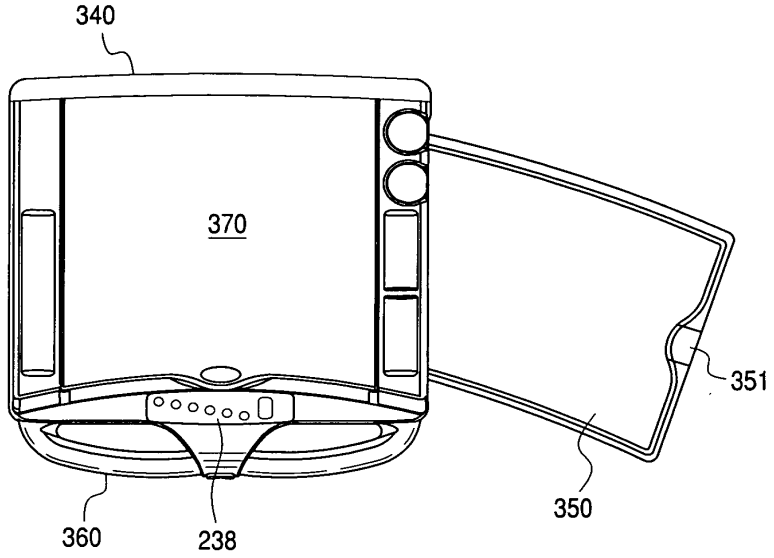


Fig. 4B

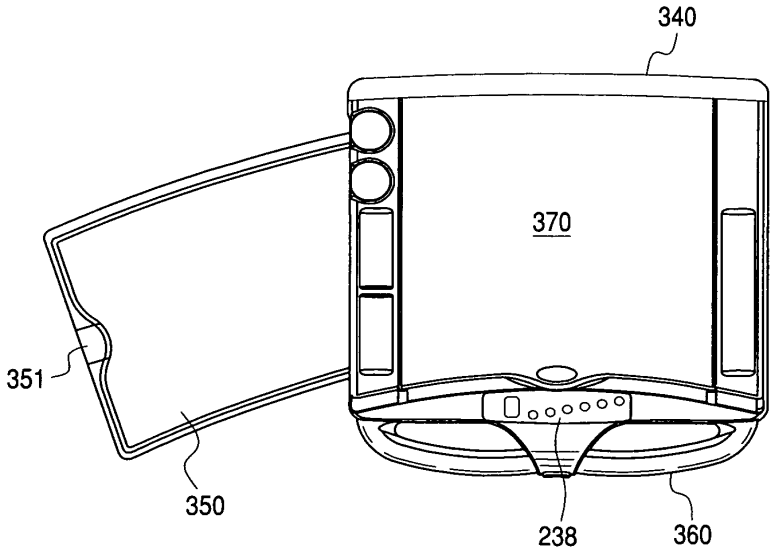


Fig. 5A

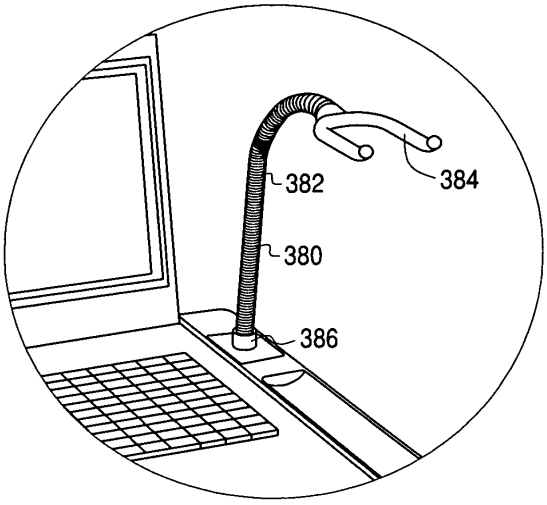


Fig. 5B

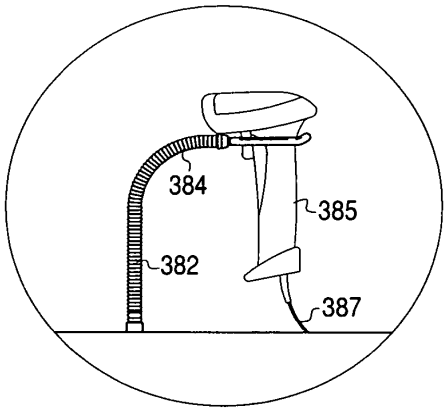


Fig. 5C

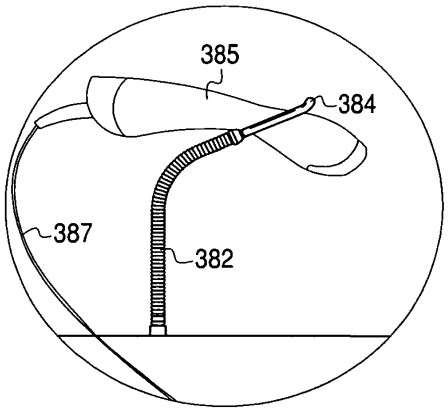


Fig. 6A

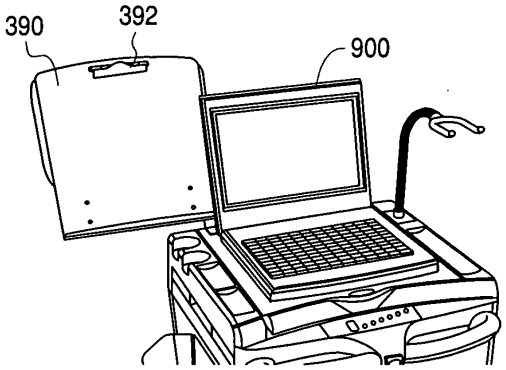


Fig. 6B

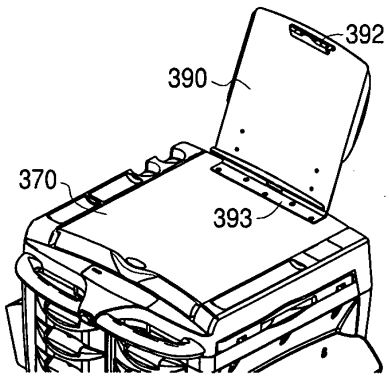


Fig. 6C

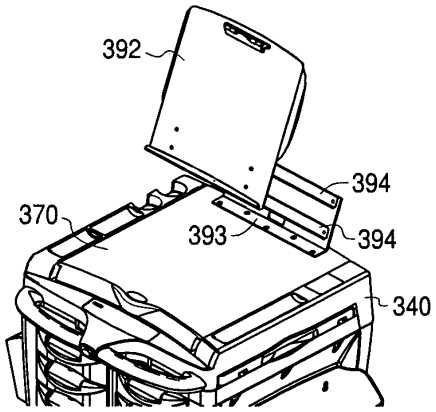


Fig. 7

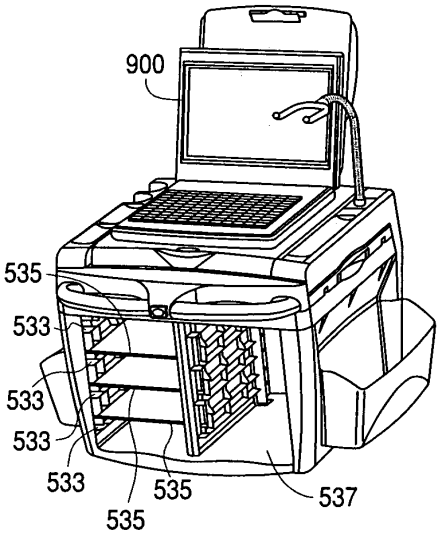

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Fig. 8

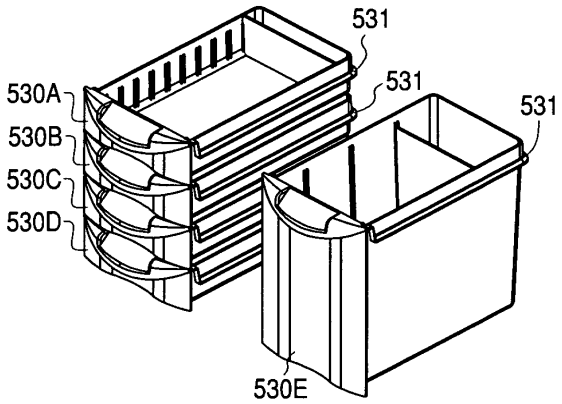

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Fig. 9A

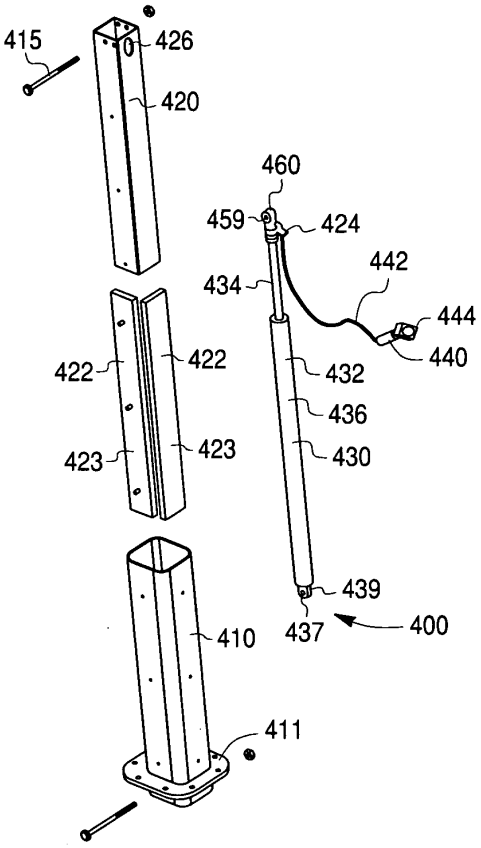

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Fig. 9B

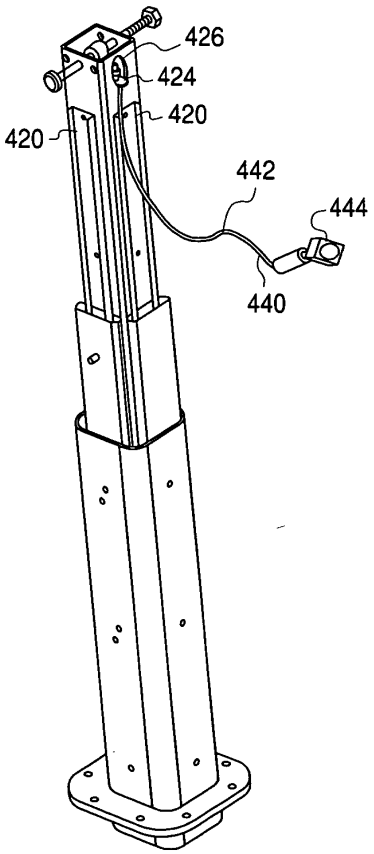

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Fig. 10A

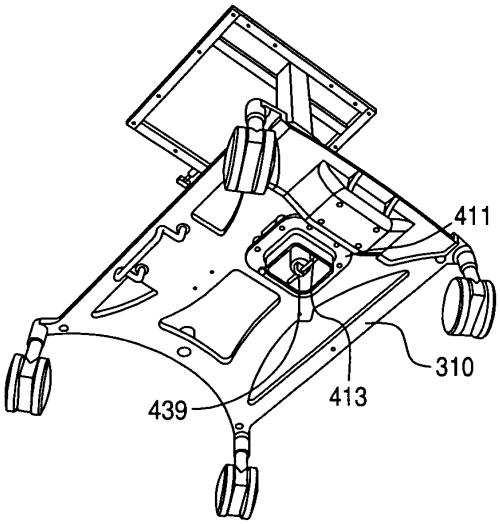


Fig. 10B

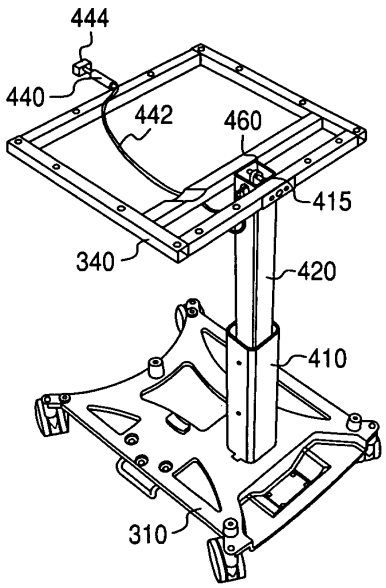


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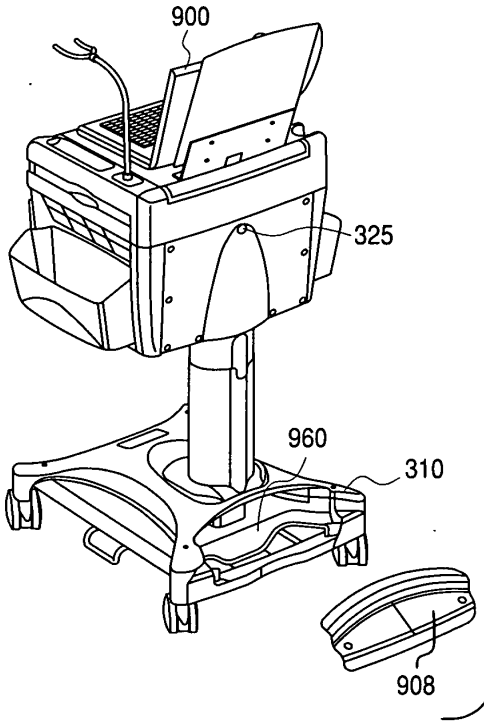


Fig. 11

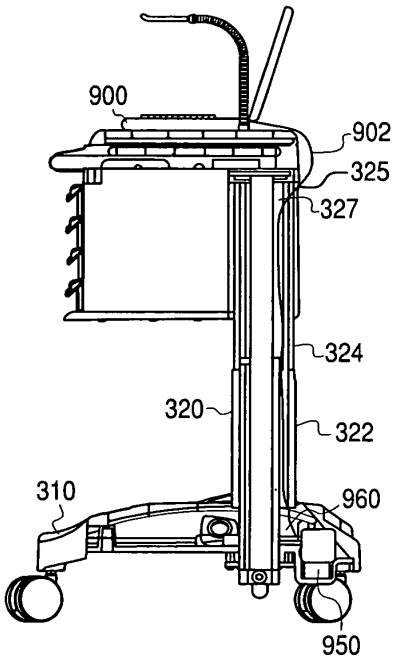


Fig. 13

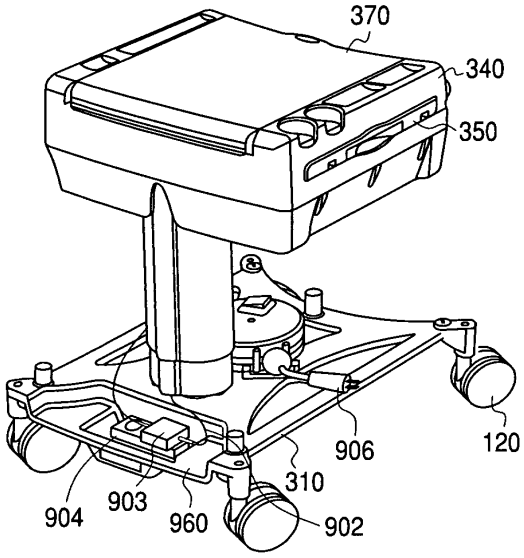


Fig. 14

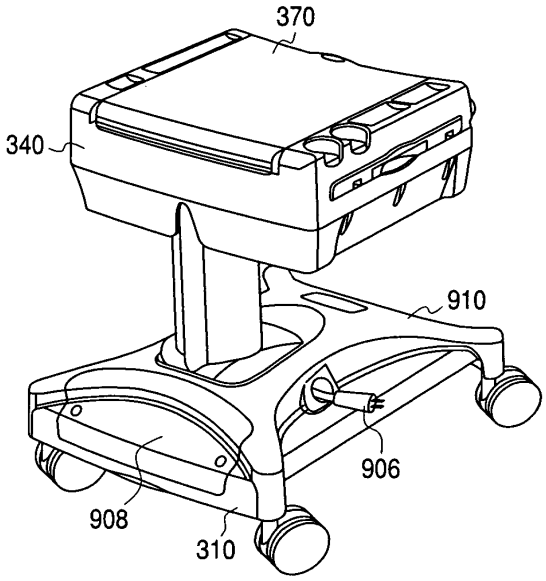


Fig. 15

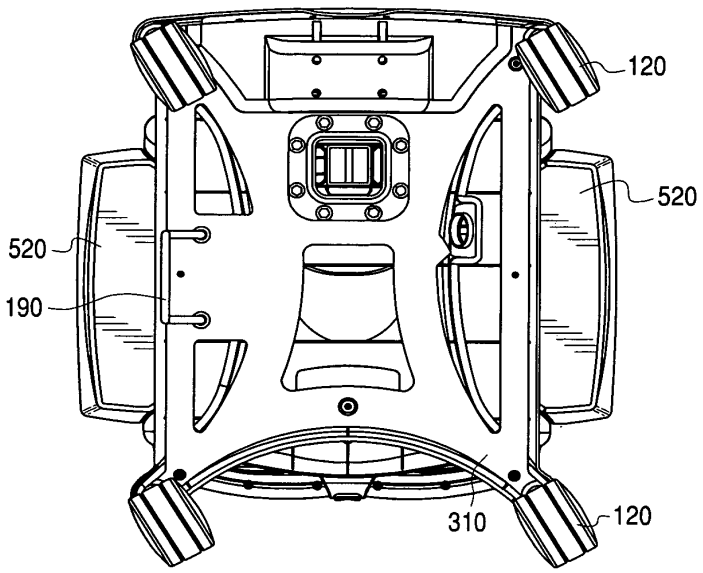


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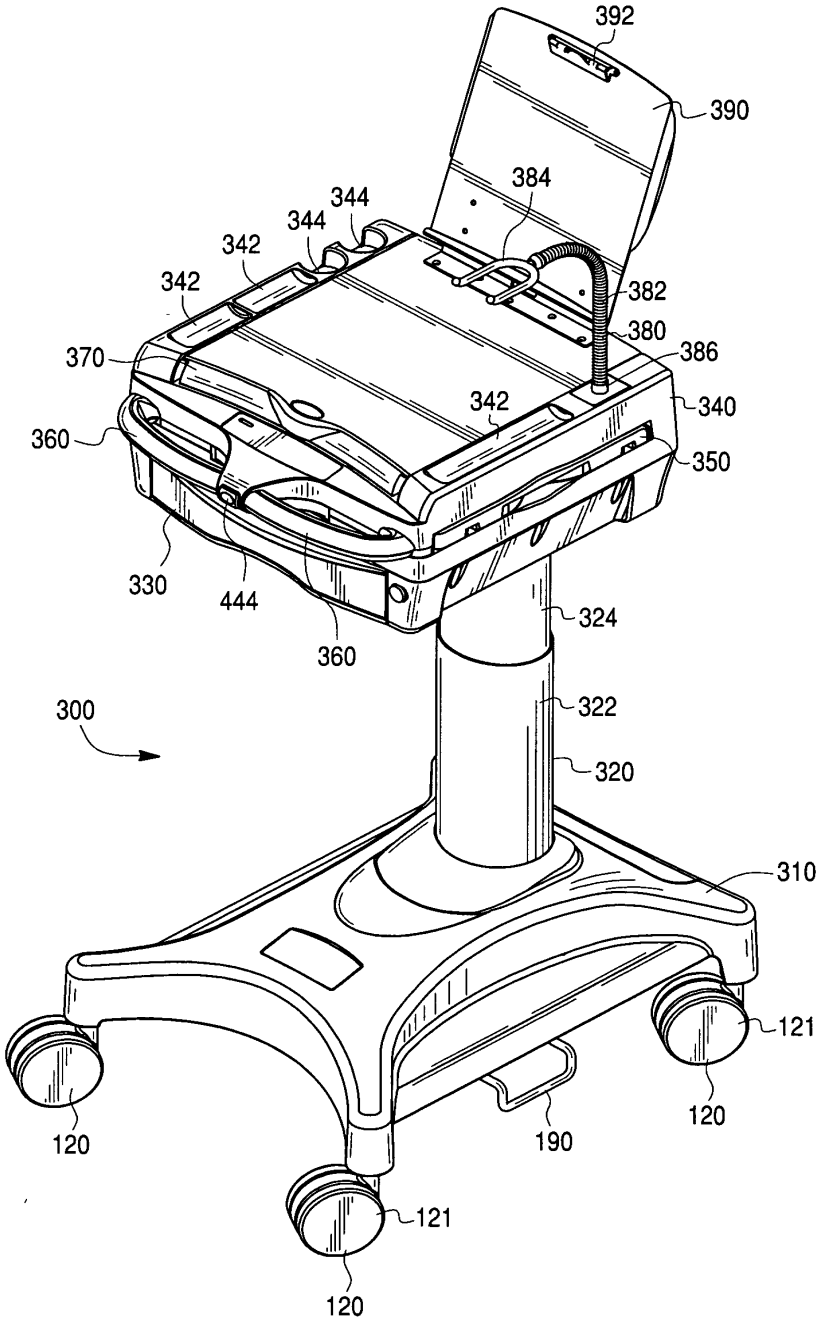

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Fig. 17

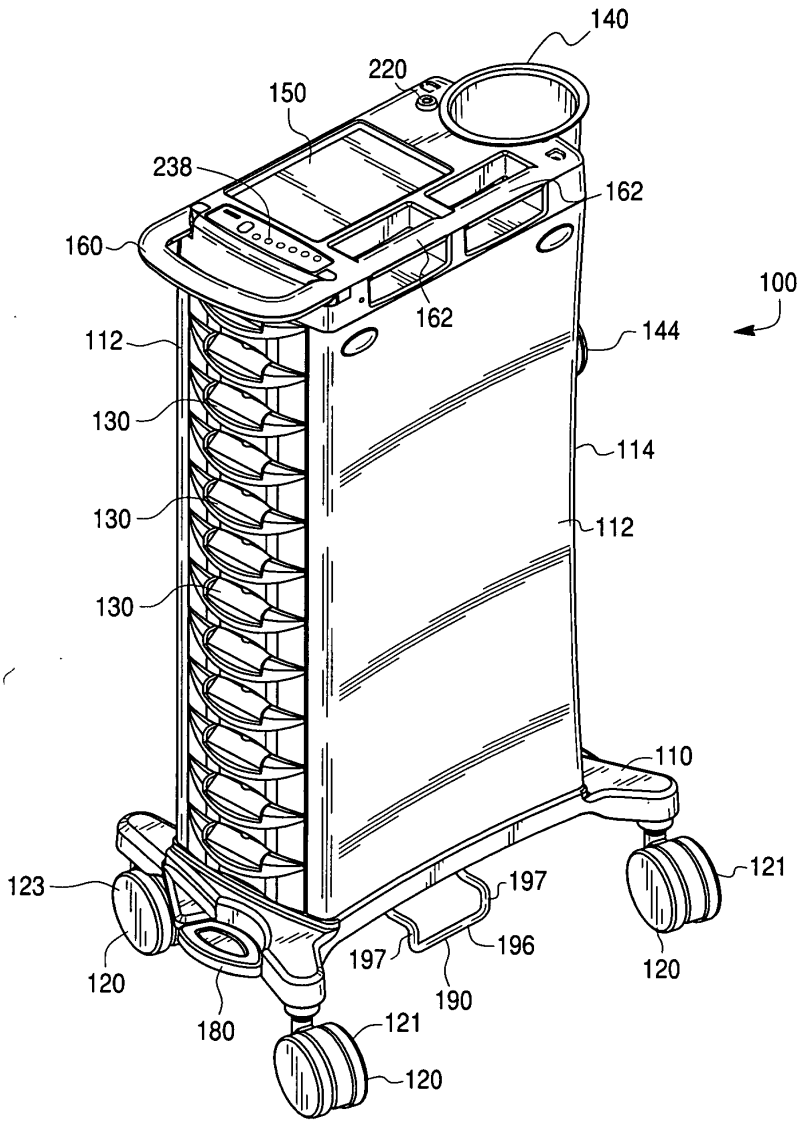
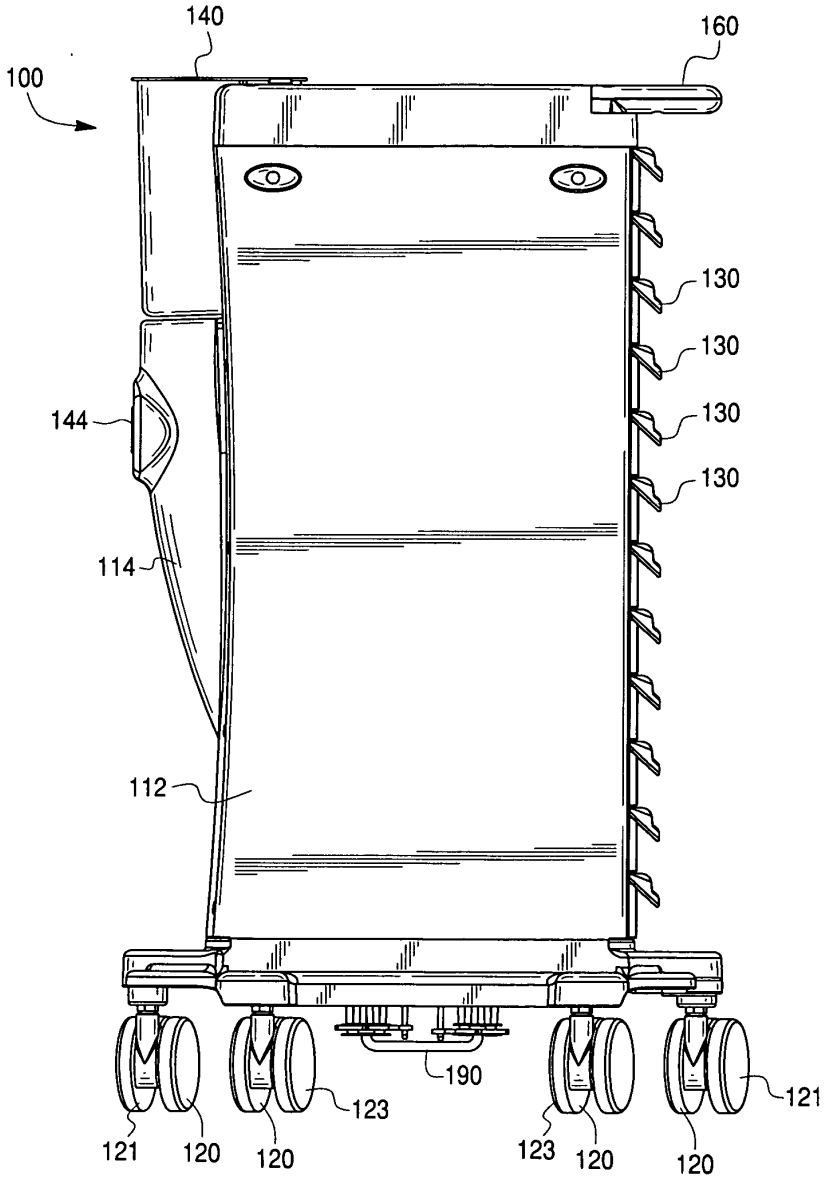

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Fig. 18


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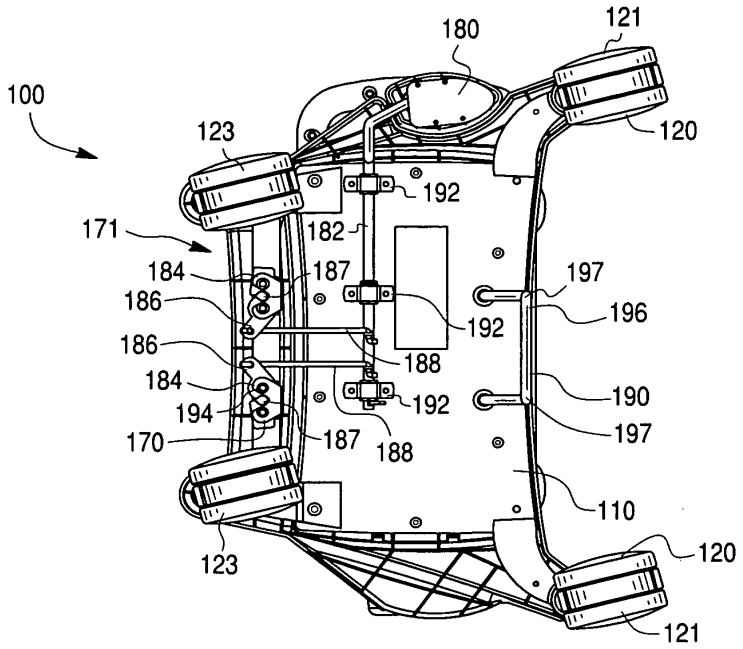

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Fig. 19

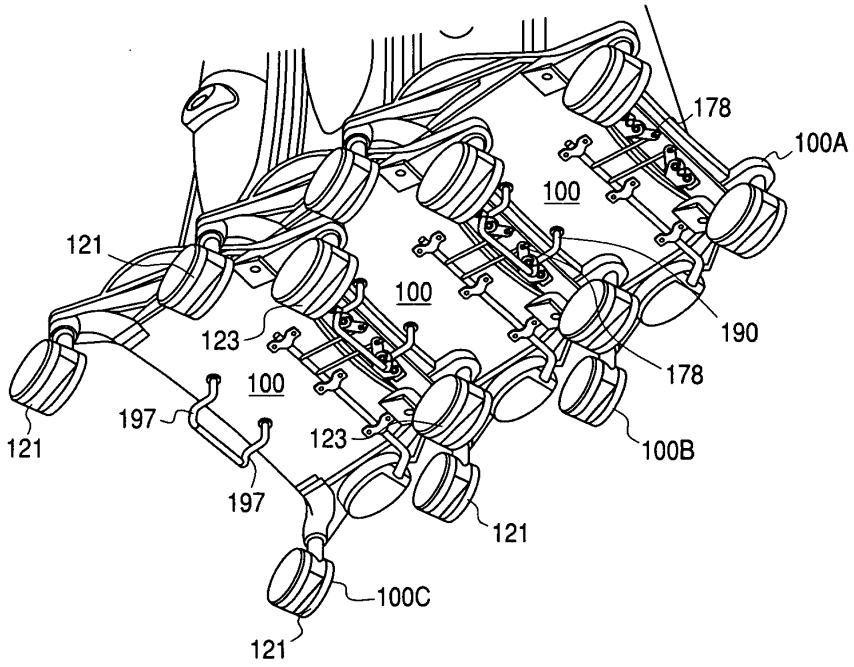

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Fig. 20

Fig. 21B

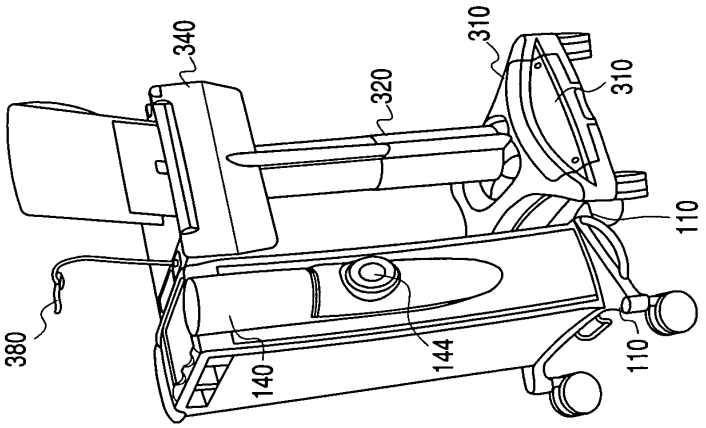


Fig. 21A

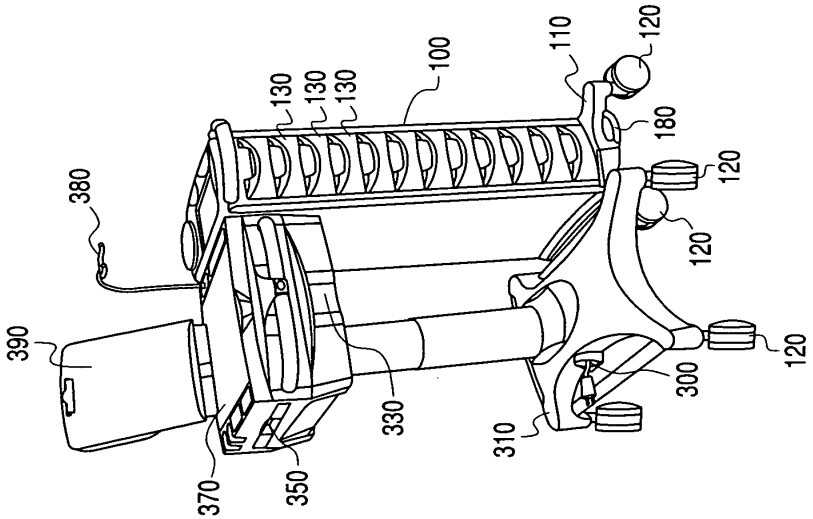


Fig. 22

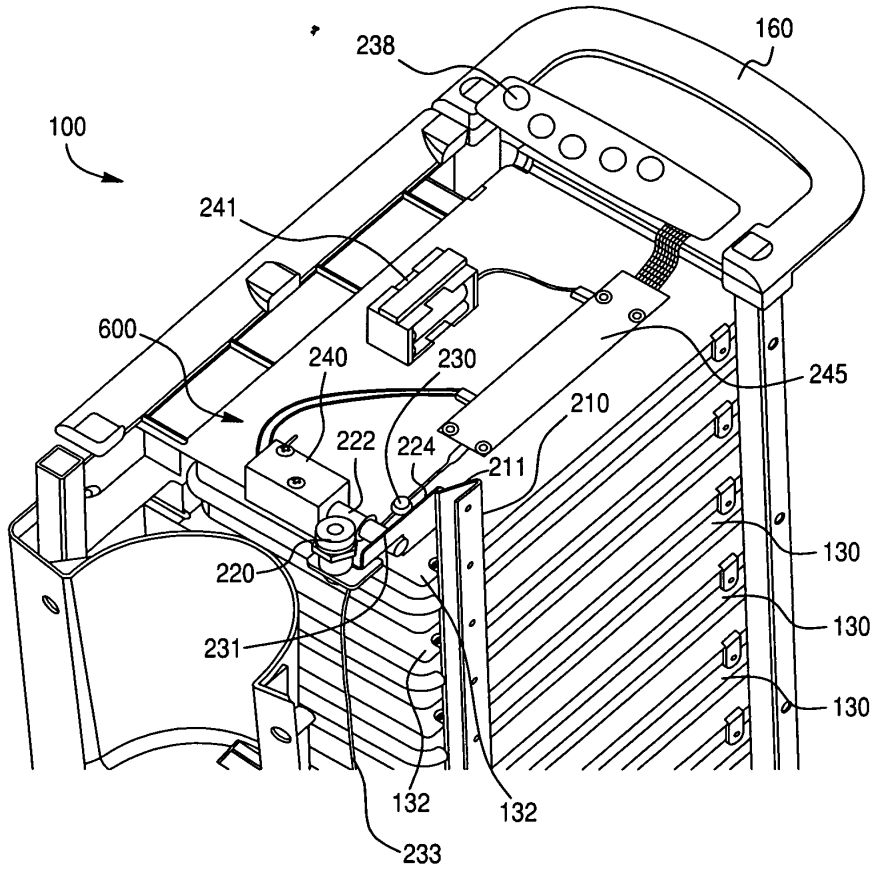

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Fig. 23

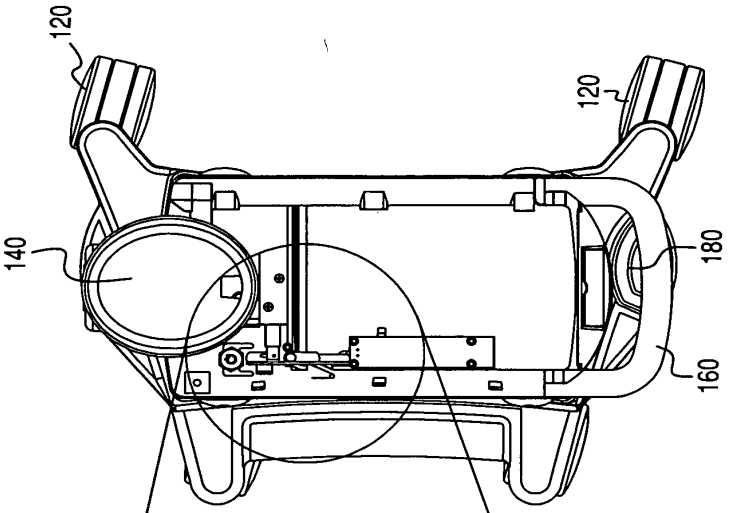


Fig. 23A

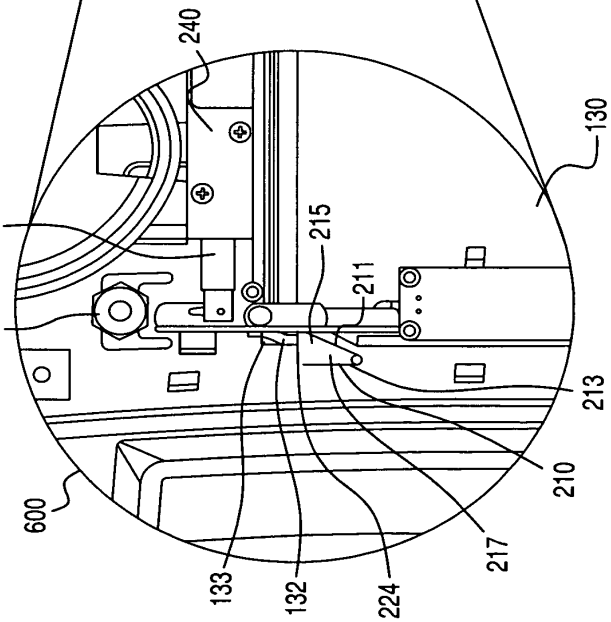
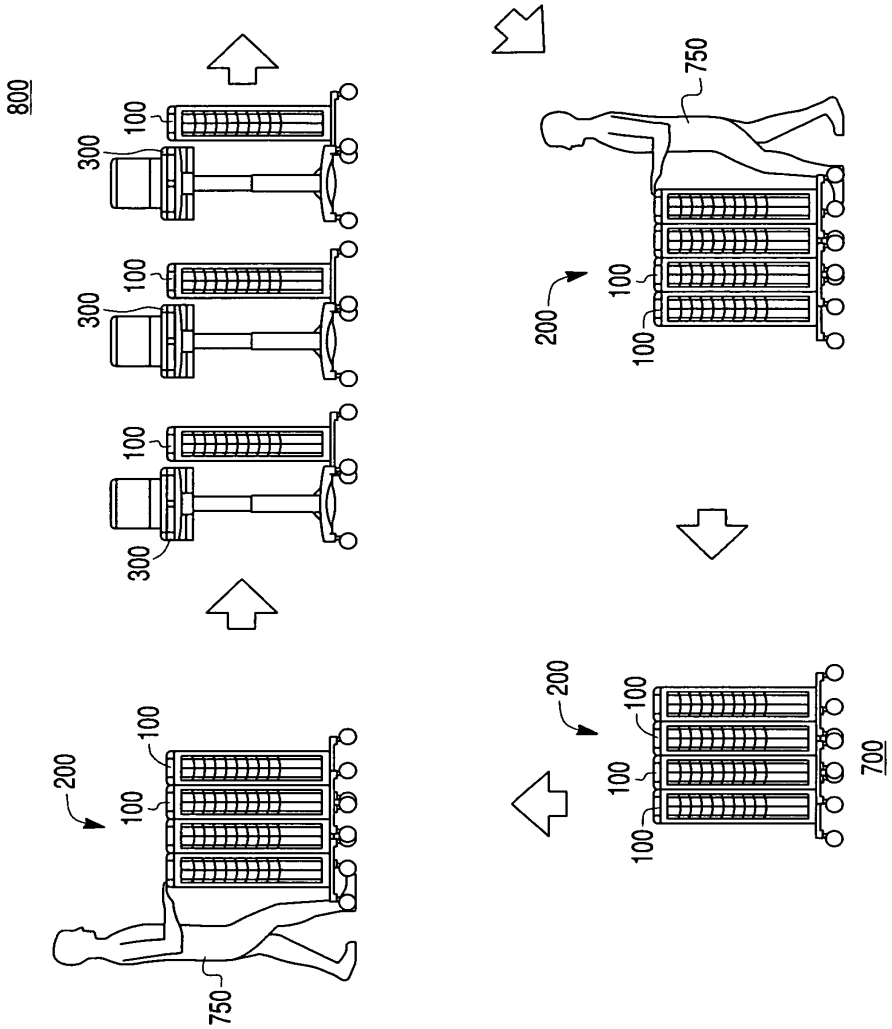


Fig. 24


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Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Radmond Vincent ARCETA et al.

Title: CART

Appl. No.: 10/783,030

Filing Date: 02/23/2004

Examiner: Unassigned

Art Unit: 3618

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.56

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

Sir:

Submitted herewith on Form PTO/SB/08 is a listing of documents known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 CFR §1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR §1.97 and §1.98, except as stated below.

The USPTO has waived the requirement under 37 CFR 1.98(a)(2)(i) to submit copies of U.S. patents and U.S. patent application publications when citing and submitting an Information Disclosure Statements in a patent application filed after June 30, 2003 and in an international application that has entered the national stage under 37 USC §371 after June 30, 2003. Accordingly, copies of these types of documents are not being supplied in connection with this application. Reference is being made to Pre-OG Notice from Office of Patent Legal Administration dated July 25, 2003, *Information Disclosure Statements May Be Filed Without Copies of U.S. Patents and Published Applications in Patent Applications filed after June 30, 2003.*

The submission of any document herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a *prima facie* art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The listed documents are being submitted in compliance with 37 CFR §1.97(b), before the mailing date of the first Office Action on the merits, and within three (3) months of the mailing date of the foreign search report.

RELEVANCE OF EACH DOCUMENT

Documents A1 – A7 listed on the attached PTO/SB/08 were cited as being relevant during the prosecution of the corresponding International application, PCT/US2001/005282. Copies of these documents are not being provided since copies should have been provided directly by WIPO under an exchange program between the PTO, the EPO and the JPO. A copy of the partial International Search Report setting forth the portion of each reference considered relevant by the examiner is attached.

Applicant respectfully requests that the listed documents be considered by the Examiner and be made of record in the present application and that an initialed copy of Form PTO/SB/08 be returned in accordance with MPEP §609.

Atty. Dkt. No. 086554-1056

STATEMENT

The undersigned hereby states in accordance with 37 CFR §1.704(d) that documents A1 – A7 listed on the PTO/SB/08 were cited in a communication from a foreign patent office in a counterpart application and that this communication was not received by any individual designated in 37 CFR §1.56(c) more than thirty days prior to the filing of the information disclosure statement..

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 CFR §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741.

Respectfully submitted,

Date August 16, 2004 By _____

FOLEY & LARDNER LLP
Customer Number: 22428
Telephone: (202) 672-5349
Facsimile: (202) 672-5399

Andrew E. Rawlins
Attorney for Applicant
Registration No. 34,702

002.1238233.1

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Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

PTO PE JC98 AUG 16 2004 PATENT & TRADEMARK OFFICE

Complete if Known	
Application Number	10/783,030
Filing Date	02/23/2004
First Named Inventor	Radmond Vincent ARCETA
Group Art Unit	3618
Examiner Name	Unassigned
Attorney Docket Number	086554-1056

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	Kind Code[2] (*if known*)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	3,910,659	A	PETERSON	10-07-1975	
	A2	5,841,361	A	HOFFMAN	11-24-1998	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (*if known*)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	A3	WO	01/97745	A	SCIENCE PARK RAF SPA	12-27-2001		
	A4	WO	03/013307	A	HILL ROM SERVICES INC.	02-20-2003		
	A5	DE	195 40 058	C	ARNOLD	06-13-1996		
	A6	DE	297 01 427	U	BSW ANLAGENBAU GMBH	03-20-1997		
	A7	DE	196 42 523	A	WAGNER	05-22-1997		

NON PATENT LITERATURE DOCUMENTS

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.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

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Substitute for form 1449B/PTO				*Complete if Known*	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				**Application Number**	10/783,030
				Filing Date	02/23/2004
				First Named Inventor	Radmond Vincent ARCETA
				Group Art Unit	3618
(use as many sheets as necessary)				Examiner Name	Unassigned
Sheet	2	of	2	Attorney Docket Number	086554-1056

Examiner Initials*	Cite No.[1]	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.	T[6]
	A8	QuickMedical, Midmark, Ritter Special Procedures Cart, http://quickmedical.com/Midmark/casework/ritter/345.html	
	A9	Lionville Systems, Inc., Carts::Healthcare, http://www.lionville.com/carts_healthcare.html	
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	A12	Lionville Systems, Inc., Carts::Pharmacy Transfer, http://www.lionville.com/carts_pharmatransfer.html	
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	A19	Lionville Systems, Inc., Anesthesia Cart Brochure	
	A20	Lionville Systems, Inc., Medication Carts Brochure	
	A21	Lionville Systems, Inc., Healthcare Carts Brochure	

Examiner Signature		Date Considered	

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APPLICATION NUMBER	FILING OR 371 (c) DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
10/783,030	02/23/2004	Radmond Vincent Arceta	086554-1056

CONFIRMATION NO. 3782

22428
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FORMALITIES LETTER

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Date Mailed: 05/14/2004

NOTICE TO FILE MISSING PARTS OF NONPROVISIONAL APPLICATION

FILED UNDER 37 CFR 1.53(b)

Filing Date Granted

Items Required To Avoid Abandonment:

An application number and filing date have been accorded to this application. The item(s) indicated below, however, are missing. Applicant is given **TWO MONTHS** from the date of this Notice within which to file all required items and pay any fees required below to avoid abandonment. 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 statutory basic filing fee is missing.
  Applicant must submit $ **770** *to complete the basic filing fee for a non-small entity. If appropriate, applicant may make a written assertion of entitlement to small entity status and pay the small entity filing fee (37 CFR 1.27).*
- The oath or declaration is missing.
  A properly signed oath or declaration in compliance with 37 CFR 1.63, identifying the application by the above Application Number and Filing Date, is required.
- To avoid abandonment, a late filing fee or oath or declaration surcharge as set forth in 37 CFR 1.16(e) of $130 for a non-small entity, must be submitted with the missing items identified in this letter.

The application is informal since it does not comply with the regulations for the reason(s) indicated below.

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 are required. The drawings submitted are not acceptable because:
  - The drawing sheets do not have the appropriate margin(s) (see 37 CFR 1.84(g)). Each sheet must include a top margin of at least 2.5 cm. (1 inch), a left side margin of at least 2.5 cm. (1 inch), a right side margin of at least 1.5 cm. (5/8 inch), and a bottom margin of at least 1.0 cm. (3/8 inch).See Figures(s) 2B.
  - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 1,3C,4A,4B,7,8,9A,11-21B,23,24.

The applicant needs to satisfy supplemental fees problems indicated below.

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

- Additional claim fees of **$86** as a non-small entity, including any required multiple dependent claim fee, are required. Applicant must submit the additional claim fees or cancel the additional claims for which fees are due.

SUMMARY OF FEES DUE:

Total additional fee(s) required for this application is **$986** for a Large Entity

- **$770** Statutory basic filing fee.
- **$130** Late oath or declaration Surcharge.

- Total additional claim fee(s) for this application is **$86**
  - **$86** for **1** independent claims over 3.

Replies should be mailed to: Mail Stop Missing Parts
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P.O. Box 1450
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A copy of this notice MUST be returned with the reply.

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PART 3 - OFFICE COPY

13281 U.S.PTO
022304

Atty. Dkt. No. 086554-1056

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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10/783030
022304

Applicant: Radmond ARCETA et al.

Title: MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Appl. No.: Unassigned

Filing Date: February 23, 2004

Examiner: Unassigned

Art Unit: Unassigned

UTILITY PATENT APPLICATION TRANSMITTAL

Mail Stop PATENT APPLICATION
Commissioner for Patents
PO Box 1450
Alexandria, Virginia 22313-1450

Sir:

Transmitted herewith for filing under 37 C.F.R. § 1.53(b) is a nonprovisional utility patent application.

Enclosed are:

[**X**] Application Data Sheet (37 CFR 1.76) (5 pages).

[**X**] Specification, Claim(s), and Abstract (22 pages).

[**X**] Informal drawings (20 sheets, Figures 1-24).

The filing fee is calculated below:

	Claims as Filed		Included in Basic Fee		Extra Claims		Rate		Fee Totals
Basic Fee							$770.00	=	$770.00
Total Claims:	17	-	20	=	0	x	$18.00	=	$0.00
Independents:	4	-	3	=	1	x	$86.00	=	$86.00
If any Multiple Dependent Claim(s) present:						+	$290.00	=	$0.00
Surcharge under 37 CFR 1.16(e) for late filing of Executed Declaration and late payment of filing fee						+	$130.00	=	$130.00
							SUBTOTAL:	=	$986.00
[ ]							Small Entity Fees Apply (subtract ½ of above):	=	$0.00
							TOTAL FILING FEE:	=	$986.00

[**X**] The required filing fees are not enclosed but will be submitted in response to the Notice to File Missing Parts of Application.

Please direct all correspondence to the undersigned attorney or agent at the address indicated below.

Respectfully submitted,

Date February 23, 2004

By _____

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Attorney Docket No. 086554-1056

U.S. PATENT APPLICATION

for

MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT

Inventors: Radmond Vincent ARCETA; Craig Kevin ROGERS; Kevin Thomas FITZPATRICK; Bryan Scott RITCHIE; Marin John PHILPOTT; and Christina Louise FORTNER

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] This application claims priority to U.S. Provisional Application Nos. 60/448,920 (filed February 24, 2003), 60/484,658 (filed July 7, 2003), and 60/518,649 (filed November 12, 2003). This application also claims priority to U.S. Design Patent Application Nos. 29/196,712, 29/196,713, 29/196,714 (all filed January 2, 2004) and to U.S. Design Patent Application Nos. _____, and _____ (filed concurrently herewith).

BACKGROUND OF THE INVENTION

[0002] The Institute of Medicine estimates that medical error is responsible for roughly 98,000 deaths annually, making it the seventh leading cause of death in the U.S. Accordingly, reducing the likelihood of error is an important issue not only for hospitals and doctors, but for society as a whole.

[0003] To alleviate some of these concerns, some hospitals provide nurses with medical carts on which a networked laptop computer facilitates the use of Electronic Medical Administration Records ("EMAR"). EMAR is an electronic record of medications and services administered by a healthcare professional through patient and medication identification via bar coding. When admitted into a hospital, the patient receives a bar coded wrist band for identification purposes. Also, healthcare professionals within the pharmacy bar code all the medications to be administered to the patients. Documentation of medications given at the point-of-care has reduced the number of errors by ensuring that the right patient is receiving the proper medication at the correct time. The EMAR software alerts the nurse if there is a discrepancy anytime during the medication administration process.

[0004] Unfortunately, however, these medical carts have proven unsatisfactory for a number of reasons. For example, the carts are not ergonomically designed. The average age of a nurse is 47 and roughly 83% of nurses report suffering chronic back pain. In addition, the existing EMAR carts suffer from a relative lack of work surface, lack of an area to dispose of

refuse, bad placement of medication drawers, lack of storage space, and relative inability to be usefully raised and lowered to enable the nurse to work when either standing or sitting.

[0005] In many hospital environments, a nurse must walk to a central location (e.g., a pyxis machine) at which medication is handled to obtain medication for a particular patient. Often, to avoid giving the wrong medication to a patient, the nurse only carries one patient's medication at a time. This control, however, does not preclude the potential for the medication to be given to the wrong patient such as, for example, if the nurse is sidetracked and asks another nurse to administer the medication.

[0006] In addition to the above-mentioned concerns, when one takes into account the number of patients which a nurse must handle, the result is that the nurse must spend a considerable amount of time walking between the central location and each patient's bedside. This problem is exacerbated in some situations in which the central location is located a significant distance from one or more of the patients for which the nurse is responsible. Moreover, the cost associated with paying nurses to continuously travel to and from various medication locations may be relatively insignificant at the level of a particular nurse but is quite significant to the medical industry as a whole.

[0007] What is needed, therefore, is an apparatus and a methodology by which medical error may be reduced and by which the amount of time a nurse spends obtaining and researching medication may be reduced, without compromising safety.

SUMMARY OF THE INVENTION

[0008] An aspect of the present invention relates to a cart including a work platform having a work surface and at least one compartment, a base, and a height adjustment mechanism for adjusting the height of the work platform relative to the base. The compartment can be a drawer. The work platform can accommodate drawers of different sizes. Preferably the compartment is configured to be unlocked via a keyless entry system.

[0009] The work platform can include a laptop platform that can be moved in at least one of a forward and a rearward direction. The work platform also can include a work surface that can be moved in at least one of a leftward and rightward direction. The work platform also can include a barcode scanner holder.

[0010] The cart can include a plurality of rolling members connected to the base. The work platform can include sidewalls and the rolling members can be disposed on the base outside of the sidewalls.

[0011] Another aspect of the present invention includes a cart system comprising a first cart and a second cart. The first cart can include at least one compartment and a base having

rolling members to permit movement of the first cart. The second cart can include a plurality of compartments and a base having rolling members to permit movement of the second cart. The first and second cart can include linking structure that permits the first and second carts to be connected together for movement.

[0012] The first cart can include a work platform having a work surface and that houses the at least one compartment. The first cart can include a plurality of compartments.

[0013] Preferably the base of the first cart is configured to nest with the base of the second cart. The second cart can include a housing for supporting the plurality of compartments and the rolling members can be disposed on the base outside of the sidewalls.

[0014] Another aspect of the present invention relates to a method of medication transport. The method can include the steps of loading, at a first location, medication into first and second carts, connecting the first and second carts to form a cart train, moving the cart train to a second location when loaded with medication, separating the first and second carts after moving the cart train to the second location, moving the first cart from the second location to a third location, removing medication from the at least one cart at the third location, and returning the first and second carts to the first location.

[0015] Another aspect of the present invention relates to a method of medication transport comprising the steps of loading, at a first location, medication into a compartment(s) in a medication module(s), moving the medication module to a second location, transferring medication from the medication module to a medical cart, and administering medicine from the medical cart to a patient.

[0016] Another aspect of the present invention relates to a method of medication transport comprising the steps of loading, at a first location, medication into a compartment(s) in a medication module(s), moving the medication module to a second location, exchanging the compartments of the medication module(s) with the compartments of a medical cart(s) at the second location, returning the medication module(s) having the compartments of the medical cart(s) therein to the first location for refilling while the medical cart(s) having the compartments of the medication module(s) therein are being taken to patients.

[0017] These and other features, aspects, and advantages of the present invention will become more apparent from the following description, appended claims, and accompanying exemplary embodiments shown in the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0018] Figure 1 is a perspective view of a first embodiment of a medical cart according to the present invention;

[0019] Figures 2A and 2B are perspective views of a slidable laptop computer surface of the medical cart of Figure 1, the laptop surface being moveable forward (Figure 2A) and rearward (Figure 2B);

[0020] Figures 3A and 3B are top and bottom exploded perspective views of three panels of a sliding platform of the medical cart of Figure 1;

[0021] Figure 3C is an enlarged view of a connection mechanism of the sliding platform of Figures 3A and 3B

[0022] Figures 4A and 4B are top plan views of the assembled sliding platform in which the platform has been pulled out to the right (Figure 4A) and to the left (Figure 4B);

[0023] Figures 5A-5C are close-up views of a barcode scanner and barcode scanner holder of the medical cart of Figure 1;

[0024] Figures 6A-6C are perspective views of a clipboard of the medical cart of Figure 1;

[0025] Figure 7 is a perspective view of a work platform of the medical cart of Figure 1 without compartments;

[0026] Figure 8 is a perspective view of different sized compartments configured to be inserted into the medical cart of Figure 1;

[0027] Figure 9A is an exploded view of parts of a height adjustment mechanism of the medical cart of Figure 1;

[0028] Figure 9B is a perspective view of the height adjustment mechanism of Figure 9A in assembled form;

[0029] Figures 10A and 10B are bottom and top perspective views of the height adjustment mechanism of Figures 9A and 9B being connected to the medical cart of Figure 1;

[0030] Figure 11 is a rear perspective view of the medical cart of Figure 1 having a laptop computer thereon and showing a hatch being removed;

[0031] Figure 12 is cross-sectional side view of the medical cart of Figure 1;

[0032] Figure 13 is a rear perspective view of the medical cart of Figure 1 having both a hatch and a base cover removed;

[0033] Figure 14 is a rear perspective view of the medical cart of Figure 1 showing a retractable power cord;

[0034] Figure 15 is an underside plan view of the medical cart of Figure 1 showing a first locking mechanism;

[0035] Figure 16 is a perspective view of a second embodiment of a medical cart according to the present invention;

[0036] Figure 17 is a perspective view of a first embodiment of a medication module according to the present invention;

[0037] Figure 18 is a side plan view of the medication module of Figure 17;

[0038] Figure 19 is an underside plan view of the medication module of Figure 17 showing first and second locking mechanisms;

[0039] Figure 20 is an underside perspective view of a plurality of medication modules of the type shown in Figure 17 releaseably engaged to form a train;

[0040] Figures 21A and 21B are front and back perspective views of a medical cart of the type shown in Figure 16 releaseably engaged with a medication module of the type shown in Figure 17;

[0041] Figure 22 is a breakaway perspective view of the medication module of Figure 17 showing a portion of a keyless entry system;

[0042] Figure 23 shows a cross-sectional top view of the medication module of Figure 17 showing a portion of a keyless entry system; and

[0043] Figure 24 is a diagram of steps for an embodiment of a method of medication transport according to the present invention, which can be performed using a plurality of medication modules of the type shown in Figure 17 and a plurality of medical carts of the types shown in Figures 1 and 16.

DETAILED DESCRIPTION

[0044] Presently preferred embodiments of the invention are illustrated in the drawings. An effort has been made to use the same or like reference numbers throughout the drawings to refer to the same or like parts.

[0045] A first embodiment of a medical cart 500 is shown in Figures 1-15. With respect to Figure 1, it can be seen that the medical cart 500 includes a work platform 340, a support mechanism 320 that supports and adjusts the height of the work platform 340, and a base 310.

[0046] The work platform 340 can include a bi-directional laptop platform 370, a bi-directional work surface 350, an adjustable barcode scanner holder 380, an adjustable clipboard 390, one or more lockable compartments 530, a plurality of top bins 342, removable side bins 520, cup holders 344, and/or a keypad 238. Because each of these items is provided on the work platform 340, a user can ergonomically access each of these items as the work platform 340 is raised or lowered.

[0047] The laptop platform 370 can be configured to support, for example, a laptop computer 900 (shown in Figures 6A and 7). Conventional structure can be provided on the laptop platform 370 to hold the laptop computer in place. The laptop platform 370 can have an

arcuate front face 376 at a front portion. The arcuate front face 376 may be designed to correspond to the torso of a user for ergonomic reasons.

[0048] The laptop platform 370 can be locked in a central position (Figure 1) or adjusted ergonomically to a forward (Figure 2A) or rearward (Figure 2B) position. As an example of a use of the present invention, when a user lowers the work platform 340 to a low position and moves the laptop platform 370 to a forward position, the user can sit and the work platform 340 functions as a desk. A transfer structure 800 allows the laptop platform 370 to be moved between those positions. The transfer structure 800 can include stationary rails 372 mounted on body portions 802 of the work platform 340 and rails runners 373 mounted on the laptop platform 370, as shown in Figures 2A and 2B.

[0049] Notches 374, which include sloped surfaces 375 and cavities 377, are formed along the rail runners 373. The notches 374 are configured to engage posts 371 formed along the stationary rails 372. When the laptop platform 370 is moved by the transfer structure 800, the sloped surfaces 375 of the notches 374 are configured to engage the posts 371. By continuing to push (or pull) the laptop platform 370, the posts 371 will ride up the sloped surfaces 375 and be deposited in cavities 377 in the notches 374, thereby releasably immobilizing the laptop platform 370 with respect to the work platform 340.

[0050] In one embodiment, one notch 374 may be provided on each of the rail runners 373 and corresponding posts 371 may be provided on the stationary rails 372. As a result, the laptop platform 370 can be releaseably locked with respect to the work platform 340. For example, as shown in Figures 2A and 2B, the posts 371 may be provided at rear portions of the stationary rails 372 and the notches 374 may be similarly provided at rear portions of the rail runners 373. As a result, the laptop platform 370 will be releaseably locked with respect to the work platform 340 when in a central position shown in Figure 1.

[0051] In another embodiment, each of the stationary rails 372 may include at least three posts 371, one provided at each end of the stationary rails 372 and one provided in a central portion of the stationary rails 372. Correspondingly, each of the rail runners 373 may include three notches 374, one provided at each end of the rails runners 373 and one provided in a central portion of the rail runners 373. As a result, the surface 370 can be releasably immobilized with respect to the work platform 340 in a forward position (Figure 2A), a rearward position (Figure 2B), and a central position (Figure 1). In the forward position (Figure 2A), the rearmost notches 374 may be engaged with the forwardmost posts 371. Similarly, in the rearward position (Figure 2B), the fowardmost notches 374 may be engaged with the rearmost posts 371. Finally, in the central position, all three posts 371 on each

stationary rail 372 may be engaged with the corresponding cavity 377 of the notches 374 of the rail runners 373.

[0052] In another embodiment, the contact between the stationary rails 372 and the rail runners 373 can be frictionally enhanced such that the laptop platform 370 does not readily slide with respect to the work platform 340. Rather, force (i.e., either pushing or pulling on the laptop platform 370) will be required to overcome the frictional engagement between the stationary rails 372 and the rail runners 373. As a result, the laptop platform 370 can be relatively fixed with respect to the work platform 340 at any location between a forwardmost position (Figure 2A) and a rearmost position (Figure 2B). In addition, one or more notches 374/posts 371 may be combined with the frictional engagement between the stationary rails 372 and the rail runners 373.

[0053] When the laptop platform 370 is pushed forward or rearward, it can expose a secondary work area 379 provided below the laptop platform 370. The secondary work area 379 can be particularly sturdy. For example, it can be sturdy enough to enable a user to crush pills on the secondary work area 379. In addition, the secondary work area 379 may be provided with a rim 378. The rim 378 may reduce the likelihood of medication rolling off the medical cart 500 such as, for example, when a nurse tries to crush pills on the secondary work area 379.

[0054] The bi-directional work surface 350 is shown in Figures 3A, 3B, 3C, 4A, and 4B. As shown in Figures 3A and 3B, the bi-directional work surface 350 is positioned below the laptop platform 370. The bi-directional work surface 350 is designed to move through a slot 343 in the side 341 of the work platform 340 in leftward and rightward directions to provide additional work space.

[0055] The work surface 350 can have channels 355, 357 on its underside that engage ribs 358, 359 formed on a plate 361 provided on a body 329 of the work platform 340. The channels 355, 357 are sized to receive the ribs 358, 359 of the plate 361. To prevent the bi-directional work surface 350 from sliding off the plate 361, the channels 355, 357 are closed at one end. As a result, when the second bi-directional work surface 350 slides to the right (as shown in Figure 4A), the channels 355 will slide along the ribs 358, 359. At one point, the channels 355 will slide past the ribs 359 on the left side of the plate 361 and will continue to slide along ribs 358 on the right side of the plate 361. The second bi-directional work surface 350 will stop sliding, however, when the closed ends 363 of the channels 355 abut the inner ends of ribs 358.

[0056] Similarly, when the second bi-directional work surface 350 slides to the left (as shown in Figure 4B), the channels 357 will slide along the ribs 358, 359. At one point, the channels 357 will slide past the ribs 358 on the right side of the plate 361 and will continue to slide along ribs 359 on the left side of the plate 361. The second bi-directional work surface 350 will stop sliding, however, when the closed ends 365 of the channels 357 abut the inner ends of the ribs 359.

[0057] When the bi-directional work surface 350 slides to the right or to the left, it slides in an arcuate path as a result of the channels 355, 357 and ribs 358, 369 (and the work surface 350) being arcuate in shape. As a result, the second bi-directional work surface 350 is positioned closer to a user standing or sitting in front of the medical cart 500 when it is in an extended position.

[0058] A releaseable locking mechanism 1000 (shown best in Figure 3C) can be provided to hold the work surface 350 in a center position and to prevent it from sliding unintentionally. For example, as shown in Figures 3B and 3C, the second bi-directional work surface 350 may be provided with a projection 354 having sloped surfaces 347 and a nesting region 346. Correspondingly, the plate 361 may be provided with a moveable pin 356 which may be, for example, a ball spring plunger that is spring-biased in upward direction (i.e., toward the work surface 350). As a result, when the bi-directional work surface 350 is pushed into the work platform 340 (from either the left or the right), the moveable pin 356 will initially be pushed downward relative to the plate 361 by the sloped surface 347 of the projection 354. Subsequently, the pin 356 will extend upwards into the nesting region 346 of the projection 354 and become frictionally engaged therein, thereby releasably locking the work surface 350 with respect to the work platform 340. To move the work surface 350 out of the locked position, a force is applied to one of the exposed ends of the second bi-directional work surface 350 (to push the moveable pin 356 out of the nesting region 346 of the curved projection 354), thereby enabling the bi-directional work surface 350 to slide freely along the ribs 358, 359.

[0059] Of course, the type of locking mechanism may be changed. Further, additional movable pins 356 may be provided in the plate 361 so as to enable the second bi-directional work surface 350 to be releasably locked in a corresponding number of positions.

[0060] As shown in Figures 5A-5C, the adjustable barcode scanner holder 380 includes a flexible neck 382, a base 386, and a holder portion 384. As a result of the neck 382 being flexible, the position of the holder portion 384 can be adjusted. For example, the vertical distance between the holder portion 384 and the laptop platform 370 can be adjusted.

Specifically, the orientation of the holder portion 384 can be adjusted between, for example, a holding position in which a barcode scanner 385 is maintained in an upright holding position (Figure 5B) and a hands-free scanning position in which the holder portion 384 is adapted to hold an inverted (i.e., facing downward) barcode scanner 385. By holding the scanner 385 in the inverted position, the holder portion 384 enables a user to pass documents between the scanner 385 and the laptop platform 370 (Figure 5C), without having to manually hold the scanner 385 (i.e., the scanner 385 may be operated in a hands-free manner). Moreover, the flexibility of the neck 382 enables the holder portion 384 to be adjusted to accommodate various barcode scanner sizes. In addition, the neck 382 is designed to rotate at the base 386 thereof so that a user can turn the barcode scanner holder 380 away from the laptop platform 370, if desired.

[0061] The barcode scanner 385 may be an integral part of the medical cart 500 or may be detachable therefrom. If the barcode scanner 385 is an integral component of the medical cart 500, its power cord 387 may be inserted into a power cord passage 327 and connected to an electrical receptacle 904, as later explained in detail with respect to Figures 11-13. By way of contrast, the barcode scanner 385 may receive the power necessary to operate it from a laptop computer 900 when it is plugged into a USB port of the laptop computer 900.

[0062] As shown in Figures 6A-6C, the adjustable clipboard 390 is also designed to hold items in a hands-free manner. The clipboard 390 includes a clip 392 for holding items, such as paper. The clipboard 390 also includes conventional rails 394 attached to an L-shaped metal bracket 393 which connects the clipboard 390 to the laptop platform 370, as shown best in Figure 6C. The clipboard 390 is designed to slide along the rails 394 to the left of the medical cart 500. As a result, if a user is working on a laptop computer provided on the laptop platform 370, the clipboard 390 can be moved from a central position (Figure 6B) to left of the laptop computer to allow the user to view the documents clipped to the clip 392, as shown in Figures 6A and 6C. Of course, in other embodiments, the clipboard 390 could be designed to move to the right.

[0063] The plurality of compartments 530 face the user and move up and down with the work platform 340 (i.e., they remain in the same position relative to the laptop platform 370), which are ergonomically desirable features. The compartments 530 may be provided with labeling portions 570, which allow labels to be displayed on the compartments 530. The plurality of compartments 530 enable a user (e.g., a nurse) to separately maintain medication for particular patients or for a particular room. For example, if a nurse is responsible for eight patients in a hospital ward, the medical cart 500 may be provided with a corresponding

number of compartments 530 and the medication for each patient may be kept in a separate drawer assigned to that patient. As a result, the nurse could load the medication for all eight patients into eight separate drawers at one time (e.g., at the start of a medication pass) and at one location (e.g., at a pyxis machine), thereby reducing the need to travel to obtain the medication during the nurse's shift.

[0064] As shown in Figures 7 and 8, the compartments 530 have projections 531 which are configured to slide in grooves 533 formed on the interior walls of the medical cart 500. Although the compartments 530 in Figure 1 are shown as having a generally uniform height, this is not required. In some embodiments the compartments 530 may have different heights.

[0065] For example, as shown in Figure 7, four short compartments 530A-D can be removed, thereby exposing dividers 535 (which may be, for example, sheet metal). By removing the dividers 535 (e.g., by sliding them out of the medical cart 500), as shown in the left side of the medical cart 500 in Figure 7, a tall space 537 may be created. As a result, a tall compartment 530E, the height of which is substantially equal to height of the four short compartments 530A-D when installed in the medical cart 500, may be inserted into medication module 500 to substantially fill the space 537. Moreover, the tall compartment 530E will readily slide into the medical cart 500 by means of the projections 531 which are configured to slide into the grooves 533 previously occupied by the projections 531 of the upper short compartment 530A. Thus, different size compartments 530 can be accommodated based on the desired application.

[0066] The compartments 530 may be lockable by means of a keyless entry system (the details of which are later described with respect to Figures 22 and 23). Thus, the potential for unauthorized access to the compartments 530 while the nurse is caring for a particular patient is small.

[0067] The top bins 243 are provided to house items such as paperclips, pencils, etc. Similarly, the cup holders 344 are provided to secure a number of medicine cups used to pass out medications.

[0068] The removable side bins 520 can be provided to hold items, such as trash or medical equipment. The side bins 520 can be removably connected to the sides of the body 329 of the work platform 340 by conventional means, such as a hole and pin arrangement.

[0069] The work platform 340 may be raised and lowered by means of the support mechanism 320. This provides a sitting or standing user with easy access to the work surface 350 and its associated components (e.g., laptop platform 370, work surface 350, compartments 530, etc.). The support mechanism 320 allows the user to adjust the position

of the work platform 340 to a comfortable position, regardless of whether the user is sitting or standing. The support mechanism 320 comprises two telescoping portions 322, 324 (shown more clearly in the embodiment shown in Figure 16) and height adjustment mechanism 400 (shown in Figures 9A and 9B). The height adjustment mechanism 400 enables a standing user or a sitting user to ergonomically raise and lower the work platform 340.

[0070] The height adjustment mechanism 400 includes an outer casing 410, a telescoping inner casing 420, and a driver 430. Preferably, two or more drawer slides 422 are provided between the inner casing 420 and the outer casing 410. Although two drawer slides 422 may be used (on opposite sides of the inner casing 420), it is preferable to use at least three drawer slides 422, to prevent (or at least greatly inhibit) a binding action from being applied to the height adjustment mechanism 400 by means of a cantilevered force being applied thereto.

[0071] The drawer slides 422 may be, for example, conventional drawer rails formed of stationary drawer rails 423 and corresponding rail runners 425. If the drawer slides 422 are conventional drawer rails, one side of the drawer slides 422 (e.g., the rail runners 425) may be fixed to outer sides of the inner casing 420 and the corresponding side of the drawer slides 422 (e.g., the stationary drawer rails 423) may be fixed to inner sides the outer casing 420. Further, the stationary drawer rails 423 may be provided with ball bearings to facilitate movement of the rail runner 425. An upper end of one side of the inner casing 420 is provided with an engagement mechanism 426. As shown, the engagement mechanism may be in the form of a window in the side of the casing 420.

[0072] The driver 430 includes a gas driven piston 432 which, in turn, includes a body portion 436 and a telescoping strut 434. The driver 430 is controlled by an actuator 440 to which is connected by a connector 442.

[0073] As shown in Figure 10A, a base 411 of the outer casing 410 is affixed to the base 310 of the medical cart 500 by a plurality of bolts through the base 411. A bolt 413 passes through a hole 437 in a connection portion 439 of the body portion 436 of the piston 432, thereby immobilizing both the outer casing 410 and the piston 432. In addition, as shown in Figure 10B, the inner casing 420 and the telescoping strut 434 are affixed to work platform 340 by an upper bolt 415 which passes through the inner casing 420 and through a hole 459 in a connection portion 460 of the telescoping strut 434. As a result, when the work platform 340 is raised or lowered, the strut 434 and the inner casing 420 are correspondingly raised or lowered.

[0074] As shown in Figure 10B, the actuator 440 may be provided in a front portion of the medical cart 500. Moreover, a button 444 of the actuator 440 may be provided in the handle

360 of the medical cart 500, as shown in Figure 1. To lower the work platform 340, the button 444 is pushed as a user pushes down on work platform 340 thereby causing the gas driven piston 432 to expel air. As a result, the telescoping strut 434 is withdrawn vertically into the body portion 436 of the piston 432. As the telescoping strut 434 moves downward into the body portion 436, the work platform 340 which is affixed to the telescoping strut 434 also moves downward. In turn, the work platform 340 forces the connection portion 460 and the inner casing 420 to move downward. If the button 444 is released while the work platform 340 is being lowered, the work platform 340 will be releaseably locked at the height at which the button 444 is released. As a result, the work platform 340 can be releaseably locked at any position between a lowest position (at which the telescoping strut 434 is maximally provided in the body portion 436 of the piston 432) and a highest position (at which the inner casing 420 is driven upward to a maximum distance by the telescoping strut 434 of the piston 432).

[0075] By way of contrast, to raise the work platform 340, a user merely needs to push button 444 and lift upward on the work platform 340. As the work platform 340 is light in weight, it will readily move upward. Moreover, in the process, the gas driven piston 432 will intake air, thereby enabling the work platform 340 to remain at the raised level, i.e., when the platform 340 is raised gas will be sucked into the piston 340 and will not be readily expellable until the button 444 is depressed. In other words, similar to the process of lowering the work platform 340, when the work platform 340 is raised it may be releaseably locked at any position between the lowest position and the height position by releasing the button 444. As a result, each component of the work platform 340 (including the bi-directional laptop platform 370 and the compartments 530) is ergonomically available to a user when sitting or standing.

[0076] In addition, as shown in Figures 12 and 13, the medical cart can include a power cord passage 327 that enables a power cord 902 of a laptop computer 900 (or other device) on the laptop platform 370 to be electrically connected to an electrical receptacle 904 provided in the base 310. The electrical receptacle 904 can be connected, for example to a wall outlet via a retractable cord 906, as later described. Preferably, the passage 327 includes an access hole 325 in the work platform 340 and extends through the telescoping portions 322, 324. The passage 327 terminates in a well 960 in the base 310 where the electrical connection can occur. This permits the point of connection to the electrical receptacle 904 to be enclosed.

[0077] As shown in Figure 13, the well 960 in the base 310 houses the electrical receptacle 904, a retractable cord 906, and a hatch 908 that provides access to the well 960 so that power cords 387, 902 can be plugged into the electrical receptacle 904. The retractable cord 906

can be plugged into an external wall outlet to recharge the battery internal to the laptop computer 900 and/or a battery-powered solenoid 240 in the keyless entry system (later described in detail). The hatch 908 works in conjunction with a cover plate 910 to enclose the base 310 including the well 960, thereby encapsulating the components provided in the base 310 and shielding them from the environment.

[0078] The base 310, which is moveable by means of rolling members 120 (e.g., casters), is ergonomically shaped to provide stability. The base 310 is designed to provide stability by having the rolling members 120 at corners which are outside of the footprint of the work platform 340. Moreover, the rolling members 120 are spaced-apart to such a degree that two rolling members 123 of a medication module 100 can be located between two rolling members 121 of the base 310, thereby enabling the medical cart 500 and the medication module 100 to nest together. Further, when the medical cart 500 is nested with a medication module 100, it may be releaseably connected to the medication module 100 by means of a second locking mechanism 190 provided on an underside of the base 310 (shown in Figures 1 and 15), also as later described in detail.

[0079] Another embodiment of a medical cart 300 is shown in Figure 16. In this embodiment, the removable side bins 520 of the previous cart 500 have been removed to facilitate joining the medical cart 300 with a medication module 100. The medical cart 300, like the medical cart 500 shown in Figure 1, also includes a second locking mechanism 190 which may be used to connect the medical cart 300 to a medication module 100. In addition, the cart 300 contains fewer compartments 330 which may, like the compartments 530 of the medical cart 500 shown in Figure 1, be lockable by means of a keyless entry system or by a conventional key lock.

[0080] One embodiment of a medication module 100, which may be referred to as a cart, is shown in Figures 17-23. As shown in Figure 17, the medication module 100 includes a component body 111 having a plurality of lockable compartments 130 and which is supported by a base 110. The medication module also may include a refuse container 140, a depression work surface 150, a retractable power cord 144 (shown best in Figures 18 and 21B) which can be used to recharge a battery 241 of a keyless entry system 600 by means of a power cord 233 (as later described in detail), a front handle 160, and a side handle 162. The two handles 160, 162 are provided so that the medication module can be pushed by a user standing in front of the compartments 130 or in front of the sidewall 112.

[0081] The component body 111 includes two side walls 112 and a back wall 114. The walls 112, 114 support a plurality of compartments 130 which, for example, may be in the form of

drawers. Although the compartments 130 are shown as having a generally uniform height, this is not required. Moreover, in some embodiments the compartments 130 may have different heights. As a result, a plurality of short compartments 130 may be replaced by a tall compartment 130 in the manner previously described with respect to the first medical cart 500 embodiment.

[0082] It is preferable to provide the user with the ability to lock the compartments 130, of the medication module 100. To reduce the likelihood of losing a key, to reduce the likelihood of having a key getting stuck (or worse broken) in a lock, and to eliminate the need for a separate lock for each compartment 130, the compartments may be lockable by a keyless entry system 600, as hereafter described with respect to Figures 22 and 23.

[0083] The keyless entry system 600 includes a solenoid 240 (powered by a battery 241 which is electrically connected, by means of the power cord 233, to the retractable power cord 144), a printed circuit board ("PCB") 245, a piston 222, a spring-biased hinge 210 (which has an active side 211 and a stationary side 213), a keypad 238, and an actuating lever 224 which is connected to the piston 222 at a connection point 231 and which pivots around an axis of rotation defined by a pin 230.

[0084] The hinge 210 can be, for example, a hinge conventionally known as a piano hinge. In a locked orientation, the active side 211 of the hinge 210 is provided in an engagement position 215 in which the active side 211 is positioned to engage a notch 132 formed on a compartment 130 (i.e., each compartment 130 has a similar notch 132), if a user attempts to withdraw the compartment 130. In other words, as a result of the engagement between the active side 211 of the spring 210 and the notches 132 of the compartments 130, the compartments 130 can not be readily withdrawn out of the medication module 100.

[0085] To unlock the compartments 130, a user first enters a security code using buttons of the keypad 238 (to verify access to the medication module 100) and may, if required, then enter an unlock code on the keypad 238. In response, the PCB 245 sends an unlock signal to the solenoid 240. When the unlock signal is received by the PCB 245, the solenoid 240 withdraws the piston 222, thereby causing the end of actuating lever 224 in contact with the active side 211 of the spring 210 to swing outward on the pin 230. As a result, the actuating lever 224 causes the active side 211 of the spring 210 to swing out of the engagement position 215 and into a disengagement position 217. In other words, the active side 211 swings toward the stationary side 213 of the spring 210 so that the two sides 211, 213 rest against each other. When the sides 211, 213 of the spring 210 rest against each other, the notches 132 of the compartments 130 will no longer be inhibited by the active side 211 of the

spring 210. As a result, the compartments 130 may be readily removed from the medication module 100.

[0086] The compartments 130 can be relocked by pressing a "lock" button (not labeled) on the keypad 238 or by entering a lock code on the keypad 238; in either case, the PCB 245 will send a lock signal to the solenoid 240 instructing it to outwardly push the piston 222, thereby causing the end of the actuating lever 224 in contact with the active side 211 of the spring 210 to swing inward on the pin 230. As a result, the active side 211 of the spring 210 will swing back into the engagement position 215 by means of the spring-biased nature of the spring 210. In addition, and as a safety means, a timer may be provided in the keypad 238, PCB 245, or in the solenoid 240 which will, when a timer count is satisfied, automatically instruct the piston 222 to be outwardly pushed, thereby causing the active side 211 of the spring 210 to retract into the engagement position 215.

[0087] If a compartment 130 is removed when either a lock signal is sent to the solenoid 240 or when a timer count is satisfied (and the active side 211 of the spring 210 is provided in the engagement position 215), the compartment 130 may be inserted into the medication module without entering an unlock code. Specifically, the notches 132 of the compartments 130 have sloped faces 133 thereon which, when the compartment 130 is pushed into the medication module 100, will abut the active side 211 of the spring 210. By continuing to push the compartment 130, the sloped face 133 will cause the active side 211 of the spring 210 to collapse into the disengagement position 217, i.e., the spring-bias of the spring 210 will be overcome. After the sloped face 133 passes the active side of the spring 210, the active side 211 will snap back into the engagement position 215 (by means of the spring-bias), thereby locking the compartment 130 in the medication module 100.

[0088] An additional safety (and access) measure may be provided to address a situation in which the keypad 238 fails or the battery powered solenoid 240 loses power. Specifically, the compartments 130 may be unlocked manually by a hard (back-up) lock 220, as shown in Figures 17 and 23. By means of the hard lock 220, a key can be used to manually rotate the actuating lever 224, thereby pushing the active side 211 of the spring 210 or enabling it to swing outward under the force of the spring bias. In other words, the key can be used to move the active side 211 manually out of the engagement position 215 or to allow the active side 211 to swing (under the spring-biased force) into the engagement position 215.

[0089] Although the keyless entry system 600 has been described with respect to the medication module 100, the same system 600 can be applied to the compartments 330, 530 of the medical carts 300, 500, respectively.

[0090] As a result of the ability to lock the compartments 130, 330, 530, a nurse can use a medication module 100 and/or medical cart 300, 500 to deliver medication to various patients, without worrying about unauthorized access to the compartments 130, 330, 530 while attending to a particular patient. Moreover, as a result of the keypad 238, a nurse does not have to worry about losing a key, except for the hard lock key which may be kept at a central location.

[0091] The base 110, which is supported by a plurality of rolling members 120 (e.g., casters), is designed to provide stability to the frame 111, similar to the base 310 of the medical cart 300, 500. However, the base 110 is also designed such that the two of the rolling members 121 on one side of the module 100 are spaced apart farther than the two rolling members 123 on the other side of the module 100. As a result, when two medication modules 100 (or a medication module 100 and a medical cart 300, 500) are brought together, the closer spaced rolling members 123 of one module 100 can fit between the farther spaced rolling members 121 of the other module 100 (or medical cart 300, 500), thereby enabling the modules 100 (or module 100 and medical cart 300, 500) to nest closer together to form a train 200.

[0092] As a result of the ability to nest the bases 110 of a plurality of consecutive medication modules 100 in a train 200 (as later described in detail), the sidewalls 112, 112 of adjacent modules 100 can be positioned in close proximity, thereby creating a small footprint for the train 200. Similarly, as a result of the ability to nest the base 110 of a medication module 100 and the base 310 of a medical carts 300, 500, the compartments of the medication module 100 can be in close proximity to the work platform 340 of the medical cart 300, 500, thereby providing a user with easy access thereto.

[0093] To releaseably link the nested medication modules 100 (or a medication module 100 and nested a medical cart 300, 500), the base 110 of the medication module 100 is provided with a connection mechanism 171. The connection mechanism 171 includes an actuator 180, a first locking mechanism 170, and a second locking mechanism 190, as best shown in Figures 19 and 20. The actuator 180, which may be in the form of a foot pedal, includes a pivot rod 182. When the foot pedal 180 is depressed, the pivot rod 182 is configured to rotate within rings 192 from a resting position to an active position, thereby activating the first locking mechanism 170.

[0094] The first locking mechanism 170 includes beams 188, cover plates 186 having sloped surfaces 194, and catches 184 which comprise cavities 187. When the rod 182 of the actuator 180 rotates, it pulls the beams 188 toward the center of the base 110. In turn, the beams 188 cause the cover plates 186 to rotate toward the center of the base 110. As the cover plates

186 rotate, they expose the cavities 187 in the catches 184. Correspondingly, when the actuator 180 is released, the rod 182 rotates back to the resting position, thereby pushing the beams 188 away from the center of the base 110 and, in turn, rotating the cover plates 186 to enclose the cavities 187.

[0095] When the cavities 187 are closed, they are designed to releaseably contain posts 197 of a second locking mechanism 190 of another medication module 100 or of a medical cart 300, 500. In addition, although the posts 197 may be provided separately on the base 110, 310, of the medication module 100 and medical carts 300, 500, they are preferably integrally formed by means of a crossbar 196. Regardless of the design of the posts 197, they enable a medication module 100 to be joined to another medication module 100 to form a train 200, as shown in Figure 20.

[0096] A train 200 of medication modules 100A-100C can be formed by releaseably aligning the posts 197 of a second locking mechanism 190 of one medication module 100A with the cover plates 186 of a first locking mechanism 170 of an adjacent medication module 100B. By pushing the modules 100A, 100B toward each other, the posts 197 will slide along the sloped surfaces 194 of the cover plates 186, thereby causing the cover plates 186 to rotate. As the cover plates 186 rotate, the cavities 187 will be exposed and the posts 197 will slide into them. After the posts 197 slide into the cavities 187, the cover plates 186 will retract, thereby locking the posts 197 in the cavities. Of course, to add a third medication module 100C, the posts 197 of the second medication module 100B would be similarly inserted into the cavities 187 of the third medication module 100C.

[0097] As the medical carts 300, 500 also include second locking mechanisms 190, the medication module can be releaseably joined with the medical carts 300, 500. For example, as shown in Figures 21A and 21B, the medication module 100 can be releaseably joined with the medical cart 300 shown in Figure 16. Of course, to release the medication module 100 from the medical carts 300, 500, a user (e.g., a nurse) would depress the foot pedal actuator 180 (shown in Figure 21A) to disengage the first locking mechanism 170 formed under the base 110 of the medication module 100 and the second locking mechanism 190 formed under the base 310 of the medical cart 300, 500.

[0098] As shown in Figure 24, a train 200 of medication modules 100 can be loaded with medication at a central location (e.g., pharmacy) 700; the number of medication modules 100 may depend on the number of medical carts 300, 500 that a hospital has on a particular floor on which the medication is to be delivered. A pharmacy technician can then drive the train 200 to a second location 800 at which the individual medication modules 100 can be

separated from the train 200. In addition, the medication modules 100 may be joined (by means of the first connection mechanism 171 thereon) to a medical cart 300, 500 (by means of the second locking mechanism 190 thereon). One or more nurses 750 can then drive the separated medication modules 100 (with or without a medical cart 300, 500 affixed thereto) to respective third locations (not shown) at which the nurse may administer medication (contained in the compartments 130) to a distinct plurality of patients. When the nurse(s)'s rounds are complete, the empty medication modules 100 can be separated from attached medical carts 300, 500 (if any) and rejoined to form a train 200 of medication modules 100. The train 200 of medication modules 100 may then be returned to the central location 700 for refilling so that the method of medication transport may be repeated.

[0099] Similar to the aforementioned method, a modification may be made. Specifically, there may arise situations in which a nurse 750 does not want to push a combined medication module 100 and medical cart 300, 500 but wants to enjoy the functionality of the medical cart 300, 500. In these situations, the nurse 750 may unlock the compartments 130 of medication module 100 at the second location 800 and remove one or more compartments 130. The removed compartments 130 could then be exchanged with compartments 530 in the medical cart 500 or placed on the work platform of the medical cart 300 so that the medical cart 300, 500 then contains the medications which the nurse 750 needs to deliver.

[0100] If the compartments 130 of the medication module 100 are exchanged with the compartments 530 of the medical cart 500, the medication modules 100 containing the empty compartments 530 of the medical carts 500 may then be taken back to central location 700 for refilling while the original medication is being taken by nurses to the patients, so that the method of medication transport can be repeated.

[0101] Although the aforementioned describes embodiments of the invention, the invention is not so restricted. It will be apparent to those skilled in the art that various modifications and variations can be made to the disclosed embodiments of the present invention without departing from the scope or spirit of the invention. Accordingly, these other medication modules, medical carts, height adjustment mechanisms, keyless entry systems, and methods of medication transport are fully within the scope of the claimed invention. Therefore, it should be understood that the apparatuses and methods described herein are illustrative only and are not limiting upon the scope of the invention, which is indicated by the following claims.

What is claimed is:

1. A cart comprising:

a work platform including a work surface and at least one compartment;

a base; and

a height adjustment mechanism for adjusting the height of the work platform relative to the base.

2. The cart of claim 1, wherein the compartment includes a drawer.

3. The cart of claim 1, wherein the work platform can accommodate drawers of different sizes.

4. The cart according to claim 1, wherein the compartment is configured to be unlocked via a keyless entry system.

5. The cart of claim 1, wherein the work platform includes a laptop platform that can be moved in at least one of a forward and a rearward direction.

6. The cart of claim 1, wherein the work platform includes a work surface that can be moved in at least one of a leftward and rightward direction.

7. The cart of claim 1, wherein the work platform includes a barcode scanner holder.

8. The cart of claim 1, further comprising a plurality of rolling members connected to the base.

9. The cart of claim 8, wherein the work platform includes sidewalls and the rolling members are disposed on the base outside of the sidewalls.

10. The cart of claim 1, wherein the height adjustment mechanism is configured to lock the work platform at a plurality of heights between a lowest position and a highest position inclusive.

11. A cart system comprising:

a first cart including:

at least one compartment; and

a base having rolling members to permit movement of the first cart;

a second cart including:

a plurality of compartments; and

a base having rolling members to permit movement of the second cart,

wherein the first and second cart including linking structure that permits the first and second carts to be connected together for movement.

12. The cart system of claim 11, wherein the first cart further includes a work platform having a work surface and that houses the at least one compartment.

13. The cart system of claim 11, wherein the first cart includes a plurality of compartments.

14. The cart system of claim 11, wherein the base of the first cart is configured to nest with the base of the second cart.

15. The cart system of claim 11, wherein the second cart further includes a housing for supporting the plurality of compartments and the rolling members are disposed on the base outside of the sidewalls.

16. A method of medication transport comprising the steps of:

(a) loading, at a first location, medication into first and second carts;

(b) connecting the first and second carts to form a cart train;

(c) moving the cart train to a second location when loaded with medication;

(d) separating the first and second carts after moving the cart train to the second location;

(e) moving the first cart from the second location to a third location;

(f) removing medication from the at least one cart at the third location; and

(g) returning the first and second carts to the first location.

17. A method of medication transport comprising the steps of:

(a) loading, at a first location, medication into a compartment in a medication module;

(b) moving the medication module to a second location;

(c) transferring medication from the medication module to a medical cart; and

(d) administering medicine from the medical cart to a patient.

ABSTRACT

A medical cart is described and includes a work platform having a work surface and at least one compartment, a base, and a height adjustment mechanism for adjusting the height of the work platform relative to the base. A medication module is described and includes a plurality of compartments. The medical cart can be joined with a medication module. In addition, a plurality of medication modules can joined to form a train. The medical cart and medication module can be used collectively and individually in a variety of methods for transferring medicine.

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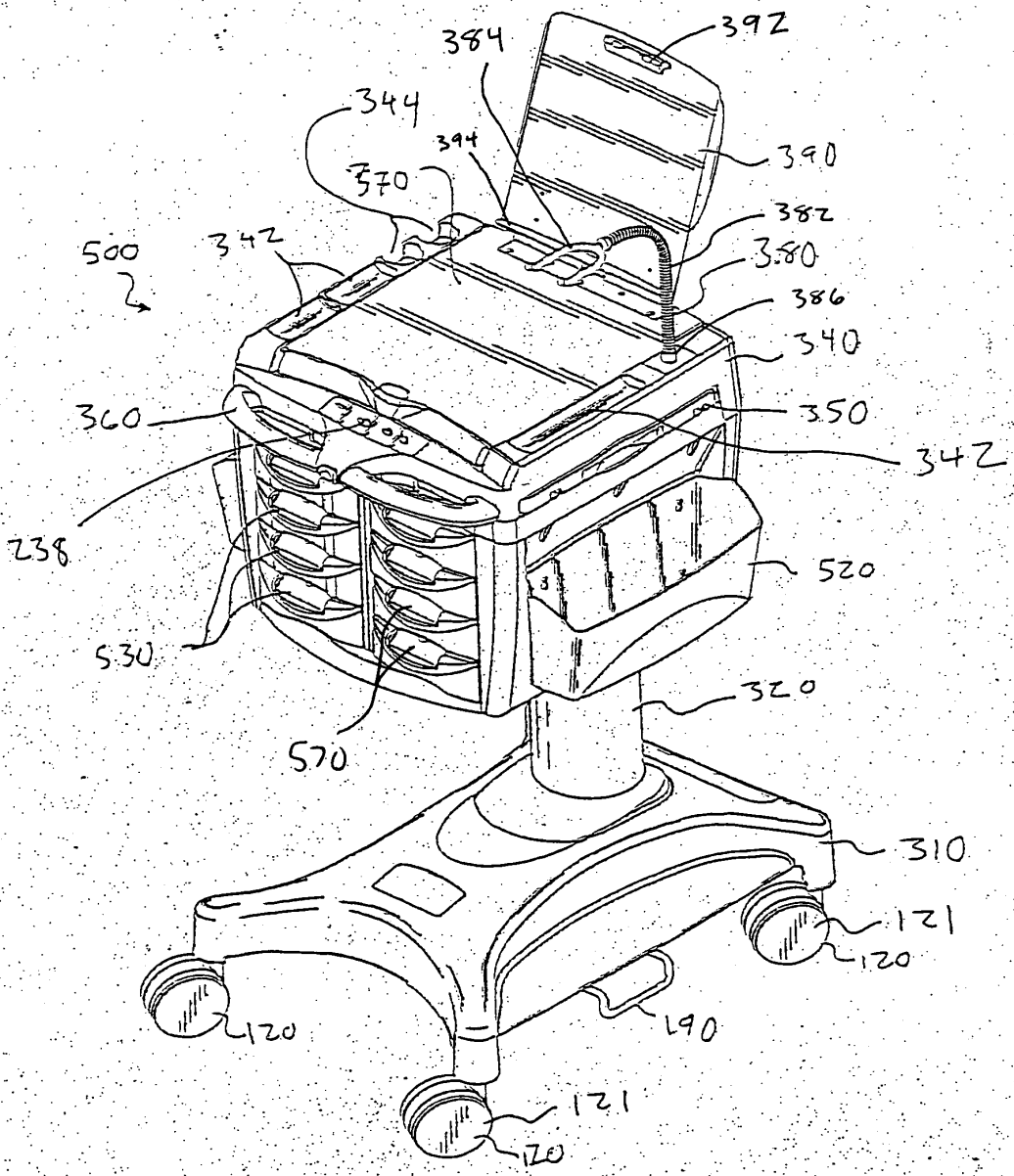

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Fig 1

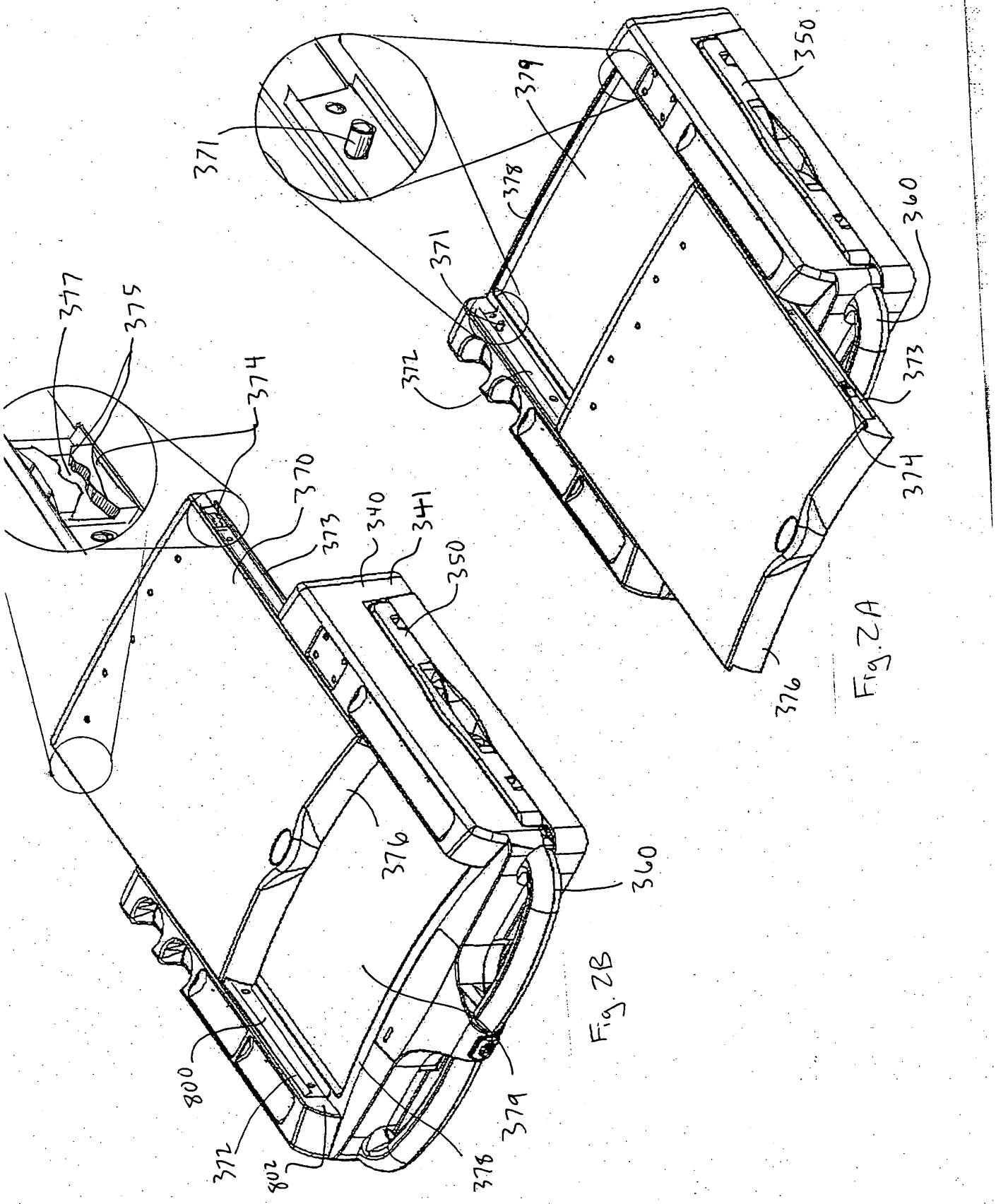
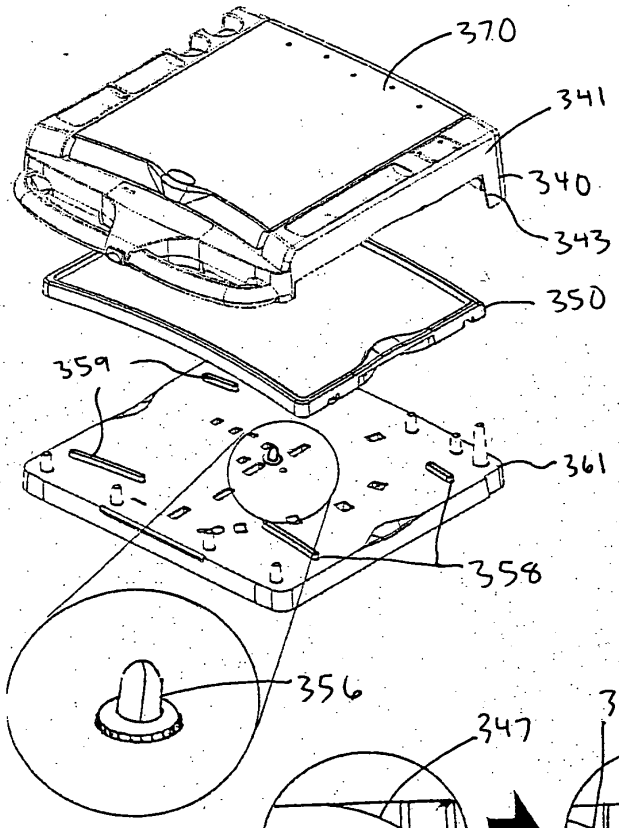

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Fig. 2A

Fig. 2B

Fig. 3A



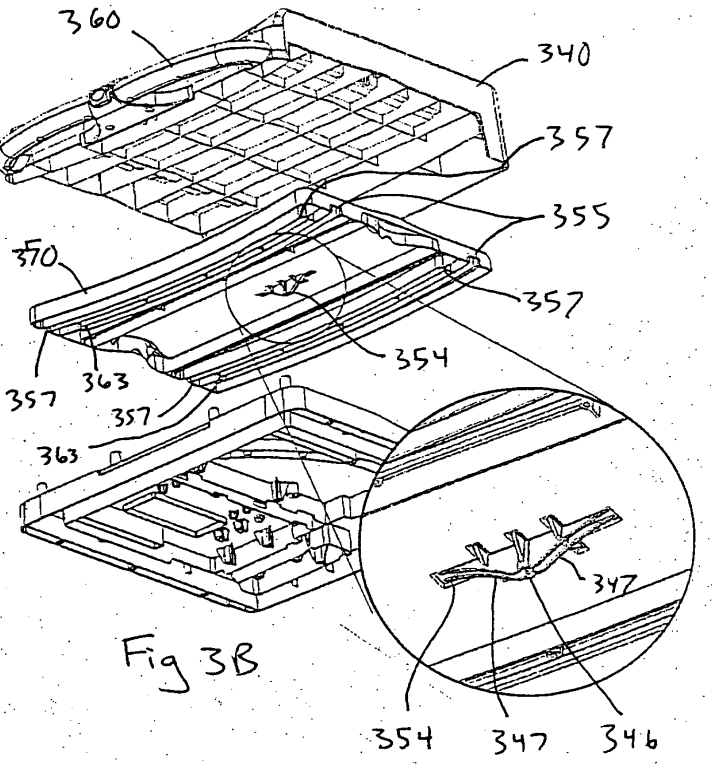


Fig 3B

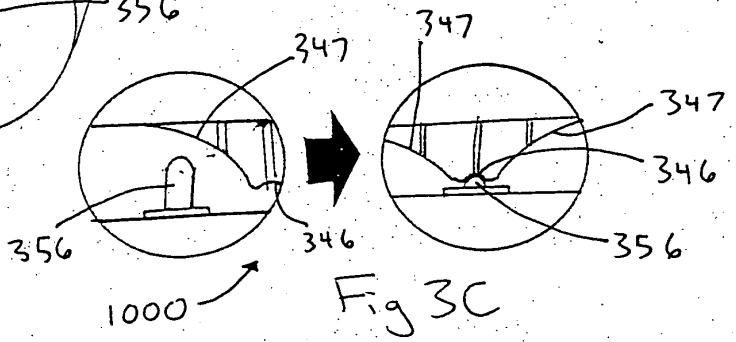


Fig 3C

Fig 4A

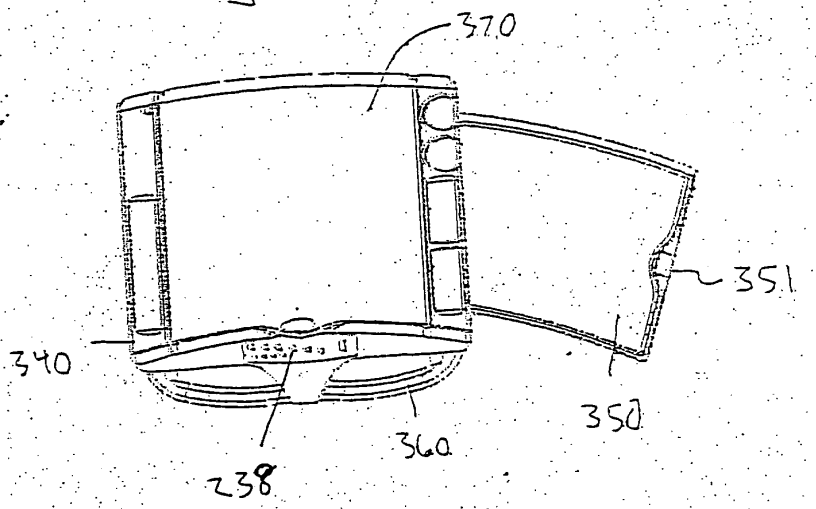
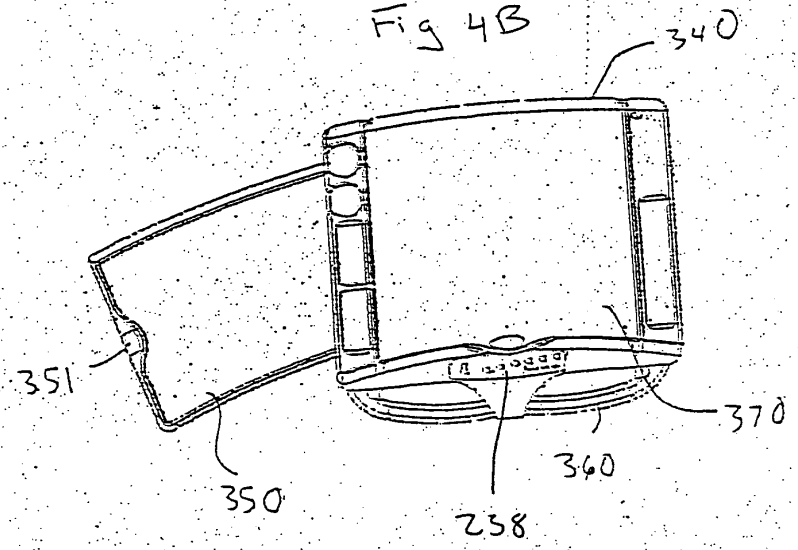


Fig 4B



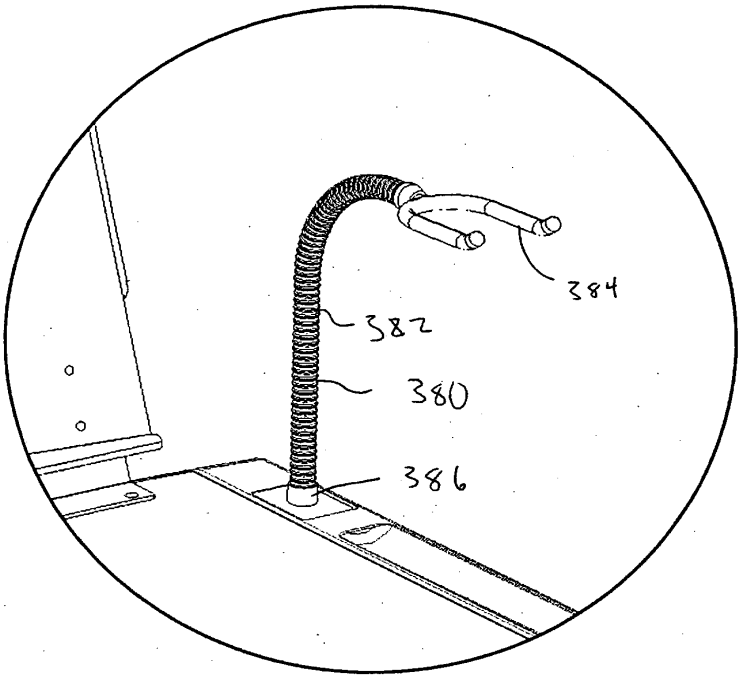


Fig. 5A

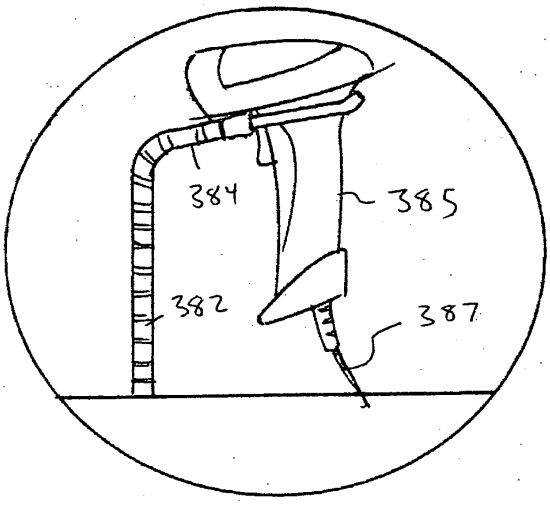


Fig. 5B

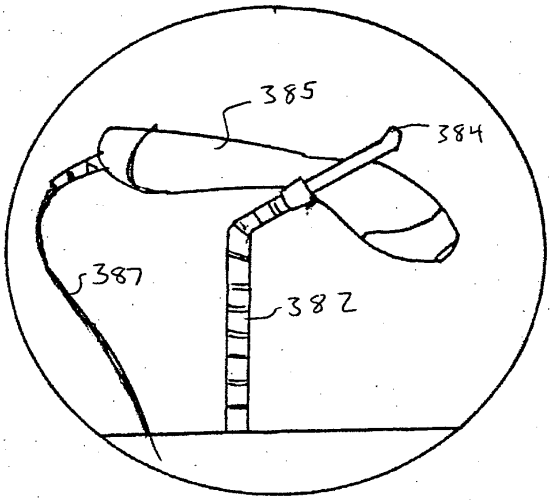


Fig. 5C

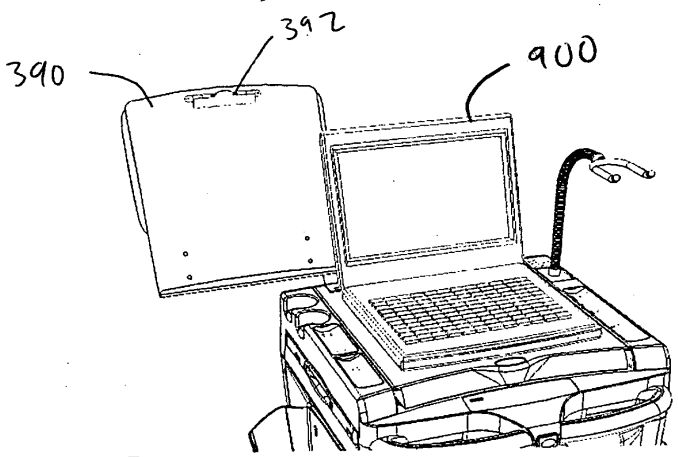


Fig. 6A

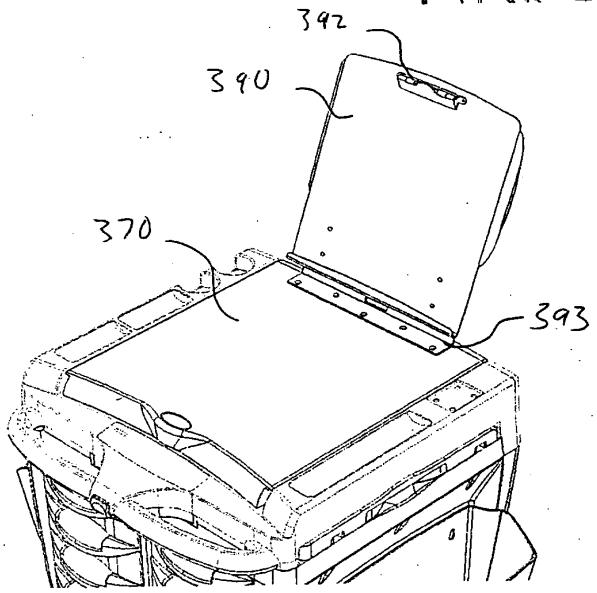


Fig. 6B

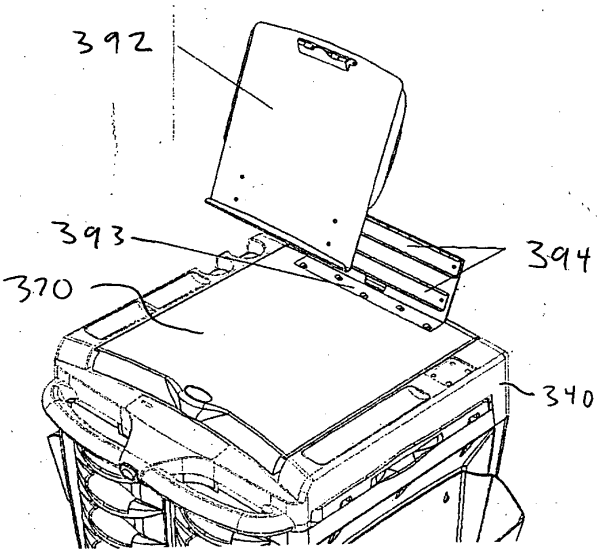


Fig. 6C

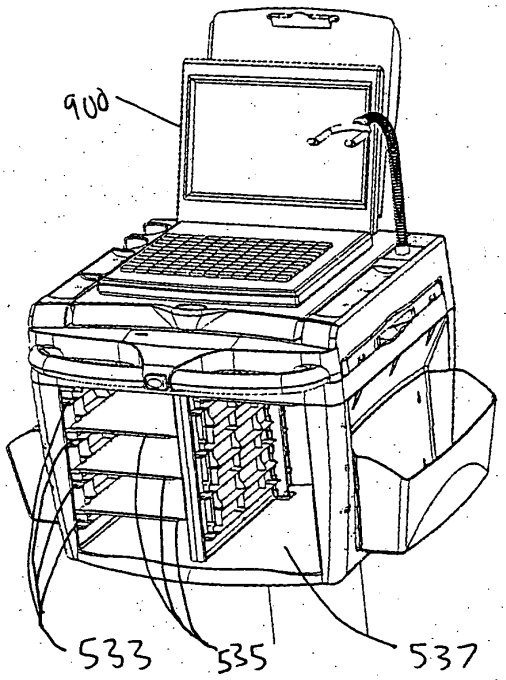


Fig 7

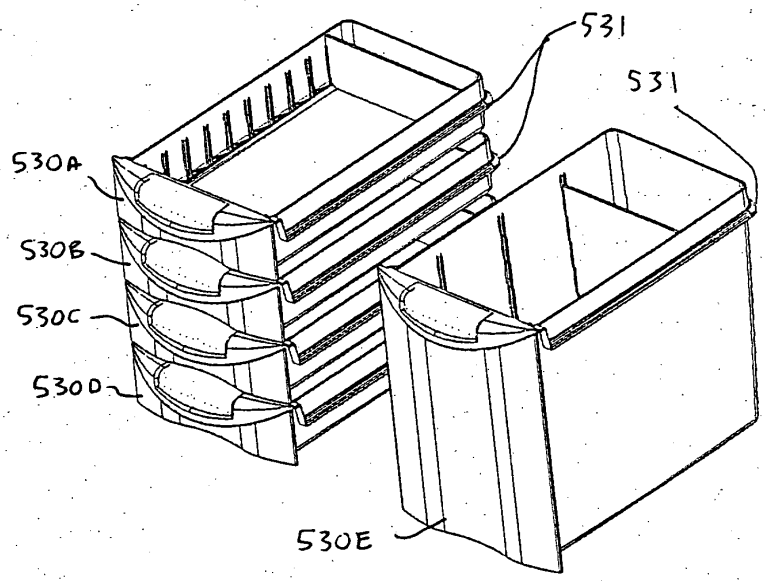


Fig 8

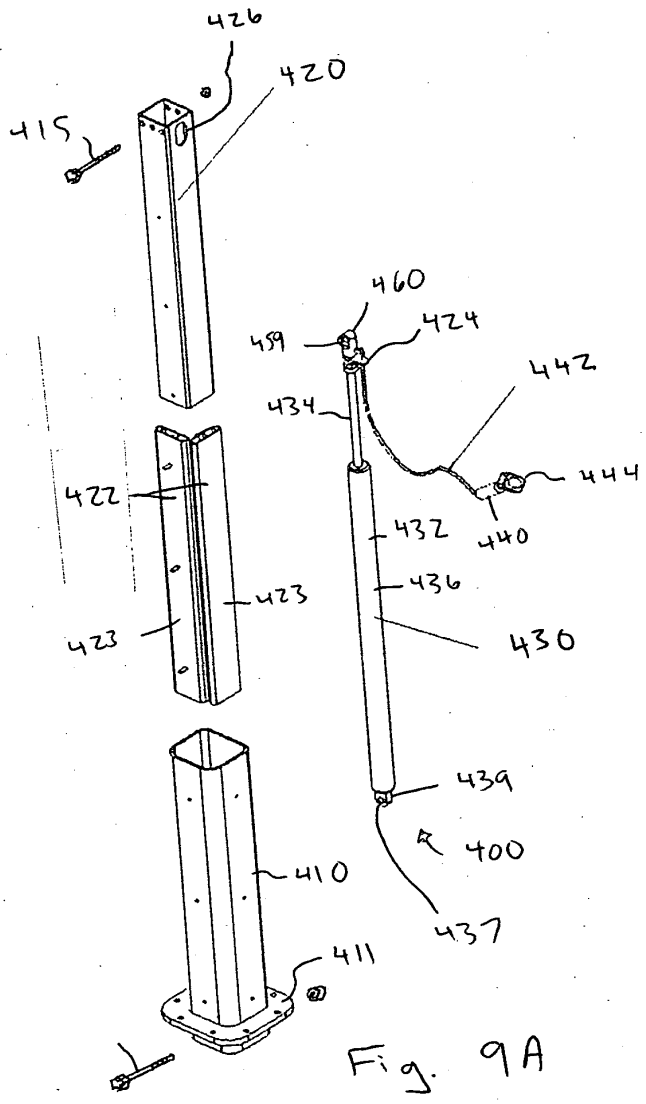

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Fig. 9A

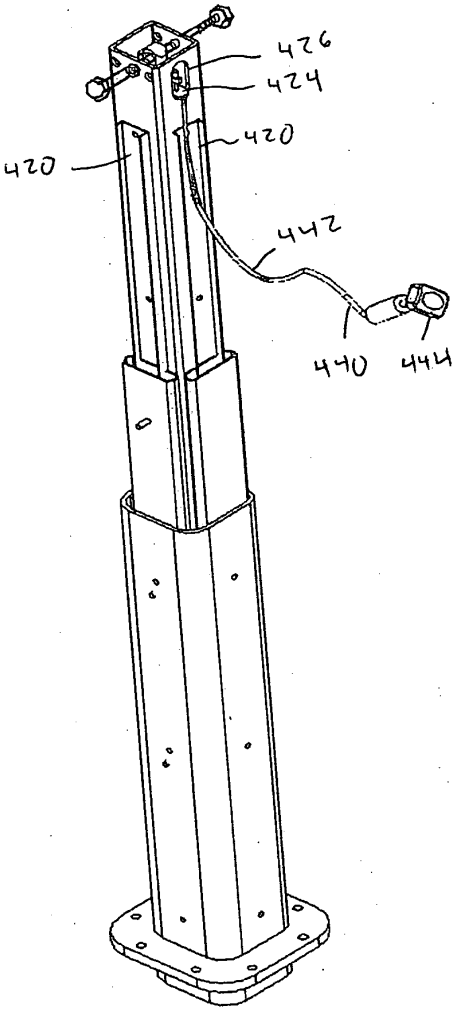

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Fig. 9B

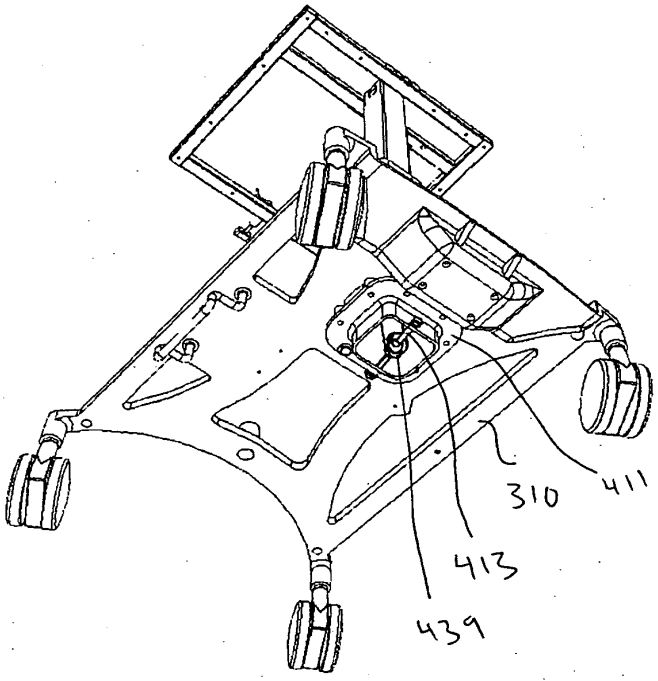


Fig 10A

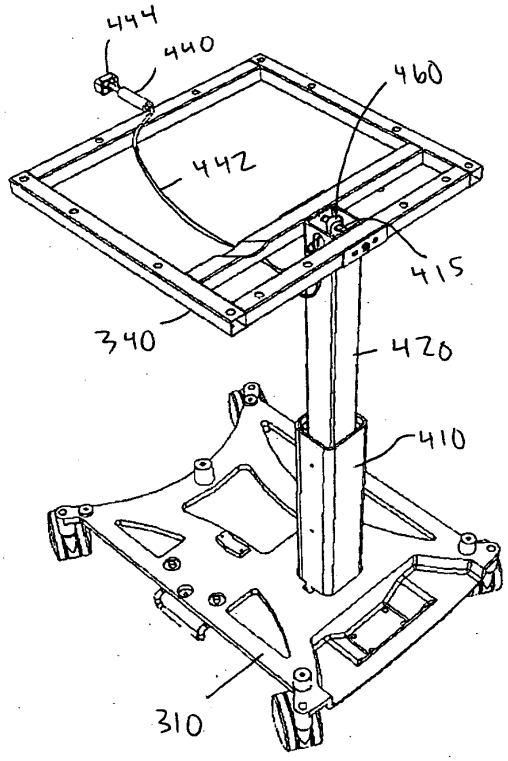


Fig 10B

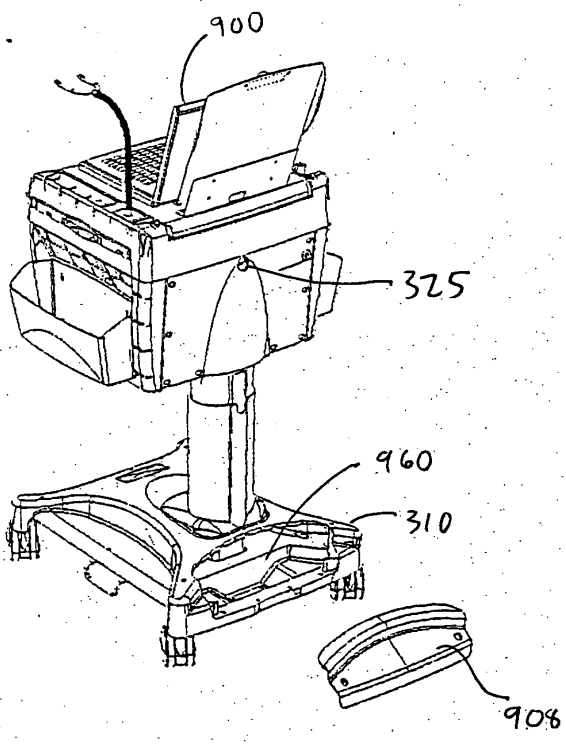


Fig 11

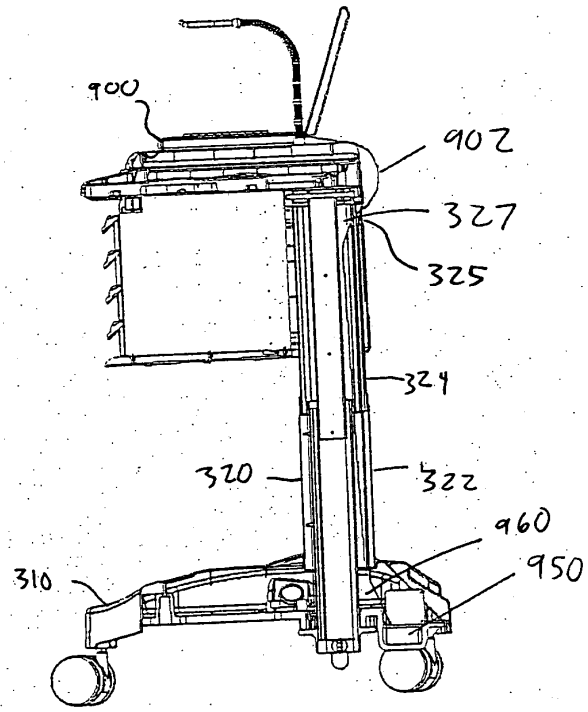


Fig. 12

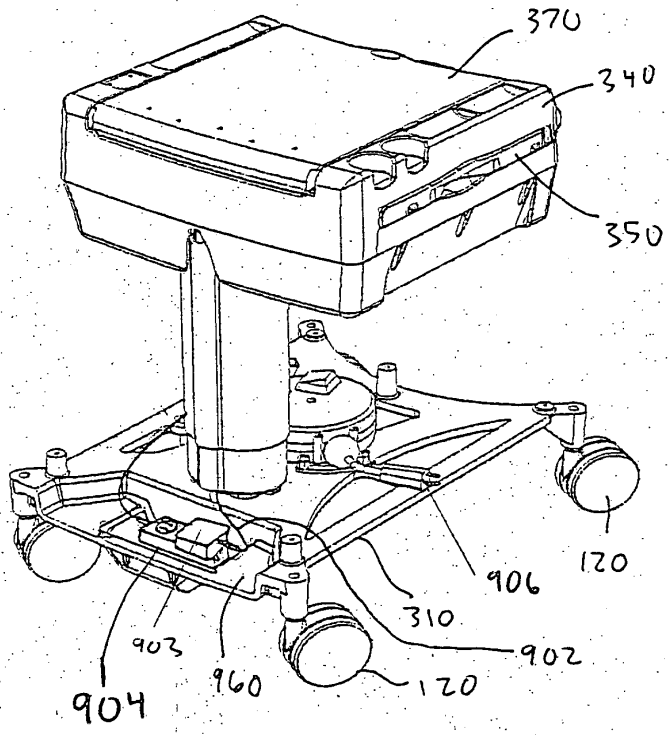

370
340
350
906
120
310
902
903
960
120
904

Fig 13

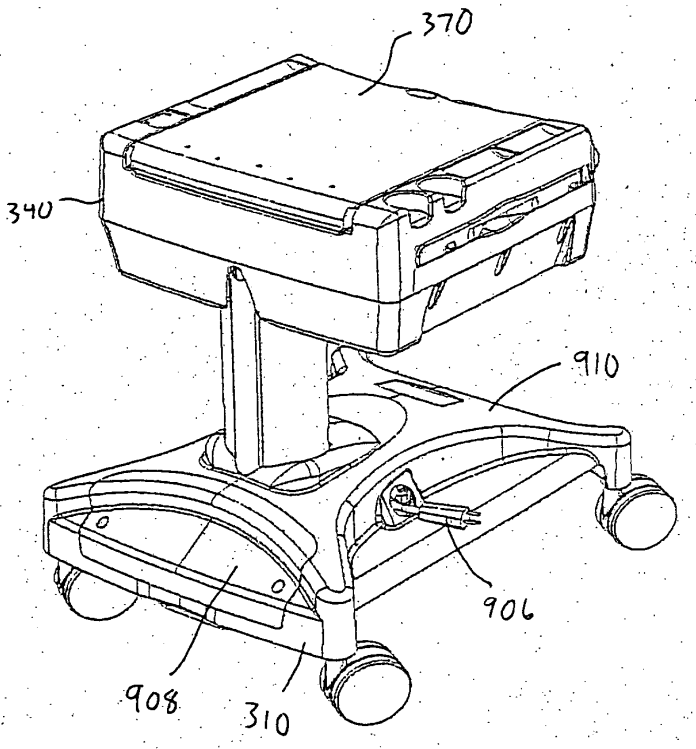

370
340
910
906
908
310

Fig. 14

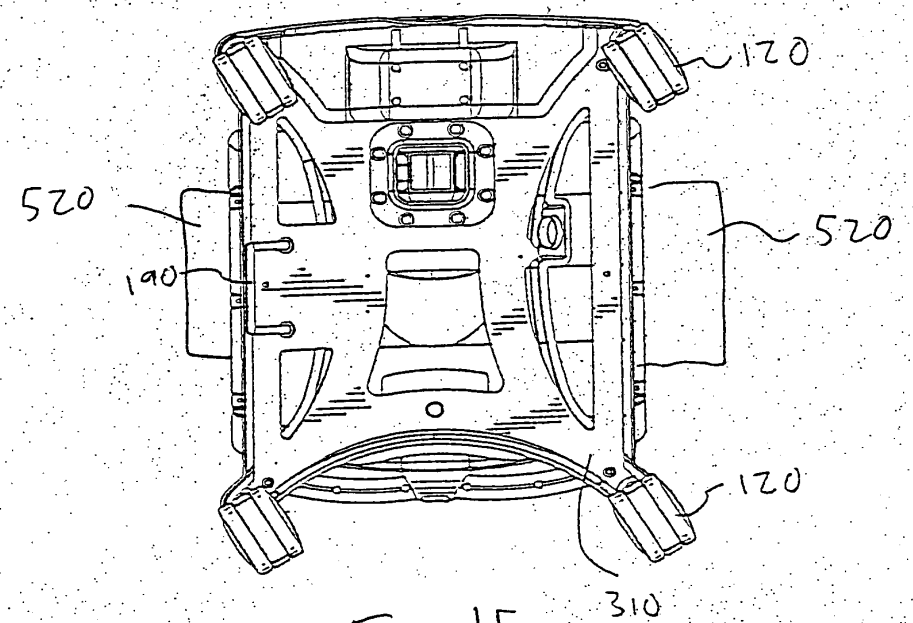


Fig. 15

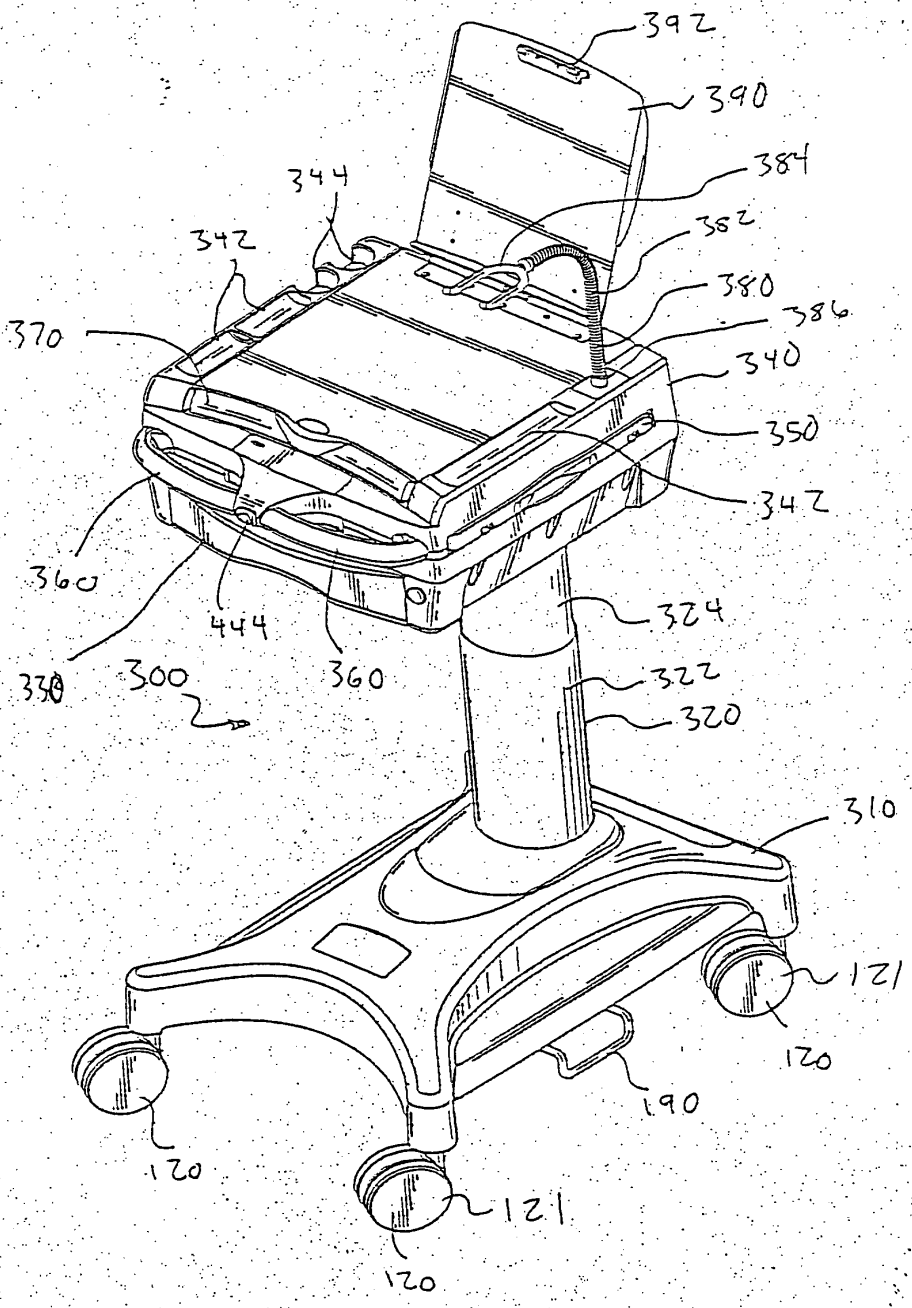

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342
382
380
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370
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444
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121
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190
120
121
120

Fig. 16

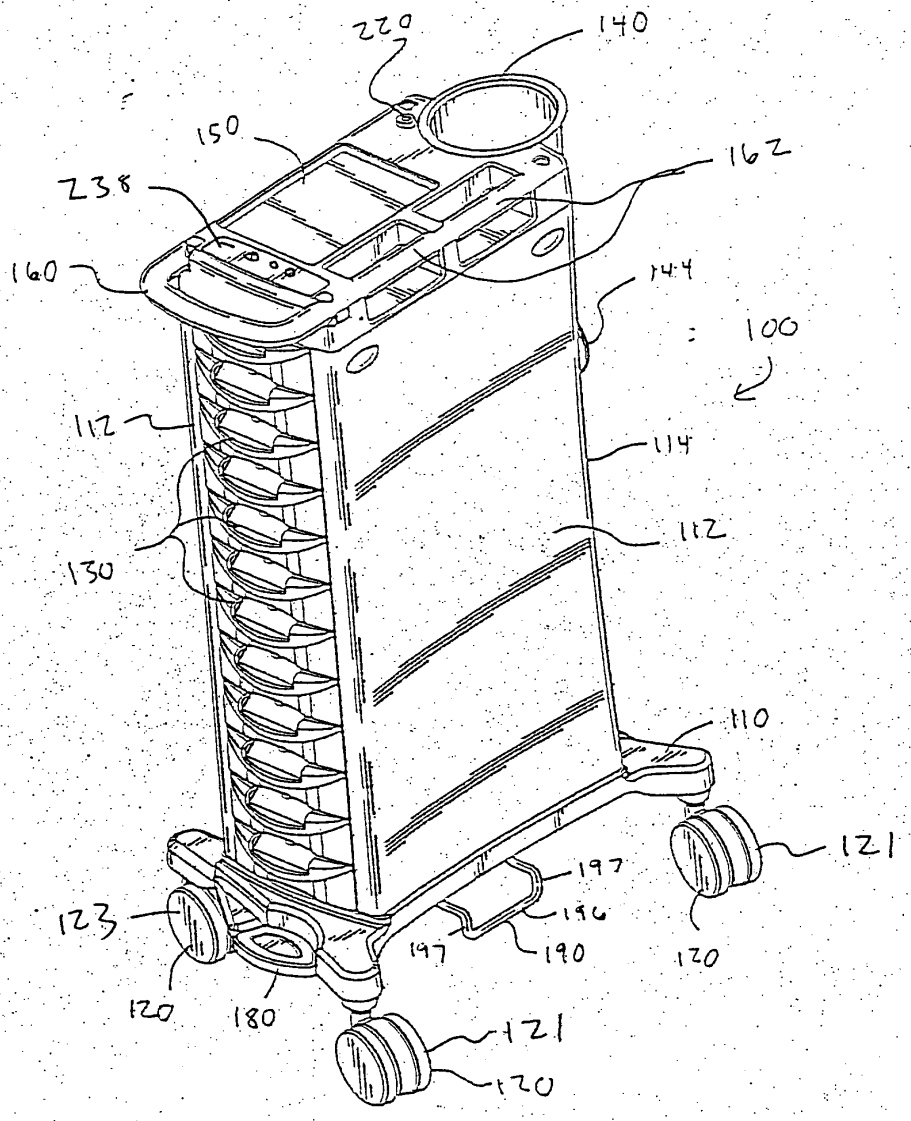

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238
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180
121
120

Fig. 17

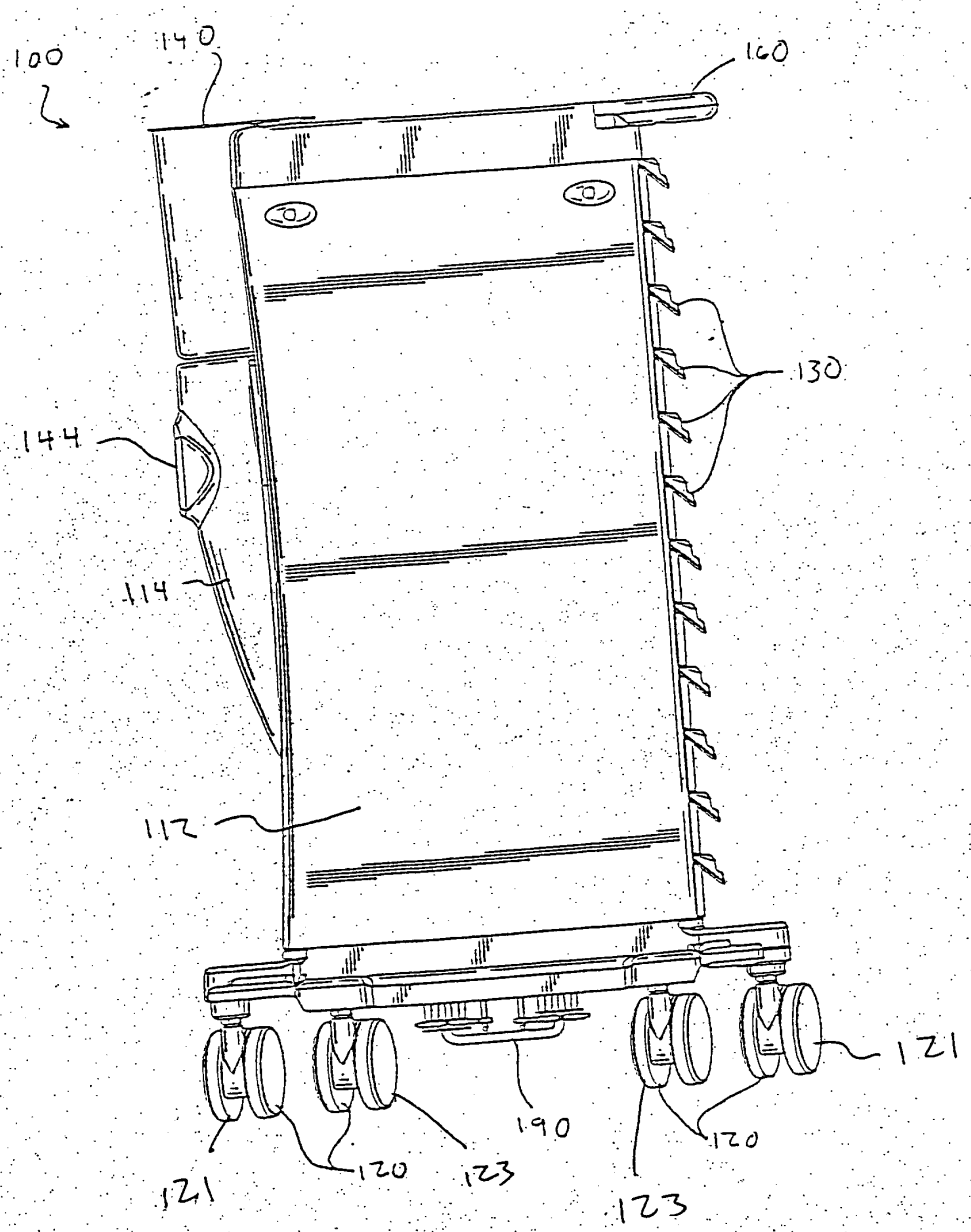


Fig. 18

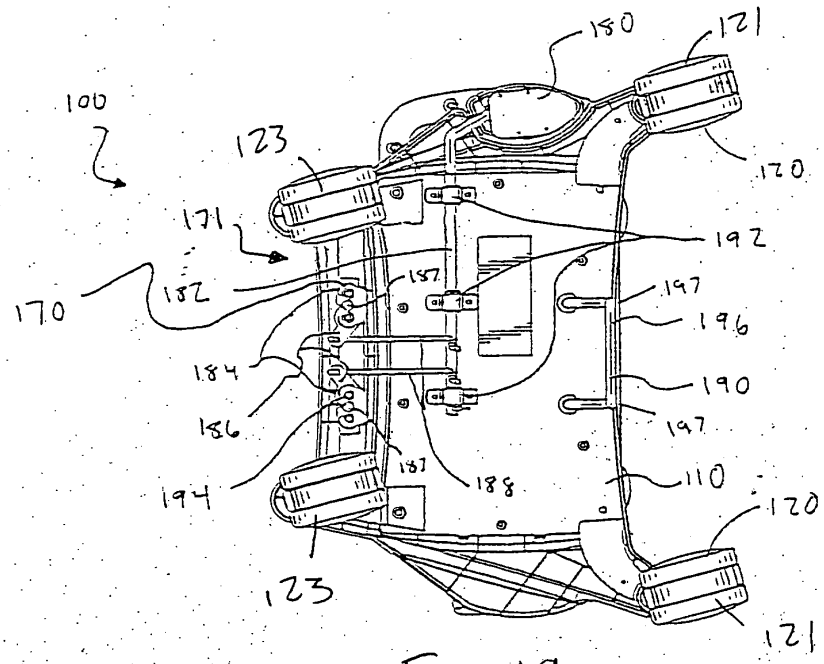

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121
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120
123
121

Fig. 19

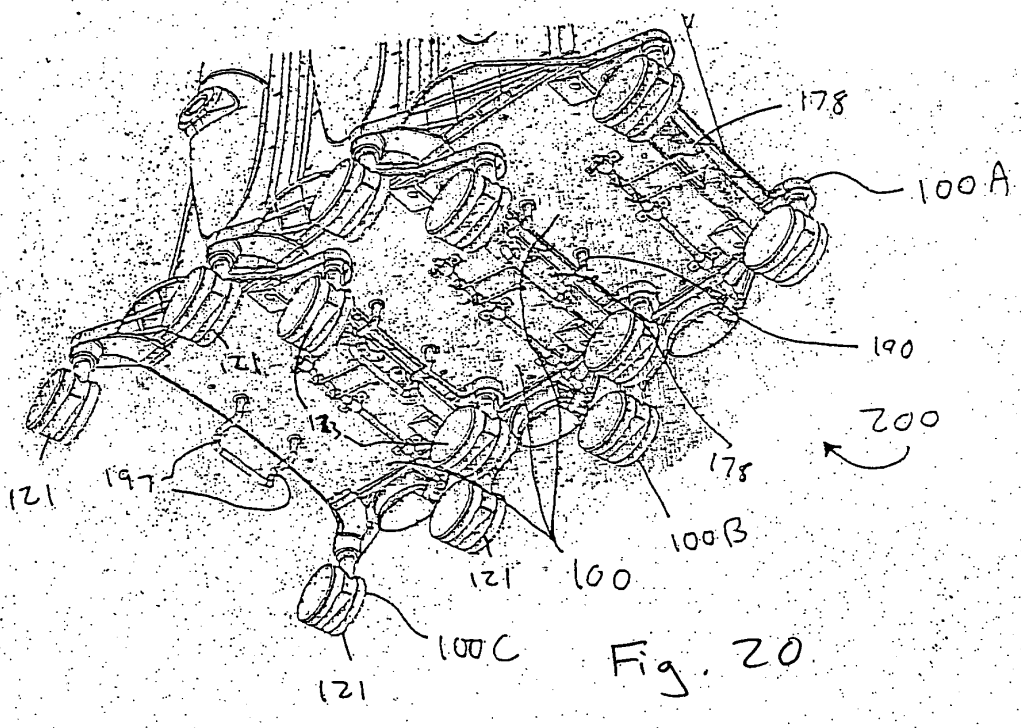

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200
121
197
178
100B
121
100
100C
121

Fig. 20

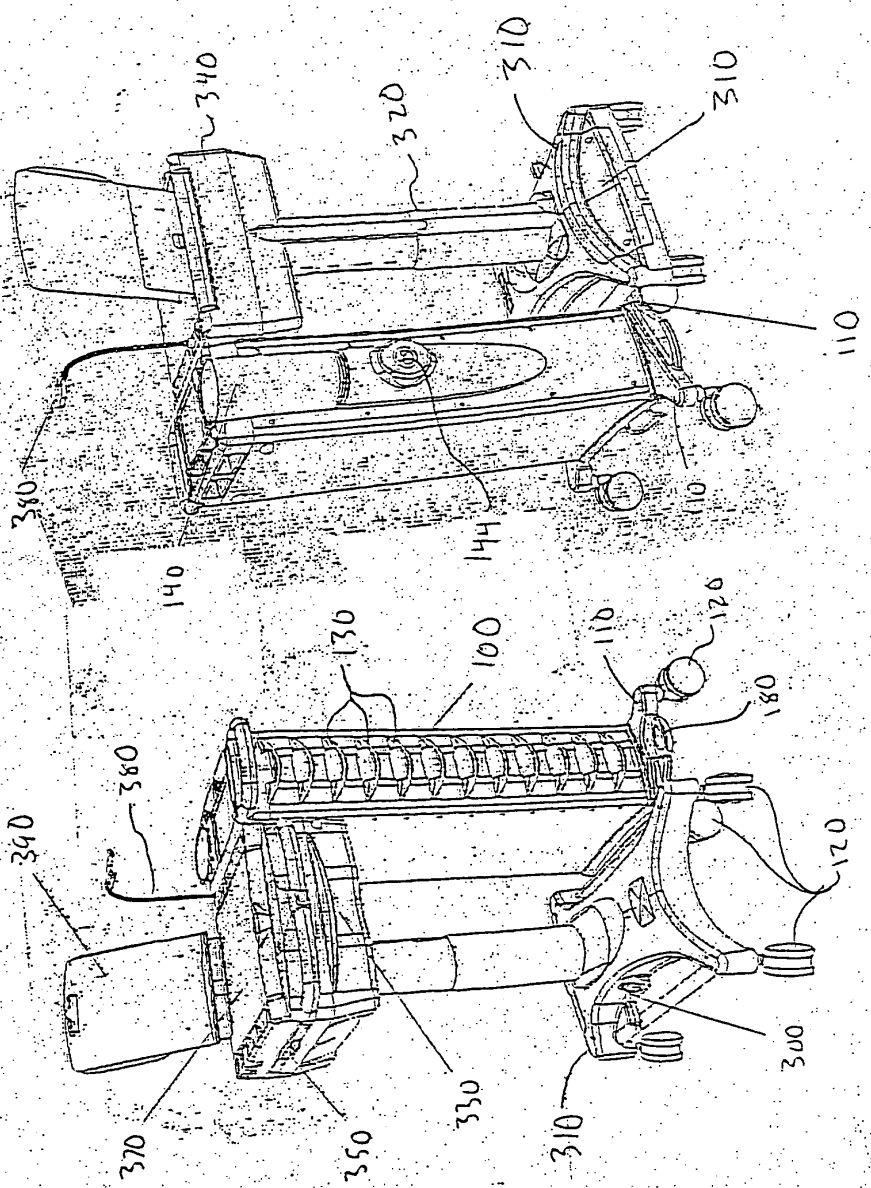


Fig. 21B

Fig. 21A

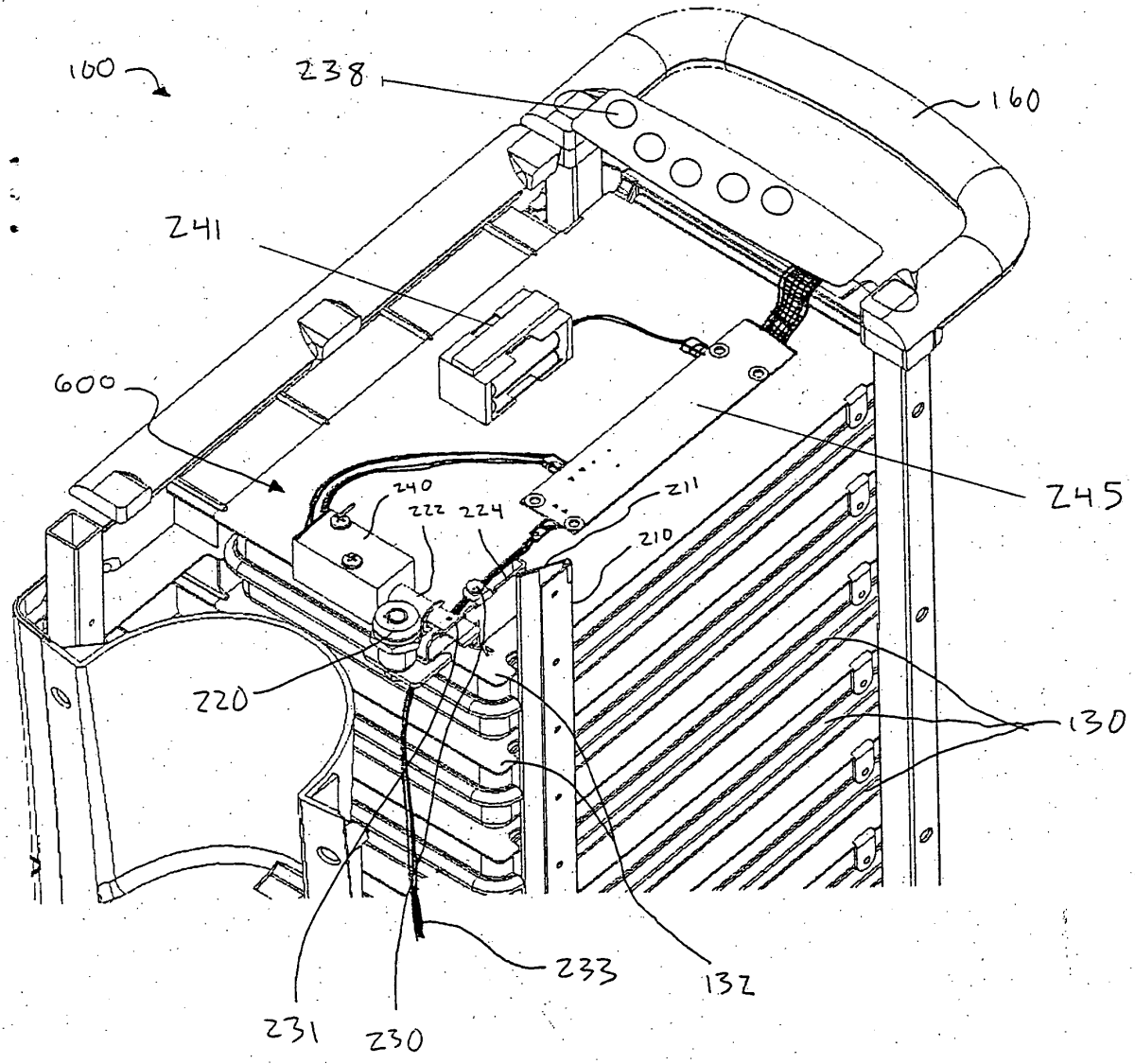

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241
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211
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245
220
130
233
132
231
230

Fig. 22

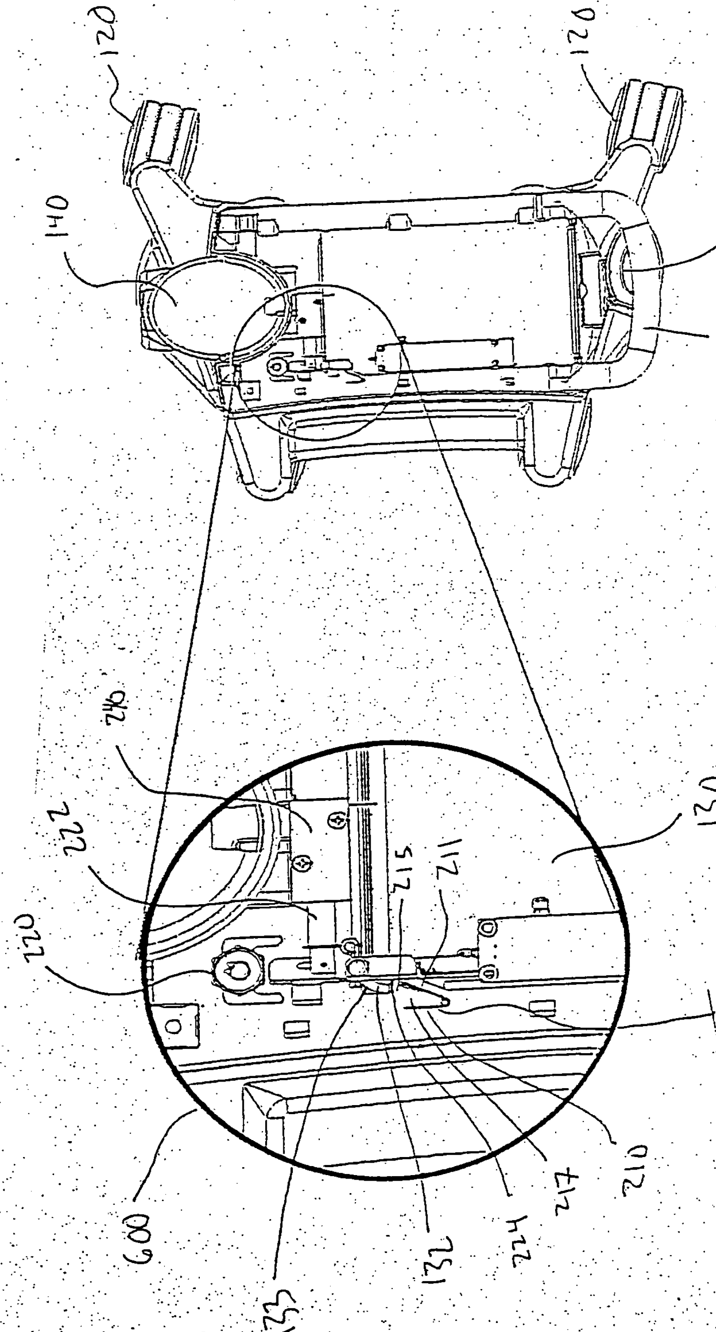

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213
210
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224
132
133
600

Fig. 23

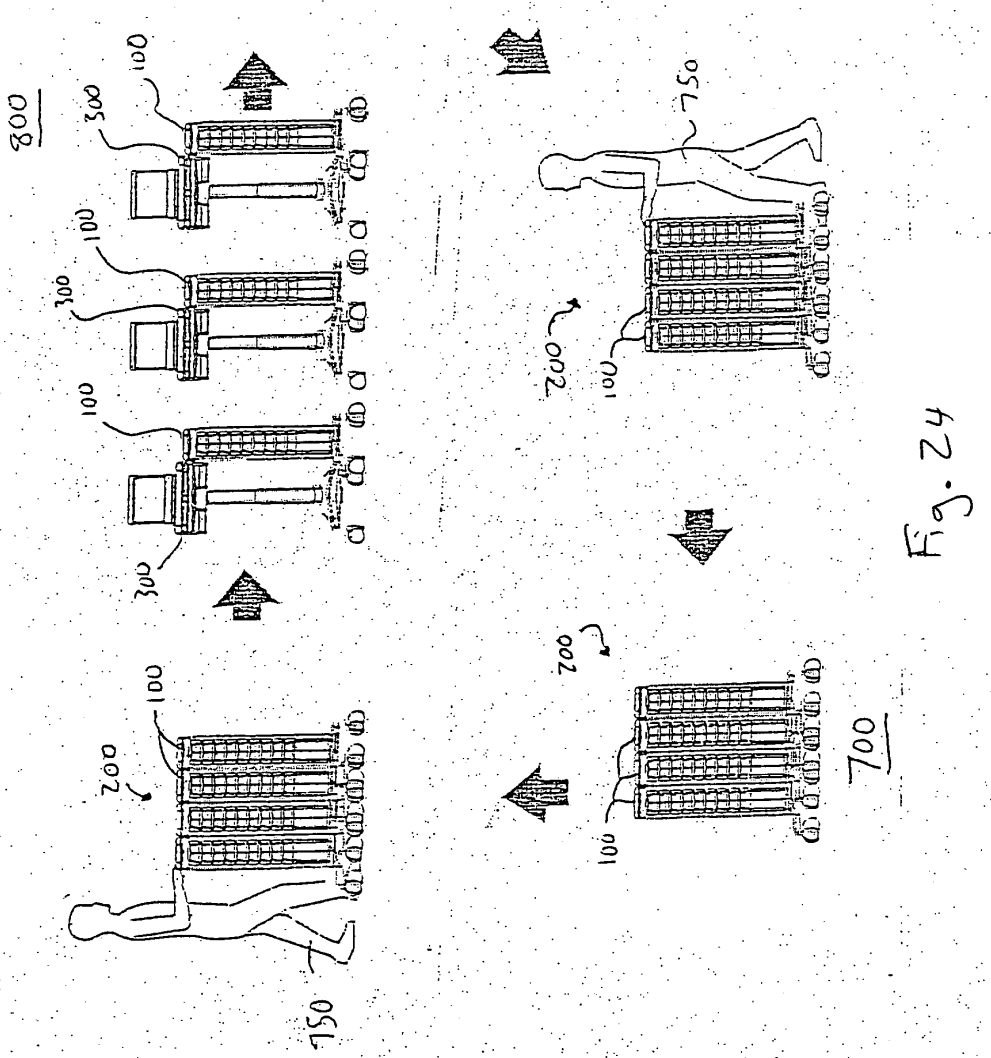


Fig. 24

Application Data Sheet

Application Information

Application Type::	Regular
Subject Matter::	Utility
Suggested classification::	
Suggested Group Art Unit::	
CD-ROM or CD-R?::	None
Computer Readable Form (CRF)?::	No
Title::	MEDICAL CART, MEDICATION MODULE, HEIGHT ADJUSTMENT MECHANISM, AND METHOD OF MEDICATION TRANSPORT
Attorney Docket Number::	086554-1056
Request for Early Publication?::	No
Request for Non-Publication?::	No
Suggested Drawing Figure::	1
Total Drawing Sheets::	20
Small Entity?::	No
Petition included?::	No
Secrecy Order in Parent Appl.?::	No

Applicant Information

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Radmond Vincent
Family Name::	ARCETA
City of Residence::	Manassas
State or Province of Residence::	VA

Country of Residence::	US
Street of mailing address::	10503 Lariat Lane, Apt. 12
City of mailing address::	Manassas
State or Province of mailing address::	VA
Postal or Zip Code of mailing address::	20109

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Craig Kevin
Family Name::	ROGERS
City of Residence::	Stephens City
State or Province of Residence::	VA
Country of Residence::	US
Street of mailing address::	102 Lariat Court
City of mailing address::	Stephens City
State or Province of mailing address::	VA
Postal or Zip Code of mailing address::	22655

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Kevin Thomas
Family Name::	FITZPATRICK
City of Residence::	Winchester
State or Province of Residence::	VA
Country of Residence::	US
Street of mailing address::	325 George Street

City of mailing address::	Winchester
State or Province of mailing address::	VA
Postal or Zip Code of mailing address::	22601

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Bryan Scott
Family Name::	RITCHIE
City of Residence::	Clear Brook
State or Province of Residence::	VA
Country of Residence::	US
Street of mailing address::	779 Ruebuck Road
City of mailing address::	Clear Brook
State or Province of mailing address::	VA
Postal or Zip Code of mailing address::	22624

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Marin John
Family Name::	PHILPOTT
City of Residence::	Winchester
State or Province of Residence::	VA
Country of Residence::	US
Street of mailing address::	611 Manito Trail
City of mailing address::	Winchester

State or Province of mailing address::	VA
Postal or Zip Code of mailing address::	22602

Applicant Authority Type::	Inventor
Primary Citizenship Country::	US
Status::	Full Capacity
Given Name::	Christina Louise
Family Name::	FORTNER
City of Residence::	Stephens City
State or Province of Residence::	VA
Country of Residence::	US
Street of mailing address::	151 Lexington Court
City of mailing address::	Stephens City
State or Province of mailing address::	VA
Postal or Zip Code of mailing address::	22655

Correspondence Information

Correspondence Customer Number::	22428
E-Mail address::	PTOMailWashington@Foley.com

Representative Information

Representative Customer Number::	22428	

Domestic Priority Information

Application::	Continuity Type::	Parent Application::	Parent Filing Date::
This Application	An application claiming the benefit under 35 USC 119(e)	60/448,920	02/24/2003
This Application	An application claiming the benefit under 35 USC 119(e)	60/484,658	07/07/2003
This Application	An application claiming the benefit under 35 USC 119(e)	60/518,649	11/12/2003
This Application	An application claiming priority to	29/196,714	01/02/2004
This Application	An application claiming priority to	29/196,713	01/02/2004
This Application	An application claiming priority to	29/196,712	01/02/2004

Foreign Priority Information

Country::	Application number::	Filing Date::	Priority Claimed::

Assignee Information

Assignee name:: RUBBERMAID COMMERCIAL PRODUCTS LLC