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UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

April 01, 2025

THIS IS TO CERTIFY THAT ANNEXED IS A TRUE COPY FROM THE RECORDS OF THIS OFFICE OF THE FILE WRAPPER AND CONTENTS OF:

APPLICATION NUMBER: 18/448,417

FILING DATE: August 11, 2023 PATENT NUMBER: 12275449 ISSUE DATE: April 15, 2025

Certified by

Coke Moy Smut

Acting Director of the United States Patent and Trademark Office





ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION # 18/448,417 RECEIPT DATE / TIME

08/11/2023 01:31:33 PM ET

ATTORNEY DOCKET # **34757-2775**

Title of Invention

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Application Information

APPLICATION TYPE Utility - Nonprovisional Application

PATENT# -

CONFIRMATION # 3414

under 35 USC 111(a)

FILED BY

Angela Staschke

PATENT CENTER # 62601803

FILING DATE

FIRST NAMED

Mark ZEHFUSS

CUSTOMER # 134811

INVENTOR

CORRESPONDENCE ADDRESS

AUTHORIZED BY Umar Bakhsh

Documents

TOTAL DOCUMENTS: 6

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
34757-2775 ADS.pdf	9	Application Data Sheet	2174 KB
34757-2775 POA.pdf	2	Power of Attorney	352 KB
34757-2775 Drawings.pdf	18	Drawings-only black and white line drawings	720 KB
34757-2775 Application- APP.TEXT.docx	24	Application body structured text document	41 KB
Warning: Bookmarks were found and have	been remov	ved.	
34757-2775 Signed Formalspdf	4	Oath or Declaration filed	383 KB

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
34757-2775 ADS.pdf	A90AD770047B8552F8BBF7AEC4056A069AC953F067FBE3605 0F23AA922414D761C804BBEFD8C873114FFFA47D2513B40D3 5DBEC9BCCFC213B515553C4C515794
34757-2775 POA.pdf	E3D36257915E6B4B76FF5A464E500345FE441C24DC75ACADC B44738D04B2BA378E234D2AE9C2221B2443A52AB30CDC3476 3DEBFCFA0B7E6F3169F517AF49397B
34757-2775 Drawings.pdf	13D9D9AA61B7BDEE240F7DC8D52211AC7341D984B5A0BEA0 F3AD15DE688C9CDD9BB3957414C22C05E91F5EC4FBDC9680 6F65CCE769A08E87B091E7E60940F712
34757-2775 Application- APP.TEXT.docx	D9090BF68F37FA3C73C97481A781D02BDC5F7D24AE39E42D CA64C9209069EE496D999A27D378E727256246301218DEEC14 B62D4E882647F0AB9303E1822569C7
34757-2775 Signed Formalspdf	7C8E9A16094BE8AA2EB3295BC846396DB312644A08A5716611 033486AFBD43BBC0475138B55EEA58B3411C238F5FA042538F D8E7CAE7DDF1E5473A36167F5DDB
34757-2775 Application.pdf	5F967661E4A8C84D5C64385AFDA38204C8D62BF69AD0C1F6B E93EA9D30961AB2050445440BA1EF0A45B30A8C5D828635F0 AD515332AF950F24AC3D6EDDADB715

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 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.



ELECTRONIC PAYMENT RECEIPT

APPLICATION # **18/448,417**

RECEIPT DATE / TIME

08/11/2023 01:31:33 PM ET

ATTORNEY DOCKET # **34757-2775**

Title of Invention

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

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Utility - Nonprovisional Application

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CONFIRMATION # 3414

under 35 USC 111(a)

FILED BY

Angela Staschke

PATENT CENTER # 62601803

AUTHORIZED BY

Umar Bakhsh

CUSTOMER # 134811

FILING DATE

CORRESPONDENCE ADDRESS FIRST NAMED INVENTOR

Mark ZEHFUSS

Payment Information

PAYMENT METHOD

DA / 195029

PAYMENT TRANSACTION ID E20238AD33237684

PAYMENT AUTHORIZED BY Angela Staschke

PRE-AUTHORIZED ACCOUNT

195029

PRE-AUTHORIZED CATEGORY

37 CFR 1.16 (National application filing, search, and examination fees); 37 CFR 1.17 (Patent application and reexamination processing fees); 37 CFR 1.19 (Document supply fees); 37 CFR 1.20 (Post Issuance fees); 37 CFR 1.21

(Miscellaneous fees and charges)

FEE CODE	DESCRIPTION	ITEM PRICE(\$)	QUANTITY	ITEM TOTAL(\$)
1111	UTILITY PATENT APPL. SEARCH FEE	700.00	1	700.00
1011	BASIC FILING FEE - UTILITY (PAPER FILING ALSO REQUIRES NON-ELECTRONIC FILING FEE UNDER 1.16(T))	320.00	1	320.00
1311	PATENT APPL. EXAMINATION FEE	800.00	1	800.00
			TOTAL	\$1,820.00

AMOUNT:

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New Applications Under 35 U.S.C. 111

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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.

Document Description: Power of Attorney

PTO/AIA/82A (07-13) Approved for use through 11/30/2014. OMB 0651-0051

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TRANSMITTAL FOR POWER OF ATTORNEY TO ONE OR MORE REGISTERED PRACTITIONERS

NOTE: This form is to be submitted with the Power of Attorney by Applicant form (PTO/AIA/82B) to identify the application to which the Power of Attorney is directed, in accordance with 37 CFR 1.5, unless the application number and filing date are identified in the Power of Attorney by Applicant form. If neither form PTO/AIA/82A nor form PTO/AIA82B identifies the application to which the Power of Attorney is directed, the Power of Attorney will not be recognized in the application.

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Application Number Filed Herewith						
Filing Date Filed Herewith						
First Named Inver	ntor					
Title		REMOVABLE SEAT ATTACHMENT FO	R A STROLLER			
Art Unit		Not yet assigned				
Examiner Name		Not yet assigned				
Attorney Docket Number		34757-2775				
SIGNATU	JRE of A	pplicant or Patent Practitioner				
Signature	/Uma	ır R. Bakhsh/	Date (Optional)			
Name	Umar R.	. Bakhsh	Registration Number			
Title (if Applicant is a juristic entity)	Attorney for Applicant					
Applicant Name (if Ap		uristic entity) Baby Jogger, L in accordance with 37 CFR 1.33. See 37 CFR 1.4(d) for				
more than one applica			or signature requirements and certifications. If			
*Total of	1 1	forms are submitted.				

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Doc Code: PA..

Document Description: Power of Attorney

PTO/AIA/82B (07-13)

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POWER OF ATTORNEY BY APPLICANT

I hereby revoke all previous the boxes below.	ous powers of attorney given in the applica	ation identified in <u>either</u> the attached transmittal letter or				
(Note: TI I hereby appoint the to transact all busing the attached trans OR I hereby appoint P all business in the	iness in the United States Patent and Trademar smittal letter (form PTO/AIA/82A) or identified ab Practitioner(s) named in the attached list (form P	lowing Customer Number as my/our attorney(s) or agent(s), and rk Office connected therewith for the application referenced in pove: 134811 PTO/AIA/82C) as my/our attorney(s) or agent(s), and to transact nnected therewith for the patent application referenced in the				
letter or the boxes abo		the application identified in the attached transmittal				
OR The address asso OR	ociated with Customer Number:					
Firm or Individual Name						
Address						
City	State	Zip				
Country						
Telephone	<u> </u> En	nail				
I am the Applicant (if the Ap	pplicant is a juristic entity, list the Applicant nam	ne in the box):				
BABY JOGG	BABY JOGGER, LLC					
Inventor or Joint I	Inventor (title not required below)					
Legal Representati	tive of a Deceased or Legally Incapacitated Inve	entor (title not required below)				
Assignee or Perso	on to Whom the Inventor is Under an Obligation	to Assign (provide signer's title if applicant is a juristic entity)				
	erwise Shows Sufficient Proprietary Interest (e.g oncurrently being filed with this document) (prov	., a petition under 37 CFR 1.46(b)(2) was granted in the vide signer's title if applicant is a juristic entity)				
	SIGNATURE of Applica	ant for Patent				
·····	title is supplied below) is authorized to act on beh	alf of the applicant (e.g., where the applicant is a juristic entity).				
Signature		Date (Optional) // Sapt 20/0				
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	Assistant Secretary, Chief Patent Counsel					
	form must be signed by the applicant in accordance than one applicant, use multiple forms.	ce with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements				
Total of	forms are submitted.					

This collection of information is required by 37 CFR 1.131, 1.32, and 1.33. The information is required to obtain or retain a basefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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

Application Data Sheet 37 CFR 1.76			Attorney	Attorney Docket Number 34757-2775									
			. 7 0	Application	Application Number								
Title o	Title of Invention REMOVABLE SEAT ATTACHMENT FOR A STROLLER												
bibliogra This do	aphic data a cument may	rranged in a f be complete	t of the provisional of format specified by the ed electronically and cluded in a paper file	he Un d subi	ited States Pa mitted to the	tent ar	ıd Trademaı	rk Of	ffice as outli	ned in 37 (CFR 1.76.		
Secre	ecy Or	der 37 (CFR 5.2:										
			olication associate ers only. Applica										suant to
Inven	tor Inf	ormatio	on:										
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City	Glen Alle	en	S	tate/	Province	VA	Cou	ntry	y of Resid	dence	US		
Mailing	Address	of Invent	or: 										
Addre	ss 1		10804 Cherry Hi	ill Driv	/e								
Addre										1			
City		en Allen	T		-		State/P	- 1		VA			
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Custo	mer Num	ber	134811		4		***************************************		***************************************				
Email	Email Address PatentDocket@eversheds-sutherland.us Add Email Remove Email						Email						
Appl	ication	Inform	nation:										
Title o	of the Inve	ention	REMOVABLE	SEAT	ATTACHME	ENT F	OR A STR	ROLI	LER				
Attorr	ney Dock	cket Number 34757-2775 Small Entity Status Claime						d 🗌					
Applic	cation Ty	ре	Nonprovisional				1						
Subje	ct Matter		Utility										
Total	Number o	of Drawing	Sheets (if any	')	18		Sugge	este	ed Figure	for Pub	lication	(if any)	

Application Data Sheet 37 CFR 1.76			At	Attorney Docket Number 34		347	57-2775	
		K 1.70	Αp	oplication Numbe	r			
Title of Invention REMOVABLE SEAT ATTACHMENT FOR A STROLLER								
Filing By Refe	erence:							
application papers inclu	ding a specification ar	d any draw	ings	are being filed. Any	domestic	bene	CFR 1.57(a). Do not comple efit or foreign priority inform and "Foreign Priority Inform	mation must be
For the purposes of a fill reference to the previou							esent application are repla 57(a).	ced by this
Application number of the previously filed application Filing date (YYYY-MM-DD) Intellectual Property Authority or Count filed application							thority or Country	
Publication I	nformation:							
Request Early	Publication (Fee re	equired at	tim	e of Request 37	CFR 1.2	19)		
35 U.S.C. 122 subject of an a	(b) and certify that	the inver	ntion	disclosed in the	attached	l app	ication not be publishe plication has not and v rnational agreement, th	will not be the
Representativ	ve Informatio	n:						
this information in the	Application Data Sher Number or comple	eet does n te the Rep	ot co	onstitute a power or entative Name sec	fattorney	in the	of attorney in the appli e application (see 37 CF) both sections are comple	R 1.32).
Please Select One	: • Custom	er Number		○ US Patent P	ractitioner	.	Limited Recognition	n (27 CED 11 0)
Customer Number	134811	ei Number		US Paterit P				11 (37 CFK 11.9)
Domestic Ber		Stage	In	formation:				
	r from a PCT applic e required by 35 U	ation. Pro S.C. 119	ovidi (e) c	ng benefit claim i or 120, and 37 CF	informatio	on in	, 120, 121, 365(c), or 3 the Application Data \$ eld blank.	

Application Number	Continuity Type	Prior Application Number	Filing or 371(c) Date (YYYY-MM-DD)	
	Continuation of	16903292	2020-06-16	
	Continuation of	16903292	2020-06-16	

Prior Application Status | Pending

Remove

Application Da	ta Sheet 37 CFR 1.76	Attorney Docket Number	34757-2775
Application ba	ta Sheet 37 OF K 1.70	Application Number	
Title of Invention	REMOVABLE SEAT ATTACH	IMENT FOR A STROLLER	

D: 4 ::	01.1						
Prior Applicati	Patented		Remove				
Application Number	Cont	tinuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Pat	ent Number	Issue Date (YYYY-MM-DD)
16903292	Continua	tion of	15912901	2018-03-06	10730)543	2020-08-04
Prior Applicati	on Status	Patented				Remo	ve
Application Number	Cont	tinuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Pat	ent Number	Issue Date (YYYY-MM-DD)
15912901	Continua	tion of	15225326	2016-08-01	99443	305	2018-04-17
Prior Applicati	on Status	Expired				Remo	ve
Application N	lumber	Cont	inuity Type	Prior Application N	umber		371(c) Date /-MM-DD)
15225326		Claims benefit	t of provisional	62311224		2016-03-21	
Prior Applicati	on Status	Patented				Remo	ve
Application Number	Cont	tinuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Pat	ent Number	Issue Date (YYYY-MM-DD)
15225326	Continua	tion in part of	14597420	2015-01-15	94035	550	2016-08-02
Prior Applicati	on Status	Patented				Remo	ve
Application Number	Cont	tinuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)	Pat	ent Number	Issue Date (YYYY-MM-DD)
14597420	Continua	tion of	14261558	2014-04-25	8955869		2015-02-07
Prior Applicati	on Status	Abandoned		Remove			
Application N	lumber	Cont	inuity Type	Prior Application Number			371(c) Date /-MM-DD)
14261558		Continuation of	of	12631375		2019-12-04	
Prior Applicati	on Status	Expired				Remo	ve
Application N	Application Number Conti		inuity Type	Prior Application N			371(c) Date /-MM-DD)
12631375		Claims benefit	of provisional	61119920		2008-12-04	
	Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the Add button.						

Foreign Priority Information:

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55. When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)ⁱ the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(i)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Application Data Sheet 37 CFR 1.76		Attorne	ey Docket Number	34757-2775		
Application Data Sheet 37 CFK 1.70			Applica	ation Number		
Title of Invention	of Invention REMOVABLE SEAT ATTACHMENT FOR A STROLLER					
				i		Remove
Application Number Country ⁱ		Filing Date (YYYY-MM-DD)		-MM-DD)	Access Code ⁱ (if applicable)	
Additional Foreign Priority Data may be generated within this form by selecting the Add button.						

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also
contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March
16, 2013.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March
16, 2013, will be examined under the first inventor to file provisions of the AIA.

Application Da	ata Shoot 37 CED 1 76	Attorney Docket Number	34757-2775
Application Data Sheet 37 CFR 1.76		Application Number	
Title of Invention	REMOVABLE SEAT ATTACH	IMENT FOR A STROLLER	

Authorization or Opt-Out of Authorization to Permit Access:

When this Application Data Sheet is properly signed and filed with the application, applicant has provided written authority to permit a participating foreign intellectual property (IP) office access to the instant application-as-filed (see paragraph A in subsection 1 below) and the European Patent Office (EPO) access to any search results from the instant application (see paragraph B in subsection 1 below).

Should applicant choose not to provide an authorization identified in subsection 1 below, applicant <u>must opt-out</u> of the authorization by checking the corresponding box A or B or both in subsection 2 below.

NOTE: This section of the Application Data Sheet is **ONLY** reviewed and processed with the **INITIAL** filing of an application. After the initial filing of an application, an Application Data Sheet cannot be used to provide or rescind authorization for access by a foreign IP office(s). Instead, Form PTO/SB/39 or PTO/SB/69 must be used as appropriate.

- 1. Authorization to Permit Access by a Foreign Intellectual Property Office(s)
- A. <u>Priority Document Exchange (PDX)</u> Unless box A in subsection 2 (opt-out of authorization) is checked, the undersigned hereby <u>grants the USPTO authority</u> to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the State Intellectual Property Office of the People's Republic of China (SIPO), the World Intellectual Property Organization (WIPO), and any other foreign intellectual property office participating with the USPTO in a bilateral or multilateral priority document exchange agreement in which a foreign application claiming priority to the instant patent application is filed, access to: (1) the instant patent application-as-filed and its related bibliographic data, (2) any foreign or domestic application to which priority or benefit is claimed by the instant application and its related bibliographic data, and (3) the date of filing of this Authorization. See 37 CFR 1.14(h) (1).
- **B.** Search Results from U.S. Application to EPO Unless box B in subsection 2 (opt-out of authorization) is checked, the undersigned hereby grants the USPTO authority to provide the EPO access to the bibliographic data and search results from the instant patent application when a European patent application claiming priority to the instant patent application is filed. See 37 CFR 1.14(h)(2).

The applicant is reminded that the EPO's Rule 141(1) EPC (European Patent Convention) requires applicants to submit a copy of search results from the instant application without delay in a European patent application that claims priority to the instant application.

2.	Opt-Out of Authorizations to Permit Access by a Foreign Intellectual Property Office(s)	

A. Applicant DOES NOT authorize the USPTO to permit a participating foreign IP office access to the instant
application-as-filed. If this box is checked, the USPTO will not be providing a participating foreign IP office with
any documents and information identified in subsection 1A above.

B. Applicant DOES NOT authorize the USPTO to transmit to the EPO any search results from the instant patent
application. If this box is checked, the USPTO will not be providing the EPO with search results from the instant
application.

NOTE: Once the application has published or is otherwise publicly available, the USPTO may provide access to the application in accordance with 37 CFR 1.14.

Application Da	ita Sheet 37 CFR 1.76	Attorney Docket Number	34757-2775
Application Data Sheet 37 GFK 1.70		Application Number	
Title of Invention	REMOVABLE SEAT ATTACH	IMENT FOR A STROLLER	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.								
Applicant	Applicant 1							
If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.								
Assignee			Legal Representative ur	der 35 U.S.C. 117	○ Joint Inventor			
O Person to	whom the inve	entor is oblig	ated to assign.	O Person who sho	ws sufficient proprietary interest			
If applicant i	s the legal re	presentativ	ve, indicate the authority to t	le the patent applicati	ion, the inventor is:			
Name of the	e Deceased o	or Legally I	ncapacitated Inventor:					
If the Appli	cant is an Or	ganization	check here.					
Organization Name Baby Jogger, LLC								
Mailing Ad	dress Infor	mation Fo	r Applicant:					
Address 1		6655 F	55 Peachtree Dunwoody Road					
Address 2								
City Atlant		ā	State/Province	GA				
Country US			Postal Code	30328				
Phone Number				Fax Number				
Email Address								
Additional Applicant Data may be generated within this form by selecting the Add button.								

Assignee Information including Non-Applicant Assignee Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

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.

Application Data Sheet 37 CFR 1.76			Attorney Doc	ket Number	34757-2	34757-2775		
			Application N	lumber				
Title of Invent	Title of Invention REMOVABLE SEAT ATTACHMENT FOR A STROLLER							
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Application Data Sheet 37 CFR 1.76		Attorney Docket Number	34757-2775
		Application Number	
Title of Invention	REMOVABLE SEAT ATTACH	IMENT FOR A STROLLER	

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REMOVABLE SEAT ATTACHMENT FOR A STROLLER

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 16/903,292, filed June 16, 2020, which is a continuation of U.S. Patent Application No. 15/912,901, filed March 6, 2018, issued as U.S. Patent No. 10,730,543, which is a continuation of 15/225,326, filed August 1, 2016, issued as U.S. Patent No. 9,944,305, which claims the benefit of U.S. Application No. 62/311,224 filed March 21, 2016, and is a continuation-in-part of U.S. Patent Application No. 14/597,420, filed January 15, 2015, issued as U.S. Patent No. 9,403,550, which is a continuation of U.S. Patent Application No. 14/261,558, filed on April 25, 2014, issued as U.S. Patent No. 8,955,869, which is a continuation of U.S. Application No. 12/631,375 filed December 4, 2009, which claims the benefit of U.S. Application No. 61/119,920, filed December 4, 2008, the contents of which are all incorporated by reference.

TECHNICAL FIELD

[0002] Embodiments disclosed herein are generally related to children's stroller systems and more particularly to apparatuses and methods for a removable seat attachment for a stroller that is capable of supporting a seat including, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a car seat, or a baby carrier.

BACKGROUND

[0003] Parents or guardians with multiple young children may have difficulty transporting their children from place to place. Children are slow, easily distracted and, therefore, may lag behind. In response, many parents and/or guardians have purchased double seat strollers allowing the parent or guardian to push two children simultaneously and thus allow them to more efficiently run errands, take walks, or jog. As such, a double seat stroller allows the parent or guardian with multiple young children more freedom than they would have with only a single seat stroller.

[0004] However, permanently fixed double seat strollers also have certain disadvantages. Double seat strollers are substantially larger (wider and/or longer) than single seat strollers and are, therefore, more difficult to maneuver through doorways and down aisles in stores. While, the

benefits of being able to accommodate two children at one time in a double seat stroller typically

offset these disadvantages, when the parent or guardian has only one child with them, the benefits of the double seat stroller are not realized but the disadvantages still exist.

[0005] Stroller manufacturers have attempted to solve this problem by providing an adjustable stroller that can be modified from having a single seat to having two seats by providing attachments that provide a second seat for the second child that hangs under and slightly behind the seat of the single seat stroller. In other embodiments, the second seat can be attached to a seat attachment placed further forward in the stroller. The current attachment mechanisms can suffer from several drawbacks. These drawbacks include being permanently affixed to the stroller frame and taking up unnecessary space or creating a safety hazard for children not in the stroller when the second seat is not attached to the stroller. In addition, the covers for the seat attachments, for covering a portion of the seat attachment mechanism when not in use, are detachable and can be easily lost when the seat attachment is in use.

BRIEF DESCRIPTION OF THE EXAMPLE DRAWINGS

[0006] For a more complete understanding of the present disclosure and certain features thereof, reference is now made to the following description, in conjunction with the accompanying figures briefly described as follows:

[0007] FIG. 1 presents a side elevation view of a single stroller apparatus according to one example embodiment of the disclosure.

[0008] FIG. 2 presents a partial side elevation view of a seat attachment to convert a single stroller into a double stroller according to one example embodiment of the disclosure.

[0009] FIG. 3 presents a side elevation view of a combination of the single stroller of Figure 1 attached to the seat attachment of Figure 2 according to one example embodiment of the disclosure.

[0010] FIG. 4 presents a perspective view of a seat attachment capable of supporting a car seat on an attachment of Figure 2 according to one example embodiment of the disclosure.

[0011] FIG. 5 presents a side elevation view of a combination of the single stroller of Figure 1 attached to an attachment in the form of a tricycle-like riding device according to one example embodiment of the disclosure.

[0012] FIG. 6A presents a view of an accessory attachment for supporting an accessory on a stroller.

[0013] FIG. 6B presents a view of a bag or purse for attaching to the accessory attachment of Figure 6A according to one example embodiment of the disclosure.

[0014] FIG. 7 presents a perspective view of an attachment for supporting a seat comprising one wheel according to one example embodiment of the disclosure.

[0015] FIGS. 8A-H present multiple views of a stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters according to one example embodiment of the disclosure.

[0016] FIG. 9 presents a perspective view of one version of a stroller with left and right attachment frame members for attaching a second seat according to one example embodiment of the disclosure.

[0017] FIG. 10 presents a front elevation view of an attachment frame member according to one example embodiment of the disclosure.

[0018] FIG. 11 is a partial perspective view of the stroller showing the seat attachment housing according to one example embodiment of the disclosure.

[0019] FIG. 12 is a partial perspective view of the seat attachment housing according to one example embodiment of the disclosure.

[0020] FIG. 13A-C are partial perspective views of the removable seat attachment adapter removably coupled to the seat attachment housing according to one example embodiment of the disclosure.

[0021] FIG. 14A-C are partial perspective views of an alternative embodiment of the seat attachment housing according to another example embodiment of the disclosure.

DETAILED DESCRIPTION OF THE EXAMPLE EMBODIMENTS

[0022] Example embodiments of the invention now will be described more fully hereinafter with reference to the accompanying drawings, in which example embodiments are shown. The concept disclosed herein may, however, be embodied in many different forms and should not be construed as limited to the exemplary embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like, but not necessarily the same, elements throughout.

[0023] The example embodiments described herein and shown in the figures is described with reference to an infant or child's stroller that can be configured to adjust from a single seat stroller to a multi-seat stroller. While the example embodiments will generally be described with reference to adding or removing seats from the stroller, the reference to seats is for example purposes only, as the seat or portion that can be added or removed from the stroller can include, but is not limited to, a stroller seat, a baby seat, a bassinet, a pram, a car seat, or a baby carrier. Each of the stroller seat, baby seat, bassinet, pram, car seat, and/or baby carrier should individually be read as an alternative embodiment to the removable/added infant or child's stroller seat described below.

[0024] Certain dimensions and features of the example adjustable stroller are described herein using the term "approximately." As used herein, the term "approximately" indicates that each of the described dimensions is not a strict boundary or parameter and does not exclude functionally similar variations therefrom. Unless context or the description indicates otherwise, the use of the term "approximately" in connection with a numerical parameter indicates that the numerical parameter includes variations that, using mathematical and industrial principles accepted in the art (e.g., rounding, measurement or other systematic errors, manufacturing tolerances, etc.), would not vary the least significant digit.

[0025] In addition, certain relationships between dimensions of the adjustable stroller and between features of the adjustable stroller are described herein using the term "substantially." As used herein, the terms "substantially" and "substantially equal" indicates that the equal relationship is not a strict relationship and does not exclude functionally similar variations therefrom. Unless context or the description indicates otherwise, the use of the term "substantially" or "substantially equal" in connection with two or more described dimensions indicates that the equal relationship between the dimensions includes variations that, using mathematical and industrial principles accepted in the art (e.g., rounding, measurement or other systematic errors, manufacturing tolerances, etc.), would not vary the least significant digit of the dimensions. As used herein, the term "substantially constant" indicates that the constant relationship is not a strict relationship and does not exclude functionally similar variations therefrom. As used herein, the term "substantially parallel" indicates that the parallel relationship is not a strict relationship and does not exclude functionally similar variations therefrom.

[0026] As discussed above, parents or guardians may find themselves in a situation wherein it is more convenient to transport two children in a stroller, but at the same time find it inconvenient to

have both a single stroller and double stroller. Embodiments of the seat attachment solve this problem. In one aspect, an embodiment of the seat attachment for a stroller is capable of converting a single stroller into a double stroller. The seat attachment may support a seat such as, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. Therefore, the parent or guardian does not require both a single stroller and a double stroller. A stroller configured to receive a seat attachment for converting a single stroller into a double stroller provides convenience to the user. The single stroller may be connected to a double stroller by attaching the seat attachment to the single stroller and then attaching the second seat. As such, an embodiment of the seat attachment for converting a single stroller into a double stroller can include at least one connector portion capable of connecting to a stroller frame and a seat support element capable of supporting a seat.

[0027] Figure 1 presents a side elevation view of a single stroller apparatus 10 according to one example embodiment of the disclosure. Referring to Figure 1, it shows only one side of the single stroller 10, however, most components include a complementary component on the other side of the single stroller but are not shown in Figure 1. The example single stroller 10 includes a frame 12 that supports a seat 13. The frame 12 may optionally include at least one, and in certain embodiments preferably two, folding mechanisms 16 that allow the stroller 10 to be folded to a more convenient size for storing or transporting the stroller 10.

[0028] In the example embodiment of Figure 1, the seat 13 is shown as a typical stroller seat. However, other types of seats may be used in a single stroller. The seat 13 may be permanently affixed to the frame 12 or releasably connected, such that it is capable of being removed and substituted with a different seat. As used herein, "releasably connected" or "releasably attached" means the connection is not a permanent connection and that the connection is capable of being connected and disconnected by the user of the stroller 10 without requiring special tools or special skills. Releasably connections include, but are not limited to, buttons, snaps, friction fittings, interference fits, threaded connections, locking tabs, keyed connections, other fasteners, or the like. The frame 12 is supported on a pair of back wheels 14 and a pair of front wheels 15. In this example embodiment, the back wheels 14 are fixed and do not swivel or pivot on the frame 12 while the pair of front wheels 15 pivot to make turning the single stroller 10 easier and more convenient. Though, pivoting wheels may be preferred in certain strollers, strollers with fixed non-pivoting wheels are also common and considered as an option as part of this disclosure. In certain

example embodiments, the single stroller 10 does not require pairs of front 15 or rear 14 wheels and either the front pair of wheels 15 or the back pair of wheels 14 may be substituted with a single wheel. In certain example embodiments, the single stroller 10, including umbrella strollers, jogging strollers, all-terrain strollers, as well as other strollers may only include one front wheel 15.

[0029] The example single stroller 10 may also include one or more seat attachments that are capable of converting any style of single stroller to a double stroller, including strollers with one or two front wheels. In one example embodiment, the stroller 10 can include two attachment portions 17. In one example, the attachment portions 17 can be positioned on or near the front of the stroller 10 to allow the seat attachment and the seat to be connected to the front portion of the stroller 10. The attachment portions 17 can allow a seat attachment such as the seat attachment for converting the single stroller 10 to a double stroller, as shown in Figure 3, to be connected to the stroller. While only one seat attachment is shown in Figure 3, the stroller 10 could typically include two seat attachments as shown in Figure 3 or one seat attachment that can include two seat support elements. In certain example embodiments, the stroller 10 can include a left side and a right side attachment portion 17. The seat attachment for the stroller 10 can further include corresponding connector portions capable of connecting to the stroller frame at the attachment portions 17. Though the seat attachment for the stroller is described in relation to a single stroller, the attachment may similarly be attached to a double stroller. As such, example embodiments of the seat attachment may therefore be used to convert a double stroller into a triple stroller, if desired. [0030] Figure 2 presents a partial side elevation view of a seat attachment to convert a single stroller into a double stroller according to one example embodiment of the disclosure. Now referring to Figures 1 and 2, the example seat attachment 20 is shown in an unlocked and folded configuration. The seat attachment 20 includes a one or more connector portions 21 capable of connecting to the attachment frame members 24, two seat attachment elements 22 capable of supporting a seat; and a wheel 23. In this example embodiment, the connector portions 21 are connected to the rear of the seat attachment 20 allowing the seat attachment 20 to be connected to the front of a stroller, such as stroller 10 shown in Figure 1. In other example embodiments, the seat attachment 20 may include more than one wheel 23, one connector portion 21, one seat support element, or combinations of these elements. In example embodiments of the stroller with one wheel, the attachment frame member may be on the forks of the front wheel, for example.

[0031] The seat attachment 20 can include a wheel support frame 26 connecting the wheel 23 to the attachment frame member 24 of the attachment 20. Each attachment frame member 24 has a first and a second end. The first end is capable of connecting to a stroller frame and the second end can be connected to the seat support element 22. As shown in Figure 2, the seat attachment 20 can include a wheel support frame 26 that is pivotally connected to two attachment frame members 24. The wheel support frame 26 or the attachment frame 24 may span the width of the stroller between the two attachment portions 17. The pivotal connection 27 allows the seat attachment 20 to be folded and conveniently stored or transported but is not necessary for all example embodiments of the disclosure. The pivotal connection 27 can be optional and provide more convenience, however, other example embodiments of the seat attachment 20 can include a releasably connected wheel support frame or a rigid frame that may be incorporated to produce a seat attachment that has greater strength for use in situations where a stronger seat attachment may be desired, such as with all-terrain or jogging strollers, for example. The wheel support frame 26 may be connected at any point on the attachment frame 24. In certain example embodiments the wheel support frame 26 is connected to the attachment frame 24 near the connector portion 21 or near the middle of the attachment frame 24.

[0032] In certain example embodiments, the seat attachment without a wheel may include connector portion 21 or attachment frame member 24, and seat attachment member 22, for example. In this example embodiment, there may be no need for the pivotal connection 27, wheel support frame 26, sliding connector 25, or wheel 23.

[0033] The seat attachment 20 can also include a folding mechanism that includes a sliding connector 25 connected to a first end of a strut 28. A second end of the strut 28 can be pivotally connected to wheel support frame 26. In such an embodiment, the sliding connector 25 may be moved between a first position and a second position on the attachment frame member 24. As the sliding connector 25 is moved, the strut 28 pushes the wheel support frame 26 from an in-use position to a storage position. The storage position is more compact as shown in Figure 2. In addition, certain example embodiments of the seat attachment 20 can also include a locking mechanism 29 that is capable of securing the seat attachment 20 to a stroller, such as stroller 10 shown in Figure 1. The locking mechanism 29 can be engaged by moving the sliding connector 25 to the in-use position, in which the wheel support frame 26 and wheel 23 are extended. In certain example embodiments, the wheel 23 of the seat attachment 20 is pivotally connected to the

connector portion 21 and when the wheel 23 is in the in-use position the releasably connection is locked and when the wheel 23 is moved to the storage position, the releasably connection is unlocked allowing the seat attachment 20 to be removed from stroller 10. The seat attachment 20 may be stored and the stroller 10 may be conveniently used as a single stroller. As designed, the seat attachment 20 may be reconnected to the stroller 10 for use as a double stroller when needed. The seat attachment portion may be secured into position on the stroller frame and a locking mechanism may be used with an embodiment with or without the wheel. Either the seat attachment or the stroller frame can include a locking mechanism for securing the stroller and seat attachment together. The locking mechanism may be any mechanism capable of securing the components together during use and may be a friction locking device, threaded connection, peg in a hole, or an interference locking device such as a pin in a hole, for example. As shown in the example embodiment of Figure 2, the locking mechanism 29 pivots with wheel support frame 26 as the seat attachment 20 is moved from an unfolded position to a folded position. The locking mechanism 29 may slide into a hole or notch in the attachment frame member 24 of the stroller 10 shown in Figure 1. As such, the seat attachment 20 may be attached to the stroller 10 by positioning the attachment (connector) portion 21 of the seat attachment 20 in the slot 18 of the attachment portion 17 of the stroller 10. The sliding connector 25 may be moved to the in-use position, the wheel support frame is moved, and the locking mechanism 29 is positioned into the locking slot 19 of the stroller 10.

[0034] In certain example embodiments, the connector portion 21 of the seat attachment 20 has a cylindrical or substantially cylindrical shape. The connector portion 21 may be inserted into a cylindrical or substantially cylindrical slot 18 of the attachment portion 17 of the stroller 10 of Figure 1 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 3. In other example embodiments, the seat attachment 20 may include any type of connector portion having any geometric or non-geometric shape. The connector portion 21 may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example. Other attachment mechanisms may be utilized to connect the seat attachment to the stroller 10 such as, but not limited to, a U-shaped bracket, a U-bolt, a pipe clamp, O-shaped bracket, screw, bolt, or other clamping or attachment means. The attachment frame member 24 of the stroller 10 can have a complimentary and/or cooperating shape that allows the connector portion 21 to be secured to the

attachment portion of the stroller.

[0035] Figure 3 presents a side elevation view of a combination of the single stroller 10 of Figure 1 attached to the seat attachment 20 of Figure 2 according to one example embodiment of the disclosure. Referring to Figure 3, the seat attachment 20 removably coupled to the single stroller 10 to form a double stroller. The double stroller configuration is shown with two stroller seats 13 in an inline configuration, though the other configurations, such as a stroller seat and a bassinet or a pram may also be supported on the double stroller. Further, the seat support element 22 of the seat attachment 20 may be capable of supporting the front stroller seat 13 in either a forward-facing or backward-facing position.

[0036] The example embodiment of the stroller 10 in Figure 3 is shown only as an example of one type of stroller, the frame of the stroller 10 may be any of many possible configurations. Example embodiments of the seat attachment accessory may be configured to be used on any such configuration of a stroller. For example, in another example embodiment, the baby stroller may not include two front wheels, may not include a folding mechanism or may include only one folding mechanism. In addition, the baby stroller may include additional features not included in baby stroller 10. For example, the stroller may optionally include fixed front wheels, an entirely different frame configuration, or a storage basket underneath the seat of the stroller.

[0037] The seat support member may be any configuration capable of supporting the seat on the seat attachment 20. Figure 4 presents another example embodiment of a seat support member 40 for use with a car seat or other baby seat according to one example embodiment of the disclosure. Now referring to Figure 4, the seat support member 40 can include a main support 41. The main support 41 can include a cradle for supporting a central portion of the seat. Another portion of the seat may rest against support bar 42. In this example, the support bar 42 may be adjusted to accommodate seats of different shapes and sizes. The support bar 42 may be slid within the aperture 43 and locked in place when the support bar 42 is in the desired position to support a certain seat. The seat is, therefore, supported on two main supports 41 and the support bar 42. The seat may be further secured in the seat attachment member 40 by wrapping belts 44 and 45 around the seat and locking the belts in this position with a buckle or other securing means.

[0038] Figure 5 presents a side elevation view of a combination 50 of the single stroller 10 of Figure 1 attached to an attachment in the form of a tricycle-like riding device according to one example embodiment of the disclosure. Referring to Figure 5, the combination 50 includes the

stroller 10 and the seat attachment 51. In one example, the seat attachment 51 is a tricycle-like attachment that includes a connector portion 52, a frame 53 with a seat support element 56, a seat 57, and a wheel 55. The tricycle-like attachment may be attached to stroller 10 to allow one child to be pushed in the stroller 10 and one child to ride the seat attachment 51. The seat attachment 51 may be other shapes also such as cars, trucks, or animal shapes, for example.

[0039] In certain example embodiments, the stroller 10 can include an additional accessory attachment portion 58. The accessory attachment portion 58 attaches to a frame member of the stroller 10. An embodiment of the accessory attachment portion 58 is shown on Figure 6A. This embodiment is particularly useful for attaching a bag or purse 64, as shown in Figure 6B, to the stroller 10.

[0040] When using a stroller, parents or guardians typically carry other items, such as purses, grocery bags, cell phones, diapers, cleaning wipes, or other personal or baby related items. Some strollers have bottom storage baskets for placing such items. However, these storage baskets can be inconvenient to access or some light weight strollers do not include such storage baskets. Therefore, users of the stroller may hang purses or shopping bags on the handle of the stroller. This is convenient in that the bag is easy to access, but the weight of the bag on the handle may cause the stroller to be unbalanced and increase the tendency of the stroller to topple backwards. A heavy bag hung from the handle of a stroller may cause the stroller to tip backwards even with a child in the seat. The problem is worse if the stroller is facing uphill, on uneven terrain, being pushed up a curb, or occupied by a small child. The accessory attachment 58 may be attached to the frame of the stroller 10 by any of the clamping or attachment methods described above, for example. Preferably, the accessory attachment 58 is attached near the center of gravity of the stroller 10 to avoid creating an unbalanced condition of the stroller 10. As shown in Figure 6A, the accessory attachment 58 is connected to stroller frame 12 of stroller 10 near the folding mechanism. Certain example embodiments of the accessory attachment 58 include a first end 61 for connecting to a stroller frame and a distal second end 62 for releasably connecting to the accessory 64. The first end 61 can include an aperture 64 that may be connected to frame 12 of the stroller 10. In certain example embodiments, the aperture 64 is on an angle, such that when the axis of the accessory attachment portion 58 is horizontal or substantially horizontal. The accessory attachment 58 may, optionally, include a rib 63 for securing the accessory 64 to the accessory attachment 58. The rib 63 may be replaced with any other locking element or securing means

including a friction fitting, a screwed fitting, or interference fitting, for example.

[0041] One example of an accessory 64 for attaching to an accessory attachment 58 is shown in Figure 6B. The accessory 64 in this example is a bag or purse. The accessory 64 can include an attachment portion 65 that is capable of being secured to the attachment portion 62 on the accessory attachment 58. The accessory 64 may be secured on stroller 10 by securing attachment portion 65 to attachment portion 62. The attachment portion 65 can slide over the cylindrical attachment portion 62 of accessory attachment 58. The attachment portion 65 may include an interior annular recess that receives the rib 63 securing the accessory 58 to the stroller 10. The accessory 64 is thus removably coupled to the stroller 10 in a center portion of the stroller as viewed from the side. Therefore, the bag or purse 64 is conveniently secured to stroller 10 while not contributing to an unbalanced condition of the stroller 10.

[0042] Figure 7 presents a perspective view of an attachment 70 for supporting a seat comprising one wheel 73 according to one example embodiment of the disclosure. Referring now to Figure 7, the example seat attachment 70 can include two seat attachment members 71, two connector portions 72, and a wheel 73. The two seat attachment members 71 and the wheel 73 can be disposed or otherwise positioned in a triangular relationship. In certain example embodiments, the wheel 73 provides additional stability to a stroller 10 connected to the seat attachment 70 if a heavier child is placed in a seat attached to the seat attachment members 71.

[0043] Figures 8A-H present multiple views of a stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters, according to another example embodiment of the disclosure. Referring now to Figures 8A-H, the example stroller apparatus 80 can include a stroller frame 81 capable of supporting one or more stroller seats 85, 86. In one example embodiment, the stroller frame 81 can be made of one or more pieces fixedly coupled and/or removably coupled to one another. The stroller frame 81 can include portions that are hollow tubing and other portions that are solid core tubing and can be made from metal, plastic, or other materials known in the art.

[0044] In one example embodiment, the stroller frame 81 can include a pair of front wheel support frames 81a (only the left front wheel support frame is shown), a pair of back wheel support frames 81b (only the left back wheel support frame is shown), a pair of upper tube support frames 81c (only the left upper tube support frame is shown), a handle portion 81d having a first end coupled to the left upper tube support frame 81c and a distal second end coupled to the right upper tube

support frame 81c, and foot rest support frame 81f having a first end coupled to the left front wheel support frame 81a (either directly or via the first seat attachment housing 1105 discussed below in Figure 11) and a distal second end coupled to the right front wheel support frame 81a (either directly of via the second seat attachment housing 1110 discussed below in Figure 11). In certain example embodiments, each front wheel support frame 81a can be fixedly coupled or rotatably coupled to its corresponding upper tube support frame 81c. Further, in certain example embodiments, the left upper tube support frame 81c, handle 81d, and right upper tube support frame 81c can be made from a single unitary piece of material, such as a single piece of bent, hollow-core metal or plastic tubing. Alternatively, each of the left upper tube support frame 81c, handle 81d, and right upper tube support frame 81c can be separate pieces of the same or different material that are coupled to one another.

[0045] The exemplary stroller frame 81 can also include a pair of folding mechanisms 81e (only the left folding mechanism is shown). In one example, each folding mechanism 81e can be coupled, either directly or indirectly to the corresponding front wheel support frame 81a, back wheel support frame 81b, and upper tube support frame 81c on the corresponding side (left and right) of the stroller 80. In certain example embodiments, one or more of the corresponding front wheel support frame 81a, back wheel support frame 81b, and upper tube support frame 81c are rotatably coupled and rotatably adjustable about one or more axes defined through the folding mechanism 81e. As such, in certain example embodiments, the folding mechanism 81e allows the stroller 80 to be folded into a more compact size for storing or transportation. Figure 8B shows the stroller 10 in a folded configuration.

[0046] The example stroller 80 can also include at least one front wheel 82 coupled directly or indirectly (*e.g.*, via one of the seat attachment housings 1105, 1110, as shown in Figure 11) to the stroller frame 81. Figure 8B presents an example embodiment wherein the stroller 80 can include two front wheels 82, one front wheel 82 being coupled to the stroller 80 adjacent the left front wheel support frame 81a and the second front wheel 82 being coupled to the stroller 80 adjacent the right front wheel support frame 81a. The example stroller 80 can also include at least one rear wheel 83 coupled directly or indirectly to the stroller frame 81 (*e.g.*, a corresponding back wheel support frame 81b). Figure 8B presents an example embodiment wherein the stroller 80 can include two back wheels 83, one back wheel 83 being coupled to the left back wheel support frame 81b and the second back wheel 83 coupled to the right back wheel support frame 81b.

[0047] The stroller 80 can also include a first stroller seat 86 either fixedly or removably coupled to the stroller frame 81. For example, the first stroller seat 86 can include a left connector on the left side of the first stroller seat 86 and a right connector on the right side of the first stroller seat 86 to removably couple and decouple the first stroller seat from the stroller frame 81. In one example, each of the left connector and right connector can be cavities in the first stroller seat 86 and can be configured to receive at least a portion of a corresponding seat attachment adapter (e.g., a bayonet connector) therein. In another example embodiment, the left connector and the right connector can each be tabs or slots that are configured to be coupled to corresponding slots or tabs along the stroller frame 81.

[0048] The stroller 80 can also include a removable seat attachment adapter 84 that is removably coupled to the frame 81 such that the seat attachment adapter 84 can be decoupled from the frame 81 and stored when a second stroller seat is not being used with the stroller 80. In one example embodiment, each removable seat attachment adapters can be coupled to the frame by coupling the adapter 84 into a seat attachment housing disposed along the frame 81. In one example, the seat attachment housing (such as that described in Figures 11-14C below) can be integrally formed with all or a portion of the stroller frame (*e.g.*, integrally formed with front wheel support frame 81a). Alternatively, the seat attachment housing can be a separate apparatus that is coupled to the frame 81 or incorporated into the frame 81 by coupling multiple pieces of the frame 81 together. The frame 81 and each seat attachment housing can be made from the same or different materials, including, metals and plastics.

[0049] Though it cannot be seen in the side view of Figure 8A, a typical embodiment of the stroller 80 will include at least two removable seat attachment adapters 84 (at least one along each left and right side of the stroller 80 along the stroller frame 81). For example, at least one removable seat attachment adapter can support each lateral side of the second stroller seat 85. In certain example embodiments, each of the removable seat attachment adapters 84 may be made up of one piece or multiple parts. The removable seat attachment adapters 84 may be of any design capable of securely supporting a seat on the stroller. In one example, the removable seat attachment adapter 84 is configured to have a first end that is removably coupled to the frame 81 and/or seat attachment housing and a distal second end that is configured to be removably coupled to a second stroller seat 85. The removable seat attachment adapter 84 is designed to be capable of supporting the

second stroller seat 85 in front of the first stroller seat 86. The stroller 80 may also include a storage basket 87.

[0050] In certain examples, each of the removable seat attachment adapters 84 removably couples to the second stroller seat 85 at a vertical height that is substantially below the vertical height that the first stroller seat 86 attaches to the stroller frame 81, thereby positioning the second stroller seat 85 at a vertical position that is substantially below the vertical position of the first stroller seat 86 when both the first stroller seat 86 and the second stroller seat 85 are coupled to the stroller 80. The difference in vertical positioning of the second stroller seat 85 as compared to the first stroller seat 86 provides improved access to the first stroller seat 86 from the front of the stroller 10 when both stroller seats 85, 86 are coupled to the stroller 80. Further, in certain example embodiments, the first stroller seat 85 can be positioned substantially over the front wheels 82 so that the stroller 80 remains stable. For example, the second stroller seat 85 can be located substantially over the front wheels 82 and the first stroller seat 86 can be located substantially over the rear wheels 83. In addition, the seats 85, 86 can be positioned such that the center of gravity of the stroller 80 is between the front 82 and rear 83 wheels.

[0051] In certain example embodiments, the removable seat attachment adapter 84 is capable of supporting a second stroller seat 85 such that a child in the second stroller seat 85 is substantially above the frame 81 of the stroller 80 that is substantially adjacent to the connection point of the second stroller seat 85. This positioning of the second stroller seat 85 with respect to the frame 81 provides easier access to the second stroller seat 85, does not block access to the storage basket 87, allows more versatile configurations of the seats 85, 86, allows more variety of seats 85, 86 to be attached to the frame 81, and allows the parent or guardian to more easily monitor and see the child in each stroller seat 85, 86.

[0052] The example stroller of Figure 8A can also include the first stroller seat 86. In certain example embodiments, the first stroller seat 86 can be located generally closer to the handle portion 81d than to the front wheels 82. The first stroller seat 86 may be fixedly coupled or removably coupled to the frame 81. In certain example embodiments wherein the first stroller seat 86 is removably coupled to frame 81, the first stroller seat 86 may be adjustable from a forward-facing configuration to a rearward-facing configuration and vice-versa, as shown, for example, in Figures 8B-8C. In addition, the second stroller seat 85, when coupled to the corresponding removable seat

attachment adapters 84, can be adjustable from a forward-facing configuration to a rearward-facing configuration and vice-versa.

[0053] Figures 8C-8H present additional examples of combinations for a variety of types of stroller seats that can be removably coupled to the stroller 80. For example, in Figure 8D, the second stroller seat 85 can be replaced by an infant carrier 93 that can be removably coupled to each of the at least two removable seat attachment adapters 84 and the first stroller seat 86 can be coupled to the stroller in a forward-facing position. In another example, as shown in Figure 8E, the first stroller seat 86 can be replaced by a child carrier 91 that may be coupled to the frame 81 and positioned in the first seat position and the second stroller seat 85 can be coupled to the stroller 80 by way of the at least two removable seat attachment adapters 84 in a rearward-facing position. In yet another example, as shown in Figure 8F, the child carrier 91, of Figure 8E, can be replaced with a pram 92 that is removably coupled to the stroller 80 in the first seat position. In still another example configuration, as shown in Figure 8G, two child carriers 91 may be removably coupled to the stroller frame 81. For example, the front child carrier can be coupled to the stroller by way of each of the at least two removable seat attachment adapters 84. In another example configuration, one of the child carriers 91 may be replaced with a pram or bassinet 92, as shown in Figure 8H.

[0054] In certain example embodiments, the stroller 80 may also include a second set of removable seat attachment adapters 89 removably coupled to the frame 81 (or another pair of seat attachment housings substantially similar to those 1105, 1110 described below) along the upper tube support frame 81c. The second set of removable seat attachment adapters 89 may be substantially the same as or exactly the same as the removable seat attachment adapters 84 described herein and may be coupled to the frame 81 (or corresponding seat attachment housings) in substantially the same manner as the removable seat attachment adapters 84, as discussed in more detail below. The second set of removable seat attachment adapters 89 can include at least two adapters (at least one along each left and right side of the stroller 80) for removably coupling and decoupling the first stroller seat 86 or any other form of seat described herein to the stroller frame 81 or corresponding seat attachment housing.

[0055] In one example embodiment, as shown in Figures 9-10, the stroller 80 can include one or more, and preferably two, seat support elements 84. The seat support element 84 is connected to and can be removably coupled to the stroller 80 front wheel support frame 81a. In certain example

embodiments, the seat support element 84 is adjacent to the front wheel support portion 81a of frame 81. Alternatively, the seat support element 84 is simply forward of and positioned at a vertical level lower than the attachment point for the first stroller seat 86 (Figure 8A) on the stroller 80. The seat support element 84 is capable of supporting a second stroller seat 85 in front of the stroller seat 86 (see Figure 8A). This provides convenience and versatility to a user of the stroller 80. Seat support element 84 may be fixedly attached or removably attached to front wheel support portion 81a. In certain example embodiments, the front seat 85 may be positioned substantially over the front wheels 15 so the stroller 80 remains stable. Preferably, the seats 85, 86 should be positioned such that the center of gravity of the stroller 80 is between the front 15 and rear 14 wheels. If not an additional wheel may be placed on the attachment as previously described. The seat support element 84 can further include a seat connector 88. In one example, the seat connector 88 can be disposed along a top end of the seat support element 84. The example seat connector 88 may be a multipurpose general connector that allows different seats to be interchanged on the seat support element 84. Any style seat may be configured to connect to the seat connector 88, such as but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. As shown in Figure 9, the seat support element 84 can also include a connector portion 21. The connector portion 21 is capable of connecting the seat attachment to the frame 81 via the attachment portion 17 and the slot 18.

[0056] In certain example embodiments, the connector portion 21 of the seat attachment 20 has a cylindrical or substantially cylindrical shape. The connector portion 21 may be inserted into a cylindrical or substantially cylindrical slot 18 of the attachment portion 17 of the stroller 80 of Figure 9-10 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 8A. The connector portion 21 may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example.

[0057] Figure 11 is a partial perspective view of the stroller 80 showing a seat attachment housing 1105 according to one example embodiment of the disclosure. Referring now to Figures 8A and 11, the example stroller 80 can include a first seat attachment housing 1105 and the second seat attachment housing 1110. The first seat attachment housing 1105 can include a first end 1105a having a cavity for slidably receiving and fixedly or slidably coupling the first end 1105a to a first end of the left front wheel support frame 81a. For example, the left front wheel support frame 81a

can have a substantially circular or oval cross-section and the cavity of the first end 1105a can have a corresponding circular or oval cross-section to slidably receive a portion of the left front wheel support frame 81a into the cavity. In one example, the left front wheel support frame 81a can be held in the cavity of the first end 1105a by a press fit hold. Alternatively, a spring-loaded button on the left front wheel support frame 81a can be positioned into a corresponding opening along one of the sides of the first seat attachment housing 1105.

[0058] The first seat attachment housing 1105 can also include a second end 1105b that includes a second cavity for coupling one of the front wheels 82 to the first seat attachment housing 1105. The wheel 82 may be removably coupled to the second end 1105b of the first seat attachment housing 1105 by a press fit hold. Alternatively, a spring-loaded button 82a on the front wheel apparatus 82 can be positioned into the cavity of the second end 1105b and positioned into a corresponding opening 1115 along one of the sides of the first seat attachment housing 1105. In one example embodiment, the first seat attachment housing 1105 can include an attachment arm 1120 extending off of one side of the first seat attachment housing 1105 in a generally orthogonal direction to the longitudinal axis of the housing 1105. The attachment arm 1120 can include a free end 1105c that includes a cavity for receiving therein and fixedly coupling or slidably coupling the first seat attachment housing 1105 to a first end of the foot rest support frame 81f. The foot rest support frame 81f may be removably coupled to the free end 1105c of the attachment arm 1120 by a press fit hold. Alternatively, a spring-loaded button on the foot rest support frame 81f can be positioned into the cavity of the free end 1105c and positioned into a corresponding opening along one of the sides of the attachment arm 1120.

[0059] The second seat attachment housing 1110 can include a first end 1110a having a cavity for slidably receiving and fixedly or slidably coupling the first end 1110a to a first end of the right front wheel support frame 81a. For example, the right front wheel support frame 81a can have a substantially circular or oval cross-section and the cavity of the first end 1110a can have a corresponding circular or oval cross-section to slidably receive a portion of the right front wheel support frame 81a into the cavity. In one example, the right front wheel support frame 81a can be held in the cavity of the first end 1110a by a press fit hold. Alternatively, a spring-loaded button on the right front wheel support frame 81a can be positioned into a corresponding opening along one of the sides of the second seat attachment housing 1110.

[0060] The second seat attachment housing 1110 can also include a second end 1110b that includes a second cavity for coupling one of the front wheels 82 to the second seat attachment housing 1110. The wheel 82 may be removably coupled to the second end 1110b of the second seat attachment housing 1110 by a press fit hold. Alternatively, a spring-loaded button on the front wheel apparatus 82 can be positioned into the cavity of the second end 1110b and positioned into a corresponding opening along one of the sides of the second seat attachment housing 1110. In one example embodiment, the second seat attachment housing 1110 can include an attachment arm 1125 extending off of one side of the second seat attachment housing 1110 in a generally orthogonal direction to the longitudinal axis of the housing 1110. The attachment arm 1125 can include a free end 1110c that includes a cavity for receiving therein and fixedly coupling or slidably coupling the second seat attachment housing 1110 to a second distal end of the foot rest support frame 81f. The second end of the foot rest support frame 81f may be removably coupled to the free end 1110c of the attachment arm 1125 by a press fit hold. Alternatively, a spring-loaded button on the foot rest support frame 81f can be positioned into the cavity of the free end 1110c and positioned into a corresponding opening along one of the sides of the attachment arm 1125.

[0061] In certain example embodiments, all or a portion of each of the seat attachment housings 1105, 1110 can be hollowed out with exterior sides. Each of the seat attachment housings 1105, 1110 can include an opening 1130 positioned along a top side of the respective seat attachment housings 1105, 1110. The opening 1130 can provide access to an adapter receiving cavity (see Figure 12) for receiving therein at least a portion of the removable seat attachment adapter 84 (see Figure 13A). Each seat attachment housing 1105, 1110 can also include a sliding door 1135. The sliding door 1135 is configured to be manually adjustable from a closed position to an open position by slidably opening the door 1135 along the top side of the seat attachment housing 1105, 1110 to provide access to the opening 1130 and adapter receiving cavity when the parent or guardian wants to insert and couple the removable seat attachment adapter 84 to the seat attachment housing 1105, 1110 and frame 81 in order to couple the second stroller seat 85 to the stroller 80. In one example, each seat attachment housing 1105, 1110 can include one or more rails either disposed above or below a top surface of the seat attachment housing 1105, 1110 that provide a guide way for slidably opening and closing the door 1135. In one example, the door 1135 can include a tab 1140 extending upward from a top surface of the door 1135 to provide a gripping area to grip the door 1135 and slide it open and closed. For example, a parent or guardian

can use a finger against the tab 1140 and apply pressure against the tab 1140 to open the door 1135 from a closed configuration to an open configuration.

[0062] The sliding door 1135 is also configured to be manually adjustable from an open configuration to a closed configuration by slidably closing the door 1135 along the top side of the seat attachment housing 1105, 1110 to prevent access to the opening 1130 and adapter receiving cavity when the second stroller seat 85 is not in use. In one example, the parent or guardian can press a finger against the tab 1140 and apply pressure against the tab 1140 to slide the door 1135 from the open configuration to the closed configuration.

[0063] Figure 12 is a partial perspective view of one of the seat attachment housings 1105, 1110 according to one example embodiment of the disclosure. Referring now to Figures 8A, 11, and 12, the door 1135 of the seat attachment housing 1105, 1110 is shown having been slid into the open configuration exposing the opening 1130 and the adapter receiving cavity 1205. The adapter receiving cavity 1205 can have any size and shape for removably coupling a portion of a removable seat attachment adapter 84 therein. In one example embodiment, all or a portion of the cross-sectional shape of the adapter receiving cavity 1205 can be keyed or have a keyed shape 1210 and all or a portion of the removable seat attachment adapter 84 can have a corresponding outer perimeter shape such that the removable seat attachment adapter 84 can only be inserted into the adapter receiving cavity 1205 in one, proper orientation.

[0064] Figures 13A-C are partial perspective views of the removable seat attachment adapter 84 coupled to the seat attachment housing 1105 according to one example embodiment of the disclosure. Now referring to Figures 8A, 11, 12, and 13A-C, once the door 1135 has been moved into the open configuration exposing the opening 1130 and the adapter receiving cavity 1205, a first end 84a of the removable seat attachment adapter 84 can be inserted into the adapter receiving cavity 1205. In certain example embodiments, the adapter receiving cavity 1205 can include one or more stop flanges 1315, 1320 that extend out from an inner surface of the cavity 1205 and into the cavity area to abut against a bottom side of the first end 84a of the removable seat attachment adapter 84 when the adapter 84 has penetrated a sufficient amount into the adapter receiving cavity 1205. Once the adapter 84 is inserted into the cavity 1205 and removably coupled to the seat attachment housing 1105, a stroller seat can be removable coupled to a seat connector disposed on or adjacent to the second end 84b of the removable seat attachment adapter 84. The seat connector on the second end 84b can be a multipurpose general connector that allows different seats to be

interchangeably connected to the removable seat attachment adapter 84. Any style seat may be configured to connect to the seat connector including, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example.

[0065] The removable seat attachment adapter 84 can also include a stop collar 1335 disposed a predetermined distance up from the first end 84a of the adapter 84. In one example embodiment, the stop collar 1335 is sized and shaped so that it will not fit into the opening 1130 and will not fit into the adapter receiving cavity 1205 as the first end 84a of the adapter 84 is being inserted into the adapter receiving cavity 1205. The size and shape of the outer surface of the stop collar 1335, being greater than that of the outer surface of the previous portion of the first end 84a inserted into the adapter receiving cavity 1205 will contact and abut an outer surface of the seat attachment housing 1105 when the adapter 84 has penetrated a sufficient amount into the adapter receiving cavity 1205.

[0066] The removable seat attachment adapter 84 can also include a spring-loaded latching tab 1305 disposed along one side of the adapter 84 between the first end 84a and the stop collar 1335. In certain example embodiments, the spring-loaded latching tab 1305 can be spring biased into an extended position (as shown in Figure 13B) via, for example, a spring (not shown). As the adapter 84 is first being inserted into the adapter receiving cavity 1205, the width of the adapter 84 at the point of the spring-loaded latching tab 1305, is greater than the width of the cavity 1205, which causes one or more side walls of the cavity 1205 to apply a force to the spring-loaded latching tab 1305 and push it inward from the extended position towards a retracted position, thereby allowing the first end 84a of the adapter 84 to continue moving into the adapter receiving cavity 1205. When the adapter 84 is inserted into the adapter receiving cavity 1205 a sufficient distance (which can be configurable based on the design specifics on the stroller), the spring-loaded latching tab 1305 can be positioned adjacent a tab receiver 1307. The tab receiver 1307 can be a cut-out or opening along one of the side walls of the cavity 1205 that allows the tab 1305 to move back to the extended position. The tab receiver 1307 can include a tab retainer surface 1310 that abuts a top side of the tab 1305 and prevents the removable seat attachment adapter 84 from being removed from the adapter receiving cavity 1205 while the spring-loaded latch tab 1305 is in the extended position. [0067] The removable seat attachment adapter 84 can also include a tab release button 1330 that is operatively coupled to and configured to move the spring-loaded latching tab 1305 from the extended position to the retracted position via, for example, a guide wire 1325 or other attachment

mechanism. For example, when the removable seat attachment adapter 84 is latched into the seat attachment housing 1105, a parent or guardian can grab the removable seat attachment adapter 84 and depress the tab release button 1330, causing the guide wire to pull the spring-loaded latching tab 1305 inward from the extended position to the retracted position with a force greater than the spring biasing force on the tab 1305 and allowing the parent or guardian to remove the removable seat attachment adapter 84 from the adapter receiving cavity 1205 using only a single hand. Thereby, the ease of decoupling the removable seat attachment adapter 84 from the stroller frame 81 is improved.

[0068] In addition, as shown in Figure 13B, in certain example embodiments, the bottom end of the adapter receiving cavity 1205 and corresponding bottom end of the seat attachment housing 1105 can be open 1340 to the environment. Leaving the bottom side of the cavity 1205 open 1340 to the environment helps to prevent liquid and material build-up in the cavity 1205 when the removable seat attachment adapter 84 is not coupled into the cavity 1205 by allowing the liquid and materials to pass through the cavity 1205 and out of the bottom of the seat attachment housing 1105. This is especially beneficial when the parent or guardian removes the removable seat attachment adapter 84 from the cavity 1205 but does slide the door 1135 into the closed position to close up the opening 1130.

[0069] Figures 14A-C are partial perspective views of an alternative embodiment of the seat attachment housing 1405, 1410 according to another example embodiment of the disclosure. Referring now to Figures 8A, 11, and 14A-C, the seat attachment housings 1405, 1410 are substantially the same as the seat attachment housings 1105, 1110 described in Figures 11-13C except for as described below. Therefore, the description of the seat attachment housings 1105, 1110 in Figures 11-13C above is incorporated herein for the alternative seat attachment housings 1405, 1410, except with regard to the distinctions described below.

[0070] As shown in Figure 14C, each seat attachment housing 1405, 1410 includes an opening or open end 1130 positioned along a top side of the respective seat attachment housings 1405, 1410. The opening 1130 can provide access to an adapter receiving cavity 1205. Each seat attachment housing 1405, 1410 also includes one or more stop flanges 1315, 1320 that extend out from an interior wall 1411 of the cavity 1205 and into the cavity area. In addition, the bottom end of the adapter receiving cavity 1205 and corresponding bottom end of each seat attachment housing

1405, 1410 can have an opening or open end 1340 to the environment and with the cavity 1205 and opening 1130 provides a through-hole 1413 through the seat attachment housing 1405, 1410. [10071] Each seat attachment housing 1405, 1410 can include a rotating door 1415 rotatably coupled to the seat attachment housing 1405, 1410. For example, the rotating door 1415 can have a fixed end that is rotatably coupled to the top side of the seat attachment housing 1405, 1410 or an interior wall 1411 of the opening 1130 or adapter receiving cavity 1205 by way of one or more hinges 1420. Alternatively, other devices may be used to allow the door 1415 to rotate from a closed configuration 1415a to an open configuration 1415b, as shown in Figure 14C. In certain example embodiments, the door 1415 and/or the rotating mechanism or hinge 1420 that the door 1415 is coupled to can be spring-biased into the closed configuration 1415a through the use of a spring or other biasing means. Spring-biasing the door 1415 into a closed configuration 1415a can help to prevent fluids and other material contaminants from entering the adapter receiving cavity 1205 when the removable seat attachment adapter 84 is not coupled into the adapter receiving cavity 1205.

[0072] When a parent or guardian wants to add a second stroller seat 85 to the stroller 80, they can insert the removable seat attachment adapter 84 into the adapter receiving cavity 1205 by pressing or applying a force with the first end 84a of the removable seat attachment adapter 84 against the top side of the rotating door 1415 with a force that is greater than the spring-biasing force. This will cause the door 1415 to rotate from the closed configuration 1415a towards the open configuration 1415b and allow the first end 84a of the removable seat attachment adapter to enter into the adapter receiving cavity 1205 and be coupled to the seat attachment housing 1405, 1410. [0073] When the parent or guardian removes the removable seat attachment adapter 84, as described above with regard to Figures 13A-C, as the first end 84a of the removable seat attachment adapter 84 exits the adapter receiving cavity 1205 and opening 1130, the spring-bias of the hinge 1420 or door 1415 will cause the door 1415 to automatically rotate from the open configuration 1415b to the closed configuration 1415a, thereby limiting access to the opening 1130 and the adapter receiving cavity 1205 from the top side of the seat attachment housing 1405, 1410. [0074] While the above description contains many specifics, these specifics should not be construed as limitations on the scope of the disclosure, but merely as exemplifications of the disclosed embodiments. Those skilled in the art will envision many other possible variations that are within the scope of the disclosure.

CLAIMS

What is claimed is:

- 1. A stroller, comprising:
 - a stroller frame comprising a handle portion and a front end portion;
 - a plurality of wheels comprising a plurality of back wheels;
- a first seat coupled to the stroller frame at a first vertical position of the stroller frame, wherein the first seat is disposed closer to the handle portion than the front end portion of the stroller frame;
- a first seat attachment housing coupled to the stroller frame at a second vertical position of the stroller frame that is below the first vertical position, wherein a first front wheel and a second front wheel extend from the front end of the stroller;
- a second seat attachment housing coupled to the stroller frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the third vertical position is closer to the front end portion than the handle portion;
- a first seat attachment adapter spaced from and coupled to the first seat attachment housing by a first attachment frame member; and
- a second seat attachment adapter spaced from and coupled to the second seat attachment housing by a second attachment frame member;

wherein the first seat and the second seat, when connected to the frame, are arranged in an inline descending configuration along the stroller frame.

ABSTRACT

A stroller is provided with the ability to removably couple and decouple a seat from the stroller as needed. The stroller can include a stroller frame. The stroller can also include one or more front wheels attached to the stroller frame and one or more rear wheels attached to the stroller frame. The stroller can include first and second seat attachment housings. Each of the seat attachment housings can include a cavity for receiving a corresponding one of the first and second seat attachment adapters. Each of the seat attachment housings can also include a door cover to prevent access to the respective cavity when not in use. The seat attachment adapters can be coupled to the respective seat attachment housings and a second seat can be coupled to the seat attachment adapters.

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

RELATED APPLICATIONS

[0001] This application is a continuation of U.S. Patent Application No. 16/903,292, filed June 16, 2020, which is a continuation of U.S. Patent Application No. 15/912,901, filed March 6, 2018, issued as U.S. Patent No. 10,730,543, which is a continuation of 15/225,326, filed August 1, 2016, issued as U.S. Patent No. 9,944,305, which claims the benefit of U.S. Application No. 62/311,224 filed March 21, 2016, and is a continuation-in-part of U.S. Patent Application No. 14/597,420, filed January 15, 2015, issued as U.S. Patent No. 9,403,550, which is a continuation of U.S. Patent Application No. 14/261,558, filed on April 25, 2014, issued as U.S. Patent No. 8,955,869, which is a continuation of U.S. Application No. 12/631,375 filed December 4, 2009, which claims the benefit of U.S. Application No. 61/119,920, filed December 4, 2008, the contents of which are all incorporated by reference.

TECHNICAL FIELD

[0002] Embodiments disclosed herein are generally related to children's stroller systems and more particularly to apparatuses and methods for a removable seat attachment for a stroller that is capable of supporting a seat including, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a car seat, or a baby carrier.

BACKGROUND

[0003] Parents or guardians with multiple young children may have difficulty transporting their children from place to place. Children are slow, easily distracted and, therefore, may lag behind. In response, many parents and/or guardians have purchased double seat strollers allowing the parent or guardian to push two children simultaneously and thus allow them to more efficiently run errands, take walks, or jog. As such, a double seat stroller allows the parent or guardian with multiple young children more freedom than they would have with only a single seat stroller.

[0004] However, permanently fixed double seat strollers also have certain disadvantages. Double seat strollers are substantially larger (wider and/or longer) than single seat strollers and are, therefore, more difficult to maneuver through doorways and down aisles in stores. While, the benefits of being able to accommodate two children at one time in a double seat stroller typically

offset these disadvantages, when the parent or guardian has only one child with them, the benefits of the double seat stroller are not realized but the disadvantages still exist.

[0005] Stroller manufacturers have attempted to solve this problem by providing an adjustable stroller that can be modified from having a single seat to having two seats by providing attachments that provide a second seat for the second child that hangs under and slightly behind the seat of the single seat stroller. In other embodiments, the second seat can be attached to a seat attachment placed further forward in the stroller. The current attachment mechanisms can suffer from several drawbacks. These drawbacks include being permanently affixed to the stroller frame and taking up unnecessary space or creating a safety hazard for children not in the stroller when the second seat is not attached to the stroller. In addition, the covers for the seat attachments, for covering a portion of the seat attachment mechanism when not in use, are detachable and can be easily lost when the seat attachment is in use.

BRIEF DESCRIPTION OF THE EXAMPLE DRAWINGS

[0006] For a more complete understanding of the present disclosure and certain features thereof, reference is now made to the following description, in conjunction with the accompanying figures briefly described as follows:

[0007] FIG. 1 presents a side elevation view of a single stroller apparatus according to one example embodiment of the disclosure.

[0008] FIG. 2 presents a partial side elevation view of a seat attachment to convert a single stroller into a double stroller according to one example embodiment of the disclosure.

[0009] FIG. 3 presents a side elevation view of a combination of the single stroller of Figure 1 attached to the seat attachment of Figure 2 according to one example embodiment of the disclosure.

[0010] FIG. 4 presents a perspective view of a seat attachment capable of supporting a car seat on an attachment of Figure 2 according to one example embodiment of the disclosure.

[0011] FIG. 5 presents a side elevation view of a combination of the single stroller of Figure 1 attached to an attachment in the form of a tricycle-like riding device according to one example embodiment of the disclosure.

[0012] FIG. 6A presents a view of an accessory attachment for supporting an accessory on a stroller.

[0013] FIG. 6B presents a view of a bag or purse for attaching to the accessory attachment of Figure 6A according to one example embodiment of the disclosure.

[0014] FIG. 7 presents a perspective view of an attachment for supporting a seat comprising one wheel according to one example embodiment of the disclosure.

[0015] FIGS. 8A-H present multiple views of a stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters according to one example embodiment of the disclosure.

[0016] FIG. 9 presents a perspective view of one version of a stroller with left and right attachment frame members for attaching a second seat according to one example embodiment of the disclosure.

[0017] FIG. 10 presents a front elevation view of an attachment frame member according to one example embodiment of the disclosure.

[0018] FIG. 11 is a partial perspective view of the stroller showing the seat attachment housing according to one example embodiment of the disclosure.

[0019] FIG. 12 is a partial perspective view of the seat attachment housing according to one example embodiment of the disclosure.

[0020] FIG. 13A-C are partial perspective views of the removable seat attachment adapter removably coupled to the seat attachment housing according to one example embodiment of the disclosure.

[0021] FIG. 14A-C are partial perspective views of an alternative embodiment of the seat attachment housing according to another example embodiment of the disclosure.

DETAILED DESCRIPTION OF THE EXAMPLE EMBODIMENTS

[0022] Example embodiments of the invention now will be described more fully hereinafter with reference to the accompanying drawings, in which example embodiments are shown. The concept disclosed herein may, however, be embodied in many different forms and should not be construed as limited to the exemplary embodiments set forth herein; rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like, but not necessarily the same, elements throughout.

[0023] The example embodiments described herein and shown in the figures is described with reference to an infant or child's stroller that can be configured to adjust from a single seat stroller to a multi-seat stroller. While the example embodiments will generally be described with reference to adding or removing seats from the stroller, the reference to seats is for example purposes only, as the seat or portion that can be added or removed from the stroller can include, but is not limited to, a stroller seat, a baby seat, a bassinet, a pram, a car seat, or a baby carrier. Each of the stroller seat, baby seat, bassinet, pram, car seat, and/or baby carrier should individually be read as an alternative embodiment to the removable/added infant or child's stroller seat described below.

[0024] Certain dimensions and features of the example adjustable stroller are described herein using the term "approximately." As used herein, the term "approximately" indicates that each of the described dimensions is not a strict boundary or parameter and does not exclude functionally similar variations therefrom. Unless context or the description indicates otherwise, the use of the term "approximately" in connection with a numerical parameter indicates that the numerical parameter includes variations that, using mathematical and industrial principles accepted in the art (*e.g.*, rounding, measurement or other systematic errors, manufacturing tolerances, etc.), would not vary the least significant digit.

[0025] In addition, certain relationships between dimensions of the adjustable stroller and between features of the adjustable stroller are described herein using the term "substantially." As used herein, the terms "substantially" and "substantially equal" indicates that the equal relationship is not a strict relationship and does not exclude functionally similar variations therefrom. Unless context or the description indicates otherwise, the use of the term "substantially" or "substantially equal" in connection with two or more described dimensions indicates that the equal relationship between the dimensions includes variations that, using mathematical and industrial principles accepted in the art (e.g., rounding, measurement or other systematic errors, manufacturing tolerances, etc.), would not vary the least significant digit of the dimensions. As used herein, the term "substantially constant" indicates that the constant relationship is not a strict relationship and does not exclude functionally similar variations therefrom. As used herein, the term "substantially parallel" indicates that the parallel relationship is not a strict relationship and does not exclude functionally similar variations therefrom.

[0026] As discussed above, parents or guardians may find themselves in a situation wherein it is more convenient to transport two children in a stroller, but at the same time find it inconvenient to

have both a single stroller and double stroller. Embodiments of the seat attachment solve this problem. In one aspect, an embodiment of the seat attachment for a stroller is capable of converting a single stroller into a double stroller. The seat attachment may support a seat such as, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. Therefore, the parent or guardian does not require both a single stroller and a double stroller. A stroller configured to receive a seat attachment for converting a single stroller into a double stroller provides convenience to the user. The single stroller may be connected to a double stroller by attaching the seat attachment to the single stroller and then attaching the second seat. As such, an embodiment of the seat attachment for converting a single stroller into a double stroller can include at least one connector portion capable of connecting to a stroller frame and a seat support element capable of supporting a seat.

[0027] Figure 1 presents a side elevation view of a single stroller apparatus 10 according to one example embodiment of the disclosure. Referring to Figure 1, it shows only one side of the single stroller 10, however, most components include a complementary component on the other side of the single stroller but are not shown in Figure 1. The example single stroller 10 includes a frame 12 that supports a seat 13. The frame 12 may optionally include at least one, and in certain embodiments preferably two, folding mechanisms 16 that allow the stroller 10 to be folded to a more convenient size for storing or transporting the stroller 10.

[0028] In the example embodiment of Figure 1, the seat 13 is shown as a typical stroller seat. However, other types of seats may be used in a single stroller. The seat 13 may be permanently affixed to the frame 12 or releasably connected, such that it is capable of being removed and substituted with a different seat. As used herein, "releasably connected" or "releasably attached" means the connection is not a permanent connection and that the connection is capable of being connected and disconnected by the user of the stroller 10 without requiring special tools or special skills. Releasably connections include, but are not limited to, buttons, snaps, friction fittings, interference fits, threaded connections, locking tabs, keyed connections, other fasteners, or the like. The frame 12 is supported on a pair of back wheels 14 and a pair of front wheels 15. In this example embodiment, the back wheels 14 are fixed and do not swivel or pivot on the frame 12 while the pair of front wheels 15 pivot to make turning the single stroller 10 easier and more convenient. Though, pivoting wheels may be preferred in certain strollers, strollers with fixed non-pivoting wheels are also common and considered as an option as part of this disclosure. In certain

example embodiments, the single stroller 10 does not require pairs of front 15 or rear 14 wheels and either the front pair of wheels 15 or the back pair of wheels 14 may be substituted with a single wheel. In certain example embodiments, the single stroller 10, including umbrella strollers, jogging strollers, all-terrain strollers, as well as other strollers may only include one front wheel 15.

[0029] The example single stroller 10 may also include one or more seat attachments that are capable of converting any style of single stroller to a double stroller, including strollers with one or two front wheels. In one example embodiment, the stroller 10 can include two attachment portions 17. In one example, the attachment portions 17 can be positioned on or near the front of the stroller 10 to allow the seat attachment and the seat to be connected to the front portion of the stroller 10. The attachment portions 17 can allow a seat attachment such as the seat attachment for converting the single stroller 10 to a double stroller, as shown in Figure 3, to be connected to the stroller. While only one seat attachment is shown in Figure 3, the stroller 10 could typically include two seat attachments as shown in Figure 3 or one seat attachment that can include two seat support elements. In certain example embodiments, the stroller 10 can include a left side and a right side attachment portion 17. The seat attachment for the stroller 10 can further include corresponding connector portions capable of connecting to the stroller frame at the attachment portions 17. Though the seat attachment for the stroller is described in relation to a single stroller, the attachment may similarly be attached to a double stroller. As such, example embodiments of the seat attachment may therefore be used to convert a double stroller into a triple stroller, if desired. [0030] Figure 2 presents a partial side elevation view of a seat attachment to convert a single stroller into a double stroller according to one example embodiment of the disclosure. Now referring to Figures 1 and 2, the example seat attachment 20 is shown in an unlocked and folded configuration. The seat attachment 20 includes a one or more connector portions 21 capable of connecting to the attachment frame members 24, two seat attachment elements 22 capable of supporting a seat; and a wheel 23. In this example embodiment, the connector portions 21 are connected to the rear of the seat attachment 20 allowing the seat attachment 20 to be connected to the front of a stroller, such as stroller 10 shown in Figure 1. In other example embodiments, the seat attachment 20 may include more than one wheel 23, one connector portion 21, one seat support element, or combinations of these elements. In example embodiments of the stroller with one wheel, the attachment frame member may be on the forks of the front wheel, for example.

[0031] The seat attachment 20 can include a wheel support frame 26 connecting the wheel 23 to the attachment frame member 24 of the attachment 20. Each attachment frame member 24 has a first and a second end. The first end is capable of connecting to a stroller frame and the second end can be connected to the seat support element 22. As shown in Figure 2, the seat attachment 20 can include a wheel support frame 26 that is pivotally connected to two attachment frame members 24. The wheel support frame 26 or the attachment frame 24 may span the width of the stroller between the two attachment portions 17. The pivotal connection 27 allows the seat attachment 20 to be folded and conveniently stored or transported but is not necessary for all example embodiments of the disclosure. The pivotal connection 27 can be optional and provide more convenience, however, other example embodiments of the seat attachment 20 can include a releasably connected wheel support frame or a rigid frame that may be incorporated to produce a seat attachment that has greater strength for use in situations where a stronger seat attachment may be desired, such as with all-terrain or jogging strollers, for example. The wheel support frame 26 may be connected at any point on the attachment frame 24. In certain example embodiments the wheel support frame 26 is connected to the attachment frame 24 near the connector portion 21 or near the middle of the attachment frame 24.

[0032] In certain example embodiments, the seat attachment without a wheel may include connector portion 21 or attachment frame member 24, and seat attachment member 22, for example. In this example embodiment, there may be no need for the pivotal connection 27, wheel support frame 26, sliding connector 25, or wheel 23.

[0033] The seat attachment 20 can also include a folding mechanism that includes a sliding connector 25 connected to a first end of a strut 28. A second end of the strut 28 can be pivotally connected to wheel support frame 26. In such an embodiment, the sliding connector 25 may be moved between a first position and a second position on the attachment frame member 24. As the sliding connector 25 is moved, the strut 28 pushes the wheel support frame 26 from an in-use position to a storage position. The storage position is more compact as shown in Figure 2. In addition, certain example embodiments of the seat attachment 20 can also include a locking mechanism 29 that is capable of securing the seat attachment 20 to a stroller, such as stroller 10 shown in Figure 1. The locking mechanism 29 can be engaged by moving the sliding connector 25 to the in-use position, in which the wheel support frame 26 and wheel 23 are extended. In certain example embodiments, the wheel 23 of the seat attachment 20 is pivotally connected to the

connector portion 21 and when the wheel 23 is in the in-use position the releasably connection is locked and when the wheel 23 is moved to the storage position, the releasably connection is unlocked allowing the seat attachment 20 to be removed from stroller 10. The seat attachment 20 may be stored and the stroller 10 may be conveniently used as a single stroller. As designed, the seat attachment 20 may be reconnected to the stroller 10 for use as a double stroller when needed. The seat attachment portion may be secured into position on the stroller frame and a locking mechanism may be used with an embodiment with or without the wheel. Either the seat attachment or the stroller frame can include a locking mechanism for securing the stroller and seat attachment together. The locking mechanism may be any mechanism capable of securing the components together during use and may be a friction locking device, threaded connection, peg in a hole, or an interference locking device such as a pin in a hole, for example. As shown in the example embodiment of Figure 2, the locking mechanism 29 pivots with wheel support frame 26 as the seat attachment 20 is moved from an unfolded position to a folded position. The locking mechanism 29 may slide into a hole or notch in the attachment frame member 24 of the stroller 10 shown in Figure 1. As such, the seat attachment 20 may be attached to the stroller 10 by positioning the attachment (connector) portion 21 of the seat attachment 20 in the slot 18 of the attachment portion 17 of the stroller 10. The sliding connector 25 may be moved to the in-use position, the wheel support frame is moved, and the locking mechanism 29 is positioned into the locking slot 19 of the stroller 10.

[0034] In certain example embodiments, the connector portion 21 of the seat attachment 20 has a cylindrical or substantially cylindrical shape. The connector portion 21 may be inserted into a cylindrical or substantially cylindrical slot 18 of the attachment portion 17 of the stroller 10 of Figure 1 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 3. In other example embodiments, the seat attachment 20 may include any type of connector portion having any geometric or non-geometric shape. The connector portion 21 may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example. Other attachment mechanisms may be utilized to connect the seat attachment to the stroller 10 such as, but not limited to, a U-shaped bracket, a U-bolt, a pipe clamp, O-shaped bracket, screw, bolt, or other clamping or attachment means. The attachment frame member 24 of the stroller 10 can have a complimentary and/or cooperating shape that allows the connector portion 21 to be secured to the

attachment portion of the stroller.

[0035] Figure 3 presents a side elevation view of a combination of the single stroller 10 of Figure 1 attached to the seat attachment 20 of Figure 2 according to one example embodiment of the disclosure. Referring to Figure 3, the seat attachment 20 removably coupled to the single stroller 10 to form a double stroller. The double stroller configuration is shown with two stroller seats 13 in an inline configuration, though the other configurations, such as a stroller seat and a bassinet or a pram may also be supported on the double stroller. Further, the seat support element 22 of the seat attachment 20 may be capable of supporting the front stroller seat 13 in either a forward-facing or backward-facing position.

[0036] The example embodiment of the stroller 10 in Figure 3 is shown only as an example of one type of stroller, the frame of the stroller 10 may be any of many possible configurations. Example embodiments of the seat attachment accessory may be configured to be used on any such configuration of a stroller. For example, in another example embodiment, the baby stroller may not include two front wheels, may not include a folding mechanism or may include only one folding mechanism. In addition, the baby stroller may include additional features not included in baby stroller 10. For example, the stroller may optionally include fixed front wheels, an entirely different frame configuration, or a storage basket underneath the seat of the stroller.

[0037] The seat support member may be any configuration capable of supporting the seat on the seat attachment 20. Figure 4 presents another example embodiment of a seat support member 40 for use with a car seat or other baby seat according to one example embodiment of the disclosure. Now referring to Figure 4, the seat support member 40 can include a main support 41. The main support 41 can include a cradle for supporting a central portion of the seat. Another portion of the seat may rest against support bar 42. In this example, the support bar 42 may be adjusted to accommodate seats of different shapes and sizes. The support bar 42 may be slid within the aperture 43 and locked in place when the support bar 42 is in the desired position to support a certain seat. The seat is, therefore, supported on two main supports 41 and the support bar 42. The seat may be further secured in the seat attachment member 40 by wrapping belts 44 and 45 around the seat and locking the belts in this position with a buckle or other securing means.

[0038] Figure 5 presents a side elevation view of a combination 50 of the single stroller 10 of Figure 1 attached to an attachment in the form of a tricycle-like riding device according to one example embodiment of the disclosure. Referring to Figure 5, the combination 50 includes the

stroller 10 and the seat attachment 51. In one example, the seat attachment 51 is a tricycle-like attachment that includes a connector portion 52, a frame 53 with a seat support element 56, a seat 57, and a wheel 55. The tricycle-like attachment may be attached to stroller 10 to allow one child to be pushed in the stroller 10 and one child to ride the seat attachment 51. The seat attachment 51 may be other shapes also such as cars, trucks, or animal shapes, for example.

[0039] In certain example embodiments, the stroller 10 can include an additional accessory attachment portion 58. The accessory attachment portion 58 attaches to a frame member of the stroller 10. An embodiment of the accessory attachment portion 58 is shown on Figure 6A. This embodiment is particularly useful for attaching a bag or purse 64, as shown in Figure 6B, to the stroller 10.

[0040] When using a stroller, parents or guardians typically carry other items, such as purses, grocery bags, cell phones, diapers, cleaning wipes, or other personal or baby related items. Some strollers have bottom storage baskets for placing such items. However, these storage baskets can be inconvenient to access or some light weight strollers do not include such storage baskets. Therefore, users of the stroller may hang purses or shopping bags on the handle of the stroller. This is convenient in that the bag is easy to access, but the weight of the bag on the handle may cause the stroller to be unbalanced and increase the tendency of the stroller to topple backwards. A heavy bag hung from the handle of a stroller may cause the stroller to tip backwards even with a child in the seat. The problem is worse if the stroller is facing uphill, on uneven terrain, being pushed up a curb, or occupied by a small child. The accessory attachment 58 may be attached to the frame of the stroller 10 by any of the clamping or attachment methods described above, for example. Preferably, the accessory attachment 58 is attached near the center of gravity of the stroller 10 to avoid creating an unbalanced condition of the stroller 10. As shown in Figure 6A, the accessory attachment 58 is connected to stroller frame 12 of stroller 10 near the folding mechanism. Certain example embodiments of the accessory attachment 58 include a first end 61 for connecting to a stroller frame and a distal second end 62 for releasably connecting to the accessory 64. The first end 61 can include an aperture 64 that may be connected to frame 12 of the stroller 10. In certain example embodiments, the aperture 64 is on an angle, such that when the axis of the accessory attachment portion 58 is horizontal or substantially horizontal. The accessory attachment 58 may, optionally, include a rib 63 for securing the accessory 64 to the accessory attachment 58. The rib 63 may be replaced with any other locking element or securing means

including a friction fitting, a screwed fitting, or interference fitting, for example.

[0041] One example of an accessory 64 for attaching to an accessory attachment 58 is shown in Figure 6B. The accessory 64 in this example is a bag or purse. The accessory 64 can include an attachment portion 65 that is capable of being secured to the attachment portion 62 on the accessory attachment 58. The accessory 64 may be secured on stroller 10 by securing attachment portion 65 to attachment portion 62. The attachment portion 65 can slide over the cylindrical attachment portion 62 of accessory attachment 58. The attachment portion 65 may include an interior annular recess that receives the rib 63 securing the accessory 58 to the stroller 10. The accessory 64 is thus removably coupled to the stroller 10 in a center portion of the stroller as viewed from the side. Therefore, the bag or purse 64 is conveniently secured to stroller 10 while not contributing to an unbalanced condition of the stroller 10.

[0042] Figure 7 presents a perspective view of an attachment 70 for supporting a seat comprising one wheel 73 according to one example embodiment of the disclosure. Referring now to Figure 7, the example seat attachment 70 can include two seat attachment members 71, two connector portions 72, and a wheel 73. The two seat attachment members 71 and the wheel 73 can be disposed or otherwise positioned in a triangular relationship. In certain example embodiments, the wheel 73 provides additional stability to a stroller 10 connected to the seat attachment 70 if a heavier child is placed in a seat attached to the seat attachment members 71.

[0043] Figures 8A-H present multiple views of a stroller apparatus capable of being converted from a single seat stroller to a double seat stroller through the use of removable seat attachment adapters, according to another example embodiment of the disclosure. Referring now to Figures 8A-H, the example stroller apparatus 80 can include a stroller frame 81 capable of supporting one or more stroller seats 85, 86. In one example embodiment, the stroller frame 81 can be made of one or more pieces fixedly coupled and/or removably coupled to one another. The stroller frame 81 can include portions that are hollow tubing and other portions that are solid core tubing and can be made from metal, plastic, or other materials known in the art.

[0044] In one example embodiment, the stroller frame 81 can include a pair of front wheel support frames 81a (only the left front wheel support frame is shown), a pair of back wheel support frames 81b (only the left back wheel support frame is shown), a pair of upper tube support frames 81c (only the left upper tube support frame is shown), a handle portion 81d having a first end coupled to the left upper tube support frame 81c and a distal second end coupled to the right upper tube

support frame 81c, and foot rest support frame 81f having a first end coupled to the left front wheel support frame 81a (either directly or via the first seat attachment housing 1105 discussed below in Figure 11) and a distal second end coupled to the right front wheel support frame 81a (either directly of via the second seat attachment housing 1110 discussed below in Figure 11). In certain example embodiments, each front wheel support frame 81a can be fixedly coupled or rotatably coupled to its corresponding upper tube support frame 81c. Further, in certain example embodiments, the left upper tube support frame 81c, handle 81d, and right upper tube support frame 81c can be made from a single unitary piece of material, such as a single piece of bent, hollow-core metal or plastic tubing. Alternatively, each of the left upper tube support frame 81c, handle 81d, and right upper tube support frame 81c can be separate pieces of the same or different material that are coupled to one another.

[0045] The exemplary stroller frame 81 can also include a pair of folding mechanisms 81e (only the left folding mechanism is shown). In one example, each folding mechanism 81e can be coupled, either directly or indirectly to the corresponding front wheel support frame 81a, back wheel support frame 81b, and upper tube support frame 81c on the corresponding side (left and right) of the stroller 80. In certain example embodiments, one or more of the corresponding front wheel support frame 81a, back wheel support frame 81b, and upper tube support frame 81c are rotatably coupled and rotatably adjustable about one or more axes defined through the folding mechanism 81e. As such, in certain example embodiments, the folding mechanism 81e allows the stroller 80 to be folded into a more compact size for storing or transportation. Figure 8B shows the stroller 10 in a folded configuration.

[0046] The example stroller 80 can also include at least one front wheel 82 coupled directly or indirectly (*e.g.*, via one of the seat attachment housings 1105, 1110, as shown in Figure 11) to the stroller frame 81. Figure 8B presents an example embodiment wherein the stroller 80 can include two front wheels 82, one front wheel 82 being coupled to the stroller 80 adjacent the left front wheel support frame 81a and the second front wheel 82 being coupled to the stroller 80 adjacent the right front wheel support frame 81a. The example stroller 80 can also include at least one rear wheel 83 coupled directly or indirectly to the stroller frame 81 (*e.g.*, a corresponding back wheel support frame 81b). Figure 8B presents an example embodiment wherein the stroller 80 can include two back wheels 83, one back wheel 83 being coupled to the left back wheel support frame 81b and the second back wheel 83 coupled to the right back wheel support frame 81b.

[0047] The stroller 80 can also include a first stroller seat 86 either fixedly or removably coupled to the stroller frame 81. For example, the first stroller seat 86 can include a left connector on the left side of the first stroller seat 86 and a right connector on the right side of the first stroller seat 86 to removably couple and decouple the first stroller seat from the stroller frame 81. In one example, each of the left connector and right connector can be cavities in the first stroller seat 86 and can be configured to receive at least a portion of a corresponding seat attachment adapter (e.g., a bayonet connector) therein. In another example embodiment, the left connector and the right connector can each be tabs or slots that are configured to be coupled to corresponding slots or tabs along the stroller frame 81.

[0048] The stroller 80 can also include a removable seat attachment adapter 84 that is removably coupled to the frame 81 such that the seat attachment adapter 84 can be decoupled from the frame 81 and stored when a second stroller seat is not being used with the stroller 80. In one example embodiment, each removable seat attachment adapters can be coupled to the frame by coupling the adapter 84 into a seat attachment housing disposed along the frame 81. In one example, the seat attachment housing (such as that described in Figures 11-14C below) can be integrally formed with all or a portion of the stroller frame (*e.g.*, integrally formed with front wheel support frame 81a). Alternatively, the seat attachment housing can be a separate apparatus that is coupled to the frame 81 or incorporated into the frame 81 by coupling multiple pieces of the frame 81 together. The frame 81 and each seat attachment housing can be made from the same or different materials, including, metals and plastics.

[0049] Though it cannot be seen in the side view of Figure 8A, a typical embodiment of the stroller 80 will include at least two removable seat attachment adapters 84 (at least one along each left and right side of the stroller 80 along the stroller frame 81). For example, at least one removable seat attachment adapter can support each lateral side of the second stroller seat 85. In certain example embodiments, each of the removable seat attachment adapters 84 may be made up of one piece or multiple parts. The removable seat attachment adapters 84 may be of any design capable of securely supporting a seat on the stroller. In one example, the removable seat attachment adapter 84 is configured to have a first end that is removably coupled to the frame 81 and/or seat attachment housing and a distal second end that is configured to be removably coupled to a second stroller seat 85. The removable seat attachment adapter 84 is designed to be capable of supporting the

second stroller seat 85 in front of the first stroller seat 86. The stroller 80 may also include a storage basket 87.

[0050] In certain examples, each of the removable seat attachment adapters 84 removably couples to the second stroller seat 85 at a vertical height that is substantially below the vertical height that the first stroller seat 86 attaches to the stroller frame 81, thereby positioning the second stroller seat 85 at a vertical position that is substantially below the vertical position of the first stroller seat 86 when both the first stroller seat 86 and the second stroller seat 85 are coupled to the stroller 80. The difference in vertical positioning of the second stroller seat 85 as compared to the first stroller seat 86 provides improved access to the first stroller seat 86 from the front of the stroller 10 when both stroller seats 85, 86 are coupled to the stroller 80. Further, in certain example embodiments, the first stroller seat 85 can be positioned substantially over the front wheels 82 so that the stroller 80 remains stable. For example, the second stroller seat 85 can be located substantially over the front wheels 82 and the first stroller seat 86 can be located substantially over the rear wheels 83. In addition, the seats 85, 86 can be positioned such that the center of gravity of the stroller 80 is between the front 82 and rear 83 wheels.

[0051] In certain example embodiments, the removable seat attachment adapter 84 is capable of supporting a second stroller seat 85 such that a child in the second stroller seat 85 is substantially above the frame 81 of the stroller 80 that is substantially adjacent to the connection point of the second stroller seat 85. This positioning of the second stroller seat 85 with respect to the frame 81 provides easier access to the second stroller seat 85, does not block access to the storage basket 87, allows more versatile configurations of the seats 85, 86, allows more variety of seats 85, 86 to be attached to the frame 81, and allows the parent or guardian to more easily monitor and see the child in each stroller seat 85, 86.

[0052] The example stroller of Figure 8A can also include the first stroller seat 86. In certain example embodiments, the first stroller seat 86 can be located generally closer to the handle portion 81d than to the front wheels 82. The first stroller seat 86 may be fixedly coupled or removably coupled to the frame 81. In certain example embodiments wherein the first stroller seat 86 is removably coupled to frame 81, the first stroller seat 86 may be adjustable from a forward-facing configuration to a rearward-facing configuration and vice-versa, as shown, for example, in Figures 8B-8C. In addition, the second stroller seat 85, when coupled to the corresponding removable seat

attachment adapters 84, can be adjustable from a forward-facing configuration to a rearward-facing configuration and vice-versa.

[0053] Figures 8C-8H present additional examples of combinations for a variety of types of stroller seats that can be removably coupled to the stroller 80. For example, in Figure 8D, the second stroller seat 85 can be replaced by an infant carrier 93 that can be removably coupled to each of the at least two removable seat attachment adapters 84 and the first stroller seat 86 can be coupled to the stroller in a forward-facing position. In another example, as shown in Figure 8E, the first stroller seat 86 can be replaced by a child carrier 91 that may be coupled to the frame 81 and positioned in the first seat position and the second stroller seat 85 can be coupled to the stroller 80 by way of the at least two removable seat attachment adapters 84 in a rearward-facing position. In yet another example, as shown in Figure 8F, the child carrier 91, of Figure 8E, can be replaced with a pram 92 that is removably coupled to the stroller 80 in the first seat position. In still another example configuration, as shown in Figure 8G, two child carriers 91 may be removably coupled to the stroller frame 81. For example, the front child carrier can be coupled to the stroller by way of each of the at least two removable seat attachment adapters 84. In another example configuration, one of the child carriers 91 may be replaced with a pram or bassinet 92, as shown in Figure 8H.

[0054] In certain example embodiments, the stroller 80 may also include a second set of removable seat attachment adapters 89 removably coupled to the frame 81 (or another pair of seat attachment housings substantially similar to those 1105, 1110 described below) along the upper tube support frame 81c. The second set of removable seat attachment adapters 89 may be substantially the same as or exactly the same as the removable seat attachment adapters 84 described herein and may be coupled to the frame 81 (or corresponding seat attachment housings) in substantially the same manner as the removable seat attachment adapters 84, as discussed in more detail below. The second set of removable seat attachment adapters 89 can include at least two adapters (at least one along each left and right side of the stroller 80) for removably coupling and decoupling the first stroller seat 86 or any other form of seat described herein to the stroller frame 81 or corresponding seat attachment housing.

[0055] In one example embodiment, as shown in Figures 9-10, the stroller 80 can include one or more, and preferably two, seat support elements 84. The seat support element 84 is connected to and can be removably coupled to the stroller 80 front wheel support frame 81a. In certain example

embodiments, the seat support element 84 is adjacent to the front wheel support portion 81a of frame 81. Alternatively, the seat support element 84 is simply forward of and positioned at a vertical level lower than the attachment point for the first stroller seat 86 (Figure 8A) on the stroller 80. The seat support element 84 is capable of supporting a second stroller seat 85 in front of the stroller seat 86 (see Figure 8A). This provides convenience and versatility to a user of the stroller 80. Seat support element 84 may be fixedly attached or removably attached to front wheel support portion 81a. In certain example embodiments, the front seat 85 may be positioned substantially over the front wheels 15 so the stroller 80 remains stable. Preferably, the seats 85, 86 should be positioned such that the center of gravity of the stroller 80 is between the front 15 and rear 14 wheels. If not an additional wheel may be placed on the attachment as previously described. The seat support element 84 can further include a seat connector 88. In one example, the seat connector 88 can be disposed along a top end of the seat support element 84. The example seat connector 88 may be a multipurpose general connector that allows different seats to be interchanged on the seat support element 84. Any style seat may be configured to connect to the seat connector 88, such as but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example. As shown in Figure 9, the seat support element 84 can also include a connector portion 21. The connector portion 21 is capable of connecting the seat attachment to the frame 81 via the attachment portion 17 and the slot 18.

[0056] In certain example embodiments, the connector portion 21 of the seat attachment 20 has a cylindrical or substantially cylindrical shape. The connector portion 21 may be inserted into a cylindrical or substantially cylindrical slot 18 of the attachment portion 17 of the stroller 80 of Figure 9-10 to secure the seat attachment and convert the single stroller into a double stroller, as shown in Figure 8A. The connector portion 21 may be of a solid or tubular construction and may be any cross-sectional shape including, but not limited to, circular, polygonal, square, rectangular, and triangular, for example.

[0057] Figure 11 is a partial perspective view of the stroller 80 showing a seat attachment housing 1105 according to one example embodiment of the disclosure. Referring now to Figures 8A and 11, the example stroller 80 can include a first seat attachment housing 1105 and the second seat attachment housing 1110. The first seat attachment housing 1105 can include a first end 1105a having a cavity for slidably receiving and fixedly or slidably coupling the first end 1105a to a first end of the left front wheel support frame 81a. For example, the left front wheel support frame 81a

can have a substantially circular or oval cross-section and the cavity of the first end 1105a can have a corresponding circular or oval cross-section to slidably receive a portion of the left front wheel support frame 81a into the cavity. In one example, the left front wheel support frame 81a can be held in the cavity of the first end 1105a by a press fit hold. Alternatively, a spring-loaded button on the left front wheel support frame 81a can be positioned into a corresponding opening along one of the sides of the first seat attachment housing 1105.

[0058] The first seat attachment housing 1105 can also include a second end 1105b that includes a second cavity for coupling one of the front wheels 82 to the first seat attachment housing 1105. The wheel 82 may be removably coupled to the second end 1105b of the first seat attachment housing 1105 by a press fit hold. Alternatively, a spring-loaded button 82a on the front wheel apparatus 82 can be positioned into the cavity of the second end 1105b and positioned into a corresponding opening 1115 along one of the sides of the first seat attachment housing 1105. In one example embodiment, the first seat attachment housing 1105 can include an attachment arm 1120 extending off of one side of the first seat attachment housing 1105 in a generally orthogonal direction to the longitudinal axis of the housing 1105. The attachment arm 1120 can include a free end 1105c that includes a cavity for receiving therein and fixedly coupling or slidably coupling the first seat attachment housing 1105 to a first end of the foot rest support frame 81f. The foot rest support frame 81f may be removably coupled to the free end 1105c of the attachment arm 1120 by a press fit hold. Alternatively, a spring-loaded button on the foot rest support frame 81f can be positioned into the cavity of the free end 1105c and positioned into a corresponding opening along one of the sides of the attachment arm 1120.

[0059] The second seat attachment housing 1110 can include a first end 1110a having a cavity for slidably receiving and fixedly or slidably coupling the first end 1110a to a first end of the right front wheel support frame 81a. For example, the right front wheel support frame 81a can have a substantially circular or oval cross-section and the cavity of the first end 1110a can have a corresponding circular or oval cross-section to slidably receive a portion of the right front wheel support frame 81a into the cavity. In one example, the right front wheel support frame 81a can be held in the cavity of the first end 1110a by a press fit hold. Alternatively, a spring-loaded button on the right front wheel support frame 81a can be positioned into a corresponding opening along one of the sides of the second seat attachment housing 1110.

[0060] The second seat attachment housing 1110 can also include a second end 1110b that includes a second cavity for coupling one of the front wheels 82 to the second seat attachment housing 1110. The wheel 82 may be removably coupled to the second end 1110b of the second seat attachment housing 1110 by a press fit hold. Alternatively, a spring-loaded button on the front wheel apparatus 82 can be positioned into the cavity of the second end 1110b and positioned into a corresponding opening along one of the sides of the second seat attachment housing 1110. In one example embodiment, the second seat attachment housing 1110 can include an attachment arm 1125 extending off of one side of the second seat attachment housing 1110 in a generally orthogonal direction to the longitudinal axis of the housing 1110. The attachment arm 1125 can include a free end 1110c that includes a cavity for receiving therein and fixedly coupling or slidably coupling the second seat attachment housing 1110 to a second distal end of the foot rest support frame 81f. The second end of the foot rest support frame 81f may be removably coupled to the free end 1110c of the attachment arm 1125 by a press fit hold. Alternatively, a spring-loaded button on the foot rest support frame 81f can be positioned into the cavity of the free end 1110c and positioned into a corresponding opening along one of the sides of the attachment arm 1125.

[0061] In certain example embodiments, all or a portion of each of the seat attachment housings 1105, 1110 can be hollowed out with exterior sides. Each of the seat attachment housings 1105, 1110 can include an opening 1130 positioned along a top side of the respective seat attachment housings 1105, 1110. The opening 1130 can provide access to an adapter receiving cavity (see Figure 12) for receiving therein at least a portion of the removable seat attachment adapter 84 (see Figure 13A). Each seat attachment housing 1105, 1110 can also include a sliding door 1135. The sliding door 1135 is configured to be manually adjustable from a closed position to an open position by slidably opening the door 1135 along the top side of the seat attachment housing 1105, 1110 to provide access to the opening 1130 and adapter receiving cavity when the parent or guardian wants to insert and couple the removable seat attachment adapter 84 to the seat attachment housing 1105, 1110 and frame 81 in order to couple the second stroller seat 85 to the stroller 80. In one example, each seat attachment housing 1105, 1110 can include one or more rails either disposed above or below a top surface of the seat attachment housing 1105, 1110 that provide a guide way for slidably opening and closing the door 1135. In one example, the door 1135 can include a tab 1140 extending upward from a top surface of the door 1135 to provide a gripping area to grip the door 1135 and slide it open and closed. For example, a parent or guardian

can use a finger against the tab 1140 and apply pressure against the tab 1140 to open the door 1135 from a closed configuration to an open configuration.

[0062] The sliding door 1135 is also configured to be manually adjustable from an open configuration to a closed configuration by slidably closing the door 1135 along the top side of the seat attachment housing 1105, 1110 to prevent access to the opening 1130 and adapter receiving cavity when the second stroller seat 85 is not in use. In one example, the parent or guardian can press a finger against the tab 1140 and apply pressure against the tab 1140 to slide the door 1135 from the open configuration to the closed configuration.

[0063] Figure 12 is a partial perspective view of one of the seat attachment housings 1105, 1110 according to one example embodiment of the disclosure. Referring now to Figures 8A, 11, and 12, the door 1135 of the seat attachment housing 1105, 1110 is shown having been slid into the open configuration exposing the opening 1130 and the adapter receiving cavity 1205. The adapter receiving cavity 1205 can have any size and shape for removably coupling a portion of a removable seat attachment adapter 84 therein. In one example embodiment, all or a portion of the cross-sectional shape of the adapter receiving cavity 1205 can be keyed or have a keyed shape 1210 and all or a portion of the removable seat attachment adapter 84 can have a corresponding outer perimeter shape such that the removable seat attachment adapter 84 can only be inserted into the adapter receiving cavity 1205 in one, proper orientation.

[0064] Figures 13A-C are partial perspective views of the removable seat attachment adapter 84 coupled to the seat attachment housing 1105 according to one example embodiment of the disclosure. Now referring to Figures 8A, 11, 12, and 13A-C, once the door 1135 has been moved into the open configuration exposing the opening 1130 and the adapter receiving cavity 1205, a first end 84a of the removable seat attachment adapter 84 can be inserted into the adapter receiving cavity 1205. In certain example embodiments, the adapter receiving cavity 1205 can include one or more stop flanges 1315, 1320 that extend out from an inner surface of the cavity 1205 and into the cavity area to abut against a bottom side of the first end 84a of the removable seat attachment adapter 84 when the adapter 84 has penetrated a sufficient amount into the adapter receiving cavity 1205. Once the adapter 84 is inserted into the cavity 1205 and removably coupled to the seat attachment housing 1105, a stroller seat can be removable coupled to a seat connector disposed on or adjacent to the second end 84b of the removable seat attachment adapter 84. The seat connector on the second end 84b can be a multipurpose general connector that allows different seats to be

interchangeably connected to the removable seat attachment adapter 84. Any style seat may be configured to connect to the seat connector including, but not limited to, a stroller seat, a baby seat, a bassinet, a pram, a baby carrier, or a car seat, for example.

[0065] The removable seat attachment adapter 84 can also include a stop collar 1335 disposed a predetermined distance up from the first end 84a of the adapter 84. In one example embodiment, the stop collar 1335 is sized and shaped so that it will not fit into the opening 1130 and will not fit into the adapter receiving cavity 1205 as the first end 84a of the adapter 84 is being inserted into the adapter receiving cavity 1205. The size and shape of the outer surface of the stop collar 1335, being greater than that of the outer surface of the previous portion of the first end 84a inserted into the adapter receiving cavity 1205 will contact and abut an outer surface of the seat attachment housing 1105 when the adapter 84 has penetrated a sufficient amount into the adapter receiving cavity 1205.

[0066] The removable seat attachment adapter 84 can also include a spring-loaded latching tab 1305 disposed along one side of the adapter 84 between the first end 84a and the stop collar 1335. In certain example embodiments, the spring-loaded latching tab 1305 can be spring biased into an extended position (as shown in Figure 13B) via, for example, a spring (not shown). As the adapter 84 is first being inserted into the adapter receiving cavity 1205, the width of the adapter 84 at the point of the spring-loaded latching tab 1305, is greater than the width of the cavity 1205, which causes one or more side walls of the cavity 1205 to apply a force to the spring-loaded latching tab 1305 and push it inward from the extended position towards a retracted position, thereby allowing the first end 84a of the adapter 84 to continue moving into the adapter receiving cavity 1205. When the adapter 84 is inserted into the adapter receiving cavity 1205 a sufficient distance (which can be configurable based on the design specifics on the stroller), the spring-loaded latching tab 1305 can be positioned adjacent a tab receiver 1307. The tab receiver 1307 can be a cut-out or opening along one of the side walls of the cavity 1205 that allows the tab 1305 to move back to the extended position. The tab receiver 1307 can include a tab retainer surface 1310 that abuts a top side of the tab 1305 and prevents the removable seat attachment adapter 84 from being removed from the adapter receiving cavity 1205 while the spring-loaded latch tab 1305 is in the extended position. [0067] The removable seat attachment adapter 84 can also include a tab release button 1330 that is operatively coupled to and configured to move the spring-loaded latching tab 1305 from the extended position to the retracted position via, for example, a guide wire 1325 or other attachment

mechanism. For example, when the removable seat attachment adapter 84 is latched into the seat attachment housing 1105, a parent or guardian can grab the removable seat attachment adapter 84 and depress the tab release button 1330, causing the guide wire to pull the spring-loaded latching tab 1305 inward from the extended position to the retracted position with a force greater than the spring biasing force on the tab 1305 and allowing the parent or guardian to remove the removable seat attachment adapter 84 from the adapter receiving cavity 1205 using only a single hand. Thereby, the ease of decoupling the removable seat attachment adapter 84 from the stroller frame 81 is improved.

[0068] In addition, as shown in Figure 13B, in certain example embodiments, the bottom end of the adapter receiving cavity 1205 and corresponding bottom end of the seat attachment housing 1105 can be open 1340 to the environment. Leaving the bottom side of the cavity 1205 open 1340 to the environment helps to prevent liquid and material build-up in the cavity 1205 when the removable seat attachment adapter 84 is not coupled into the cavity 1205 by allowing the liquid and materials to pass through the cavity 1205 and out of the bottom of the seat attachment housing 1105. This is especially beneficial when the parent or guardian removes the removable seat attachment adapter 84 from the cavity 1205 but does slide the door 1135 into the closed position to close up the opening 1130.

[0069] Figures 14A-C are partial perspective views of an alternative embodiment of the seat attachment housing 1405, 1410 according to another example embodiment of the disclosure. Referring now to Figures 8A, 11, and 14A-C, the seat attachment housings 1405, 1410 are substantially the same as the seat attachment housings 1105, 1110 described in Figures 11-13C except for as described below. Therefore, the description of the seat attachment housings 1105, 1110 in Figures 11-13C above is incorporated herein for the alternative seat attachment housings 1405, 1410, except with regard to the distinctions described below.

[0070] As shown in Figure 14C, each seat attachment housing 1405, 1410 includes an opening or open end 1130 positioned along a top side of the respective seat attachment housings 1405, 1410. The opening 1130 can provide access to an adapter receiving cavity 1205. Each seat attachment housing 1405, 1410 also includes one or more stop flanges 1315, 1320 that extend out from an interior wall 1411 of the cavity 1205 and into the cavity area. In addition, the bottom end of the adapter receiving cavity 1205 and corresponding bottom end of each seat attachment housing

1405, 1410 can have an opening or open end 1340 to the environment and with the cavity 1205 and opening 1130 provides a through-hole 1413 through the seat attachment housing 1405, 1410. [0071] Each seat attachment housing 1405, 1410 can include a rotating door 1415 rotatably coupled to the seat attachment housing 1405, 1410. For example, the rotating door 1415 can have a fixed end that is rotatably coupled to the top side of the seat attachment housing 1405, 1410 or an interior wall 1411 of the opening 1130 or adapter receiving cavity 1205 by way of one or more hinges 1420. Alternatively, other devices may be used to allow the door 1415 to rotate from a closed configuration 1415a to an open configuration 1415b, as shown in Figure 14C. In certain example embodiments, the door 1415 and/or the rotating mechanism or hinge 1420 that the door 1415 is coupled to can be spring-biased into the closed configuration 1415a through the use of a spring or other biasing means. Spring-biasing the door 1415 into a closed configuration 1415a can help to prevent fluids and other material contaminants from entering the adapter receiving cavity 1205 when the removable seat attachment adapter 84 is not coupled into the adapter receiving cavity 1205.

[0072] When a parent or guardian wants to add a second stroller seat 85 to the stroller 80, they can insert the removable seat attachment adapter 84 into the adapter receiving cavity 1205 by pressing or applying a force with the first end 84a of the removable seat attachment adapter 84 against the top side of the rotating door 1415 with a force that is greater than the spring-biasing force. This will cause the door 1415 to rotate from the closed configuration 1415a towards the open configuration 1415b and allow the first end 84a of the removable seat attachment adapter to enter into the adapter receiving cavity 1205 and be coupled to the seat attachment housing 1405, 1410. [0073] When the parent or guardian removes the removable seat attachment adapter 84, as described above with regard to Figures 13A-C, as the first end 84a of the removable seat attachment adapter 84 exits the adapter receiving cavity 1205 and opening 1130, the spring-bias of the hinge 1420 or door 1415 will cause the door 1415 to automatically rotate from the open configuration 1415b to the closed configuration 1415a, thereby limiting access to the opening 1130 and the adapter receiving cavity 1205 from the top side of the seat attachment housing 1405, 1410. [0074] While the above description contains many specifics, these specifics should not be construed as limitations on the scope of the disclosure, but merely as exemplifications of the disclosed embodiments. Those skilled in the art will envision many other possible variations that are within the scope of the disclosure.

CLAIMS

What is claimed is:

- 1. A stroller, comprising:
 - a stroller frame comprising a handle portion and a front end portion;
 - a plurality of wheels comprising a plurality of back wheels;
- a first seat coupled to the stroller frame at a first vertical position of the stroller frame, wherein the first seat is disposed closer to the handle portion than the front end portion of the stroller frame;
- a first seat attachment housing coupled to the stroller frame at a second vertical position of the stroller frame that is below the first vertical position, wherein a first front wheel and a second front wheel extend from the front end of the stroller;
- a second seat attachment housing coupled to the stroller frame at a third vertical position of the stroller frame that is below the first vertical position, wherein the third vertical position is closer to the front end portion than the handle portion;
- a first seat attachment adapter spaced from and coupled to the first seat attachment housing by a first attachment frame member; and
- a second seat attachment adapter spaced from and coupled to the second seat attachment housing by a second attachment frame member;

wherein the first seat and the second seat, when connected to the frame, are arranged in an inline descending configuration along the stroller frame.

ABSTRACT

A stroller is provided with the ability to removably couple and decouple a seat from the stroller as needed. The stroller can include a stroller frame. The stroller can also include one or more front wheels attached to the stroller frame and one or more rear wheels attached to the stroller frame. The stroller can include a first seat coupled to the stroller frame. The stroller can include first and second seat attachment housings. Each of the seat attachment housings can include a cavity for receiving a corresponding one of the first and second seat attachment adapters. Each of the seat attachment housings can also include a door cover to prevent access to the respective cavity when not in use. The seat attachment adapters can be coupled to the respective seat attachment housings and a second seat can be coupled to the seat attachment adapters.

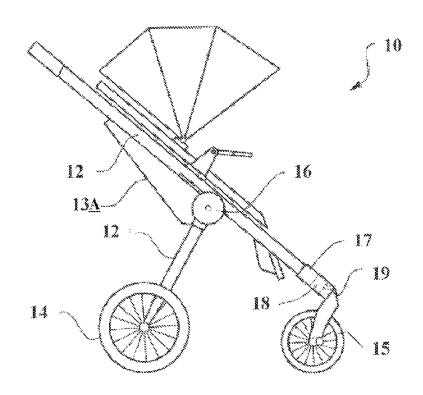
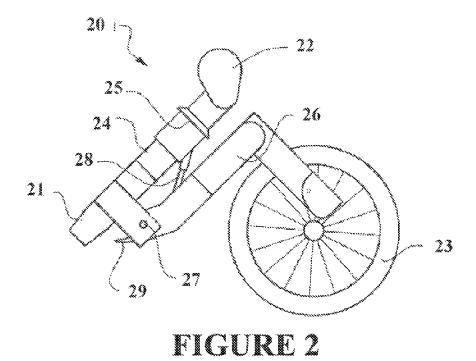


FIGURE 1



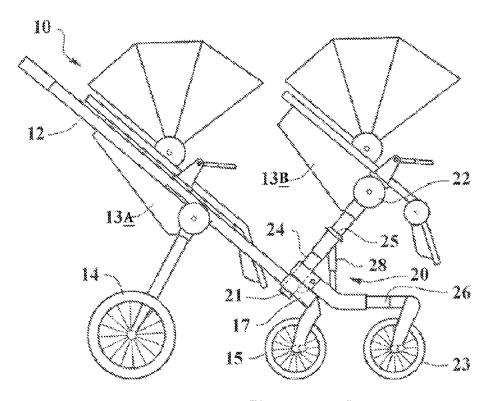
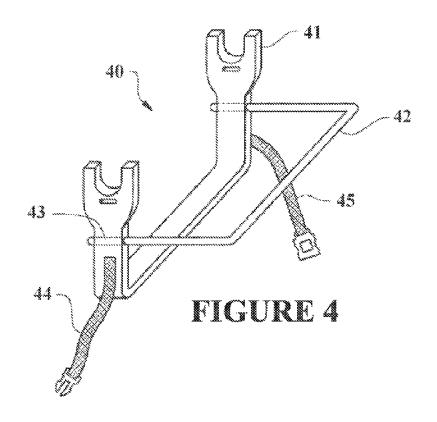


FIGURE 3



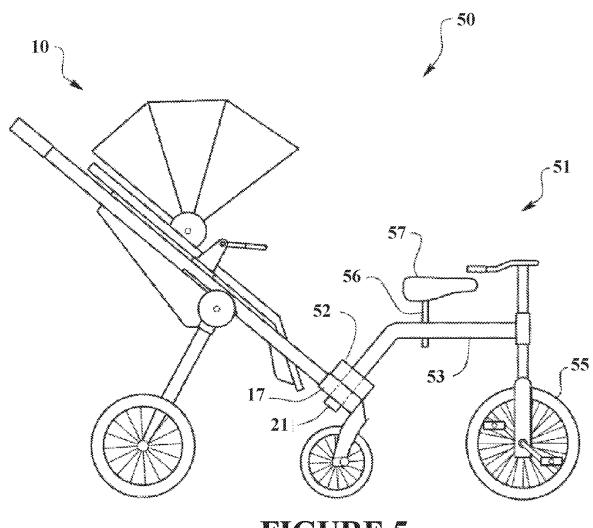
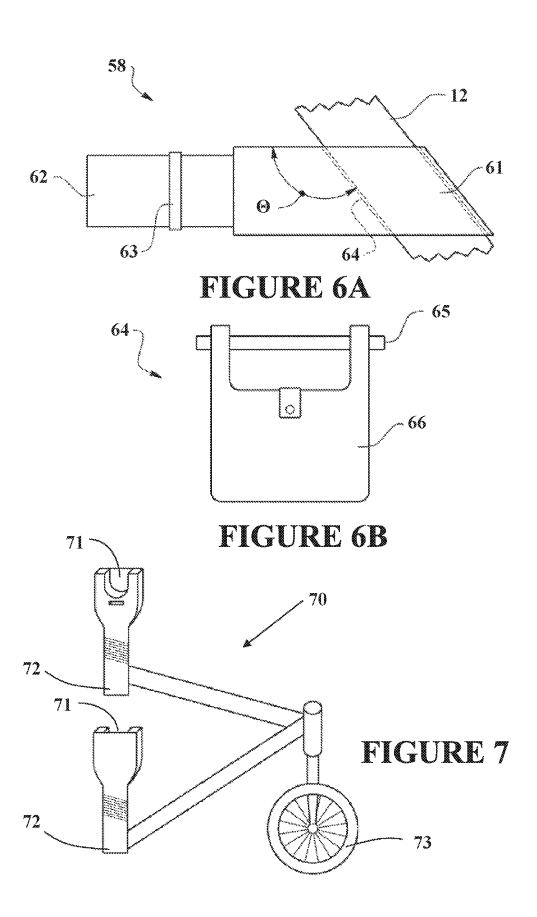


FIGURE 5



REPLACEMENT SHEET

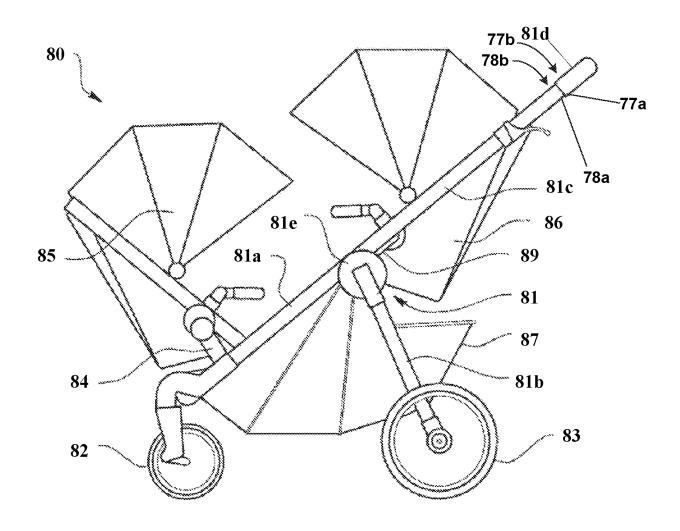


FIGURE 8A

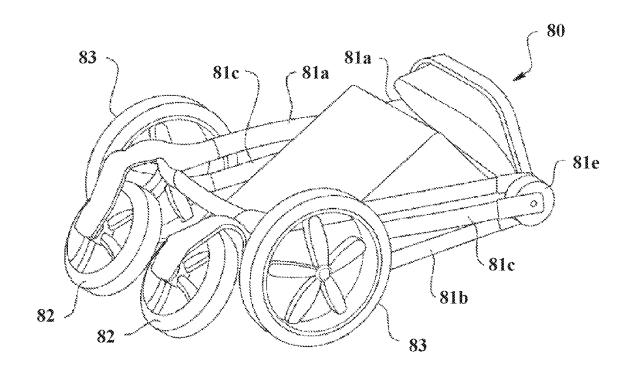


FIGURE 8B

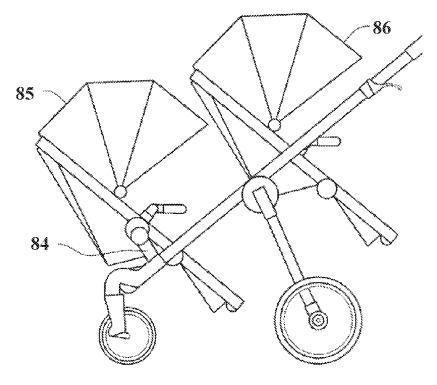


FIGURE 8C

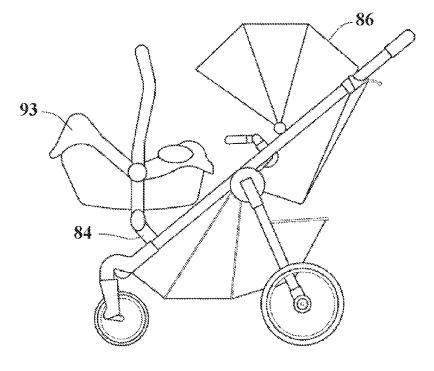


FIGURE 8D

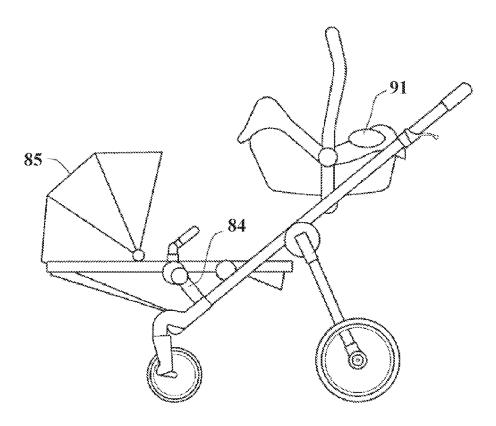


FIGURE 8E

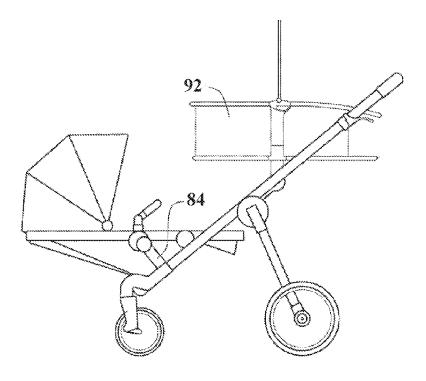


FIGURE 8F

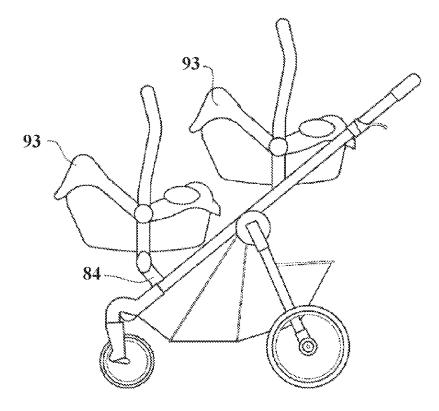


FIGURE 8G

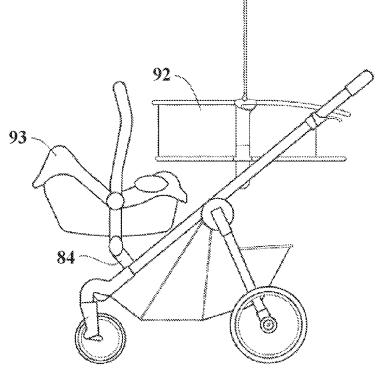


FIGURE 8H

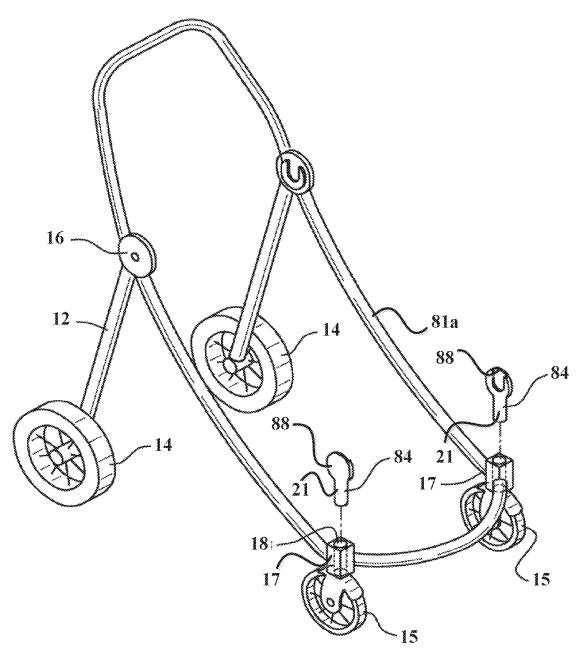


FIGURE 9

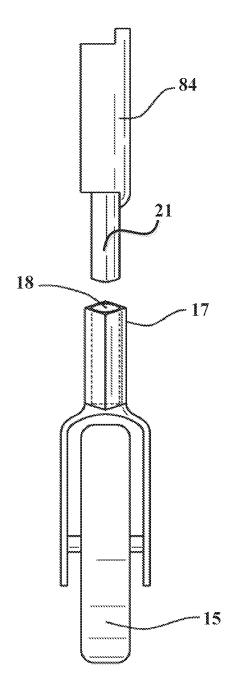


FIGURE 10

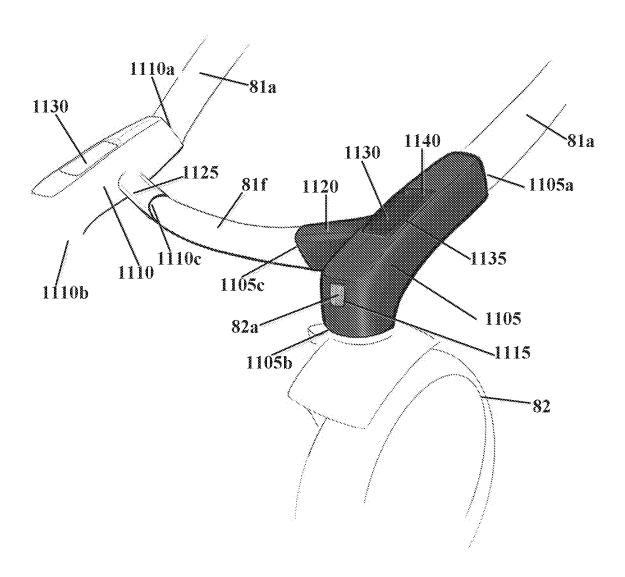


FIGURE 11

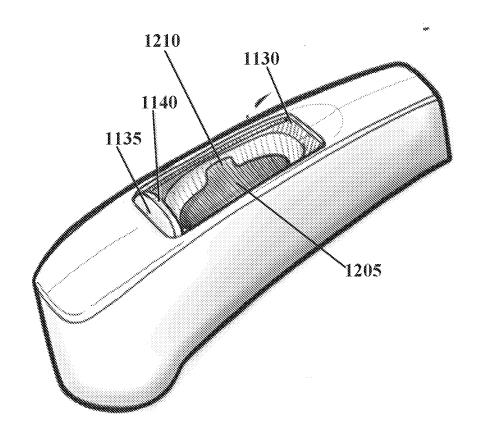


FIGURE 12

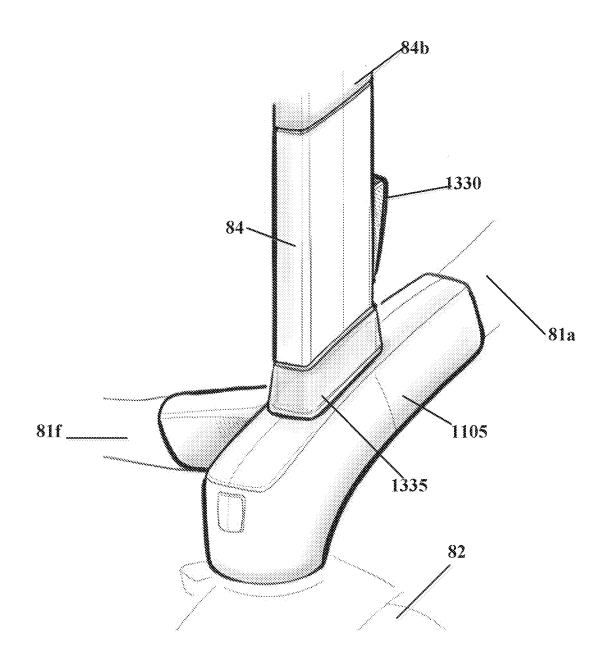


FIGURE 13A

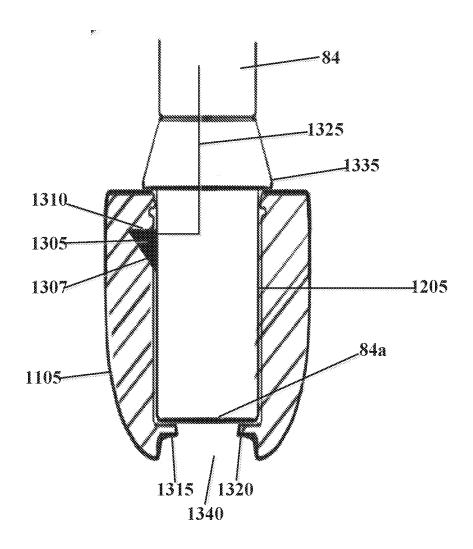


FIGURE 13B

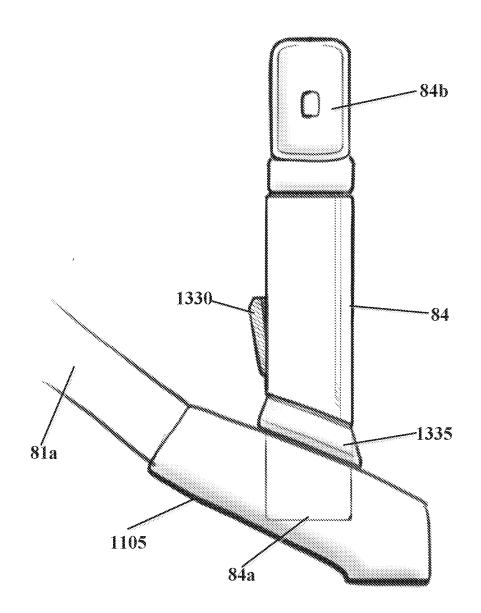


FIGURE 13C

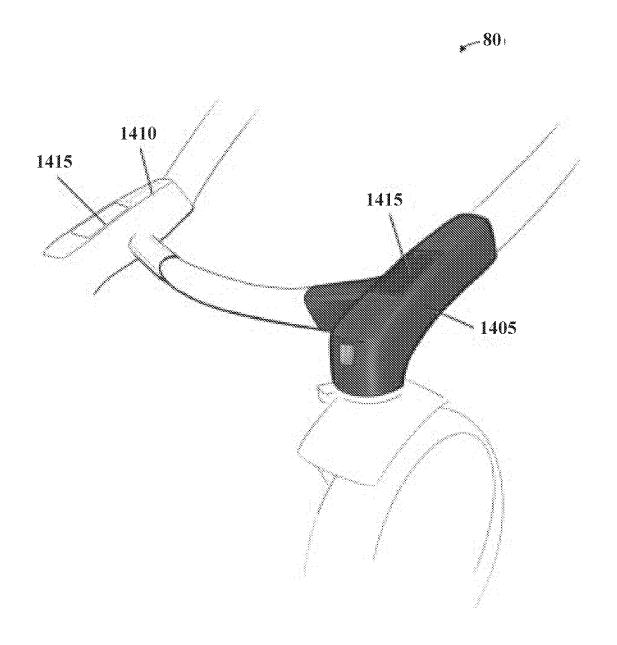


FIGURE 14A

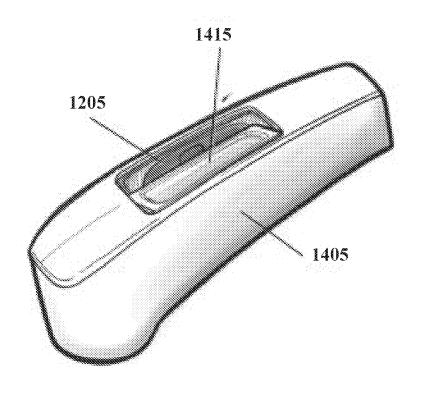


FIGURE 14B

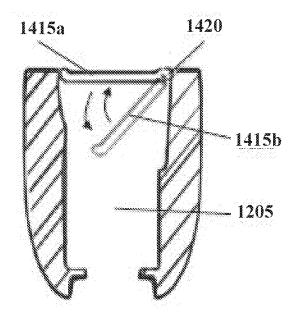


FIGURE 14C

U.S. Patent Appln, No. <u>15/225,326</u> Filed: <u>August 1, 2016</u> Attorney Docket No. 34757-1526

PARTIES TO THE ASSIGNMENT

Assignor(s):

MARK ZEHFUSS 10804 Cherry Hill Drive Glen Allen, VA 23059

Assignee:

BABY JOGGER, LLC 8575 Magellan Parkway, Suite 1000 Richmond, VA 23227

AGREEMENT

WHEREAS, ASSIGNOR(S) (listed above) are inventor(s) of an invention entitled "REMOVABLE SEAT ATTACHMENT FOR A STROLLER" (Invention) for which a non-provisional application for United States Letters Patent

\boxtimes	was	file	d on _s	<u>August 1, 201</u>	<u>6</u> , and	acc	orded U.S. A	lqq⁄	licat	ion No. <u>15</u>	/225,326	; or	
	will	be	filed	concurrently	with	the	submission	of	this	executed	PATENT	ASSIGNMENT	for
	reco	rda	tion.										

ASSIGNOR(S) hereby authorizes and requests ASSIGNEE'S legal representatives, of Sutherland Asbill and Brennan LLP, associated with Customer No. 134811, to insert in the header above and here in

Page 1 of 7

U.S. Patent Appln. No. 15/225,326

Filed: August 1, 2016

Attorney Docket No. 34757-1526

parentheses (U.S. Application No. 15/225326 , filed August 1, 2016), this application's U.S. application

number and filing date, when known.

WHEREAS, ASSIGNEE, a corporation of the State of Virginia, is desirous of acquiring the entire

right, title and interest in and to the Invention and in and to any letters patent that may be granted therefor in

the United States and in any and all foreign countries;

NOW, THEREFORE, in exchange for good and valuable consideration, the receipt of which is hereby

acknowledged, ASSIGNOR(S) hereby sell, assign and transfer unto ASSIGNEE its successors and assigns, the

entire right, title and interest in and to said Invention and any improvements thereto, said Application and any

and all letters patent which may be granted for said Invention in the United States of America and its territorial

possessions and in any and all foreign countries, and in any and all provisional, divisions, reissues, re-

examinations and continuations thereof, including the right to file foreign applications directly in the name of

ASSIGNEE and to claim priority rights deriving from said application to which said foreign applications are

entitled by virtue of international convention, treaty or otherwise, said Invention, application and all letters

patent on said Invention to be held and enjoyed by ASSIGNEE and its successors and assigns for their use and

benefit and of their successors and assigns as fully and entirely as the same would have been held and enjoyed

by ASSIGNOR(S) had this assignment, transfer and sale not been made. ASSIGNOR(S) hereby authorize and

request the Commissioner of Patents and Trademarks to issue all letters patent on said Invention to

ASSIGNEE. ASSIGNOR(S) agree to execute all instruments and documents required for the making and

prosecution of applications for United States and foreign letters patent on said Invention, for litigation

regarding said letters patent, or for the purpose of protecting title to said invention or letters patent therefor.

AND ASSIGNOR(S) DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its

successors, logal representatives, and assigns all claims for damages and all remedies arising out of any

Page 2 of 7

U.S. Patent Appln. No. 15/225,326

Filed: August 1, 2016

Attorney Docket No. 34757-1526

violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or

may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past

infringements of said letters patent before or after issuance.

AND ASSIGNOR(S) DOES HEREBY covenant and agree that ASSIGNOR(S) will communicate to

said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting

the Invention or said application, and testify in any legal proceeding, assist in the preparation of any other

patent property relating to the application and the Invention or any improvements made thereto, sign/execute

all lawful papers, provide all requested documents, execute and make all rightful oaths and/or declarations in

connection with the application and the Invention including any improvements made thereto, any patent

applications filed therefrom, and any continuing application filed from any of the aforementioned applications,

and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to

obtain and enforce proper patent protection for the Invention in all countries. These provisions are binding

upon our heirs, legal representatives, administrators, and assigns.

CORRESPONDENCE ADDRESS

I hereby direct all correspondence and telephone calls in connection with this application be addressed

to the number associated with the customer number listed below, which is:

134811

Page 3 of 7

U.S. Patent Applia, No. 15/225,326 Filed: <u>August 1, 2016</u>	Attorney Docket No. 34757-1526
DECLARATION	
As a below named inventor, I hereby declare that this de	elanotica la dimeted ice
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PCT international application number (We hereby authorize and request the Com- above the application number and filing dat	pany or its delegated attorneys or agents to insert 🥏
The above-identified application was made or authorized	I to be made by me. I believe that I am the original
inventor or an original joint inventor of a claimed invent	
I have reviewed and understand the contents of the above disclose to the US Patent & Trademark Office all inform as defined in 37 CFR 1.56. I hereby acknowledge that any willful false statement as	ation known to me to be material to the patentability
1001 by fine or imprisonment of not more than five (6) y	
Legal name of inventor: MARK ZEHFUSS	
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STATE OF Visquis	
SS. COUNTY OF Henry of	
This 201 day of <u>Request</u> 2016 before to me personally known as the individual who executed that he/she executed the same of his/her own free will for	ne foregoing assignment, who acknowledged to me the purposes therein, set forth,
	MARLY Jay / Notary Publicy /
AMARY VINE	

Page 7 of 7

CD Submission Review Results

Internal Worksheet Only - Do Not Scan

18448417 Receipt Date Aug 11, 2023

Response To Date Of Response

Х	New Application		Response To Notice	Date Of Response		
	Jumbo – Large ta	ables	are included on the)		
Х	There are no pro	blem	s with the CDs in th	e submission		
	Items checked I	below	<i>i</i> are to be selecte	d in the PALM Pre-Exa	m CD	problem
	Omitted Items	below	vare to be selecte	d in the PALM Pre-Exa	m CD	problem
П	Omitted Items			d in the PALM Pre-Exa	m CD	problem
_		disc a	are unreadable:	d in the PALM Pre-Exa	m CD	problem
	Omitted Items	disc a	are unreadable: readable:	d in the PALM Pre-Exa	m CD	problem

Missing Parts

Missing compact discs

Application Number

Disc(s) do not contain file names listed
Discs contains files that are non-ASCII files:
Only one copy of the CD, no duplicate:
Wrong media type, e.g., CD-RW:
The transmittal letter and specification do not list information:
Both disc(s) contain unreadable files:
One disc(s) contain unreadable files:
Compact disc(s) contain viruses, but are still readable:
EFS/Paper Submission:
Table does not maintain data in proper alignment:
Not proper subject matter for CD's:

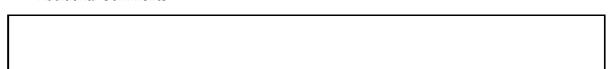
Informality

No statement in transmittal letter that CD's are the same:
No incorporation by reference statement for the CD's:
CD's not labeled "Copy 1" and "Copy 2":
Deficient CD packaging:
Deficient Labeling on CD's:
The transmittal letter does not list information:
The specification does not list information:
Table less than 51 pages submitted on CD:

File Directory Attachment

Copy of file directory listing is attached and should be mailed to applicant
Copy of file directory listing is not attached
Copy of file directory listing is not attached because it is over one page long

Additional Comments



Internal Worksheet Only - Do Not Scan



SCORE Placeholder Sheet for IFW Content

Application Number: 18448417 Document Date: 08/11/2023

The presence of this form in the IFW record indicates that the following document type was received in electronic format on the date identified above. This content is stored in the SCORE database.

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Drawing

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APPLICATION	FILING or	GRP ART				
NUMBER	371(c) DATE	UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
18/448,417	08/11/2023		1820	34757-2775	1	1

CONFIRMATION NO. 3414

FILING RECEIPT

134811 Eversheds Sutherland (US) LLP/NWL 999 Peachtree Street **Suite 2300** Atlanta, GA 30309

Date Mailed: 08/24/2023

Receipt is acknowledged of this non-provisional utility patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF FIRST INVENTOR, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection.

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Inventor(s)

Mark ZEHFUSS, Glen Allen, VA;

Applicant(s)

Baby Jogger, LLC, Atlanta, GA;

Power of Attorney: The patent practitioners associated with Customer Number 134811

Domestic Priority data as claimed by applicant

This application is a CON of 16/903,292 06/16/2020 PAT 11,731,682 which is a CON of 15/912,901 03/06/2018 PAT 10,730,543 which is a CON of 15/225,326 08/01/2016 PAT 9,944,305 which claims benefit of 62/311,224 03/21/2016 and is a CIP of 14/597,420 01/15/2015 PAT 9,403,550 which is a CON of 14/261,558 04/25/2014 PAT 8,955,869 which is a CON of 12/631,375 12/04/2009 ABN which claims benefit of 61/119,920 12/04/2008

Foreign Applications for which priority is claimed (You may be eligible to benefit from the Patent Prosecution Highway program at the USPTO. Please see http://www.uspto.gov for more information.) - None. Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

Permission to Access Application via Priority Document Exchange: Yes

page 1 of 4

Permission to Access Search Results: Yes

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted: 08/22/2023

The country code and number of your priority application, to be used for filing abroad under the Paris Convention,

is **US 18/448,417**

Projected Publication Date: 11/30/2023

Non-Publication Request: No Early Publication Request: No

Title

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Preliminary Class

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: No

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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

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countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

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Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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	page 4 of 4

	PATEN		Application or Docket Number 18/448,417							
	APPLIC	CATION AS			umn 2)	SMALL	ENTITY	OR	OTHER SMALL	
FOR NUMBER FILED NUMBER EXTRA			R EXTRA	RATE(\$)	FEE(\$)	7	RATE(\$)	FEE(\$)		
	ASIC FEE (CFR 1.16(a), (b), or (c)) N/A N/A			N/A		1	N/A	320		
SEA	RCH FEE FR 1.16(k), (i), or (m))	<u> </u>	/A		√A	N/A		1	N/A	700
EXA	MINATION FEE	 	/A		I/A	N/A		1	N/A	800
TOT	FR 1.16(o), (p), or (q)) AL CLAIMS FR 1.16(i)	1	minus	20 = *	0			OR	x =	0
INDE	FR 1.16(i)) EPENDENT CLAIMS	1	minus	*				1	x =	0
APPLICATION SIZE FEE (37 CFR 1.16(s)) If the specification and drawings exceed 100 sheets of paper, the application size fee due is \$310 (\$155 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).								0		
MŲL	TIPLE DEPENDENT	CLAIM PRES	SENT (3	7 CFR 1.16(j))				1		0
* If ti	he difference in colum	nn 1 is less th	an zero,	enter "0" in colun	nn 2.	TOTAL		1	TOTAL	1820
						014411		25	OTHER	
IT A	F	(Column 1) CLAIMS REMAINING AFTER MENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL RATE(\$)	ENTITY ADDITIONAL FEE(\$)	OR	OTHER SMALL RATE(\$)	
	F	CLAIMS REMAINING AFTER	Minus	HIGHEST NUMBER PREVIOUSLY	PRESENT		ADDITIONAL	OR OR	SMALL	ENTITY ADDITIONAL
	F Al	CLAIMS REMAINING AFTER	Minus Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL		SMALL RATE(\$)	ENTITY ADDITIONAL
	Total (37 CFR 1.16(i)) Independent	CLAIMS REMAINING AFTER MENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL	OR	SMALL RATE(\$) x =	ENTITY ADDITIONAL
	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h))	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s))	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$)	ADDITIONAL	OR	SMALL RATE(\$) x =	ENTITY ADDITIONAL
	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Application Size Fee (3) FIRST PRESENTATION	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s))	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR 	PRESENT EXTRA	RATE(\$)	ADDITIONAL	OR OR	SMALL RATE(\$) x =	ENTITY ADDITIONAL
AMENDMENT A	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Application Size Fee (3) FIRST PRESENTATION	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s))	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$) x = x =	ADDITIONAL	OR OR	SMALL RATE(\$) X = X =	ENTITY ADDITIONAL
- B AMENDMENT	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Application Size Fee (3 FIRST PRESENTATIO	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s)) ON OF MULTIPL (Column 1)	Minus E DEPENI	HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE(\$) x = x =	ADDITIONAL	OR OR	SMALL RATE(\$) X = X =	ENTITY ADDITIONAL FEE(\$)
- B AMENDMENT	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Application Size Fee (3 FIRST PRESENTATIO	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s)) ON OF MULTIPL (Column 1) CLAIMS REMAINING AFTER	Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR COLUMN 2) HIGHEST NUMBER PREVIOUSLY	PRESENT EXTRA = = CFR 1.16(j)) (Column 3) PRESENT	RATE(\$) X = X = TOTAL ADD'L FEE	ADDITIONAL FEE(\$)	OR OR	SMALL RATE(\$) X = X = TOTAL ADD'L FEE	ENTITY ADDITIONAL FEE(\$)
B AMENDMENT	F Al Total	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s)) ON OF MULTIPL (Column 1) CLAIMS REMAINING AFTER	Minus E DEPENI	HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA = (Column 3) PRESENT EXTRA	RATE(\$) X = X = TOTAL ADD'L FEE	ADDITIONAL FEE(\$)	OR OR OR	SMALL RATE(\$) X = X = TOTAL ADD'L FEE RATE(\$)	ENTITY ADDITIONAL FEE(\$) ADDITIONAL
- B AMENDMENT	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Application Size Fee (3) FIRST PRESENTATION FRA Total (37 CFR 1.16(i)) Independent *	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s)) ON OF MULTIPL (Column 1) CLAIMS REMAINING AFTER MENDMENT	Minus E DEPENI Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA = = CFR 1.16(j)) (Column 3) PRESENT EXTRA	RATE(\$) X = X = TOTAL ADD'L FEE RATE(\$)	ADDITIONAL FEE(\$)	OR OR OR OR	SMALL RATE(\$)	ENTITY ADDITIONAL FEE(\$) ADDITIONAL
AMENDMENT	Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h)) Application Size Fee (3 FIRST PRESENTATION FIRST PRESENTATION Total (37 CFR 1.16(i)) Independent (37 CFR 1.16(h))	CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s)) ON OF MULTIPL (Column 1) CLAIMS REMAINING AFTER MENDMENT 37 CFR 1.16(s))	Minus E DEPENI Minus Minus	HIGHEST NUMBER PREVIOUSLY PAID FOR (Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR "" "" "" "" "" "" "" "" ""	PRESENT EXTRA = CFR 1.16(j)) (Column 3) PRESENT EXTRA	RATE(\$) X = X = TOTAL ADD'L FEE RATE(\$)	ADDITIONAL FEE(\$)	OR OR OR OR	SMALL RATE(\$)	ENTITY ADDITIONAL FEE(\$)

 ^{**} 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 found in the appropriate box in column 1

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sutherland.com,umarbakhsh@eversheds-sutherland.us

FROM: noreply@uspto.gov

CC: patentcenter_eofficeaction@uspto.gov

SUBJECT: USPTO: Patent Electronic System - Correspondence Notification for Customer Number

134811

Thu Aug 24 06:28:40 EDT 2023

Dear Patent Center Customer:

Correspondence Address:

Eversheds Sutherland (US) LLP/NWL

999 Peachtree Street

Suite 2300

Atlanta, GEORGIA, 30309

UNITED STATES

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Application	Document	Mailroom Date	Attorney Docket No.
18448417	APP.FILE.REC	08/24/2023	34757-2775

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PTO/SB/08a (01-10)

Approved for use through 07/31/2012. OMB 0651-0031

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	Application Number		18448417	
INFORMATION BIOOLOGUEE	Filing Date		2023-08-11	
INFORMATION DISCLOSURE	First Named Inventor Mark		k ZEHFUSS	
STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Art Unit		OPAP	
(Not for Submission under or or it 1.55)	Examiner Name TBD)	
	Attorney Docket Numb	er	34757-2775	

				U.S.I	PATENTS	Remove
Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear
	1	6585284	B2	2003-07-01	SWEENEY ET AL	
	2	5417449	А	1995-05-23	SHAMIE	
	3	5653460	А	1997-08-05	FOGARTY	
	4	5794951	А	1998-08-18	CORLEY ET AL.	
	5	D360392		1995-07-18	LEWANDOWSKI	
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	1					
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number		18448417		
Filing Date		2023-08-11		
First Named Inventor Mark		ZEHFUSS		
Art Unit		OPAP		
Examiner Name TBD				
Attorney Docket Number		34757-2775		

Examiner Initial*	Cite No	Foreign Document Number³	Country Code ² İ	Kind Code ⁴	Publication Date	Name of Patentee or Applicant of cited Document	Pages,Columns,Lines where Relevant Passages or Relevant Figures Appear	T 5
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number		18448417			
Filing Date		2023-08-11			
First Named Inventor	Mark	ZEHFUSS			
Art Unit		OPAP			
Examiner Name TBD					
Attorney Docket Number		34757-2775			

		CERTIFICATION	N STATEMENT							
Plea	ase see 37 CFR 1	.97 and 1.98 to make the appropriate selecti	ion(s):							
	That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).									
OF	1									
	foreign patent of after making real any individual d	information contained in the information diffice in a counterpart foreign application, ar sonable inquiry, no item of information contestignated in 37 CFR 1.56(c) more than the 37 CFR 1.97(e)(2).	nd, to the knowledge of th ained in the information di	e person signing the certification sclosure statement was known to						
	See attached ce	rtification statement.								
	The fee set forth	in 37 CFR 1.17 (p) has been submitted here	ewith.							
X	A certification sta	atement is not submitted herewith.								
	ignature of the ap n of the signature.	SIGNA policant or representative is required in accor		18. Please see CFR 1.4(d) for the						
Sig	nature	/Umar Bakhsh/	Date (YYYY-MM-DD)	2023-10-27						
Name/Print Umar Bakhsh Registration Number 67307										
pub	lic which is to file	rmation is required by 37 CFR 1.97 and 1.98 (and by the USPTO to process) an application is estimated to take 1 hour to complete, inclu	on. Confidentiality is gover	rned by 35 U.S.C. 122 and 37 CFR						

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VA 22313-1450.

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- 5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
- 6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
- 7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
- 8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.
- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.



ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION # **18/448,417**

RECEIPT DATE / TIME

10/27/2023 01:27:05 PM ET

ATTORNEY DOCKET # **34757-2775**

Title of Invention

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Application Information

APPLICATION TYPE Utility - Nonprovisional Application

Utility - Nonprovisional Application under 35 USC 111(a)

PATENT# -

CONFIRMATION # 3414

FILED BY Umar Bakhsh

PATENT CENTER # 63099012

FILING DATE 08/11/2023

CUSTOMER # 134811

FIRST NAMED

Mark ZEHFUSS

INVENTOR

CORRESPONDENCE ADDRESS AUTHORIZED BY -

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
updated_IDS.pdf	4	Information Disclosure Statement (IDS) Form (SB08)	598 KB

Warning: The PDF file contains multiple layers and must be flattened prior to submission. Documents submitted with multiple layers will be flattened by the USPTO when converted to an image. Layers marked as "invisible" will be lost during conversion.

Digest

updated IDS.pdf

91AC9816456F77A12341413BE04912B365F97C14F555D6B1581

D462BBF89D944E272D2C9F4083F064C7ED58A26327E4894955 83A20AAE38B167ACCDBE4E68453

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 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.





ELECTRONIC ACKNOWLEDGEMENT RECEIPT

APPLICATION # 18/448,417 RECEIPT DATE / TIME

11/07/2023 06:34:00 PM Z ET

ATTORNEY DOCKET #

34757-2775

Title of Invention

REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Application Information

APPLICATION TYPE Utility - Nonprovisional Application

PATENT# -

CONFIRMATION # 3414

under 35 USC 111(a)

FILED BY

Loretta Garcia

PATENT CENTER # 63182222

FILING DATE

08/11/2023

CUSTOMER # 134811

FIRST NAMED

Mark ZEHFUSS

INVENTOR

CORRESPONDENCE ADDRESS

AUTHORIZED BY

Umar Bakhsh

Documents

TOTAL DOCUMENTS: 1

DOCUMENT	PAGES	DESCRIPTION	SIZE (KB)
34757-2775 - Suppl. IDS.pdf	4	Information Disclosure	598 KB
		Statement (IDS) Form (SB08))

Digest

DOCUMENT	MESSAGE DIGEST(SHA-512)
34757-2775 - Suppl. IDS.pdf	B977FE578B95286D4E9B13D777C3014BEFAB428EDA3536B46 59125A35178AABD4DC55ACFEE1739E74B07E945BF0B7427D6

8F3550E3F9F4CF6D8EB68741A90EF7

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New International Application Filed with the USPTO as a Receiving Office

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PTO/SB/08a (01-10)

Approved for use through 07/31/2012. 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.

INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Application Number		18448417	
	Filing Date		2023-08-11	
	First Named Inventor Mark		k ZEHFUSS	
	Art Unit		OPAP	
	Examiner Name TBD)	
	Attorney Docket Number	er	34757-2775	

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Examiner Initial*	Cite No	Patent Number	Kind Code ¹	Issue D)ate	of cited Document		Relev	s,Columns,Lines where ant Passages or Relev es Appear	e ⁄ant
	1	8371606	B2	2013-02	?-12	Gower et al.				
	2	9004524	B1	2015-04	-14	Gower et al.	Gower et al.			
	3	9643640	B2	2017-05	5-09	Gower et al.				
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number		18448417		
Filing Date		2023-08-11		
First Named Inventor Mark		ZEHFUSS		
Art Unit		OPAP		
Examiner Name TBD				
Attorney Docket Number		34757-2775		

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Examiner Initials*	Cite No	de name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item and a special symposium, catalog, etc), date, pages(s), volume-issue number(s), sher, city and/or country where published.						
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If you wis	h to ac	additional non-patent literature document citation information please click the Add button Add						
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*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								
Standard ST ⁴ Kind of doo	See Kind Codes of USPTO Patent Documents at www.USPTO.GOV or MPEP 901.04. ² Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). ³ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language translation is attached.							

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Not for submission under 37 CFR 1.99)

Application Number		18448417	
Filing Date		2023-08-11	
First Named Inventor	Mark ZEHFUSS		
Art Unit		OPAP	
Examiner Name	TBD		
Attorney Docket Number		34757-2775	

CERTIFICATION STATEMENT							
Please see 37 CFR 1.97 and 1.98 to make the appropriate selection(s):							
	That each item of information contained in the information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(1).						
OR	1						
	That no item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the person signing the certification after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the information disclosure statement. See 37 CFR 1.97(e)(2).						
	See attached certification statement.						
	The fee set forth in 37 CFR 1.17 (p) has been submitted herewith.						
X	🔀 A certification statement is not submitted herewith.						
SIGNATURE							
A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.							
Sigr	ignature /Umar Bakhsh/		Date (YYYY-MM-DD)	2023-11-07			
Nan	Name/Print Umar Bakhsh		Registration Number	67307			
pub 1.14	This collection of information is required by 37 CFR 1.97 and 1.98. 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 1 hour 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,**

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

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

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



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FIRST NAMED APPLICANT ATTY. DOCKET NO./TITLE APPLICATION NUMBER FILING OR 371(C) DATE

18/448,417 08/11/2023 Mark ZEHFUSS 34757-2775

CONFIRMATION NO. 3414 PUBLICATION NOTICE

Date Mailed: 11/30/2023

134811 Eversheds Sutherland (US) LLP/NWL 999 Peachtree Street **Suite 2300** Atlanta, GA 30309

Title: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

Publication No.US-2023-0382447-A1

Publication Date: 11/30/2023

NOTICE OF PUBLICATION OF APPLICATION

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

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

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Public Records Division. The Public Records Division can be reached by telephone at (571) 272-3150 or (800) 972-6382, by facsimile at (571) 273-3250, by mail addressed to the United States Patent and Trademark Office, Public Records Division, Alexandria, VA 22313-1450 or via the Internet.

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

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

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

page 1 of 1

TO: patentdocket@eversheds-sutherland.com,NewellPatents@eversheds-

sutherland.us,umarbakhsh@eversheds-sutherland.us

FROM: noreply@uspto.gov

CC: patentcenter_eofficeaction@uspto.gov

SUBJECT: USPTO: Patent Electronic System - Correspondence Notification for Customer Number

134811

Thu Nov 30 05:41:30 EST 2023

Dear Patent Center Customer:

Correspondence Address:

Eversheds Sutherland (US) LLP/NWL

999 Peachtree Street

Suite 2300

Atlanta, GEORGIA, 30309

UNITED STATES

This is a courtesy notification regarding the following USPTO patent application(s) associated with your Customer Number, 134811, that have new outgoing correspondence. This correspondence is now available for viewing in Patent Center.

The official date of notification of the outgoing correspondence will be indicated on the form (e.g., PTOL-90) accompanying the correspondence.

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Application	Document	Mailroom Date	Attorney Docket No.
18448417	NTC.PUB	11/30/2023	34757-2775

To view your correspondence online, please sign in to <u>Patent Center</u> and then select Workbench/View correspondence. To update your email address(es), select Manage/Manage customer numbers.

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	APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
	18/448,417	08/11/2023	Mark ZEHFUSS	34757-2775	3414	
		7590 02/29/202 erland (US) LLP/NWL		EXAM	IINER	
	999 Peachtree S		•	DOLAK,	JAMES M	
	Suite 2300 Atlanta, GA 30	309		ART UNIT	PAPER NUMBER	
				3618		
				NOTIFICATION DATE	DELIVERY MODE	
				02/29/2024	ELECTRONIC	

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 the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

NewellPatents@eversheds-sutherland.us patentdocket@eversheds-sutherland.com umarbakhsh@eversheds-sutherland.us

PTOL-90A (Rev. 04/07)

	18/448,417	ZEHFUSS, M	
Office Action Summary	Examiner JAMES M DOLAK	Art Unit 3618	AIA (FITF) Status No
The MAILING DATE of this communication applied for Reply	ears on the cover sheet with the o	correspondent	ce address
A SHORTENED STATUTORY PERIOD FOR REPLY DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 date of this communication. - If NO period for reply is specified above, the maximum statutory period w - Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a reply be tin will apply and will expire SIX (6) MONTHS from a cause the application to become ABANDONE	nely filed after SIX the mailing date o ED (35 U.S.C. § 13	(6) MONTHS from the mailing fthis communication.
Status			
1) ■ Responsive to communication(s) filed on 8/1	1/2023.		
☐ A declaration(s)/affidavit(s) under 37 CFR 1	I. 130(b) was/were filed on	·	
2a) ☐ This action is FINAL . 2b) {			
3) An election was made by the applicant in res on; the restriction requirement and election			
4) Since this application is in condition for allow closed in accordance with the practice under			
Disposition of Claims*			
5) 🗹 Claim(s) <u>1</u> is/are pending in the applica	tion.		
5a) Of the above claim(s) is/are withdra	awn from consideration.		
6) Claim(s) is/are allowed.			
7) 🗹 Claim(s) 1 is/are rejected.			
8) Claim(s) is/are objected to.			
9) Claim(s) are subject to restriction as * If any claims have been determined <u>allowable</u> , you may be eli participating intellectual property office for the corresponding ap http://www.uspto.gov/patents/init_events/pph/index.jsp or send	gible to benefit from the Patent Pro pplication. For more information, plea	ase see	way program at a
Application Papers			
10) The specification is objected to by the Examir	ner.		
11) The drawing(s) filed on 8/11/2023 is/are: a)	accepted or b) objected :	to by the Exa	aminer.
Applicant may not request that any objection to the di	rawing(s) be held in abeyance. See 3	37 CFR 1.85(a)	
Replacement drawing sheet(s) including the correction	on is required if the drawing(s) is obje	cted to. See 37	' CFR 1.121(d).
Priority under 35 U.S.C. § 119 12) Acknowledgment is made of a claim for foreign Certified copies:	gn priority under 35 U.S.C. § 1	19(a)-(d) or (f).
a) ☐ All b) ☐ Some** c) ☐ None of t	he:		
1. Certified copies of the priority docun	nents have been received.		
2. Certified copies of the priority docun	nents have been received in Ap	plication No	
3. Copies of the certified copies of the application from the International Bu		received in tl	nis National Stage
** See the attached detailed Office action for a list of the certific			
Attackmont/o\			
Attachment(s) 1) A Notice of References Cited (PTO-892)	2) Interview Commen	, /DT∩ / 43\	
1) Notice of References Cited (PTO-892)	3) Interview Summary Paper No(s)/Mail D		
2) Information Disclosure Statement(s) (PTO/SB/08a and/or PTO/S Paper No(s)/Mail Date	B/08b) 4) Other:	•	

U.S. Patent and Trademark Office PTOL-326 (Rev. 11-13)

Application/Control Number: 18/448,417 Page 2

Art Unit: 3618

DETAILED ACTION

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 10/27/2023 and 11/07/2023 were filed in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "a first seat attachment adapter spaced from and coupled to the first seat attachment housing by a first attachment frame member; and a second seat attachment adapter spaced from and coupled to the second seat attachment housing by a second attachment frame member" (Claim 1 – only one attachment frame member 24 is portrayed in the Figures) and similarly all of the elements listed below must be shown and labeled or the feature(s) canceled from the claim(s) (No new matter should be entered).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

Application/Control Number: 18/448,417 Page 3

Art Unit: 3618

and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cheng (US 7,475,900 B2).

[Claim 1] Regarding Claim 1, Cheng discloses: A stroller (See, e.g., Fig. 4-8), comprising:

a stroller frame (See, e.g., Fig. 4-8, 3+4+5+10+etc.);

comprising a handle portion (See, e.g., Fig. 4-8, 10) and a front end portion (See, e.g., Fig. 4-8, 31); a plurality of wheels (See, e.g., Fig. 4-8, 33+34) comprising a plurality of back wheels (See, e.g., Fig. 4-8, 34); a first seat (See, e.g., Fig. 4-8, 72) coupled to the stroller frame at a first vertical position of the stroller frame (See, e.g., Fig. 4-8), wherein the first seat is disposed closer to the handle portion than the front

Application/Control Number: 18/448,417 Page 4

Art Unit: 3618

end portion of the stroller frame (See, e.g., Fig. 4-8); a first seat attachment housing (See, e.g., Fig. 4-8, 410) coupled to the stroller frame at a second vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8), wherein a first front wheel and a second front wheel extend from the front end of the stroller (See, e.g., Fig. 4-8, 33); a second seat attachment housing (See, e.g., Fig. 4-8, 410) coupled to the stroller frame at a third vertical position of the stroller frame that is below the first vertical position (See, e.g., Fig. 4-8), wherein the third vertical position is closer to the front end portion than the handle portion (See, e.g., Fig. 4-8); a first seat attachment adapter (See, e.g., Fig. 4-8, 71) spaced from and coupled to the first seat attachment housing by a first attachment frame member (See, e.g., Fig. 4-8, 71); and a second seat attachment adapter (See, e.g., Fig. 4-8, 71) spaced from and coupled to the second seat attachment housing by a second attachment frame member (See, e.g., Fig. 4-8, 71); wherein the first seat and the second seat, when connected to the frame, are arranged in an inline descending configuration along the stroller frame (See, e.g., Fig. 4-8).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, and can be found on the attached Notice of References Cited.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAMES M DOLAK whose telephone number is (571)270-7757. The examiner can normally be reached on 9-530 EST Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J ALLEN SHRIVER can be reached on 303-297-4337. The fax phone

Application/Control Number: 18/448,417

Art Unit: 3618

273-8300.

number for the organization where this application or proceeding is assigned is 571-

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES M DOLAK/ Primary Examiner, Art Unit 3618. Page 5

Application/Control No. Applicant(s)/Patent Under 18/448,417 Reexamination ZEHFUSS, Mark Notice of References Cited Art Unit Examiner JAMES M DOLAK 3618 Page 1 of 1 **U.S. PATENT DOCUMENTS** Document Number Date Name **CPC Classification US Classification** YYYY-MM-DD Country Code-Number-Kind Code US-7475900-B2 01-2009 Cheng; Huang-Yi B62B7/08 280/47.38 * US-D593459-S 06-2009 Liao; Gordon D12/129 С US-6286844-B1 09-2001 Cone, II; Richard E. B62B9/28 280/47.41 * 02-2020 Rolicki; Peter B62B9/02 D US-10556610-B2 1/1 * Ε US-10449987-B2 10-2019 Gibson; Bryce B62B7/06 1/1 Barenbrug; Machiel Gerardus * F US-6513827-B1 02-2003 B62B7/145 280/648 Theodorus Marie * 280/47.38 US-7377537-B2 G 05-2008 Li: Wei-Yeh B62B7/123 * Н US-10899377-B2 01-2021 Eggert-Crowe; Colin F. B62B7/14 1/1 * US-8602441-B2 12-2013 1 Li; Jian-Qun B62B9/28 280/642 * J US-6267406-B1 07-2001 Huang; Mien Chen 280/47.38 B62B7/08 * Κ US-11091186-B2 08-2021 Zhang; Xiaojian B62B7/062 1/1 * L US-8313115-B2 11-2012 Cheng; Kenny B62B7/142 280/47.38 US-7971897-B2 07-2011 Pike; Robert T. B62B7/123 280/650 FOREIGN PATENT DOCUMENTS Document Number Date **CPC Classification** Country Name Country Code-Number-Kind Code YYYY-MM-DD Ν 0 Ρ Q R S Т **NON-PATENT DOCUMENTS** Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages) U V W

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

U.S. Patent and Trademark Office PTO-892 (Rev. 01-2001)

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Notice of References Cited

Part of Paper No. 20240224

	Application/Control No.	Applicant(s)/Patent Under Reexamination
Index of Claims	18/448,417	ZEHFUSS, Mark
	Examiner	Art Unit
	JAMES M DOLAK	3618

1	Rejected	-	Cancelled	N	Non-Elected	Α	Appeal
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	Application/Control No.	Applicant(s)/Patent Under Reexamination
Search Notes	18/448,417	ZEHFUSS, Mark
	Examiner	Art Unit
	JAMES M DOLAK	3618

CPC - Sea	rched*			
Symbol		Date	Examiner	
B62B7/008	3,00,006,14,142,145	02/24/2024	JMD	
B62B9/12,	28,102	02/24/2024	JMD	
CPC Com	bination Sets - Searched*			
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US Classi	fication - Searched*			
Class	Subclass	Date	Examiner	

^{*} See search history printout included with this form or the SEARCH NOTES box below to determine the scope of the search.

Search Notes				
Search Notes	Date	Examiner		
Inventor & Assignee Search	02/24/2024	JMD		
Text search	02/24/2024	JMD		

Interference Search					
US Class/CPC Symbol	US Subclass/CPC Group	Date	Examiner		

/JAMES M DOLAK/ Primary Examiner.Art Unit 3618	/JAMES M DOLAK/ Primary Examiner, Art Unit 3618

PE2E SEARCH - Search History (Prior Art)

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02/24/2024 11:04:16 PM Workspace: 18448417_updatedparent Page 134 of 1837

			USOCR)				01:21 PM
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L122	29	("0122730" "0937625" "1212221" "20070114738" "2836224" "3000645" "4288124" "4779883" "4805938" "4863217" "5312122" "5622375" "5653460" "5704627" "5848797" "6378892" "6530591" "6746079" "6851693" "7226059" "7481439" "7597332" "7677585").PN. OR ("8128103").URPN.	(US-PGPUB; U USOCR)	SPAT;	OR	ON	ON	2013/07/25 03:29 PM
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L131	60	(US-20100052277-\$ or US-20070114738-\$ or US-20070114738-\$ or US-20060290107-\$ or US-20080303232-\$ or US-20060131841-\$ or US-2006001226-\$ or US-2006001226-\$ or US-2006001226-\$ or US-20080224451-\$ or US-20010033069-\$).did. or (US-5338096-\$ or US-6045145-\$ or US-3223431-\$ or US-6378892-\$ or US-653460-\$ or US-6209892-\$ or US-6209892-\$ or US-6201535-\$ or US-6676140-\$ or US-7475900-\$ or US-7938435-\$ or US-7497461-\$ or US-7497461-\$ or US-7497461-\$ or US-7497461-\$ or US-7497461-\$ or US-7497461-\$ or US-752405-\$ or US-759405-\$ or US-7597332-\$ or US-75974951-\$ or US-5794951-\$ or US-5647601-\$ or US-5647601-\$ or US-5647601-\$ or US-5647601-\$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2013/07/25 04:59 PM

		2453631-\$ or US- 6443467-\$ or US- 8205906-\$ or US- 8262103-\$ or US- 8336904-\$ or US- 8371606-\$ or US- 8251382-\$ or US- 7377537-\$ or US- 7320471-\$ or US- 7367581-\$ or US- 7367581-\$ or US- 6827356-\$).did. or (US- 3000645-\$ or US- 2453631-\$).did.					
L132	7295614	@ad<="20081204"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/29 06:38 PM
L133	2588	(297/130,232,243,463.1).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/29 06:38 PM
L134	3082	(280/650,657,647,648,6 58,639,642,643).CCLS.	1 ` '	OR	ON	ON	2014/01/29 06:38 PM
L135	1082	L132 and L133	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:39 PM
L136	1877	L132 and L134	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:39 PM
L137	5616	L133 or L134	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:41 PM
L138	2924	L132 and L137	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:41 PM
L139	1012	L138 and stroller	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:41 PM
L140	901	L139 and seat\$3	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:41 PM
L141	757	L140 and (insert\$4 or attach\$4 or detach\$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:42 PM
L142	107	L141 and ((double or tandem) same stroller)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/01/29 06:42 PM
L143	1	("5816367").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/30 09:23 AM
L144	3	("2006/0290107").URP N.	(USPAT)	OR	ON	ON	2014/01/30 02:24 PM
L145	78	("20030020259" "20030227157" "20060290107"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/30 02:26 PM

		"20070001429"					
		"20070085303"					
		20070003303					
		"20070222107" "20070296182"					
		· · · · · · · · · · · · · · · · · · ·					
		"20080073877"					
		"20080150247"					
		"20090039620"					
		"20100038886"					
		"20100038887"					
		"20100072732"					
		"20100078916"					
		"20100109292"					
		"20100140902"					
		"20100282800"					
		"20120153583"					
		"2769482" "2798733"					
		"2857953" "2993702"					
		"3235279" "3309101"					
		"4542915" "4725071"					
		"4858947" "5018754"					
		"5167425" "5184835"					
		"5263730" "5333893"					
		"5338096" "5417449"					
		"5653460" "5664795"					
		"5722682" "5911432"					
		"6045145" "6086087"					
		"6209892" "6267406"					
		"6378892" "6497424"					
		"6585284" "6676140"					
		"6702316" "6843498"					
		"6877761" "6935652"					
		"6979017" "7320471"					
		"7451999" "7938433"					
		"8070179" "8157273"					
		"8186705" "8205894"					
		"D311363" "D321850"					
		"D328047"					
		"D359937" "D375706"					
		"D429664"					
		"D430076" "D431212"					
		"D455679"					
		"D587635" "D614540"					
		"D616337"					
		"D616338"					
		"D636300").PN. OR					
		("8371606").URPN.					
L146	8	("2010/0078916").URP	(USPAT)	OR	ON	ON	2014/01/30
- '-'	ľ	N.	(301 71)		~ ~		02:27 PM
=			// no popula		 	 	
L147	8	("20070096438"	(US-PGPUB; USPAT;	OR	ON	ON	2014/01/30
		"20100025968"	USOCR)				02:27 PM
		"20100078916"					
		"6422586" "7401803"					
		"7441794" "7632035"					
		"7766366").PN. OR					
		("8596669").URPN.					
L148	1	("8157273").PN.	(US-PGPUB; USPAT;	OR	ON	ON	2014/01/30
1	Ι.	1, 3.3.2.0 / 11.	USOCR)	1		1	04:20 PM
		I	100010		<u> </u>		0 1.20 1 IVI

L149	18	("0522608" "1707186" "3223431" "3524655" "3997180" "4620686"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/30 04:21 PM
		"4632409" "4836573" "6267406" "6752405" "7364183").PN. OR ("8157273").URPN.					
L150	1	("5338096").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/30 04:23 PM
L151	19	("3223431" "3915493" "3917312" "4886209" "5184835").PN. OR ("5338096").URPN.	1	OR	ON	ON	2014/01/30 04:24 PM
L152	23	("4657269" "4836573" "5184835" "5338096" "5664795" "5911432").PN. OR ("6045145").URPN.		OR	ON	ON	2014/01/30 05:17 PM
L153	53	("20030192925" "20050072821" "2907372" "3079162" "3248125" "3627342" "3961803" "3967833" "4032173" "4113306" "4181356" "4220351" "4231587" "4239259" "4256325" "4412688" "4620711" "4681340" "4762256" "4844504" "4892327" "5230523" "5333769" "5398951" "5411729" "5478096" "5468009" "5478096" "5829826" "5964470" "5987665" "6045145" "6231056" "6250654" "6375213" "6811178" "6910696" "D254610" "D345720" "D358058" "D365925" "D402235" "D508443").PN. OR ("7497461").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/30 05:56 PM
L154	6	("5653460" "6045145" "6378892").PN. OR ("7320471").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/30 06:00 PM
L155	23	("20010013689" "20040032103" "20040094923" "20070057486" "20080012268" "20080231022" "20090127827" "20090243260" "20090295128"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/01/31 10:54 AM

02/24/2024 11:04:16 PM Workspace: 18448417_updatedparent Page 141 of 1837

		"4398748" "4836573" "6446990" "6478327" "6572134" "7497461" "7513512" "7658399" "7686322" "7712765" "7775532" "7832755" "7878527" "7938435").PN. OR ("8231136").URPN.						
L156	2	("2008/0231022").URP N.	(USPAT)		OR	ON	ON	2014/01/31 12:58 PM
L157	14	("20040094923" "20070057486" "20080012268" "20080231022" "20090127827" "20090243261" "20120098219" "4398748" "4836573" "6446990" "6478321" "6478327" "6572134" "7712765").PN. OR ("8458880").URPN.	(US-PGPUB; U USOCR)	JSPAT;	OR	ON	ON	2014/01/31 12:59 PM
L158	1	("7938435").PN.	(US-PGPUB; UUSOCR)	JSPAT;	OR	ON	ON	2014/01/31 01:26 PM
L159	34	("4157839" "5558357" "5676386" "5772279" "5794951" "5863061" "5865447" "5876046" "5947555" "6241274" "6286844" "6331032" "6409205" "6428034" "6478327" "6533309" "6666473" "6893040" "7032922" "7267359" "7377537" "7431395" "7475900" "7681894" "7766366").PN. OR ("7938435").URPN.	(US-PGPUB; UUSOCR)	JSPAT;	OR	ON	ON	2014/02/03 12:41 PM
L160	17	("20050098983" "2842374" "6357784" "7118121" "7267359" "7367581" "7441794" "7527283").PN. OR ("7766366").URPN.	(US-PGPUB; U USOCR)	JSPAT;	OR	ON	ON	2014/02/03 12:56 PM
L161	105	("1727335" "2435733" "2508905" "2509103" "2574743" "2722966" "2805076" "2864429" "3083997" "3116069" "3549164" "3829113" "4108468" "4412689" "4537414" "4570956" "4697845" "4743063" "4750783" "4762331" "4768795" "4786064"		JSPAT;	OR	ON	ON	2014/02/03 01:14 PM

		"4822064" "4832354" "4834403" "4861105" "4874182" "4915401" "4921261" "5121940" "5133567" "5203577" "5201535" "5203577" "5234224" "5265931" "5364137" "5375869" "5385386" "5499831" "5527096" "5564778" "5567008" "5601297" "5676386" "5707106" "5727798" "5876046" "5974555").PN. OR ("6286844").URPN.						
L162	52	("3779655" "4191397" "4216974" "4412688" "4602889" "4634177" "4645371" "4834403" "5028061" "5257799" "5527096" "5772279" "5865447" "6286844").PN. OR ("6513827").URPN.		USPAT;	OR	ON	ON	2014/02/03 01:21 PM
L168	1	("20140217706").PN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2014/09/24 10:03 AM
L169	3175	(280/650,657,647,648,6 58,639,642,643).CCLS.		USPAT;	OR	ON	ON	2014/09/24 10:24 AM
L170	7324421	@ad<="20081204"	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2014/09/24 10:24 AM
L171	1878	L169 and L170	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2014/09/24 10:25 AM
L172	64	(US-20100052277-\$ or US-20070114738-\$ or US-2007001429-\$ or US-20060290107-\$ or US-20080303232-\$ or US-20080303232-\$ or US-20060131841-\$ or US-2006001226-\$ or US-20060001226-\$ or US-20060001226-\$ or US-20010033069-\$).did. or (US-5338096-\$ or US-6045145-\$ or US-3223431-\$ or US-3223431-\$ or US-6578892-\$ or US-5653460-\$ or US-6209892-\$ or US-620711-\$ or US-6676140-\$ or US-6717051-\$ or US-7475900-\$ or US-	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2014/09/24 10:25 AM

		7938435-\$ or US-					
		D508443-\$ or US-					
		7497461-\$ or US-					
		4570956-\$ or US-					
		6923467-\$ or US-					
		6752405-\$ or US-					
		8157273-\$ or US-					
		7896384-\$ or US-					
		7677585-\$ or US-					
		8128103-\$ or US-					
		7597332-\$ or US-					
		7481439-\$ or US-					
		6851693-\$ or US-					
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		5848797-\$).did. or (US-3000645-\$ or US-					
		8070180-\$ or US-					
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		7832755-\$ or US-					
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		5704627-\$ or US- 5794951-\$ or US-					
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		6443467-\$ or US-					
		8205906-\$ or US-					
		8262103-\$ or US-					
		8336904-\$ or US-					
		8371606-\$ or US-					
		8251382-\$ or US-					
		7377537-\$ or US-					
		7320471-\$ or US-					
		7032922-\$ or US-					
		7367581-\$ or US-					
		8029007-\$ or US-					
		7699325-\$ or US-					
		6827356-\$ or US-					
		8398098-\$ or US-					
		7766366-\$ or US-					
		6286844-\$ or US-					
		6513827-\$).did. or (US-					
		3000645-\$ or US-					
		2453631-\$).did.					
L173	3686032	@pd>="20140129"	(US-PGPUB; USPAT;	OR	ON	ON	2014/09/24
			USOCR; FPRS; EPO;				10:56 AM
			JPO; DERWENT)				
L174	1	L171 and L173	(US-PGPUB; USPAT;	OR	ON	ON	2014/09/24
	[_		USOCR; FPRS; EPO;	1	1		10:56 AM
			JPO; DERWENT)				10.007
1 175	12	(Zobfuos noor?	·		l _{ON}	ON	2014/00/04
L175	13	(Zehfuss near2	(US-PGPUB; USPAT;	OR	ON	ON	2014/09/24
		Mark).in.	USOCR; FPRS; EPO;				10:57 AM
			JPO; DERWENT)				
L176	1	("7,497,461").PN.	(US-PGPUB; USPAT;	OR	ON	ON	2014/09/24
			USOCR)	1		1	11:01 AM
L177	94	L169 and L173	(US-PGPUB; USPAT;	OR	ON	ON	2014/09/24
			USOCR; FPRS; EPO;				11:08 AM
			JPO; DERWENT)	1		1	
1 179	12	("20070206492"	(US-PGPUB; USPAT;		ON	ON	2014/00/24
L178	12	("20070296182"	KUS-FGPUB, USPAT;	OR	ON	ON	2014/09/24

		<u> </u>	T				ı
		"20100117315" "5820144" "6086086" "6513827" "6715783" "7032922" "7066542" "7364183" "7377537" "7455362" "8061732").PN. OR ("8764048").URPN.	USOCR)				11:25 AM
L179	15	("3797848" "4832361" "5074575" "6116624" "6446990" "6508605" "6530591" "6824161" "6830254" "6851700" "6951342" "7021650" "7273225" "7401803" "7513512").PN. OR ("8696016").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:41 AM
L180	1	("7,938,435").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:47 AM
L181	1	("20080231022").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:47 AM
L182	2	("2008/0231022").URP N.	(USPAT)	OR	ON	ON	2014/09/24 11:48 AM
L183	1	("7,766,366").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:51 AM
L184	1	("6,286,844").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:52 AM
L185	1	("6,513,827").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:53 AM
L186	0	(2006/0131841).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:53 AM
L187	1	("20060131841").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:54 AM
L188	1	("20060001226").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:54 AM
L189	1	("7,320,471").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:55 AM
L190	1	("6,045,145").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:55 AM
L191	1	("20080224451").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:55 AM
L192	1	("7,481,439").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 11:57 AM
L193	1	("7,367,581").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 11:57 AM
L194	1	("8,029,007").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:58 AM
L195	1	("6,923,467").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 11:58 AM
L196	1	("20070090619").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 11:58 AM

L197	1	("6,851,693").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 11:59 AM
L198	1	("20010033069").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 12:00 PM
L199	1	("7,249,779").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 12:00 PM
L200	57	("1218943" "1347384" "1408729" "1560288" "20010035626" "20030151225" "2305719" "2435733" "2468933" "2798727" "3314494" "3738700" "3954283" "4015297" "4825484" "4958842" "5125674" "5190306" "5590896" "5562300" "5590896" "5692760" "5709400" "5820146" "5884922" "5975551" "6164666" "6231056" "6237995" "6340168" "6409190" "6460866" "6595536" "6601862" "6623023" "6676140" "6688614" "7029015").PN. OR ("7249779").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 12:02 PM
L201	2665	(297/130,232,243,463.1).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 12:02 PM
L202	79	L201 and L173	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2014/09/24 12:03 PM
L203	2	L202 and L170	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 12:03 PM
L204	1	("5338096").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 01:24 PM
L205	1	("20030025304").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 01:25 PM
L206	1	("20070001429").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 01:25 PM
L207	1	("20070085303").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2014/09/24 01:26 PM
L208	1	("20070114738").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 01:26 PM
L209	1	("7681894").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 02:33 PM
L210	14	("20040164593" "3145442" "5865447" "5947555" "6446314" "7032922").PN. OR ("7681894").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 02:33 PM
L211	1	("7377537").PN.	(US-PGPUB; USPAT;	OR	ON	ON	2014/09/24

			USOCR)				02:34 PM
L212	41	("7249779" "3000645" " 7677585" "7377537" "2 0060001226" "8029007 " "20080231022" "7766 366" "6443467" "65615 26" "20080224451" "65 13827" "7475900" "749 7461" "20070114738" " 1707186" "6752405" "6 851693" "7938435" "66 76140" "6045145" "692 3467" "20030025304" " 20070001429" "533809 6" "6045145" "2007009 0619" "6209892" "6378 892" "7896384" "81572 73" "8251382" "826210 3" "8336904" "2001003 3069" "20060131841" " 7320471" "7367581" "7 481439" "62868444").PN	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2014/09/24 02:56 PM
L219	19	(Zehfuss near2 Mark).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2015/04/20 01:53 PM
L220	22	("7249779" "200600012 26" "20080231022" "77 66366" "8029007" "200 80224451" "6513827" " 4797461" "7497461" "6 851693" "7938435" "60 45145" "6923467" "890 5427" "20070090619" " 20010033069" "200601 31841" "6286844" "732 0471" "7367581" "7481 439" "8882134").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 01:58 PM
L221	1	("7475900").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 02:02 PM
L222	68470442	@ad<="20081204"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:02 PM
L223	1214191	@pd>="20140924"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:03 PM
L224	3292	(280/650,657,647,648,6 58,639,642,643).CCLS.		OR	ON	ON	2015/04/20 02:04 PM
L225	2741	(297/130,232,243,463.1).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 02:04 PM
L226	5977	L224 or L225	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:04 PM
L227	2929	L226 and L222	(US-PGPUB; USPAT;	OR	ON	ON	2015/04/20

			USOCR; FPRS; EPO; JPO)				02:04 PM
L228	2	L227 and L223	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:04 PM
L230	88	("0119331" "1138802" "1269379" "1707186" "1890469" "20040251063" "20070045975" "20090115151" "20090160162" "20100038887" "20100140902" "20110175330" "3223431" "3612603" "3726536" "4222132" "4349938" "4403807" "4684148" "4725071" "4805938" "4834415" "485947" "4872692" "4969656" "5018754" "5033761" "5064209" "5167425" "5221106" "5230523" "5338096" "5653460" "5664795" "5772235" "5887935" "5918892" "6086087" "6099022" "6267406" "6357784" "63361111" "6375213" "6431579" "6527294" "6536842" "6585284" "6676140" "6679506" "6752405" "6843498" "6935652" "6938906" "6938954" "7025364" "7364183" "7367581" "7516966" "7597332" "7896384" "7025364" "7364183" "7367581" "7516966" "7597332" "7896384" "0321850" "D300310" "D305316" "D321850" "D328047" "D348489" "D360392" "D370437" "D382516" "D328047" "D348489" "D360392" "D370437" "D382516" "D368794" "D598333").PN. OR ("8905427").URPN. (B62B7/00).CPC.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 02:04 PM
		,	ÙSOCR; FPRS; EPO; JPO)				02:08 PM

L231	796	(B62B7/008).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:12 PM
L232	666	(B62B7/14).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:12 PM
L233	894	(B62B7/142).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:12 PM
L234	1003	(B62B9/102).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:12 PM
L235	450	(B62B9/12).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:12 PM
L236	3236	L230 L231 L232 L233 L234 L235	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:12 PM
L237	2104	L236 and L222	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:13 PM
L238	70	L237 and (seat\$3 same revers\$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/04/20 02:14 PM
L239	77	(US-20100052277-\$ or US-20070114738-\$ or US-20070001429-\$ or US-20060290107-\$ or US-20080303232-\$ or US-20060031841-\$ or US-20060001226-\$ or US-20060001226-\$ or US-20080224451-\$ or US-20030025304-\$ or US-20030025304-\$ or US-20070069505-\$ or US-20080231022-\$).did. or (US-5338096-\$ or US-6045145-\$ or US-3223431-\$ or US-3223431-\$ or US-653460-\$ or US-6045145-\$ or US-6209892-\$ or US-5201535-\$ or US-6209892-\$ or US-5201535-\$ or US-676140-\$ or US-676140-\$ or US-7475900-\$ or US-7938435-\$ or US-7497461-\$ or US-7497461-\$ or US-7497461-\$ or US-7497461-\$ or US-6923467-\$ or US-6923467-\$ or US-	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 02:14 PM

		6752405-\$ or US- 8157273-\$ or US- 7896384-\$ or US- 7677585-\$ or US- 8128103-\$ or US- 7597332-\$ or US- 7481439-\$ or US- 5848797-\$).did. or (US- 3000645-\$ or US- 8070180-\$ or US- 7261308-\$ or US- 7261308-\$ or US- 5794951-\$ or US- 5647601-\$ or US- 5647601-\$ or US- 8205906-\$ or US- 8205906-\$ or US- 8205906-\$ or US- 8336904-\$ or US- 8336904-\$ or US- 8371606-\$ or US- 8371537-\$ or US- 7377537-\$ or US- 7320471-\$ or US- 7367581-\$ or US-					
L240 L241 L242	58 1 87	7377537-\$ or US- 7320471-\$ or US- 7320471-\$ or US- 7032922-\$ or US- 8029007-\$ or US- 8029007-\$ or US- 6827356-\$ or US- 8398098-\$ or US- 7766366-\$ or US- 6286844-\$ or US- 6513827-\$ or US- 8764048-\$ or US- 8061732-\$).did. or (US- 8733784-\$ or US- 8696016-\$ or US- 8231136-\$ or US- 8231136-\$ or US- 8458880-\$ or US- 7249779-\$ or US- 7681894-\$ or US- 8905427-\$).did. or (US- 3000645-\$ or US- 2453631-\$).did. L238 not L239 ("8882134").PN.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO) (US-PGPUB; USPAT; USOCR) (US-PGPUB; USPAT; USOCR)	OR OR	ON ON	ON ON	2015/04/20 02:14 PM 2015/04/20 02:15 PM 2015/04/20
		"1418929" "1832770" "20020125662" "20040011884" "20050253348" "20050253431"	USOCR)				02:16 PM

		"20050264064"						
		"20060290107"						
		"20070001410"						
		"20070075510"						
		"20070114738"						
		"2007011 4 730" "20070257526"						
		"20080042476"						
		20080042476						
		20090072520 "20090302556"						
		•						
		"20090302578"						
		"20100032925"						
		"20100072731"						
		"20100109270"						
		"20100109293"						
		"20100140902"						
		"20100148553"						
		"20100314925"						
		"20110074195"						
		"20110101742"						
		"20110115264"						
		"20120080244"						
		"20130154215"						
		"3173396" "3831960"						
		"4310167" "4433869"						
		"4893826" "4936629"						
		"5022669" "5158319"						
		"5301968" "5417449"						
		"5556118" "5581843"						
		"5653460" "5664795"						
		"5722594" "6086087"						
		"6135222" "6267406"						
		"6312005" "6394470"						
		"6454286" "6540239"						
		"6698788" "6702306"						
		"6935652" "6938906"						
		"7059625" "7261308"						
		"7338122" "7481439"						
		"7497449" "7559606"						
		"7597332" "7740313"						
		"7770970" "7780184"						
		"7789413" "7832756"						
		"7854435" "7887129"						
		"7891732" "7938433"						
		"7971897" "7992889"						
		"8029007" "8070179"						
		"8128119" "8157273"			1			
		"8262107" "8276935" "D336748"			1			
		"D326748"			1			
		"D431798").PN. OR						
		("8882134").URPN.						
L243	1	("6361111").PN.	(US-PGPUB;	USPAT;	OR	ON	ON	2015/04/20
			USOCR)		1			02:19 PM
L244	1	("20040251063").PN.	(US-PGPUB;	USPAT;	OR	ON	ON	2015/04/20
		<u>'</u>	ÙSOCR)	,				02:19 PM
L245	1	("6527294").PN.	(US-PGPUB;	USPAT:	OR	ON	ON	2015/04/20
		,	USOCR)	,				02:20 PM
	<u> </u>	1	1		L		l	

L246	1	("20070045975").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 02:20 PM
L247	27	("20060001226" "20070045975" "20080296872" "20090033066" "5301970" "5520433" "5601302" "5709400" "5845924" "6099022" "6193263" "6203054" "6209892" "6398233" "6446990" "6540250" "6715783" "7377537" "7475900" "7753398").PN. OR ("8029014").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/04/20 02:30 PM
L249	2790	(297/130,232,243,463.1).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/12/07 10:16 AM
L250	3337	(280/650,657,647,648,6 58,639,642,643).CCLS.	, , , , , , , , , , , , , , , , , , ,	OR	ON	ON	2015/12/07 10:16 AM
L251	102	(B62B7/00).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L252	824	(B62B7/008).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L253	686	(B62B7/14).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L254	947	(B62B7/142).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L255	1031	(B62B9/102).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L256	520	(B62B9/12).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L257	3385	L251 L252 L253 L254 L255 L256	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L258	1888686	@pd>="20150420"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L259	6070	L249 or L250	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L260	49	L258 and L249	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L261	93	L258 and L259	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM

L262	45	L258 and L250	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:17 AM
L263	44	L262 not L260	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:18 AM
L264	105	L258 and L257	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:19 AM
L265	94	L264 not L263	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:19 AM
L266	93	L265 not L260	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2015/12/07 10:19 AM
L267	1	("8936261").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/12/07 12:33 PM
L268	64	("20040164593" "20060261565" "20070045975" "20070187914" "20080054579" "20080150247" "20080179848" "20080303232" "20090033066" "20090102162" "200901256323" "20100013281" "2010012535" "20100230933" "20100230933" "20100244408" "20110204600" "20110291389" "2011020459021" "20110304124" "2012025492" "20120261961" "20120261961" "20130113188" "4872692" "5018405" "5676386" "5722682" "5947555" "6513827" "6530591" "6581957" "6851700" "7032922" "7267359" "7377537" "7401803" "7681894" "7686323" "7753397" "7753398" "7789402" "7798500" "7938435" "8029014" "8033555" "8157286" "8205906" "8240700" "8251382"	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2015/12/07 12:33 PM

		"8322744" "8366127" "8454049" "8465045" "8469388" "8474854" "8480116" "8485546" "8544873" "8550489" "8596669").PN. OR ("8936261").URPN.					
L269	18	("1671774" "1707186" "20050167951" "20070194545" "20100052277" "20110163519" "20120118516" "7032922" "7871100" "8157273" "8251382" "8585075" "8651502" "8727370" "D686541").PN. OR ("9010773").URPN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2015/12/07 01:12 PM
L270	1	("6,286,844").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2015/12/07 06:14 PM
L271	110	(B62B7/00).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L272	855	(B62B7/008).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L273	694	(B62B7/14).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L274	989	(B62B7/142).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L275	1052	(B62B9/102).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L276	540	(B62B9/12).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L277	3473	L271 L272 L273 L274 L275 L276	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:45 PM
L278	3353	(280/650,657,647,648,6 58,639,642,643).CCLS.	1 `	OR	ON	ON	2016/02/12 12:46 PM
L279	2802	(297/130,232,243,463.1).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 12:46 PM
L280	279114	@pd>="20151207"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:47 PM
L281	21	L277 and L280	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:53 PM
L282	16	L278 and L280	(US-PGPUB; USPAT;	OR	ON	ON	2016/02/12

			USOCR; FPRS; EPO; JPO)				12:53 PM
L283	12	L279 and L280	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:53 PM
L284	17	L281 not (L282 or L283)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/02/12 12:53 PM
L285	2	("20070069504" "7401803").PN. OR ("9242665").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 01:16 PM
L286	70	("20030020259" "20040094935" "20060226635" "20060290107" "20070075525" "20070085303" "20070114738" "20070267833" "20080001370" "20080024432" "20080224432" "20090039620" "20090039620" "20100038886" "20100038886" "20100072731" "20100140902" "20100201089" "20100282800" "20100282800" "20110175330" "20120098237" "20120098237" "20120098237" "20130244419" "20130234419" "20130234419" "201302564787" "20130264787" "20130270800" "20140159346" "20140312586" "20140312586" "20140312586" "20140346756" "4542915" "4725071" "5338096" "5417449" "5664795" "6086087" "6267406" "6676140" "6702316" "6843498" "6877761" "7451999" "699325" "7971884" "8070180" "8146926" "8157273" "8205894" "8282109" "8322745" "8398143" "8444171" "8480115" "8684395" "8714582" "8757646"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 01:18 PM

						,	
		"8807588" "8844964" "8857829" "8905427" "8915516" "D321850" "D359937" "D375706"					
		"D429664" "D430076" "D431212" "D636300").PN. OR ("9227650").URPN.					
L287	1	("7475900").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 01:19 PM
L288	1	("4343124").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 03:17 PM
L289	1	("4340124").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 03:18 PM
L290	1	("20140361517").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/02/12 03:50 PM
L291	111	(B62B7/00).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L292	864	(B62B7/008).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L293	699	(B62B7/14).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L294	993	(B62B7/142).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L295	1054	(B62B9/102).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L296	542	(B62B9/12).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L297	3486	L291 L292 L293 L294 L295 L296	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:44 PM
L298	3358	(280/650,657,647,648,6 58,639,642,643).CCLS.		OR	ON	ON	2016/03/25 04:45 PM
L299	2805	(297/130,232,243,463.1).CCLS.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 04:45 PM
L300	6106	L298 or L299	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:45 PM
L301	83034	@pd>="20160212"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:45 PM
L302	8	L300 and L301	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2016/03/25 04:59 PM
L303	6	L297 and L301	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2016/03/25 05:01 PM

			JPO)					
L304	13	("20080231022" "20090243261" "20130113188" "6513827" "7267359" "7377537" "7798500" "7938435" "8061732" "8733784" "8764048" "8777253" "8955869").PN. OR ("9260128").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2016/03/25 05:03 PM
L305	94	("1239498" "1322788" "1418929" "1832770" "20020125662" "20040011884" "20050253348" "20050253431" "20050264064" "20060290107" "20070001410" "20070075510" "20070075510" "20070257526" "20080224451" "20080224451" "20090072520" "20090302556" "20090302556" "20100109270" "20100109270" "20100148553" "20100148553" "20100314925" "2011001742" "2011001742" "2011001742" "2011001742" "2011001742" "2011001742" "2011001742" "2011001742" "20130154215" "20140191483" "3173396" "433869" "4330167" "4433869" "4393826" "4936629" "55566118" "5556118" "55581843" "5653460" "5664795" "5722594" "6086087" "6135222" "6267406" "6312005" "6394470" "6454286" "6540239" "6698788" "6702306" "6877762" "6935652" "6938906" "6981709" "7059625" "7261308" "7338122" "7481439" "7338122" "7481439"		USPAT;	OR	ON	ON	2016/03/25 05:04 PM

		"7497449" "7559606" "7597332" "7740313" "7770970" "7780184" "7789413" "7832756" "7854435" "7887129" "7891732" "7938433" "7971897" "7992889" "8029007" "8070179" "8128118" "8128119" "8157273" "8262107" "8276935" "8882134" "9056622" "D326748" "D431798").PN. OR ("9260127").URPN.						
L306	1	("20150123440").PN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2016/03/25 05:20 PM
L307	1	("8955869").PN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2016/03/25 05:22 PM
L308	32	("20010033069" "20060001226" "20060131841" "20070090619" "20080224451" "20080231022" "6045145" "6286844" "6513827" "6851693" "6923467" "7249779" "7311323" "7320471" "7367581" "7377537" "7475900" "7481439" "7497461" "7681894" "7766366" "7938435" "8029007" "8033554" "8061732" "8231136" "8444171" "845880" "8696016" "8733784" "8764048").PN. OR ("8955869").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2016/03/25 05:22 PM
L309	2	"39773911".FMID.	(US-PGPUB; FPRS)	USPAT;	OR	ON	ON	2016/03/25 05:27 PM
L310	32	("4657269" "4836573" "5184835" "5338096" "5664795" "5911432").PN. OR ("6045145").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2016/03/25 05:33 PM
L311	28	("1203729" "1321009" "20020036391" "20050023783" "20070075525" "20070216138" "20070222167" "20090315300" "20100072732" "2769482" "4923208" "5338096" "5417449" "56664795" "5722682"	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2016/03/25 05:37 PM

L312	15	"5740989" "5887935" "6045145" "6378892" "6676140" "7011318" "7445229" "8282119" "D587635" "D614540").PN. OR ("8857830").URPN. "37454081".FMID.	(US-PGPUB; USPAT;	OR	ON	ON	2016/03/25
L313	1	"41399621".FMID.	FPRS) (US-PGPUB; USPAT;	OR	ON	ON	05:37 PM 2016/03/25
			FPRS)				05:41 PM
L314	6	("2009/0302578").URP N.	(USPAT)	OR	ON	ON	2016/03/25 05:42 PM
L315	70	("20030020259" "20040094935" "20060226635" "20060290107" "20070075525" "20070085303" "20070114738" "20070267833" "20080001370" "2008001370" "20080224432" "20090039620" "20090236826" "200903302578" "20100038886" "20100072731" "20100072731" "20100201089" "20100282800" "20100282800" "20110175330" "20120098219" "20120098237" "20120098237" "20130234419" "20130234419" "20130234419" "20130264787" "20130264787" "20140159346" "20140312586" "20140346756" "4542915" "4725071" "5338096" "5417449" "5664795" "6086087" "6267406" "6676140" "6702316" "6843498" "6877761" "7451999" "7699325" "7971884" "8070180" "8146926" "8157273" "8205894" "8282109" "8322745" "8398143" "8444171"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 05:43 PM

		"8480115" "8684395" "8714582" "8757646" "8807588" "8844964" "8857829" "8905427" "8915516" "D321850" "D359937" "D375706" "D429664" "D430076" "D431212" "D636300").PN. OR ("9227650").URPN.					
L316	108	(US-20100052277-\$ or US-20070114738-\$ or US-20070114738-\$ or US-20060290107-\$ or US-20080303232-\$ or US-20080303232-\$ or US-20060131841-\$ or US-20060001226-\$ or US-20080224451-\$ or US-20010033069-\$ or US-20070069505-\$ or US-20070069505-\$ or US-2010031585-\$ or US-2010031585-\$ or US-2010031585-\$ or US-2010031585-\$ or US-2010031585-\$ or US-2010072732-\$ or US-20100072732-\$ or US-20100072732-\$ or US-20100072732-\$ or US-20100072732-\$ or US-20100072732-\$ or US-20100072732-\$ or US-20130113188-\$ or US-20130113188-\$ or US-20130113188-\$ or US-20190243261-\$).did. or (US-5338096-\$ or US-6045145-\$ or US-6378892-\$ or US-653460-\$ or US-6045145-\$ or US-653460-\$ or US-60751-\$ or US-6676140-\$ or US-67594620711-\$ or US-6759462-\$ or US-7475900-\$ or US-7938435-\$ or US-7497461-\$ or US-7475900-\$ or US-7938435-\$ or US-7475900-\$ or US-7938435-\$ or US-747590-\$ or US-747585-\$ or US-7486384-\$ or US-748638	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 05:54 PM

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8205906-\$ or US-
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8029014-\$ or US-
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9073563-\$ or US-
9242665-\$ or US-
7401803-\$ or US-
9227650-\$ or US-
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9260127-\$ or US-
8857830-\$ or US-

		2769482-\$).did. or (US- 3000645-\$ or US- 2453631-\$).did.					
L317	1	("20090290107").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 05:56 PM
L318	1	("20060290107").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 05:58 PM
L319	1	("4542915").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 06:07 PM
L320	2	"47750100".FMID.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2016/03/25 09:54 PM
L321	1	("6209892").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 11:02 PM
L322	60	("3829113" "4729572" "4768795" "4861105" "5056865" "5076599" "5146656" "5322343" "5676386" "5727798" "5820144" "5887889").PN. OR ("6209892").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2016/03/25 11:02 PM
L323	60	("3829113" "4729572" "4768795" "4861105" "5056865" "5076599" "5146656" "5322343" "5676386" "5727798" "5820144" "5887889").PN. OR ("6209892").URPN.		OR	ON	ON	2016/03/28 11:14 AM
L324	0	(A stroller, comprising a stroller frame a plurality of wheels, including front and rear wheels a first seat coupled to the stroller frame at a first vertical position closer to a handle of the stroller frame and configured to hold a first child in the stroller a second seat attachment coupled to the stroller frame at a second vertical position substantially below the first vertical position and closer to the front wheels and comprising a left seat support element, wherein the left seat support element comprises a first connector portion releasably connected to the stroller frame closer	USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:20 PM

		to left front wheel and a left seat connector releasably connecting a second seat in either a forward or backward position and a right seat support element, wherein the right seat support element comprises a second connector portion releasably connected to the stroller frame closer to a right front wheel and a right seat connector releasably connecting the second seat in either a forward or backward position between the left and right seat support connectors and the second seat releasably connected to the left seat connector and the right seat connector and the right seat connector and configured to hold a second child in the stroller while the first seat holds the first					
L325	0	child).clm. (stroller frame wheel seat first vertical position handle child attach\$4 coupl\$3 left seat support element, first connector portion releas\$4 connect\$4 forward backward position).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:42 PM
L326	0	(stroller frame wheel seat vertical position handle attach\$4 coupl\$3 left seat support element, first connector portion releas\$4 connect\$4 forward backward position).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:42 PM
L327	0	(stroller frame wheel seat vertical position handle attach\$4 coupl\$3 left support element portion releas\$4 connect\$4 forward backward position).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:43 PM

L328	0	(stroller frame wheel seat vertical position handle attach\$4 coupl\$3 left support element portion releas\$4 connect\$4	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:43 PM
L329	0	forward backward).clm. (stroller frame wheel seat vertical position handle attach\$4 coupl\$3 left support\$4 releas\$4 connect\$4 forward backward).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:43 PM
L330	3	(stroller frame wheel seat vertical position handle attach\$4 left support\$4 releas\$4 connect\$4).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:44 PM
L331	14	(stroller frame wheel seat vertical position handle attach\$4 support\$4 releas\$4 connect\$4).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:45 PM
L332	15	(stroller frame wheel seat vertical position handle attach\$4 releas\$4 connect\$4).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:46 PM
L333	1	L332 not L331	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:46 PM
L334	18	(stroller frame wheel seat vertical position handle attach\$4 releas\$4).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:47 PM
L335	3	L334 not L332	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:47 PM
L336	25	(stroller frame wheel seat vertical position\$4 attach\$4 releas\$4).clm.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:48 PM
L337	7	L336 not L334	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	AND	ON	ON	2016/03/28 01:48 PM
L338	1	"41399621".FMID.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2016/03/28 01:48 PM
L339	1	("20160339940").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/08 04:58 PM
L340	3453	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/08 05:22 PM
L341	2353	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2017/06/08 05:23 PM

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L342	5184262	@pd>="20160325"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/08 05:31 PM
L343	5004	L340 or L341	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/08 05:33 PM
L344	254	L342 and L343	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/08 05:33 PM
L346	4	(Lee near2 (Jon and Hee)).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/08 05:52 PM
L347	14	(Roe near2 Megan).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/12 08:15 AM
L348	1	(Simpson near2 (Stacy and Noel)).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2017/06/12 08:16 AM
L349	66	("1707186" "200100330 69" "20060001226" "20 060131841" "20060290 107" "20070090619" "2 0080224451" "2008023 1022" "20090302578" " 3000645" "4542915" "5 338096" "6045145" "62 09892" "6286844" "637 8892" "6443467" "6513 827" "6561526" "66761 40" "6752405" "685169 3" "6923467" "7249779" "7311323" "7320471" " 7367581" "7377537" "7 401803" "7475900" "74 81439" "7497461" "767 7585" "7681894" "7766 366" "7896384" "79384 35" "8029007" "802901 4" "8033554" "8061732" "8157273" "8231136" " 8251382" "8262103" "8 336904" "8444171" "84 5880" "8696016" "873 3784" "8764048" "8882 134" "8905427" "89362 61" "9010773" "910865 4" "9108659" "9119483" "9199659" "9200746" " 9227650" "9242665" "9 260127" "9260128").PN	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 09:35 AM
L350	111	(US-20100052277-\$ or US-20070114738-\$ or US-20070001429-\$ or	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 09:36 AM

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US-2010	0301585-\$ or			
US-2010	00013281-\$ or			
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US-2009	0302578-\$ or			
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6827356.8 or US- 8389898-9 or US- 7766366-\$ or US- 6286844-\$ or US- 6573527-\$ or US- 8764048-\$ or US- 8061732-\$),did. or (US- 8733784-\$ or US- 8656016-\$ or US- 8231138-\$ or US- 8458890-\$ or US- 7249779-\$ or US- 7311322-\$ or US- 83458890-\$ or US- 7341723-\$ or US- 83033554-\$ or US- 7881894-\$ or US- 890527-\$ or US- 9010773-\$ or US- 9119483-\$ or US- 9119483-\$ or US- 9200748-\$ or US- 9119483-\$ or US- 9200748-\$ or US- 9200728-\$ or US- 9200738-\$ or US- 9200748-\$ or US- 9200748-\$ or US- 9200778-\$ or US- 9200748-\$ or US- 9								
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		"5653460" "5664795"					
		"5772235" "5887935"					
		"5918892" "6086087"					
		"6099022" "6267406"					
		"6357784" "6361111"					
		"6375213" "6431579"					
		"6527294" "6536842"					
		"6585284" "6676140"					
		"6679506" "6752405"					
		"6843498" "6935652"					
		"6938906" "6938954"					
		"7025364" "7364183"					
		"7367581" "7516966"					
		"7597332" "7896384"			1	1	
		"8128103" "8157273"			1	1	
		"8220822" "8282120"					
1		"8297642" "8398143"			1	1	
		"8905427" "D296540"			1	1	
		"D300310" "D305316"					
1		"D321850"			1	1	
		"D328047" "D348489"			1	1	
		"D360392"					
		"D370437" "D382516"			1	1	
		D370437 D362516 "D404344"			1	1	
		"D430512" "D431212"			1	1	
		"D452191"			1	1	
		"D568794" "D593458"			1	1	
1		"D595621"			1	1	
		"D598333").PN. OR			1	1	
1		("9517787").URPN.			1	1	
L354	8	"48223173".FMID.	(US-PGPUB; USPAT;	OR	ON	ON	2017/06/12
1			FPRS)		1	1	09:47 AM
	1	1	·		I	I	<u>. </u>

L355	10	("2013/0113185").URP	(USPAT)	OR	ON	ON	2017/06/12
L356	36	N. ("1486118" "2769482" "2993702" "3253860" "3497234" "3612603" "4155588" "4181356" "4288124" "4381870" "4596405" "4632409" "4711489" "4813742" "4946180" "5161811" "5201535" "5213360" "5374073" "5401076" "5547205" "5848797" "5988657" "6135479" "6276709" "D340140").PN. OR ("6561526").URPN.	1 '	OR	ON	ON	09:48 AM 2017/06/12 09:52 AM
L357	22	("1707186").URPN.	(USPAT)	OR	ON	ON	2017/06/12 09:53 AM
L358	0	L350 and (cover\$4 same door)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 09:56 AM
L359	0	L350 and (cover\$4 same2 door)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:00 AM
L360	17	L350 and (cover\$4 same attach\$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:00 AM
L361	1	("7377537").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:08 AM
L362	56	("4836573" "4892327" "5028061" "5069474" "5257799" "5460430" "5887935" "5921574" "6099022" "6523853" "6594840" "6739649" "7281732").PN. OR ("7377537").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:08 AM
L363	3	L349 and door	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:13 AM
L364	1	("9517787").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:19 AM
L365	1	("9517789").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:20 AM
L366	1	("9561817").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:20 AM
L367	1	("9493179").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:21 AM
L368	3453	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:22 AM
L369	2353	(B62B9/12,28,102).CP	(US-PGPUB; USPAT;	OR	ON	ON	2017/06/12

02/24/2024 11:04:17 PM Workspace: 18448417_updatedparent Page 169 of 1837

		C.	USOCR; FPRS; EPO;				10:22 AM
L370	5004	L368 or L369	JPO) (US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:22 AM
L371	23	L370 and (cover\$4 same door)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:22 AM
L372	5	L370 and (cavit\$3 same door)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:23 AM
L373	35	("2917316" "2993702" "3110504" "3248125" "3309101" "5579556" "5622375" "5664795" "5725238" "6086087" "6276759" "6312005" "D319493" "D444738" "D450265").PN. OR ("6447001").URPN.	1 .	OR	ON	ON	2017/06/12 10:23 AM
L374	40	L370 and (cavit\$3 same cover\$4)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/06/12 10:24 AM
L375	1	("5522121").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:28 AM
L376	25	("0461069" "1318850" "1352647" "1688148" "1707186" "4805938").PN. OR ("5522121").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:29 AM
L377	1	("6449801").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:29 AM
L378	1	("20070114738").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:30 AM
L379	2	"38052732".FMID.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2017/06/12 10:30 AM
L380	41	("20010033069" "20020135142" "20030025304" "20030127835" "20040164510" "20070090619" "5463853" "5622375" "5625923" "5725238" "5882022" "5909887" "5967190" "6098492" "6422634" "6447001" "6453921" "6530591" "6540238" "6557878" "6698772" "6827356" "6893028" "7159829" "7290776").PN. OR ("8029007").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 10:30 AM

L381	13	("20040164510" "20070090619" "20120098237" "20130234419" "20130264787" "20160001805" "3061328" "5622375" "6422634" "6530591" "7004272" "8029007").PN. OR ("9545941").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2017/06/12 10:31 AM
L382	91	("1239498" "1322788" "1418929" "1832770" "20020125662" "20040011884" "20050253348" "200502533431" "20050264064" "20060290107" "20070001410" "20070075510" "20070075510" "20070257526" "20080042476" "20090302556" "20090302556" "20100032925" "20100109270" "20100109270" "20100148553" "20100148553" "20100314925" "20110074195" "20110074195" "20110074195" "20110074195" "20110074195" "20110074195" "20110074195" "20130154215" "3173396" "3831960" "4310167" "4433869" "4893826" "4936629" "5556118" "5581843" "5556118" "5581843" "5556118" "5581843" "5556118" "5581843" "5653460" "5664795" "5722594" "6086087" "6135222" "6267406" "6312005" "6394470" "6454286" "6540239" "6698788" "6702306" "6935652" "6938906" "7059625" "7261308" "7338122" "7481439" "7770970" "7780184" "7770970" "7780184"		USPAT;	OR	ON	ON	2017/06/12 10:33 AM

L383	42	"7789413" "7832756" "7854435" "7887129" "7891732" "7938433" "7971897" "7992889" "8029007" "8070179" "8128119" "8157273" "8262107" "8276935" "D326748" "D431798").PN. OR ("8882134").URPN. ("0522608" "1707186" "3223431" "3524655" "3997180" "4620686" "4632409" "4836573" "6267406" "6752405" "7364183").PN. OR		USPAT;	OR	ON	ON	2017/06/12 10:46 AM
L384	15	("8157273").URPN. ("20050242548" "20070052271" "4518139" "4681340" "6022077" "6536842").PN. OR ("7364183").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2017/06/12 10:49 AM
L385	1	("6286844").PN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2017/06/12 12:09 PM
L386	119	("1727335" "2435733" "2508905" "2509103" "2574743" "2722966" "2805076" "2864429" "3083997" "3116069" "3549164" "3829113" "4108468" "4412689" "4537414" "4570956" "4697845" "476331" "4768795" "4768795" "4786064" "4822064" "4832354" "4834403" "4861105" "4874182" "4915401" "4921261" "5121940" "5133567" "512753" "5201535" "5203577" "5234224" "5265931" "5364137" "5375869" "5385386" "5499831" "5527096" "5564778" "55676386" "5707106" "5727798" "5772279" "5865447" "5876046" "5974555").PN. OR ("6286844").URPN.	(US-PGPUB;	USPAT;	OR	ON	ON	2017/06/12 12:13 PM
L387	91	("0706448" "1480451" "1508500" "1952467" "20010013689" "20040212161"		USPAT;	OR	ON	ON	2017/06/12 12:16 PM

		"20060085953"						
	1	"20070085302"						
		"20070120404"						
		"20090029784"						
		"20090181780"						
		"20110278810"						
		•						
		"20120023662"						
		"20120060326"						
		"20120235450"						
		"20130334781"						
		"20140042729"						
		"20150008659"						
		"20150042056"						
		"20150042076"						
		"20150175189"						
		"2708585" "2961248"						
		"3564626" "4476649"						
		"5099528" j "5201535" j						
	1	"5562548" "5676386"]
	1	"5772279" "5846136"]
	1	"5947555" "5987665"]
	1	"5988670" "6250654"]
		"6286844" "6471597"						
		"6671926" "6872146"						
		"6893040" "7037205"						
		"7100724" "7354352"						
		"7377537" "7445559"						
		"7475942" "7497461"						
		"7607734" "7681894"						
		"7686323" "7694996"						
		"7766366" "7905791"						
		"7938435" "8029014"						
		"8251382" "8292750"						
		"8550556" "8672341"						
		"8746794" "8851505"						
		"8944927" "8955869"						
		"9085312" "D156930"						
		"D371094" "D377466"						
		"D408768"						
		"D442895" "D452195"						
		"D475951"						
		"D481976" "D498713"						
		"D498714"						
		"D519063" "D604055"						
	1	"D622640"]
	1	"D623429" "D667229"]
		"D682562"						
	1	"D684789" "D687352"]
	1	"D743304").PN. OR						
	1							
		("9421992").URPN.						<u> </u>
L388	20	("20010040357"	(US-PGPUB; U	SPAT;	OR	ON	ON	2017/06/12
	1	"20080106070"	USOCR)					12:16 PM
	1	"20100127480"]
	1	"20110181026"						
	1	"20160144879"]
		"5257799" "5645293"]
	1	"6102432" "6312005"						
	I	<u> </u>	l .					

		"7281732" "7641216" "8141895" "8240698" "8585075" "8696015" "8696016" "8998241" "9050993" "9421991" "9540028").PN. OR ("9637155").URPN.					
L389	9	("20120326474" "4306749" "4634177" "4915446" "5947556" "6286844" "6595583" "8251382" "8678498").PN. OR ("9346378").URPN.	1	OR	ON	ON	2017/06/12 12:21 PM
L390	9	("20120326474" "4306749" "4634177" "4915446" "5947556" "6286844" "6595583" "8251382" "8678498").PN. OR ("9346378").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 12:54 PM
L391	28	("20030015895" "20090066130" "20090295207" "4306749" "4750783" "5385387" "5478135" "5562548" "5586351" "5997098" "6017088" "6170911" "6299249" "6331032" "6336682" "6347832" "6428099" "6428100" "6443522" "6554358" "6705676" "6793280" "6921359" "6979057" "7090294").PN. OR ("8678498").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 12:55 PM
L392	54	("20080150247" "20080179848" "20080224451" "20080303232" "20090102162" "20090121455" "20090256323" "20100001492" "20100109272" "20100127480" "4645371" "5028061" "5257799" "5364137" "5676386" "5772279" "5865447" "5947555" "6286844" "6446990" "6513827" "6991248" "7032922" "7296820" "7314247" "7367581" "7377537" "7584985"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 01:08 PM

		"7658399" "7681894" "7686323" "7694996" "7712765" "7753398").PN. OR ("8251382").URPN.						
L393	15	("20080231022" "5773379" "5947555" "6286844" "6893040" "7032922" "7267359" "7475900" "7658399" "7681894" "7766366" "7938435" "8033555" "D621306").PN. OR ("8851505").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2017/06/12 01:09 PM
L394	58	("20010013689" "20050264062" "20060214397" "20070257458" "20070296182" "20080231023" "20180231023" "20100219616" "20100230933" "20120025492" "4834403" "5028061" "5257799" "5277472" "5364137" "5564778" "5567008" "5676386" "5772279" "5794951" "5947555" "6086086" "6089653" "6286844" "6318807" "6446990" "6572134" "6595583" "6793280" "6802514" "6863286" "6942294" "6983986" "7032922" "7770197" "7207628" "7370913" "7377537" "7681894" "7686322" "7694996" "7753398" "8029014" "8070228" "8172253" "8282120" "8382150").PN. OR ("8651502").URPN.	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2017/06/12 01:09 PM
L395	76	("3779655" "4191397" "4216974" "4412688" "4602889" "4634177" "4645371" "4834403" "5028061" "5257799" "5527096" "5772279" "5865447" "6286844").PN. OR ("6513827").URPN.		USPAT;	OR	ON	ON	2017/06/12 01:12 PM
L396	49	("4915401" "5133567" "5277472" "5564778"		USPAT;	OR	ON	ON	2017/06/12 01:13 PM

		"5644816" "5676386" "5772279").PN. OR ("5865447").URPN.					
L397	88	("0763771" "0921361" "1167525" "2509972" "2982562" "3029087" "3083997" "3596986" "4306749" "4345791" "4371206" "4545613" "4501032" "4545613" "4634177" "4664396" "4733909" "4861105" "4915446" "4943113" "4984813" "4998307" "5052750" "5058283" "5203577" "5277472" "5385387" "D294777" "D305583" "D322001" "D325132").PN. OR ("5567008").URPN.	USPAT;	OR	ON	ON	2017/06/12 01:14 PM
L398	92	("2982562" "3100651" "3290050" "3330575" "3784252" "4072318" "4378946" "4412688" "4428598" "4478427" "4606550" "4762364" "4815764" "5004253" "5074575").PN. OR ("5201535").URPN.	USPAT;	OR	ON	ON	2017/06/12 01:16 PM
L399	119	("1727335" "2435733" "2508905" "2509103" "2574743" "2722966" "2805076" "2864429" "3083997" "3116069" "3549164" "3829113" "4108468" "4412689" "4537414" "4570956" "4697845" "4762331" "4768795" "4762331" "4768795" "4786064" "4822064" "4832354" "4834403" "4861105" "4874182" "4915401" "4921261" "5121940" "5133567" "5197753" "5201535" "5203577" "5234224" "5265931" "5364137" "5375869" "5385386" "5499831" "5567008" "5564778" "5567008" "5601297" "5676386" "5772279" "5865447" "5876046" "5727798" "5772279" "5865447" "5876046" "5974555").PN. OR ("6286844").URPN.	USPAT;	OR	ON	ON	2017/06/12 01:23 PM

L400	82	L397 not L399	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 01:23 PM
L401	20	("20040164593" "3145442" "5865447" "5947555" "6446314" "7032922").PN. OR ("7681894").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 01:28 PM
L402	59	("20020175498" "20020195797" "20030111825" "20040046364" "20050098982" "20060071452" "20060237949" "5772235" "5823564" "7032922").PN. OR ("7267359").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 01:30 PM
L403	1	("5201535").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 01:32 PM
L404	1	("6286844").PN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2017/06/12 01:47 PM
L405	3477	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/11/13 04:13 PM
L406	2369	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/11/13 04:13 PM
L407	5040	L405 or L406	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/11/13 04:13 PM
L408	1329175	@pd>="20170608"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/11/13 04:16 PM
L409	44	L407 and L408	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2017/11/13 04:16 PM
L410	3	"37808038".FMID.	(US-PGPUB; USPAT; FPRS)	OR	ON	ON	2017/11/13 05:27 PM
L423	1	("20180201293").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2019/04/15 10:50 AM
L424	39	(Zehfuss near2 Mark).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2019/04/15 10:51 AM
L425	8	(Lee near2 (Jon and Hee)).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2019/04/15 10:52 AM
L426	18	(Roe near2 Megan).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2019/04/15 10:52 AM
L427	3	(Simpson near2 (Stacy and Noel)).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2019/04/15 10:52 AM

L428	151		(US-PGPUB;	USPAT;	OR	ON	ON	2019/04/15
		US-20070114738-\$ or	USOCR)				1	11:03 AM
		US-20070001429-\$ or						
		US-20060290107-\$ or						
		US-20030075903-\$ or						
		US-20080303232-\$ or						
		US-20070085303-\$ or						
		US-20060131841-\$ or						
		US-20060001226-\$ or						
		US-20080224451-\$ or						
		US-20010033069-\$ or						
		US-20030025304-\$ or						
		US-20070187914-\$ or						
		US-20070069505-\$ or						
		US-20080231022-\$ or						
		US-20100301585-\$ or						
		US-20100013281-\$ or						
		US-20150360709-\$ or						
		US-20070069504-\$ or						
		US-20100072732-\$ or				1	1	
		US-20090302578-\$ or						
		US-20130113188-\$ or						
		US-20130049331-\$ or						
		US-20160001805-\$ or						
		US-20040164593-\$ or						
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		\$ or US-6045145-\$ or						
		US-3223431-\$ or US-						
		6378892-\$ or US-						
		5653460-\$ or US-						
		6209892-\$ or US-						
		5201535-\$ or US-						
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		6017051-\$ or US-						
		1707186-\$ or US-						
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		7481439-\$ or US-						
		6851693-\$ or US-				1	1	
		5848797-\$ or US-				1	1	
		•				1	1	
		3000645-\$).did. or (US-				1	1	
		8070180-\$ or US-				1	1	
		7832755-\$ or US-				1	1	
		7261308-\$ or US-				1	1	
		5704627-\$ or US-						
		5794951-\$ or US-				1	1	
		5647601-\$ or US-						

245363	31-\$ or US-			
	67-\$ or US-			
	06-\$ or US-			
	03-\$ or US-			
)4-\$ or US-			
	06-\$ or US-			
	32-\$ or US-			
	37-\$ or US-			
	'1-\$ or US-			
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769932	25-\$ or US-			
682735	66-\$ or US-			
839809	98-\$ or US-			
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628684	l4-\$ or US-			
651382	27-\$ or US-			
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926012	28-\$ or US-			
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			JPO)				12.20 1 101
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L433	2627	(B62B9/12,28,102).CP C.	JPO) (US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2019/04/15 12:29 PM
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L452	66	("20020093177" "20020109320"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2019/04/28 11:18 PM
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L455	2688	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2019/08/23 12:51 AM
		[-	JPO)				
L456	5586	L454 or L455	(US-PGPUB; USPAT;	OR	ON	ON	2019/08/23
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			JPO)				
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L458	58	L456 and L457	(US-PGPUB; USPAT;	OR	ON	ON	2019/08/23
		L-100 and L-101	USOCR; FPRS; EPO;	"	-	-	12:59 AM

			JPO)					
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L460	167	1 '	(US-PGPUB; USOCR)	USPAT;	OR	ON	ON	2019/08/23 01:02 AM

6923467-\$ or US-
6752405-\$ or US-
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L465	2834	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2020/02/28 08:49 PM
L466	5847	L464 or L465	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2020/02/28 08:49 PM
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L468	97	L466 and L467	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2020/02/28 09:02 PM
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L472	7365969	@ad<="20081204"	(US-PGPUB; U USOCR)	SPAT;	OR	ON	ON	2020/03/01 11:01 PM

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L502	25	(Roe near2 Megan).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2020/09/10 11:56 PM
L503	5	(Simpson near2 (Stacy and Noel)).in.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2020/09/11 12:00 AM
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L506	4378	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/04/11 11:36 PM
L507	3086	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/04/11 11:36 PM
L508	6262	L506 or L507	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/04/11 11:36 PM
L509	2515828	@pd>="20200910"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/04/11 11:47 PM
L510	120	L508 and L509	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/04/11 11:48 PM
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L513	4404	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/07/02 08:37 PM
L514	3109	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO;	OR	ON	ON	2021/07/02 08:37 PM

02/24/2024 11:04:17 PM Workspace: 18448417_updatedparent Page 200 of 1837

			JPO)				
L515	6295	L513 or L514	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/07/02 08:37 PM
L516	184287	@pd>="20210411"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/07/02 08:37 PM
L517	15	L515 and L516	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/07/02 08:38 PM
L518	12	"22994051".FMID.	(US-PGPUB; USPAT; FPRS; JPO)	OR	ON	ON	2021/07/02 08:52 PM
L522	4494	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/08/11 03:57 PM
L523	3202	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/08/11 03:57 PM
L524	6428	L522 or L523	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/08/11 03:57 PM
L525	81312	@pd>="20210702"	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/08/11 03:58 PM
L526	6	L524 and L525	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/08/11 03:58 PM
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		"D643344" "D643345" "D643346" "D643786" "D683974" "D699633" "D716705" "D756852").PN. OR ("11059510").URPN.					
L528	2	("20130270800" "8157273").PN. OR ("11052933").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/11 04:01 PM
L529	2	("20130270800" "8157273").PN. OR ("11052933").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/11 04:03 PM
L530	2	"49324395".FMID.	(US-PGPUB; USPAT; FPRS; JPO)	OR	ON	ON	2021/08/11 04:04 PM
L531	21	("0522608" "0677195" "0720692" "3997180" "4620686" "7364183" "7475900" "8157273" "8398143" "8444171" "8596670" "D598333").PN. OR ("8844964").URPN.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/08/11 04:05 PM
L532	1	("20200385045").pn.	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2021/10/13 12:35 AM
L533	111	500 501 502 503 494	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2021/10/13 09:34 AM
L534	3	500 501 502 503 494	(US-PGPUB; USPAT; USOCR; FIT (AP, AT,	AND	ON	ON	2021/10/13 09:35 AM

			AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)				
L535	92	500 501 502 503	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2021/10/13 09:36 AM
L536	19	533 NOT 535	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2021/10/13 09:36 AM
L537	12	"57325932".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2021/10/13 09:38 AM

L538	6	"38367586".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2021/10/14 09:55 AM
L539	30	("3145442" "5865447" "5947555" "6446314" "7032922" "20040164593").pn. OR ("7681894").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/10/14 09:56 AM
L540	3527	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/10/14 11:06 AM
L541	4425	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO)	OR	ON	ON	2021/10/14 11:06 AM
L542	819242	@pd>="20210811"	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2021/10/14 11:06 AM
L543	6717	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO;	OR	ON	ON	2021/10/14 11:14 AM

			JPO)				
L544	6006	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2021/10/14 11:14 AM
L545	10662	544 543	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2021/10/14 11:14 AM
L546	2061	544 543	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	AND	ON	ON	2021/10/14 11:14 AM
L547	36	545 AND 542	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	AND	ON	ON	2021/10/14 11:15 AM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)				
L548	10	("20100244408" "20110012324" "20110241313" "20150259005" "20180027989" "20190256120" "20190320812" "20190320814" "20190322304" "20200239058").pn. OR ("11091186").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	AND	ON	ON	2021/10/14 11:27 AM
L549	1	("7475900").pn.	(US-PGPUB; USPAT; USOCR)	AND	ON	ON	2021/10/14 09:17 PM
L550	67	(Zehfuss near2 Mark).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:23 AM
L551	6	(Simpson near2 (Stacy AND Noel)).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:23 AM
L552	29	(Roe near2 Megan).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB,	OR	ON	ON	2021/10/15 09:24 AM

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)				
L553	18	(Lee near2 (Jon AND Hee)).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:24 AM
L554	92	550 551 552 553	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:25 AM
L555	6	550 551 552 553	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	AND	ON	ON	2021/10/15 09:25 AM
L556	49	(Baby near2 Jogger).AS.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP,	OR	ON	ON	2021/10/15 09:26 AM

			AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK,				
L557	167	545 AND (seat near2 (attach\$4 AND convert\$4))	TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY,	OR	ON	ON	2021/10/15 09:43 AM
			CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT)				
L558	405	545 AND ((double OR tandem) SAME stroller)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:45 AM
L559	115914245	@ad<="20081204"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:46 AM
L560	3529	545 AND 559	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:46 AM
L561	146	560 AND ((double OR tandem) SAME stroller)	(US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2021/10/15 09:46 AM
L562	10	("6595583" "7559606" "7681894" "8033555").pn. OR ("8313115").urpn. AND	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/10/15 09:49 AM

		(PGPB USPT USOC).dbnm.					
L563	1	"52582129".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2021/10/15 11:58 AM
L564	1	("2015/0061249").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2021/10/15 11:58 AM
L565	4853	545 AND 559	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2022/02/02 05:41 PM
L566	2093553	@pd>="20211015"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/02/02 05:42 PM
L567	0	565 AND 566	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS,	OR	ON	ON	2022/02/02 05:42 PM

			IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)				
L568	73	545 AND 566	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/02/02 05:42 PM
L569	1	("6286844").pn.	(US-PGPUB; USPAT; USOCR)	AND	ON	ON	2022/02/02 05:45 PM
L570	12	("4805938" "5653460" "5848797" "6540239" "6938906" "6981709" "7597332" "9056622" "9283978" "9771095" "20070001410" "20100072731").pn. OR ("11220282").urpn. AND (PGPB USPT USOC).dbnm.	l '	AND	ON	ON	2022/02/02 06:03 PM
L571	228	ÖR US-20070114738- A1 OR US- 20070001429-A1 OR US-20060290107-A1 OR US-20030075903- A1 OR US-	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	AND	ON	ON	2022/02/02 06:32 PM

OR US-20100013281-			
A1 OR US-			
20150360709-A1 OR			
US-20070069504-A1			
OR US-20100072732-			
A1 OR US-			
20090302578-A1 OR			
US-20130113188-A1			
OR US-20090243261-			
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US-20120228843-A1			
OR US-20080179848-			
A1 OR US-			
20080150247-A1 OR			
US-20050006864-			
A1).did. AND			
PGPB.dbnm.) OR ((US-			
5338096-A OR US-			
6045145-A OR US-			
3223431-A OR US-			
6378892-B1 OR US-			
5653460-A OR US-			
6209892-B1 OR US-			
5201535-A OR US-			
4620711-A OR US-			
6676140-B1 OR US-			
6017051-A OR US-			
1707186-A OR US-			
7475900-B2 OR US-			
7938435-B2 OR US-			
D508443-S OR US-			
7497461-B2 OR US-			
4570956-A OR US-			
6923467-B2 OR US- 6752405-B1 OR US-			
6752405-B1 OR US- 8157273-B2 OR US-			
7896384-B2 OR US-			
7696384-B2 OR US-			
8128103-B1 OR US-			
7597332-B2 OR US-			
7481439-B2 OR US-			
1401408-DZ OR US-			

6851693-B2 OR US-	
5848797-A OR US-	
3000645-A OR US-	
8070180-B2 OR US-	
7832755-B2 OR US-	
7261308-B2 OR US-	
5704627-A OR US-	
5794951-A OR US-	
5647601-A OR US-	
2453631-A OR US-	
6443467-B1 OR US-	
8205906-B2 OR US-	
8262103-B2 OR US-	
8336904-B2 OR US-	
8371606-B2 OR US-	
8251382-B2 OR US-	
7377537-B2 OR US-	
7320471-B2 OR US-	
7032922-B1 OR US-	
7367581-B2 OR US-	
8029007-B2 OR US-	
7699325-B2 OR US-	
6827356-B2 OR US-	
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7766366-B2 OR US-	
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9327752-B2 OR US-	
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9561817-B2 OR US-	
6447001-B1 OR US-	
5522121-A OR US-	
9545941-B2 OR US-	
9056622-B2 OR US-	
9403550-B2 OR US-	
8899615-B2 OR US-	
7364183-B2 OR US-	
9637155-B1 OR US-	
9421992-B2 OR US-	
9545940-B2 OR US-	
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9771095-B2 OR US-	
9725106-B2 OR US-	
9701333-B2 OR US-	
8585075-B2 OR US-	
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9956979-B1 OR US-	
9944305-B2 OR US-	
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9849903-B1 OR US-	
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8322745-B2 OR US- 6585284-B2 OR US- 6267406-B1 OR US- 11091186-B2 OR US- 110960913-B2 OR US- 10960913-B2 OR US- 13322739-B2 OR US- 7971897-B2 OR US- 7971897-B2 OR US- 8313115-B2 OR US- 83205894-B2 OR US- 6981709-B2 OR US- 69816709-B2 OR US- 6936552-B2 OR US- 11220282-B2 OR US- 1122082-B2 OR US- 112208136-B2 OR US- 11208135-B2 OR US- 11208135-B2 OR US- 11192568-B2).did. AND USPT.dhorm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (centrals (US-PGPUB; USPAT; OR ON ON 2022/02/02 O6:32 PM AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
6585284-B2 OR US- 6267406-B1 OR US- 11091186-B2 OR US- 110952934-B2 OR US- 10960913-B2 OR US- 83131115-B2 OR US- 83131115-B2 OR US- 10322739-B2 OR US- 7971897-B2 OR US- 7614640-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 11220282-B2 OR US- 11220822-B2 OR US- 11208136-B2 OR US- 11208135-B2 OR US- 111208135-B2 OR US- 111208371-B2 OR US- 11192568-B2), did. AND USPT.dhorm,) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A), did. AND USOC.dbnm.) OR ((US- 20050008864-A1), did. AND DWPI.dbnm.) L572 9 571 AND (central\$ near2 wheel) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
6267406-B1 OR US- 11091186-B2 OR US- 110960913-B2 OR US- 10960913-B2 OR US- 8313115-B2 OR US- 10322739-B2 OR US- 7971897-B2 OR US- 7614640-B2 OR US- 8205894-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 6935652-B2 OR US- 3998490-A OR US- 11220282-B2 OR US- 112203371-B2 OR US- 11203371-B2 OR US- 11208135-B2 OR US- 11203371-B2 OR US- 112063-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (centralS near2 wheel) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
11091186-B2 OR US- 11052934-B2 OR US- 10960913-B2 OR US- 8313115-B2 OR US- 8313115-B2 OR US- 10322739-B2 OR US- 7614640-B2 OR US- 7614640-B2 OR US- 8205894-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 6983652-B2 OR US- 1122082-B2 OR US- 112208135-B2 OR US- 112208135-B2 OR US- 11208135-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; OR ON ON 2022/02/02 near2 wheel) (US-PGPUB; USPAT; OR ON ON 2022/02/02 06:32 PM								
11052934-B2 OR US- 10960913-B2 OR US- 8313115-B2 OR US- 10322739-B2 OR US- 7971897-B2 OR US- 7614640-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 693652-B2 OR US- 1120282-B2 OR US- 11208136-B2 OR US- 11208136-B2 OR US- 11208137-B2 OR US- 11120568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; OR ON ON 2022/02/02 near2 wheel) (US-PGPUB; USPAT; OR ON ON 2022/02/02 06:32 PM								
10960913-B2 OR US- 8313115-B2 OR US- 10322739-B2 OR US- 7971897-B2 OR US- 7614640-B2 OR US- 8205894-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 112208136-B2 OR US- 112208135-B2 OR US- 11208135-B2 OR US- 111208135-B2 OR US- 1112081371-B2 OR US- 111208371-B2 OR US- 11120568-B2), did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A), did. AND USOC.dbnm.) OR ((US- 20050006864-A1), did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
8313115-B2 OR US- 10322739-B2 OR US- 76714640-B2 OR US- 8205894-B2 OR US- 6981709-B2 OR US- 6985652-B2 OR US- 6935652-B2 OR US- 11220282-B2 OR US- 11220282-B2 OR US- 11208136-B2 OR US- 11208136-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ near2 wheel)								
10322739-B2 OR US-7971897-B2 OR US-7614640-B2 OR US-8205894-B2 OR US-6981709-B2 OR US-6981709-B2 OR US-6935652-B2 OR US-11220282-B2 OR US-112208136-B2 OR US-11208136-B2 OR US-11208136-B2 OR US-112083371-B2 OR US-11192568-B2).did. AND USPT.dbnm.) OR ((US-3000645-A OR US-2453631-A OR US-1707186-A).did. AND USOC.dbnm.) OR ((US-20050006864-A1).did. AND DWPI.dbnm.) L572								
7971897-B2 OR US- 7614640-B2 OR US- 7614640-B2 OR US- 8205894-B2 OR US- 6981709-B2 OR US- 6981709-B2 OR US- 3998490-A OR US- 1120282-B2 OR US- 11208135-B2 OR US- 11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
7614640-B2 OR US- 8205894-B2 OR US- 6981709-B2 OR US- 6983652-B2 OR US- 3998490-A OR US- 11220282-B2 OR US- 11220282-B2 OR US- 11203371-B2 OR US- 111203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ near2 wheel) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
8205894-B2 OR US- 6981709-B2 OR US- 6935652-B2 OR US- 3998490-A OR US- 11220282-B2 OR US- 111208135-B2 OR US- 111208371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 20453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPl.dbnm.) L572 9 571 AND (central\$ near2 wheel) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
6981709-B2 OR US- 6935652-B2 OR US- 3998490-A OR US- 11220282-B2 OR US- 112208136-B2 OR US- 11208135-B2 OR US- 11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
6935652-B2 OR US- 3998490-A OR US- 11208136-B2 OR US- 11208135-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPl.dbnm.) L572 9								
3998490-A OR US- 11220282-B2 OR US- 11208136-B2 OR US- 11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; OR ON ON 2022/02/02 of 32 PM								
11220282-B2 OR US- 11208136-B2 OR US- 11208135-B2 OR US- 11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; OR ON ON 2022/02/02 of OR) Near2 wheel) USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
11208136-B2 OR US- 11208135-B2 OR US- 11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ near2 wheel)								
11208135-B2 OR US- 11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
11203371-B2 OR US- 11192568-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ near2 wheel) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
11192568-B2).did. AND USPT.dbnm.) OR ((US-3000645-A OR US-2453631-A OR US-1707186-A).did. AND USOC.dbnm.) OR ((US-20050006864-A1).did. AND DWPI.dbnm.)								
USPT.dbnm.) OR ((US-3000645-A OR US-2453631-A OR US-1707186-A).did. AND USOC.dbnm.) OR ((US-20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; Near2 wheel) (US-PGPUB; USPAT; OR ON ON 2022/02/02 USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
3000645-A OR US-2453631-A OR US-1707186-A).did. AND USOC.dbnm.) OR ((US-20050006864-A1).did. AND DWPl.dbnm.)			,					
2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, ON ON ON O6:32 PM		1						
1707186-A).did. AND USOC.dbnm.) OR ((US-20050006864-A1).did. AND DWPI.dbnm.)		1						
USOC.dbnm.) OR ((US-20050006864-A1).did. AND DWPI.dbnm.)		1						
20050006864-A1).did. AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,								
AND DWPI.dbnm.) L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,		1						
L572 9 571 AND (central\$ (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, ON ON 2022/02/02 06:32 PM		1						
near2 wheel) USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,			'					
AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	L572	9	,		OR	ON	ON	
CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,		1	near2 wheel)					06:32 PM
CZ, DD, DE, DK, EA,		1						
		1						
				LEE, EP, ES, FI, FR, GB,				

			HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)				
L573	1	("20200385045").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2022/02/03 10:10 AM
L574	11	"51060413".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	OFF	OFF	2022/02/03 12:40 PM
L575	19	"46172541".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	OFF	OFF	2022/02/03 12:46 PM
L576	1	(D593459).pn.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2022/02/03 01:26 PM
L577	13	("10449987" "10556610 " "10899377" "1109118 6" "6267406" "6286844" "6513827" "7377537" " 7475900" "7971897" "8 313115" "8602441" "D5 93459").PN.	l '	OR	OFF	OFF	2022/02/03 01:28 PM
L578	2332892	@pd>="20220202"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV,	OR	ON	ON	2022/06/15 12:13 PM

			MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)				
L579	11186	544 543	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2022/06/15 12:14 PM
L580	126	579 AND 578	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/06/15 12:14 PM
L581	14	("292933" "329579" "4953887" "6676140" "8070180" "8128103" "8152177" "8186705" "8596670" "8915516" "9511789" "10077063" "20070001429" "201502327" "20150217792" "20150232114").pn. OR ("11338836").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/06/15 12:24 PM
L582	101	("1239498" "1322788" "1418929" "1832770" "3173396" "3831960" "4310167" "4433869" "4893826" "4936629" "5022669" "D326748"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/06/15 12:25 PM

"5158319" "5301968"
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"5581843" "5653460"
"5664795" "5722594"
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6698788" 6702306"
6877762" 6935652"
"6938906" "6981709"
"7059625" "7261308"
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"8276935" "8882134"
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"20080042476"
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"20100072731"
"20100109270" j
"20100109293"
"20100140902" j
"20100148553" j
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"20130154215"
"20140191483"
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	"20160159385").pn. OR ("11292499").urpn. AND (PGPB USPT USOC).dbnm.						
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		"20020109321"						
		"20030025304" j						
		"20060001226"						
		"20060131841"						
		"20060290107"						
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		"20070085303"						
		"20070090619" j						
		"20070114738"						
		"20080224451"						
		"20080231022"						
		"20090302578"						
		"20100140902"						
		"20140191483"						
		"20140333039"						
		"20160046315").pn. OR						
		("11192568").urpn.						
		AND (PGPB USPT						
		USOC).dbnm.						
L584	99	("1707186" "3000645"		USPAT;	AND	ON	ON	2022/06/15
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		"5338096" "5567008"						
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		"6286844" "6378892"						
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		"6752405" "6851693"						
		"6923467" "7249779"						
		"7311323" "7320471"						
		"7367581" "7377537"						
		"7401803" "7475900"						
		"7481439" "7497461"						
		"D593459" "7677585"						
		"7681894" "7766366"						
		"7832755" "7896384"						
		"7938435" "8029007"						
1		"8029014" "8033554"						
		"8061732" "8157273"						
		"8231136" "8251382"						
		"8262103" "8336904"						
		"8444171" "8458880"						
		"8585075" "8596670"						
		"8696016" "8733784"						
		"8764048" "8882134" "8905427" "8936261"						
		"9010773" "9108654"						
		9108659" 9119483"						
1		"9199659" "9200746"						
		"9227650" "9242665"						
		"9260127" "9260128"						
		"9517787" "9561817"						
		"9701333" "9725106"						
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		"9840168" "9849903"						
		"9884640" "9924806"						
		<u>'</u>	1		1			

L58	35	31	"9944305" "9956979" "10023218" "10207731" "10293843" "10449987" "20010033069" "20020109321" "20030025304" "20060001226" "200600290107" "20070001429" "20070090619" "20070090619" "20070114738" "20080224451" "20080224451" "20080231022" "20090302578" "20140191483" "20140333039" "20160046315").pn. OR ("10730543").urpn. AND (PGPB USPT USOC).dbnm. ("3998490" "6045145" "6086087" "6209892" "8641077" "9849903" "20100013281" "20100072732" "20100072732" "20100078916" "201000140902" "20110181024" "20120261906" "20130140797" "20130207369" "20140191483" "20140217706" "20130140797" "20130207369" "20140191483" "20140217706" "20150232114" "20160001805" "201600339940" "20170217471" "20180043919" "20180229750").pn. OR ("10293843").urpn.		AND	ON	ON	2022/06/15 12:55 PM
L58	36	230		(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	AND	ON	ON	2022/06/15 01:30 PM

OR US-20030075903-	EE, EP, ES, FI, FR, GB,		
A1 OR US-	HR, HU, ID, IE, IL, IS,		
20080303232-A1 OR	IT, JP, KR, LT, LU, LV,		
US-20070085303-A1	MA, MC, MD, MY, NL,		
OR US-20060131841-	NO, NZ, OA, PH, PL,		
A1 OR US-	PT, RO, RS, RU, SE,		
20060001226-A1 OR	SG, SI, SK, SU, TH,		
US-20080224451-A1	TN, TR, TW, UA, VN,		
OR US-20010033069-	WO); FPRS; EPO;		
A1 OR US-	JPO; DERWENT;		
20030025304-A1 OR	IBM TDB)		
US-20070187914-A1			
OR US-20070069505-			
A1 OR US-			
20080231022-A1 OR			
US-20100301585-A1			
OR US-20100013281-			
A1 OR US-			
20150360709-A1 OR			
US-20070069504-A1			
OR US-20100072732-			
A1 OR US-			
20090302578-A1 OR			
US-20130113188-A1			
OR US-20090243261- A1 OR US-			
20130049331-A1 OR			
US-20160001805-A1			
OR US-20040164593- A1 OR US-			
20070075525-A1 OR			
US-20130087993-A1 OR US-20140191483-			
A1 OR US-			
20070090619-A1 OR			
US-20020109321-A1			
OR US-20100140902-			
A1 OR US-			
20180229750-A1 OR			
US-20170158219-A1			
OR US-20160075363-			
A1 OR US-			
20150061249-A1 OR			
US-20120228843-A1			
OR US-20080179848-			
A1 OR US-			
20080150247-A1 OR			
US-20050006864-			
A1).did. AND			
PGPB.dbnm.) OR ((US-			
5338096-A OR US-			
l l			
6045145-A OR US-			
3223431-A OR US-			
6378892-B1 OR US-			
5653460-A OR US-			
6209892-B1 OR US-			
5201535-A OR US-			
4620711-A OR US-			

6676140-B1 OR US-			
6017051-A OR US-			
1707186-A OR US-			
7475900-B2 OR US-			
7938435-B2 OR US-			
D508443-S OR US-			
7497461-B2 OR US-			
4570956-A OR US-			
6923467-B2 OR US-			
6752405-B1 OR US-			
8157273-B2 OR US-			
7896384-B2 OR US-			
7677585-B2 OR US-			
8128103-B1 OR US-			
7597332-B2 OR US-			
7481439-B2 OR US-			
6851693-B2 OR US-			
5848797-A OR US-			
3000645-A OR US-			
8070180-B2 OR US-			
7832755-B2 OR US-			
7261308-B2 OR US-			
5704627-A OR US-			
5794951-A OR US-			
5647601-A OR US-			
2453631-A OR US-			
6443467-B1 OR US-			
8205906-B2 OR US-			
8262103-B2 OR US-			
8336904-B2 OR US-			
8371606-B2 OR US-			
8251382-B2 OR US-			
7377537-B2 OR US-			
737737-B2 OR US-			
7032922-B1 OR US-			
7367581-B2 OR US-			
8029007-B2 OR US-			
7699325-B2 OR US-			
6827356-B2 OR US-			
8398098-B2 OR US-			
7766366-B2 OR US-			
6286844-B1 OR US-			
6513827-B1 OR US-			
8764048-B1 OR US-			
8061732-B2 OR US-			
8733784-B2 OR US-			
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8231136-B2 OR US-			
8458880-B2 OR US-			
7249779-B2 OR US-			
7311323-B1 OR US-			
8444171-B2 OR US-			
8033554-B2 OR US-			
7681894-B2 OR US-			
8955869-B2 OR US-			
8905427-B2 OR US-			
8882134-B2 OR US-			
8029014-B2 OR US-			
10023014-DZ OK US-			1

77	89402-B2 OR US-			
l	58399-B2 OR US-			
	67425-A OR US-			
I I	36261-B2 OR US-			
	10773-B2 OR US-			
	19483-B1 OR US-			
	00746-B2 OR US-			
	99659-B2 OR US-			
	08659-B2 OR US-			
	73563-B2 OR US-			
	42665-B2 OR US-			
l l	01803-B1 OR US-			
	27650-B2 OR US-			
	60128-B2 OR US-			
	60127-B2 OR US-			
	57830-B2 OR US-			
l l	69482-A OR US-			
	42915-A OR US-			
	15783-B1 OR US-			
	08654-B2 OR US-			
	30642-B2 OR US-			
	17787-B2 OR US-			
	27752-B2 OR US-			
	61526-B1 OR US-			
	67171-B2 OR US-			
	17789-B2 OR US-			
	61817-B2 OR US-			
	47001-B1 OR US- 22121-A OR US-			
	45941-B2 OR US-			
	56622-B2 OR US-			
	03550-B2 OR US-			
	99615-B2 OR US-			
	64183-B2 OR US-			
	37155-B1 OR US-			
l l	21992-B2 OR US-			
l l	45940-B2 OR US-			
	46378-B2 OR US-			
l l	78498-B2 OR US-			
l l	15446-A OR US-			
	34177-A OR US-			
l l	06749-A OR US-			
l l	51505-B2 OR US-			
	51502-B2 OR US-			
	93040-B2 OR US-			
l l	46990-B1 OR US-			
	65447-A OR US-			
l l	72279-A OR US-			
l l	67008-A OR US-			
l l	57326-B2 OR US-			
	91000-B2 OR US-			
l l	55740-A OR US-			
l l	47555-A OR US-			
l l	67359-B1 OR US-			
l l	76652-B2 OR US-			
l l	71095-B2 OR US-			
l l	25106-B2 OR US-			
l l	01333-B2 OR US-			

8585075-B2 OR US-			
8596670-B2 OR US-			
9956979-B1 OR US-			
9944305-B2 OR US-			
9924806-B2 OR US-			
9884640-B2 OR US-			
9849903-B1 OR US-			
9840168-B2 OR US-			
10207731-B2 OR US-			
10023218-B2 OR US-			
6938906-B1 OR US-			
D593459-S OR US-			
D621306-S OR US-			
8328208-B2 OR US-			
7513512-B2 OR US-			
10293843-B2 OR US-			
10556611-B2 OR US-			
10556610-B2 OR US-			
10449987-B2 OR US-			
10730543-B2 OR US-			
10926785-B2 OR US-			
10899377-B2 OR US-			
10974754-B2 OR US-			
10994763-B2 OR US-			
11001289-B2 OR US-			
11059510-B2 OR US-			
11052933-B2 OR US-			
8844964-B2 OR US-			
6086087-A OR US-			
9643640-B2 OR US-			
9616912-B2 OR US-			
9283978-B2 OR US-			
9050987-B2 OR US-			
9004524-B1 OR US-			
8857829-B2 OR US-			
8807588-B2 OR US-			
8708364-B2 OR US-			
8684395-B2 OR US-			
8602441-B2 OR US-			
8505958-B2 OR US-			
8480115-B2 OR US-			
8322745-B2 OR US-			
6585284-B2 OR US-			
6267406-B1 OR US-			
11091186-B2 OR US-			
11052934-B2 OR US-			
10960913-B2 OR US-			
8313115-B2 OR US-			
10322739-B2 OR US-			
7971897-B2 OR US-			
7614640-B2 OR US-			
8205894-B2 OR US-			
6981709-B2 OR US-			
6935652-B2 OR US-			
3998490-A OR US-			
11220282-B2 OR US-			
11208136-B2 OR US-			
11208135-B2 OR US-			
1			ı l

L587	25456812	11203371-B2 OR US- 11192568-B2 OR US- 11338836-B2 OR US- 11292499-B2).did. AND USPT.dbnm.) OR ((US- 3000645-A OR US- 2453631-A OR US- 1707186-A).did. AND USOC.dbnm.) OR ((US- 20050006864-A1).did. AND DWPI.dbnm.) @ad<="20081204"	(US-PGPUB; USPAT;	OR	ON	ON	2022/06/15
L588	110	587 AND 586	USOCR; DERWENT) (US-PGPUB; USPAT;	OR	ON	ON	01:30 PM 2022/06/15
L589	6	"53797406".fmid.	USOCR; DERWENT) (US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	01:31 PM 2022/06/15 02:05 PM
L590	85	("4542915" "4725071" "D321850" "5338096" "5417449" "D359937" "D375706" "5664795" "6086087" "D429664" "D430076" "6267406" "6676140" "6702316" "6843498" "6877761" "7451999" "7699325" "D636300" "7971884" "8070180" "8146926" "8157273" "8205894" "8282109" "8322745" "8398143" "8444171" "8480115" "8684395" "8714582" "8757646" "8857829" "8905427" "8915516" "20030020259" "20040094935" "20060290107" "20070075525" "20070085303" "20070114738"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/06/15 02:06 PM

		"20070267833" "20080001370" "20080179863" "20080224432" "20090039620" "20090236826" "20100038886" "20100038887" "20100072731" "20100140902" "20100201089" "20100282800" "20100301585" "20110175330"				
L591	102	"20120098237" "20120169021" "20130049331" "20130234419" "20130264787" "20130270800" "20140159346" "20140312586" "20140346756").pn. OR ("9227650").urpn. AND (PGPB USPT USOC).dbnm. ("119331" "1138802"	OR	ON	ON	2022/06/15
		"1269379" "1707186" "1890469" "3223431" "3612603" "3726536" "4222132" "4349938" "4391453" "4403807" "4684148" "4725071" "D296540" "4805938" "D300310" "4834415" "4872692" "D305316" "4969656" "5018754" "5033761" "D321850" "5064209" "D328047" "5167425" "5221106" "5230523" "D348489" "5338096" "D360392" "D370437" "D382516" "5653460" "5664795" "5772235" "D404344" "5887935" "5918892" "6086087" "6099022"				09:09 PM
		"D430512" "D431212" "6267406" "D452191" "6357784" "6361111" "6375213" "6431579" "6527294" "6536842" "6585284" "6676140" "6679506"				

		"6752405" "6843498" "6935652" "6938906" "6938954" "7025364" "7364183" "D568794" "7367581" "7516966" "D593458" "D595621"					
L592	1	"41399621".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2022/06/15 09:15 PM
L593	14	("2009/0302578").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/06/15 09:20 PM
L594	1	("20200385045").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/22 12:25 PM
L595	52	(Baby near2 Jogger).AS.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2022/09/23 03:30 PM
L596	95	550 551 552 553	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY,	OR	ON	ON	2022/09/23 03:30 PM

			CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)				
L597	670	545 AND 542	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	AND	ON	ON	2022/09/23 03:52 PM
L598	1304890	@pd>="20220615"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/09/23 03:53 PM
L599	75	597 AND 598	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/09/23 03:53 PM

L600	31	("10449987" "10556610 " "10899377" "1109118	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/23 03:54 PM
		6" "11192568" "112033 71" "11208135" "11208 136" "11220282" "1129 2499" "11338836" "200 60290107" "5167425" " 5338096" "5988670" "6 045145" "6086087" "62 67406" "6286844" "651 3827" "7377537" "7475 900" "7563170" "79384 35" "7971897" "831311 5" "8602441" "9403550" "D429476" "D430076" " D593459").PN.	,				
L601	232	ÖR US-20070114738- A1 OR US- 20070001429-A1 OR US-20060290107-A1 OR US-20030075903- A1 OR US- 20080303232-A1 OR US-20070085303-A1	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/23 03:54 PM

OR US-201014902. A1 OP US- 0180075363- A1 OP US-20180075363- A1 OP US-20180075363- A1 OP US-20180179848. A1 OP US-20080179848. A1 OP US-20080179848. A1 OP US-20180150247 A1 OP US- A1 OP US-20180232114- A1 OP US-3038096 A OP US- 8045145-A OP US- 8045165-A OP US- 8045165-A OP US- 8050882.B1 OP US- 8050882.B1 OP US- 8050882.B1 OP US- 8050882.B1 OP US- 8050843-S OP US- 80		
A1 OR US- 2018029750-A1 OR US-20170158219-A1 OR US-20160075303- A1 OR US- 20150061249-A1 OR US-20120228843-A1 OR US-20080179848- A1 OR US- 20080179848- A1 OR US- 20080179848- A1 OR US- 200801922714- A1) did. AND PGPB.domm.) OR (US- 533006-A OR US- 604514-A OR US- 533006-A OR US- 653480-A OR US- 653480-A OR US- 653480-A OR US- 6678140-B1 OR US- 6678140-B1 OR US- 6678140-B1 OR US- 7475900-B2 OR US- 7497461-B2 OR US- 6923467-B2 OR US- 4820717-B2 OR US- 6923467-B2 OR US- 692368-B2 OR US- 692368-B2 OR US- 7481439-B2 OR US- 8128103-B1 OR US- 8128103-B2 OR US- 8138760-B2 OR US-		R US-20100140902-
20180229750-A1 OR US-20140075383-A1 OR US-20140075383-A1 OR US-20150081249-A1 OR US-20150081249-A1 OR US-2012228443-A1 OR US-20080179848-A1 OR US-20080179848-A1 OR US-2005000684-A1 OR US-20150222114- A1).did. AND PGPB.dbmm.) OR ((US-5338096-A OR US-6045145-A OR US-33223131-A OR US-3322331-A OR US-5338096-A OR US-653460-A OR US-6576140-B1 OR US-6576140-B2 OR US-6576140-B1 OR US-6576140-B1 OR US-6576140-B1 OR US-6576140		
US-20170158219-A1 OR US-20160075363- A1 OR US- 20150061249-A1 OR US-2012028843-A1 OR US-20080179848- A1 OR US- 20080150247-A1 OR US-20080179848- A1 OR US- 20080150247-A1 OR US-20050006984-A1 OR US-20150232114- A1).did. AND PGPB.domin.) OR (US- 533008-A OR US- 634543-A OR US- 6378892-B1 OR US- 6578892-B1 OR US- 6509892-B1 OR US- 6509892-B1 OR US- 6676140-B1 OR US- 677140-B1 OR US- 170718-A OR US- 170718-A OR US- 7475900-B2 OR US- 7497461-B2 OR US- 6823467-B2 OR US- 6823467-B2 OR US- 6875440-B1 OR US- 67572405-B1 OR US- 68152737-B2 OR US- 68152737-B2 OR US- 68152737-B2 OR US- 68152737-B2 OR US- 88152737-B2 OR US- 88152737-B2 OR US- 88152810-B1 OR US- 8816810-B2 OR US- 881760-B2 OR US- 883890-B2 OR US-		
OR US-20160075363- A1 OR US- 20160061249-A1 OR US-20120022843- A1 OR US-20000179848- A1 OR US-20000179848- A1 OR US-2000016984-A1 OR US-2000006864-A1 OR US-201500221114- A1), did. AND PCPE abnm.) OR ((US- 5338096-A OR US- 6045145-A OR US- 3223431-A OR US- 532892-B1 OR US- 5653460-A OR US- 5693460-A OR US- 5693460-A OR US- 5691536-A OR US- 6676140-B1 OR US- 6676140-B1 OR US- 6676140-B1 OR US- 1707186-A OR US- 1707186-A OR US- 1707186-A OR US- 1747590-B2 OR US- 7338435-B2 OR US- 5933435-B2 OR US- 6923467-B2 OR US- 6732405-B1 OR US- 6732405-B1 OR US- 6732405-B1 OR US- 6732405-B1 OR US- 8157275-B2 OR US- 8157275-B2 OR US- 8128103-B1 OR US- 816803-B2 OR US- 8128103-B1 OR US- 8128103-B2 OR US- 8128103-B2 OR US- 8128103-B2 OR US- 8851603-B2 OR US-		
A1 OR US- 20150061249-A1 OR US-20120228843-A1 OR US-20180179848 A1 OR US- 2008015027-A1 OR US-20050006884-A1 OR US-20500232114 A1) did. AND PGPB.dnmi, OR (US- 538096-A OR US- 6045145-A OR US- 6045145-A OR US- 6378992-B1 OR US- 6538992-B1 OR US- 6538992-B1 OR US- 6538992-B1 OR US- 6501455-A OR US- 620153-A OR US- 620153-A OR US- 620153-A OR US- 61770718-A OR US- 170718-A OR US- 170718-A OR US- 170718-A OR US- 747590-B2 OR US- 749343-S DC R US- 749343-S DC R US- 6923467-B2 OR US- 6752405-B1 OR US- 675732-B2 OR US- 6757332-B2 OR US- 6767338-B2 OR US- 676735-B2 OR US- 685189-B2 OR US- 685190-B2 OR US- 6794951-A OR US- 6794951-A OR US- 6794951-A OR US- 6794951-A OR US- 6847401-A OR US- 6847401-B OR US-		
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	1803-B2 OR US-			
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I I)127-B2 OR US-			
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	9482-A OR US-			
	2915-A OR US-			
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	3654-B2 OR US-			
)642-B2 OR US-			
	787-B2 OR US-			
	752-B2 OR US-			
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	7001-B1 OR US-			
	2121-A OR US-			
I I	5941-B2 OR US-			
I I	6622-B2 OR US-			
I I	3550-B2 OR US-			
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	763-B2 OR US-			
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	40-B2 OR US-			
	12-B2 OR US-			
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L602	104	600 NOT 601	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO; DERWENT; IBM_TDB)	OR	ON	ON	2022/09/23 03:54 PM
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		"20120169021" "20140345980" "20160016601").pn. OR ("11370468").urpn. AND (PGPB USPT USOC).dbnm.					
L604	3	"47750100".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2022/09/23 04:06 PM
L605	11	"66397144".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)	OR	ON	ON	2022/09/23 04:07 PM
L606	22	("6086086" "6209892" "8061732" "8474854" "8696016" "9085312" "9399477" "20010013689" "20020005628" "20030201617" "20070194545" "20100230933" "20100244408" "20100259021" "20110298198" "20130087993" "20150042056" "20160046315" "20170313339").pn. OR ("10899377").urpn. AND (PGPB USPT USOC).dbnm.		OR	ON	ON	2022/09/23 04:07 PM
L607	1	("7475900").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/23 04:08 PM

L608	48	("5333893" "D429664" "D430076" "6209892" "6513827" "6863286"	USPAT;	OR	ON	ON	2022/09/23 04:09 PM
		"7032922" "7367581" "7377537" "20030111825").pn. OR					
		("7475900").urpn. AND (PGPB USPT USOC).dbnm.					
L609	114	("1707186" "3000645" "4542915" "5201535" "5338096" "5567008" "6045145" "6086087" "629892" "6267406" "6286844" "6513827" "6561526" "6585284" "6676140" "6752405" "6851693" "6923467" "7249779" "7311323" "7320471" "7367581" "7475900" "7481439" "7497461" "D593459" "7677585" "7681894" "7766366" "7832755" "7896384" "8029007" "8029014" "8033554" "8029014" "8033554" "8029014" "8157273" "8231136" "8251382" "8262103" "8322745" "8586070" "8444171" "8458880" "8480115" "8505952" "8585075" "8596670" "8602441" "8696016" "8733784" "8764048" "8844964" "8882134" "9108659" "9119483" "9199659" "9200746" "9227650" "9242665" "9260127" "9260128" "9517787" "9561817" "9771095" "9776652" "9840168" "9944305" "9924806" "9944305" "9956979" "10023218" "10207731" "10293843"	USPAT;	OR	ON	ON	2022/09/23 04:17 PM
		"9840168" "9849903" "9884640" "9924806" "9944305" "9956979" "10023218" "10207731"					

		"10926785" "10974754" "10994763"						
		"11001289" "11052933" "11059510" "20010033069" "20020109321" "20030025304" "20060001226" "20060131841" "20060290107" "20070001429" "20070090619" "20070090619" "20070114738" "20080224451" "20080231022" "20090302578" "20100140902" "20140191483" "20140333039" "20160046315").pn. OR						
		("11192568").urpn. AND (PGPB USPT						
L610	108	USOC).dbnm. ("1239498" "1322788" "1418929" "1832770" "3173396" "3831960" "4310167" "4433869" "4936629" "5022669" "D326748" "5158319" "5301968" "5417449" "5556118" "5581843" "5653460" "5664795" "5722594" "6086087" "D431798" "6135222" "6267406" "6312005" "6394470" "6454286" "6540239" "6698788" "6702306" "6877762" "6935652" "6938906" "6981709" "7059625" "7261308" "7338122" "7481439" "77597332" "7740313" "7770970" "7780184" "7789413" "7789413" "7789433" "77971897" "7992889" "8029007" "8070179" "8128118" "8128119" "8157273" "8262107" "8276935" "8882134"	USOCR)	USPAT;	OR	ON	ON	2022/09/23 04:18 PM

	<u> </u>	lunnan a sa s		I	<u> </u>	<u> </u>	
		"20020125662" "20040011884"					
		20040011864 "20050253348"					
		"200502533 4 31"					
		"20050264064"					
		"20060290107"					
		"20070001410"					
		"20070075510"					
		"20070114738"					
		"20070257526"					
		"20080042476"					
		"20080224451"					
		"20090072520" "20090302556"					
		20090302536					
		"20100032925"					
		"20100072731"					
		"20100109270" j					
		"20100109293"					
		"20100140902"					
		"20100148553"					
		"20100314925" "20110074195"					
		20110074193 "20110101742"					
		"20110115264"					
		"20120080244"					
		"20130154215"					
		"20140191483").pn. OR					
		("9260127").urpn. AND					
		(PGPB USPT					
		USOC).dbnm.					
L611	109	("1239498" "1322788" "1418929" "1832770"		OR	ON	ON	2022/09/23 04:26 PM
		1416929 1632770 13173396" "3831960"	USOCR)				04.26 PW
		3173390 3631900 1 3173390 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 3631900 36319000 3631900 3631900 3631900 3631900 3631900 36319000 3631900 36319000 36319000 36319000 36319000 363190000 36319000 363190000 3631900000 3631900000 363190000000000 3631900000000000000000000000000000000000					
		"4893826" "4936629"					
		"5022669" "D326748"					
		"5158319" "5301968"					
		"5417449" "5556118"					
		"5581843" "5653460"					
		"5664795" "5722594"					
		"6086087" "D431798" "6135222" "6267406"					
		"6312005" "6394470"					
		"6454286" "6540239"					
		"6698788" "6702306"					
		"6935652" "6938906"					
		"7059625" "7261308"					
		"7338122" "7481439"					
		"7497449" "7559606" "7597332" "7740313"					
		7597532 7740515					
		"7789413" "7832756"					
		"7854435" "7887129"					
		i "7891732" "7938433"					
		"7971897" "7992889"					
		"8029007" "8070179"	Ī	I	I	ı	i l

		"8128119" "8157273" "8262107" "8276935" "20020125662" "20040011884" "20050253348" "20050253431" "20050264064" "20060290107" "20070001410" "20070075510" "20070075510" "20070257526" "20090072520" "20090072520" "20100032925" "201000199270" "20100109270" "20100148553" "20100314925" "20110074195" "2011001742" "20110115264" "20120080244" "20120080244" "20130154215").pn. OR ("8882134").urpn. AND					
L612	28	(PGPB USPT USOC).dbnm. ("7789402" "7832755" "8033554" "8231136" "8602441" "8905427" "8967647" "9050987" "8955869" "D747669" "9399477" "9403550" "9493179" "9517787" "9616912" "9637154" "20130087993" "20130087993" "20130154241" "20150159414" "20160046315").pn. OR ("10449987").urpn. AND (PGPB USPT USOC).dbnm.	ÙSOCR)	OR	ON	ON	2022/09/23 04:31 PM
L613	4	"35160119".fmid.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO,	OR	ON	ON	2022/09/23 04:50 PM

			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; JPO)				
L614	25	("2006/0290107").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/23 04:50 PM
L615	11538	544 543	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2022/09/23 05:10 PM
L616	75	615 AND 598	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/09/23 05:10 PM
L617	2793	615 AND (fold\$ SAME pivot\$)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2022/09/23 05:10 PM
L618	610	615 AND (fold\$ near2 pivot\$)	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU,	OR	ON	ON	2022/09/23 05:10 PM

L619	26	601 AND (fold\$ near2 pivot\$)	CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO) (US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA,	OR	ON	ОИ	2022/09/23 05:11 PM
			EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)				
L620	62	("2986400" "4216974" "4294464" "4544178" "4614454" "4834403" "5257799" "6086086" "6095548" "6102431" "6102432" "6105998" "6270111" "6869096" "6991248" "7077420" "7185909" "7237795" "7296820" "7396039" "7404569" "7614641" "7632035" "7712765" "7798500" "7798515" "7832756" "8251382" "8444170" "20060038378" "20060082104" "20070063487" "20070096434").pn. OR ("8714581").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2022/09/23 05:27 PM
L621	30	("10449987" OR "10556610" OR "10899377" OR "11091186" OR "11192568" OR "11203371" OR "11208135" OR	(US-PGPUB; USPAT)	OR	ON	ON	2022/09/29 10:54 AM

L622	240	OR US-20070114738- A1 OR US- 20070001429-A1 OR US-20060290107-A1 OR US-20030075903- A1 OR US- 20080303232-A1 OR US-20070085303-A1 OR US-20060131841-	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE.	OR	ON	ON	2022/09/29 10:59 AM
L622	240	"9403550" OR "D429476" OR "D430076" OR "D593459").pn. ((US-20100052277-A1 OR US-20070114738- A1 OR US- 20070001429-A1 OR US-20060290107-A1 OR US-20030075903- A1 OR US- 20080303232-A1 OR US-20070085303-A1	USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL,	OR	ON	ON	
		US-20160001805-A1 OR US-20040164593-					

A1 OR US-
20070075525-A1 OR
US-20130087993-A1
OR US-20140191483-
A1 OR US-
20070090619-A1 OR
US-20020109321-A1
OR US-20100140902-
A1 OR US-
20180229750-A1 OR
US-20170158219-A1
OR US-20160075363-
A1 OR US-
20150061249-A1 OR
US-20120228843-A1
OR US-20080179848-
A1 OR US-
20080150247-A1 OR
US-20050006864-A1
OR US-20150232114-
A1).did. AND
PGPB.dbnm.) OR ((US-
5338096-A OR US-
6045145-A OR US-
3223431-A OR US-
6378892-B1 OR US-
5653460-A OR US-
6209892-B1 OR US-
5201535-A OR US-
4620711-A OR US-
6676140-B1 OR US-
6017051-A OR US-
1707186-A OR US-
7475900-B2 OR US-
7938435-B2 OR US-
D508443-S OR US-
7497461-B2 OR US-
4570956-A OR US-
6923467-B2 OR US-
6752405-B1 OR US-
8157273-B2 OR US-
7896384-B2 OR US-
7677585-B2 OR US-
8128103-B1 OR US-
7597332-B2 OR US-
7481439-B2 OR US-
6851693-B2 OR US-
5848797-A OR US-
3000645-A OR US-
8070180-B2 OR US-
7832755-B2 OR US-
7832755-B2 OR US-
5704627-A OR US-
5794951-A OR US-
5647601-A OR US-
2453631-A OR US-
6443467-B1 OR US-
8205906-B2 OR US-

8262103-B2 OR US-
8336904-B2 OR US-
8371606-B2 OR US-
8251382-B2 OR US-
7377537-B2 OR US-
7320471-B2 OR US-
7032922-B1 OR US-
7367581-B2 OR US-
8029007-B2 OR US-
7699325-B2 OR US-
6827356-B2 OR US-
8398098-B2 OR US-
7766366-B2 OR US-
6286844-B1 OR US-
6513827-B1 OR US-
8764048-B1 OR US-
8061732-B2 OR US-
8733784-B2 OR US-
8696016-B2 OR US-
8231136-B2 OR US-
8458880-B2 OR US-
7249779-B2 OR US-
7311323-B1 OR US-
8444171-B2 OR US-
8033554-B2 OR US-
7681894-B2 OR US-
8955869-B2 OR US-
8905427-B2 OR US-
8882134-B2 OR US-
8029014-B2 OR US-
7789402-B2 OR US-
7658399-B2 OR US-
5167425-A OR US-
8936261-B2 OR US-
9010773-B2 OR US-
9119483-B1 OR US-
9200746-B2 OR US-
9199659-B2 OR US-
9108659-B2 OR US-
9073563-B2 OR US-
9242665-B2 OR US-
7401803-B1 OR US-
9227650-B2 OR US-
9260128-B2 OR US-
9260127-B2 OR US-
8857830-B2 OR US-
2769482-A OR US-
4542915-A OR US-
6715783-B1 OR US-
9108654-B2 OR US-
9630642-B2 OR US-
9517787-B2 OR US-
9327752-B2 OR US-
6561526-B1 OR US-
8967171-B2 OR US-
9517789-B2 OR US-
9561817-B2 OR US-
6447001-B1 OR US-

5.5	522121-A OR US-			
	545941-B2 OR US-			
	056622-B2 OR US-			
I I	403550-B2 OR US-			
l l	899615-B2 OR US-			
	364183-B2 OR US-			
I I	637155-B1 OR US-			
l l	421992-B2 OR US-			
l l	545940-B2 OR US-			
l l	346378-B2 OR US-			
l l	678498-B2 OR US-			
	915446-A OR US-			
	634177-A OR US-			
	306749-A OR US-			
l l	851505-B2 OR US-			
l l	651502-B2 OR US-			
	893040-B2 OR US-			
	446990-B1 OR US-			
	865447-A OR US-			
	772279-A OR US-			
l l	567008-A OR US-			
I I	657326-B2 OR US-			
I I	491000-B2 OR US-			
	155740-A OR US-			
	947555-A OR US-			
I I	267359-B1 OR US-			
I I	776652-B2 OR US-			
I I	771095-B2 OR US-			
97	725106-B2 OR US-			
97	701333-B2 OR US-			
85	585075-B2 OR US-			
85	596670-B2 OR US-			
99	956979-B1 OR US-			
99	944305-B2 OR US-			
99	924806-B2 OR US-			
98	884640-B2 OR US-			
98	849903-B1 OR US-			
	840168-B2 OR US-			
	0207731-B2 OR US-			
	0023218-B2 OR US-			
	938906-B1 OR US-			
	593459-S OR US-			
	621306-S OR US-			
	328208-B2 OR US-			
	513512-B2 OR US-			
	0293843-B2 OR US-			
	0556611-B2 OR US-			
	0556610-B2 OR US-			
	0449987-B2 OR US-			
	0730543-B2 OR US-			
	0926785-B2 OR US-			
	0899377-B2 OR US-			
	0974754-B2 OR US- 0994763-B2 OR US-			
	1001289-B2 OR US-			
	1001289-B2 OR US- 1059510-B2 OR US-			
	1052933-B2 OR US-			
	844964-B2 OR US-			
	044904-BZ OR US-			

		6086087-A OR US-						
		9643640-B2 OR US-						
		9616912-B2 OR US-						
		9283978-B2 OR US-						
		9050987-B2 OR US-						
		9004524-B1 OR US-						
		8857829-B2 OR US-						
		8807588-B2 OR US-						
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		8480115-B2 OR US-						
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		6585284-B2 OR US-						
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		11091186-B2 OR US-						
		11052934-B2 OR US-						
		10960913-B2 OR US-						
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		10322739-B2 OR US-						
		7971897-B2 OR US-						
		7614640-B2 OR US-						
		8205894-B2 OR US-						
		6981709-B2 OR US-						
		6935652-B2 OR US-						
		3998490-A OR US-						
		11220282-B2 OR US-						
		11208136-B2 OR US-						
		11208135-B2 OR US-						
		11203371-B2 OR US-						
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		11292499-B2 OR US-						
		10077063-B2 OR US-						
		11370468-B2 OR US-						
		8714581-B2 OR US-						
		4216974-A OR US-						
		4544178-A OR US-						
		4834403-A OR US-						
		6102431-A OR US-						
		6102432-A OR US-						
		6991248-B2).did. AND						
		USPT.dbnm.) OR ((US-						
		3000645-A OR US-						
		2453631-A OR US-				1		
		1707186-A).did. AND				1		
		USOC.dbnm.) OR ((US-				1		
		20050006864-A1).did.						
		AND DWPI.dbnm.)						
L623	26	622 AND 621	(US-PGPUB;	USPAT)	OR	ON	ON	2022/09/29
								11:00 AM
L624	4	621 NOT 622	(US-PGPUB;	USPAT)	OR	ON	ON	2022/09/29
			[`	,		1		11:00 AM
L625	1	("20100013281").pn.	(US-PGPUB;	USP∆T·	OR	ON	ON	2022/09/29
	Ι΄	20 1000 1020 1 <i>j</i> .pii.	USOCR)	JOI A1,				11:34 AM
	L	<u> </u>	1000011			<u> </u>		

L626	1	("20230065661").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/09/07 11:00 PM
L627	63	(Baby near2 Jogger).AS.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2023/09/08 12:02 AM
L628	84	(Zehfuss near2 Mark).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2023/09/08 12:03 AM
L629	7822	(B62B7/008,00,006,14, 142,145).CPC.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2023/09/08 12:18 AM
L630	7381	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO,	OR	ON	ON	2023/09/08 12:18 AM

			MC, MD, MY, NL, NO,				
			NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)				
L631	6996106	@pd>="20220923"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2023/09/08 12:19 AM
L632	12521	629 630	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2023/09/08 12:19 AM
L633	443	631 AND 632	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2023/09/08 12:19 AM
L634	24	("6267406" "6286844" "6513827" "7377537" "7475900" "D593459" "7971897" "8313115" "8602441"	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2023/09/08 12:22 AM

	"10449987" "10556610" "10899377" "11091186" "11192568" "11208135" "11208136" "11220282" "11292499" "11338836" "11577771").pn. OR ("11731682").urpn. AND (PGPB USPT					
L635 48	"5988670" "6045145" "6086087" "D429476" "D430076" "6102431" "6102432" "6209892" "6267406" "6991248" "7377537" "7475900" "D593459" "7563170" "7938435" "7971897" "8313115" "8602441" "9403550" "9840168" "9849903" "9884640" "9924806" "9944305" "9956979" "10207731" "10449987" "10556610" "11899377" "11192568" "11203371" "11208135" "11208135" "11208282" "11338836" "11370468" "11370468" "11505231" "20060290107" "20100013281").pn. OR ("11577771").urpn. AND (PGPB USPT USOC).dbnm.	USOCR)	OR	ON	ON	2023/09/08 12:23 AM
L636 48	("4216974" "4544178" "5167425" "5338096" "5988670" "6045145" "6086087" "D429476"		OR	ON	ON	2023/09/08 12:24 AM

L637	46	"10449987" OR "10556610" OR "10899377" OR "11091186" OR "11192568" OR "11203371" OR "11208135" OR "11208136" OR "11292499" OR "11338836" OR "11370468" OR "20060290107" OR	(US-PGPUB; USPAT)	OR	ON	ON	2023/09/08 12:25 AM
		"11091186" OR "11192568" OR "11203371" OR "11208135" OR "11208136" OR "11220282" OR "11292499" OR "11338836" OR "11370468" OR					

		"6513827" OR "6991248" OR "7377537" OR "7475900" OR "7563170" OR "7938435" OR "7971897" OR "8313115" OR "8602441" OR "9403550" OR "9849903" OR "984900" OR					
		"D430076" OR					
L638	0	"D593459").pn. ("20230371642").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2023/09/08 02:36 PM
L639	1	("11505231").PN.	(US-PGPUB; USPAT; USOCR)	OR	OFF	OFF	2023/09/08 02:37 PM
L640	1	("20230382447").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/02/24 09:47 PM
L641	67	(Baby near2 Jogger).AS.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/24 10:16 PM
L642	86	(Zehfuss near2 Mark).in.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO; DERWENT)	OR	ON	ON	2024/02/24 10:16 PM
L643	8010	(B62B7/008,00,006,14,	(US-PGPUB; USPAT;	OR	ON	ON	2024/02/24

		142,145).CPC.	USOCR; FIT (AU, AP,				10:16 PM
			AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)				
L644	7630	(B62B9/12,28,102).CP C.	(US-PGPUB; USPAT; USOCR; FIT (AU, AP, AT, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, OA, RU, SU, WO, MC, MD, MY, NL, NO, NZ, PH, PL, PT, RO, RS, SE, SG, SI, SK, TH, TN, TR, TW, UA, VN); FPRS; EPO; JPO)	OR	ON	ON	2024/02/24 10:16 PM
L645	2967797	@pd>="20230908"	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2024/02/24 10:17 PM
L646	12844	643 OR 644	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN,	OR	ON	ON	2024/02/24 10:17 PM

	1	1	T	Т	T	Т	, , , , , , , , , , , , , , , , , , , ,
			WO); FPRS; EPO; JPO)				
L647	205	645 AND 646	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2024/02/24 10:17 PM
L648	2	645 AND 642	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2024/02/24 10:17 PM
L649	52	("4216974" "4544178" "5167425" "5338096" "5988670" "6045145" "0429476" "0430076" "6102431" "6102432" "6209892" "6267406" "6286844" "6513827" "6991248" "7377537" "7475900" "D593459" "7563170" "7938435" "7971897" "8313115" "8602441" "9403550" "9840168" "9944305" "9956979" "10207731" "10449987" "10556610" "10899377" "11091186" "111203371" "11208135" "11208135" "11208136"		OR	ON	ON	2024/02/24 10:18 PM

		"11220282" "11292499" "11338836" "11370468" "11505231" "11577771" "11654949" "11731680" "11731681" "11731682" "20060290107" "20100013281").pn. OR ("11878729").urpn. AND (PGPB USPT USOC).dbnm.					
L650	1	645 AND 641	(US-PGPUB; USPAT; USOCR; FIT (AP, AT, AU, BE, BG, BR, BY, CA, CH, CN, CS, CU, CZ, DD, DE, DK, EA, EE, EP, ES, FI, FR, GB, HR, HU, ID, IE, IL, IS, IT, JP, KR, LT, LU, LV, MA, MC, MD, MY, NL, NO, NZ, OA, PH, PL, PT, RO, RS, RU, SE, SG, SI, SK, SU, TH, TN, TR, TW, UA, VN, WO); FPRS; EPO; JPO)	OR	ON	ON	2024/02/24 10:19 PM
L651	6	("4725071" "8157273" "20090278335" "20130270800" "20140183843" "20150048599").pn. OR ("11827265").urpn. AND (PGPB USPT USOC).dbnm.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/02/24 10:24 PM
L652	1	("7475900").pn.	(US-PGPUB; USPAT; USOCR)	OR	ON	ON	2024/02/24 10:27 PM
L653	8	("8371606" OR "9004524" OR "9643640" OR "5417449" OR "5653460" OR "5794951" OR "6585284" OR "D360392").pn.	(US-PGPUB; USPAT)	OR	ON	ON	2024/02/24 10:41 PM
L654	27	("D321850" "2443236" "2993702" "3612603" "4542915" "5018754" "5184835").pn. OR ("D360392").urpn. AND (PGPB USPT USOC).dbnm.	USOCR)	OR	ON	ON	2024/02/24 10:41 PM
L655	49	("4542915" "4854607"	(US-PGPUB; USPAT;	OR	ON	ON	2024/02/24

		"4986564" "5033761").pn. OR ("5653460").urpn. AND (PGPB USPT USOC).dbnm.	USOCR)				10:46 PM
L656	63	("D311363" "2857953" "4542915" "4858947" "5018754" "5221106").pn. OR ("5417449").urpn. AND (PGPB USPT USOC).dbnm.		OR	ON	ON	2024/02/24 10:49 PM

PE2E SEARCH - Search History (Interference)

Ref#	Hits	Search Query	DBs	Default Operator	Plurals	British Equivalents	Time Stamp
N163	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.	,		ON	ON	2014/02/03 05:17 PM
N164	0	(seat attachment stroller separate left right attachment portion connector portion removably connecting	(US-PGPUB; USPAT)) AND	ON	ON	2014/02/04 09:35 AM

		frame adjacent front wheel seat support element removably connecting seat forward backward position).clm.						
N165	0	(seat attach\$4 stroller separate left right portion connect\$4 remov\$4 frame adjacent front wheel support\$4 element forward backward position).clm.	(US-PGPUB;	USPAT)	AND	ON	ON	2014/02/04 09:46 AM
N166	1	(seat attach\$4 stroller separate left right connect\$4 remov\$4 frame wheel support\$4).clm.	(US-PGPUB;	USPAT)	AND	ON	ON	2014/02/04 09:46 AM
N167	19	(seat attach\$4 stroller left right connect\$4 remov\$4 frame wheel).clm.	(US-PGPUB;	USPAT)	AND	ON	ON	2014/02/04 09:47 AM
N213	0	(A seat attachment for a stroller, comprising a separate left attachment portion, wherein the left attachment portion comprises a connector portion capable of removably connecting to a stroller frame adjacent a left front wheel of the stroller and a left seat support element removably connecting a seat in either a forward or backward position and a separate right attachment portion, wherein the right attachment portion comprises a connector portion capable of removably connecting to the stroller frame adjacent a right front wheel of the stroller and a right seat support element removably connecting the seat in either a forward or backward position between the left and right seat support elements).clm.		USPAT)	AND	ON	ON	2014/09/24 02:26 PM

N214	1	(seat attach\$4 stroller separate left right connect\$4 remov\$4 frame wheel support\$4).clm.	(US-PGPUB; USF	PAT) AND	ON	ON	2014/09/24 02:26 PM
N215	19	(seat attach\$4 stroller left right connect\$4 remov\$4 frame wheel).clm.	(US-PGPUB; USF	PAT) AND	ON	ON	2014/09/24 02:26 PM
N216	19	(seat\$3 attach\$4 stroller left right connect\$4 remov\$4 fram\$3 wheel).clm.	(US-PGPUB; USF	PAT) AND	ON	ON	2014/09/24 02:29 PM
N217	68	(seat\$3 attach\$4 stroller connect\$4 remov\$4 fram\$3 wheel).clm.	(US-PGPUB; USF	PAT) AND	ON	ON	2014/09/24 02:29 PM
N218	5	("20020036391" "20070069505" "20070187914" "4753453" "4779883").PN. OR ("8033554").URPN.	(US-PGPUB; USF	PAT) OR	ON	ON	2014/09/24 02:32 PM
N248	4	(US-20070187914- \$).did. or (US-7311323- \$ or US-8444171-\$ or US-8033554-\$).did.	(US-PGPUB; USF	PAT) OR	ON	ON	2015/04/20 02:14 PM
N411		(A stroller, comprising a stroller frame a plurality of wheels coupled to the stroller frame a first seat coupled to the stroller frame a first seat attachment housing disposed along a first portion of the stroller frame and comprising a first adapter receiving cavity extending through the first seat attachment housing and a first door rotatably coupled to the first seat attachment housing along a top end of the first adapter receiving cavity, wherein the first door rotates from a closed configuration, preventing access to the first adapter receiving cavity from a top side of the first seat attachment housing to an open configuration allowing access to the first adapter receiving	(US-PGPUB; USF	PAT) AND	ON	ON	2017/11/13 04:52 PM

		cavity from the top side					
		of the first seat					
		attachment housing a					
		second seat attachment					
		housing disposed along					
		a second portion of the					
		stroller frame and					
		comprising a second					
		adapter receiving cavity					
		extending through the					
		second seat attachment					
		housing and a second					
		door rotatably coupled					
		to the second seat					
		attachment housing					
		along a second top end					
		of the second adapter					
		receiving cavity,					
		wherein the second					
		door rotates from a					
		second closed					
		configuration,					
		preventing access to					
		the second adapter					
		receiving cavity from a					
		top side of the second					
		seat attachment					
		housing, to a second					
		open configuration					
		allowing access to the					
		second adapter					
		receiving cavity from					
		the top side of the					
		second seat attachment					
		housing a first					
		removable seat					
		attachment adapter					
		removably coupled to					
		the first seat attachment					
		housing and a second					
		removable seat					
		attachment adapter					
		removably coupled to					
		the second seat					
		attachment					
		housing).CLM.					
N412	0	(stroller frame wheel	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13
		seat attachment	,				04:55 PM
		housing first adapter					
		receiving cavity					
		extending through					
		housing first door					
		rotatably coupled to					
		housing closed					
		configuration preventing					
		access to cavity from					
		top side open					
		Top side open					

		configuration allowing access to cavity first removable seat attachment adapter removably coupled to housing and second removable seat attachment adapter removably coupled to housing).CLM.					
N413	1	(stroller frame wheel seat attach\$4 hous\$4 adapter receiv\$4 cavity extend\$4 door rotat\$4 closed configuration prevent\$4 access\$4 open configuration allow\$4 access).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 04:56 PM
N414	1	(stroller frame wheel seat attach\$4 hous\$4 adapter receiv\$4 cavity door rotat\$4 closed configuration prevent\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:21 PM
N415	1	(stroller wheel seat attach\$4 hous\$4 cavity door closed configuration prevent\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:22 PM
N416	1	(stroller wheel seat attach\$4 hous\$4 cavity door clos\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:22 PM
N417	1	(stroller seat attach\$4 hous\$4 cavity door clos\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:23 PM
N418	1	(stroller seat\$3 attach\$4 cavity door clos\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:24 PM
N419	1	(stroller seat\$3 cavity door clos\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:24 PM
N420	3	(stroller seat\$3 door clos\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:24 PM
N421	2	(stroller seat\$3 cavit\$3 clos\$4 access\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:26 PM
N422	21	(stroller seat\$3 cavit\$3 clos\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2017/11/13 05:26 PM
N442	5	(US-20090243261- \$).did. or (US-7938435- \$ or US-6447001-\$ or US-8585075-\$ or US- 8596670-\$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2019/04/15 11:03 AM
N463	2	(US-20090243261-	(US-PGPUB; USPAT)	OR	ON	ON	2019/08/23

		(t) did or (UC 0447004	<u> </u>	1		<u> </u>	T04.00 AM
		\$).did. or (US-6447001- \$).did.					01:02 AM
N477	2	(US-20090243261- \$).did. or (US-6447001- \$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/03/01 11:02 PM
N478	0	(A stroller, comprising a stroller frame comprising a first upper tube support frame a second upper tube support frame a first	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/11 11:05 PM
		front wheel support frame rotatable with respect to the first upper tube support					
		frame a second front wheel support frame rotatable with respect to the second upper tube					
		support frame a first back wheel support frame rotatable with					
		respect to the first upper tube support frame a second back wheel support frame					
		rotatable with respect to the second upper tube support frame a plurality of wheels comprising at					
		least one front wheel and a plurality of back wheels a first seat					
		coupled to the stroller frame at a first vertical position of the stroller frame a first seat					
		attachment housing disposed along the first front wheel support					
		frame a first seat attachment adapter removably coupled to the first seat attachment					
		housing stroller frame at a second vertical position of the stroller					
		frame that is below the first vertical position a second seat attachment					
		housing disposed along the second front wheel support frame a second seat attachment					
		adapter removably coupled to the second seat attachment					

		housing at a third vertical position of the stroller frame that is below the first vertical position wherein the first seat is coupled along the first upper tube support frame and the second upper tube support frame and wherein a second seat is removably coupled to the first seat attachment adapter and the second seat attachment adapter to position the second seat at a fourth vertical position that is below the first vertical position).CLM.					
N479	1	(stroller frame wheel first seat first vertical position attachment housing adapter removably coupled below).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/11 11:07 PM
N480	1	(stroller frame wheel seat vertical position attach\$4 hous\$4 adapt\$4 remov\$4 coupl\$4 below).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/11 11:10 PM
N481	4	(stroller frame wheel seat attach\$4 hous\$4 adapt\$4 remov\$4 coupl\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/11 11:10 PM
N482	11	(stroller frame wheel seat attach\$4 adapt\$4 remov\$4 coupl\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/11 11:11 PM
N483	33	(stroller frame wheel seat attach\$4 adapt\$4 remov\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2020/03/11 11:12 PM
N498	2	(US-20090243261- \$).did. or (US-6447001- \$).did.	(US-PGPUB; USPAT)	OR	ON	ON	2020/09/10 02:56 PM
N519	37	(stroller frame wheel seat attach\$4 adapt\$4 remov\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2021/07/02 08:50 PM
N520	37	(stroller frame wheel seat attach\$4 adapt\$4 remov\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2021/07/02 08:50 PM
N521	0	N519 not N520	(US-PGPUB; USPAT)	AND	ON	ON	2021/07/02 08:50 PM
N532	0	(A stroller, comprising a stroller frame	(US-PGPUB; USPAT)	AND	ON	ON	2021/08/12 04:23 PM

		comprising a first upper						
		tube support frame a						
		second upper tube						
		support frame a front						
		wheel support frame						
		rotatably adjusted to be						
		substantially parallel						
		with respect to the first						
		upper tube support						
		frame when the stroller						
		frame is unfolded from						
		a folded configuration a						
		back wheel support						
		frame rotatably adjusted						
		to be substantially						
		•						
		parallel with respect to						
		the first upper tube						
		support frame when the stroller frame is						
1		unfolded from a folded						
		1						
		configuration a plurality of wheels comprising at						
		least one front wheel						
		1						
		and a plurality of back wheels a first seat						
		coupled along the first						
		upper tube support						
		frame and the second						
		upper tube support						
		frame at a first vertical						
		position of the stroller						
		frame a first seat						
		1						
		attachment adapter						
		coupled to the front						
		wheel support frame at						
		a second vertical						
		position of the stroller						
		frame that is below the						
		first vertical position a						
		second seat attachment						
1		adapter coupled to the						
		front wheel support						
1		frame at a third vertical						
1		position of the stroller						
1		frame that is below the						
		first vertical position						
1		wherein a second seat						
		is removably coupled to						
		the first seat attachment						
1		adapter and the second						
1		seat attachment						
		adapter to position the						
1		second seat at a fourth						
1		vertical position that is						
		below the first vertical						
1		position).CLM.						
N533	0	(stroller frame wheel	(US-PGPUB; US	SPAT)	AND	ON	ON	2021/08/12

		fold\$4 seat\$4 vertical\$4 position\$4 attach\$4 adapter coupl\$4).CLM.					04:31 PM
N534	0	(stroller fram\$4 wheel fold\$4 seat\$4 vertical\$4 position\$4 attach\$4 adapter).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2021/08/12 04:34 PM
N535	54	(stroller fram\$4 wheel fold\$4 seat\$4 vertical\$4 position\$4).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2021/08/12 04:35 PM
N536	70	("4834415" "4886289" "5018754" "5167425" "5417449" "5664795" "5769448").PN. OR ("6086087").URPN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/08/12 04:51 PM
N537	32	("20010013688" "20030020259" "20060226635" "20060290107" "20090039620" "20100038886" "20100078916" "20100244393" "3223431" "4542915" "4725071" "4858947" "4886289" "5221106" "5333893" "5417449" "5624152" "5887935" "6086087" "6267406" "6530591" "6843498" "6935652" "7475900" "D360392").PN. OR ("8602441").URPN.	(US-PGPUB; USPAT)	OR	ON	ON	2021/08/12 05:01 PM
N538	0	(A stroller, comprising: a stroller frame; a plurality of wheels comprising at least one central wheel AND a plurality of back wheels; a first seat coupled to the stroller frame at a first vertical position of the stroller frame AND configured to hold a first child in the stroller; a first seat attachment housing coupled to the stroller frame at a second vertical position of the stroller frame that is below the first vertical position, wherein a first front wheel extends from a front of the stroller; a second seat attachment housing	(US-PGPUB; USPAT)	AND	ON	ON	2022/02/02 06:30 PM

		coupled to the stroller frame at a third vertical position of the stroller frame that is below the first vertical position, wherein a second front wheel extends from the front of the stroller; wherein a first seat attachment adapter is coupled to the first seat attachment housing AND wherein a second seat attachment adapter is coupled to the second seat attachment housing.						
N539	0	(stroller frame wheel central\$ wheel back seat attach\$ housing vertical position front wheel adapter coupled).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/02/03 08:56 AM
N540	0	(stroller frame wheel central\$ back seat attach\$ housing front adapter coupled).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/02/03 09:19 AM
N541	0	(stroller frame wheel central\$ seat attach\$ front adapter coupled).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/02/03 09:19 AM
N542	1	(stroller frame wheel central\$ seat attach\$ front adapter).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/02/03 09:19 AM
N543	34	(stroller frame wheel central\$ seat attach\$ front).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/02/03 09:19 AM
N544	0	(A stroller, comprising: a stroller frame; a plurality of wheels comprising a plurality of back wheels; a first seat coupled to the stroller frame at a first vertical position of the stroller frame a first seat attachment housing coupled to the stroller frame at a second vertical position of the stroller frame that is below the first vertical position, wherein a first front wheel extends from a front of the	(US-PGPUB;	USPAT)	AND	ON	ON	2022/06/15 12:34 PM

		stroller; a second seat		1		1	
		attachment housing coupled to the stroller frame at a third vertical position of the stroller frame that is below the first vertical position, wherein a second front wheel extends from the front of the stroller; a first seat attachment adapter coupled to the first seat attachment housing; AND a second seat attachment adapter coupled to the second seat attachment housing).CLM.					
N545	0	(stroller frame wheel seat first vertical position first seat attachment housing below first front wheel extends from a front of the stroller second front wheel extend\$ from front of stroller first seat attachment adapter coupl\$ to first seat attachment housing).CLM.	(US-PGPUB; USPAT	AND	ON	ON	2022/06/15 12:42 PM
N546	0	(stroller frame wheel seat first vertical position first seat attachment housing below first front wheel extends from front of stroller second front wheel extend\$ from front of stroller first seat attachment adapter coupl\$ to first seat attachment housing).CLM.	(US-PGPUB; USPAT	AND	ON	ON	2022/06/15 12:43 PM
N547	2	(stroller frame wheel seat vertical\$ position attach\$ housing below front extend\$ adapter coupl\$).CLM.	(US-PGPUB; USPAT	AND	ON	ON	2022/06/15 12:48 PM
N548	5	(stroller frame wheel seat\$ vertical\$ position attach\$ housing adapter coupl\$).CLM.	(US-PGPUB; USPAT	AND	ON	ON	2022/06/15 12:53 PM
N549	0	(A stroller system for supporting a front stroller seat AND a rear	(US-PGPUB; USPAT	AND	ON	ON	2022/09/29 11:48 AM

stroller seat, the system comprising: a pair of rear wheels; a pair of front wheels; a frame including a handle portion, a rear wheel support portion, a front wheel support portion AND a folding mechanism connecting the front wheel support portion AND the handle portion in both an unfolded configuration AND in a folded configuration, wherein the folding mechanism connects the rear wheel support portion to the front wheel support portion AND the handle portion, wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, AND wherein the front wheel support portion AND the handle portion are substantially parallel when the frame is in the unfolded configuration; AND a front seat attachment configured for attachment to the front wheel support portion at a second vertical position substantially lower than the first vertical position, AND wherein the front seat attachment is configured to releasably connect to AND support the front stroller seat in either a forward-facing configuration OR a backward-facing configuration, AND wherein the front seat attachment is configured to support the front stroller seat substantially over the front wheels so that a center of gravity of the

N550	0	stroller system is between the front wheels AND the rear wheels; wherein the rear wheel support portion extends diagonally from the front wheel support portion when the frame is in the unfolded configuration, AND the rear wheel support portion is disposed adjacent to both the front wheel support portion AND the handle portion when the frame is in the folded configuration; AND wherein the stroller seat support portion positioned at the first vertical position AND the front seat attachment at the second vertical position create an inline descending configuration of the rear stroller seat AND the front stroller seat).CLM. (stroller front seat rear seat rear wheel front wheels frame handle support portion folding mechanism connecting support portion folding mechanism connecting support portion substantially parallel front seat attachment second vertical position substantially parallel front seat attachment second vertical position substantially lower than first vertical position releasably connect support forward-facing configuration of rear stroller seat front stroller seat).CLM.	(US-PGPUB; USPAT)	AND	ON	ON	2022/09/29 12:20 PM
N551	1	(stroller front seat\$ rear	(US-PGPUB; USPAT)	AND	ON	ON	2022/09/29

		wheel frame handle support\$ fold\$ mechanism connect\$ configuration vertical\$ position\$ attach\$ releas\$).CLM.						12:21 PM
N552	8	(stroller front seat\$ rear wheel frame handle fold\$ vertical\$ position\$ attach\$ releas\$).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/09/29 12:21 PM
N553	12	(stroller front seat\$ rear wheel frame handle fold\$ vertical\$ position\$ attach\$).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/09/29 12:22 PM
N554	14	(stroller front seat\$ rear wheel frame handle fold\$ vertical\$ attach\$).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/09/29 12:23 PM
N555	36	(stroller front seat\$ rear wheel frame handle fold\$ vertical\$).CLM.	(US-PGPUB;	USPAT)	AND	ON	ON	2022/09/29 12:23 PM
N556	0	(A stroller system for supporting a front stroller seat AND a rear stroller seat, the system comprising: a pair of rear wheels; a pair of front wheels; a frame including a handle portion, a rear wheel support portion, a front wheel support portion, AND a folding mechanism connecting the front wheel support portion AND the handle portion in both an unfolded configuration AND in a folded configuration, wherein the frame includes a stroller seat support portion positioned at a first vertical position adjacent the handle portion, AND wherein the front wheel support portion AND the handle portion are substantially parallel when the frame is in the unfolded configuration; AND a front seat attachment configured for attachment to the front wheel support portion at	(US-PGPUB;	USPAT)	AND	ON	ON	2023/09/08 01:01 AM

		a second vertical						
		position substantially			1			
		lower than the first						
		vertical position,						
		wherein the front seat						
		attachment is						
		configured to releasably connect to AND support						
		the front stroller seat in						
		either a forward-facing						
		configuration OR a						
		backward-facing						
		configuration, wherein the front seat						
		attachment is						
		configured to support the front stroller seat						
		substantially over the front wheels so that a			1			
		center of gravity of the						
		stroller system is						
		between the front						
		wheels AND the rear						
		wheels; wherein the						
		rear wheel support						
		portion extends						
		diagonally relative to						
		the front wheel support						
		portion when the frame						
		is in the unfolded						
		configuration, AND the						
		rear wheel support						
		portion is disposed						
		adjacent to both the						
		front wheel support						
		portion AND the handle						
		portion when the frame						
		is in the folded						
		configuration; AND						
		wherein the stroller seat						
		support portion						
		positioned at the first						
		vertical position AND						
		the front seat			1			
		attachment at the			1			
		second vertical position						
		create an inline						
		descending			1			
		configuration of the rear						
		stroller seat AND the						
1		front stroller seat).CLM.			1			
NEE7		1	(He DODUD	HCDAT)	LAND	ON	ON	2022/00/00
N557	44	(stroller front seat\$ rear wheel frame handle	I(US-PGPUB;	USPAI)	AND	ON	ON	2023/09/09 05:43 PM
		fold\$ vertical\$).CLM.						00.43 FW
		TOTO VET II CATO). CLIVI.						

Bibliographic Data

Application No: 18/448,417

Foreign Priority claimed: O Yes No

35 USC 119 (a-d) conditions met: Yes No Met After Allowance

Verified and Acknowledged: /JAMES M DOLAK/
Examiner's Signature Initials

Title: REMOVABLE SEAT ATTACHMENT FOR A STROLLER

FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.		
08/11/2023	280	3618	34757-2775		
RULE					

APPLICANTS

Baby Jogger, LLC, Atlanta, GA, UNITED STATES

INVENTORS

Mark ZEHFUSS, Glen Allen, VA, UNITED STATES

CONTINUING DATA

This application is a CON of 16903292 06/16/2020 PAT 11731682

16903292 is a CON of 15912901 03/06/2018 PAT 10730543

15912901 is a CON of 15225326 08/01/2016 PAT 9944305

15225326 has PRO of 62311224 03/21/2016

15225326 is a CIP of 14597420 01/15/2015 PAT 9403550

14597420 is a CON of 14261558 04/25/2014 PAT 8955869

14261558 is a CON of 12631375 12/04/2009ABN

12631375 has PRO of 61119920 12/04/2008

FOREIGN APPLICATIONS

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999 Peachtree Street

Suite 2300

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99) Application Number 18448417 Filing Date 2023-08-11 First Named Inventor Mark ZEHFUSS Art Unit OPAP Examiner Name TBD Attorney Docket Number 34757-2775

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	1	8371606	B2	2013-02	2-12	Gower et al.				
	2	9004524	B1	2015-04	-14	Gower et al.				
	3	9643640	B2	2017-05	5-09	Gower et al.				
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			10/440/41/	CLAC .	
Application Number	Application Number				
Filing Date		2023-08-11			
First Named Inventor Mark 2		ZEHFUSS			
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			10/440/411	CONT.	~ ~ ~ ~ ~ ~
Application Number		18448417			
Filing Date		2023-08-11			
First Named Inventor	Mark	ZEHFUSS			
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Attorney Docket Number		34757-2775			

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	See attached ce	rtification statement.								
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×	A certification sta	atement is not submitted herewith.								
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Sign	Signature /Umar Bakhsh/ Date (YYYY-MM-DD) 2023-11-07									
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- 9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Receipt date: 10/27/2023

18/448,417 - GAU: 3618

Doc code: IDS Doc description: Information Disclosure Statement (IDS) Filed

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	Application Number		18448417	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Not for submission under 37 CFR 1.99)	Filing Date		2023-08-11	
	First Named Inventor	Mark	ZEHFUSS	
	Art Unit		OPAP	
	Examiner Name	TBD		
	Attorney Docket Number		34757-2775	

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	2 5417449 A 1995-05-23 SHAMIE								
3 5653460		5653460	А	1997-08-05	FOGARTY				
	4	5794951	А	1998-08-18	CORLEY ET AL.				
	5 D360392 1995-07-18 LEWANDOWSKI		LEWANDOWSKI						
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Application Number		18448417			
Filing Date		2023-08-11			
First Named Inventor	Mark	ZEHFUSS			
Art Unit		OPAP			
Examiner Name TBD		,			
Attorney Docket Number		34757-2775			

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Application Number		18448417			
Filing Date		2023-08-11			
First Named Inventor	Mark	ZEHFUSS			
Art Unit		OPAP			
Examiner Name TBD					
Attorney Docket Number		34757-2775			

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	See attached ce	rtification statement.								
	The fee set forth	in 37 CFR 1.17 (p) has been submitted here	with.							
X	A certification sta	atement is not submitted herewith.								
1	SIGNATURE A signature of the applicant or representative is required in accordance with CFR 1.33, 10.18. Please see CFR 1.4(d) for the form of the signature.									
Signature /Umar Bakhsh/ Date (Y		Date (YYYY-MM-DD)	2023-10-27							
Nar	ne/Print	Umar Bakhsh	Registration Number	67307						
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Application	Document	Mailroom Date	Attorney Docket No.
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Bibliographic data: ES2253093 (A1) — 2006-05-16

Small double infantile car has two small car units each of which may be utilized separate from other since car units are removably attached by connectors

Inventor(s): JANE STOPP JOAQUIM [ES] ± (JANE STOPP JOAQUIM)

Applicant(s): PLAY SA [ES] ± (PLAY, S.A)

Classification: - international: 86289/12

- cooperative: <u>B62B7/008</u>; <u>B62B7/142</u>; <u>B62B7/145</u>; <u>B62B9/102</u>;

B62B9/12; B62B2207/02 more

Application

ES20040001973 20040806

Priority

number:

ES20040001973 20040806

number(s):

Also <u>ES2253093 (B1)</u>

published as:

Abstract of ES2253093 (A1)

The car is comprised of two small car units joined together by removable connectors. The removable connectors include a pair of sockets in the front part of one car unit and a pair of steel rods in the rear part of the other car unit. The steel rods are removably insertable into the sockets such that each car unit may be utilized separate from the other.





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ESPAÑA

① Número de publicación: 2 253 093

21) Número de solicitud: 200401973

(51) Int. CL

B62B 9/12 (2006.01)

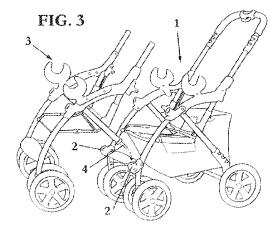
(12) SOLICITUD DE PATENTE **A1**

- (22) Fecha de presentación: 06.08.2004
- 43 Fecha de publicación de la solicitud: 16.05.2006
- (43) Fecha de publicación del folleto de la solicitud: 16.05.2006
- (1) Solicitante/s: PLAY, S.A. Polígono Industrial Riera de Caldes Rda. Boada Vell. 6 08164 Palau de Plegamans, Barcelona, ES
- (2) Inventor/es: Jane Stopp, Joaquim
- (14) Agente: Ponti Sales, Adelaida

- (54) Titulo: Cochecito infantii doble.
- (57) Resumen:

Cochecito infantil doble.

El cochecito comprende un primer cochecito infantil (1) y un segundo cochecito infantil (3) unidos entre sí, y se caracteriza por el hecho de que los dos cochecitos están unidos mediante medios de acoplamiento amovibles (2, 4). Dichos medios de acoplamiento amovibles comprenden un par de casquillos (2) previstos en la parte delantera de dicho primer cochecito infantil (1), donde se alojan un par de varillas (4) previstas en la parte posterior del segundo cochecito infantil (3). Se consigue un cochecito infantil doble que también se puede utilizar de manera individual.



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DESCRIPCIÓN

Cochecito infantil doble.

La presente invención se refiere a un cochecito infantil doble, que puede utilizarse para llevar dos niños a la vez, o de manera independiente.

Antecedentes de la invención

En la actualidad existen cochecitos infantiles dobles, que habitualmente se utilizan para llevar gemelos, aunque también se pueden usar para llevar niños de diferentes edades.

Estos cochecitos dobles comprenden dos cochecitos infantiles unidos a través de una única estructura, de manera que no se pueden separar.

Esta imposibilidad de separar los cochecitos presenta varios inconvenientes. En primer lugar, no se pueden utilizar los cochecitos por separado, lo que implica que si se han de llevar los dos niños por separado es necesario un cochecito independiente. En segundo lugar, si los niños son de diferente edad, cuando el mayor ya no necesita un cochecito infantil, únicamente se dispone de un cochecito infantil doble, no pudiéndose utilizar de manera individual.

Por lo tanto, es evidente la necesidad de un cochecito infantil que se pueda utilizar como cochecito infantil doble para dos niños a la vez y, al mismo tiempo, si se desea, utilizarlo como dos cochecitos infantiles independientes.

Descripción de la invención

Con el cochecito infantil de la invención se consiguen resolver los inconvenientes citados, presentando otras ventajas que se describirán.

El cochecito infantil doble de la presente invención comprende un primer cochecito infantil y un segundo cochecito infantil unidos entre sí, y se caracteriza por el hecho de que los dos cochecitos infantiles están unidos mediante medios de acoplamiento amovibles.

Gracias a esta característica, el cochecito infantil de la presente invención se puede utilizar con ambos cochecitos unidos o separados, según se desee.

Según una realización preferida, dichos medios de acoplamiento amovibles comprenden un par de casquillos previstos en la parte delantera de dicho primer cochecito infantil, donde se alojan un par de varillas previstas en la parte posterior del segundo cochecito infantil.

De esta manera, el acoplamiento y desacoplamiento de los dos cochecitos puede realizarse cómoda y rápidamente en el momento que se desee utilizar dichos cochecitos unidos o por separado.

Preferentemente, el segundo cochecito infantil comprende un par de ruedas montadas de manera amovible, estando dichas ruedas amovibles de dicho segundo cochecito montadas en dichas varillas.

Ventajosamente, dicho segundo cochecito comprende un manillar montado de manera amovible.

Breve descripción de los dibujos

Para mejor comprensión de cuanto se ha expuesto se acompañan unos dibujos en los que, esquemáticamente y tan sólo a título de ejemplo no limitativo, se representa un caso práctico de realización

La figura 1 es una vista en perspectiva del primer cochecito de la presente invención;

La figura 2 es una vista en perspectiva del segundo cochecito de la presente invención;

La figura 3 es una vista en perspectiva de los dos cochecitos justo antes de su unión;

La figura 4 es una vista en perspectiva de cochecito doble de la presente invención; y

Las figuras 5 y 6 son vistas en perspectiva de dos cochecitos dobles según dos realizaciones alternativas.

Descripción de una realización preferida

En la figura 1 se ha representado un primer cochecito infantil 1, cuya única diferencia respecto a un cochecito infantil convencional es la presencia de medios de acoplamiento en su parte delantera. En concreto dichos medios de acoplamiento son un par de casquillos 2, cuya función se describirá posteriormente.

El resto del cochecito infantil no se describe, ya que es convencional y no forma parte de la presente invención.

En la figura 2 se ha representado un segundo cochecito infantil 3 que puede acoplarse al primer cochecito infantil 1 citado anteriormente. En este caso, la diferencia entre este segundo cochecito 3 y uno convencional es que comprende medios de acoplamiento en su parte trasera, en concreto un par de varillas 4, que se alojan en los casquillos 2 citados anteriormente cuando se utilizan ambos cochecitos 1, 3 acoplados entre sí, o en las que se colocan las ruedas traseras 5 del segundo cochecito 3, las cuales están montadas de manera amovible.

Además, el manillar 6 también está montado de manera amovible, pudiéndose retirar cuando se utilice el cochecito doble 1, 3.

Como es evidente, los dos cochecitos 1, 3 representados en las figuras 1 y 2 pueden utilizarse de manera independiente. Si se desea utilizarlos conjuntamente, simplemente se han de retirar las ruedas traseras 5 y el manillar 6 del segundo cochecito 3, introduciéndose las varillas 4 en los correspondientes casquillos 2, tal como se muestra en la figura 3. Aunque no se ha representado en las figuras, es evidente que los casquillos 2 comprenden algún sistema de retención para evitar que las varillas 4 se salgan accidentalmente.

Una vez realizada esta operación, el cochecito infantil doble de la presente invención queda tal como se ha representado en la figura 4, listo para utilizarse con dos niños.

Para volver a utilizar los dos cochecitos 1, 3 de manera independiente simplemente hay que realizar la operación inversa a la descrita anteriormente.

En las figuras 5 y 6 se han representado dos ejemplos de utilización del cochecito doble de la presente invención.

En la figura 5, se ha representado el cochecito doble con un asiento trasero 8 y un capazo delantero 7, mientras que en la figura 6 se ha representado con dos asientos 8. Como es sobradamente conocido, el capazo 7 es adecuado para bebés que han de ir echados, mientras que el asiento 8 es adecuado para niños que pueden permanecer sentados.

Es evidente que las combinaciones representadas en las figuras 5 y 6 son solamente a modo de ejemplo, pudiéndose utilizar cualquier combinación adecuada además de las representadas.

A pesar de que se ha hecho referencia a una realización concreta de la invención, es evidente para un experto en la materia que el coche infantil descrito es susceptible de numerosas variaciones y modifica-

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ciones, y que todos los detalles mencionados pueden ser substituidos por otros técnicamente equivalentes, sin apartarse del ámbito de protección definido por las reivindicaciones adjuntas.

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REIVINDICACIONES

- 1. Cochecito infantil doble, que comprende un primer cochecito infantil (1) y un segundo cochecito infantil (3) unidos entre sí, caracterizado por el hecho de que los dos cochecitos están unidos mediante medios de acoplamiento amovibles (2, 4).
- 2. Cochecito infantil doble según la reivindicación 1, caracterizado por el hecho de que dichos medios de acoplamiento amovibles comprenden un par de casquillos (2) previstos en la parte delantera de dicho primer cochecito infantil (1), donde se alojan un par de varillas (4) previstas en la parte posterior del

segundo cochecito infantil (3).

- 3. Cochecito infantil doble según la reivindicación 1 ó 2, **caracterizado** por el hecho de que el segundo cochecito infantil (3) comprende un par de ruedas (5) montadas de manera amovible.
- 4. Cochecito infantil doble según las reivindicaciones 2 y 3, caracterizado por el hecho de que dichas ruedas amovibles (5) de dicho segundo cochecito están montadas en dichas varillas (4).
- 5. Coche infantil doble según la reivindicación 1, caracterizado por el hecho de que dicho segundo cochecito (3) comprende un manillar (6) montado de manera amovible.

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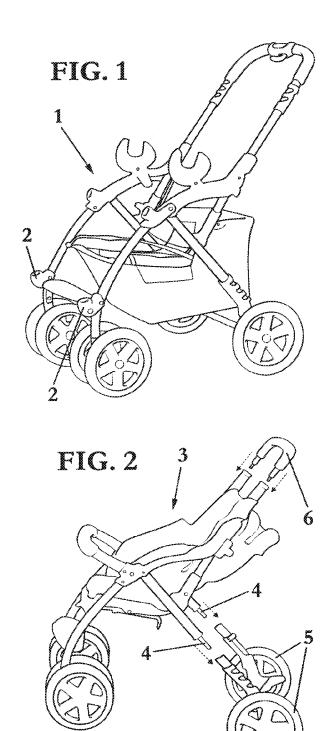
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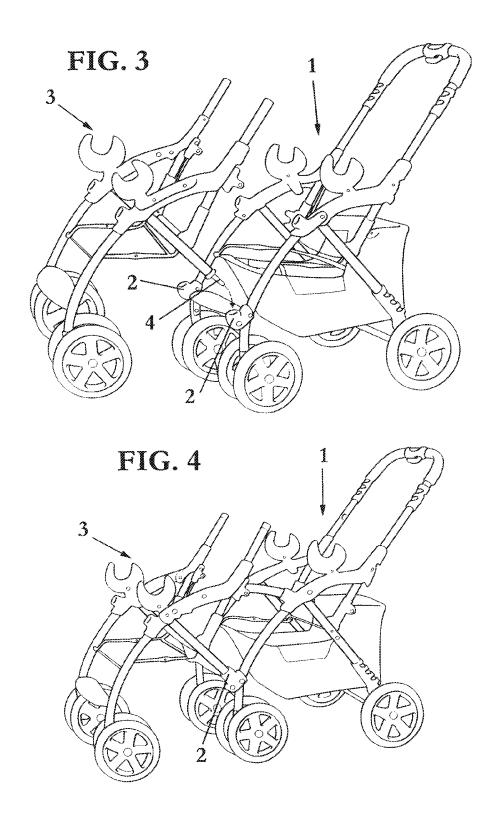
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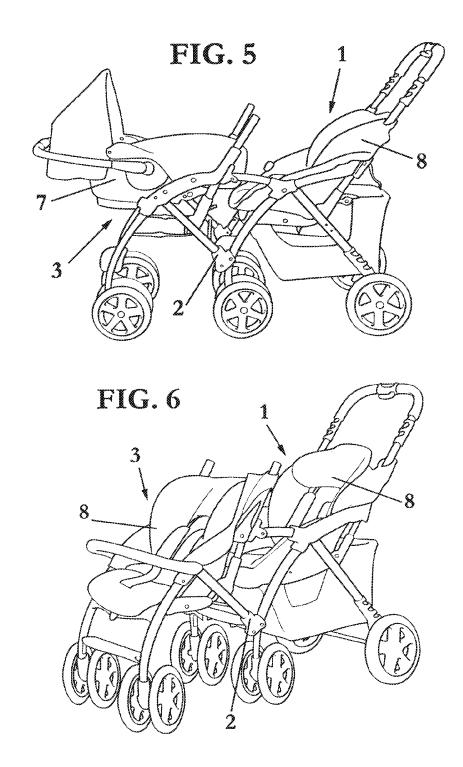
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① ES 2 253 093

② Nº de solicitud: 200401973

22 Fecha de presentación de la solicitud: 06.08.2004

32) Fecha de prioridad:

INFORME SOBRE EL ESTADO DE LA TÉCNICA

(1) Int. Cl.:	<i>B62B 9/12</i> (2006.01)		

DOCUMENTOS RELEVANTES

Categoría		Documentos citados	Reivindicacione afectadas
Х	GB 2368824 A (LACKEY) 15.05.2002, página 8, línea 29 - página 12, línea 20; figuras 4,5,7.		1,5
А			2
х	US 5522121 A (FRAYND) 04 figura 1.	06.1996, columna 1, líneas 30-37;	1
А	US 6449801 B1 (DURRIN) 1 línea 50 - columna 2, línea 6;		3,4
Categoría de los documentos citados X: de particular relevancia Y: de particular relevancia combinado con otro/s de la P: publicado entre la fecha de prioridad y la de p misma categoría A: refleja el estado de la técnica C: referido a divulgación no escrita P: publicado entre la fecha de prioridad y la de p de la solicitud E: documento anterior, pero publicado después de la fecha de la técnica			
		de presentación de la solicitud	o después de la lectia
	nte informe ha sido realizado todas las reivindicaciones	para las reivindicaciones nº:	
Fecha de realización del informe		Examinador	Página

(12) UK Patent Application (19) GB (11) 2 309 203 (13) A

(43) Date of A Publication 23.07.1997

- (21) Application No 9626714.1
- (22) Date of Filing 23.12.1996
- (30) Priority Data
 - (31) **U9600110**
- (32) 16.01.1996
- (33) ES

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- (51) INT CL⁶
 B62B 7/04 // B62B 9/12
- (52) UK CL (Edition O) **B7B** BTX1 B406 B407
- (56) Documents Cited

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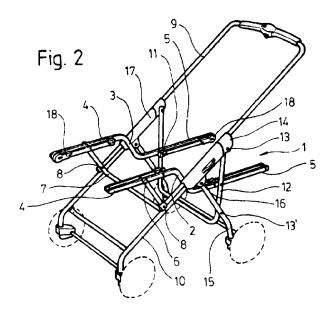
(58) Field of Search

UK CL (Edition O) B7B BTF1 BTX1

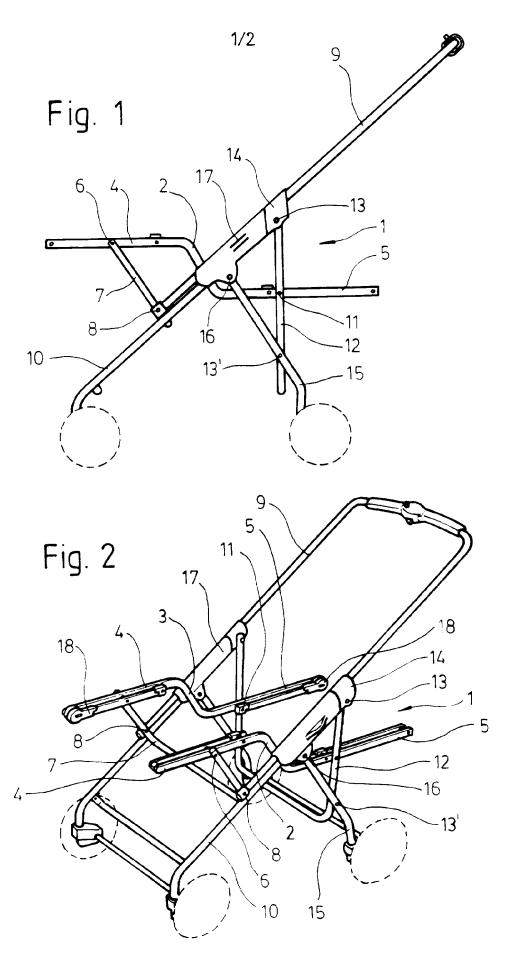
INT CL⁶ B62B 7/00 7/04 9/00 9/10 9/12 9/28

(54) Compact two seater pushchair

(57) A two-seater pushchair comprises a foldable frame 1 upon which can be mounted two seats (figures 3 and 4) or a seat and a carry cot (figure 5), which frame has two side bars 2, 3 each having an upper portion 4 for mounting one seat/carry cot and a lower portion 5 at a different level for mounting the other seat/carry cot. The seats can be mounted variously to face one another or otherwise (figures 3 to 5). The portions may include devices 18 for locking the seats and/or carry cot in place. The upper portions and lower portions of the side bars may be linked by respective U-shaped supports 7 and 12. A backrest (R figure 3) and legrest (P figure 3) of the seat(s) may recline and a hood (T figures 3A and 5) may be provided on the seat(s)/carry cot.



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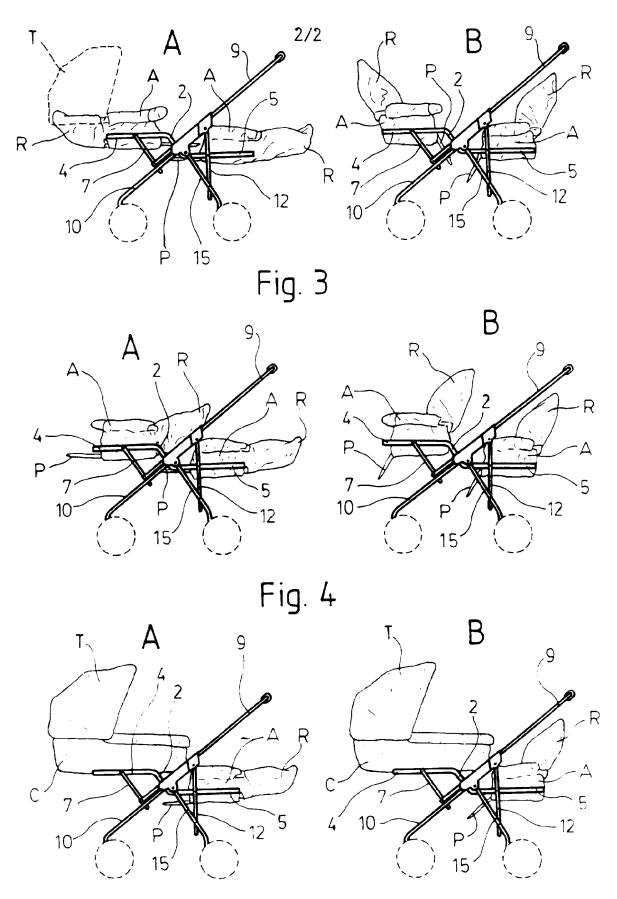


Fig. 5

Two-seater children's pram-pushchair

This invention refers to a two-seater children's pram-pushchair.

Different models of two-seater children's prampushchairs are already known, created for twins, usually comprising a frame with four or six sets of wheels upon which one double-width seat or two single seats or two carry-cots are assembled side by side. These seats or carry-cots are usually placed looking forwards or backwards.

The problem with these pram-pushchairs is their width which hinders their passing through normal-width doors. To solve this problem, there are also two-seater pushchairs whose width is similar to that of conventional pram-pushchairs, where the seats are arranged one behind the other. In this case the pushchair is particularly long, making it difficult to fold up and with its not fitting into a car boot. In order to reduce this length in as far as possible, in some cases the matter of the child's comfort has been simplified using seats in which the child cannot lie flat.

The object of this invention is to achieve a two-seater children's pram-pushchair in which the children can lie down without the device being excessively long and of a normal width, with the additional advantage that the children can sit one in front of the other or looking at each other, and with its even being possible to use one seat and one carry-cot for transporting two children of different ages.

For this purpose, the common feature is that the chassis of the pram-pushchair has two side bars, each one of them formed by two stretches on different levels, with the two seats or one seat and one carry-cot being coupled fixedly on the higher stretches of the two bars and on the lower of them respectively.



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The two stretches of the two side bars on the different levels include a device to lock and unlock the fixture of the seats and carry-cot assembled on them.

These and other features are better understood from the detailed description that follows, to facilitate which two sheets of drawings are attached where a practical case of the embodiment mentioned is shown; this is provided merely as a non-restrictive example of the scope of this present invention.

In the drawings :

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Figure 1 shows the side elevation of the frame of the pushchair in question.

Figure 2 shows a perspective view of that frame, and Figures 3, 4 and Frepresent, schematically, some of the different positions of the seats and carry-cot.

According to the drawings, the pram-pushchair includes a foldable frame -1- presenting, characteristically, two side bars -2- and -3- each one of which formed by facing stretches -4- and -5- on different levels. Of these, stretches -4-, which are higher, are the front ones whereas stretches -5-, which are lower, are the rear ones.

In this case, the side bars are coupled by means of joints to the frame of the pram-pushchair. Thus, the higher front stretches -4- are jointed at an intermediate point -6- at the ends of the branches of a first U-shaped support -7- which is jointed underneath by points -8- to the ends of the branches of the handle in an inverted U-shape -9-, sliding along those branches along the front feet -10- of the frame when the pram-pushchair is folded up.

Meanwhile, the lower rear stretches -5- of the side bars -2- and -3- are jointed at an intermediate point - 11- to an intermediate point of the branches of a second support in a U-shape -12-; at the higher end -13- these BAD ORIGINAL

are jointed to different brackets -14- coupled to the front feet -10- and underneath -13- they are jointed to the rear feet -15-; these, at their higher end -16- are jointed to different brackets -17- linked to the brackets of the handle -9-.

The stretches -4- and -5- of the side bars are equipped with devices -18- to lock and unlock the fixtures of the corresponding seats -A- comprising a jointed back-rest -R- and leg-rest -P- and a carry-cot -C-; the seats and the carry-cot can be equipped with a hood -T-.

This structure and design of the side bars -2- and -3- make it possible to arrange the seats in front of each other and lying down (figure 3-A) or in front of each other and with the back-rest raised and the leg-rest lowered (figure 3-B), or to have one seat behind the other lying down (Figure 4-A) or with the back-rest raised and the leg-rest lowered (figure 4-B). It is also possible to arrange a carry-cot and a lying seat (Figure 5-A) or with the seat with the back-rest raised and the leg-rest lowered (Figure 5-B). Logically, other combinations can also be made such as for example one seat looking forwards and other looking backwards.

It is to be understood that the frame -1- may present a different structure to the one that is shown here as the essential factor of this pram-pushchair is the coupling of the side bars with its facing stretches on different levels of the frame.



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CLAIMS

- 1. Two-seater children's pram-pushchair comprising a foldable frame upon which the seats are assembled, characterized in that the frame has two side bars, each one of them formed by facing stretches on different levels, coupling fixedly on the higher stretches of the two bars and on the lower stretches thereof the corresponding seats or one seat and one carry-cot, where the seats can be arranged facing one another or otherwise.
- 2. Two-seater children's pram-pushchair, according to Claim 1. characterized in that the two stretches on different levels of the two side bars include devices for locking and unlocking the coupling of the seats and carry-cot assembled on them.
- 3. Two-seater children's pram-pushchair, according to Claim 1, characterized in that the front stretches of the side bars are linked by a joint at an intermediate point of the higher ends of the branches of the first support in a U-shape, articulated underneath the frame of the pram-pushchair.
 - 4. Two-seater children's pram-pushchair, according to claim 1, characterized in that the rear stretches of the side bars are linked in a jointed way on an intermediate point of the branches of a second U-shapep support above and below the frame of the pram-pushchair.
 - 5. Two-seater children's pram-pushchair, substantially as described herein with reference to the drawings.



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Amendments to the claims have been filed as follows

CLAIMS

- 1. A two-seater children's pram-pushchair comprising a foldable frame adapted to receive two seats, wherein the frame has two side bars, each one of which has two parts located at different heights, the two seats or one seat and one carry-cot being detachably mountable on the upper and lower parts of the side bars in such a manner as to face one another or be located one behind the other.
- 2. A two-seater children's pram-pushchair according to claim 1, wherein the said two parts of each of the side bars include devices for locking and unlocking the seats or carry-cot detachably mounted on said parts.
 - 3. A two-seater children's pram-pushchair according to claim 1 or claim 2, wherein the upper parts of the side bars are located towards the front and are articulatedly linked at an intermediate point by a U-shaped joint which is articulated at a lower point to the frame of the prampushchair.
 - 4. A two-seater children's pram-pushchair according to any one of the preceding claims, wherein the lower parts of the side bars are located towards the rear and are linked at an intermediate point by a second U-shaped joint which is articulatedly located at its upper point and at its lower point to the frame of the prampushchair.
 - 5. A two-seater children's pram pushchair substantially as described herein with reference to the drawings.





Application No: Claims searched:

GB 9626714.1

1 to 5

Examiner:

Karl Whitfield

Date of search:

12 March 1997

Patents Act 1977 Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.O): B7B (BTF1, BTX1)

Int Cl (Ed.6): B62B 7/00, 7/04, 9/00, 9/10, 9/12, 9/28

Other: Online database: Derwent World Patents Index accessed via Questel

Documents considered to be relevant:

Category	Identity of document and relevant passage		
х	US 4728112	(WYNENS) see especially figures 1 & 3	1 at least
x	US 4753453	(SCHILBACH) see especially figures 5-8	1 at least
X	US 4542915	(WHEELER et al) see especially 2	1 at leas
x	FR 2615155 A1	(BOIDIN) see especially figures 1 & 2	1 at leas
Α	US 5033761	(KELLY) see especially figures 2-4	
	_		

X Document indicating lack of novelty or inventive step

Y Document indicating lack of inventive step if combined with one or more other documents of same category.

[&]amp; Member of the same patent family

A Document indicating technological background and/or state of the art.

P Document published on or after the declared priority date but before the filing date of this invention.

E Patent document published on or after, but with priority date earlier than, the filing date of this application.



Espacenet

Bibliographic data: CN2918181 (Y) — 2007-07-04

Carriage for children with front and rear seats

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Classification: - international: 862B7/06

- cooperative:

Application number:

CN2006253300U 20060105

Priority

CN2006253300U 20060105

number(s):

Abstract of CN2918181 (Y)

The utility model discloses a double-child perambulator with a front seat and a rear seat, which comprises a frame of the perambulator, a front wheel assembly, a rear wheel assembly and a seat assembly. The frame comprises two side brackets, which are arranged at the two sides and connected with each other by a plurality of connecting rods; the side bracket comprises a supporting rod of the front wheel, a supporting rod of the rear wheel, a front arm lever and a rear arm lever respectively; the supporting rod of the front wheel is connected with a front wheel axle, while the supporting rod of the rear wheel is connected with a rear wheel axle; the rear end of the supporting rod of the front wheel is hinged with the front end of the supporting rod of the rear wheel mutually, and an arc with an upward opening is formed; the front end of the front arm lever is hinged in the middle of the supporting rod of the front wheel; the rear end of the front arm lever is hinged with the front end of the rear arm lever mutually, and an arc with an downward opening is formed; the middle part of the supporting rod of the rear wheel is hinged with the middle part of the rear arm lever; a kink four-bar linkage mechanism is formed by the side brackets by the supporting rod of the front wheel, the supporting rod of the rear wheel, the front arm lever and the rear arm lever hinged with each other; a transverse supporting rod is arranged between the two supporting rods of the rear wheel of the two side brackets, and a buckle mechanism is provided in the middle of the transverse supporting rod.

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.

B62B 7/06 (2006.01)



[12] 实用新型专利说明书

专利号 ZL 200620053300.7

[45] 授权公告日 2007年7月4日

[11] 授权公告号 CN 2918181Y

[22] 申请日 2006.1.5

[21] 申请号 200620053300.7

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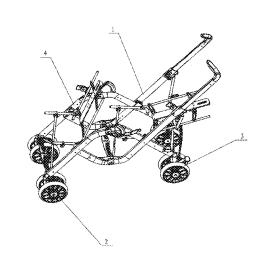
权利要求书3页 说明书8页 附图7页

[54] 实用新型名称

一种前后座双人儿童推车

[57] 摘要

本实用新型公开了一种前后座双人儿童推车,包括一推车车架、前轮组件、后轮组件及座椅组件,车架包括对称设置在两侧、并通过若干连接杆相连接的两侧支架;该侧支架,分别包括一前轮支杆、一后轮支杆、一前臂杆、一后臂杆;前轮支杆与前轮轴相连接,后轮支杆与后轮轴相连接;前轮支杆的后端部与后轮支杆的前端部相互铰接,形成一开口向上的拱起;前臂杆的前端部,铰接在前轮支杆的中部;前臂杆后端部与后臂杆的前端部相互铰接,形成一开口向下的拱起;后轮支杆的中部与后臂杆的中部相铰接;相互铰接的前轮支杆、后臂杆,使侧支架形成铰链四连杆机构;侧支架的两后轮支杆之间,还设有一横向支撑杆,该支撑杆中部设有一卡扣机构。



- 1、一种前后座双人儿童推车,包括一推车车架、设置在所述推车车架底前部的前轮组件,设置在所述的推车车架的底后部的后轮组件,及设置在所述车架上的两座椅组件,其特征在于: 所述的推车车架包括对称设置在两侧、并通过若干连接杆相连接的两侧支架; 所述的侧支架, 分别包括一前轮支杆、一后轮支杆、一前臂杆、一后臂杆; 所述的前轮支杆的前端部与后轮轴相连接, 所述后轮支杆的后端部与后轮轴相连接, 所述的前端部相互铰接, 铰接后形成一开口向上的拱起; 所述前臂杆的前端部,铰接在前轮支杆的中部; 所述前臂杆后端部与后臂杆的前端部相互铰接, 铰接后形成一开口向下的拱起; 所述后轮支杆的中部与所述后臂杆的中部相铰接; 所述相互铰接的前轮支杆、后轮支杆、前臂杆、后臂杆, 共同使侧支架形成一铰链四连杆机构; 所述侧支架的两后轮支杆之间, 还设有一横向支撑杆, 该支撑杆的两端分别铰接在两后轮支杆上, 其中部设有一用来使该支撑杆保持平直或弯折状态的卡扣机构。
- 2、根据权利要求 1 所述的儿童推车, 其特征在于: 所述的侧支架的后臂杆后段, 还连接有一手把杆; 所述的手把杆的下段可以从所述的后臂杆后段中插进或拉出; 所述后臂杆的上端部, 还设有一控制手把杆进出的伸缩卡位机构; 所述手把杆的上端, 还设有一把手; 所述的手把杆, 还铰接有一对呈弯折形、中部相互交叉的连接杆; 所述弯折形连接杆的一端, 铰接在所述的手把杆上, 其另一端铰接在另一侧支架的后轮支架上; 所述的两个弯折形连接杆的中段交叉部相互铰接。

- 3、根据权利要求 1 或 2 所述的儿童推车, 其特征在于: 所述的前轮支杆、后轮支杆、前臂杆、后臂杆、手把杆, 均是管状构件, 其各自的两端部, 均设有一连接件, 并通过该连接件与其他构件相互连接。
- 4、根据权利要求 1 或 2 或 3 所述的儿童推车,其特征在于:所述的两侧支架的前轮支杆之间,还设有一中部可折叠的前脚踏板:所述的两侧支架的前臂杆之间,也设有一中部可折叠的后脚踏板。
- 5、根据权利要求 1 或 2 或 3 所述的儿童推车,其特征在于: 所述侧支架前轮支杆的中段,还铰接有一前座水平连杆,该连杆的后端通过一连接板铰接在所述的前臂杆上; 所述后臂杆与后轮支杆的铰接轴上,还铰接有一后座水平连杆,该连杆的后段相下弯折,其端部铰接在后轮支杆上: 所述两侧支架之间,其前部及后部还分别设有一对呈 X 形交叉、且其交叉部相铰接的斜向交叉连杆; 所述设在前部的两斜向交叉连杆,其上端部分别与所述前轮支杆相铰接; 所述设在后部的两斜向交叉连杆,其上端部分别与所述前轮支杆相铰接; 所述设在后部的两斜向交叉连杆,其上端部分别与所述后座水平连杆相铰接,其下端部分别与所述后座水平连杆相铰接,其下端部分别铰接在所述前臂杆与后臂杆的铰接轴上。
- 6、根据权利要求 5 所述的儿童推车,其特征在于:所述前座水平连杆的后段,分别铰接有一向上的前座背靠立杆;所述后座水平连杆的后段,分别铰接有一向上的后座背靠立杆;所述两前座背靠立杆之间,以及两后座背靠立杆之间,还分别设有一座位无级调节装置,该装置通过水平对称设置的若干背靠连接板,对称地铰接在所述的背靠立杆上。
- 7、根据权利要求 6 所述的儿童推车,其特征在于:所述座位无级调节装置,包括一长形本体、设在所述本体上并可上下滑动的卡位机构及若干条钢丝:所述的钢丝一端固定在所述本体的上端,中部穿过卡位机

- 构,下端固定在所述的车架上;所述的卡位机构,通过拉紧或松弛所述的钢丝,可以不间断地无级调节或改变本体相对于所述车架的位置。
- 8、根据权利要求 1 或 2 或 3 所述的儿童推车,其特征在于:所述的前轮支架,其上端部连接件的内侧边,与所述后轮支架的外侧边相互铰接,两前轮支架之间距离,大于两后轮支架之间的距离,使前后轮组件的位置错开。
- 9、根据权利要求 1 或 2 或 3 所述的儿童推车,其特征在于:所述前轮支杆、后轮支杆的铰接轴上,还设有一环形拉手,该拉手的一侧还开有一弧形槽,所述槽开口的一端铰接有一卡钩;所述后轮支架与后臂杆的铰接轴上,设有一与所述卡钩配合使用、设有一卡钩连接开口的定位构件;当车架处于使用状态时,该卡钩与该定位构件脱开;当车架处于折叠收拢状态时,该卡钩与该定位构件结合。
- 10、根据权利要求 1 或 2 或 3 所述的儿童推车,其特征在于:所述的前座水平连杆、前座背靠立杆,及铰接在所述前座背靠立杆上的无级调节装置上,还设有一前座椅;所述的后座水平连杆、后座背靠立杆,及铰接在所述后座背靠立杆上的无级调节装置上,设有一后座椅;所述的座椅可以是普通座椅或汽车座椅之一。

一种前后座双人儿童推车

技术领域

本实用新型涉及儿童推车,特别涉及一种可实现三维伸缩折叠、且 折叠后仍然可以推行的前后座双人儿童推车。

背景技术

现有技术中的儿童推车,一般包括推车车架、设置在所述的推车车架的底前部的前轮、设置在所述的推车车架的底后部的后轮,所述的推车车架包括位于两侧的侧支架,所述的侧支架包括前轮支架、下端部与所述的前轮支架的上端部相转动连接的推把、上端部与所述的推把相转动连接的后轮支架,通常推车车架包括座连杆等,所述的座连杆的前端部与所述的前轮支架相转动连接,所述的座连杆的后端部与所述的后轮支架相转动连接,当所述的儿童推车折叠时,前轮支架相对后轮支架折叠,而座连杆限制了前轮支架相对后轮支架折叠的位置从而不能使前轮支架相对后轮支架在折叠后收缩的较小,且车架结构复杂,组装繁琐;现有的儿童推车,在车宽及车高方向也无法进行收缩折叠,且折叠后推车无法直立推行。因而现有技术的儿童推车结构复杂,折叠后的体积依然较大,制造及运输成本较高,使用亦部方便。

实用新型内容

本实用新型目的是提供一种可以实现三维折叠、结构简单、使用 方便、折叠后体积更小、且折叠后推车仍可以直立推行的前后座双人儿 章推车。

本实用新型实现上述目的所采用的技术方案是: 一种前后座双人儿 童推车,包括一推车车架、设置在所述推车车架底前部的前轮组件,设 置在所述的推车车架的底后部的后轮组件,及设置在所述车架上的两座 椅组件,其特征在于: 所述的推车车架包括对称设置在两侧、并通过若 干连接杆相连接的两侧支架: 所述的侧支架, 分别包括一前轮支杆、一 后轮支杆、一前臂杆、一后臂杆: 所述的前轮支杆的前端部与前轮轴相 连接, 所述后轮支杆的后端部与后轮轴相连接: 所述的前轮支杆的后端 部与后轮支杆的前端部相互铰接,铰接后形成一开口向上的拱起。所述 前臂杆的前端部,铰接在前轮支杆的中部:所述前臂杆后端部与后臂杆 的前端部相互铰接, 铰接后形成一开口向下的拱起: 所述后轮支杆的中 部与所述后臂杆的中部相铰接; 所述相互铰接的前轮支杆、后轮支杆、 前臂杆、后臂杆,共同使侧支架形成一铰链四连杆机构; 所述侧支架的 两后轮支杆之间,还设有一横向支撑杆,该支撑杆的两端分别铰接在两 后轮支杆上,其中部设有一用来使该支撑杆保持平直或弯折状态的卡扣 机构: 所述的支撑杆是由中部相互铰接的两段杆体组成, 所述的卡扣机 构是设置在该支撑杆中部的铰接处,包括一舌杆及复位弹簧。

所述的侧支架的后臂杆后段,还连接有一手把杆; 所述的手把杆的 下段可以从所述的后臂杆后段中插进或拉出; 所述后臂杆的上端部, 还 设有一控制手把杆进出的伸缩卡位机构; 所述手把杆的上端, 还设有一 把手; 所述的手把杆, 还铰接有一对呈弯折形、中部相互交叉的连接杆 ; 所述弯折形连接杆的一端, 铰接在所述的手把杆上, 其另一端铰接在 另一侧支架的后轮支架上; 所述的两个形连接杆的中段交叉部相互铰接 所述的前轮支杆、后轮支杆、前臂杆、后臂杆、手把杆,均是管状构件,其各自的两端部,均设有一连接件,并通过该连接件与其他构件相互连接。具体地,设置在前轮支杆与后轮支杆之间的连接件是一轴节;设置在后臂杆与后臂杆之间的连接件是一轴节;设置在后臂杆与手把杆之间的连接件是一伸缩卡扣机构。根据具体需求,上述构件可以采用铝合金材料制成,也可以选用其他材料,如不锈钢材料等。

所述的两侧支架的前轮支杆之间,还设有一中部可折叠的前脚踏板 ; 所述的两侧支架的前臂杆之间,也设有一中部可折叠的后脚踏板。

所述侧支架前轮支杆的中段,还铰接有一前座水半连杆,该连杆的后端通过一连接板铰接在所述的前臂杆上;所述后臂杆与后轮支杆的铰接轴上,还铰接有一后座水平连杆,该连杆的后段相下弯折,其端部铰接在后轮支杆上;所述两侧支架之间,其前部及后部还分别设有一对是X形交叉、且其交叉部相铰接的斜向交叉连杆;所述设在前部的两斜向交叉连杆,其上端部分别与所述前座水平连杆相铰接,其下端部分别与所述前轮支杆相铰接;所述设在后部的两斜向交叉连杆,其上端部分别与所述后座水平连杆相铰接,其下端部分别铰接在所述前臂杆与后臂杆的铰接轴上。

所述前座水平连杆的后段,分别铰接有一向上的前座背靠立杆;所述后座水平连杆的后段,分别铰接有一向上的后座背靠立杆;所述两前座背靠立杆之间,以及两后座背靠立杆之间,还分别设有一座位无级调节装置,该装置通过水平对称设置的若干背靠连接板,对称地铰接在所述的背靠立杆上。

所述的座位无级调节装置,包括一长形本体、设在所述本体上并可

上下滑动的卡位机构及若干条钢丝; 所述的钢丝一端固定在所述本体的 上端, 中部穿过卡位机构, 下端固定在所述的车架上; 所述的卡位机构 , 通过拉紧或松弛所述的钢丝, 可以不间断地无级调节或改变本体相对 于所述车架的位置。

所述的前轮支架,其上端部连接件的内侧边,与所述后轮支架的外侧边相互铰接,两前轮支架之间距离,大于两后轮支架之间的距离,使前后轮组件的位置错开。

所述前轮支杆、后轮支杆的铰接轴上,还设有一环形拉手,该拉手的一侧还开有一弧形槽,所述槽开口的一端铰接有一卡钩;所述后轮支架与后臂杆的铰接轴上,设有一与所述卡钩配合使用、设有一卡钩连接开口的定位构件;当车架处于使用状态时,该卡钩与该定位构件脱开;当车架处于折叠收拢状态时,该卡钩与该定位构件结合。

所述的前座水平连杆、前座背靠立杆,及铰接在所述前座背靠立杆上的无级调节装置上,还设有一前座椅;所述的后座水平连杆、后座背靠立杆,及铰接在所述后座背靠立杆上的无级调节装置上,设有一后座椅;所述的座椅可以是普通座椅或汽车座椅之一。

本实用新型还可以根据实际需要,在各连接杆等适当的部件上,或相关部件之间,设置若干帘布,及其他辅助或装饰性部件、物品。

本实用新型与现有技术相比,具有下列优点:由于在所述的前轮 支杆、后轮支杆、前臂杆、后臂杆使侧支架形成一铰链四连杆结构,可 以使车架实现车长方向的折叠伸缩;由于把手杆可以伸缩进出后臂杆内 ,车架折叠后可将其缩进后臂杆内,降低折叠后的车架高度;由于两侧 支架之间的各构件均可以其中心铰接轴或中点进行横向折叠,故车架可 以实现车身的车宽方向的伸缩折叠;由于前后轮组件的位置相互错开,车架折叠后前后轮组仍然可以继续工作,因而使车身可以继续直立推动行走。如上所述,本实用新型实现了对推车的三维伸缩折叠,不仅减小了儿童推车折叠后的体积,降低了运输成本,而且结构简单,折叠、伸展等较为便捷,折叠后仍然可以推行,使用非常方便。

附图说明

- 图 1 为本实用新型实施例车架的展开使用状态立体结构示意图:
- 图 2 为图 1 的主视图:
- 图 3 为图 1 的左视图:
- 图 4 为图 1 的右视图:
- 图 5 为图 1 的俯视图;
- 图 6 为图 1 中背靠的立体结构示意图:
- 图 7 为本实用新型实施例车架的折叠状态立体结构示意图:

下面结合附图及实施例对本实用新型进一步说明。

具体实施方式

实施例: 采用本实用新型技术方案,构造一款铝合金管状构件为 车架主体的一种前后座双人儿童推车。

参见图 1~图 7, 一种前后座双人儿童推车,包括一推车车架 1、设置在所述推车车架 1 底前部的前轮组件 2,该组件包括前车轮 2a 及前车轮轴 2b;设置在所述的推车车架 1 的底后部的后轮组件 3,该组件包括后车轮 3a 及后车轮轴 3b,及设置在所述车架 1 上的两座椅组件,包括

前座椅组件及后座椅组件;所述的推车车架1包括对称设置在两侧、并通过若干连接杆相连接的两侧支架4,分别是左侧支架与右侧支架;所述的侧支架4,分别包括一前轮支杆5、一后轮支杆6、一前臂杆7、一后臂杆8;所述的前轮支杆5的前端部与前轮轴2b相连接,所述后轮支杆6的后端部与后轮轴3b相连接;所述的前轮支杆5的后端部与后轮支杆6的前端部相互铰接,铰接后形成一开口向上的拱起;所述前臂杆7的前端部相互铰接,铰接后形成一开口向上的拱起;所述后轮支杆6的中部与所述后臂杆8的中部相铰接;所述相互铰接的前轮支杆5、后轮支杆6、前臂杆7、后臂杆8,共同使侧支架4形成一铰链四连杆机构;所述侧支架4的两后轮支杆6之间,还设有一横向支撑杆9,该支撑杆的两端分别铰接在两后轮支杆6之间,还设有一横向支撑杆9,该支撑杆的两端分别铰接在两后轮支杆6上,其中部设有一用来使该支撑杆9保持平直或弯折状态的卡扣机构9a;所述的支撑杆9a是由中部相互铰接的两段杆体组成,所述的卡扣机构是设置在该支撑杆中部的铰接处,包括一舌杆及复位弹簧。

所述的侧支架 4 的后臂杆 8 后段,还连接有一手把杆 10;所述的手把杆 10 的下段可以从所述的后臂杆 8 后段中插进或拉出;所述后臂杆 8 的上端部,还设有一控制手把杆 10 进出的伸缩卡位机构 11;所述手把杆 10 的上端,还设有一把手 12;所述的手把杆 10,还铰接有一对呈弯折形、中部相互交叉的连接杆 13;所述弯折形连接杆 13 的一端,铰接在所述的手把杆 10 上,其另一端铰接在另一侧支架 4 的后轮支杆 6 上;所述的两个弯折形连接杆 13 的中段交叉部相互铰接。

所述的前轮支杆 5、后轮支杆 6、前臂杆 7、后臂杆 8、手把杆 10,

均是铝合金管状构件,其各自的两端部,均设有一连接件,并通过该连接件与其他构件相互连接;具体地,设置在前轮支杆 5 与后轮支杆 6 之间的连接件是轴节 14;设置在前臂杆 7 与后臂杆 8 之间的连接件是轴节 15;设置在后臂杆 8 与手把杆 10 之间的连接件是伸缩卡扣机构 11。根据具体需求,也可以选用其他材料,如不锈钢材料来制造前轮支杆 5、后轮支杆 6、前臂杆 7、后臂杆 8、手把杆 10 等构件及其连接件。

所述的两侧支架 4 的前轮支杆 5 之间,还设有一中部可折叠的前脚踏板 16;所述的两侧支架 4 的前臂杆 7 之间,也设有一中部可折叠的后脚踏板 17。

所述侧支架前轮支杆 5 的中段,还铰接有一前座水平连杆 18,该连杆 18 的后端通过一连接板 19 铰接在所述的前臂杆 7 上;所述后臂杆 8 与后轮支杆 6 的铰接轴上,还铰接有一后座水平连杆 20,该连杆 20 的后段相下弯折,其端部铰接在后轮支杆 6 上;所述两侧支架 4 之间,其前部设有一对星 X 形交叉、且其交叉部相铰接的斜向交叉连杆 21,其后部设有一对星 X 形交叉、且其交叉部相铰接的斜向交叉连杆 22;所述设在前部的两斜向交叉连杆 21,其上端部分别与所述前座水平连杆 18 相铰接,其下端部分别与所述前轮支杆 5 相铰接;所述设在后部的两斜向交叉连杆 22,其上端部分别与所述后座水平连杆 20 相铰接,其下端部分别较接在所述前臂杆 7 与后臂杆 8 的铰接轴上。

所述前座水平连杆 18 的后段,分别铰接有一向上的前座背靠立杆 23; 所述后座水平连杆 20 的后段,分别铰接有一向上的后座背靠立杆 24; 所述两前座背靠立杆 23 之间,以及两后座背靠立杆 24 之间,还分别设有一座位无级调节装置 25,该装置通过水平对称设置的两对背靠连

接板 26, 对称地铰接在所述的背靠立杆 23 及 24 上。

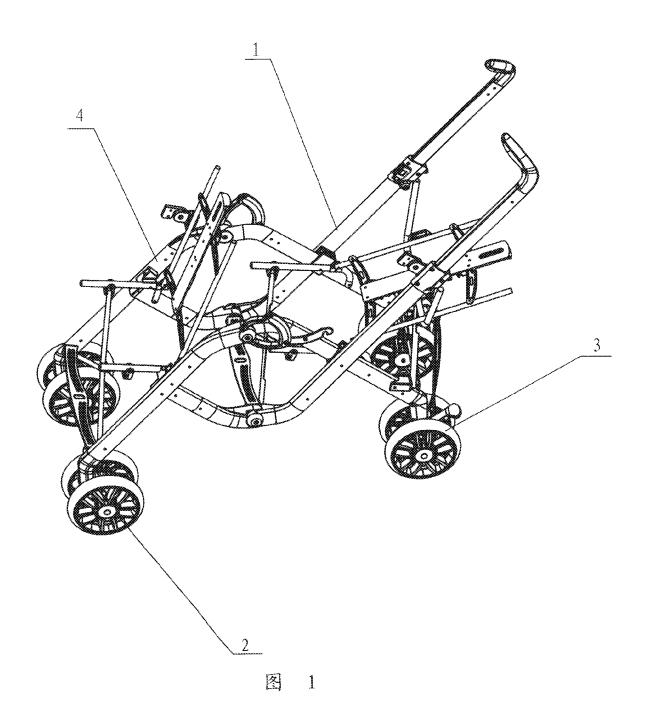
所述的座位无级调节装置 25,包括一长形本体 27、设在所述本体上 26 并可上下滑动的卡位机构 28 及若干条钢丝;所述的钢丝一端固定在所述本体 27 的上端,中部穿过卡位机构 28,下端固定在所述的车架 1上;所述的卡位机构 28,通过拉紧或松弛所述的钢丝,可以不间断地无级调节或改变本体 27 相对于所述车架 1 的位置。

所述的前轮支架 5, 其上端部连接件轴节 14 的内侧边,与所述后轮支架 6 的外侧边相互铰接,两前轮支架 5 之间距离,大于两后轮支架 6 之间的距离,使前轮组件 2 与后轮组件 3 的位置错开。

所述前轮支杆 5、后轮支杆 6 的铰接轴 14 上,还设有一环形拉手 29,该拉手的一侧还开有一弧形槽 30,所述槽开口的一端铰接有一卡钩 31;所述后轮支架 6 与后臂杆 8 的铰接轴上,设有一与所述卡钩 31 配合使用、设有一卡钩连接开口的定位构件 32;当车架 1 处于使用状态时,该卡钩 31 与该定位构件 32 脱开;当车架 1 处于折叠收拢状态时,该卡钩 31 与该定位构件 32 结合。

所述的前座水平连杆 18、前座背靠立杆 23,及铰接在所述前座背靠立杆 23 上的无级调节装置 25 上,还设有一前座椅;所述的后座水平连杆 20、后座背靠立杆 24,及铰接在所述后座背靠立杆 24 上的无级调节装置 25 上,设有一后座椅;所述的座椅可以是普通座椅或汽车座椅之一。本实用新型还可以根据实际需要,在各连接杆等适当的部件上,或相关部件之间,设置若干帘布,及其他辅助或装饰件部件、物品。

采用本实用新型上述实施例所述相同或相似的结构, 所得到的其他 前后座双人儿童推车, 均在本实用新型保护范围之内。



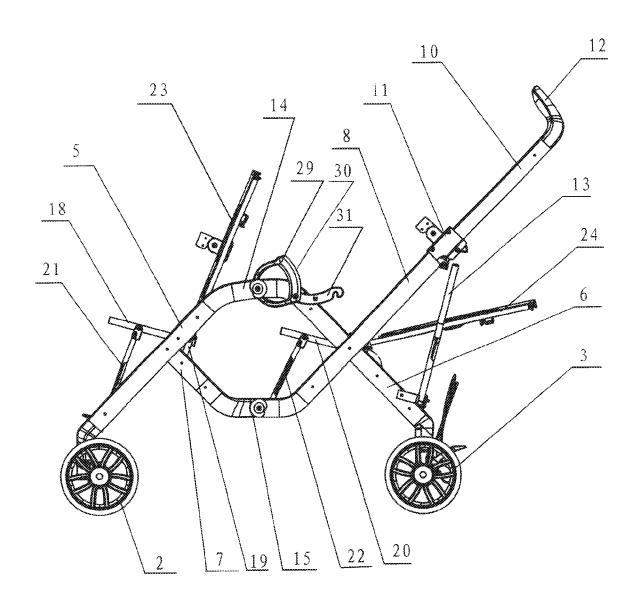


图 2

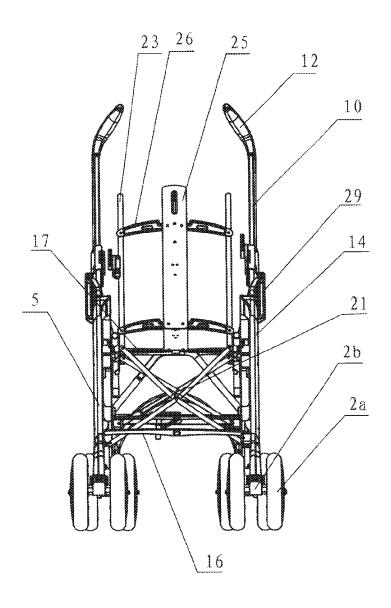


图 3

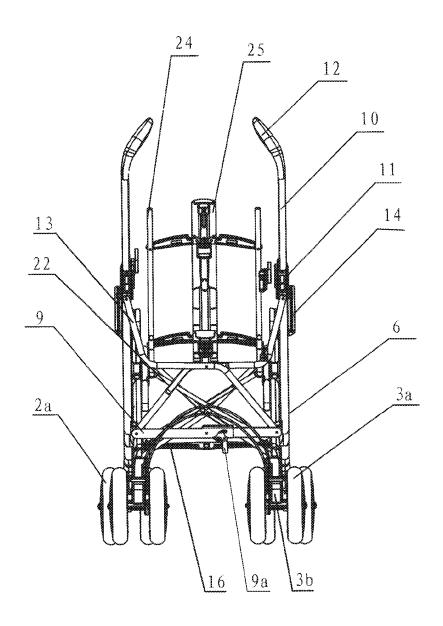


图 4

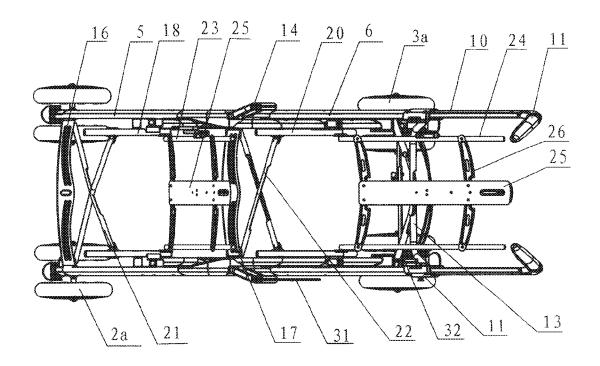


图 5

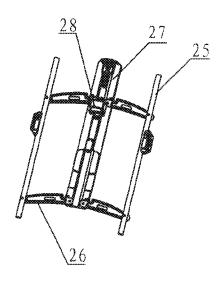


图 6

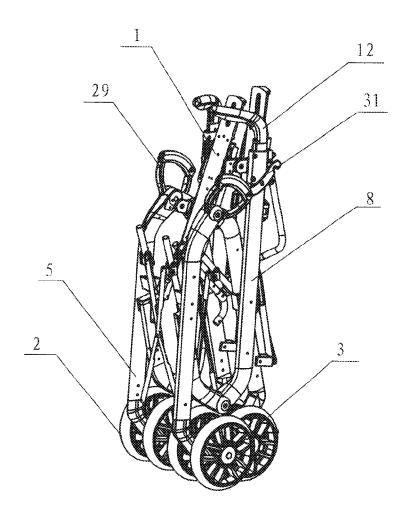


图 7



Espacenet

Bibliographic data: CN2784272 (Y) — 2006-05-31

Go-cart for children

Inventor(s): SHEN HAIDONG [CN] ± (HAIDONG SHEN)

Applicant(s): GOODBABY CHILD PRODUCTS CO LTD [CN] ± (GOODBABY

CHILD PRODUCTS CO., LTD)

Classification: - international: B62B7/00; B62B9/00

- cooperative:

Application number:

CN2005269647U 20050104

Priority

CN2005269647U 20050104

number(s):

Abstract of CN2784272 (Y)

The utility model relates to a go-cart for children, which comprises a frame of the go-cart, front wheels arranged at the bottom-front part of the frame of the go-cart, rear wheels arranged at the bottom-rear part of the frame of the go-cart, and a first seat arranged on the frame of the go-cart, wherein the first seat is rotationally connected with the frame of the go-cart; in addition, rotary axis is almost vertical to the horizontal surface; a locking device for position is arranged between the first seat and the frame of the go-cart. When the direction of the first seat is needed to change, the locking device for position is unlocked and the first seat is rotated so that the direction of the first seat corresponding the frame of the go-cart is changed; then the first seat and the frame of the go-cart are locked again, and the direction of the first seat can be changed.

[19] 中华人民共和国国家知识产权局

[51] Int. Cl.

B62B 7/00 (2006.01)

B62B 9/00 (2006.01)



[12] 实用新型专利说明书

专利号 ZL 200520069647.6

[45] 授权公告日 2006年5月31日

[11] 授权公告号 CN 2784272Y

[22] 申请日 2005.1.4

[21] 申请号 200520069647.6

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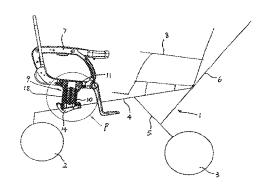
权利要求书1页 说明书3页 附图5页

[54] 实用新型名称

儿童推车

[57] 摘要

一种儿童推车,包括推车车架、设置在推车车架的底前部的前轮、设置在推车车架的底后部的后轮、设置在推车车架上的第一座位,第一座位与推车车架相转动连接,并且转动的轴心线与水平面大致上相垂直,第一座位与推车车架之间具有位置锁定装置。 当第一座位需要换向时,只需将位置锁定装置解锁,转动第一座位,使得第一座位相对推车车架换向,再重新将第一座位与推车车架锁定,便实现第一座位的换向。



- 1、一种儿童推车,包括推车车架[1]、设置在所述的推车车架[1]的底前部的前轮[2]、设置在所述的推车车架[1]的底后部的后轮[3]、设置在所述的推车车架[1]上的第一座位[7],其特征在于:所述的第一座位[7]与所述的推车车架[1]相转动连接,并且转动的轴心线与水平面大致上相垂直,所述的第一座位[7]与所述的推车车架[1]之间具有位置锁定装置[9]。
- 2、根据权利要求 1 所述的儿童推车,其特征在于:所述的推车车架[1]上固定设置有固定座[10],所述的第一座位[7]上设有底盘[11],所述的固定座[10]与所述的底盘[11]之间相转动连接。
- 3、根据权利要求 2 所述的儿童推车,其特征在于: 所述的位置锁定装置 [9]包括滑动地设置在所述的底盘 [11]或所述的固定座 [10]的一个上的插销 [13]、开设在所述的底盘 [11]或所述的固定座 [10]的另一个上的至少两个插孔 [12],所述的插销 [13]具有两个工作位置,第一工作位置是锁定工作位置,所述的插销 [13] 插在所述的插孔 [12]中,第二工作位置是解锁工作位置,所述的插销 [13] 脱离所述的插孔 [12]。
- 4、根据权利要求 3 所述的儿童推车,其特征在于:所述的位置锁定装置 [9]还包括操作件[14],所述的操作件[14]与所述的插销[13]相连接。
- 5、根据权利要求 3 所述的儿童推车,其特征在于: 所述的固定座[10]上开有导向槽[15],所述的插销[13]滑动地插在所述的导向槽[15]内。
- 6、根据权利要求 5 所述的儿童推车,其特征在于;所述的插销[13]与所述的固定座[10]之间设置有弹簧[15]。
- 7、根据权利要求 2 所述的儿童推车,其特征在于:所述的第一座位[7]的座基架与所述的底盘[11]可拆卸地连接。
- 8、根据权利要求 2 所述的儿童推车, 其特征在于: 所述的推车车架[1]包括前轮支架[4]、与所述的前轮支架[4]的后端部相转动连接的推把[6]、与所述的推把[6]的下端部相转动连接的后轮支架[5], 所述的后轮支架[5]的前端部与所述的前轮支架[4]相转动连接。
- 9、根据权利要求 8 所述的儿童推车, 其特征在于: 所述的固定座[10]固定设置在所述的前轮支架[4]上。

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儿童推车

技术领域

本实用新型涉及一种儿童推车。

背景技术

现有技术中,为了实现儿童推车上的座位相对推车车架换向(换向是指座位上的儿童相对于推车的大人呈面对面的位置或背对面的位置),儿童推车上的座位可拆卸的设置在所述的推车车架上,需要换向时,须先将座位从推车车架上拆卸下来,将所述的座位换个方向后再安装到所述的推车车架上,假如所述的座位上坐着小孩,还有必要将小孩抱下,再将座位换向,使得操作很不方便。

发明内容

本实用新型目的是提供一种儿童推车,其座位的换向可以较方便的实现。为达到上述目的,本实用新型采用的技术方案是:一种儿童推车,包括推车车架、设置在所述的推车车架的底前部的前轮、设置在所述的推车车架的底后部的后轮、设置在所述的推车车架上的第一座位,所述的第一座位与所述的推车车架相转动连接,并且转动的轴心线与水平面大致上相垂直,所述的第一座位与所述的推车车架之间具有位置锁定装置,在位置锁定装置处于解锁状态下,所述的第一座位可以相对于推车车架转动,可以调整座位,使得座位上的儿童相对于推车的大人呈面对面的状态,或呈背对面的状态。在位置锁定装置处于锁定状态下,所述的第一座位相对于推车车架呈位置相对固定的状态,第一座位不能相对于推车车架转动。

由于上述技术方案运用,本实用新型与现有技术相比具有下列优点:由于所述的第一座位与所述的推车车架之间相转动连接,并且所述的第一座位与所述的推车车架之间具有位置锁定装置,因此当第一座位需要换向时,只需将所述的位置锁定装置解锁,转动所述的第一座位,使得第一座位相对所述的推车车架换向,再重新将所述的第一座位与所述的推车车架锁定,便实现所述的第一座位的换向。

附图说明

附图 1 为本实用新型的座位正常使用时的主视图:

附图 2 为本实用新型的座位换向过程中的主视图:

附图 3 为本实用新型的座位换向后的主视图;

附图 4 为附图 1 的 1 处放大图;

附图 5 为附图 2 的 K 处放大图:

附图 6 为附图 3 的 P 处放大图:

其中: 1、推车车架; 2、前轮; 3、后轮; 4、前轮支架; 5、后轮支架; 6、推把; 7、第一座位; 8、第二座位; 9、位置锁定装置; 10、固定座; 11、底盘; 12、插孔: 13、插销; 14、操作件; 15、弹簧; 16、导向槽; 17、第二转动轴; 18、第一转动轴;

具体实施方式

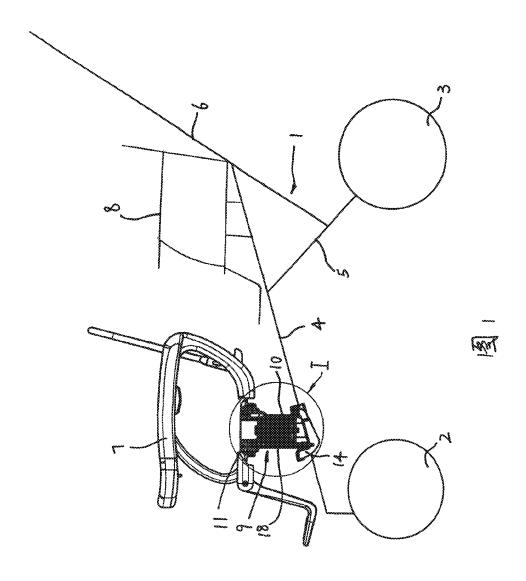
参见附图 1-附图 3,一种可以双人坐的儿童推车,包括推车车架 1、设置在所述的推车车架 1的底前部的前轮 2、设置在所述的推车车架 1的底后部的后轮 3、设置在所述的推车车架 1上的第一座位 7、设置在所述的推车车架 1上的第二座位 8。所述的推车车架 1包括前轮支架 4、与所述的前轮支架 4的后端部相转动连接的推把 6、与所述的推把 6 的下端部相转动连接的后轮支架 5,所述的后轮支架 5 的前端部与所述的前轮支架 4 相转动连接,所述的第一座位 7与所述的推车车架 1 相转动连接,并且转动的轴心线与水平面大致上相垂直。所述的推车车架 1上固定设置有固定座 10,所述的固定座 10 固定设置在所述的前轮支架 4上,所述的第一座位 7上设有底盘 11,所述的第一座位 7的座基架与所述的底盘 11 可拆卸地连接,所述的固定座 10 与所述的底盘 11之间通过第一转动轴 18 相转动连接,所述的第一座位 7与所述的推车车架 1之间具有位置锁定装置 9。

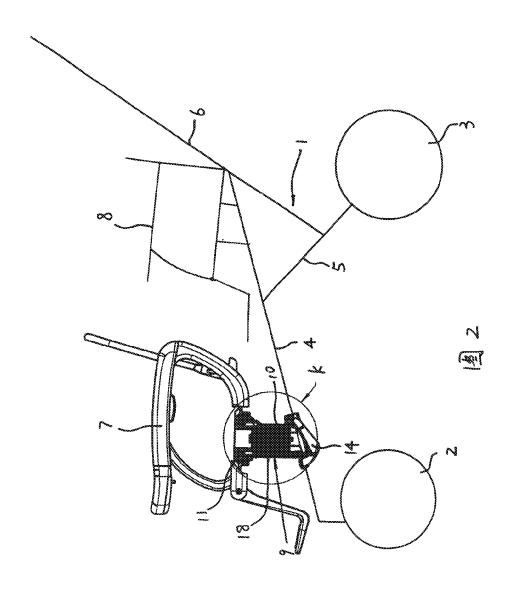
所述的位置锁定装置 9 包括滑动地设置在所述的底盘 11 或所述的固定座 10 的一个上的插销 13、开设在所述的底盘 11 或所述的固定座 10 的另一个上的至少两个插孔 12。

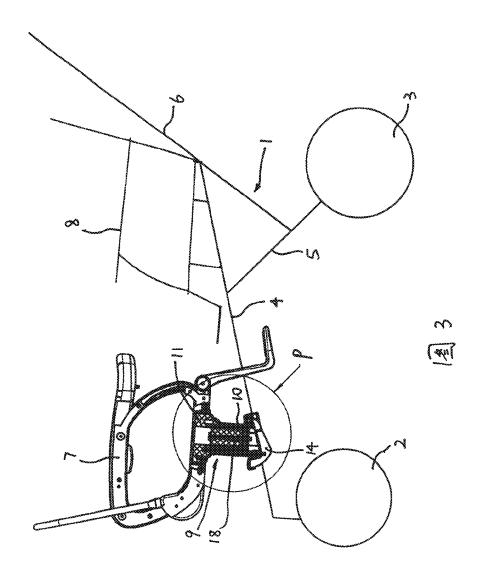
如附图 4-附图 6 所示,所述的固定座 10 上开有导向槽 15,所述的插销 13 滑动地插在所述的导向槽 15 内,在所述的底盘 11 上开有两个插孔 12,该两个插孔 12 分别用于把第一座位 7 锁定于座位朝前或座位朝后的位置。所述的插销 13 具有两个工作位置,第一工作位置是锁定工作位置,所述的插销 13 脱离所适的插孔 12 中,第二工作位置是解锁工作位置,所述的插销 13 脱离所述的插孔 12。所述的位置锁定装置 9 还包括操作件 14,所述的操作件 14 的一端部与所述的固定座 10 通过第二转动轴 17 相转动连接,所述的操作件 14 与

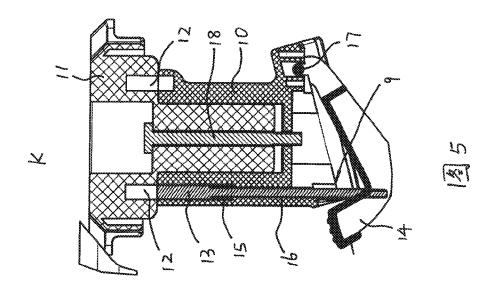
所述的插销 13 相连接,按动所述的操作件 14,使得所述的插销 13 处于第二工作位置,所述的插销 13 脱离所述的插孔 12。

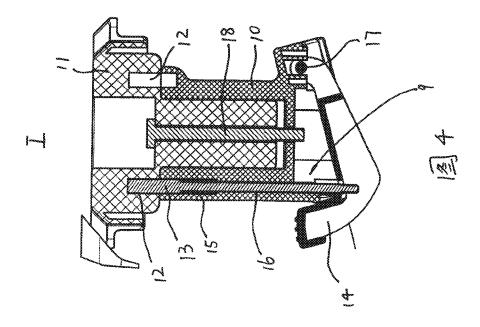
所述的插销 13 与所述的固定座 10 之间设置有弹簧 15, 当所述的插销 13 处于第一工作位置时,弹簧 15 的作用力使得所述的插销 13 稳定地插在所述的插孔 12 中。

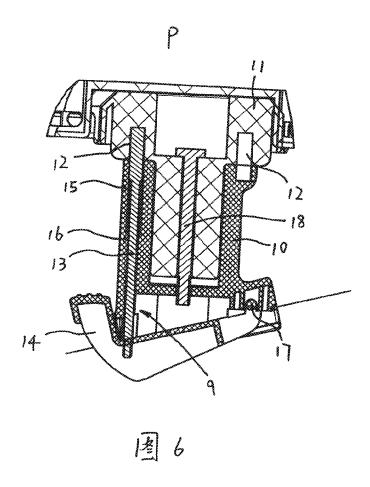














Espacenet

Bibliographic data: CN201626448 (U) — 2010-11-10

Multifunctional baby carrier

Inventor(s): GE LUO <u>+</u> (LUO GE)

Applicant(s): GE LUO \pm (LUO GE)

Classification: - international: B62B7/04; B62B9/12

- cooperative:

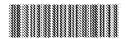
Application number: CN20102115279U 20100211

Priority number(s): CN20102115279U 20100211

Abstract of CN201626448 (U)

The utility model relates to a multifunctional baby carrier, which comprises a baby carrier body, a baby carrier frame and wheels. Lateral handrails are arranged on two sides of the baby carrier body; a detachable device is arranged on the lateral handrails, and comprises a receiving device arranged on the lateral handrails and a connecting seat capable of being mounted and demounted on the receiving device; the receiving device comprises grooves formed on the lateral handrails; a cross rod is fixed in the grooves in the transverse direction; the connecting seat comprises a connecting seat casing, in which a fixed hook capable of being buckled in the cross rod is arranged; a spring is arranged between the fixed hook and the connecting seat casing, and is connected with a button; and the connecting seat is fixed on an automobile seat or a cradle. The utility model has the advantages that the detachable device is arranged on the lateral handrails of the baby carrier, so that the automobile seat or the cradle can be conveniently mounted or demounted to greatly facilitate users; and moreover, the structure is simple, and both the mounting and the demounting are very simple.

(19) 中华人民共和国国家知识产权局





(12) 实用新型专利

(10) 授权公告号 CN 201626448 U (45) 授权公告日 2010.11.10

(21) 申请号 201020115279.5

(22) 申请日 2010,02,11

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(51) Int. CL.

8628 7/04 (2006, 01)

8628 9/12 (2006: 01)

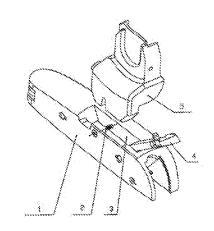
权利要求书 1 页 说明书 2 页 附图 3 页

(54) 实用新型名称

一种多功能演车

(57) 摘要

本实用新型涉及一种多功能董车,包括车身、 车架与车轮,车身两侧设有侧扶手,所述的侧扶手 上设置可拆卸装置,可拆卸装置包括设置在侧扶 手上的接收装置和可装卸在接收装置上的连接 座,所述的被收装置包括设置在侧扶手上的凹槽, 所述的凹槽内横向方向上固定有横杆,所述的连 接座包括连接座壳体,壳体内设置有能扣入横杆 的固定钩,固定钩与连接座壳体之间设置弹簧,弹 置连接按钮,且连接座固定在汽车座椅或摇篮上。 本实用新型在董车的侧扶手上设置可拆卸装置, 使得汽车座椅或者摇篮可以方便地安装或拿下, 大大方便了用户,且本实用新型结构简单,安装和 拆卸都能简单。



CX 201626448 U

1. 一种多功能童车,包括车身、车架与车轮,车身两侧设有侧扶手,其特征在于;所述的侧扶手上设置可拆卸装置,所述的可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座,所述的接收装置包括设置在侧扶手上的凹槽,所述的凹槽内横向方向上固定有横杆,所述的连接座包括连接座壳体,壳体内设置有能扣入横杆的固定钩,固定钩与连接座壳体之间设置弹簧,弹簧连接按钮,且所述的连接座固定在汽车座椅或摇篮上。

一种多功能童车

(一)技术领域

[0001] 本实用新型涉及一种童车,尤其是涉及一种能放置多种部件的多功能童车。

(二)背景技术

[0002] 目前市场上的童年一般不具备儿童汽车安全座椅功能,如专利号为 03225254.4 的中国实用新型专利一种两用童车,其结构包括可折叠主体,连接在主体下端的四个可折叠车轮,主体装设有汽车安全带卡扣机构,在儿童乘坐位置有用于缚紧乘员的安全带。完全打开时,与普通童车无异,四个车轮收折后,可放在汽车座椅上,扣上汽车安全带作为汽车安全座椅使用。虽然,该款童车实现双重功能,但是毕竟童车与汽车座椅在要求上差别较大,折叠后的童车作为汽车座椅在安全性和舒适性上大打折扣。

(三)发明内容

[0003] 为了克服现有技术中的不足,本实用新型提供一种汽车座椅或提篮可拆卸地安装 在童车上的多功能童车,结构简单,使用方便。

[0004] 本实用新型解决其技术问题的技术方案是:

[0005] 一种多功能童车,包括车身、车架与车轮,车身两侧设有侧扶手,所述的侧扶手上设置可拆卸装置,所述的可拆卸装置包括设置在侧扶手上的接收装置和可装卸在接收装置上的连接座,所述的接收装置包括设置在侧扶手上的凹槽,所述的凹槽内横向方向上固定有横杆,所述的连接座包括连接座壳体,壳体内设置有能扣入横杆的固定钩,固定钩与连接座壳体之间设置弹簧,弹簧连接按钮,且连接座固定在汽车座椅或提篮上。

[0006] 在童车的侧扶手上设置凹槽,凹槽内设置横杆,按下按钮,连接座通过固定钩锁定横杆,由于连接座固定在汽车座椅或提篮上,则汽车座椅或提篮就安装在童车上了。在拆卸时,只要按下按钮,固定钩从横杆中脱离就可以了,这时候,将汽车座椅安装在车上,或者可以手提提篮。在童车的侧扶手上设置可拆卸装置,使得汽车座椅或者提篮可以方便地安装或拿下,大大方便了用户。

[0007] 本实用新型的有益效果在于,本实用新型在童车的侧扶手上设置可拆卸装置,使 得汽车座椅或者提篮可以方便地安装或拿下,大大方便了用户,且本实用新型结构简单,安 装和拆卸都银简单。

(四)附图说明

[0008] 图1是本实用新型可拆卸装置的结构示意图:

[0009] 图 2 是本实用新型连接座的爆炸结构示意图;

[0010] 图 3 是本实用新型的结构示意图。

(五) 具体实施方式

[0011] 下面结合附图和具体实施方式对本实用新型作进一步详细说明。

[0012] 如图 3 所示,一种多功能童车,包括车身、车架以及车轮,车架的两侧设有侧扶手1,如图 1 所示,侧扶手上表面上设有凹槽 3,凹槽横向宽度方向悬空固定有一横杆 2,凹槽与横杆组成接收装置,侧扶手上还连接有能翻转的扶手盖 4,能盖住在凹槽上。如图 1、图 2 所示,另设有连接座 5,连接座 5 随定在汽车座椅或提篮 9 上,连接座可方便安装在接收装置上,连接座与接收装置组成侧扶手的可拆卸装置,连接座包括壳体 6,壳体背面设有连接座盖 7,壳体 6 内设置固定钩 8,且固定钩钩体能够伸出连接座,固定钩 8 与座壳体之间设置弹簧,弹簧连接按钮。按下按钮,将固定钩锁定横杆上,然后释放按钮,则汽车座椅和提篮 9 就连接在童车上了,如图 3 所示,而需要拆卸时,只需要将固定钩脱离就好了,这样,汽车座椅就可以方便地安装在汽车上,或者轻松地提提篮了。

