Heartland Recreational Vehicles LLC v. Forest River Inc Doc. 132 Att. 10

is arcuate braces 142, 144. As shown, cross beams 116 and 120 still serve as structural supports adjacent the forward corners. Arcuate braces 142, 144, however, serve as the outer frame members at the forward corners, each attached to their respective frame members 82, 84, and both attached to forward edge beam 88. The forward corners are still recessed as indicated by reference numerals 146, 148 which depict conventional forward frame corners. (See, also, Fig. 9a.) Similar to the previous embodiments, forward end cap 24 is shown attached to upper deck 140 in Fig. 15. It is, again, appreciated that the recessed corner edges 28, 30 can be of any useful depth and may be configured to conform to the shape of the cavities created by arcuate braces 142, 144. Conversely, as shown herein, recessed corner edges 28, 30 may also take a differing recess shape than the cavities formed by cross beams 116, 120.

[0052] Although the present disclosure has been described with reference to particular means, materials and embodiments, from the foregoing description, one skilled in the art can easily ascertain the essential characteristics of the present disclosure and various changes and modifications may be made to adapt the various uses and characteristics without departing from the spirit and scope of the present invention as set forth in the following claims.

What is Claimed is:

1. A travel trailer characterized by a chassis assembly coupled to a wheel assembly, a compartment having at least one side wall and a forward wall, and a hitch assembly adjacent the chassis assembly and the forward wall, the hitch assembly is configured to couple to a mating hitch on a towing vehicle, the travel trailer comprising: a panel located between the side and forward walls; wherein the panel forms an angle between itself and at least the side wall that is greater than 90 degrees.

2. The travel trailer of claim 1, wherein the angle formed between the side wall and the panel reduces any right-angled attachment between the side and forward walls to improve the towing vehicle's turning radius relative to the travel trailer.

3. The travel trailer of claim 1, wherein the panel forms an angle between itself and forward wall that is greater than 90 degrees.

4. The travel trailer of claim 3, wherein the panel eliminates any right-angle attachment between the side and forward walls.

5. The travel trailer of claim 1, wherein the panel forms a recess directed inwardly toward the interior of the compartment.

6. A travel trailer comprising: a chassis having a front end and a rear end; wherein the chassis has a front outer frame rail located substantially perpendicular to a side outer frame rail; a wheel assembly coupled to the chassis adjacent the rear end; a hitch assembly attached to the chassis adjacent the front end; an outer coupling rail extending between the front and side outer frame rails; wherein the outer coupling rail forms an angle between itself and at least the side frame rail at a front corner of the travel trailer that is greater than 90 degrees.

7. The travel trailer of claim 6, wherein the coupling rail forms an angle between itself and the front outer frame rail that is greater than 90 degrees to improve the towing vehicle's turning radius relative to the travel trailer.

8. The travel trailer of claim 7, wherein the coupling rail eliminates a right-angle attachment between the side and front frame rails.

9. The travel trailer of claim 8, further comprising a front end cap located adjacent the front corner and the outer coupling rail, wherein the front end cap comprises an inwardly directed recess toward the chassis.

10. A travel trailer comprising: a chassis assembly which comprises a hitch assembly adjacent a front end of the trailer and a plurality of wheels adjacent a rear end of the trailer; a forward panel located at the front end; at least one side panel; and a corner panel that joins the forward and side panels to prevent an outer right-angled vertex from being formed between the forward and side panels to allow an increased turning radius for the trailer.

11. The travel trailer of claim 10, wherein the corner panel forms a recess along a front corner edge of the travel trailer.

12. The travel trailer of claim 11, wherein the chassis assembly comprises a frame assembly having a corner rail located at a front corner of the frame that does not form an outer right-angled vertex at the front corner of the frame.

13. The travel trailer of claim 12, further comprising a compartment having right and left front corner edges, each of which is recessed inwardly toward the interior of the compartment to allow an increased turning radius for the trailer.

14. A travel trailer comprising: a chassis which comprises a hitch located assembly adjacent a front end of the trailer and a plurality of wheels located adjacent a rear end of the trailer; a compartment comprising at least a forward panel portion located at the front end and at least one side panel portion; and a corner panel portion that joins the forward and the side panel portions and forms a recess directed inwardly toward the interior of the compartment to allow an increased turning radius for the travel trailer as compared to forward and the side panels that join to form an outer right-angled vertex.

15. A travel trailer for use with a towing vehicle having a mating hitch coupled thereto and configured to haul the travel trailer, the travel trailer comprising: a chassis comprising: first and second longitudinally extending side frame members oriented substantially parallel to each other and located exteriorly on the chassis; a forward cross-member located substantially perpendicular the first and second side members, wherein the forward cross-member is located exteriorly on the chassis and whose end does not attach directly to a corresponding end of the first side member; a first brace attached to adjacent the ends of forward cross-member and the first side member, located exteriorly on the chassis, and oriented non-parallel to both the forward cross-member and the first side member; and a hitch attached to a portion of the chassis and couples with the mating hitch on the towing vehicle.

16. The travel trailer of claim 15, wherein the towing vehicle has a bed that has the mating hitch attached thereto, and wherein a portion of the chassis is located over the bed.

17. The travel trailer of claim 16, further comprising a compartment attached to the chassis and having at least one recessed corner edge located at a forward end of the trailer adjacent the first brace to allow an increased turning radius of the towing vehicle.

18. A travel trailer configured to be coupled to, and towed by a vehicle, comprises, a compartment attached to a chassis that includes a front end and a rear end, wherein a plurality

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of wheels are attached to the chassis adjacent the rear end and a hitch assembly is attached to the chassis adjacent the front end, and wherein the compartment at the front end of the chassis forms first and second corners, and wherein a recess is located at each corner edge of the compartment such that cavities formed by each recess may receive a portion of the vehicle while the vehicle is engaged in a turn.

19. The travel trailer of claim 18, wherein the chassis comprises a frame that has angled corners adjacent the recesses at the front end of the compartment.

20. A travel trailer configured to be coupled to, and towed by a vehicle, which comprises a compartment attached to a chassis that includes a front end and a rear end, wherein a plurality of wheels are attached to the chassis adjacent the rear end and a coupling attached to the chassis adjacent the front end, and wherein the front end of the chassis forms first and second corner edges that are recessed inwardly toward the compartment.

21. The travel trailer of claim 20, wherein the compartment has front corner recessed edges located adjacent the recesses at the front end of the chassis.

22. A travel trailer configured to be coupled to, and towed by a vehicle, the travel trailer comprising: a chassis assembly having a front end and a rear end; a hitch attached to the chassis assembly adjacent the front end; a compartment attached to the chassis assembly; and a cap located at the front end of the chassis and attached to the compartment; wherein the cap has at least one front corner edge that is recessed inwardly toward the interior of the compartment.

23. The travel trailer of claim 22, wherein the cap further comprises a second front corner edge that is also recessed inwardly toward the interior of the compartment.

24. The travel trailer of claim 23, wherein the space formed by the recesses are configured to receive a portion of the vehicle when engaged in a turn.

25. The travel trailer of claim 24, wherein the cap is comprised of a monolithic structure.

26. The travel trailer of claim 24, wherein cap is comprised of a plurality of structures.

27. A front end cap for a travel trailer having a chassis assembly coupled to a wheel assembly, a compartment having at least one side wall and a forward wall, and a hitch assembly adjacent the chassis assembly and the forward wall, the hitch assembly configured to couple to a mating hitch on a towing vehicle, the front end cap comprising:

a first portion located between the side and forward walls and forming an angle between itself and the side wall that is greater than 90 degrees.

28. The front end cap of claim 27, wherein the first portion forms an angle between itself and the forward wall that is greater than 90 degrees.

29. A travel trailer chassis comprising:

a front outer frame rail;

a side outer frame rail substantially perpendicular to the front outer frame rail;

an outer coupling rail extending between the front and side outer frame rails, the outer coupling rail forming an angle between itself and the side outer frame rail at a front corner of the chassis that is greater than 90 degrees.

30. The chassis of claim 29, wherein the outer coupling rail forms an angle between itself and the front outer frame rail that is greater than 90 degrees.

31. A travel trailer front end cap comprising:

a forward panel;

a least one side panel; and

a corner portion connecting the forward and side panels and forming a recess between the forward and side panels.

32. A travel trailer chassis comprising:

a forward edge beam;

an outer side frame member substantially perpendicular to the forward edge beam; and

an arcuate brace connecting the forward edge beam to the outer side frame member.

33. A travel trailer chassis comprising:

a forward edge beam having a first end;

an outer side frame member substantially perpendicular to the forward edge beam, the outer side frame member having a forward end;

a first cross beam substantially perpendicular to the side frame member and connected to the forward end of the side frame member at a location rearward of the forward edge beam; and

a second cross beam substantially parallel to the outer side frame member and connected to the first cross beam and the first end of the forward edge beam.

34. The chassis according to claim 33, wherein the outer side frame member, first cross beam, second cross beam and forward edge beam form an inwardly directed recess.

35. The chassis according to claim 34, wherein the inwardly directed recess is a right angle.

36. A travel trailer chassis comprising:

a forward edge beam having a first end;

an outer side frame member substantially perpendicular to the forward edge beam, the outer side frame member having a forward end; and

a brace connected to the front edge beam and the outer side frame member and forming an angle with the outer side frame member of greater than 90 degrees.

37. The chassis according to claim 36, wherein the brace forms an angle with the forward edge beam of greater than 90 degrees.

38. The chassis according to claim 36, wherein the brace is connected to the first end of the forward edge beam and forward end of the outer side frame member.

* * * * *

Gallagher, Gerard T.

From: Scott Tuttle [scott@heartlandrvs.com]
Sent: Monday, July 18, 2005 6:48 AM
To: Gallagher, Gerard T.
Subject: RE: Formal Drawings for Application

Regarding the drawings, the only thing that I noticed that needs to be changed is that Figure15 shows the corner with the same configuration as that of Figure 11, not of Figure 14. Figures 12 and 13 show the 5th wheel with an "inverse" corner, while Figures 14 and 15 are supposed to show the corner with a "radius". Only 14 does, 15 shows it with the same inverse as angle as Figure 11.

Besides that, I think you're ready to go.

ST

-----Original Message-----
From: Gallagher, Gerard T. [mailto:Gerard.Gallagher@bakerd.com]
Sent: Thursday, July 14, 2005 10:59 AM
To: Scott Tuttle
Subject: Formal Drawings for Application

Scott,

Attached are formal drawings that I had our draftsman prepare for the application. Please confirm that the drawings are accurate or call me so that we can discuss any changes that may be necessary. Thanks.

Jerry

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Indiana | Washington, D.C. | China

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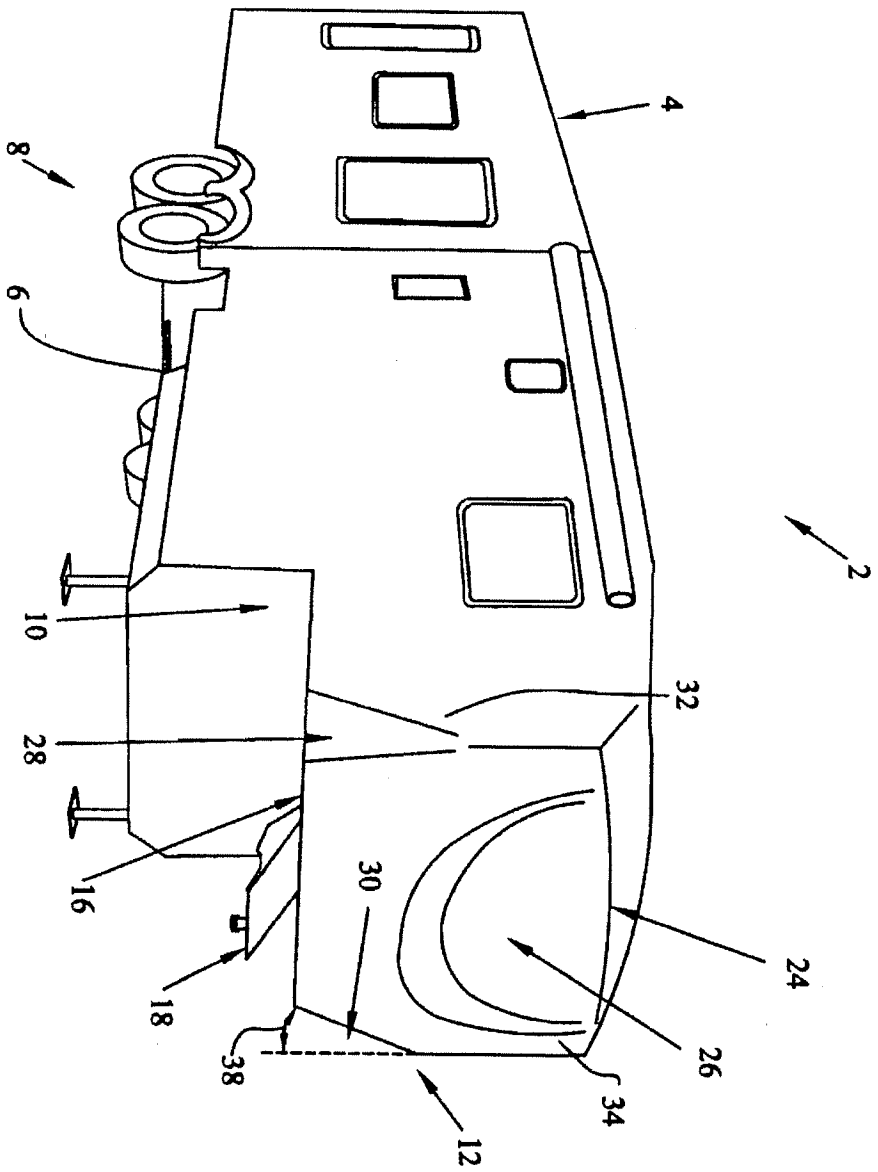


FIG. 1

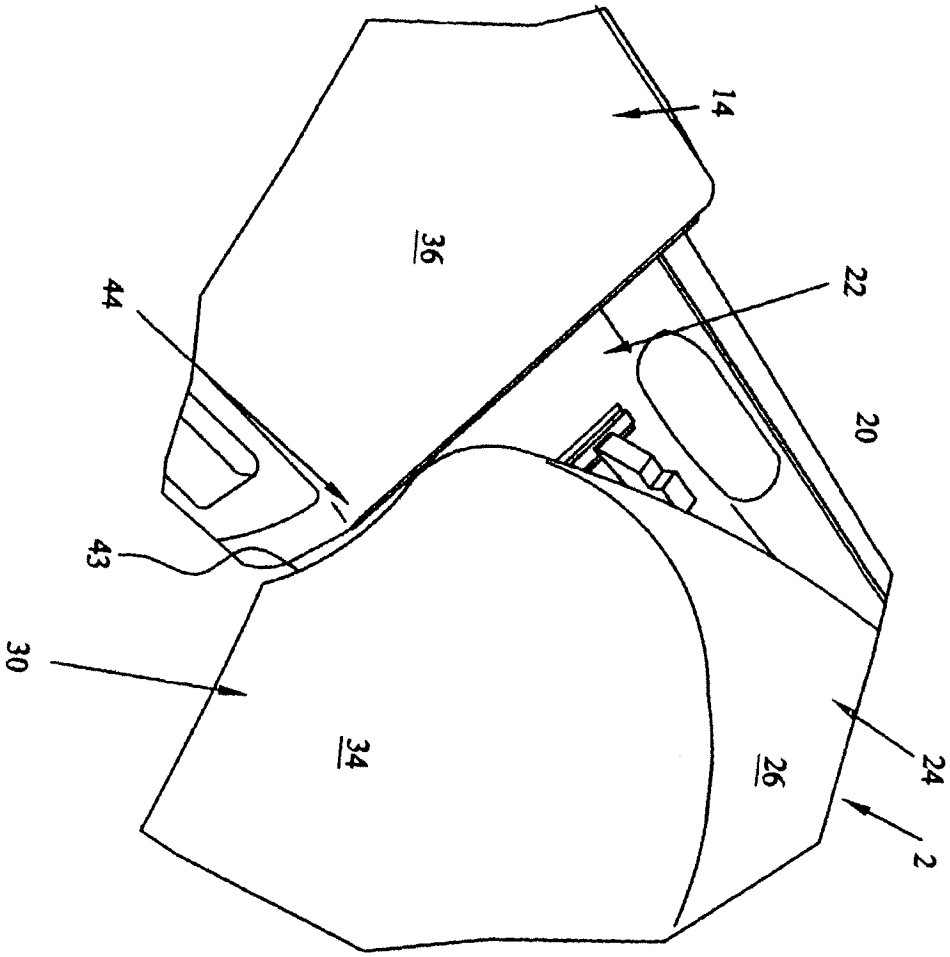


FIG. 2

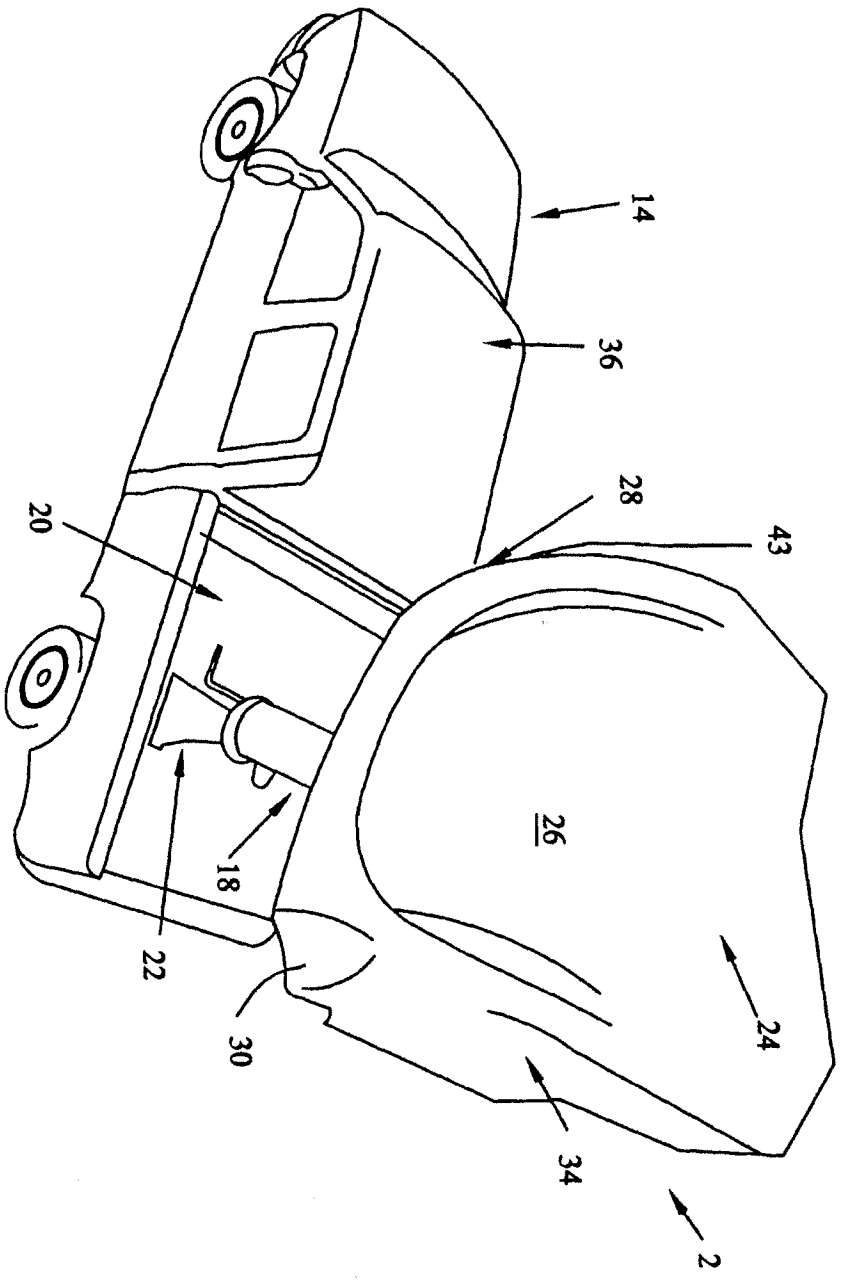


FIG. 3

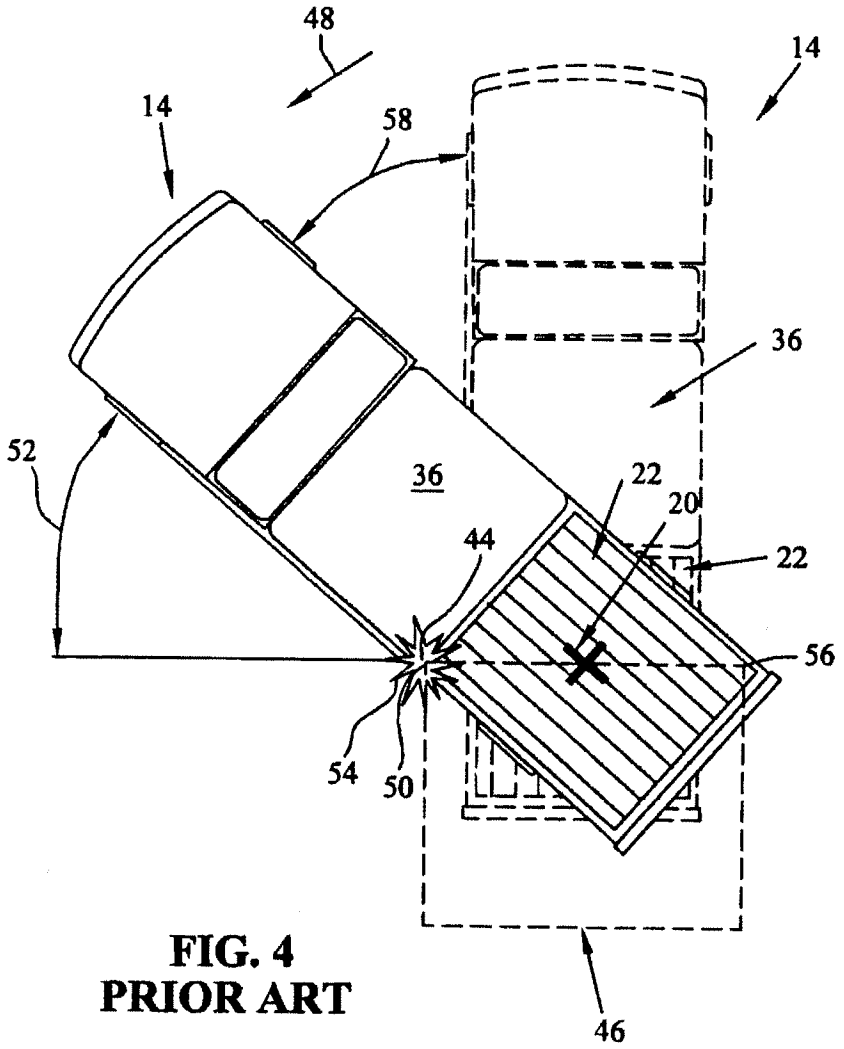


FIG. 4
PRIOR ART

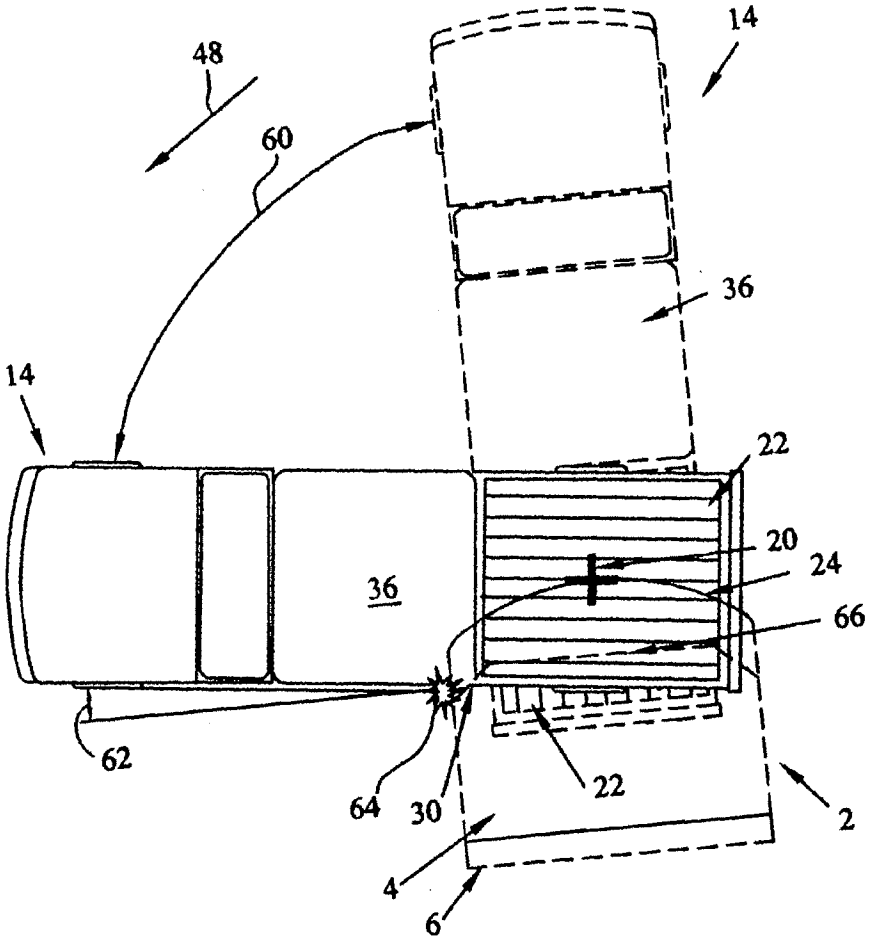
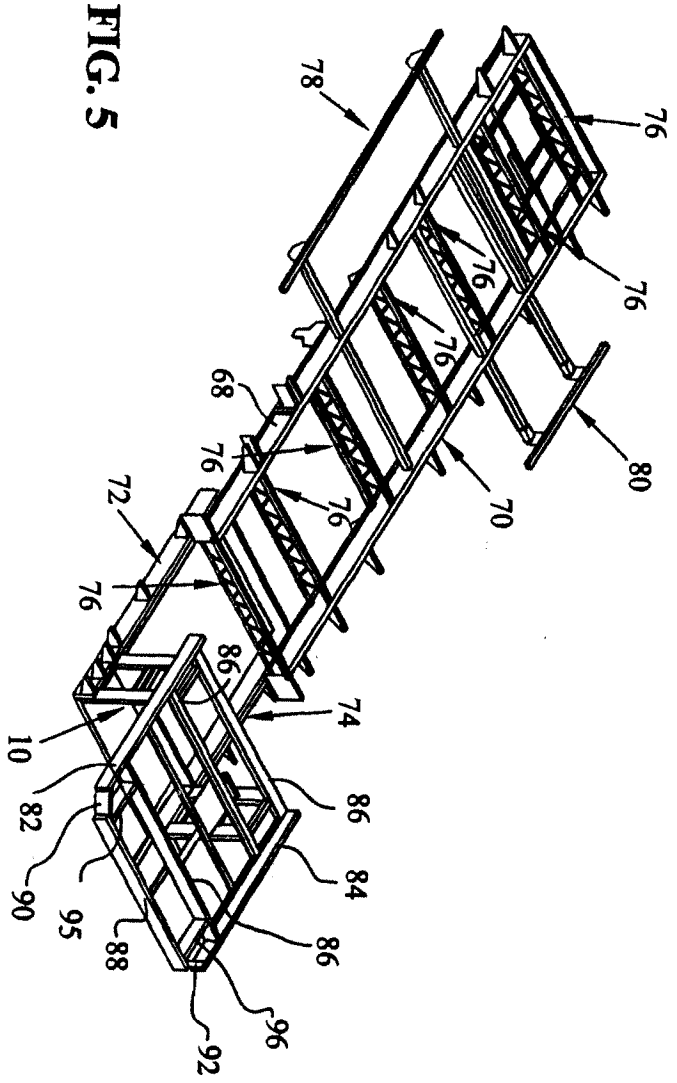


FIG. 5

FIG. 5



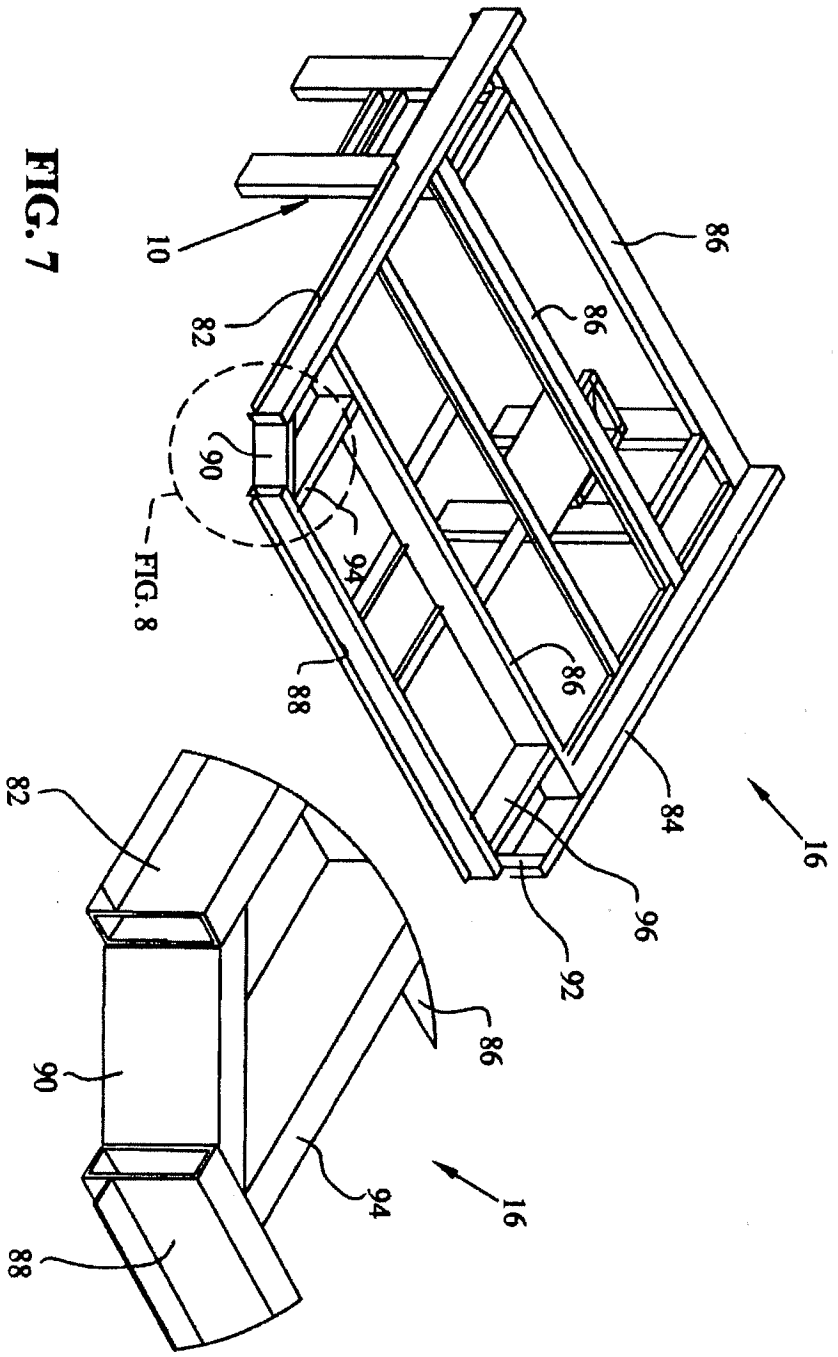


FIG. 7

FIG. 8

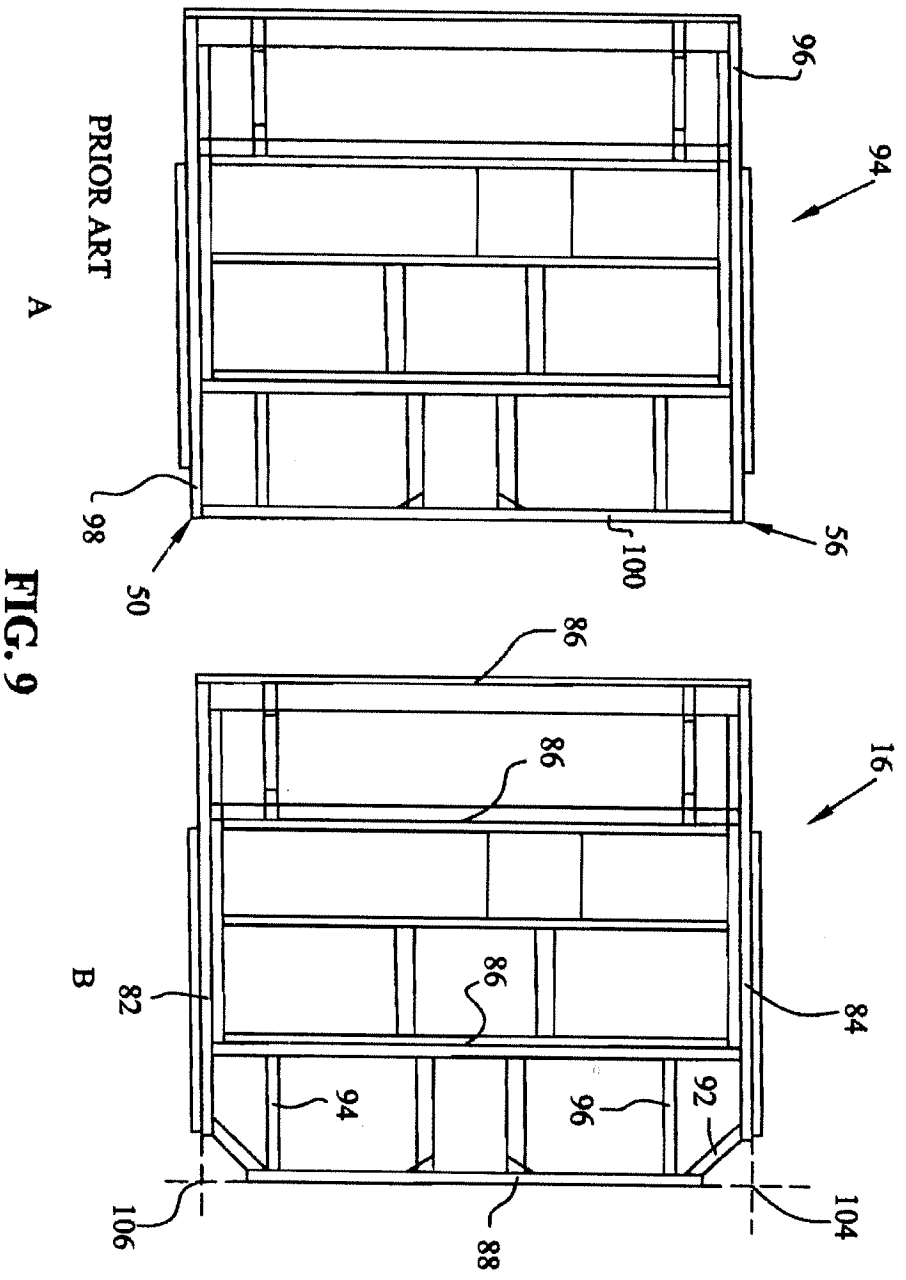
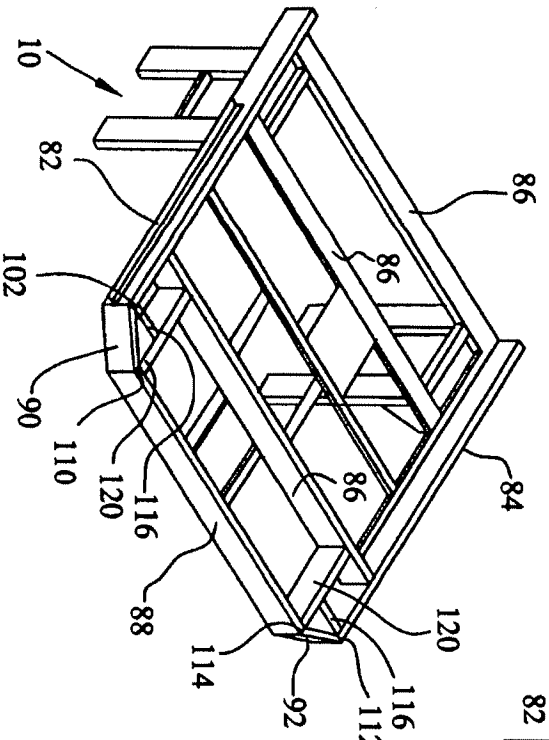


FIG. 9


10
82
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92
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116
120
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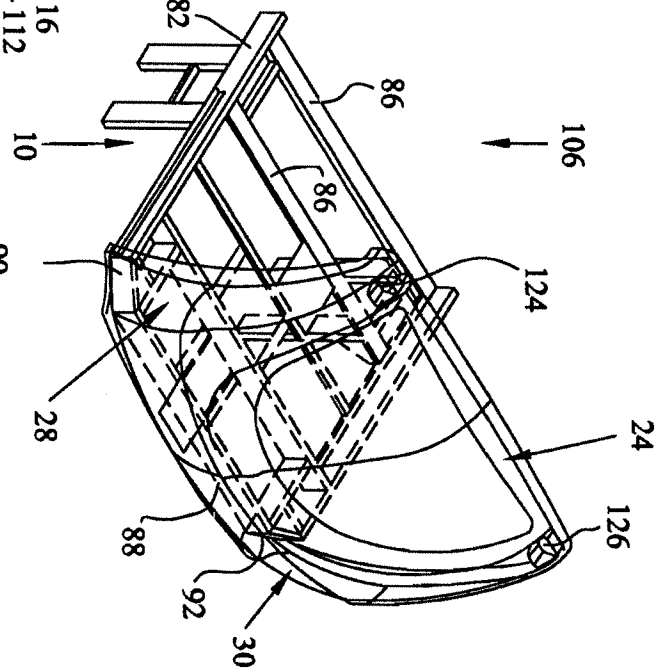
86
86
84
106

FIG. 10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106
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124
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126
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92
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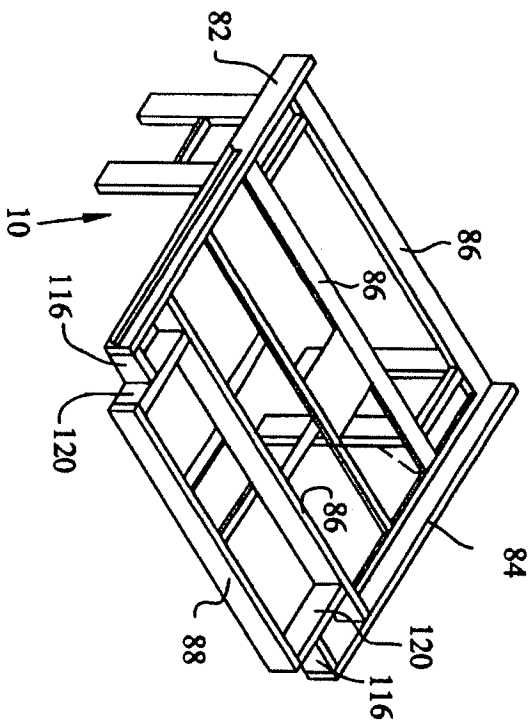
FIG. 11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116
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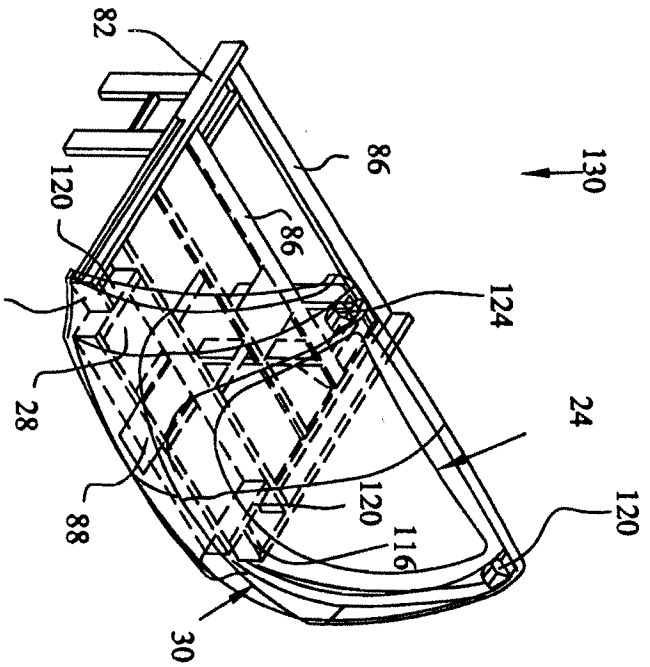
FIG. 12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116
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124
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116
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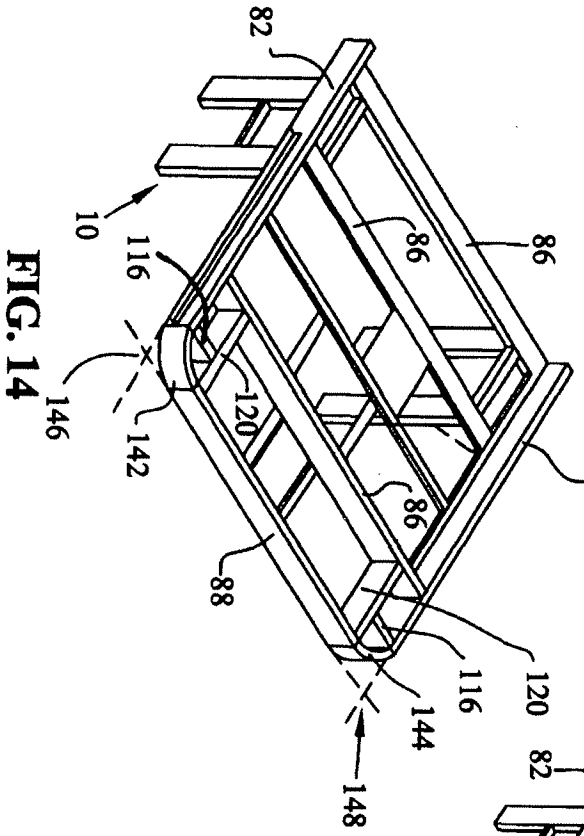
FIG. 13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146
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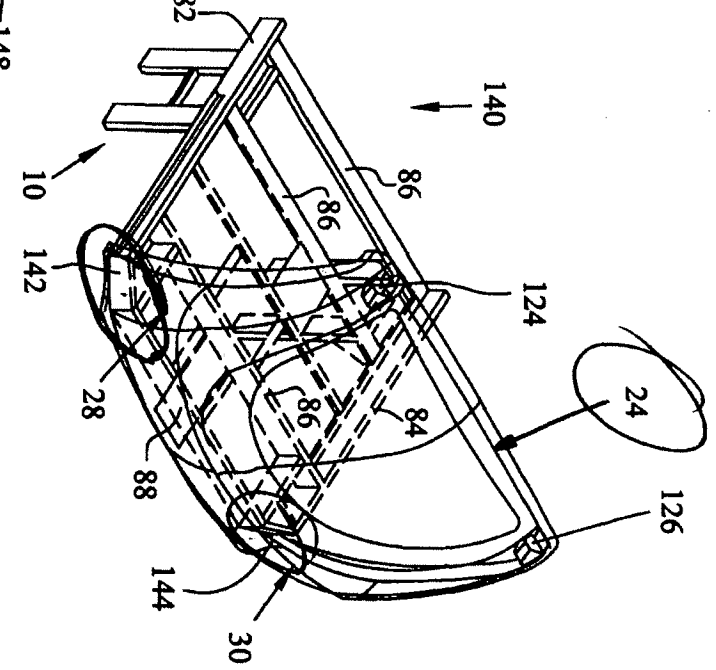
144
148

FIG. 14


82
140
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142
124
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24
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144
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FIG. 15

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Brian R. Brady et al.

Serial No.: 11/091,070

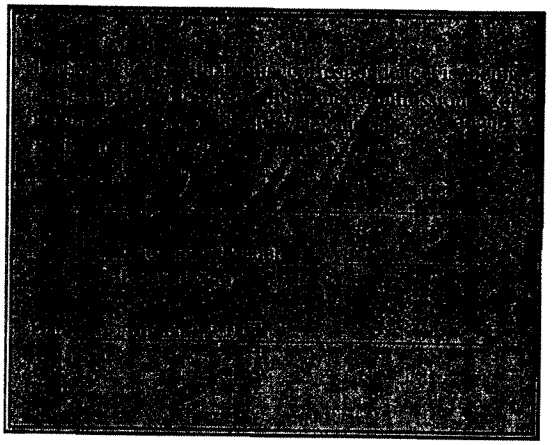
Filed: March 28, 2005

For: TRAVEL TRAILER HAVING IMPROVED TURNING RADIUS

Group Art Unit: 3609

Examiner: Stabley, Michael R.

Attorney Docket No.: HRV0001.1



RESPONSE TO OFFICE ACTION

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

Sir:

In response to the Office Action of **July 24, 2007**, Applicants submit this Response and Amendment and request that the Examiner please reconsider the above-identified application. With this response, Applicants provide **Amendments to the Specification** beginning on page **2, Amendments to the Claims** beginning on page **3,** the **Amendments to the Drawings** beginning on page **4** and **Remarks/Arguments** beginning on page **5.**

Amendments to the Specification:

Please amend the specification as follows:

[Para 47] Top views of the upper deck of the travel trailer are shown in Figs. 9a and b. Specifically, Fig. 9a is a prior art version of such an upper deck, whereas Fig. 9b depicts upper deck 16 as discussed with respect to Figs. 6 through 8. Comparing the structure of 9a to the structure of 9b much is similar except for the forward corners and the forward edge beams. For example, the prior art upper deck 94 uses side frame members 96, 98 to attach to forward edge beam 100 to form corner right-angled edges 50, 56. (See, also, Fig. 4.) It is these corner edges that can limit the turning radius of vehicle 14 for the reasons previously discussed. By comparison, such corner edges have been removed from upper deck 16, as indicated by reference numerals ~~106~~ 106A, 104 in Fig. 9b.

Listing of Claims

Please cancel claims 1-32.

33. (Previously Presented) A travel trailer chassis comprising:

a forward edge beam having a first end;

an outer side frame member substantially perpendicular to the forward edge beam, the outer side frame member having a forward end;

a first cross beam substantially perpendicular to the side frame member and connected to the forward end of the side frame member at a location rearward of the forward edge beam; and

a second cross beam substantially parallel to the outer side frame member and connected to the first cross beam and the first end of the forward edge beam.

34. (Previously Presented) The chassis according to claim 33, wherein the outer side frame member, first cross beam, second cross beam and forward edge beam form an inwardly directed recess.

35. (Previously Presented) The chassis according to claim 34, wherein the inwardly directed recess is a right angle.

Please cancel claims 36-38.

Amendments to the Drawings

Please replace Figures 7 and 8 with the appropriate enclosed replacement sheet, in which reference numeral 94 has been changed to reference numeral 95, as indicated in red. This change ensures Figures 7 and 8 are consistent with Figure 6 and paragraph 45 of the specification.

In addition, please replace Figures 9A and 9B with the appropriate enclosed replacement sheet, in which reference numeral 106 has been changed to reference numeral 106A, as indicated in red. This drawing change ensures Figure 9B remains consistent with the change to the specification set forth above. Furthermore, in order to ensure Figure 9b is consistent with Figures 6 through 8 and paragraph 45 of the specification, please change reference numeral 94 to reference numeral 95, as indicated in red.

Remarks

Applicant acknowledges the Office Action mailed on July 24, 2007. In the Office Action, the Examiner indicates that claims 33 through 35 are in condition for allowance. In order to passage quickly to issuance, Applicant has cancelled all rejected claims. Accordingly, only the allowed claims, claims 33 through 35, remain pending in the application.

In the Office Action, the Examiner rejects the drawings due to various informalities. Applicant submits that the changes described above and depicted on the attached drawing sheets correct the informalities with the drawings. Specifically, the changing of reference numeral 94 to reference numeral 95 in Figures 7, 8 and 9B, ensures that these figures are consistent with Figure 6 and the specification at paragraph 45. In addition, the change of reference numeral 106 to 106A in Figure 9B ensures that Figure 9B is consistent with Figures 10 and 11, both of which utilize numeral 106 to indicated the upper deck frame.

Furthermore, the above indicated change to the specification ensures that the specification is consistent with the drawing changes discussed above.

For the reasons set forth above in detail, the pending application is in condition for allowance. Accordingly, Applicant requests passage to issuance. If necessary to affect a timely response, please consider this paper a request for an extension of time, and charge any shortages in fees, or apply any overpayment credits, to Baker & Daniels' Deposit Account No. 02-0387 (973963.2). However, please do not include the payment of issue fees.

Respectfully submitted,

Thomas J. Mauon, Reg. No. 56,686
BAKER & DANIELS LLP
205 West Jefferson Boulevard, Suite 250
South Bend, IN 46601
Telephone: (574) 234-4149
Fax: (574) 239-1900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re patent application of:	)	Before the Examiner
	)	
Brian R. Brady et al.	)	
	)	
Serial No: 11/091,070	)	Group Art Unit: 3611
	)	
Filed: 03/28/2005	)	
	)	
TRAVEL TRAILER HAVING IMPROVED TURNING RADIUS	)	

INFORMATION DISCLOSURE STATEMENT

Applicant wishes to bring to the attention of the Examiner the documents identified on the attached PTO Form PTO/SB/08A in accordance with 37 CFR §1.97(b)(3), as these documents are being identified before the first Office Action.

The filing of this Information Disclosure Statement shall not be construed as an admission that the information cited is, or is considered to be, material to patentability as defined in § 1.56(b), or that these documents are prior art.

It is believed that no fee is required for consideration of the submitted items. Should any fee be required, however, please charge such fee to Deposit Account No. 02-0387, but not to include any payment of issue fees.

Respectfully submitted,

Gerard T. Gallagher, Reg. No. 39,679
BAKER & DANIELS LLP
205 West Jefferson Blvd., Suite 250
South Bend, IN 46601
Telephone: (574) 234-4149

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: June 23, 2005.

Gerard T. Gallagher

PTO/SB/08A (08-03)
Approved for use through 07/31/2006. OMB 0651-0031
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	11/091,070
Filing Date	03/28/2005
First Named Inventor	Brian D. Brady
Art Unit	3611
Examiner Name	
Attorney Docket Number	HRV0001.01

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-Kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		US- 5746473	05-05-1998	Crean	
		US- 6170903 B1	01-09-2001	Crean	
		US- 6231115 B1	05-15-2001	Crean	
		US- 6343830 B1	02-05-2002	Ingram et al.	
		US- 6502894 B1	01-07-2003	Ingram et al.	
		US- 6792630 B1	09-21-2004	Palmatier et al.	
		US- 6802521 B1	10-12-2004	Boughton	
		US- 6807735 B2	10-26-2004	Crean	
		US- 6808195 B2	10-26-2004	Smith	
		US- 6832809 B2	12-21-2004	Wang et al.	
		US- 6846000 B2	01-25-2005	Grinde et al.	
		US- 6860545 B1	03-01-2005	Ingram et al.	
		US- 6866283 B2	03-15-2005	Alguera et al.	
		US- 6866330 B2	03-15-2005	Jones et al.	
		US-			
		US-			
		US-			
		US-			
		US-			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]-Number[4]-Kind Code[5] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

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 2 hours 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, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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