

(12) INNOVATION PATENT
(19) AUSTRALIAN PATENT OFFICE

(11) Application No. **AU 2018100696 A4**

(54) Title
Develop caravan is a innovative method of increasing the size of a living area for caravans, motor homes and cabins. The innovation allows side walls to be lowered to form a deck and front wall, with two swing out walls to fully enclose the area. An awning or retractable roof covers the expended living area.

(51) International Patent Classification(s)
B60P 3/34 (2006.01) **B60P 3/39** (2006.01)
B60P 3/38 (2006.01)

(21) Application No: **2018100696** (22) Date of Filing: **2018.05.23**

(30) Priority Data

(31) Number	(32) Date	(33) Country
2017902930	2017.07.26	AU

(45) Publication Date: **2018.06.28**

(45) Publication Journal Date: **2018.06.28**

(45) Granted Journal Date: **2018.06.28**

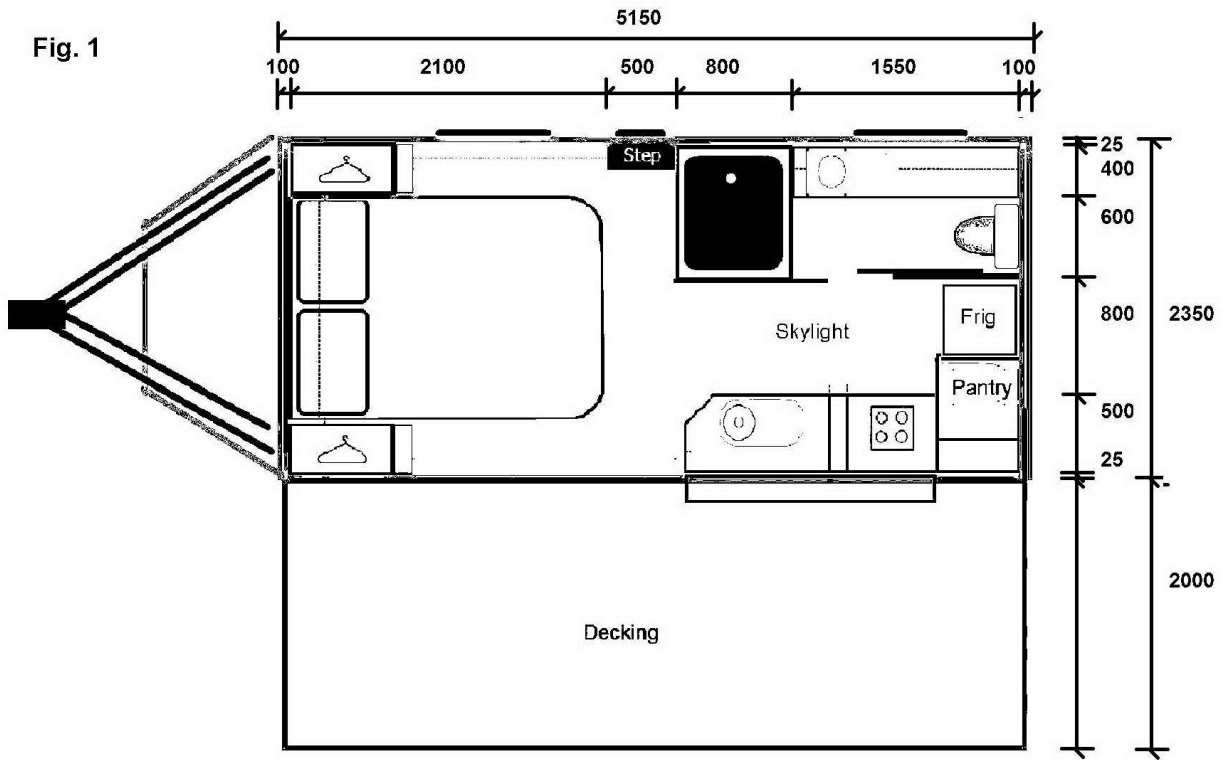
(71) Applicant(s)
Barry Ian Miller

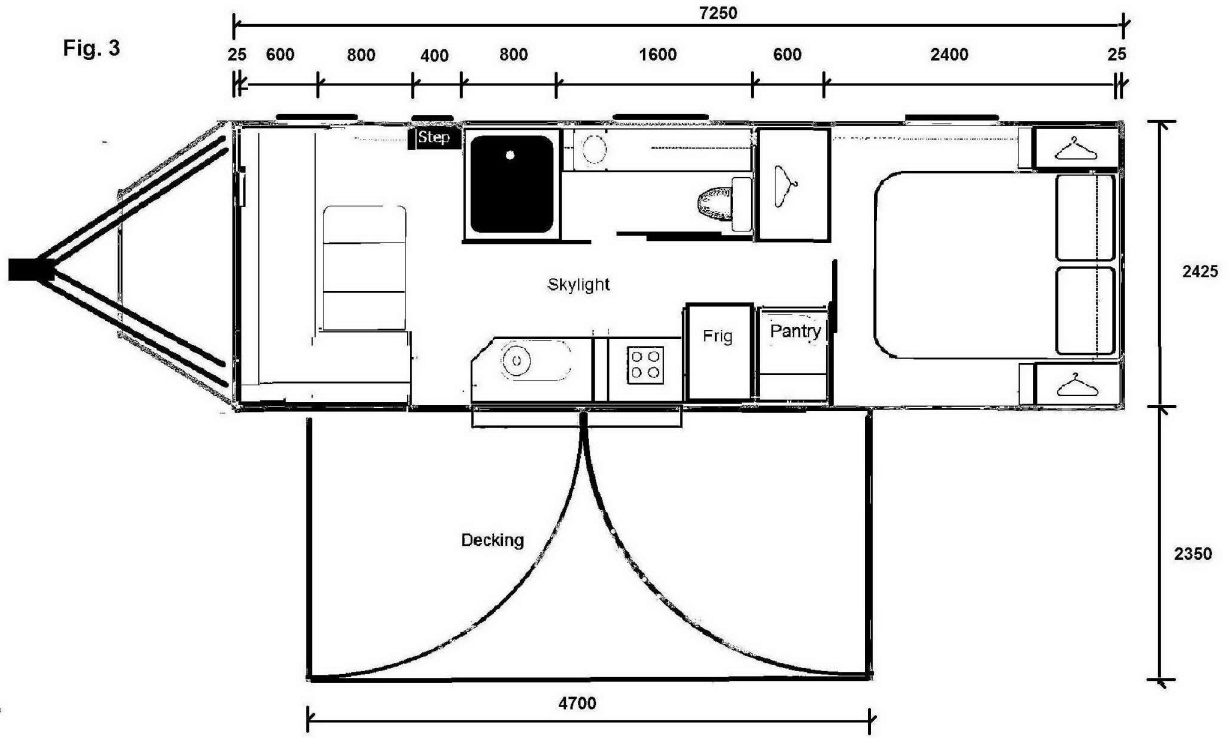
(72) Inventor(s)
Miller, Barry Ian

(74) Agent / Attorney
Barry Ian Miller, 6C, 381 Toorak Rd, South Yarra, VIC, 3123, AU

Abstract

The develop caravan concept can be used on any caravan design or motorhome with slight alterations to the internal layout. The internal layout ideally will have a kitchen with island bench on the side that is opening (fig.1). Where the opening is beside a bedroom ideally there will be a space at the end of the bed where a person can access the decking (fig.3). All the wall materials are standard caravan materials which could be an aluminium or fibreglass sandwich and the decking material (internal wall when upright) will be a light Malibu or similar to give strength and durability. The two side walls are similar to gates with pin hinges. The decking wall will have at least 6 stands that will support the deck to the ground being height adjustable. The caravan is fully operational without expanding the living areas or only expanding some of the area.





AUSTRALIA
Patents Act 1990

COMPLETE SPECIFICATION INNOVATION PATENT

DEVELOP CARAVAN

(Pop Out Caravan, Doubla or Tripla)

The following statement is a full description of this invention,
including the best method of performing it known to me:

Background of the Invention

[001] A caravan that increases its size, the present invention relates to a new way of building a caravan so that the owner can have more space. For caravan owners who want access to the outside environment without increasing the overall size of the van whilst towing.

[002] More particularly the invention relates to the ability to swing out and fold down walls into a decking area and then having an awning that will make the area fully enclosed background.

[003] Caravan customisation is a fast growing area of interest for many retirees and holiday enthusiasts. This customisation of a caravan will allow for a larger area for recreational purposes and will be of great interest to all ages.

[004] Recently, the development of extendable current caravans with a push out area in various sizes and shapes have been on the increase. However this can only give you a marginal larger area to use in the caravan. These areas are either a dining area or bedroom area in large with the slide out extension however these extension caravans suffer many drawbacks in that they only increase the size of the area by small amount and require regular servicing to make sure the sliding mechanism does not get caught or jammed. If a caravan is in any sort of damage that slide out area this becomes a real problem to repair. Another drawback of these extendable caravans is that they only create a small walking area where the position has extended. You don't really get a sense of an openness, an open area within the caravan after the extension therefore a need exists for a caravan that can extend its size to almost double its original size in a low-cost and functional way. A caravan with an area can be used as a fully open semi enclosed or fully enclosed area for whatever purpose the owner wishes to use the area for example barbecue area living area dining area or an extension to the kitchen meals area or even sleeping area.

A brief summary of the invention and its advantages

[005] A brief summary of the invention the present invention comprises of a way of lowering a wall and sliding or swinging out to side walls to double the size of the caravan and then an awning that can make the area transform from a decking area open to a fully enclosed area.

[006] The wall is lowered by hinges at the base of the wall. The internal cladding of this wall is decking material so when it folds down who creates a deck area the two side walls are located directly behind the sidewall and can be swung out after the main wall has been lowered down. Hinged to that main wall is a front wall, once this one is swung up, the two side walls then swing around clip into the front wall making it solid and secure.

[007] The original design can be in many sizes of caravan and the opening of the caravan does not necessarily have to be the full sidewall it can be part of the sidewall also the invention can be used to triple the size of a caravan by swinging out both sides of the caravan and extending both sides of the caravan or leaving the rear of the caravan and using the same methodology.

A brief description of the drawings

[008] The floor plan shows a very simple living area open kitchen and a bathroom. The layout comprising of shower kitchen and toilet with room at the rear of the caravan for a refrigerator and pantry Fig 1. This layout of a simple 5150mm version of the invention, one of the layouts that could be used

[009] Fig. 2 to illustrate the perspective view looking from the end of the caravan to show the height of the caravan and the openness of the floor area between the kitchen and bathroom. Fig 2 swing out slide walls length dependent on trailer opening required links with notches the front wall height to be 1900 allowing for the warning blind do have a slope for water run-off and yet still be at standing height inside the front wall.

[010] Fig 4 shows the side view of the caravan once the wall is lowered and the two side walls or swing out it also shows how the sidewalls swing out into place to create an enclosed area and also shows the awning systems were that's positioned on the side of the caravan. Fig 4 is a side elevation to show the storage unit which acts as a windbreaker and can be used for hanging space and the storage under the caravan and the dimensions of the wall fold down for the decking.

[011] Fig. 6 shows the storage areas and in particular the hanging space at the end of their caravan which is unique feature of this test of this version of the design.

Detailed description of the invention

[012] The detailed description of the invention the terminology used herein is the purpose of describing the particular features of the invention but not intended to limit the invention.

[013] Related information the wall draw will have a hydraulic devices to enable the will to be lowered slowly and when then to help put the wall back into place the morning will have special positions on each Warwick and clip into as shown in Fig 6.

[014] The overall height of the caravan is higher than the standard caravan due to the higher floor height which enable storage underneath and all the electrical and plumbing to be run underneath the caravan to save money to 4 as a cheaper option and easier to service

[015] The special hinge system used to pivot the wall into the decking position is part of this invention and it allows the wall to be lowered and level with the caravan floor without any gaps. Gas struts or a coiled spring will assist in the lowering and raising of the decking wall.

[016] Fig 7 shows an alternative longer caravan model and a different layout using the same invention to increase the size of the overall band. [017] In Fig 8 another layout of a 7250mm van which shows that use of the invention that can make a larger area and key design changes in the layout

[018] Fig 2 swing out slide wars length dependent on trailer opening required links with notches the front war height to be 1900 allowing for the warning blind do have a slope for water run-off and yet still be at standing height 1900 mm inside the front wall

[019] Fig 2 shows the notches for awning placement the awning can be placed at different extension lengths to let some light into the decking area or completely cover the decking area. Fig 2 shows the shape of a slide out, side wall for the decking and also shows the dimensions for a swing outside wall design for the decking.

[020] Fig 3 shows the swing out slide wall system which creates a width of the caravan of an additional 75 mm increasing the overall width to 2425 millimetres

[021] Fig 5 shows the awning blind extension pull out bar with steel rod ends to fit into the sidewall notches. Fig 5 shows the window and

door layout as a cutaway view and also indicates the steel frame to support the decking wall and hydraulics struts and hinges.

[022] Fig.10 shows how the external decking wall has a folded front wall and behind this are two swing out, side walls to completely enclose the decking area. A detailed drawing showing the side walls and the front wall hinged to the side decking wall of the caravan how they sit together when the caravan is packed up ready to travel on the road total width of 100 mm.

[023] Fig 6 shows a another layout with the bathroom at the end of the caravan and full decking folding down on one side of the van with sliding doors at both ends of the van to create the side walls for the decking

[024] Fig. 9 shows a simple layout of the van with decking folding out on both sides of the caravan to almost triple the usable space on both sides walls which swing out are used. Fig. 9 shows the opening for the decking can be on both sides of the caravan or even the end of the caravan situated at different positions using the same methodology of the doors which swing out forming to side walls of the decking with the front wall of the decking being hinged to the decking floor as shown in Fig 2.

[025] Fig 8 shows an optional clothes hanging space for the front storage area.

Claim

The claims defining the Develop Caravan are as follows:

1. The innovation can be used in the manufacture of any size caravan or motorhome to substantially increase the overall its overall living area size.
2. The innovation create an open or closed deck on one or more sides of the caravan or motorhome.
3. The Innovation can be made out of standard caravan materials where the external dick wall and external walls that swing out complement the external walls of the caravan or motorhome.
4. The Innovation internal walls can be made out of standard caravan materials to match and compliment the caravan or motorhomes internal walls.
5. The internal wall which lowers down to form a decking and a hinged front wall can be clad with standard decking material on a strengthened aluminium frame to take the weight of up to 20 people.
6. The hinges used on the decking wall to lower and raise the wall allow the decking wall to slide clear of the floor of the caravan or motorhome and then swing down to be level with the existing floor of the caravan or motorhome.
7. The external dimensions of the caravan or motorhome will not be altered with the innovation so they will still meet Australian Standards.
8. The walls can swing out or slide out either side of the decking.
9. A locking system consisting of pins unlocked with a key together with clamps on the corners of the wall will make the sidewall secure whilst towing or driving.
10. The weight distribution and balance with the extra walls and framing around an opening side will be counterbalanced with water tanks petrol tanks refrigerator washing machine and other weighty items.
11. The swing out doors for the side walls, and the decking wall being lowered can be motorized.

12. The decking wall will hinge from a height determined by The Wheel Arches which can be lower with smaller diameter wheels and tyres.

13. The extended area can be covered with an awning or retractable roof slightly wider than the decking covering the whole or part of the area.

14. Once the decking is lowered one swing out wall can be remain closed to give privacy for a bedroom area and leaving the decking completely open on one side.

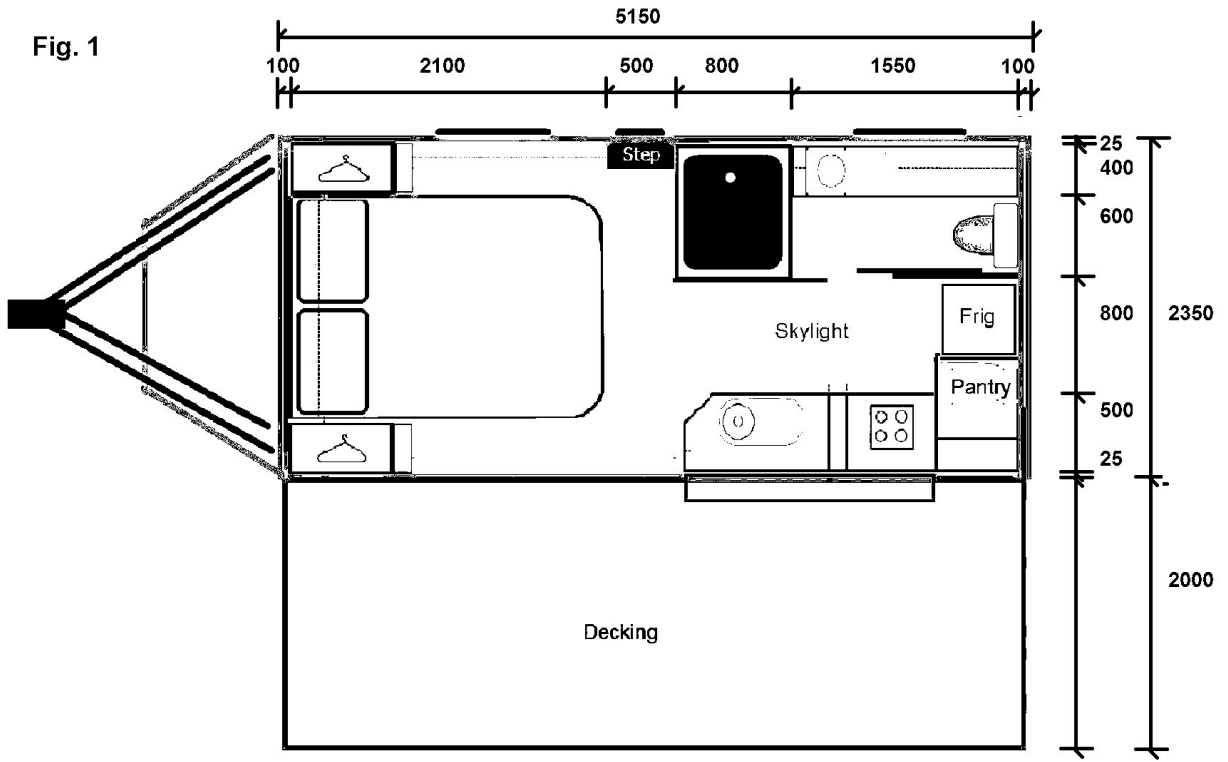
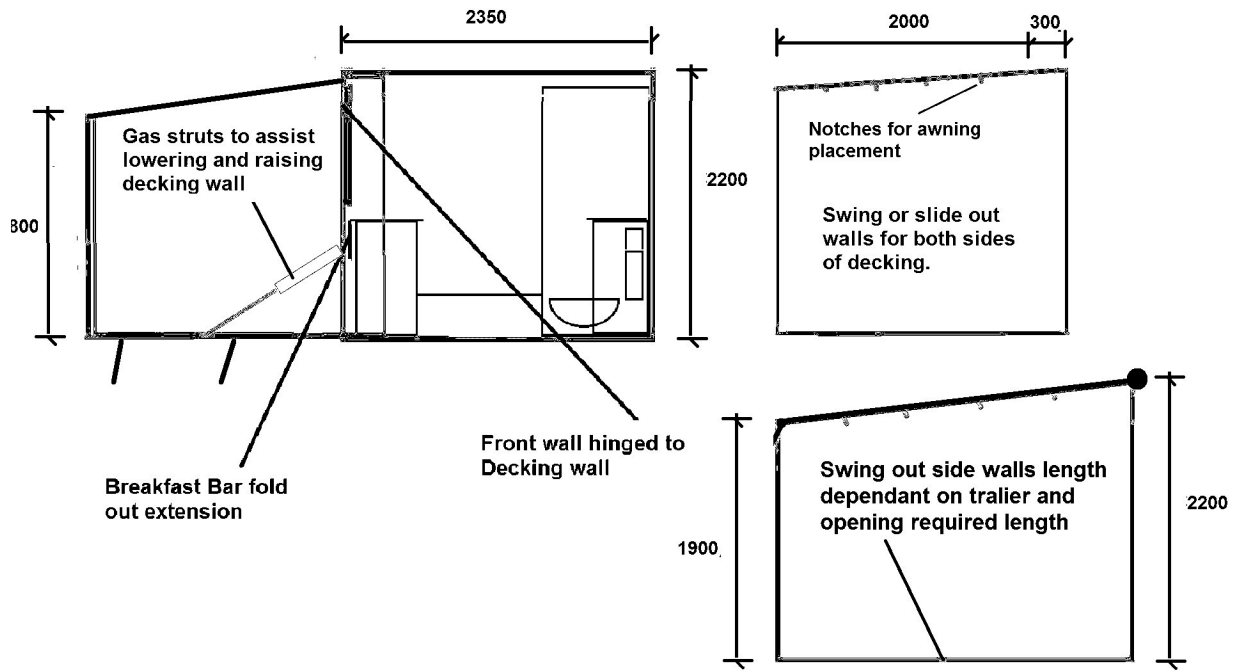


Fig. 2



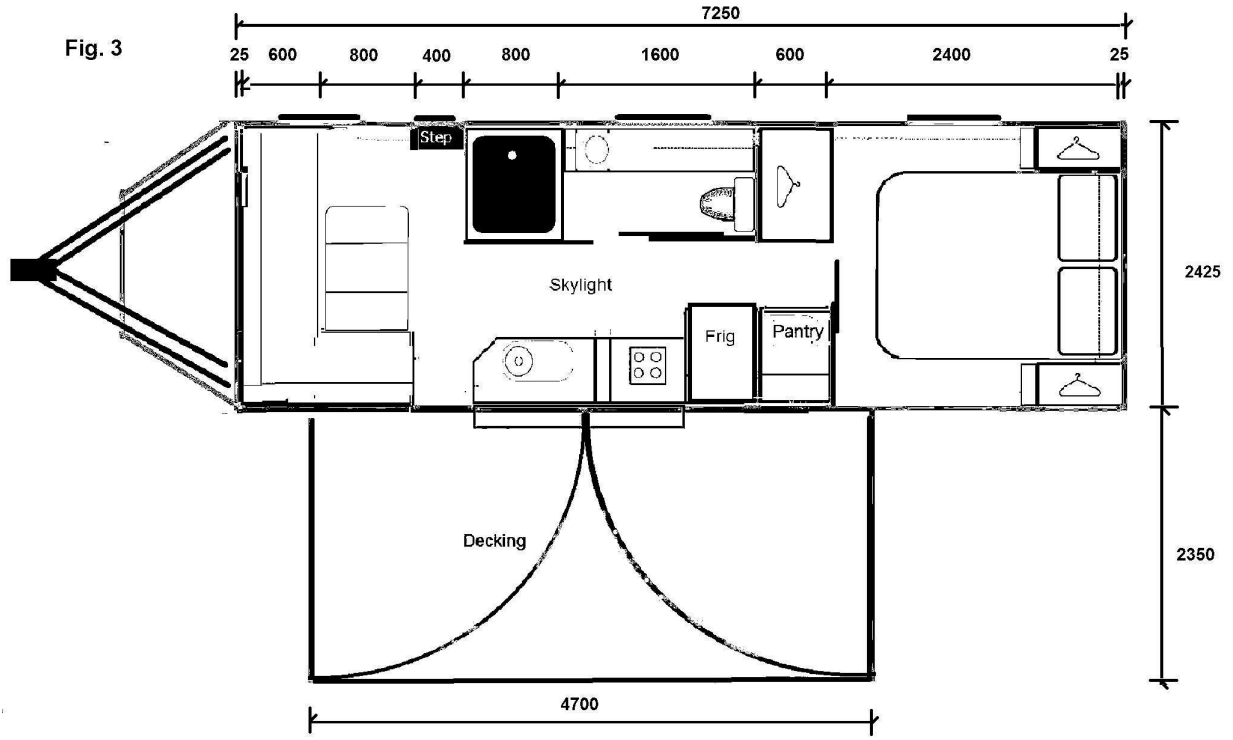
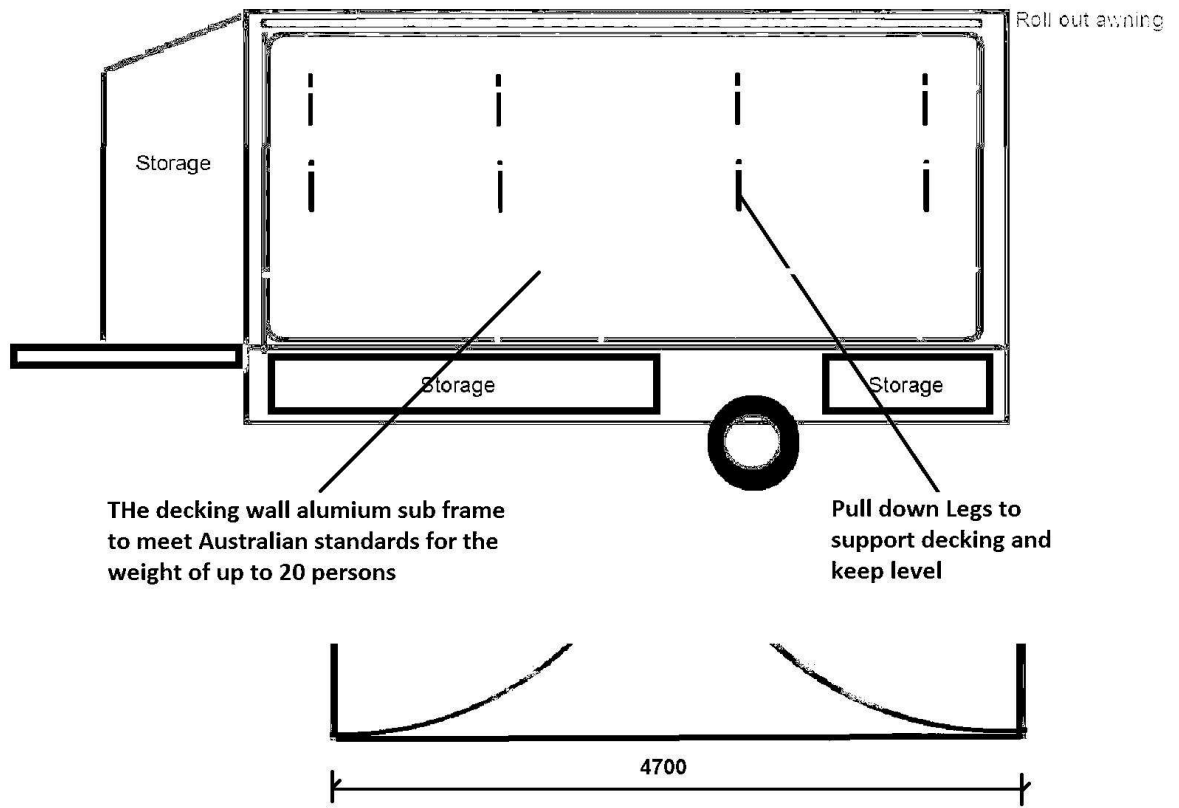


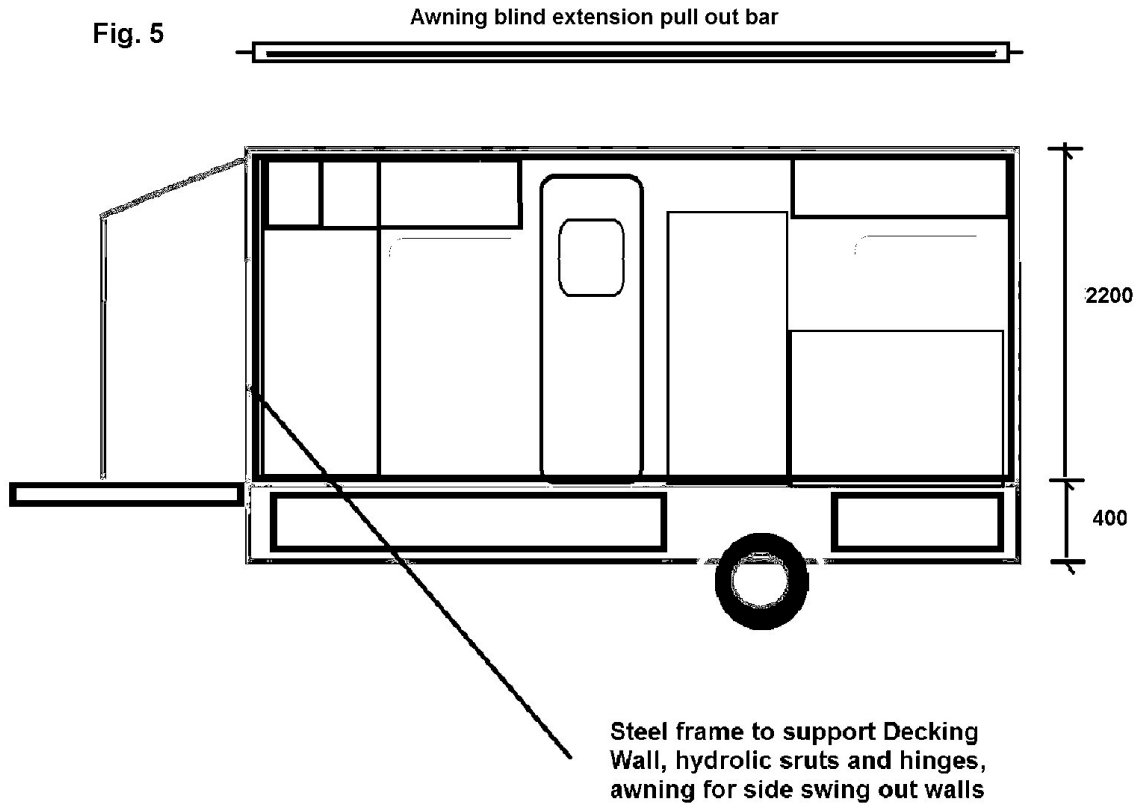
Fig. 4

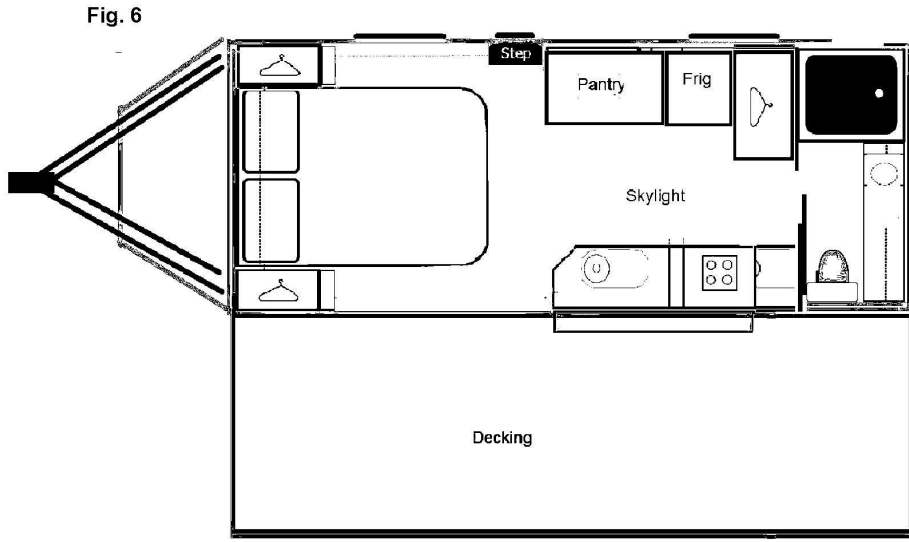


The decking wall alumium sub frame to meet Australian standards for the weight of up to 20 persons

Pull down Legs to support decking and keep level

4700





This inventive method can also be used for a winebago or van to increase its living area.

Fig. 7

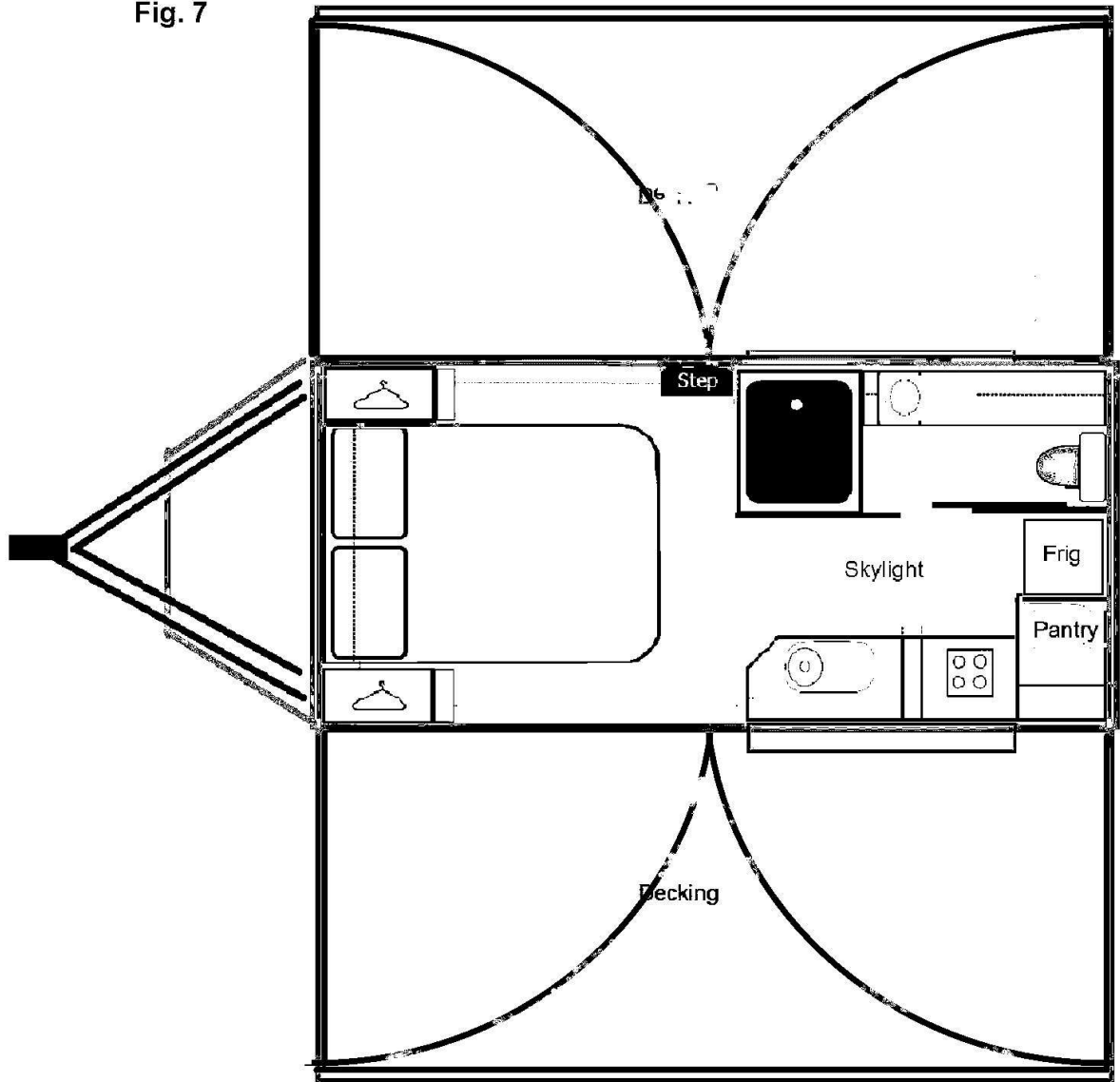


Fig. 8

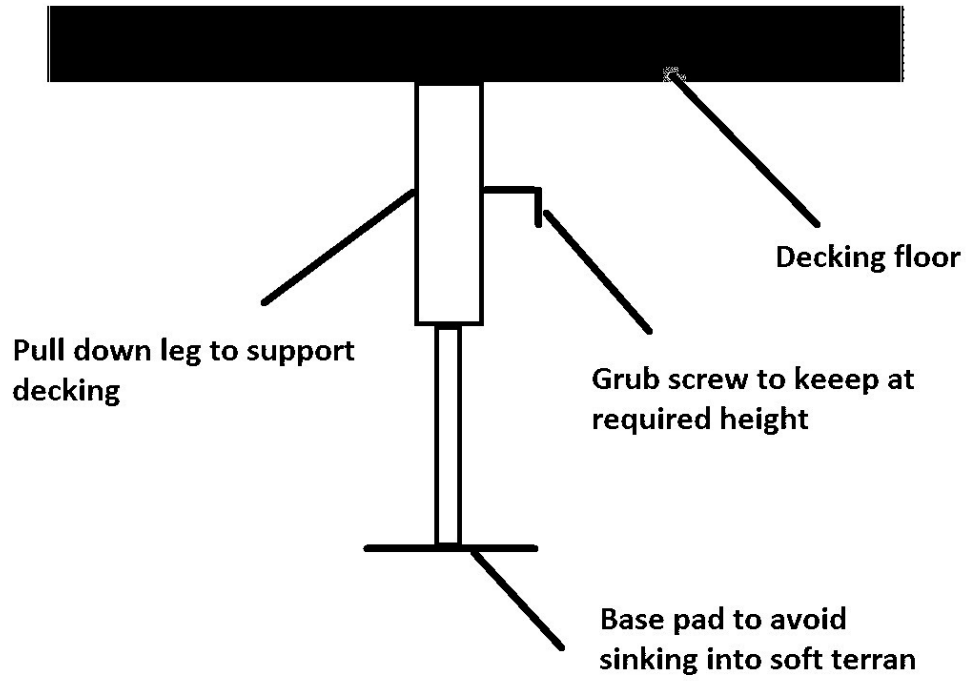
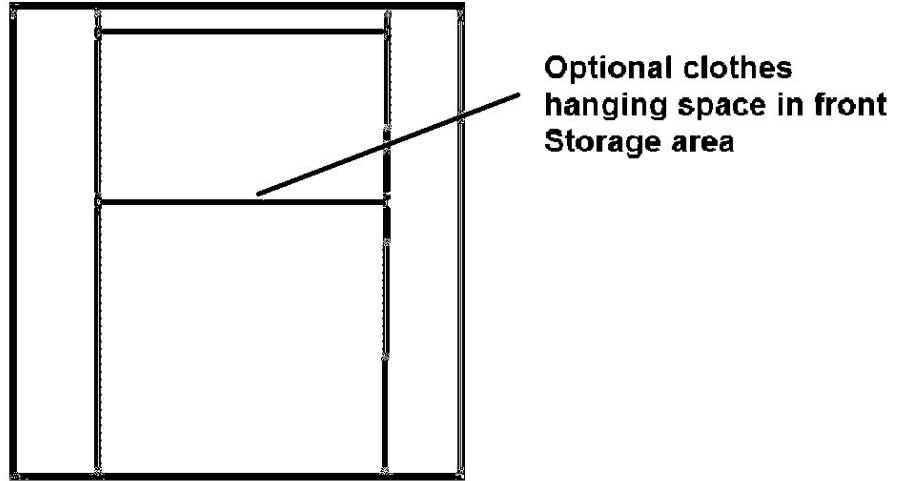


Fig. 9

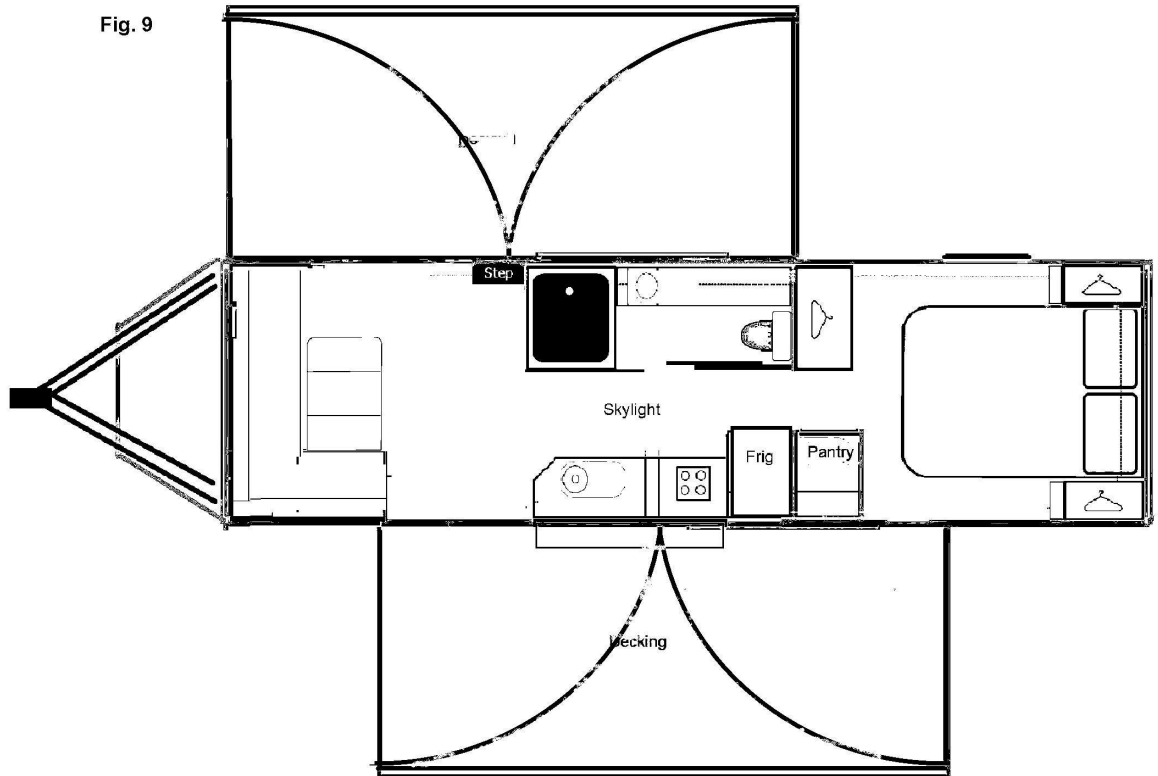
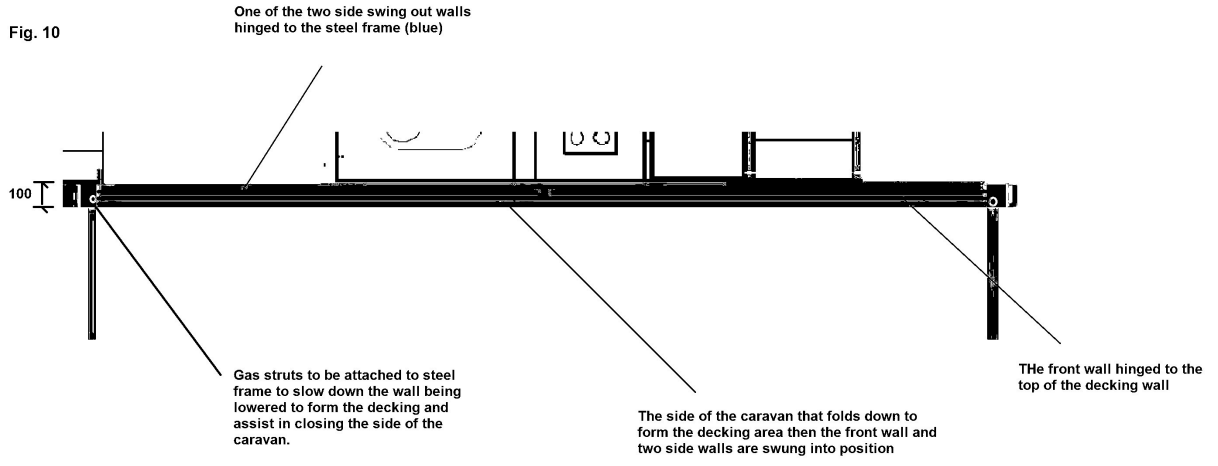
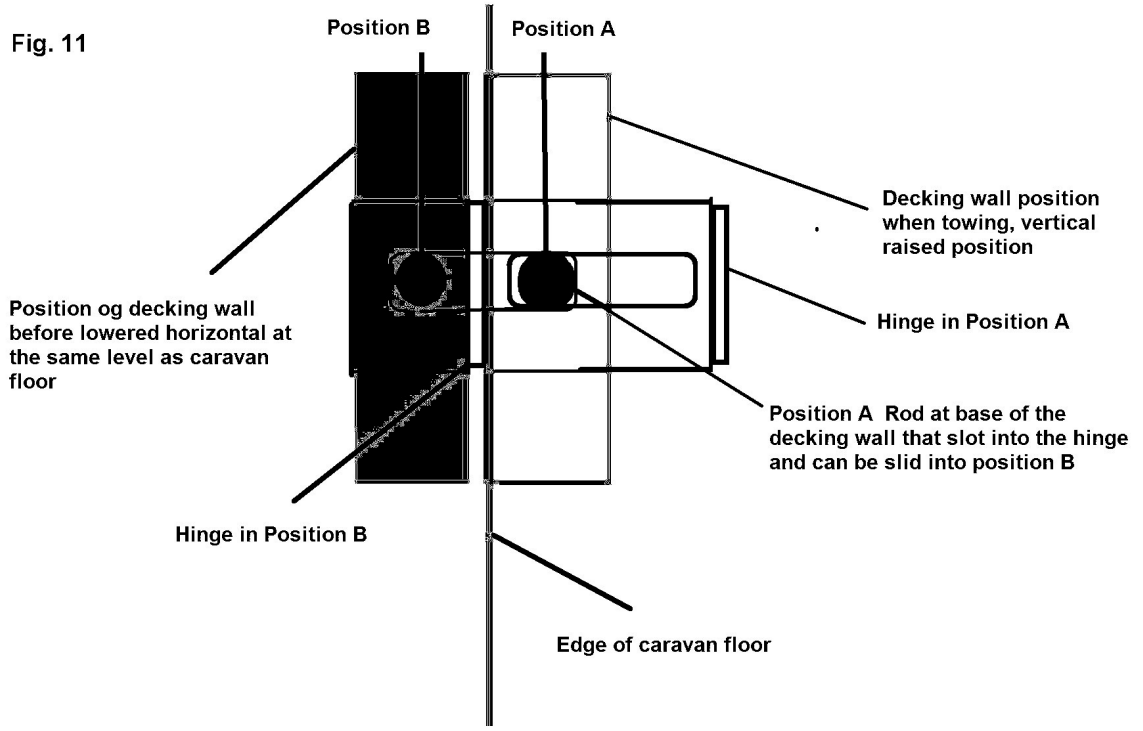


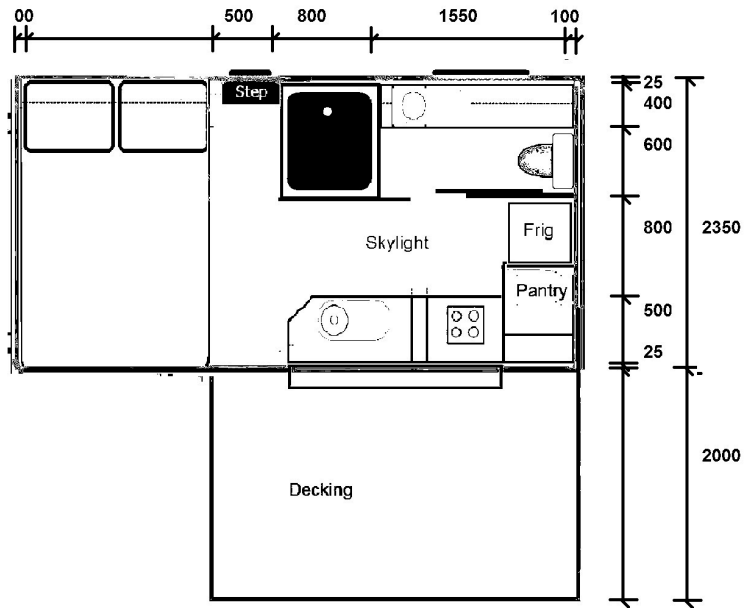
Fig. 10



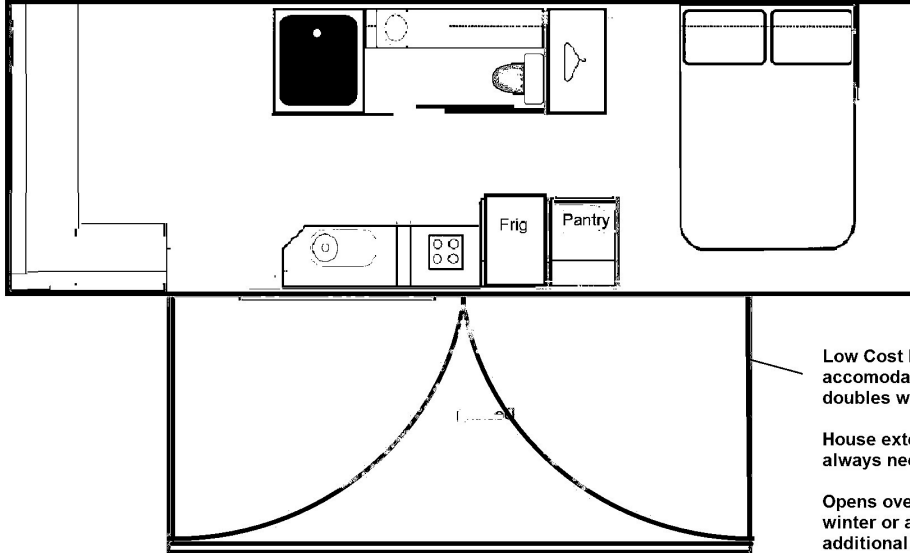


2018100696 23 May 2018

Pop Out Motorhome



Pop Out Cabin or Cottage



Low Cost holiday or homeless accomodation where house size doubles when required.

House extension when you don't always need the space.

Opens over swimming pool in winter or a courtyard to provide additional living space.