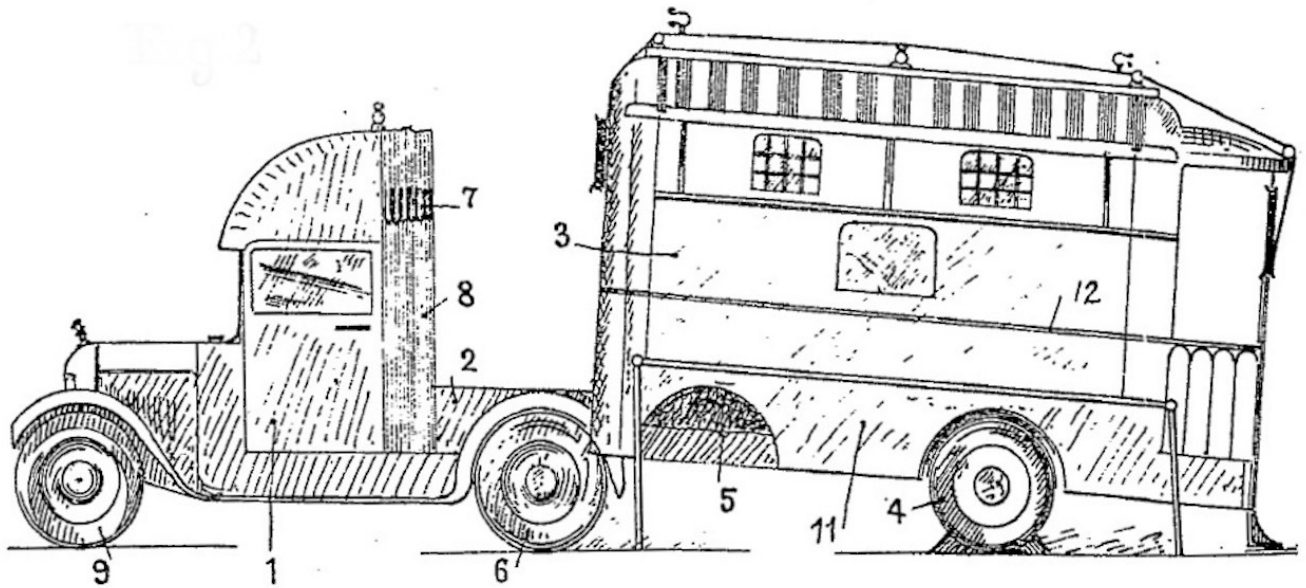
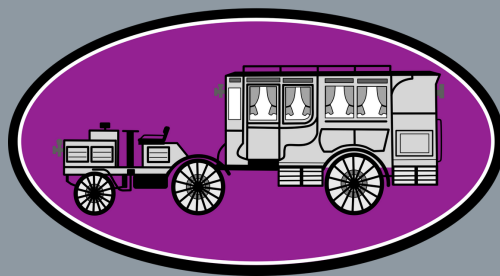


Fifty Pioneering RV Designs  
from Around the World

EARLY  
RECREATIONAL  
VEHICLE  
PATENTS



A N D R E W   W O O D M A N S E Y



rvhistory.com

Cover: Levoyer Car and Trailer, France, 1931 (Patent FR730,012A)

Copyright © Andrew Woodmansey, 2023

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopying, recording or by any information storage and retrieval system, without permission from the author in writing.

## About the Author

Andrew Woodmansey is a recreational vehicle historian based in Sydney, Australia. Andrew has been caravanning since childhood and recently became fascinated with the history of the recreational vehicle in all its forms around the world. His first RV history book, *Recreational Vehicles: A World History 1872-1939* was published by Pen & Sword in January 2022. It soon became one of the most highly praised books on the subject with 35 professional reviews. It is widely accepted that this book has re-written the history of the RV.

The author's website [rvhistory.com](http://rvhistory.com) includes blogs on a wide range of topics illustrated by high quality archival images, many never previously published.

## Contents

Introduction

RV Patent Design Overview 1889-1938

RV Patents Before 1900

RV Patents 1900-1909

RV Patents 1910-1919

RV Patents 1920-1929

RV Patents 1930-1938

Conclusion

# Introduction

The drawings included in a patent application reveal fascinating glimpses into the mind of the inventor. From these ideas invariably comes one of four broad outcomes – a successful product that is still recognised today, a niche product that is known only to a few, a ‘one-off’ or a total flop. Recreational vehicles (‘RVs’) are no exception.

RVs have evolved dramatically over the last 150 years. Patents are a good way to track the design history of the RV, but they don’t tell the whole story. Many inventors generously decided not to patent their invention in the hope that others would copy their ideas and their industry as a whole would grow. Others would have liked to patent their ideas but were put off by the cost of applying for and policing the patent. Still, enough RV-related patents exist to enable us to follow how these vehicles changed over time, which ones were successful and which weren’t.

The USA is by far the most patent-happy country in this review, in the main due to the inventiveness of its inhabitants, but also thanks to its large population of lawyers. Patents of other countries represented here include the UK, France, Germany and Australia.


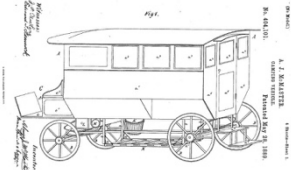


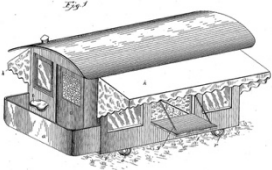


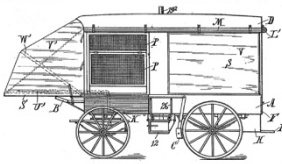


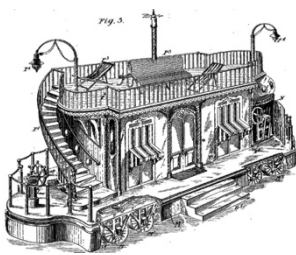

This eBook is divided not by country but by date range. My goal here is to move away from the somewhat parochial national approach to RVs on display today, and to show instead the shared stories and ideas across countries that makes RV history a truly international invention.

The date range used to define ‘early’ RV is (as with my print book) prior to the start of the Second World War. No early patents use the term ‘recreational vehicle’ (the term was not in use in this sense until after 1940), so I have curated here a selection of patents which meet my definition of an RV – a road-going vehicle containing sleeping facilities used primarily for leisure.

Patent numbers are given for each patent. These can be searched online using Google Patents at or the patent offices of relevant countries. The year associated with each patent is the year of the patent application.

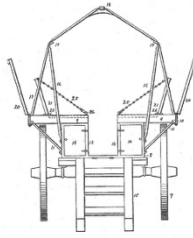
I hope that a few readers may be surprised at how old some of the ideas related to RV design are. We are indebted to these early pioneers for many of the concepts that are still in use today.

# RV Patent Designs 1889-1938

Year	RV Patent Design and Country of Origin
1889	  
1890	  
1894	  
1896	  

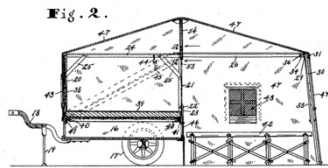


1909

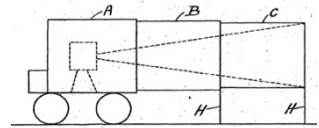


5

1914

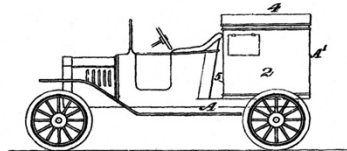


6



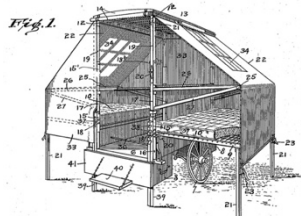
7

1915

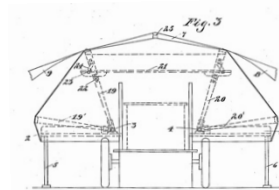


8

1916

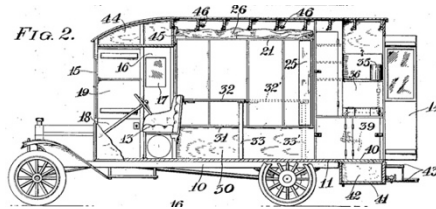


9



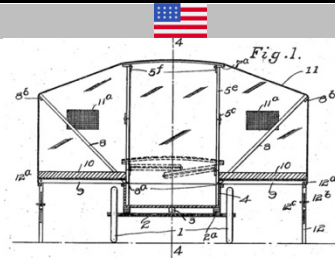
10

1917



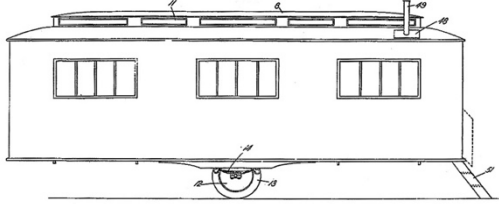
11

1918

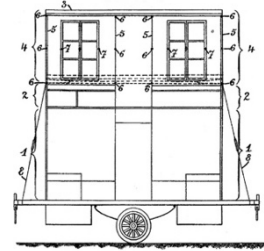


12

1919

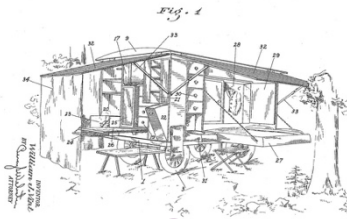


13

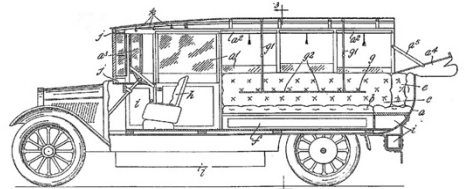


14

1920

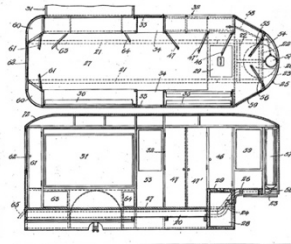


15

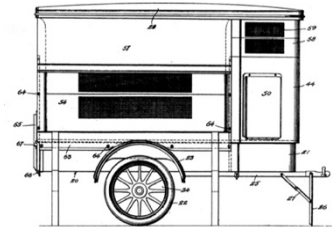


16

1921

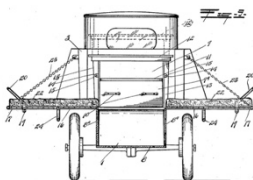


17

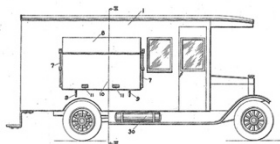


18

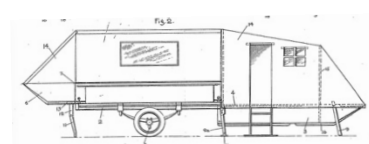
1922




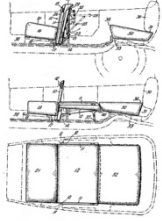

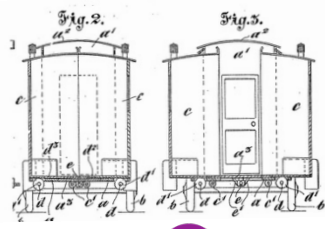

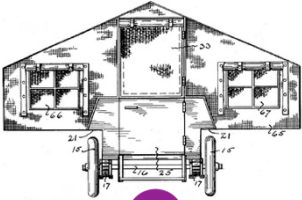

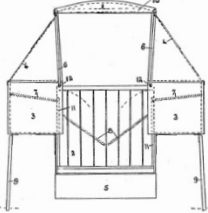
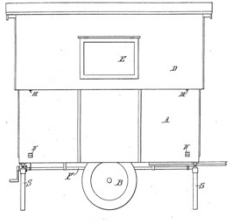


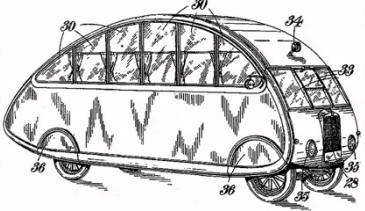

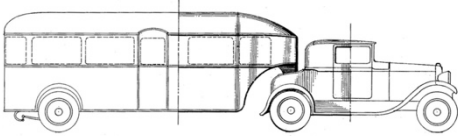

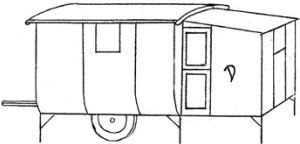

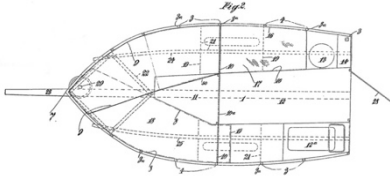
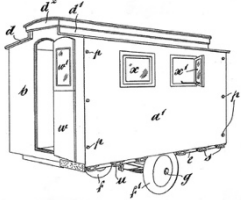
19



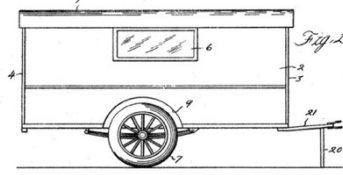
20



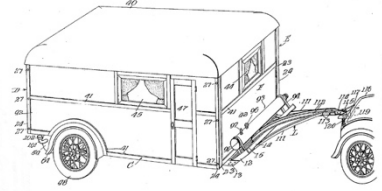
21

<p>1923</p> <p>1924</p>	  <p>22</p>	  <p>23</p>
<p>1926</p>	  <p>24</p>	  <p>25</p>  <p>26</p>
<p>1927</p>	  <p>27</p>	 <p>28</p>
<p>1928</p>	  <p>29</p>	  <p>30</p>
<p>1929</p>	  <p>31</p>	 <p>32</p>

1931

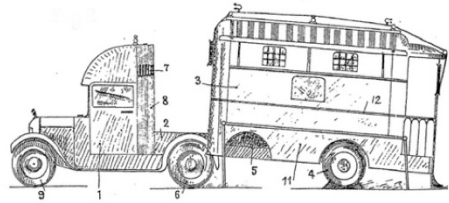


33

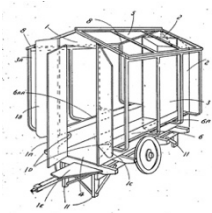


34

1931  
(cont.)

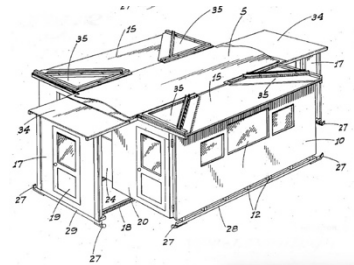


35

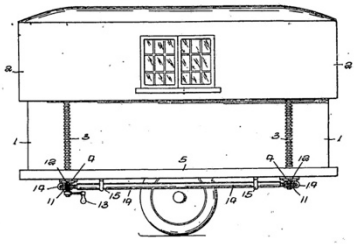


36

1933

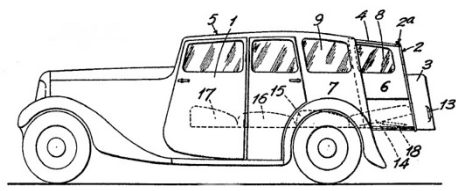


37



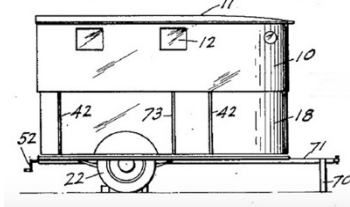
38

1933  
(cont.)



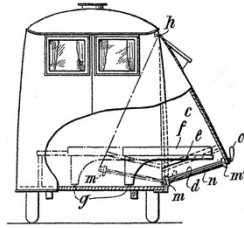
39

1934



40

1935



41

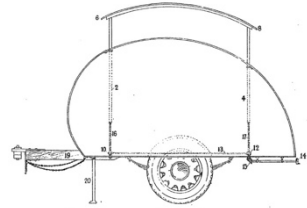
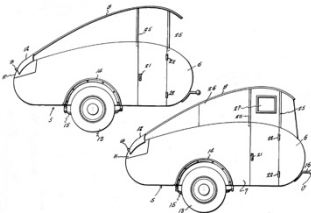


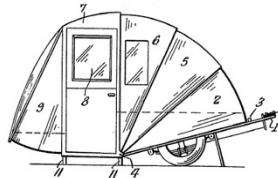
Fig. 2

42

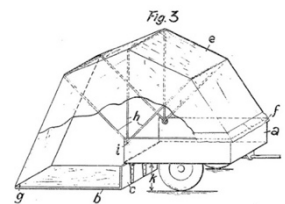
1936



43

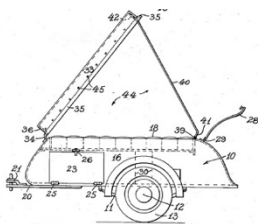


44

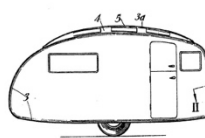


45

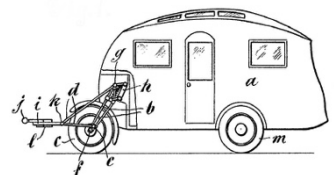
1937



46

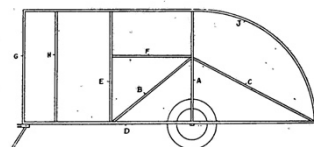


47

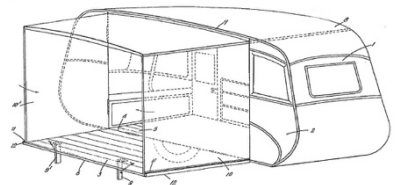


48

1938



49



50

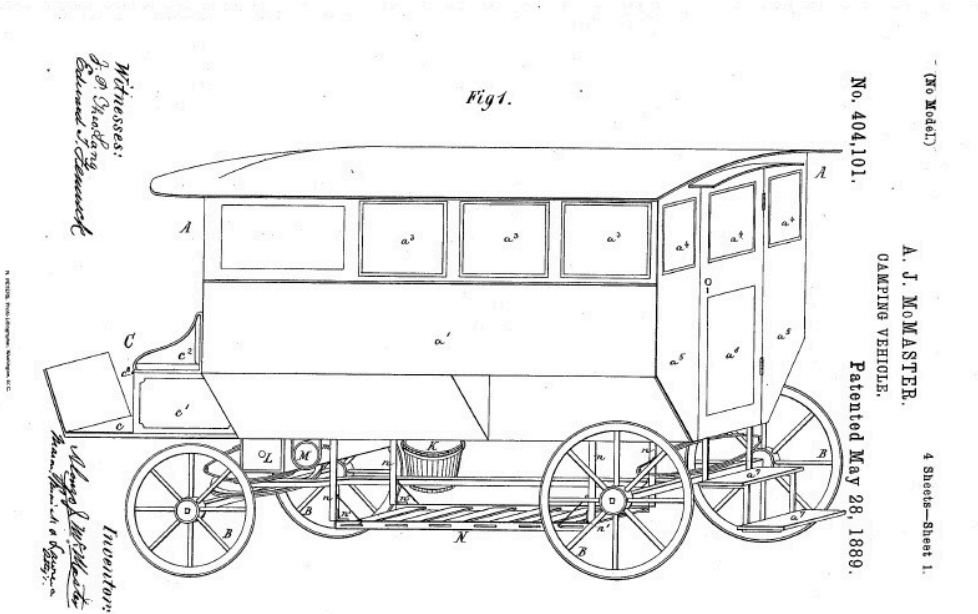
# RV Patents Before 1900

The horse-drawn era is often neglected when telling the history of the RV. Prior to the widespread introduction of the automobile at the start of the twentieth century, a few intrepid individuals and families, notably in the UK and the USA, decided to explore the countryside in horse-drawn wagons. In North America the horse-drawn ambulance wagon was popular as a means of transport for health-seekers traveling west to help cure their tuberculosis.

In the UK a small group of wealthy men and women called ‘gentlemen gypsies’ started traveling though the countryside in gypsy-styled caravans. The first of these was Scotsman Dr. Gordon Stables in *The Wanderer* of 1885. It is the earliest, purpose-built RV that we know of, but it was not patented. Here are some that were.

1

## The McMaster Camping Car, USA 1889 (US404,101A)



The first patented, purpose-built RV that has come to light is the McMaster Camping Car of 1889. Alonzo J. McMaster of Lockport, New York developed his camping car based on the design of a Herdic carriage used as an urban, horse-drawn omnibus in late 1800s North America. McMaster explains in his patent:



*“My invention consists of a camping-carriage the constituent parts of which are so constructed, combined and arranged that all the furniture, bedding and kitchen requirements for camping purposes are supplied in the most compact form, and the carriage capable of use at pleasure either as a sitting-room, bed-room, or kitchen.”*

Alonzo J. McMaster patent, 1889

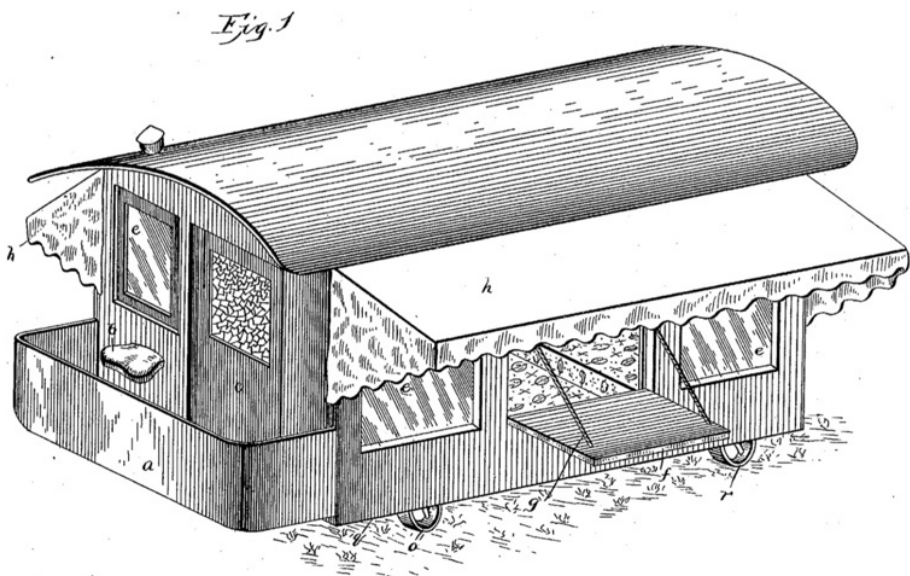
McMaster’s invention had several innovations that set it apart from the more basic ‘camping wagon’ of the period, including a combined driver’s seat and oil stove, a ladder slung under the wagon that was used as a cot for the driver, an ice box with floating inner shelf, a wardrobe door that served as a table, a folding sink, fold-down beds and a toilet consisting of a trap door and bucket below.

William Wallace Wylie, a partner in Wylie & Wilson who operated permanent tent camps for tourists in Yellowstone National Park, was sufficiently impressed with the McMaster Camping Car to order two of them for the 1892 summer season in the park. But the experiment proved short-lived, as established railroad and hotel operators hounded the cars out of the park to protect their lucrative tourist markets.

McMaster later ran into financial difficulties and his camping car failed to take off. It was an idea before its time.

## 2

### **The Griffin Road Car, USA 1890 (US423,242A)**



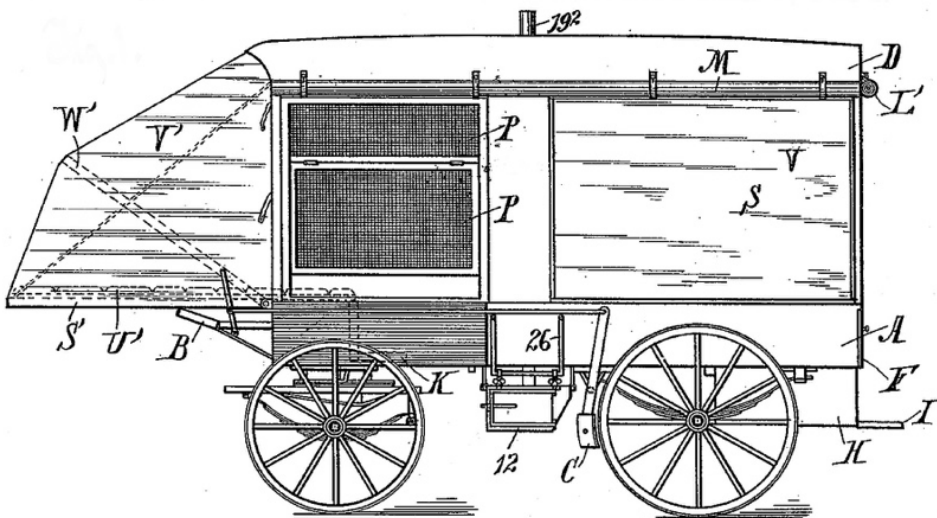
The 1890 Road Car of Leander L. Griffin of Scranton, Pennsylvania looked altogether more homely than McMaster's invention, despite its railroad wagon proportions.

Griffin intended his Road Car to be used as "a traveling store or sales wagon, or for use as a highway dining and living car". Its canopies and drop-down sides were intended for display or ventilation purposes.

The interior was divided into two rooms, a kitchen and a living/dining/sleeping/display area. Griffin saw potential uses of the Road Car in fairgrounds and for camping parties. No propulsion or steering method is mentioned, but presumably it was to be horse-drawn. We don't know if the Road Car was ever built.

### 3

#### The Brown Hunting Wagon, USA 1894 (US 512,273A)



The Brown Hunting Wagon followed the more conventional lines of a camping wagon.

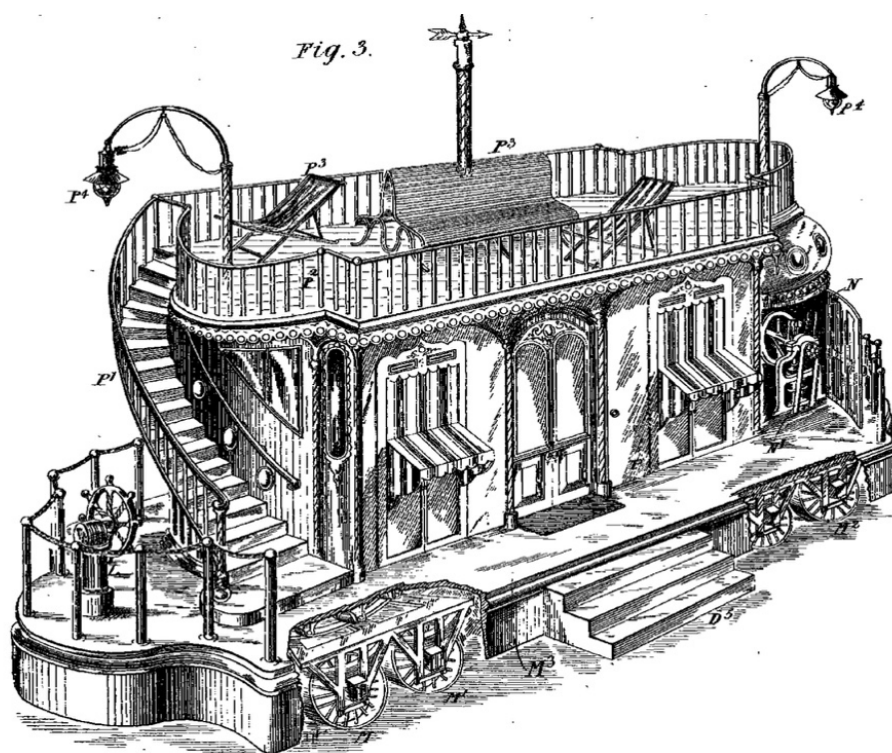
Its inventor, Thomas H. Brown of Milwaukee, Wisconsin, seemed to be a practical person, with much thought going into a horizontally-telescoping stove flue to provide more internal warmth, insect screens and retractable "waterproof aprons" (awnings) on all sides.



Brown also used the concept of insect-proof, fold-out beds that did not encroach on internal space. This was a feature of many early twentieth century North American 'house cars' and camping trailers but was rarely seen in Europe. Fold-out beds could be uncomfortable in cold weather, so the fully-enclosed caravan was preferred in the UK and other countries with cold winters. Or perhaps the North Americans were just a hardy bunch.

4

**Lawson's Portable House, UK 1896 (GB1896,14657A)**



The earliest-known British contribution to RV patent history is an altogether more grandiose idea from Henry John Lawson with his 1896 patent entitled 'Improvements in or relating to Portable Houses of Structures'.

Henry John ("Harry") Lawson (1852-1925) is known in part for his design contributions to the development of the safety bicycle and for organising the first London to Brighton automobile rally in 1896. He is however best and perhaps infamously known for seeking to monopolise the British automobile industry in the late 1800s. He sought to do so by acquiring and using third party automobile patents to prevent rather than encourage innovation.

Lawson's idea included a motor of unknown type at one end, steering wheels at both ends, retractable steps and a staircase to a balcony with seats and lighting. He also included sketches of a folding version of the mobile house with movable walls and a lifting roof for ventilation.

It was an altogether impractical idea. No surprise then, that there are no records of it or anything like it ever being built, but it may have sown the seed of an idea in others. It is the first-known patent suggesting propulsion and accommodation be incorporated into a single vehicle, so dare we call it the first ever concept for a motorhome?

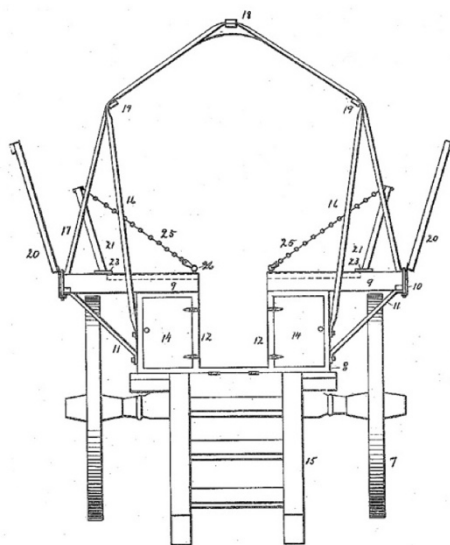
## RV Patents 1900-1909

The first decade of the twentieth century saw very few RV-related patents, for one simple reason: attention was focused elsewhere.

The arrival of the automobile was captivating engineers and consumers. There were thousands of patents issued for all manner of vehicles, engines, batteries, lights and machinery related to making automobiles faster, safer and more reliable. Little thought was given as to the leisure possibilities of this new form of transport until after the First World War, mainly because the first low-powered automobiles could carry (or tow) very little more than themselves and a driver.

5

### Hardin Camping Wagon, USA 1909 (US941,195A)



Daniel Hardin of Hoyt, Kansas patented a camping wagon in 1909 which continued the use of Thomas Brown's fold-out beds from 1894 and made extensive use of canvas stretched over a frame, but otherwise had no remarkable features. It was in effect a tent on wheels. Its only feature of note is that it was the only known RV-related patent between 1900 and 1909.

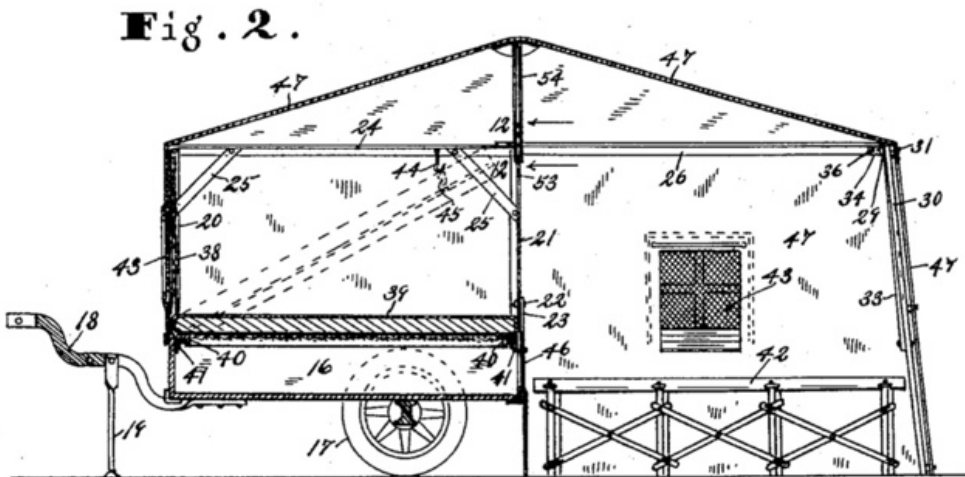
France was the leading nation globally in terms of automobile development in the early 1900s. This extended to some degree into touring and leisure vehicles, but the first French motorhomes were one-offs commissioned by wealthy businessmen who gave no thought to patenting their ideas. The British 'gentlemen gypsies' stuck largely to their horses. One or two motorhomes appeared in the UK in the early 1900s but were not patented.

## RV Patents 1910-1919

The second decade of the twentieth century saw innovation move at two different speeds in Europe and North America. Whilst Europe was facing the prospect of war, the US was able to develop new types of vehicle that could be used for leisure purposes. Automobiles were becoming powerful enough to tow trailers, so the camping trailer became the preferred form of RV in the US. They were light, affordable and flexible. In this decade we also see some early designs for 'camping cars', which were automobiles adapted for camping.

# 6

## Campbell Folding Camping Trailer, USA 1914 (US1,185,981)



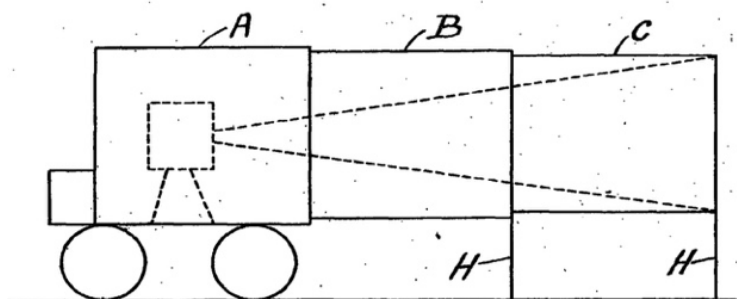
The Campbell Folding Camping Trailer developed by Archibald D. Campbell and Lawrence S. Campbell of Los Angeles, California was probably the first purpose-built camping trailer to be commercially sold and manufactured in America from about 1914. As far as we know the first *self-built* camping trailer was made in 1910 by Dr. A Morsman. The Campbell trailer weighed only 150 pounds. The aim of the trailer was:

*“to provide a novel and improved construction whereby a folding tent may be attached to and carried in a box adapted to contain a camping outfit, and which permits of the tent and camping outfit being compacted in the box so as to be always ready for use, easily transported from place to place, and which permits of the tent being easily and quickly set up and taken down when desired.”*

The shift during this period from putting loose camping equipment in a box trailer to permanently attaching a tent to a trailer was highly successful in North America. It came at a time when US national parks were opening up to the automobile, leading to many variations of this design being manufactured between 1915 and 1925.



### **The Harman Telescopic Caravan, UK 1914 (GB1914,10484A)**



**FIG 2.**

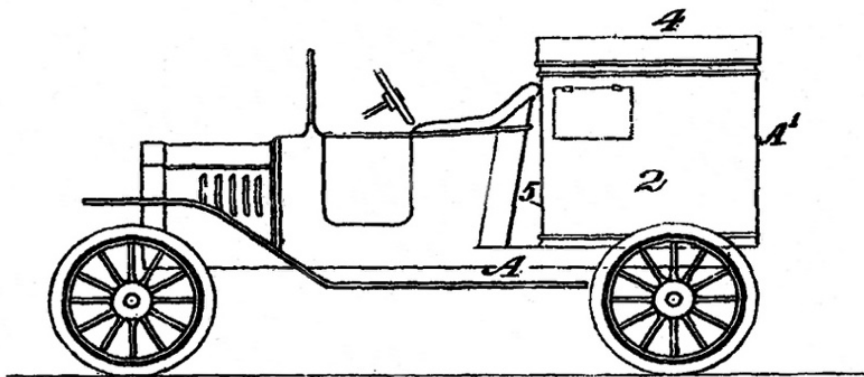
The remarkable simplicity of the drawing included in the 1914 patent of Henry Albert Harman of Shalford, UK belies an important use of the caravan in at least the UK and Australia in the 1910s and 1920s.

Basic caravans were used by ‘traveling picture showmen’ in these countries to give ‘magic lantern’ (slide projector) or cinematography shows to paying audiences. Harman’s design shows a caravan with telescopic walls to allow the rearmost wall to be extended at rest and used as a rear projection screen. Picture showmen would invariably

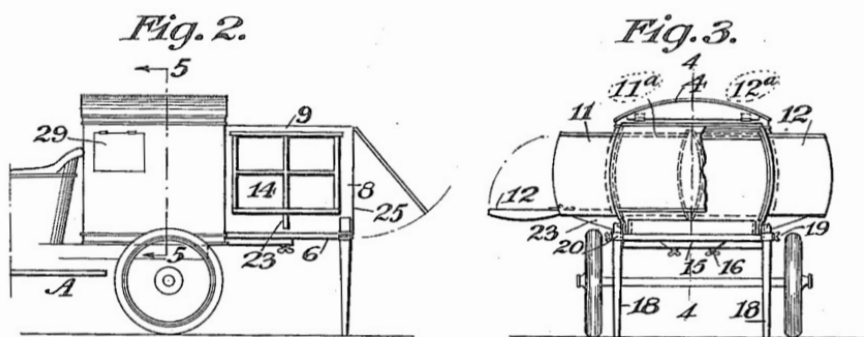
sleep in their caravans, turning them into simple RVs as they moved through the countryside introducing these new entertainment technologies to a fascinated audience. Some showmen used early motorhomes to transport their bulky and sensitive projection equipment.

8

**The Stein Camping Car, USA 1916 (US1,196,309)**



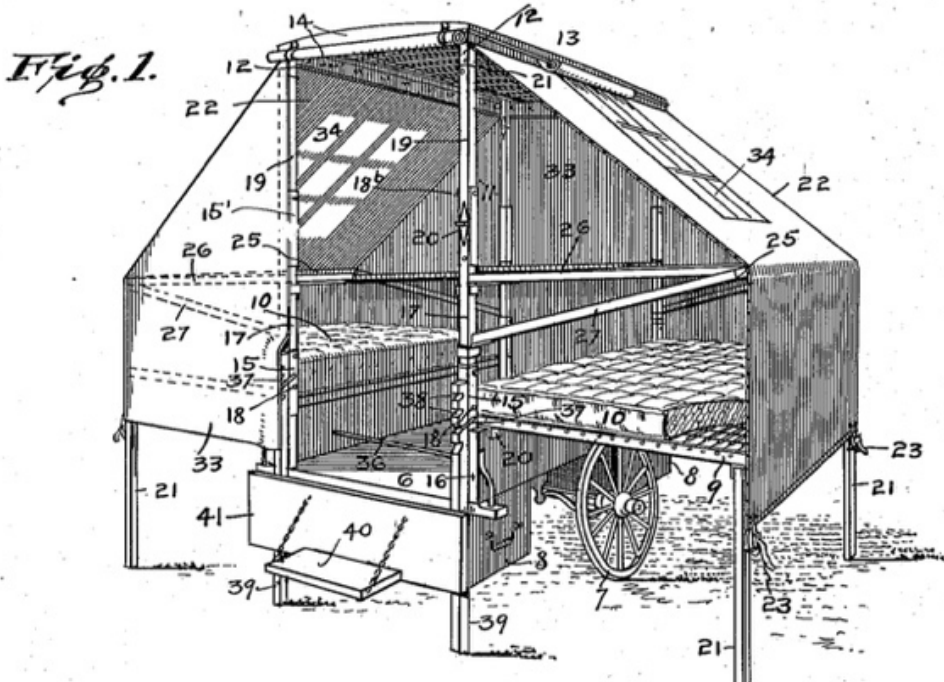
The 1915 vehicle camping attachment of **George R. Stein** of San Francisco, California was assigned to **Gustav De Bretteville** who built the **de Bretteville Camping Car** from 1916. If we accept the term ‘motorhome’ to mean propulsion and accommodation in a single chassis, this is one of the earliest motorhome patents (but certainly not the first motorhome).



Stein’s camping concept was refreshingly compact, using folding doors and telescopic sides to create a bed, table and several storage compartments built onto the chassis of a standard automobile. De Bretteville produced a small number of these camping cars but it seems the idea did not take off, out-competed by the simpler and more affordable new kid on the block, the camping trailer.



### The Habig Trailer Camp, USA 1916 (US1,216,986)

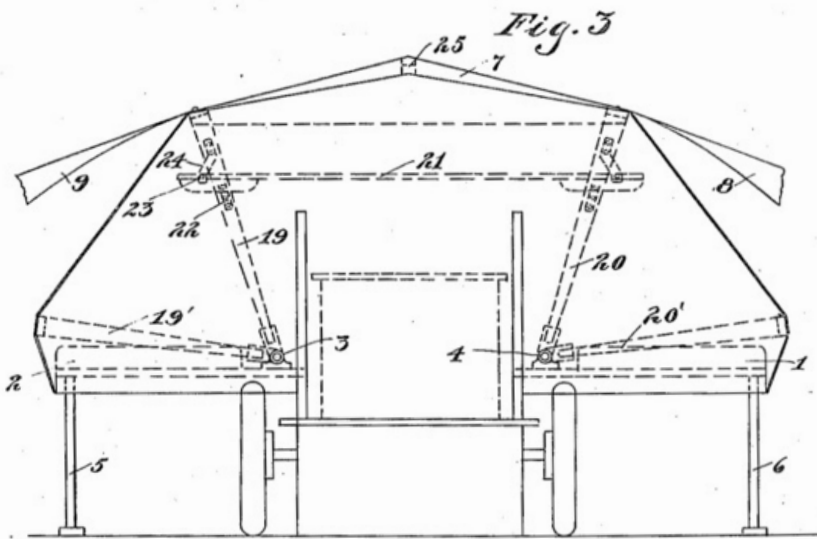


The Habig Trailer-Camp developed by Edward H. Habig of Indianapolis, Indiana in 1916 was a further development of the camping trailer. It used a rigid canopy top and bracing that eliminated the requirement for stakes and ropes to secure the canvas sleeping-room extensions.

It was sold by the Cozy Trailer and Equipment Co. of Indianapolis under the brand name of Cozy Camp-mobile for just \$165. It was four times as heavy as the earlier Campbell Folding Trailer, weighing 600 pounds, but it could carry up to 1,500 pounds.

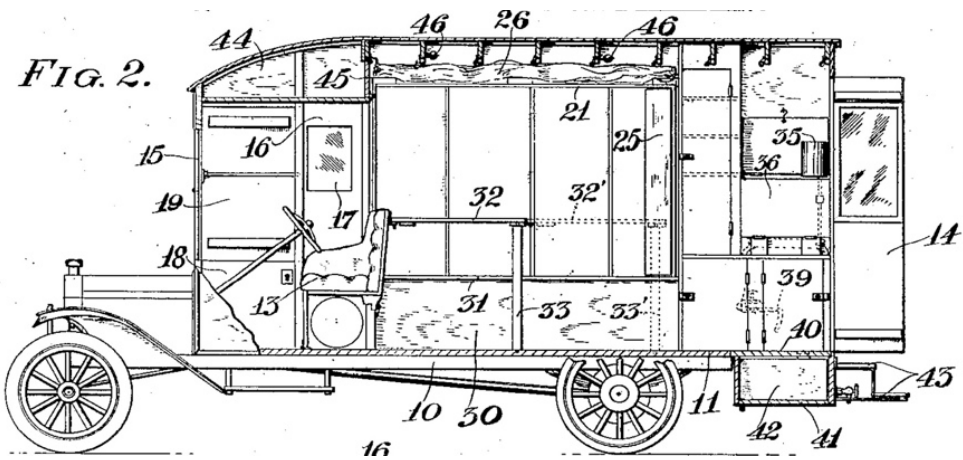
The 'Outing Trailer' of William P. Shattuck from Minneapolis, Minnesota was sold by the Shattuck Trailer Co. for \$175 and weighed 625 pounds. It included a khaki-colored duck tent, two double beds, a collapsible table, an ice box and a gasoline stove. According to the company it could be set up in seven minutes.

**The Shattuck Outing Trailer, USA 1916 (US1,229,534)**



11

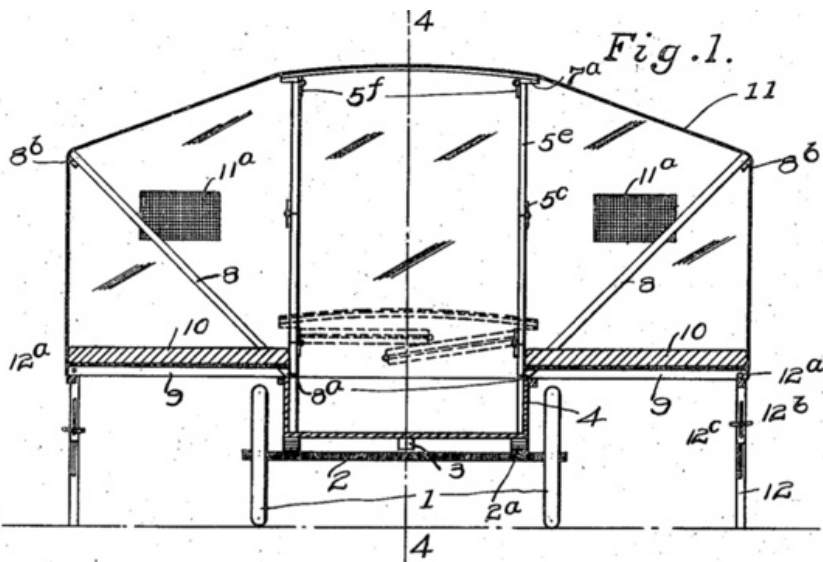
**The Bunker Camping Automobile, USA 1917 (US1,327,589)**



The **Camping Automobile of Ward S. Bunker** of Waukesha in Wisconsin demonstrated in 1917 that in America the 'house car' was beginning to take shape alongside the camping trailer. It took the fold-out bed design of camping trailers and used it in the housecar to create more internal space. Insect screens and a fold-out awning were used to protect the sleeper at night. An icebox was located under a trap door in the floor. Most early house-cars were one-offs built to order for wealthy individuals.

12

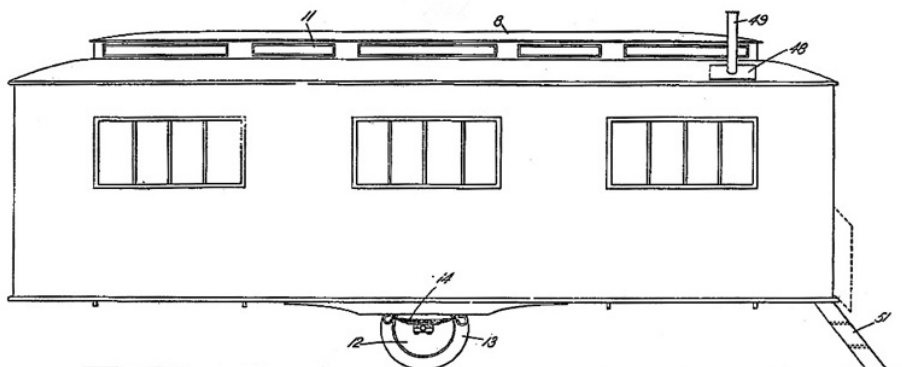
The Marx Camping Trailer, USA 1918 (US1,276,388)



The camping trailer of Sidney S. Marx of San Diego, California used a one-piece canvas tent and frame structure to create a lightweight and easy-to-assemble camping trailer. By 1918 assembly time was down to a claimed 5 minutes. It was sold by the Marx Trailer Company of San Diego as the Komfy Kamping Trailer from 1918.

13

The Piggott Demountable Caravan, UK 1919 (GB143,338A)





Across the Atlantic, at the end of the First World War entrepreneurs in post-war UK were developing RVs that moved as far away from the concept of camping as possible. Piggott Bros. of London were early British caravan builders, starting (along with Eccles and Bertram Hutchings) in 1919. As marquee and tent makers, they specialised in caravans with lightweight canvas walls, allowing them to be made somewhat larger than those of their competitors.

Piggott's caravan patent of 1919 was for a demountable caravan that could be *“taken to pieces for storage purposes and adapted when in use to be trailed behind a motor or other tractor for use by parties making tours into the country or for other purposes.”*

It consisted of a simple box girder frame with canvas stretched over it, but in its shape we see the beginnings of the standard British caravan design that dominated the country's roads and lanes until aerodynamic design was introduced from 1930 onwards. Demountable caravans, on the other hand, failed to take off, especially when manufacturers realised they could earn storage fees for caravans not used during the cold British winter.

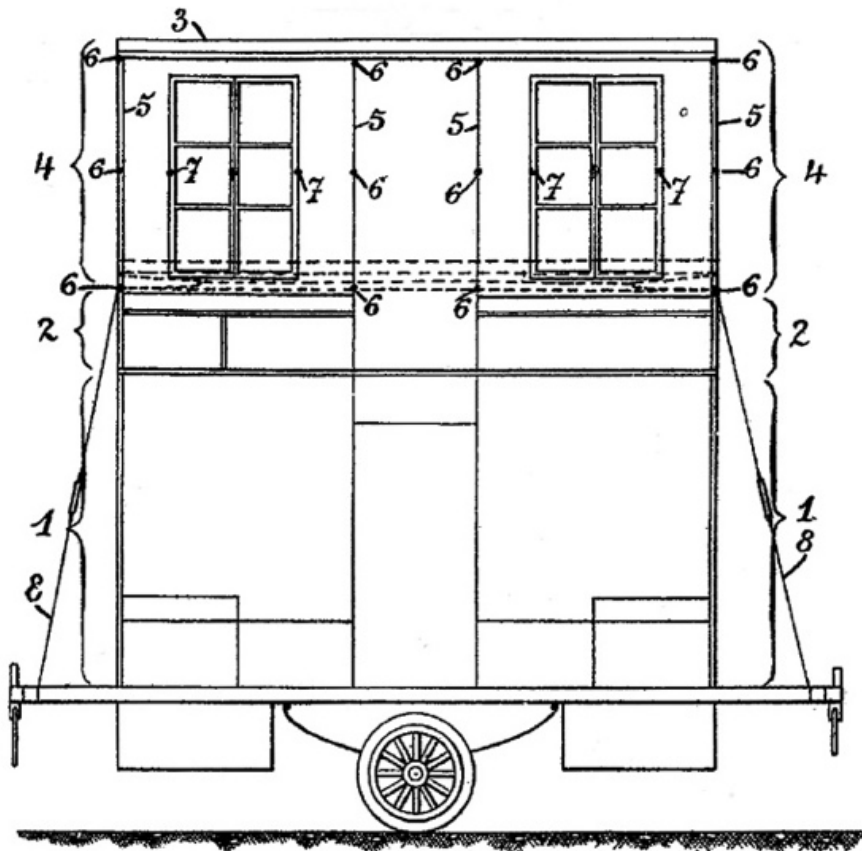
## 14

We finish this decade across the Channel in France with a remarkable caravan.

The two-storey caravan of Charles Jules Fernand Lafeuille (France 1919) was a remarkably large caravan and almost certainly the first two-storey caravan ever built. Lafeuille was an engineer who served as the deputy director of technical services in France's 'Office of Industrial Reconstruction' ("ORI"), formed in 1917 to help French industry recover after the First World War.

His idea was to build a "maison liberée" or 'liberated house' to house ORI officials and their families as they worked in areas devastated by the war. The caravan was built by Parisian trailer manufacturer Cadel and was of 'chocolate box' construction, meaning the top half dropped down over the bottom, with the two floors connected by an internal staircase. The top half was manually raised and lowered using wires, drums and pulleys and held in place by "collapsible vertical uprights". One of these 'liberated houses' was later seen in use the UK as an RV in 1938, albeit held in place by guy ropes against the blustery British wind.

**The 'Liberated House' of Charles Lafeuille, France 1919  
( UK patent GB1,526,11A)**



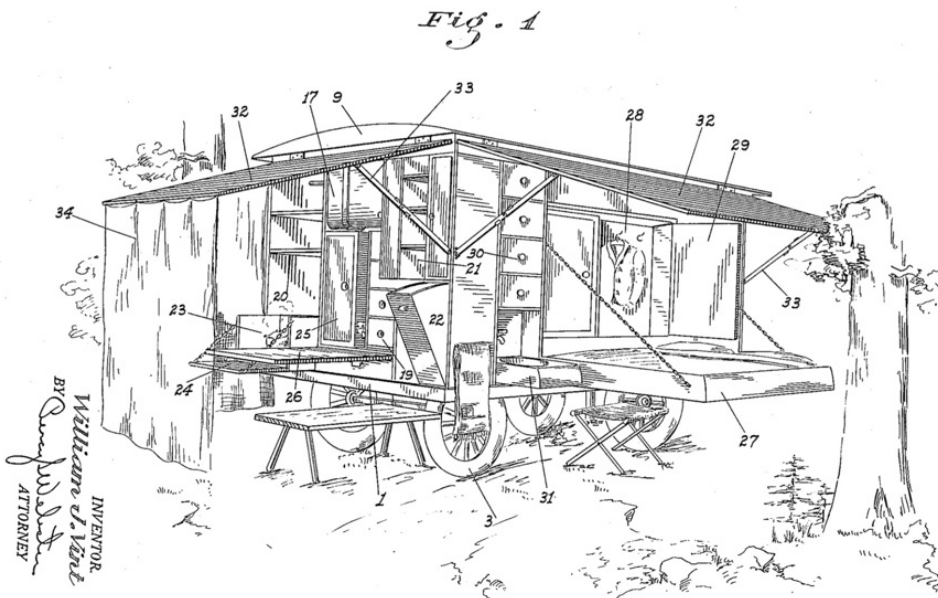
## **RV Patents 1920-1929**

The 1920s was a decade of RV experimentation. In keeping with the spirit of 'The Roaring Twenties', no transportation idea was too far-fetched. Humans took to the air and drove their automobiles in ever greater numbers. War was over and it was time for some rest and recreation, making this an important decade for the RV.

Automobiles were growing more powerful, allowing heavier weights to be carried or towed. Most importantly, road conditions in Europe and North America improved significantly, making long-distance road travel feasible for the first time.

In the latter part of the decade, RVs were traveling fast enough for fuel consumption and air resistance to become (often overstated) hindrances, leading to the design of RVs that shrunk, collapsed or folded for travel to reduce these impacts. Most were over-complex or unreliable and as a result few had long-term successful.

## The Vint Camping Trailer, USA 1920 (US1,422,498A)



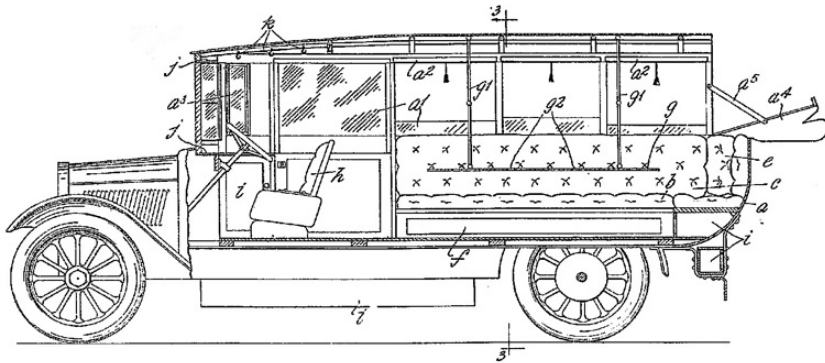
In America in 1920 William J. Vint of Stockton, California took the camping trailer concept to the next level. He developed a four-wheeled camping trailer that included just about everything: *“beds, toilet, bath, washtubs, water supply, clothes and linen closets, stove, table, and ample space for stores and utensils.”*

Vint was kind enough to provide in his patent detailed reasoning for his invention, including *“to provide a device of this character in which the beds are always ample distance from the ground so that the liability of obnoxious insects and animals crawling over the sleepers is obviated.”*

The now ubiquitous fold-out bed was included. Four-wheeled trailers failed to take off in most countries except for heavy showmen’s caravans or some living vans.

In 1920 Daniel Joseph Pilmore-Bedford of London developed a *“new or improved saloon-type vehicle”* for various purposes including as a char-a-banc, motor bus or caravan. The saloon’s seats could be folded down into beds and tents or awnings could be stowed on the roof.

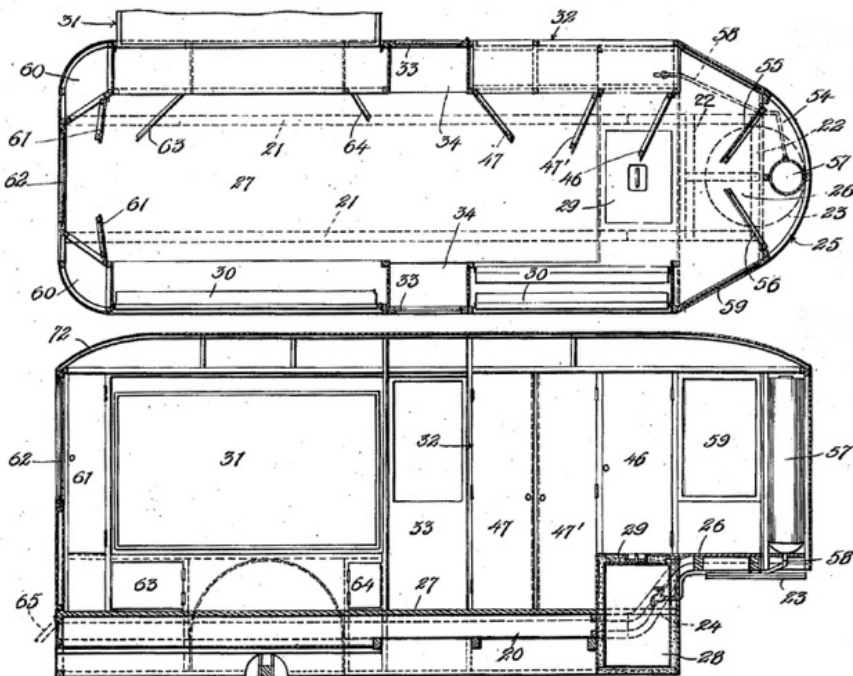
## The Pilmore-Bedford Saloon, UK 1920 (GB172,487A)



It was an early example of motorhome ('house car' in the USA) design using a truck chassis with accommodation at the rear where goods would normally be carried. This format was in use from about 1905 in the UK and 1917 in the USA (especially with the Ford TT) but few patents for these early RVs were submitted. The truck-based RV depended on the development of long-wheelbase chassis and more powerful engines, but they often betrayed their goods-hauling genes by being noisy, smelly, slow and unreliable.

17

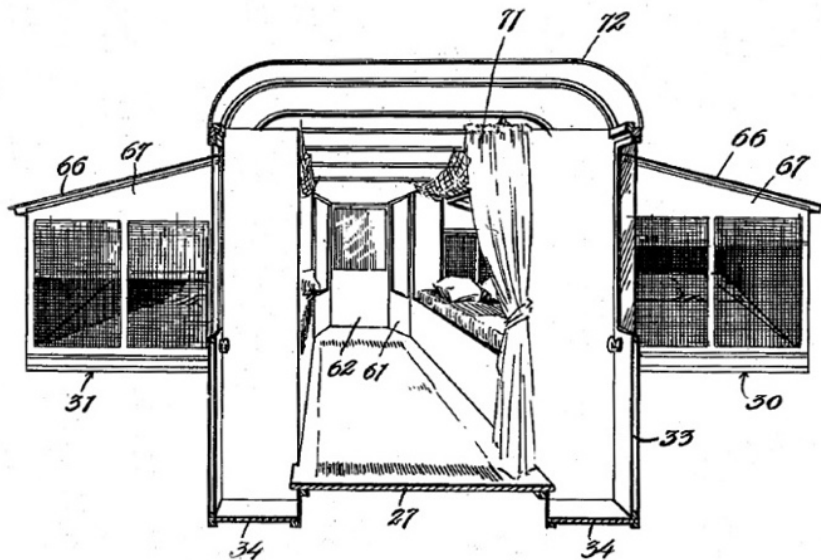
## The Curtiss Camp Car, USA 1921 (US1,437,172)



The superficially unremarkable drawing above represents one of the most important RV patents of the 1920s. It is the first-known RV to be patented with a fifth-wheel attachment.

The Curtiss Camp Car of 1921 was developed by motorcycle and aviation pioneer Glenn H. Curtiss of Hammondsport, New York. It was a prototype camping vehicle designed to make camping more comfortable for Curtiss' family and friends.

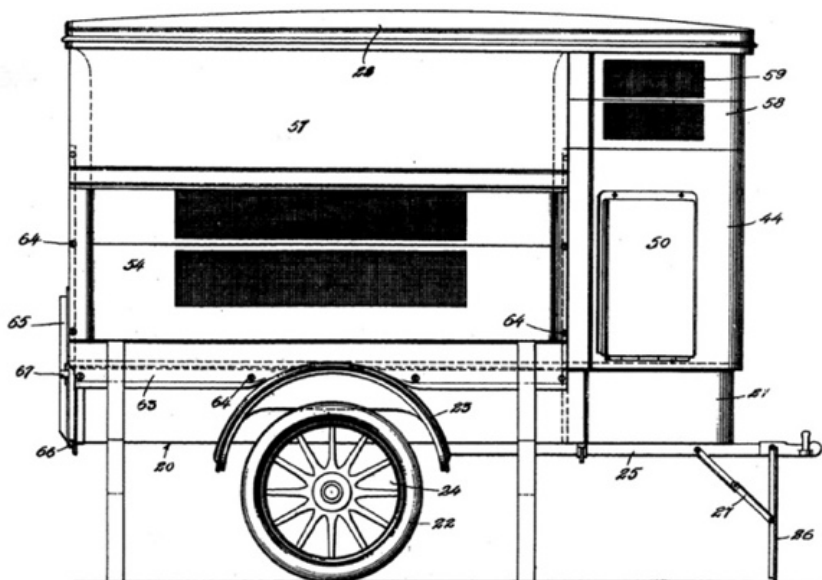
Based on the now familiar 'Pullman' concept of drop-down external beds, its key feature was a fifth wheel towing mechanism that offered greater safety and stability when towing at speed. Although the patent indicates that Curtiss was developing his own fifth-wheel mechanism that would be the subject of a further patent, such an invention did not appear until his 'Flexible Coupling' patent of 1928. This coupling was first used in the Curtiss Aerocar and would come to be known as the Aero Coupler.



Following a strong reception in the press, the camp car was intended to be manufactured in New York state by G. Carl Adams, Curtiss' half-brother, but this RV failed to progress beyond the prototype stage. It is not known how many Pullman camp car prototypes Curtiss and Adams produced, but Curtiss found them to be too heavy and they did not go into production.

The camp car prototypes clearly taught Curtiss much about RV design however, and as such can be viewed as an early prototype of the 1928 Curtiss Aerocar.

**The Adams Motorbungalo, USA 1921  
(Canada patent CA221,009)**

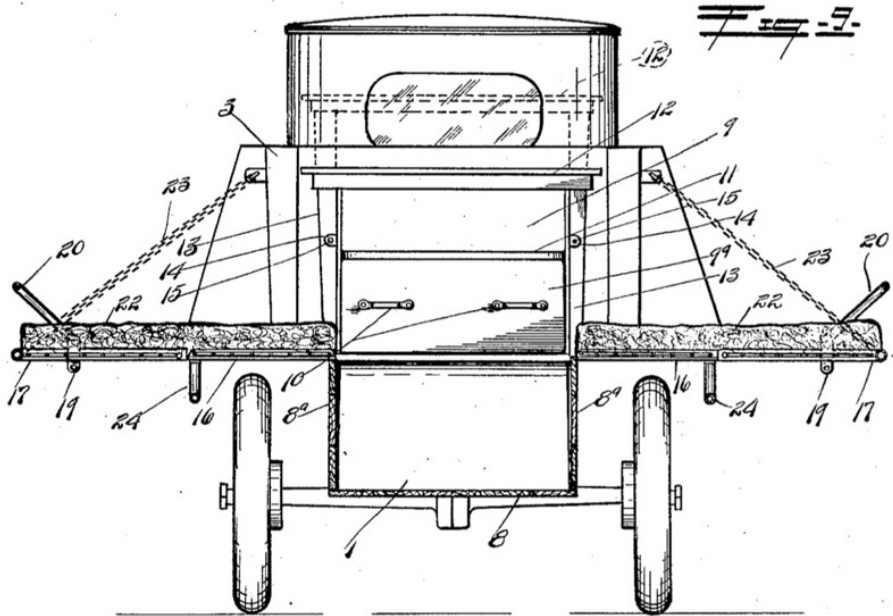


Having shelved the idea of creating a large camper trailer which could sleep six people, in about 1920 Curtiss instead focused on a shorter, lighter trailer that could be towed by just about any vehicle on the market at the time. The result was the Adams Motorbungalo, named after Curtiss' half-brother, G. Carl Adams.

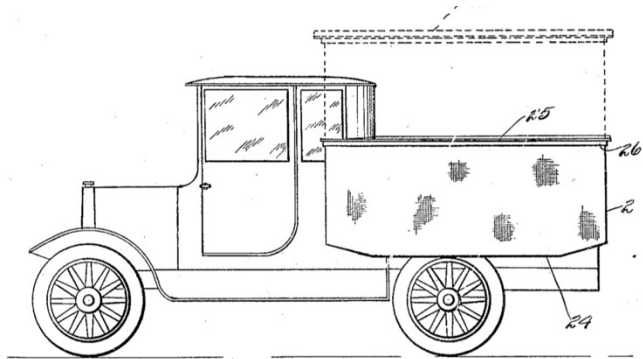
The V-shaped front of the Motorbungalo shown below is reminiscent of basic commercial trailers produced by Adams. For the Motorbungalo the fifth wheel concept was temporarily abandoned in favour of a standard tow hitch. This was done in all likelihood so that the Motorbungalo would appeal to a wide range of motorists who would not have to modify their existing automobiles to tow this smaller trailer.

The Motorbungalo was produced in several different versions, all of which were luxurious but far more expensive than a standard camping trailer. It was one of the most elegant RVs developed up to that time, but it failed to sell in significant numbers as it was still viewed by consumers as an expensive form of camping.

The Zagelmeyer Camping Outfit, USA 1922 (US1,527,105)



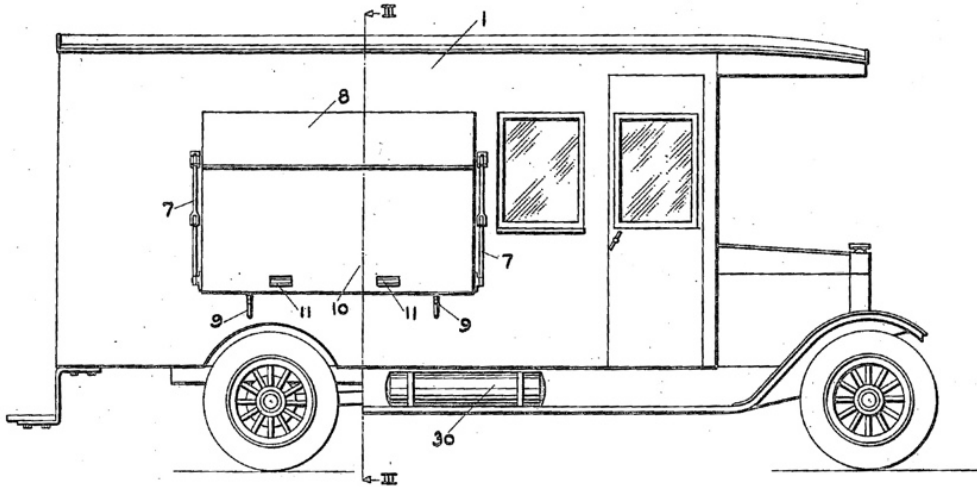
Frank Zagelmeyer of Bay City, Michigan was one of the first to exploit the popularity of Ford automobiles and trucks by developing a ‘camping outfit’ in 1922 that could be mounted on a Ford chassis with few modifications.



Zagelmeyer proposed a Ford coupé be modified to receive a camping box with a raisable roof and fold-down beds. It became known as the Zagelmeyer Kamper-Kar. It competed with another ‘camping auto’ of the period called the Lamsted Kampkar produced by Samuel B. Lambert of Anheuser Busch from about 1920. Although a step up from camping out of a camping trailer, camping autos were mechanically complex and inflexible, preventing the host vehicle from being used easily for other purposes.



### The Diefenderfer Portable House, USA 1922 (US1,431,783)



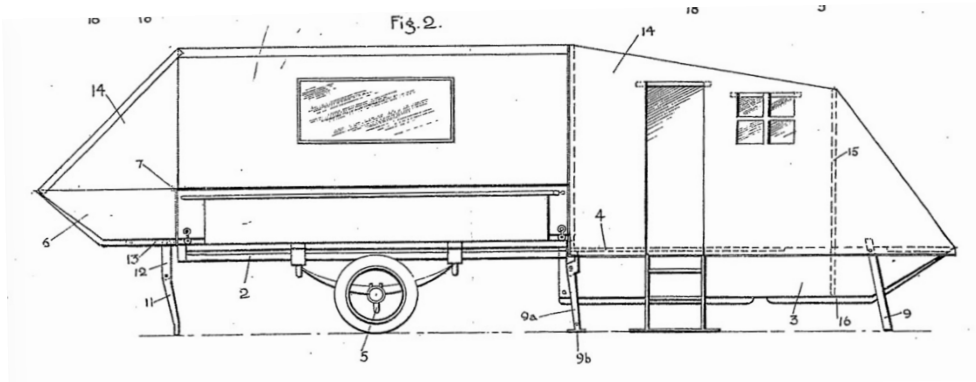
In 1922 Martin Diefenderfer of South Pasadena, California designed a “*vehicle body...to be used as portable houses for cross country traveling and camping expeditions*”. This is an example of what was to become the default design for ‘house cars’ that would be seen in increasing numbers on American roads over the next decade.

The now obligatory fold-down external beds were included, and just about everything inside the vehicle folded too. The success of the house car was in their simplicity, with everything needed for camping in comfort contained in a single chassis. The house car’s cost compared to camping trailers limited demand to wealthy travellers and they were generally unsuitable for use as everyday transport.

It was only a matter of time before someone came up with the idea of an amphibious RV, and inevitably it came from mildly eccentric Britain in 1922. William Edward Clinton of Birmingham, UK (GB). The patent description of this vehicle is unremittingly complex, nor is the problem which is being solved with this invention ever hinted at. These factors may explain why there is no evidence of it ever having been built.



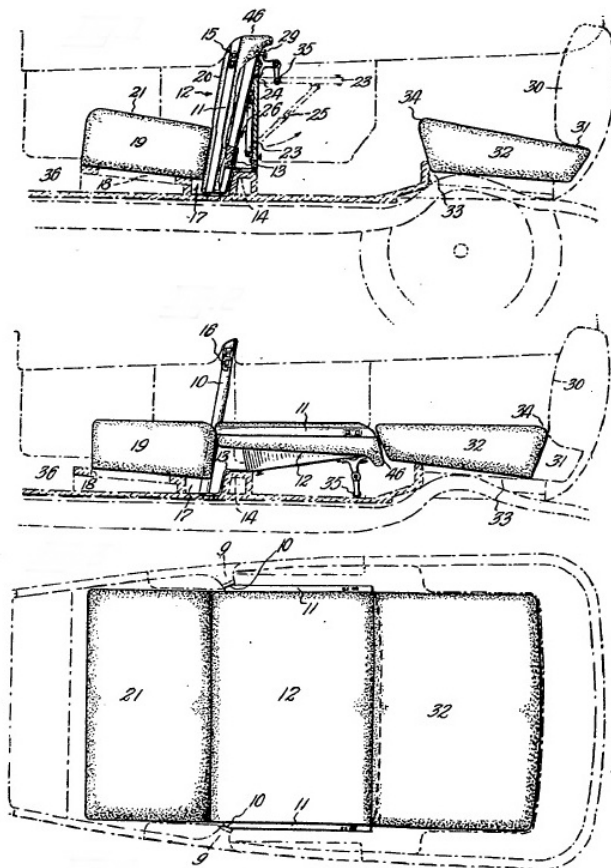
## The Clinton Amphibious Caravan, UK 1922 (GB193,696)



Even if it was constructed, it would not have been the first. An amphibious caravan was reported on and photographed in 1907. No prizes for guessing which country it came from.

22

## The Propert Camping Body, Australia 1923 (AU11,770/23)

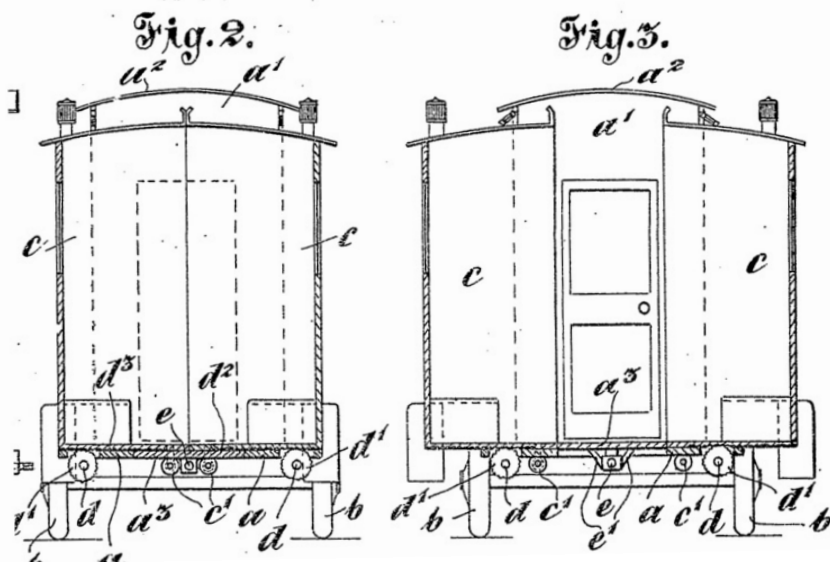


Designed in Australia in 1923, the Propert Camping Body illustrates how conventional automobiles could be easily converted to camping vehicles at reasonable cost. Alfred Harold Propert of Sydney, Australia was one motor body builder who offered camping body conversions to customers.

Standard seats were replaced by lie-flat seats for sleeping and a range of camping accessories were added to the automobile including a folding table, equipment box and clothes storage. Similar adaptations were offered in America, some including canvas awnings attached to the automobile. Auto camping was a cost-effective and flexible way of exploring the countryside.

23

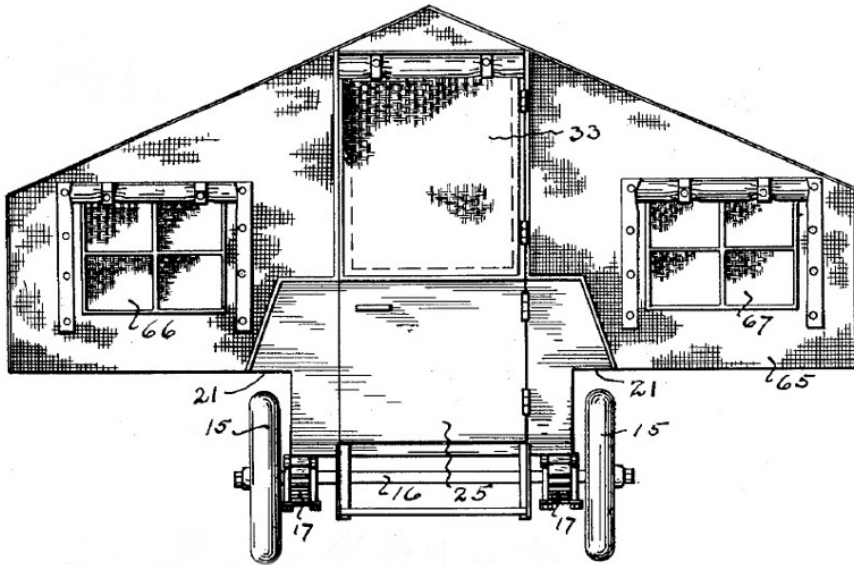
### The Purdey Collapsible Caravan, UK 1924 (GB243,878A)



In 1924 Percy John Purdey and Mary Cole Purdey of Birmingham, UK (GB243,878A) were not particularly concerned whether their ‘collapsible caravan’ was a motorhome, an automobile trailer or even horse-drawn. Finding that it was “*not desirable to construct the caravan of a width more than that of the vehicle drawing it*”, they invented a vehicle “*which has collapsible characteristics laterally whereby it may be transported on the road in its collapsed condition and laterally extended when parked, as for instance, in a field or common.*”

To achieve this goal the Purdeys used a rack and pinion system on the caravan chassis operated by a handle. This invention is included here primarily to show that the concept of the now ubiquitous RV side ‘slide-out’ will be one hundred years old in 2024.

### The Gilkison Auto Camp Trailer, USA 1926 (US1,696,113)

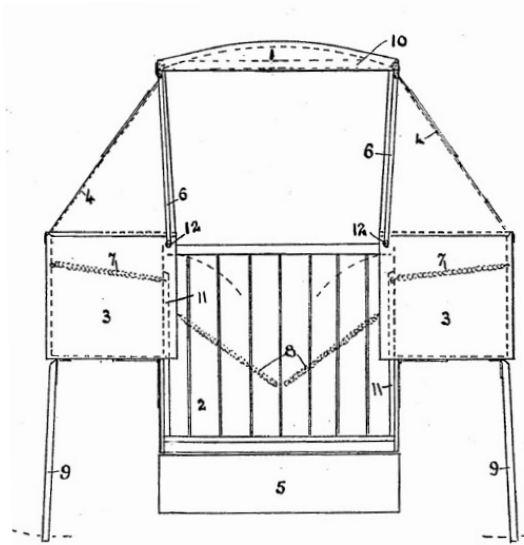


By 1926 the American camping trailer had reached a peak in its development and usage. The Auto Camp Trailer of Edward Ray Gilkison of Terre Haute, Indiana (US1,696,113, above) was a good example of how far the camping trailer had come since 1914. It featured rubber wheels, suspension, a full-height tent, full-size beds on tracks and casters, barn door, insect-proof windows and ample space and storage.

The production versions of the Gilkie Camp Trailer included electric lights, an all-steel kitchenette and an ice box. Gilkison received additional patents for refinements to his trailer into the 1930s and production continued until at least 1936. Examples of this camping trailer feature in the collections of the RV/MH Hall of Fame and the Henry Ford Collection.

John Cecil Rice of London developed what would become a highly successful RV in 1926. Called the Rice Folding Caravan, it sold well not only in the UK but also in South Africa, Australia and New Zealand.

## The Rice Folding Caravan, UK 1926 (GB252,590A)



Rice described his invention “a box-like body in which the sides fall open in such a manner as to increase the inside space, at the same time the roof rising by means of suitable link-work, the weight of the sides assisting to lift the roof, and conversely the roof in descending assists to raise the sides”. Ease of assembly was an important selling point for camping trailers of the late 1920s and early 30s, especially as more women and families tried out RV-ing for the first time.

26

## The Fletcher Collapsible Caravan, UK 1926 (GB275,829A)

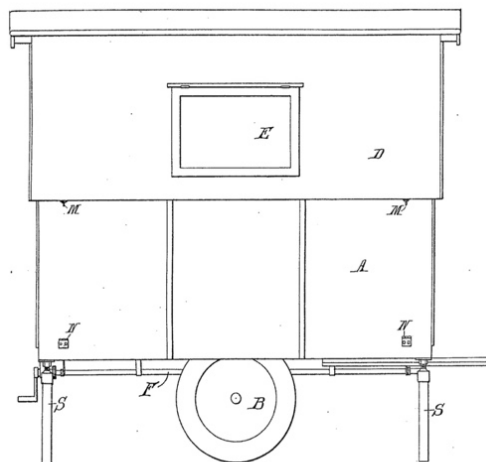
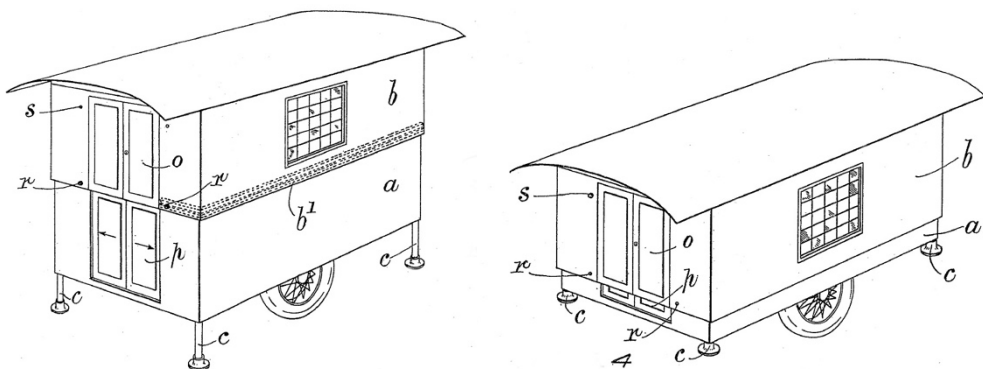


Fig. 1.

In 1926 John Lancelot Parkinson Fletcher of Wolverhampton, UK pursued the ‘chocolate box’ caravan concept first used by Lafeuille of France in 1919 in a much smaller form. Fletcher gave several options for the caravan’s lifting and lowering mechanism as follows: “*If desired the raising and lowering may be effected by rack and pinion or by endless chains passing over chain wheels or on the principle of the screw jack as will be readily understood*”. Fletcher’s idea was incorporated into the Shadow Caravan made by Fletcher and his partner R. H. Sievwright and Co. of Wolverhampton from about 1925.

27

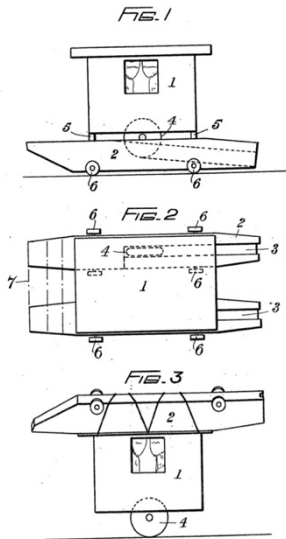
**The Skinner Collapsible Caravan, UK 1927 (GB271,388A)**



Following hot on Fletcher’s heels in 1927 was Alfred Thomas Skinner of Maidstone, UK. His ‘chocolate box’ caravan design differed only from Fletcher’s in that it had stabilising legs. It used ropes and pulleys at either end of the caravan to raise and lower the roof.

Although no direct connection has yet been established, Skinner’s design is very similar to the collapsible caravan made by Eccles in the late 1920s. Eccles may have acquired Skinner’s design.

Neither the Shadow nor the Eccles lasted long, however, since it was challenging to make them fully waterproof. Any aerodynamic advantages they might have had over standard caravans was rendered moot by increasingly powerful automobile engines.



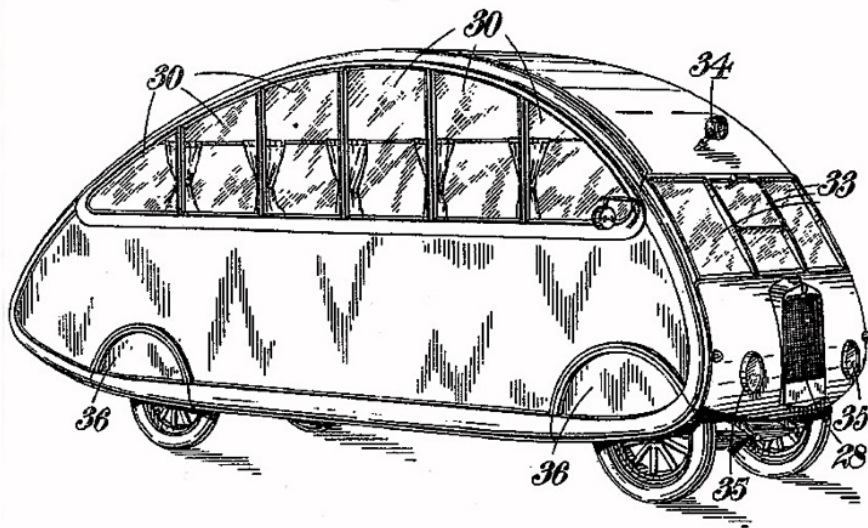
Skinner submitted another caravan patent in 1928 (GB318,048A, left), this time for an amphibious caravan.

Called the ‘Combined Trailer Caravan and House Boat’ it featured two pontoons or floats attached to the underside of the caravan for use on water that could be stored on the caravan roof when not in use.

The reason or appetite for such a vehicle was not stated, but the British obsession with floating caravans continued.

28

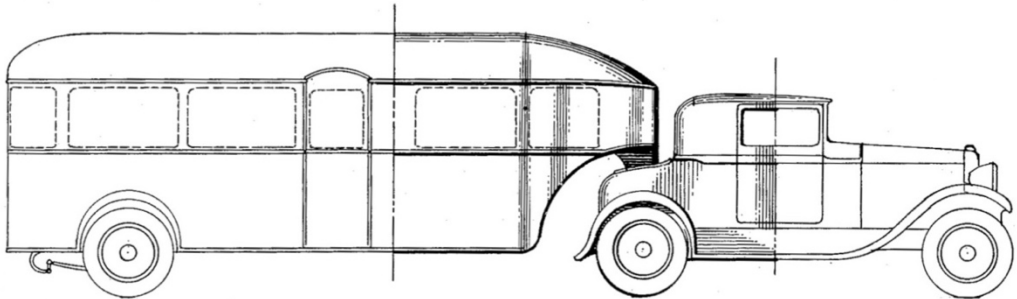
**The Pemberton-Billing Road Yacht, UK 1927 (GB297,881A)**



Noel Pemberton-Billing’s Road Yacht of 1927 features on the cover of *Recreational Vehicles: A World History 1872-1939*. It is significant as the first British coach-built motorhome where the vehicle body encloses both engine and accommodation. This permitted a degree of streamlining and gave the RV a more pleasing external appearance. Aside from the RVs of Frenchman Charles Louvet (who did not patent his RVs), this type of RV was not seen in greater numbers until the late 1930s. It was well before its time, so only one Road Yacht was ever built.



### The Curtiss Aerocar, USA 1928 (US\$1,880,844)



The Curtiss Aerocar was probably in Glenn H. Curtiss' mind from about 1919, but became reality only in 1928. It evolved from the Curtiss Camp Car prototypes built in New York prior to 1921 and was manufactured in Miami and Detroit from 1928 until 1940.

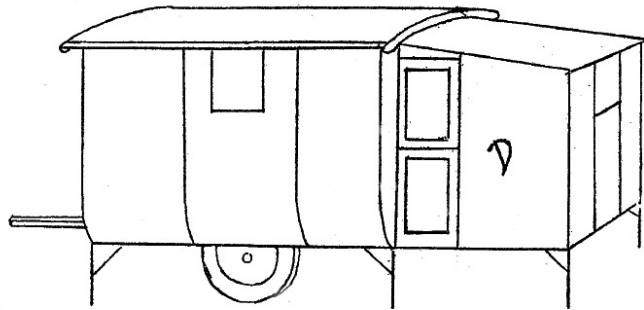
The Aerocar was a rarity in RV history in that it was both radical and successful – most RVs are either one or the other but not both. It was radical in its semi-monocoque design (having no separate chassis) and consisting of fully-enclosed walls (no fold-out beds). Its fifth wheel coupling (called the Aerocoupler) had never previously been used in production RVs, making the Aerocar fast but stable. Its aircraft-inspired styling and construction methods made it lightweight and streamlined. It was certainly expensive, but it was one of the most desirable RVs ever built.

The Aerocar concept is the subject of a number of patents submitted by Curtiss himself (prior to his death in 1930), by Curtiss' widow (in 1931) and by employees of the Curtiss Aerocar Company (after Curtiss' death). Curtiss saw it as not just an RV but also as a road vehicle that could serve as passenger transport, a luxury commuting vehicle and for goods transport. It served all those purposes and more.

Much of the technology used in the Aerocar has over the last century or so been updated or made redundant. The Aerocar's greatest legacy however is the merger of the RV with the fifth wheel. Thousands of 'fifth wheeler' RVs are to be found in Europe, Australia and especially North America today. Yes, they can be huge, but they are also some of the safest RVs on the road, thanks to Curtiss.

30

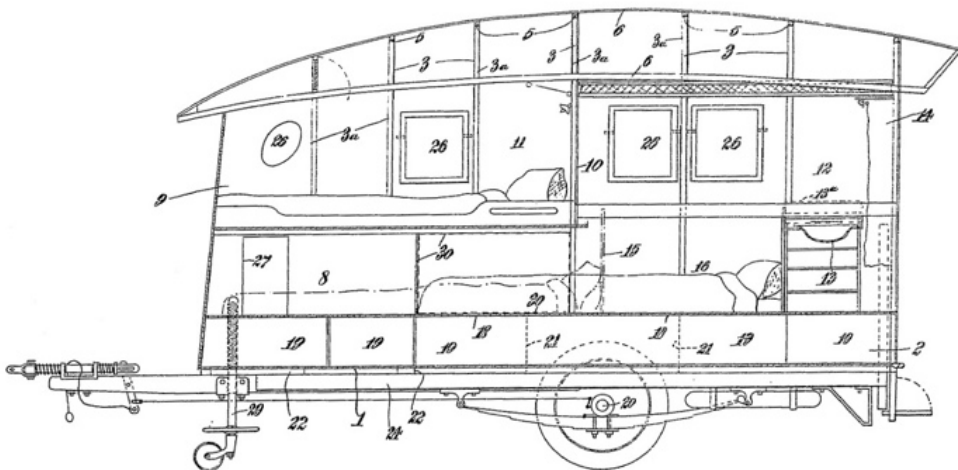
The Allen Folding Caravan, UK 1928 (GB310,906)



In 1928 William Allen of Seaford, UK suggested that a caravan might have a rear extension and that the entire caravan might fold for storage purposes. Even the axle and wheels of this caravan could fold. The lack of engineering detail in Allen’s patent suggest his complex concept would have been difficult to realise. But his ideas show that British consumers wanted larger caravans if they were going to take up caravanning in significant numbers. RV manufacturers met this demand in the 1930s.

31

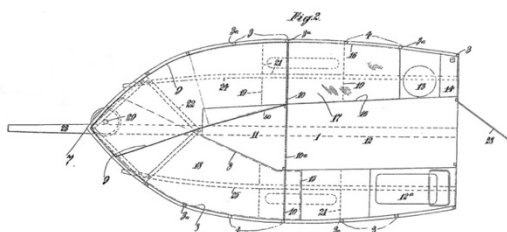
The Howard-Mercer V-Shaped Caravan UK 1929 (GB327,468A)





Francis Howard-Mercer of Guildford, UK was clearly not a fan of the ‘chocolate-box’ style of caravan, commenting in his 1929 patent that *“such a telescopic structure is however open to the objections that it is comparatively costly, its action is uncertain, that special lifting and lowering mechanism must be provided, and that it is particularly difficult to secure a draft, rain, and insect proof jointing between the telescopic sections.”*

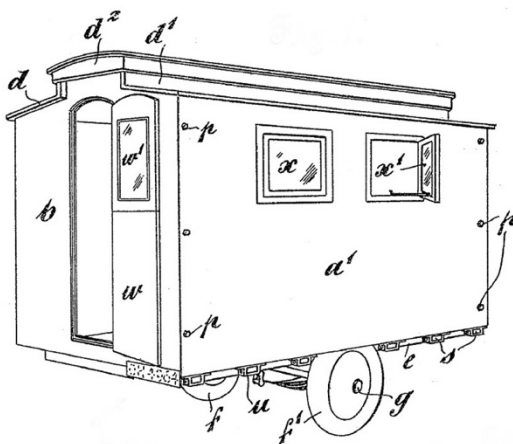
Howard-Mercer still wanted something aerodynamic, so he decided to address this issue by designing a caravan that followed the lines of a boat hull. The front of the caravan resembled the prow of a ship, with internal single berths along its sides. Although often termed ‘land yachts’, RV designs that came too close to their aquatic cousins (including amphibious versions) were not popular, and this design is not known to have seen the light of day.



32

**Charles Alfred Ensor** of Wellington, UK was a creative caravan designer with several patents to his name in the late twenties and early to mid thirties. His 1929 design was for a collapsible caravan with solid walls and roof secured together with bolts. The aim was to make the caravan easier to store during the British winter. As with many early RV designers, this was a solution looking for a problem that either didn't exist or was needed only by a small minority. Most demountable caravans either leaked or were not very stable.

**The Ensor Demountable Caravan, UK 1929 (GB317,662A)**



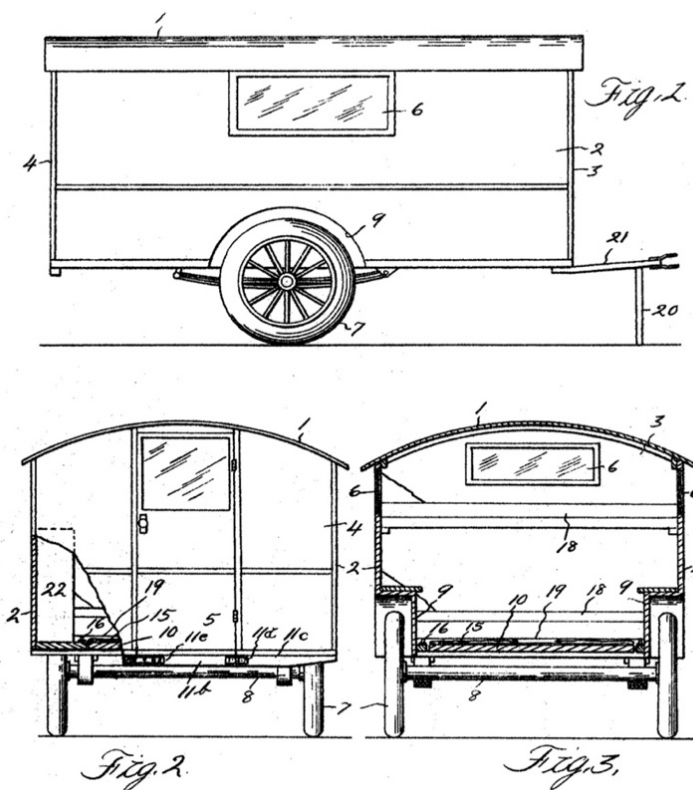
## RV Patents 1930-1939

If the 1920s was the decade of experimentation, the 1930s was the decade of expansion. Potential RV buyers had made their wishes clear. Camping was becoming a chore. Most didn't want to 'rough it' but instead wanted to take their home comforts with them, including the kitchen sink. RV manufacturers responded by making RVs bigger, aided by the evermore-powerful automobile engine.

Still, with the Great Depression in full flight, many couldn't afford a large automobile. For this market, RV manufacturers made camping trailers and small caravans. The 'sweet spot' of RV manufacturing in the 1930s was the mid-sized caravan or travel trailer – not too big, not too small, but just right for a few days away with enough creature comforts for the whole family. North America saw a travel trailer boom in the mid 1930s as homeless families joined vacationers on the road looking for work. The boom turned to bust by 1938, whilst in Europe the minds of working families turned to thoughts of war.

33

### The Covered Wagon of Arthur G. Sherman, USA 1931 (Canada patent CA322,807D)



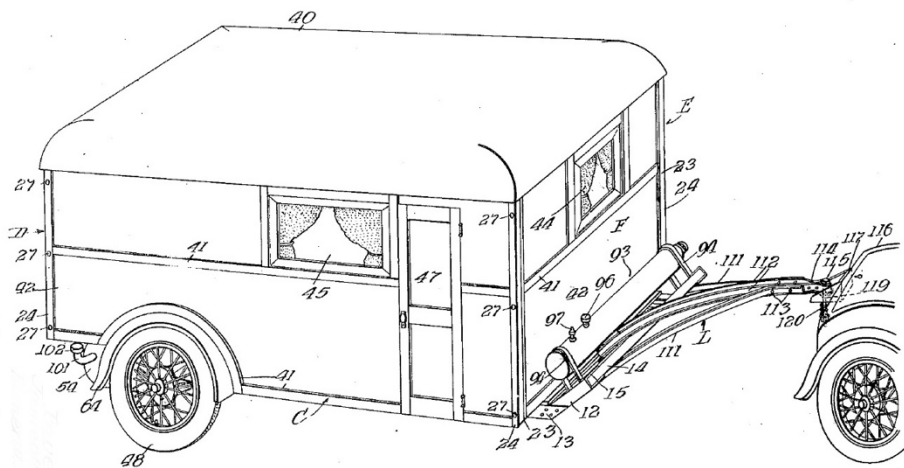
Arthur G. Sherman was the founder of Covered Wagon, the largest American manufacturer of travel trailers in the mid 1930s. His 1931 patent for a camping trailer is important because it documents Sherman's first RV concept after, as legend has it, a frustrating camping trip trying to set up a tent in the rain in 1929. Sherman's 'invention' (as we have seen the idea itself was not new) was a collapsible, hard-walled trailer that provided full internal height at camp and a lowered height when under tow. A low trailer under tow reduced wind resistance and improved stability.

What made Sherman's collapsible trailer different to similar British vehicles of the 1920s was the mechanism used to change the height of the trailer. Instead of a roof that was lowered over the trailer base in 'chocolate-box' fashion, the entire trailer floor was raised and lowered using an externally operated handle and cord.

The increased power of tow vehicles combined with the often complex and unreliable nature of collapsing mechanisms soon made the collapsing trailer redundant. They were replaced by permanent full-height travel trailers in the early 1930s and an Australian innovation – the 'pop top' caravan.

34

**The Small Automobile Trailer, USA 1931 (US1,945089)**



The trailer developed in 1931 by James W. Small and Elmer W. Pahlke of Chicago, Illinois used a fifth wheel mechanism of a more basic nature than Curtiss' 'Aerocoupler'. It was a design in which:

*“the combined floor space necessary for the kitchen or working space and the bed space is less than the sum of the spaces necessary for each of these purposes separately”*. Patent-speak for space-saving.

The Small trailer was designed to be low enough to fit inside a standard garage and could be disassembled for storage. The 13-page patent was detailed enough for anyone interested to construct the trailer, reflecting the significant growth in self-built trailers in the US during the 1930s.

## 35

French RV concepts were rarely patented, so it is pleasing to have an unusual RV from France documented during the early 1930s. Antoine Marie Louis Levoyer of Paris came up with the concept of a ‘removable bungalow’ in 1931.

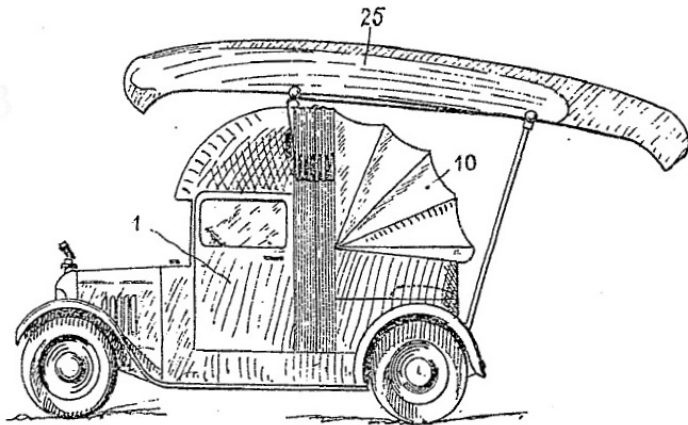
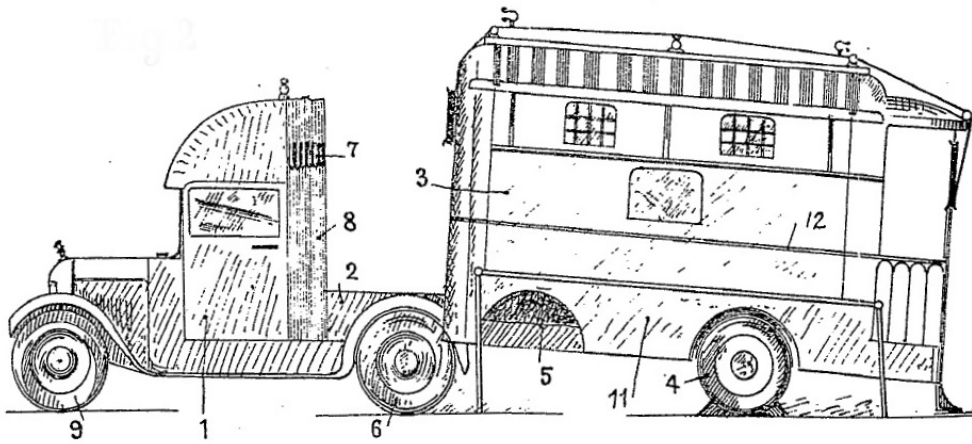
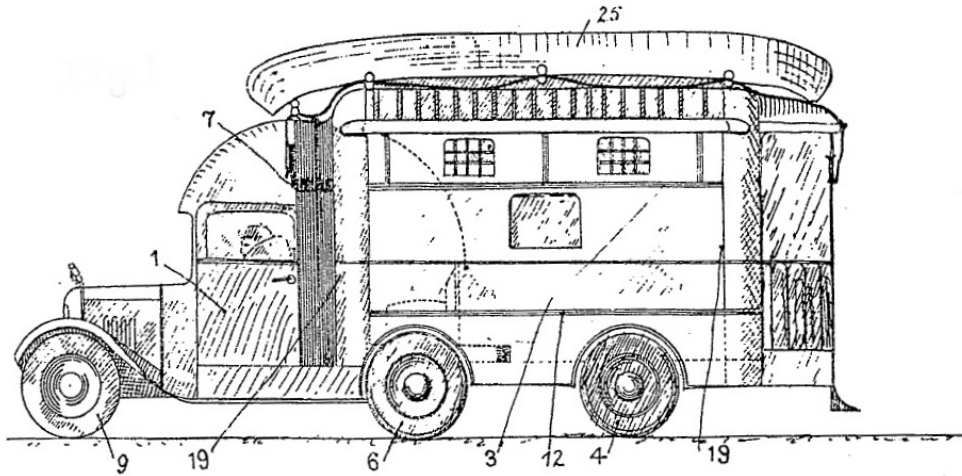
Levoyer was not keen on the motor car and trailer arrangement, since the trailer *“could only house a restricted number of persons, both during travel and when stationary, while on the other hand the whole arrangement is not very strong and does not offer sufficient comfort.”*

His solution was to have a self-standing bungalow with a rear axle which could be loaded and deposited at camp in a similar way that breakdown trucks collect and unload stranded automobiles. After depositing its cargo, the tow vehicle would fold down a rear hood and be used for independent travel. The rear wheels of the bungalow were designed to be steerable so the combination could navigate sharp bends.

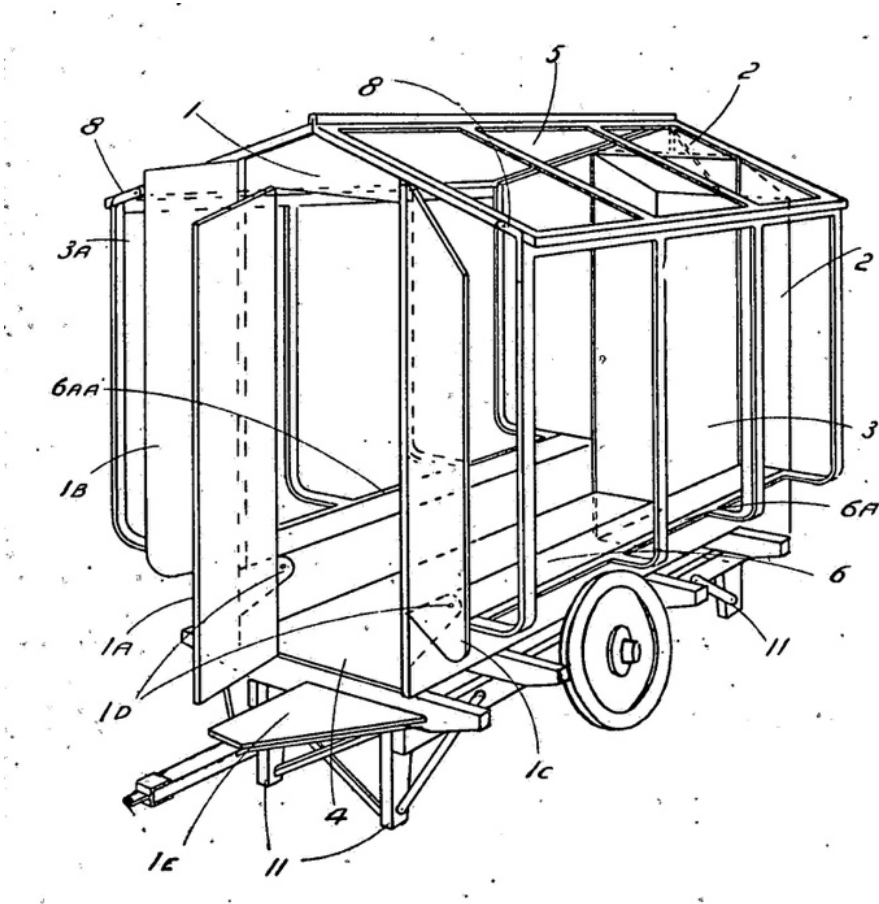
Like his compatriot Charles Louvet, Levoyer was keen to have a canoe on the roof of his RV, so one is provided for in his patent. The bungalow had American-style fold-out beds on either side to create additional internal space. The roof had a horizontal roller blind for ventilation.

Levoyer’s invention was both creative and playful, but was probably too complex for its own good. In seeking solutions that gave more space and better flexibility, he created new engineering challenges and practical difficulties that as far as we know were never overcome in the real world. But without colourful inventors like Levoyer, the world of early RVs would have been dull indeed.

The Levoyer Car and Trailer Group for Camping,  
France 1931 (UK patent GB401,267)



## The Parkerbilt Folding Trailer, New Zealand 1931 (NZ68,085)

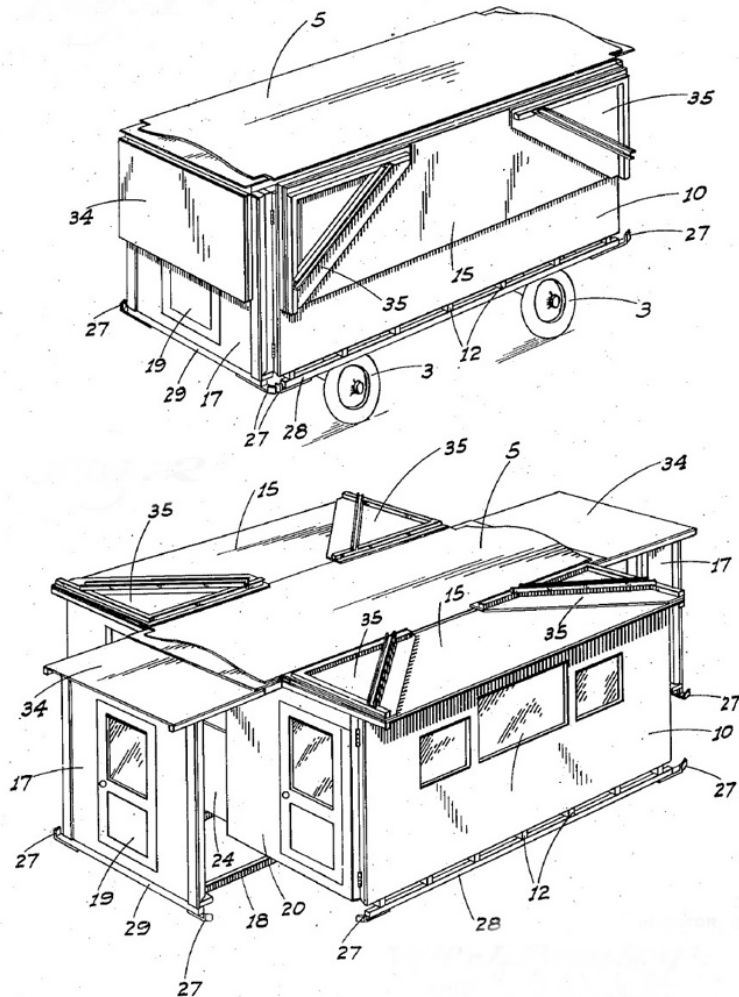


The wonderfully named Horace Hobart Herschll Weston Parker of Dunedin, New Zealand is responsible for a valuable contribution to pre-WW2 RV design. His 1931 “*improved combined trailer and camp construction and method for collapsing same*” was to become the Parkerbilt Folding Trailer sold in New Zealand between 1931 and 1936.

Just about every part of Parker’s trailer hinged, pivoted, folded or collapsed down to a compact form. Parker envisaged it could be used on the back of a truck chassis as well as in trailer form. He added in his patent description “*when camping season is over it can be stood on end, in an exceptionally small space, in any shed; this is particularly the case when wheels and the springs are removed.*”



**The Pendry Folding Cabin, USA 1933 (US2,006,477)**

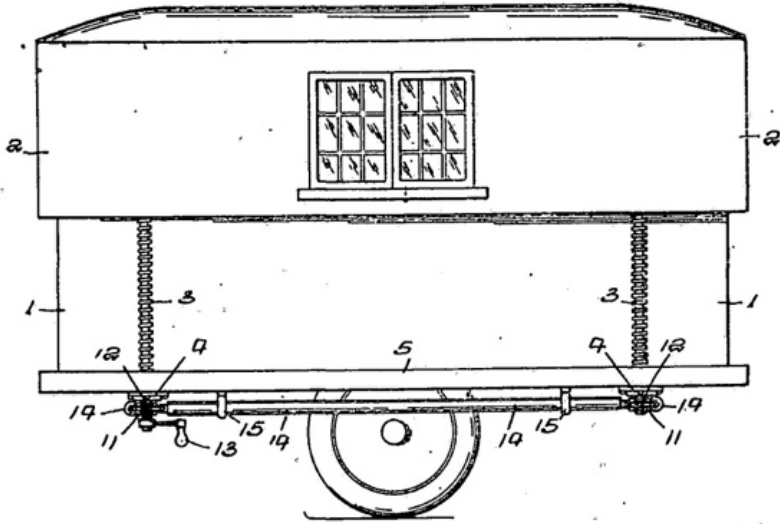


William J. Pendry’s 1933 folding cabin is an early example of the move towards the ‘mobile homes’ that would become a familiar sight in trailer parks in the US and caravan parks in the UK after the Second World War. These structures were only mobile between factory and their final resting place in RV parks. There they would become affordable permanent or holiday homes for tens of thousands, especially in the immediate aftermath of the war.

Pendry’s design allowed for the rigid walls to collapse for transit. He saw his cabin being used as a ‘traveling lunch wagon’ at circuses and carnivals, but his suggestion that they were suitable as summer cabins in resorts or as temporary accommodation for fruit pickers was much closer to the mark.

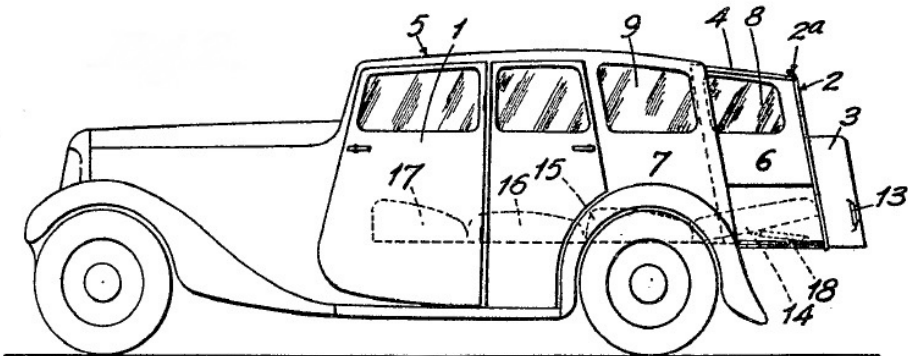


**The Thomas Collapsible Caravan, New Zealand 1933 (NZ700,86)**



New Zealand inventor Frank Vincent Thomas of Christchurch persisted with the chocolate-box caravan concept in 1933, this time using a continuous chain to operate worm-drive screws in each of the caravan's four corners. It is unlikely to have delayed the demise of this design as, by the early 1930s, full-height caravans and travel trailers were being comfortably towed by ever more powerful automobiles.

**The Cooke Telescoping Saloon, UK 1933 (GB424,791)**

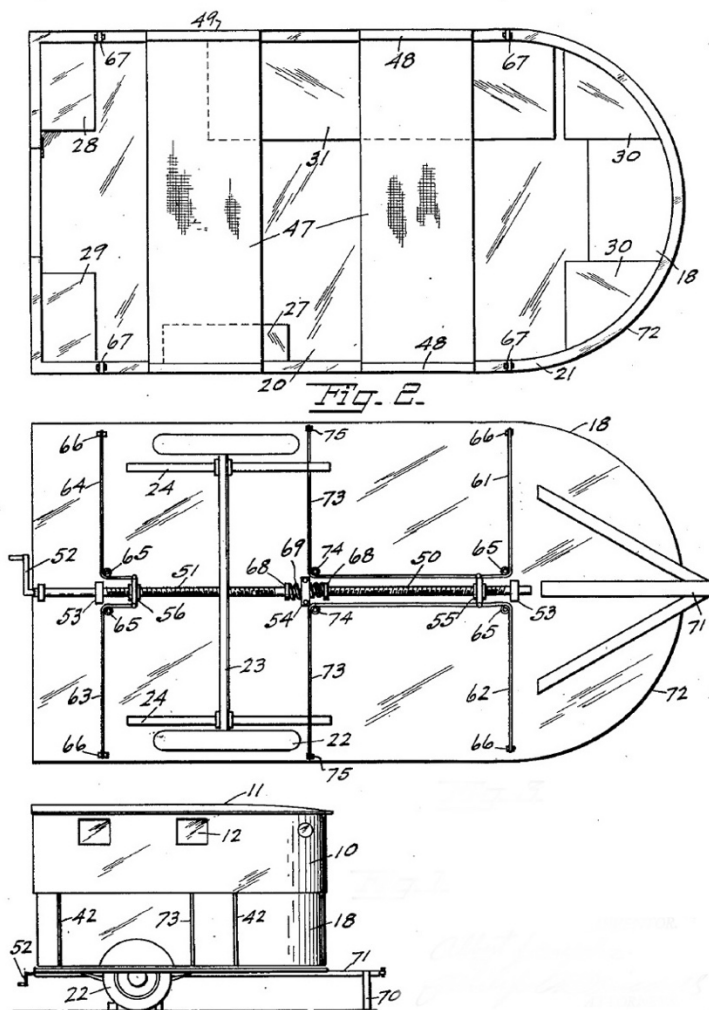


Walter Cooke of Sutton, UK felt that a ‘telescoping vehicle’ would be a simpler mobile accommodation alternative to the caravan. He pointed out that no additional storage would be required for his invention above that of a normal automobile.

Cooke’s telescoping saloon followed the ‘extending body’ principle of the 1916 Stein Camping Car by using rollers and slides for two compartments to be extended rearwards for sleeping purposes. This concept is believed to have been built, but did not gain traction among British campers in the 1930s. A lot of engineering was needed for little additional space benefit.

40

**The Josephs Dustproof Telescopic Automotive Trailer, USA 1934 (US2,055,930)**



Any ‘telescopic’ vehicle used for camping had many challenges to overcome. How could the telescoping parts be made waterproof, dustproof and insulated against the cold? Would the moving parts still function after being subjected to twisting and vibration on the road? Albert Josephs of Oakland, California explained this dilemma in one breathless sentence in his 1934 patent:

*“Automotive trailers of the telescopic type permit ingress of dust to the interior of the trailer due to several reasons, of which, in one case, the trailer may admit dust either in the raised or lowered position or both, due to the omission of sealing means, and in another case, the raising and lowering means are not self-compensating for variation in the length of the flexible elements cooperating with the different portions of the upper section, so that, while contact may be obtained at certain points, such contact is lacking in continuity, and if any slight crack exists, dust will readily enter or filter through while the trailer is being towed behind an automotive vehicle on a dusty road.”*

Quite so. Josephs’ solution was to use a series of felt pads recessed into grooves that pushed against the sides of the trailer as it was raised and lowered, not dissimilar to the draft excluders sometimes used at the bottom of a door. This was a good idea in principle, but depended on the unlikely event of the raising and lowering mechanism retaining its rigidity throughout the trailer’s life.

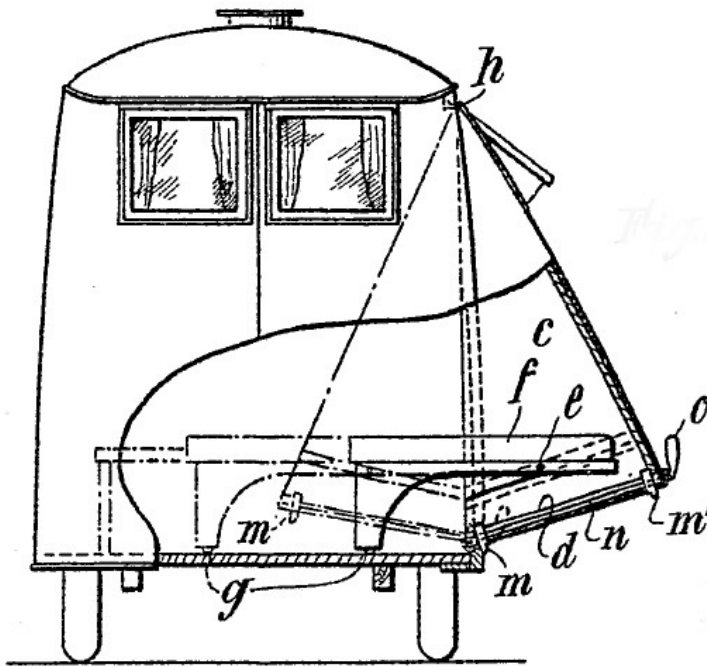
It’s also worth noting that the Joseph trailer was curved on a vertical axis at the front, a trend introduced in the streamlining fashion of 1930s. Very few RV makers since then have been forgiven by consumers for designing an RV that resembled a horse box.

## 41

The UK had a bumpy relationship with streamlining in the 1930s. Some British makers struggled to choose between traditional gypsy caravan design and streamlining, ending up with RVs that were half and half.

The Bampton Folding Caravan of 1935 was perhaps a case in point. Its ungainly looks were compounded by a side extension that folded about thirty degrees from top-mounted hinges, making it look at rest like an owl with an injured wing. It did go into production but is unlikely to have won any design awards.

**The Bampton Folding Caravan, UK 1935 (UK )**



42

**The Jennison Movable Roof, Australia 1935 (AU23,879/35 )**

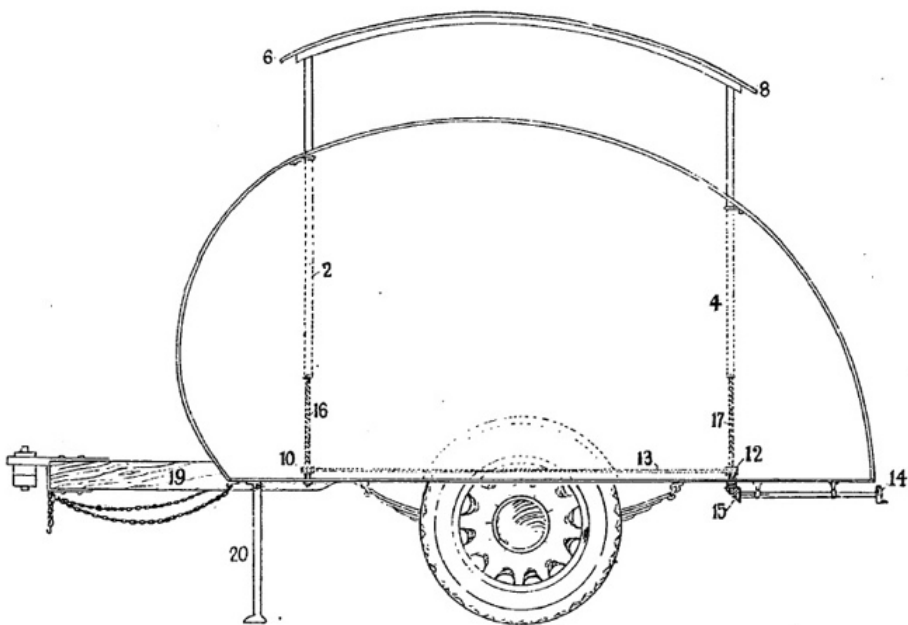


FIG. 2

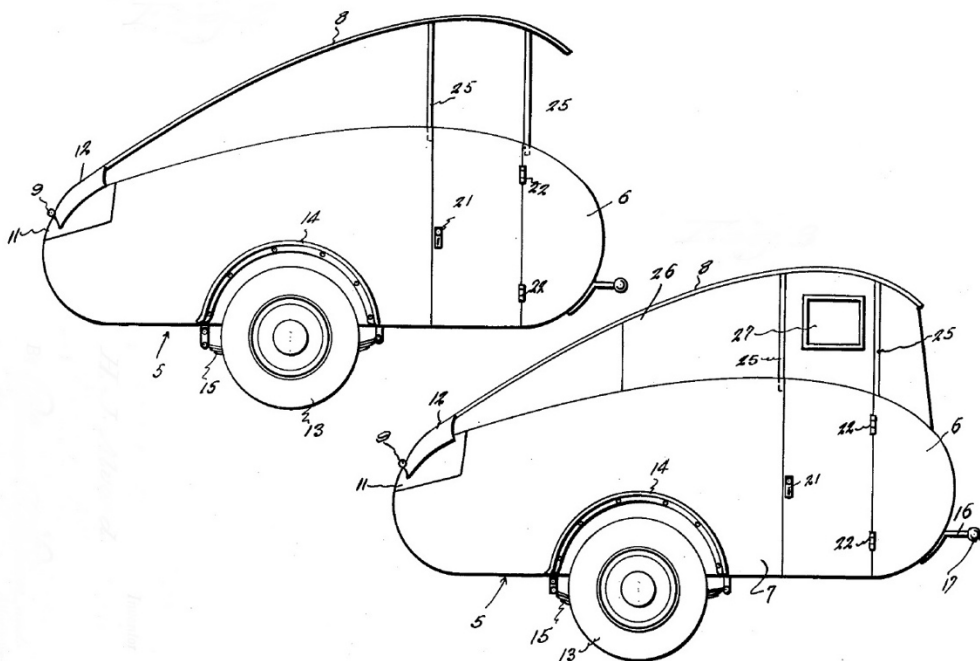
The patent of John Alfred Jennison for a small caravan with a raised roof looks at first sight unremarkable, but it heralded a new type of RV in Australia – the ‘pop-top’.

Jennison's solution to the aerodynamic limitations of the full height caravan was to raise the roof only. When the roof was lowered before travel the caravan was more aerodynamic, but when raised at camp it still provided both headroom and ventilation. To raise and lower the roof Jennison used an ingenious method of linking four 'worm-drive' rods at each corner of the caravan to a continuous chain, requiring only a single handle to operate the roof. When the roof was raised, Jennison proposed a detachable skirt of canvas to be attached between roof and caravan to make it waterproof.

Jennison patented his idea in 1935. The idea was called a 'movable roof' in the patent but was later named by Jennison a 'telescopic roof mechanism'. Later Australian caravanners came to call such a design the ‘pop-top’. It remains one of the most popular forms of RV in Australia today.

43

**The Alvord Trailer, USA 1936 (US2,071,489)**

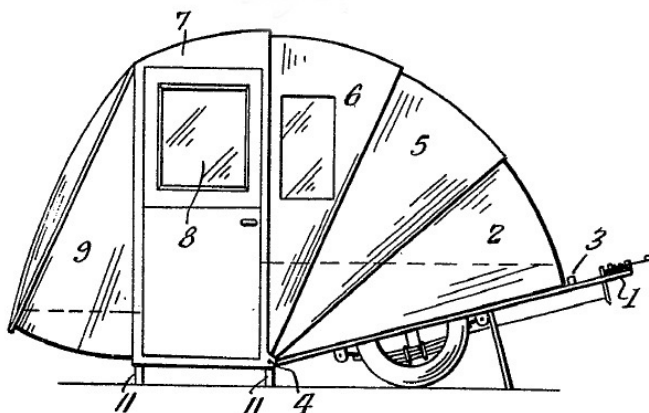
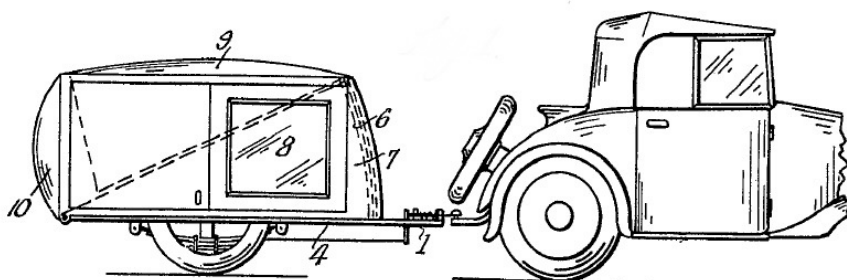


Harry J. Alvord of Phoenix, Arizona patented a trailer in 1936 that represented a new form of small RV – the teardrop trailer. In his patent Alvord expressed concern that large travel trailers prevented rearward visibility from the automobile. His simple solution was to design a low-profile trailer with a raisable roof hinged at the rear.

The core of creative activity around the design of teardrop trailers seems to have been concentrated in the Los Angeles area around 1936. Designs from this period soon gave up the idea of a raised roof, accepting that the inside of a teardrop was for sleeping only. Instead an external kitchen was added to the rear of the teardrop. In the late 1930s there were a number of plans issued by magazines and periodicals for DIY construction of a teardrop trailer. Their simplicity and low costs made them an immediate hit. Their form remains substantially unchanged today.

44

**The Wilson Collapsible Caravan, UK 1936 (GB446,028)**



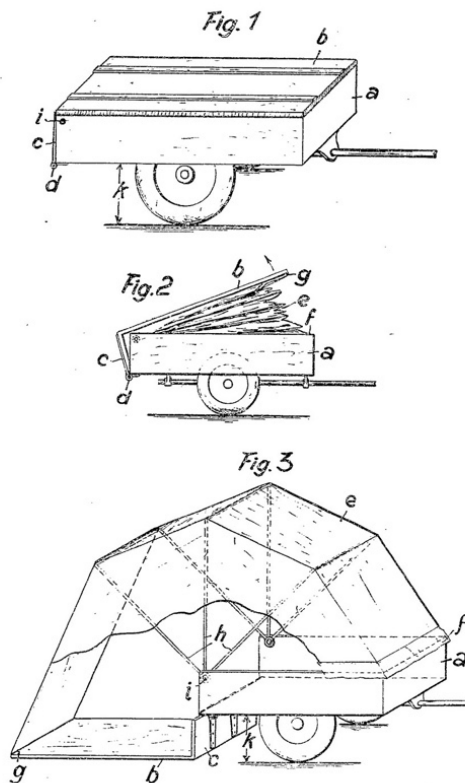


Dennis Laird Wilson of Seaford, UK came up with a hybrid caravan and camping trailer idea in 1936. His invention contained “a plurality of open ended sections pivotally mounted on said end section so as to telescope one over the other over said end section and a closed rear section pivotally mounted so as to telescope into its adjacent section which forms the side cover of the caravan in the collapsed position.”

Wilson envisaged that individual sections of the caravan could be opened independently, “which is advantageous, e.g. when it is desired to use the caravan for the purpose of sunbathing with a certain degree of privacy.” To overcome the issue of dust and water ingress through the telescoping sections, Wilson proposed “an inflatable tube which, when inflated hermetically seals any gaps which may occur between adjacent sections.” Needless to say there is no evidence to date of this strange, armadillo-like RV coming to life on British roads.

45

**Sport Berger Werk Hans Berger  
Germany, 1936 (FR807639A)**

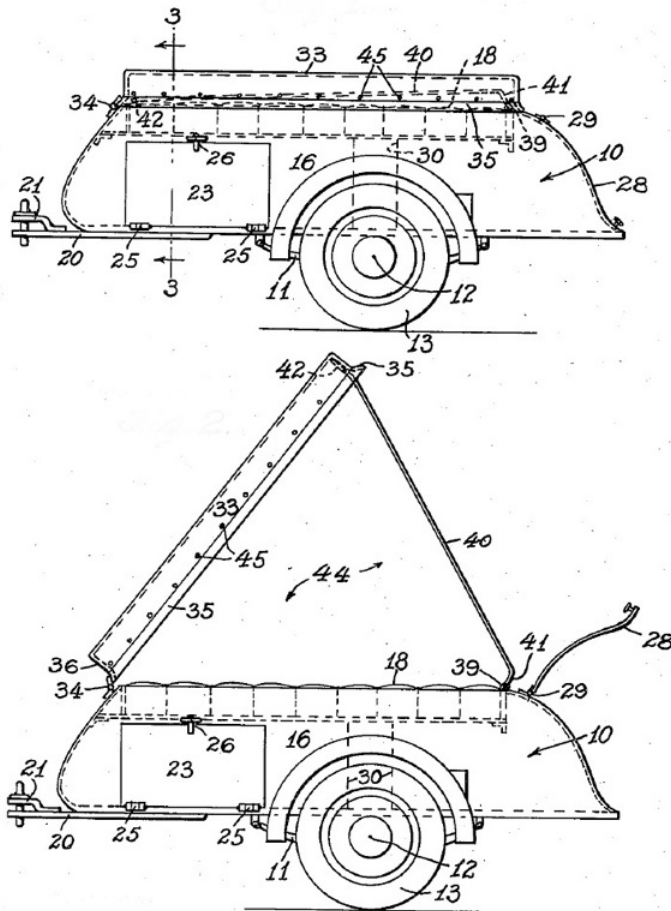


The above French patent is in fact from German RV maker Hans Berger, who produced a range of camping trailers and lightweight caravans in the mid to late 1930s. His concertina-type camper was sold as the Hausdabei ('House with You') and weighed only 220kg. Its simplicity and low cost made it popular with German campers. The design was foolproof and strong, unlike many earlier attempts at integrated camping trailers of the decade before.

In contrast to the Wilson Collapsible Caravan, the Berger design accepted that canvas was the best material for a telescopic enclosure. The folding tent frames provided all the strength necessary to create a rigid structure without the need for additional guy ropes or poles. This basic idea is still in use in many types of tents and camping trailers today.

46

**The Lynn Trailer, USA 1937 (US2,131,110)**

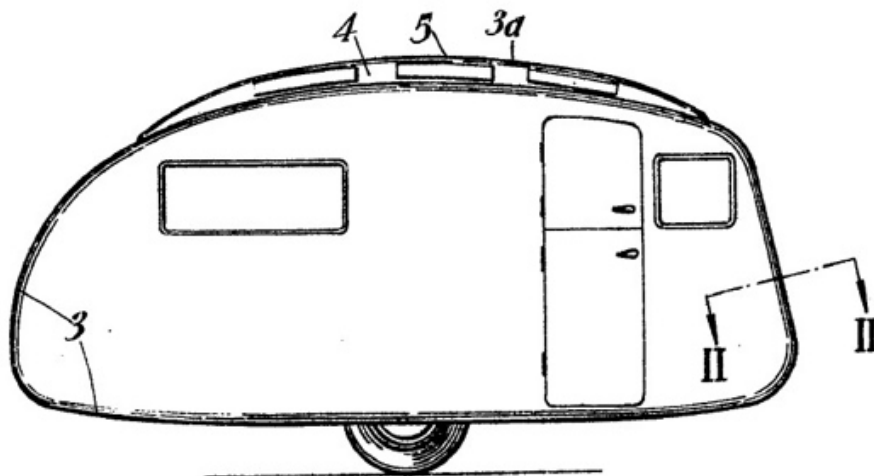


Moore Lynn of Santa Monica, California, chose in 1937 to design his trailer in such a way that two collapsible hard panels could be raised into an A-shape at camp to form a watertight roof above a bed built into the base of the trailer. British caravan designers of the early 1930s had realised that an RV did not need to be full height from front to rear. Lynn took this idea to the extreme, probably modelling his trailer idea on the ridge tent to create full height only at the mid-point of the RV.

Regular RV travellers will recognize this shape from one particular manufacturer still in business today, underlining the longevity of Lynn's 1937 idea.

47

### The Dawtrey Curved Caravan, UK 1937 (GB470,628)



A number of RV designers of the 1930s preferred to patent specific aspects of RV design rather than entire vehicles. If an entire vehicle was patented, infringement could be easily avoided by changing just one aspect of the vehicle. The more specific a patent the better.

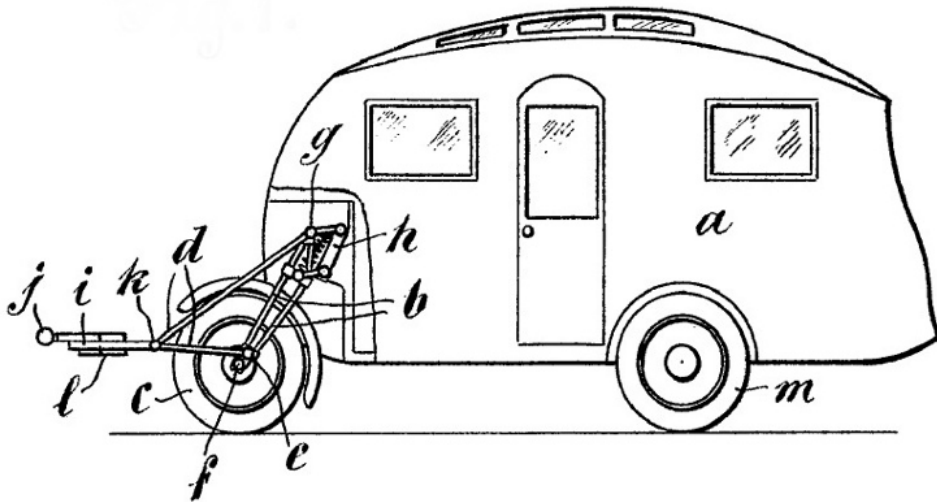
Clifford Rawnsley Dawtrey of Coventry, UK, was an innovative caravan manufacturer of the 1930s. His Airlite caravans went through a series of radical design changes that used wood, steel,

aluminium and even 'Bakelite' plastic to create curvaceous exteriors that were ahead of their time.

Dawtrely was at the forefront of RV material exploration. As a pioneer of new materials he had as many failures as successes. This particular patent related to the use of heated plastic applied over a curved wooden mold which, when cooled, formed a curved corner. The use of such materials was not without its problems, since the plastic tended to craze over time. It was later superseded by fiberglass.

48

### The Ensor Three-Wheeled Caravan, UK 1937 (GB470,661)



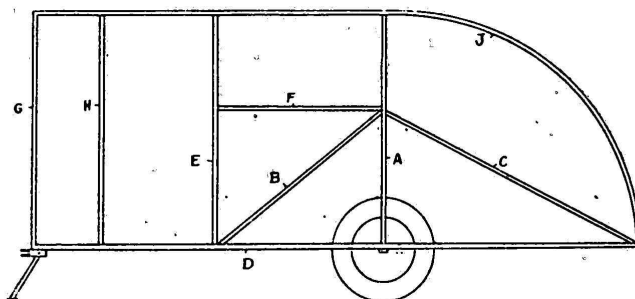
Charles Alfred Ensor deserves a second patent in this list (see also patent number 32) for his creative thinking around RV design. His 1937 three-wheeled caravan used a third wheel at the front of the caravan attached by a steering fork (apparently Ensor used the front wheel of a motorcycle for his prototype) connected to the van.

Frustratingly Ensor does not explain in his patent what problem his invention solves. It was presumably intended to reduce some of the weight applied on the rear axle of the tow vehicle. In addressing this issue, as with so many other RV inventions, Ensor introduced new ones. Achieving a level caravan at camp was one, dealing with potholes or dips in the road another. As towing dynamics was not

studied scientifically until the 1950s, Ensor would not have known that the addition of a third wheel did not add materially to the stability or safety of a trailer. But he gets full marks for trying.

49

### The Baird Improved Caravan, New Zealand 1938 (NZ78,095)



James Reginald Baird of Hamilton, New Zealand deserves full credit for his invention of a lightweight steel caravan in 1938. His patent describes the safety and weight problems of caravans of the period. The simple drawing above belies the complexity of his ideas that did away with transverse axle, springs, chassis and drawbar. Instead Baird created a monocoque welded steel frame and skin that used independent axles, pneumatic tyres as suspension and a low floor to reduce the center of gravity. The front of Baird's caravan was attached directly to the tow vehicle and incorporated a single drop-down leg for stability at camp. Baird expressed pride that all parts of the caravan could be made in New Zealand.

Although we might pick holes in Baird's ideas, his invention contains many ideas which are still in use today. It is not known if his caravan was ever built.

50

Our final invention belongs to William McDonald Park of Northwood, UK, who designed an extending caravan in 1938. Park's variation on the theme of folding caravans was to have an entire side wall fold down and out to create an external deck. A sliding roof section extended to cover the deck and side panels swung out to

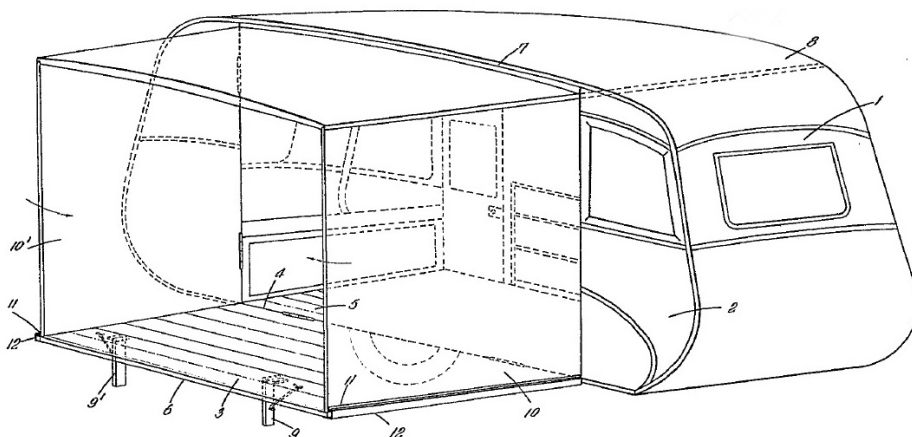
connect with extended floor and roof, effectively doubling the size of the caravan.

What could possibly go wrong? Ability to use the caravan without extending it? Structural issues under tow? Rigidity? Sealing the caravan and its annex against rain, wind and dust? None of these issues get a mention.

RV annexes are very popular today thanks to the extra private space they create. Slide-outs aside, nearly all are created from canvas or a modern fabric alternative. So how did we arrive at this solution rather than the solid-walled idea of William Park in 1938? Through simple trial and error.

This invention is included to show that for every successful design there are many failed ones. We should be grateful to all the inventors in this book for assisting with the process of design selection that had led to the RVs of today.

### **The Park Extending Caravan, UK 1938 (GB500,051)**



## **Conclusion**

A review of early patents does not give a complete history of RV design. There are many important RV design pioneers who do not feature here because they did not patent their ideas, including Dr. Gordon Stables, Bertram Hutchings, Charles Louvet and Hawley Bowlus. There are also many patents not featured here that related to specific parts of an RV such as tow hitches, suspension and even toilets. Each of these has contributed to the development of the RV.

What we do learn however is how the RV has evolved over time, and how many ideas were tried and jettisoned before reaching the designs we see today. We see that the RV has gone through fads and



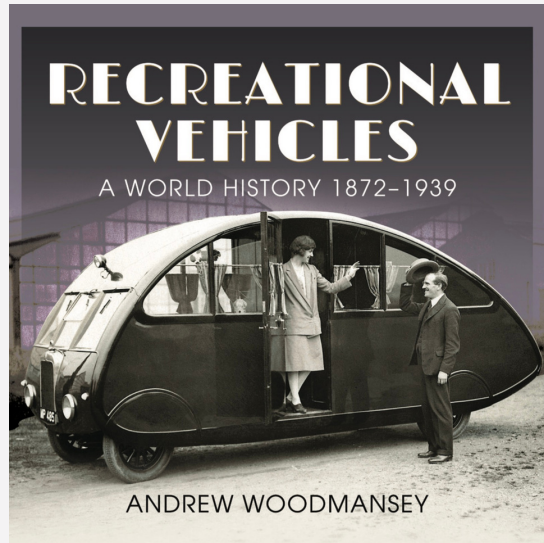
fashions, from the early motorized house fantasies of the late nineteenth century, through bulky horse-drawn camping cars to the lightweight camping trailer of the early twentieth century and the streamlined caravans and travel trailers of the 1930s. We discover that just about everything possible has been tried to reduce RV weight, height and air resistance by making RVs fold, collapse, slide or rotate. Perhaps most of all we find out that nothing in the RV world is new, and that designs that we may have thought belong in the twenty-first century in fact came from the early twentieth.

My own concluding thoughts following this review are twofold. The first is one of surprise at the sheer volume and variety of ideas that have gone into the hobby of recreation on wheels across many nations. How many hours of design, testing, building prototypes and manufacturing have gone into these vehicles over the last one hundred and forty years or so? The creation and refinement of the RV has been an important but often overlooked part of our social, leisure and transport history.

The second is the steady growth in size of our mobile recreational needs over time. Although RV size had to be reduced somewhat when low-powered automobiles were first introduced, RVs have otherwise been on a steady trajectory of increasing size and weight. As automobile engines have become more powerful, we have been able to take more paraphernalia with us. Recreation on the road has not meant managing with less, it's meant re-creating more of what we have at home. At considerable cost to fuel economy, the environment and sometimes even safety.

It will be interesting to look at RV patents over the next decade as we enter the electric vehicle age to see if RVs become smaller, leaner and simpler. Managing with less does not have to mean sacrificing the joys of the open road. I hope a few future RV designers will look through these designs and find inspiration to create some of the responsible RVs of the future.

*Reviews of Recreational Vehicles*  
*A World History 1872-1939*



"ANDREW WOODMANSEY HAS BECOME  
THE NEW AUTHORITY ON RV HISTORY."  
RV CAMPING MAGAZINE

"A METICULOUS VOLUME THAT IS  
SURELY DESTINED AS THE STANDARD  
REFERENCE WORK ABOUT CARAVANS  
AND MOTORHOMES."  
THE SOCIETY OF AUTOMOTIVE HISTORIANS IN BRITAIN

"THE BEST QUALITY RV HISTORY BOOK  
ON THE MARKET."  
DAVID WOODWORTH, RV HISTORIAN

AVAILABLE FROM ALL GOOD BOOKSHOPS

