Feb. 20, 1962 N. A. HOFFMAN 3,021,852

CAR TOP TENT

Filed April 10, 1959

3 Sheets-Sheet 1

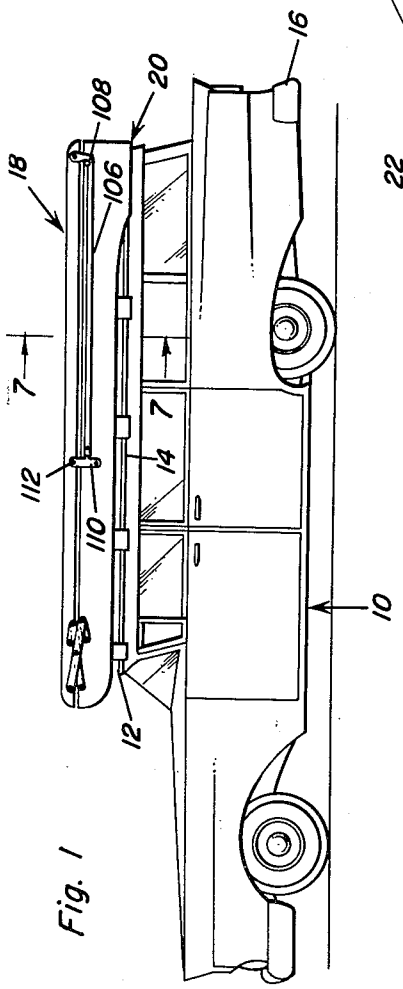


Fig. 1

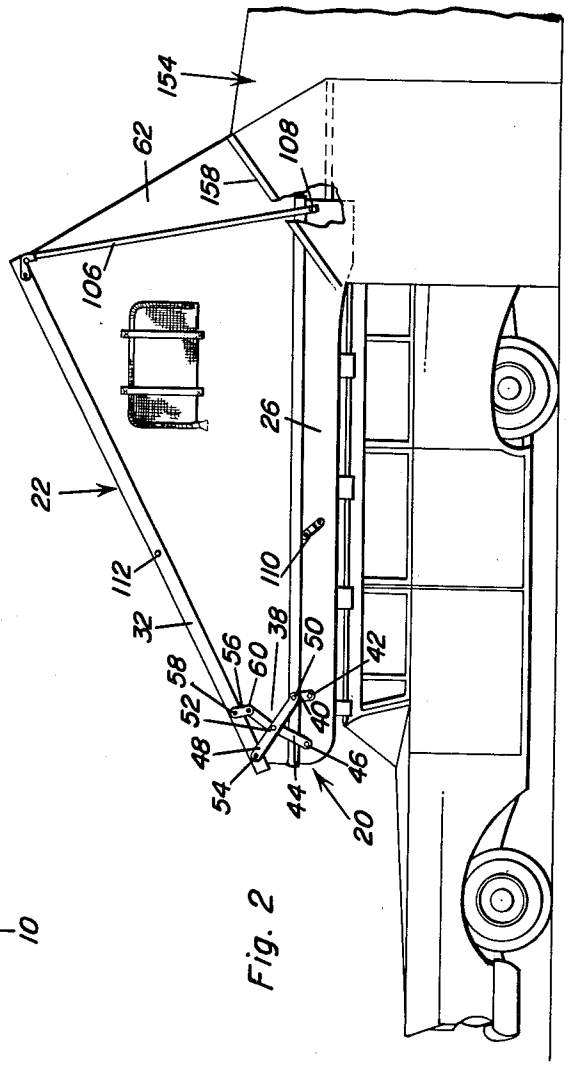


Fig. 2

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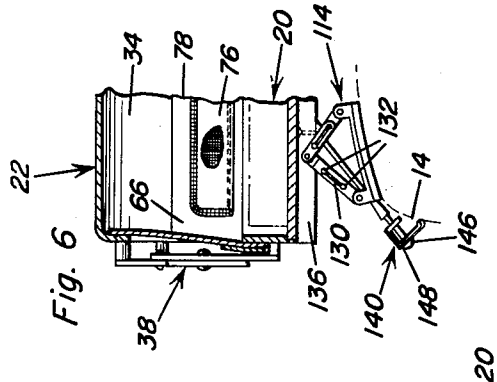


Fig. 6

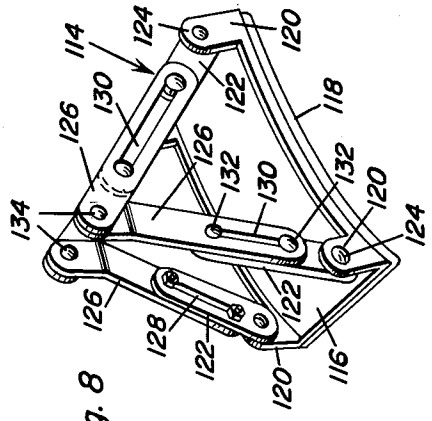


Fig. 8

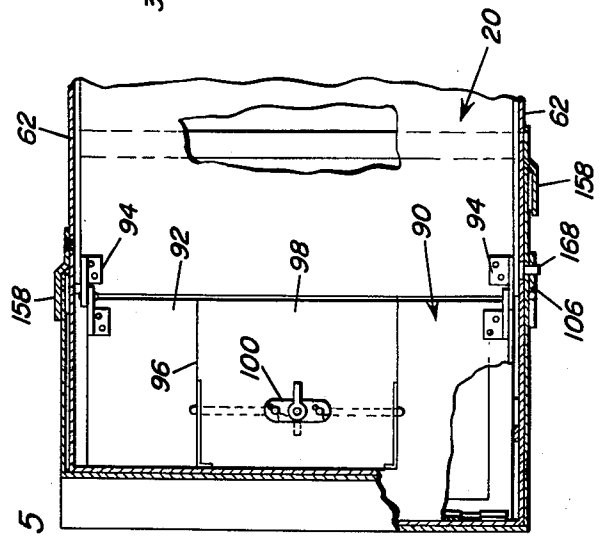


Fig. 5

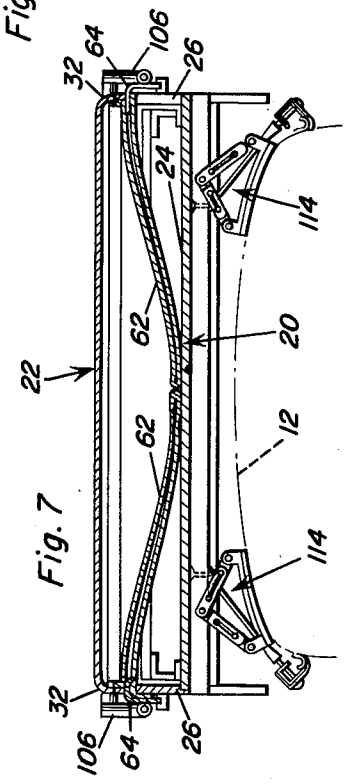


Fig. 7

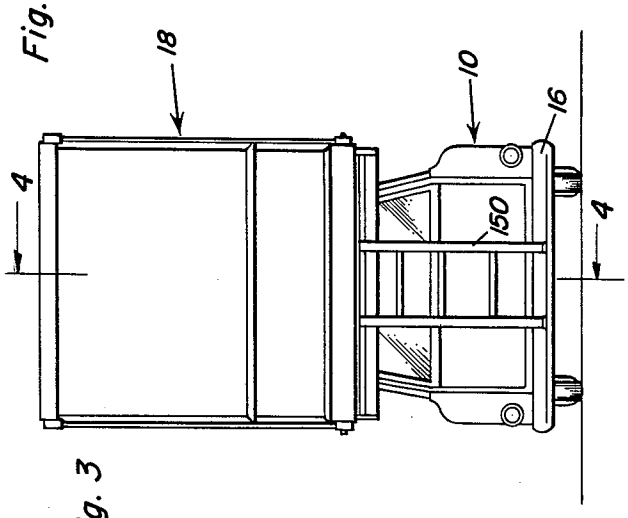


Fig. 3

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CAR TOP TENT

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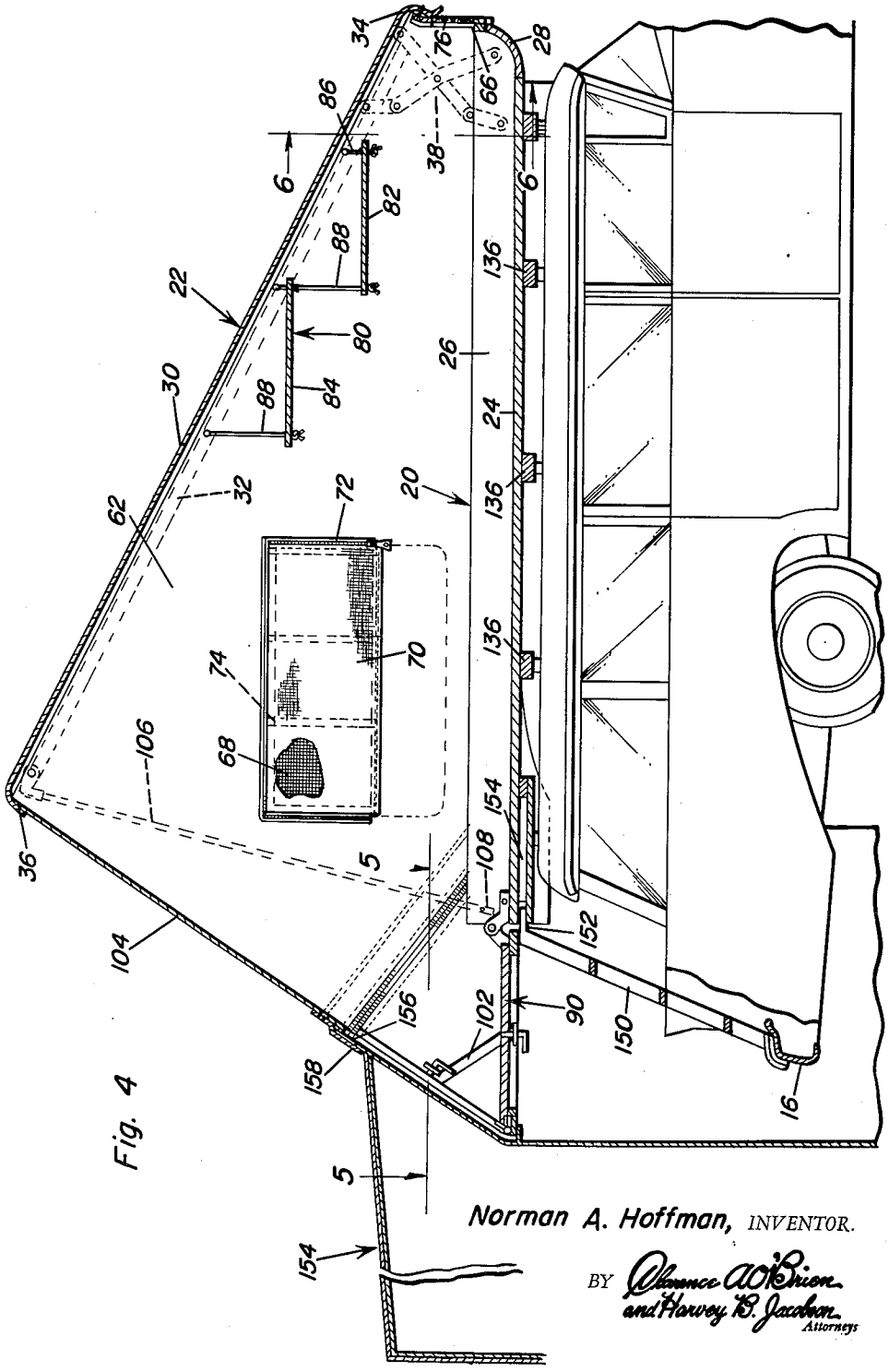


Fig. 4

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United States Patent Office 3,021,852
Patented Feb. 20, 1962

3,021,852

CAR TOP TENT

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Filed Apr. 10, 1959, Ser. No. 805,490
9 Claims. (Cl. 135—1)

This invention relates in general to new and useful improvements in construction, and more specifically to a novel car top tent.

Although numerous car top tents have been devised in the past, all have presented numerous difficulties. For example, the car top tents may be broadly divided into two classes which includes those where the cover or top wall of the tent structure is directly elevated and is supported all around by suitable props, and that form of car top tent wherein the cover is pivotally connected to the base and so remains connected. In the first type of car top tent, the problem of raising the cover and the provision of adequate lightweight supports has not been completely solved. On the other hand, while the hingedly mounted type cover has proved to be very successful in that it merely requires the lifting of one end of the cover and the provision of a suitable prop, it has failed to provide the normal space requirements because of the limitations of the hinge.

It is therefore the primary object of this invention to provide a car top tent wherein the cover is hingedly connected to the base by means of an expansible hinge so that when the cover is pivoted from a position in sealed engagement with the base to an elevated position, the hinged end of the cover will also be elevated above the base so as to provide adequate space for a camper at both ends of the car top tent.

Another object of this invention is to provide a car top tent which may have the length thereof increased by the simple expedient of the base extension which is pivotally connected to the main base of the car top tent and is swingable to a position extending beyond the vehicle on which the car top tent is mounted.

Another object of the invention is to provide a car top tent which is so constructed whereby an auxiliary ground supported tent may be readily attached thereto in sealed relation so that the car top tent and the ground supported tent may combine as a single unit thus providing the additional space requirements of a camper.

A further object of the invention is to provide a novel car top tent which includes a base and a cover, the sides of the car top tent being formed by side flaps which extend between the sides of the base and the cover, the side flaps being normally stored within the base and having sealing gasket materials disposed along lower edges thereof for engagement between the cover and the base so as to form a seal between the two.

A still further object of the invention is to provide a novel mounting bracket for a car top tent, the mounting bracket being readily adjustable whereby it may be secured to all types of vehicles and adjusted to support the base of the car top tent in overlying relation with respect to the vehicle.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a side view of a vehicle which has mounted on the top thereof a car top tent which is the subject of this invention;

FIGURE 2 is a side view similar to FIGURE 1 and shows the car top tent of FIGURE 1 in its open position and having attached thereto an extension tent;

FIGURE 3 is a rear view of the vehicle and car top tent with the car top tent in its open state and the ground engageable tent disconnected therefrom;

FIGURE 4 is a longitudinal sectional view on an enlarged scale taken substantially upon the plane indicated by the section line 4—4 of FIGURE 3 and shows the specific details of the car top tent and the connection between the car top tent and the ground supported tent;

FIGURE 5 is an enlarged fragmentary horizontal sectional view taken substantially upon the plane indicated by the section line 5—5 of FIGURE 4 and shows the details of the base extension and the trap door formed therein;

FIGURE 6 is an enlarged fragmentary sectional view taken substantially upon the plane indicated by the section line 6—6 of FIGURE 4 and shows the details of mounting of the forward end of the car top tent and the general arrangement of the components thereof;

FIGURE 7 is an enlarged transverse sectional view taken substantially upon the plane indicated by the section line 7—7 of FIGURE 1 and shows the specific manner in which the car top tent is mounted on the vehicle; and

FIGURE 8 is an enlarged perspective view of one of the mounting brackets for supporting the car top tent.

Referring to the drawings in detail, it will be seen that there is illustrated a conventional type of vehicle **10** which, among other components, includes a top **12** having a rain gutter **14** extending about the sides thereof. Also, the vehicle includes a rear bumper **16**. Mounted on the top **12** of the vehicle **10** is the car top tent which is the subject of this invention, the car top tent being referred to in general by the reference numeral **18**.

The car top tent **18** includes a base generally referred to by the numeral **20** and a cover generally referred to by the numeral **22**. As best shown in FIGURE 4, the base **20** includes a bottom wall **24** having upstanding side panels **26**. The forward end of the bottom wall **24** terminates in an upwardly curved nose **28**.

The cover **22** includes a top wall **30** and depending side walls **32**. Also, at the forward end of the cover **22** the top wall terminates in a downwardly curved nose **34**. The rear end of the top wall **30** terminates in a generally downwardly curved portion **36**.

The cover **22** is hingedly secured to the base **20** by means of a pair of hinges **38**. The hinges are identical and each extends between a side **26** of the base **20** and a side **32** of the cover **22**. Each hinge **38** includes a relatively short link **40** which is connected to the side **26** by means of a pivot **42**. A relatively long length **44** is connected to the side **26** by means of a pivot **46**. Pivotally connected to the short link **40** is a long link **48**. The long link **48** is connected to the short link **40** by means of a pivot pin **50**.

The long links **44** and **48** are in crossed relation and are pivotally connected to each other by means of a pivot pin **52**. The upper end of the long link **48** is pivotally connected to the side **32** by means of a pivot pin **54**. A second short link **56** is pivotally connected to the sides **32** by means of a pivot pin **38**. The short link **56** is connected to the upper end of the long link **44** by means of a pivot pin **60**. It will be readily apparent that the construction of the hinges **38** is such that when the cover **22** is swung upwardly from its closed position of FIGURE 1 to its elevated position of FIGURE 2, not only is the rear end of the cover **22** elevated as is the customary arrangement, but also the front end of the cover **22** is elevated above the base **20** so as to provide adequate foot room at the forward end of the car top tent **18**.

Extending outwardly between the sides **26** and **32** are side flaps **62**. As is best shown in FIGURE 7, each of the side flaps **62** is secured to the exterior of the side **26**

and to the interior of the side 32. Carried by the side flaps 62 adjacent their intersections with the sides 26 are sealing gasket strips 64. When the cover 22 is in its closed position, the side flaps 62 are disposed within the base 20 and the lower edges of the side 32 engage the sealing gasket strips 64 to form a seal between the cover 22 and the base 20.

Reference is now had to FIGURE 4 wherein it is shown that the car top tent 18 also includes a front flap 66 which is secured to the nose portions 28 and 34. The front flap 66 will also fold into the base 20 when the cover 22 is moved to its closed position.

At this time it is pointed out that each of the side flaps 62 includes a screened panel 68 for the purpose of admitting air into the car top tent 18. A curtain 70 is connected to the side flap 62 in overlying relation to the screened panel about three edges thereof by means of a slide fastener 72 so that the curtain 70 may be lowered and permit the entrance of light and air. During fair weather the curtain 72 may be lowered below the screen panel 68 and is supported in this position by straps 74. The front flap 66 is also provided with a screen panel 76 and a curtain 78.

Suspended from the cover 22 is a shelf construction referred to generally by reference numeral 80. The shelf construction is illustrated as including a pair of shelves 82 and 84 which are disposed at different levels and which are suspended from the cover 22 at the side thereof by means of suitable flexible hangers 86 and 88. When the cover 20 is swung to its closed position, the shelf assembly 80 merely collapses.

The rear part of the base 20 is opened and there is connected to the rear edge of the bottom 24 a base extension generally referred to by the numeral 90. The base extension 90 includes a platform 92 which is connected to the bottom 24 by means of a pair of hinges 94 the details of which are best illustrated in FIGURES 4 and 5. It is to be noted that the base extension 90 may be swung from a position forming an extension of the bottom 24 to a position overlying the bottom 24 within the base 20. The platform 92 has an entrance opening 96 which is normally closed by a trap door 98. The trap door 98 is locked in place by means of a latch assembly 100. As is best shown in FIGURE 4, the trap door 98 swings upwardly and rearwardly to its open position and is held in this position by a suitable brace 102.

Extending downwardly from the rear portion 36 of the cover 22 is a rear flap 104. The rear flap 104 has the lower edge thereof connected to the rear edge of the platform 92. As when the platform 92 is swung inwardly into the base 20, the rear flap 104 is also moved into the base 20. Further, the rear flap 104 serves to seal the rear part of the base 20 and the cover 22 against the entrance of water and other foreign matter. The edges of the rear flap 104 are secured to the rear edges of the side flaps 62 and cooperate therewith to provide the desired seal.

Pivotally connected to the rear parts of the side 32 of the cover 22 are props 106. Each of the props 106 is provided at the lower end thereof with an opening which receives a pin 108 carried by the base 20. When the cover 22 is moved to an open position, it is merely necessary to connect the props 106 to the pins 108.

When the cover 22 is in its lowered position, it is retained in this position by means of a pair of pivotally mounted catches 110. The catches 110 engage pins 112 carried by the cover 22. The catches 110 also serve a dual function in that they retain props 106 in place alongside the base 22 when not in use. This is best shown in FIGURE 1.

It is to be noted that the car top tent 18 is mounted on the vehicle top 12 by means of a plurality of mounting supports which are referred to in general by the reference numeral 114 and which are best illustrated in FIGURE 8. Each of the mounting supports 114 includes a curved base 116 having a rubber pad 118 on the underside thereof for engaging the vehicle top 12. Extending upwardly from the base 116 at the corners thereof are ears 120 to which there are pivotally connected first links 122 by means of pivot pins 124. The first links 122 have connected thereto extensions or second links 126. The first links 122 have elongated slots 128 and the second links 126 have similar slots 130. Extending through the slots 128 and 130 are fasteners 132 which are used to vary the length of the links. The links are arranged in pairs and the upper ends of the second links 126 are provided with aligned bores 134. The upper ends of two of the second links 126 are transversely spaced from the upper ends of the other two of the second links 126.

Secured to the underside of the bottom 24 is a plurality of transverse frame members 136. Each of the frame members 136 has connected to opposite ends thereof one of the mounting supports 114. Each of the transverse frame members 136 will be disposed between the upper ends of the second links 126 and to which the second links 126 will be connected by means of a pin 138. From the foregoing, it will be readily apparent that the mounting supports 114 may be readily adjusted to fit any type of vehicle top and to support the car top tent 18 in the desired relation thereto. The car top tent 18 is secured on the vehicle top 12 by means of suitable clamps 142. Each of the clamps 142 includes an anchor member 144 carried by its associated mounting support 114 and an elongated bolt 146 which is threadedly engaged in the anchor member 144. Carried by the lower end of the bolt 146 is a rain gutter engaging member 148 which engages under the rain gutter 14 and serves to pull the car top tent 18 down onto the vehicle top 12.

It is to be noted that the base 20 is of a sufficient depth for the supporting of a sleeping bag. If desired, either a sleeping bag or thin mattress may be stored therein. Also, conveniently stored within the base 20 will be a ladder 150. The ladder 150, when in use, has the lower end thereof resting upon the rear bumper 16 of the vehicle 10 and has a forwardly extending upper portion 152 seated in a socket 154 formed on the underside of the bottom 24 at the rear thereof.

The car top tent 18 in itself is sufficient for camping purposes. However, if it is so desired, there may be attached to the car top tent a ground supported extension tent generally referred to by the numeral 154. The extension tent 154 may be of any desired construction and is secured to the side flaps 62 and the rear flaps 104 by a slide fastener 156. The junction between the extension tent 154 and the flaps 62 and 104 is closed by a flap 158, as is best shown in FIGURE 4.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A car top tent comprising a base, a cover, side flaps extending between side edges of said base and said cover, a hinge connecting together said cover and said base, and car top mounting supports for said base positioned in spaced relation along opposite sides thereof, each of said supports including a seat member curved for seating on a vehicle top, a drip gutter engaging clamp adjacent said seat member, said supports each being extensible and provided with means for adjusting the effective height thereof whereby said seat members may be properly positioned to support said base over car tops having different contours and including two pair of upstanding extensible and adjustable mounting supports, the supports of each pair of supports being pivotally secured together at their upper ends and to said tent base and pivotally secured

to an arcuate top engaging base at their lower ends for movement about axes extending transversely of and spaced longitudinally of said arcuate base.

2. A car top tent comprising a base, a cover, side flaps extending between said base and cover, means mounting said cover to said base for movement between a collapsed position directly overlying said base and an extended position with one end thereof spaced vertically above said base and with said cover and side flaps defining a tent enclosure, said base being elongated and adapted to have one end positioned over the rear end of a car top, said one end of said base having an extension connected to said one end movable between the retracted position forwardly of said one end of said base and an extended position extending rearwardly of said one end of said base to project beyond the rear end of a car top to which said base is secured, an entrance opening in said base extension and said side flaps enclosing said base extension whereby said tent when erected encloses said base extension.

3. The combination of claim 2 including a trap door normally closing said entrance opening.

4. The combination of claim 3 wherein said tent includes a ground supported tent extension removably secured to the rear of said tent and adapted to enclose the ground area immediately rearwardly of the vehicle by which tent is supported.

5. The combination of claim 2 wherein said base extension is hingedly secured to said base for pivotal movement about an axis extending transversely of said base.

6. The combination of claim 2 wherein said mounting means comprises hinge means connecting the forward end of said cover to the forward end of said base.

7. The combination of claim 6 wherein said hinge means includes a pair of hinges extending between corresponding opposite side portions of said base and cover.

8. The combination of claim 7, said hinges each including means for elevating the forward end of said cover relative to said base.

9. The combination of claim 6 wherein said hinge means includes a pair of hinges extending between corresponding opposite side portions of said base and cover, each of said hinges including a pair of crossed links pivotally secured together at their midportions, one pair of corresponding ends of said links pivotally secured to said base and cover for movement about axes extending transversely of said tent and the other pair of corresponding ends of said links pivotally secured to corresponding ends of a pair of short links whose other ends are pivotally secured to said cover and base for movement about axes extending transversely of said base.

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