July 10, 1934. V. R. WILL 1,966,023

CAMP ATTACHMENT FOR AUTOMOBILES

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Fig. 1

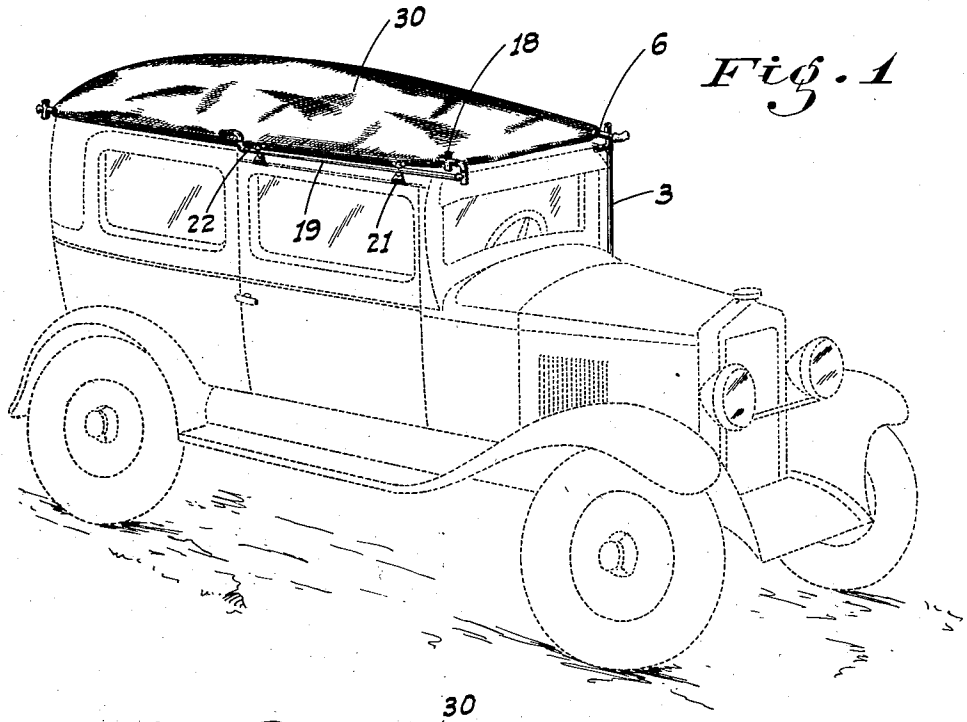
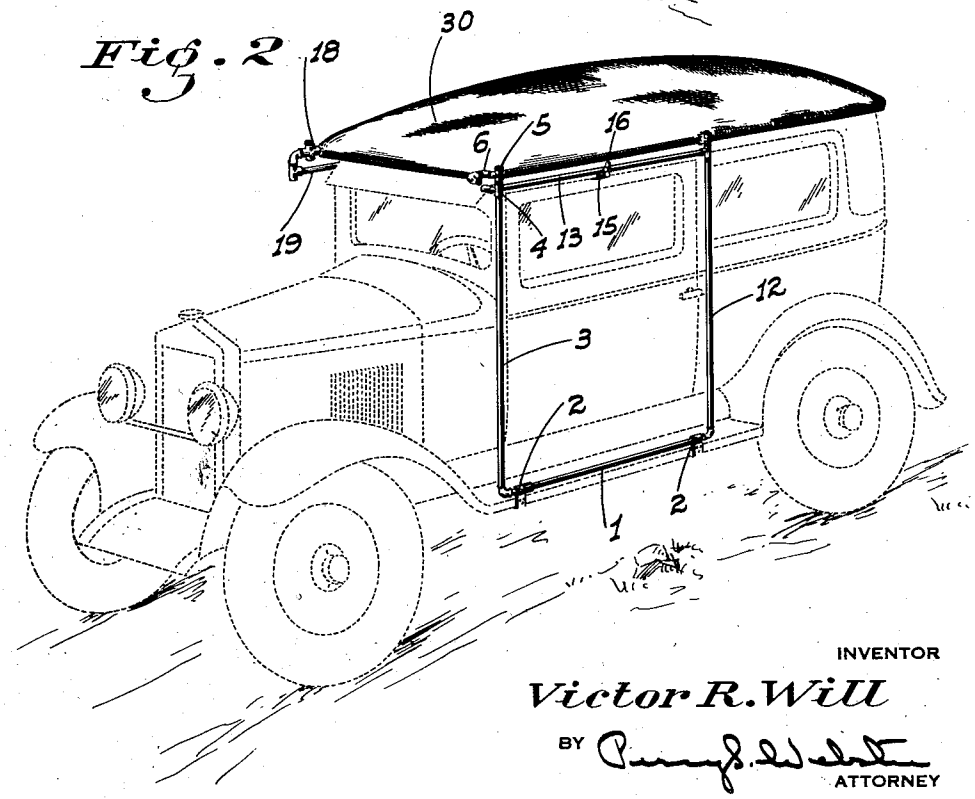


Fig. 2



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CAMP ATTACHMENT FOR AUTOMOBILES

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Fig. 3

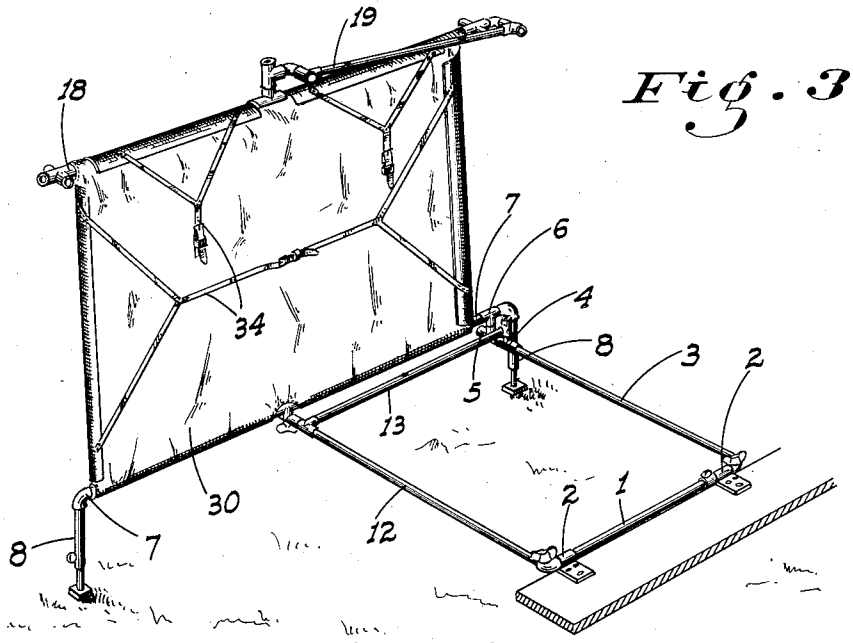
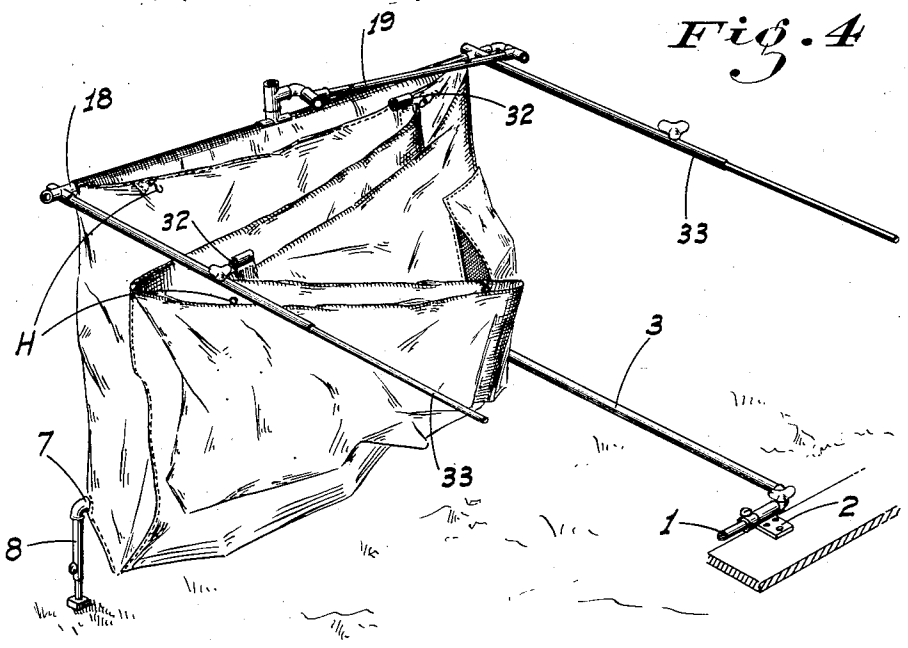


Fig. 4



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CAMP ATTACHMENT FOR AUTOMOBILES

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Fig. 5

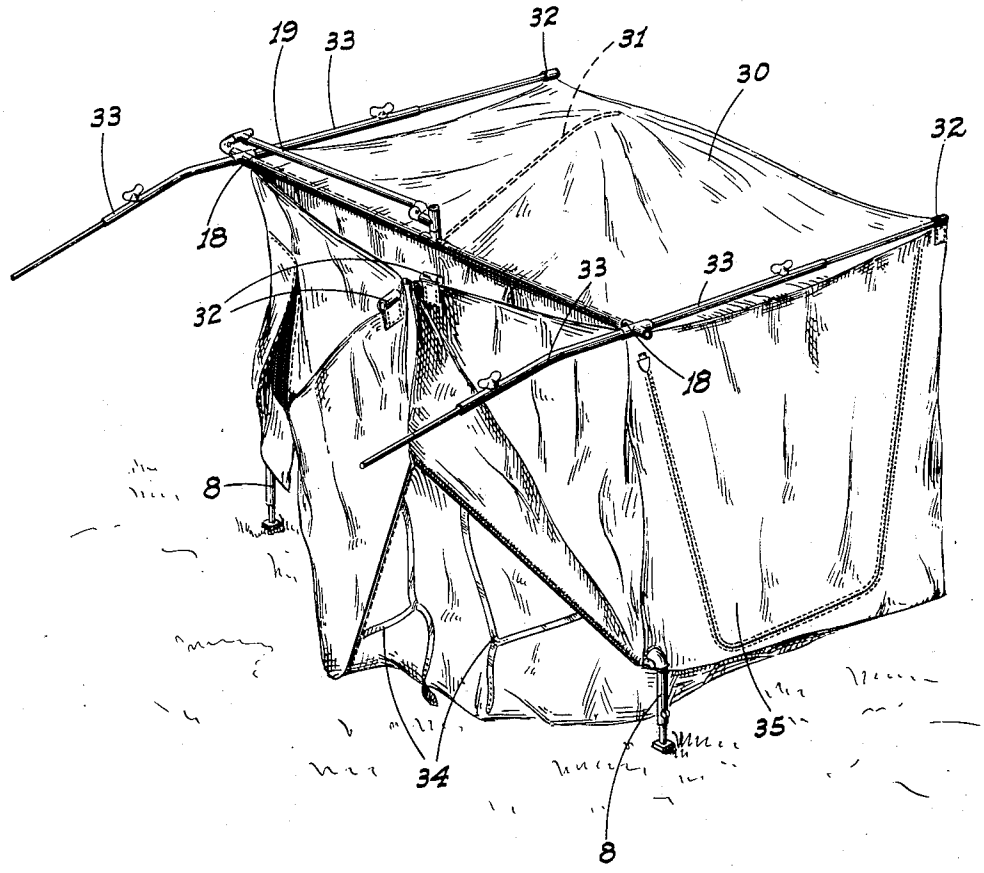

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Fig. 6

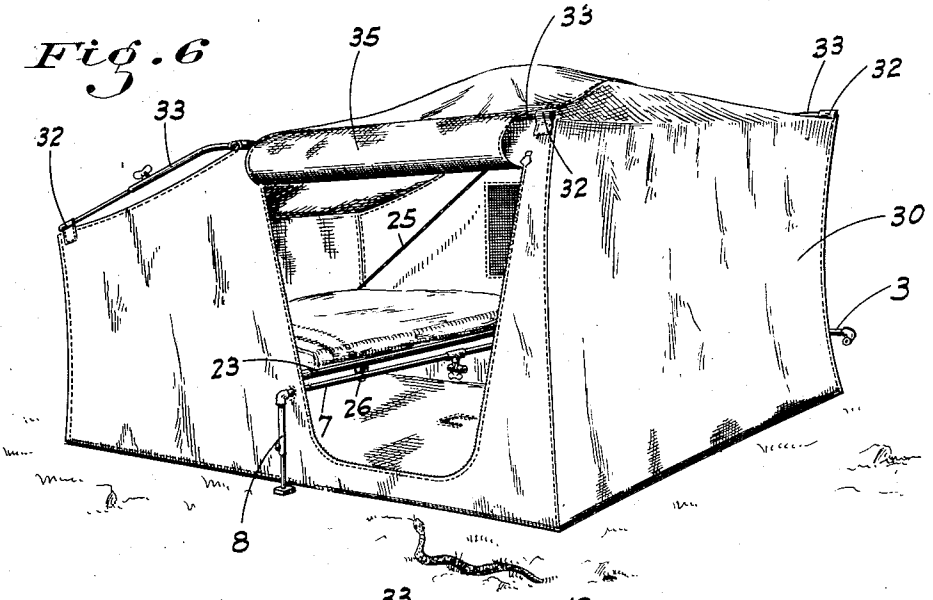

Fig. 7

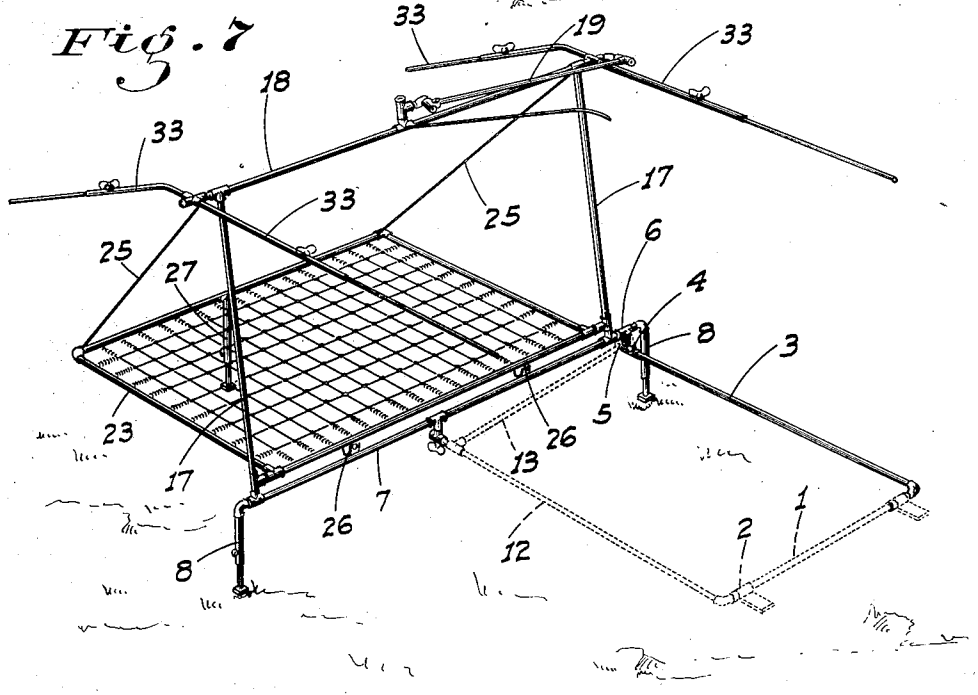

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Fig. 8

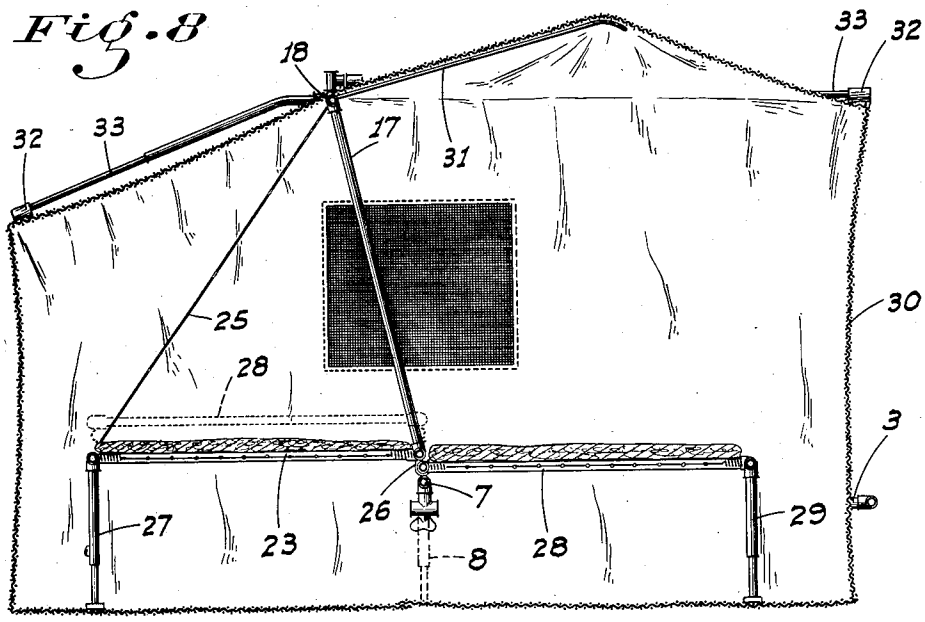
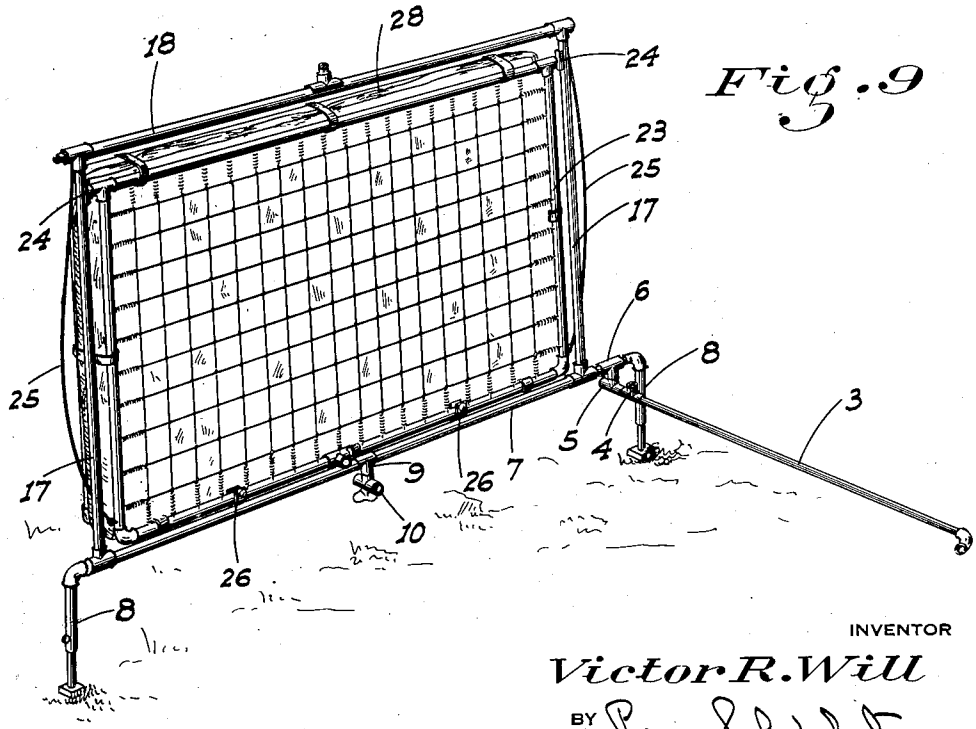


Fig. 9



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CAMP ATTACHMENT FOR AUTOMOBILES

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Fig. 10

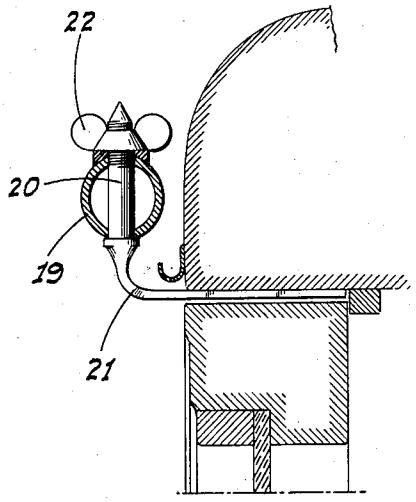


Fig. 11

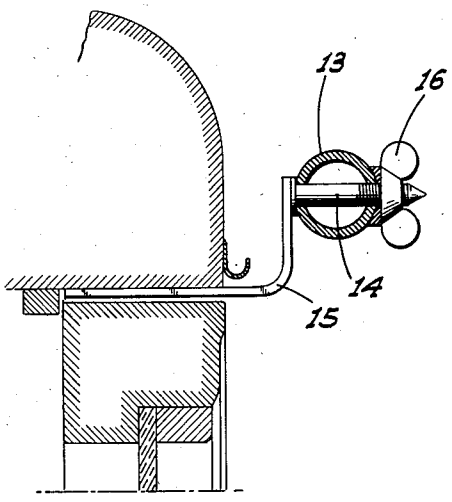
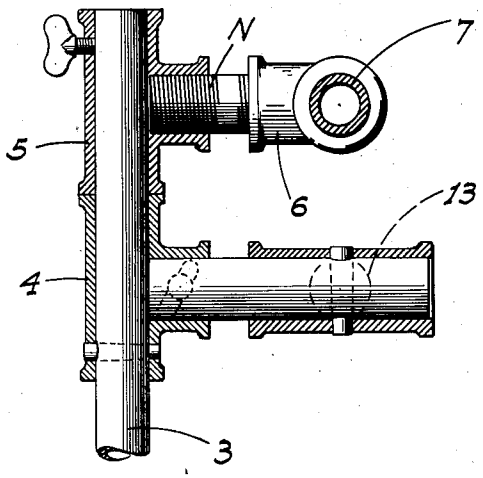


Fig. 12



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Patented July 10, 1934 1,966,023

UNITED STATES PATENT OFFICE

1,966,023

CAMP ATTACHMENT FOR AUTOMOBILES

Victor R. Will, Sacramento, Calif.

Application February 20, 1932, Serial No. 594,279½
Renewed December 5, 1933

10 Claims. (Cl. 135—1)

This invention relates to folding camp or tent attachments for automobiles. The main objects of my invention are to provide a device of this character adapted when folded to lie on the roof of the car in a compact and flat form; one having detachable connection with the car so arranged that it can be readily raised to or lowered from a position on top of the car; one which when lowered may be easily and quickly unfolded to assume the proper tent-like form; one having one or more full sized beds permanently mounted inside the tent covering and arranged so that when the tent is unfolded and set up the beds may be easily moved to a usable position; one having a continuous bottom covering or floor integral with the side walls which automatically assumes its outstretched position when the walls of the tent are unfolded and set up; one which may be left in connection with the car or the latter detached without interfering with the use of the tent; and one whose frame work is of such a constructional nature that it may be easily made to fit onto the roof of any car regardless of differences in contour and size of the roof and the height of the same from the ground or running board.

Also, it may be readily held in place on the roof with a minimum of parts being attached to the car itself.

A further object is to provide a simple and relatively inexpensive structure and one which can be easily manipulated by two persons in performing the folding or setting up operations.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings similar characters of reference indicate corresponding parts in the several views:

Figs. 1 and 2 are perspective outlines of the opposite sides of an automobile showing my improved camp folded and in carrying position on the roof.

Fig. 3 is a perspective view of the tent initially lowered from the car but still folded.

Fig. 4 is a similar view showing the initial unfolding operation of one side of the tent.

Fig. 5 is a perspective view of the tent looking toward the opposite side from that shown in Fig. 4, and depicting said opposite side being unfolded and with the one side completely set up.

Fig. 6 is a perspective view of the tent set up and ready for use and detached from the car.

Fig. 7 is a skeleton view of the frames of the tent and bed as set up.

Fig. 8 is a sectional elevation of the tent as ready for use.

Fig. 9 is a perspective view of certain parts of the frame work with the bed in a folded position relative thereto.

Figs. 10 and 11 are fragmentary transverse sections of a car on opposite sides showing the clamping connections between the car and the frame work of the tent.

Fig. 12 is a sectional view of a portion of the frame work of the tent showing a typical form of connection fittings between different parts of the frame.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 denotes a shaft turnable in bearing bracket 2 mounted in longitudinally spaced relation on one fender of the vehicle. At its forward end the shaft has detachable connection with an arm 3 extending at right angles thereto, the length of this arm being substantially equal to the height of the body of the car from the running board to the roof. At its outer end the arm is secured to one end of a T fitting 4. At its opposite end this fitting has removable connection with one end of a similar fitting 5. The lateral of the T 5 has turning connection with the lateral of another T fitting 6, which normally extends lengthwise of the car or parallel to the shaft 1. A bar 7 is connected to the rear end of the fitting 6, the length of this bar being equal to that of the tent which is substantially that of the body of the car. Adjustable legs 8 are removably mounted in connection with the outer ends of the fitting 6 and bar 7 to engage the ground when the arm 3 is horizontally disposed.

The bar 7 intermediate its ends has a T fitting 9 interposed therein whose lateral faces and is secured to the lateral of another T fitting 10 extending parallel to the arm 3. An arm 12 extends between and removably engages one end of the T 10 and the rear end of the shaft 1. A member 13 is secured to the arm 12 adjacent its outer end and is removably connected to the lateral of the T 4. The members 12 and 13 together form a non-separable unit removable as such from the other parts.

Owing to the particular mounting of the member 13 it is not parallel to the bar 7 or the shaft 1 but instead follows the transverse curvature or slope of the front portion of one side of the roof of the car adjacent which, just above the front door, said member is disposed when the arm 3 is raised so as to project vertically.

When in this position said member is engaged by a horizontal and an outwardly projecting stud 14 mounted on a bracket 15 secured to the under face of the top of the door casing and projecting outwardly between said casing and the door as shown in Fig. 11. This stud is pointed so as to readily project through a hole drilled transversely through said member 13 and is provided with a wing nut 16 so that it may be removed by hand when desired to release the member. Owing to the position of the bar 7 relative to the member

13 said bar then lies on top of the roof and extends lengthwise of the car parallel to the longitudinal axis of the same.

The various shafts, arms and other parts of the framework hereinbefore or later described are preferably pipes or tubes, having mainly slip rather than threaded connection with the various T fittings. In manufacturing the framework to fit different cars in which the transverse slope of the roof and the height of the same from the running board may vary, the pipes and nipples which it may be necessary to use in connection with the T's are initially made of excessive length, and when fitting the device on any car they are adjusted in the T's to the proper length, secured to said T's and the projecting and excessive portions cut off.

Rigidly secured to the bar 7 adjacent its ends and extending at right angles thereto are other pipes normally forming tent uprights 17, the length of which is slightly less than the width of the car roof. Said uprights are connected at their outer ends by another pipe 18 forming a ridge pole which is parallel to the bar 7. A member 19 is connected to the forward portion of the ridge pole in such angular relation thereto as to lie in practically the same position relative to the roof and door of the car as the member 13, but on the opposite side of the car. This member when in this position is engaged by vertical longitudinally spaced studs 20 mounted on brackets 21 secured to the door casing in the same manner as the bracket 15 and also provided with wing nuts 22. The ridge pole 18 then lies on top of the roof in parallel relation to the bar 7, while the uprights 17 of course extend transversely of the roof.

A metal bed frame 23 of a size to fit and extend lengthwise between the uprights 17 is provided at corresponding side corners with slides or saddles 24 engaging said uprights. At its opposite corners it is connected by flexible elements such as light cables or chains 25 to the ends of the ridge pole. These elements are arranged so that when the bed frame is horizontal and the saddles are adjacent the lower ends of the uprights, or close to the bar 7, said elements are taut, as shown in Fig. 8. To fold the bed frame it is raised at the saddle side, and the opposite side supported by the flexible elements swings in between the uprights. By then manually raising the bed frame somewhat the lower side may be engaged and clamped in cradles 26 mounted on the bar 7. When outstretched the bed frame may be additionally supported by one or more removable legs 27 depending from the side opposite the bar 7.

If desired another bed frame 28 separate from the frame 23, but of similar size, may be used as well, and strapped on top of said frame 23 when not in use so as to fold therewith, as indicated in Fig. 9. This frame when outstretched and removed from the frame 23 may be supported along one side by the cradles 26 and is supported along the opposite side by removable depending legs 29.

The flexible waterproof covering 30 forming the tent permanently encloses all the above described parts except the arms 3 and 12 and the members 13 and 19; though the ends of the bar 7 project from said covering in order that the legs 8 shall be outside the tent, while the ends of the ridge pole likewise project for a purpose which will be shortly seen.

This covering comprises side and end walls, a roof and a complete continuous floor permanently connected together to form a unitary watertight and draft-proof enclosure. The roof portion is secured intermediate its side edges to the ridge pole, and while the bar 7 and the legs 8 are centered relative to the width of the tent, the ridge pole is offset somewhat from the center line on account of the slope which the uprights 17 normally assume, as shown in Fig. 8, so that a greater expanse of roof is provided to one side of the ridge pole than the other. To prevent sagging of this expanse of roof I provide a supporting arm 31 under the same, which arm is removably supported at one end by a suitable socket provided in the ridge pole centrally of its length.

The roof at the corners or the junction with the depending walls is provided with loops 32. These loops are adapted when the tent is being set up to be detachably engaged with the adjacent ends of telescopic supporting arms 33, which are removably socketed at their other ends in sockets provided on the outer exposed ends of the ridge pole, as shown in Fig. 5. The roof of the tent when unsupported by the arms 31 and 33 naturally drop down about the ridge pole, and the oppositely disposed portions of the entire covering, on opposite sides of the vertical frame work, are arranged so that each portion may be folded together so that the side and end walls are enclosed between the adjacent roof and floor portions, as shown in Figs. 4 and 5, with the latter portions outermost. Said floor portions being relatively unfolded then present a smooth appearance, as shown in Figs. 1, 2 and 3, being maintained in a rigid rectangular form by the vertical frame consisting of the parts 7, 17 and 18.

The folded cover on that side which lies on top of the car when the structure is raised to a transporting position is overlapped by the edges of the folded portion on the opposite side, as shown in Fig. 3 and is then held in such overlapped relation by suitable means such as adjustable strap and buckle devices 34. In this manner rain is prevented from passing between the folded portions when the structure is disposed on top of the car.

A flap door 35 is provided in one wall of the tent and is permanently connected along the top to said wall. The free edges of the said door and the corresponding edges of the door opening are provided throughout their extent with a continuous quick action fastening device of the hookless or zipper type of common character which is operable either from the interior or exterior. This type of fastening not only makes a secure closure but does not interfere with the folding of the tent and its lower portion being above the floor line is almost certain insurance against the entrance of snakes into the tent, since they will not crawl over any such roughened surface as this type of fastener provides when the door is open.

In operation, assuming the structure to have been transported to the camp ground on top of the car, the first step is to remove the wing nuts 16 and 22. This releases the members 13 and 19 and allows the folded tent to be swung down as a rigid unit with the arms 3 and 12 about the shaft 1 as an axis, or to the position shown in Fig. 3. The legs 8 are then mounted in place on the ends of the bar 7 so that the tent frame will stand upright and is disposed at the proper level.

The members 12 and 13 are then removed from association with the shaft 1 and arm 3, since they would obviously interfere with the setting up of the tent inasmuch as they project into the floor area.

The arm 3 however does not interfere with the

tent since it is beyond one end of the tent frame, and is left in place to aid in supporting the tent.

The next step is to undo the straps 34 so that the tent portions on opposite sides of the frame may be unfolded. Each side portion is folded separately, the supporting arms 33 being preferably placed in position first so that as soon as the tent portions are unfolded they may be engaged with the corresponding arms and be maintained in proper outstretched positions the separate unfolding operations are shown in Figs. 4 and 5. The unfolding of the tent portions and the engagement of the loops 32 with the corresponding arms automatically causes the side and end walls, the roof and the floor to be disposed at their proper outstretched positions without further work and the door flap may then be opened and the tent entered.

The roof supporting arm 31 is then placed in position and the bed frame let down. This is done by raising the same sufficiently to clear the cradles and then swinging the corresponding edge back while lowering the edge which is slidably connected to the uprights 17. The bed is then in immediate condition for use as soon as the bed coverings are unstrapped and the other bed if such is provided is removed. The folding operations are of course carried out in the reverse sequence to those above described and either set of operations can be quickly and easily accomplished by two persons.

If camp is to be maintained only over night the arm 3 is left attached to the car and the tent frame, since it aids in maintaining the tent frame upright. It is not necessary however for the car to be positioned parallel to the tent since while the arm 3 is always disposed at right angles to the car and is rigid with the shaft 1, it is swivelly connected to the tent frame by the fittings 5 and 6 which enable the tent frame to be disposed at any suitable angle relative to said arm and car. If the tent is to remain set up for some time the arm 3 may be removed permitting the car to be used as may be desired. In this case the tent is firmly held against possible tilting by stakes and guy ropes as is the case with an ordinary tent.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described my invention what I claim as new and useful and desire to secure by Letters Patent is:

1. A tent attachment for a motor vehicle comprising a rectangular frame, and means pivotally connecting the frame with the vehicle so that the frame may be swung and disposed in a vertical position adjacent the ground and may be swung upwardly to rest in a horizontal position on top of the vehicle.

2. A structure as in claim 1, with orificed members rigid with and extending along the forward portion of the frame outwardly thereof to lie substantially parallel to and adjacent the sides of the body of the vehicle adjacent but below the top of the same when said frame is disposed on said top, studs mounted on the vehicle in position to each project through one of said orifices when the frame is swung upwardly to a horizontal position, and removable nuts on the outer ends of said studs.

3. A tent attachment for a motor vehicle comprising a rectangular frame, an arm projecting at right angles to the frame from one lower corner of the same, a shaft to which the other end of the arm is connected and disposed at right angles to the arm, and means rotatably mounting said shaft lengthwise along the running board of the vehicle; the length of said arm being substantially equal to the height of the vehicle from the running board to the top thereof.

4. A structure as in claim 3, with a swivel connection between the arm and frame for swinging the frame relative to the arm in a horizontal plane.

5. A structure as in claim 3, with a swivel connection between the arm and frame for swinging the frame relative to the arm in a horizontal plane, and a removable connection between the opposite end of the shaft and the bottom of the frame.

6. A tent structure comprising a rectangular frame which includes end uprights and a ridge pole member, a unitary flexible covering foldable against and in which said frame is enclosed and comprising a roof, end and side walls, the roof being secured intermediate its side edges to the ridge pole and the ends of the latter projecting through the end walls, substantially horizontal arms removably supported by and projecting at right angles to the ridge pole from the projecting ends thereof, and loops on the covering at the corners of the roof portion for detachable engagement with the outer ends of the arms.

7. In a tent frame of the class described, an arm detachably engageable at one end with the ridge pole intermediate its ends and extending with an upward slope and away from the pole whereby to supportingly engage the roof of the tent and cause a peak to be formed thereon.

8. In a tent structure having a rectangular frame which includes end uprights, a ridge-pole and a bottom bar, a unitary covering to form the tent in which said frame is enclosed and comprising a roof, end and side walls and a floor, the roof being permanently secured intermediate its side edges to the ridge pole, and the floor being adapted to be folded upwardly from the bottom bar of the frame on opposite sides thereof, and having a width substantially equal to twice the height of the frame; the roof and wall portions on each side of the frame being adapted to fold so as to be enclosed by the floor when the latter is thus folded upwardly, and disengageable fastening means between the separated folded portions of the floor to maintain them in such folded relationship.

9. In combination, a rectangular frame which includes end uprights, top and bottom bars, a bed frame of a size to fit in said frame, swivelly mounted saddles at opposed corners of the bed frame slidably engaging the uprights, and flexible elements between the other corners of the bed frame and the top bar; said elements being taut when the bed frame is horizontally disposed and the saddles are at the bottom of the uprights.

10. A structure as in claim 9, with cradles projecting upwardly from the bottom bar of the frame to engage the side of the bed opposite to that adjacent which the saddles are mounted when the bed frame is vertically disposed with the saddles at the top thereof.

VICTOR R. WILL.