D. M. WINANS.

VEHICLE TOP SUPPORT.

APPLICATION FILED DEC. 8, 1917.

1,313,772. Patented Aug. 19, 1919.

Fig. 1.

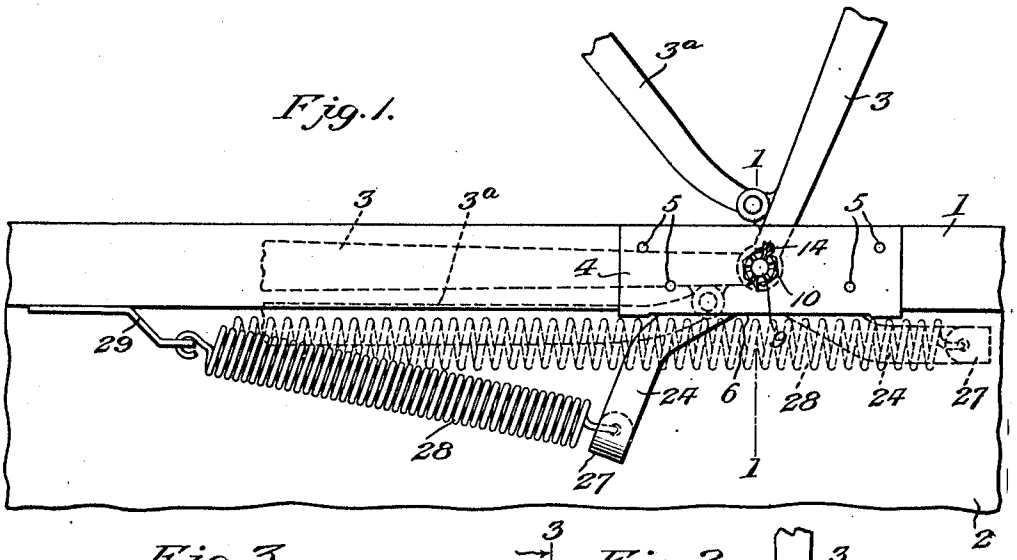


Fig. 3.

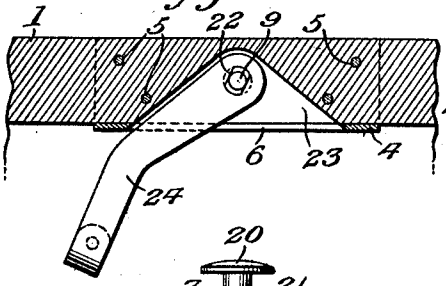


Fig. 2.

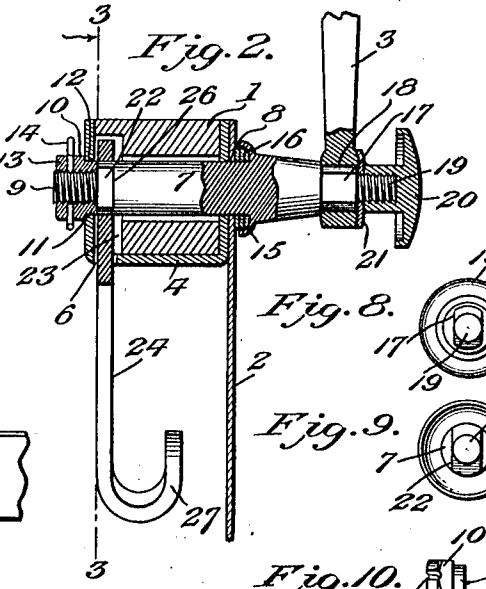


Fig. 4.

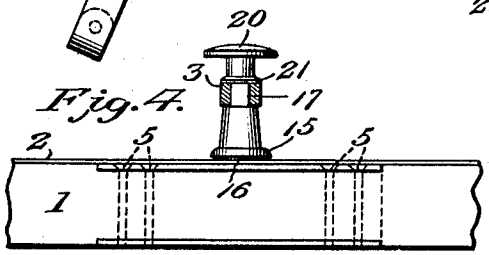


Fig. 8.

Fig. 9.

Fig. 10.

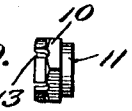


Fig. 5.

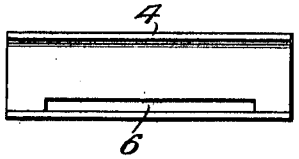


Fig. 7.

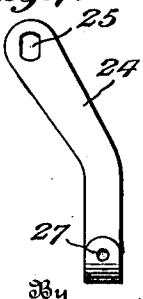
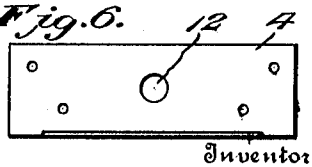


Fig. 6.



Witness

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VEHICLE-TOP SUPPORT.

1,313,772. Specification of Letters Patent. Patented Aug. 19, 1919.

Application filed December 8, 1917. Serial No. 206,194.

To all whom it may concern:

Be it known that I, DANIEL M. WINANS, a citizen of the United States, residing at Binghamton, county of Broome, and State of New York, have invented certain new and useful Improvements in Vehicle-Top Supports, of which the following is a specification.

This invention relates to a support for the standard or bow socket of foldable vehicle tops, such as are used on automobiles and other vehicles, and is an improvement on the support disclosed in my Patent No. 1,273,710, dated July 23, 1918.

In the present invention, as in the construction set forth in the aforesaid patent, the support is carried by, and self-contained with, the body of the vehicle so that the body, as it comes to the operatives who are to place the top thereon, is ready for the quick and easy attachment of the top.

The present invention embodies an oscillatory member, a channel iron in which said oscillatory member is journaled, an arm secured to the oscillatory member and arranged in a novel manner in relation thereto and to the channel iron, and means, such as a contractile spring, connecting the arm to the body for the purpose of rocking the oscillatory member and automatically raising the vehicle top. When the top is folded, the actuating means, such as the spring, is conditioned so that when the top is slightly raised manually, the spring, or other actuating means, quickly rocks the oscillatory member and automatically raises the top. The present invention is not limited to the use of a spring to coöperate with the arm, as other means could be employed for that purpose.

In the present invention the top rail of the vehicle body or frame is received within the channel iron, the latter embracing it and reinforcing and strengthening the frame at the point where the top is to be connected. The present invention is, therefore, particularly adapted for use in connection with vehicle bodies whose top rails are of wood. The channel iron has a slot in which the arm oscillates and the top rail of the body is bored and cut out to accommodate the oscillatory member and arm. The arm is provided with an offset part for connection to the spring or other actuating means which is thereby brought in line with the central part of the rail, the spring and arm being inclosed by the body.

My invention contemplates, further, the provision of certain novel details of construction appearing more fully hereinafter comprising a lock nut for the oscillatory member, said nut being journaled in one side of the channel iron; and the provision of flattened interlocking portions on the arm and oscillatory member, the whole constituting a secure, non-rattling, arrangement which can be readily applied to the vehicle body, or, removed therefrom should said removal become necessary.

In the present invention the oscillatory member is journaled in the channel iron and to which the bow socket is directly connected when the top is placed on the automobile or vehicle.

The invention is susceptible of modification without departing from the essential principle thereof and the disclosure hereinafter given and found in the accompanying drawings is to be considered as illustrative, rather than restrictive, of the scope of the invention.

In the accompanying drawings—

Figure 1 is a detail side elevation showing the invention applied to an automobile body, only a portion of which is shown, the bow socket being in raised position in full lines and in folded position in dotted lines;

Fig. 2, a detail vertical section on the line 1—1, Fig. 1;

Fig. 3, a section on the line 3—3, Fig. 2;

Fig. 4, a detail plan view, the bow socket eye being in section;

Fig. 5, a detail plan of the channel iron alone, showing the slot therein;

Fig. 6, a detail side elevation of the channel iron;

Fig. 7, a similar view of the arm;

Figs. 8 and 9, opposite detail end views of the oscillatory member; and

Fig. 10, a detail view of the lock nut.

The top rail of the vehicle body or frame is shown at 1. The present invention is particularly adaptable to a vehicle or automobile having a wooden rail 1, and that form is shown in Fig. 2. The shell of the body appears at 2. The foldable top may be of any construction; to illustrate the use of the invention I have shown merely the lower part of one of the main bow sockets 3 and rear bow socket 3^a. The parts are carried

by a channel iron 4 which is elongated and is of U-shape in cross section and fitted against the sides and bottom of the rails 1 and secured thereto in any suitable manner as by bolts, screws, or other fastenings 5. In the bottom of the channel iron 4 and adjacent one of its sides is an elongated slot 6.

An oscillatory member 7 is journaled at 8 in a bearing in one of the sides of the channel iron 4 and is provided with a screw-threaded portion 9 on which is a removable nut 10 (Figs. 2 and 10) which has a circular hub 11 journaled in an opening 12 in the other side of the channel iron 4. The nut 10 is provided with radial slots 13. A cotter 14 is passed through a hole in the screw-threaded end 9 and has its end portions lying in the slots 13. The oscillatory member 7 is thereby rockably mounted in the channel iron 4, but cannot become accidentally detached nor will the parts rattle. The oscillatory member has a shoulder 15 and a felt washer 16 which takes up lost motion and prevents rattling and entry of water around member 7. The outer end of the oscillatory member is provided with flattened portions 17 and the bow socket 3 has an eye 18 adapted to fit the said flattened end 17 as shown in Fig. 2. The end of the oscillatory member 7 has a screw threaded portion 19 on which is a retaining nut 20, there being a washer 21 interposed between the end of the nut 20 and the eye of the bow socket. The operatives who place the top on the vehicle have only to slip the eyes 18 over the flattened portions 17 and apply the washer 21 and nut 20, in order to attach the top to the vehicle as the vehicle body carries the oscillatory member which is, in effect, a part of said body.

The inner end portion of the oscillatory member 7 is provided with a flattened part 22 which lies in line with the cut-out portion 23 in the inner face of the rail 1. An arm 24 has an elongated eye 25 which is slipped over the end 9 of the oscillatory member 7 and engages the flattened part 22, being held against the shoulder 26 by the hub 11 of the nut 10. The arm lies in the cut-out portion 23 and is adapted to swing in the slot 6. The arm depends within the body and inside of the shell 2 and is provided with a bent end 27.

Different means may be employed for actuating the arm 24 and thereby turning the oscillatory member 7. I have illustrated a contractile coiled spring 28, one of whose ends is secured to a bracket 29 suitably secured to the rail 1, or, other part of the body. The contraction of the spring 28 holds the main bow socket 3 in completely elevated position. When the top is folded as shown by dotted lines in Fig. 1, the spring 28 is placed under tension and the rocking of the arm 24 brings it to a position where the pull of the spring on the effective length of the arm 24 is such that the weight of the top prevents the latter from rising. Immediately, however, the top is raised manually to a slight extent, the downward movement of the arm 24 and the increasing leverage exerted, causes the top to be automatically raised by the spring.

I am aware that instead of the spring 28, other means could be employed for actuating the arm 24.

The arm 24 may be made as a part of the oscillatory member 7 and located outside, and against the face of the wall of the channel iron 4, the cut out portion 23 then being omitted; in such a construction the member 7 would be journaled in the walls of the channel iron.

The lock nut 10 can be omitted and a collar substituted, the end of the member 7 being riveted down on the collar.

What I claim is:

1. In a support for a vehicle top, the combination with the top rail of the vehicle frame or body, of a channel iron embracing said top rail and having a slot in its bottom, an oscillatory member adapted for having a bow socket detachably connected thereto, said member being journaled in both sides of the channel iron, an arm connected to the oscillatory member and projecting downward through said slot and movable therein, and power actuating means for said arm.

2. In a support for a vehicle top, the combination with the top rail of the vehicle body, of a channel iron embracing said top rail, an oscillatory member adapted for the attachment of a bow socket thereto, said member being journaled in one of the sides of the channel iron and provided at its end with a screw threaded portion, a lock nut on said screw threaded portion, said nut having a hub which is journaled in the other side of the channel iron, said oscillatory member having a flattened portion located inside the channel iron, said channel iron having a slot, an arm having an eye which is slipped over and engaged with the flattened portion on the oscillatory member, said arm being adapted to play in said slot, and power actuating means for said arm.

In testimony whereof, I hereunto affix my signature.

DANIEL M. WINANS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."