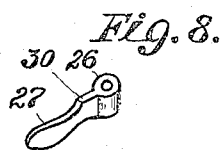
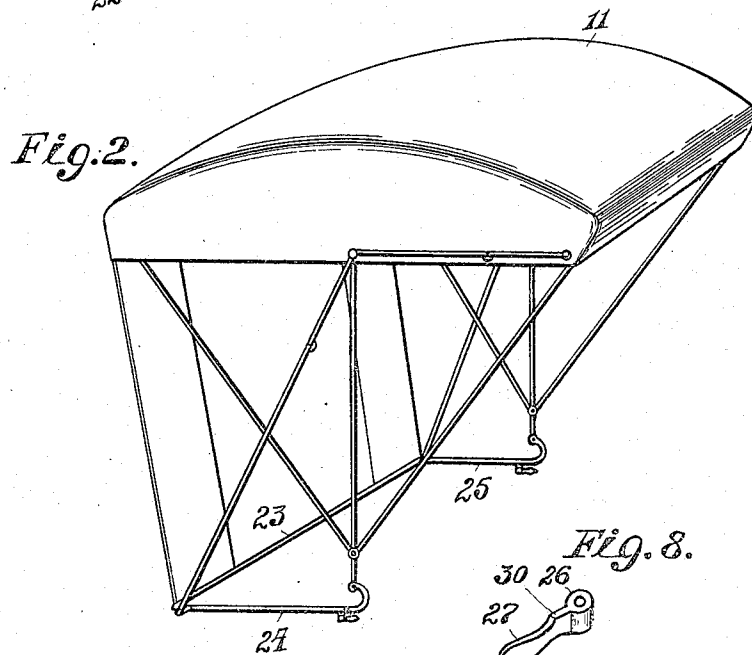
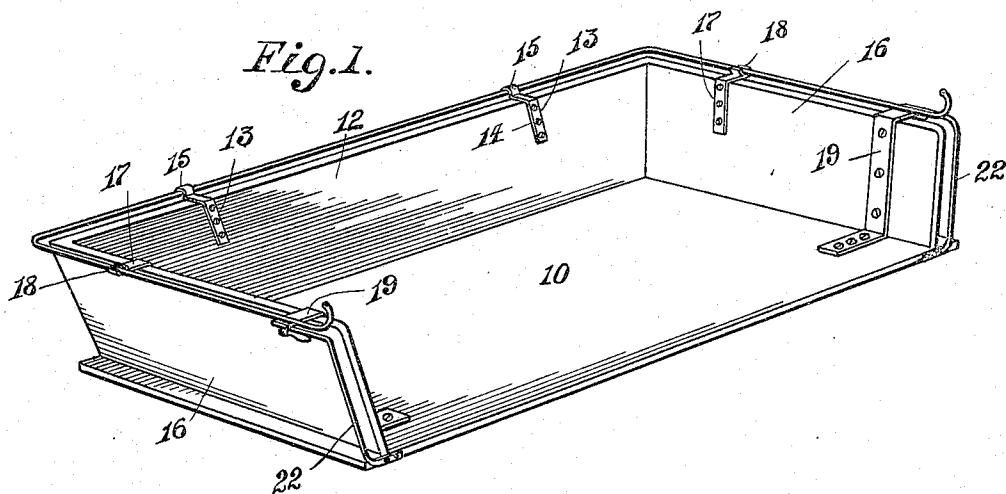


A. E. SMITH.
SHIFTING RAIL FOR VEHICLE SEATS.
APPLICATION FILED FEB. 26, 1908.

942,292.

Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.



Witnesses:

George Oltsch
G. M. Cole.

Albert E. Smith

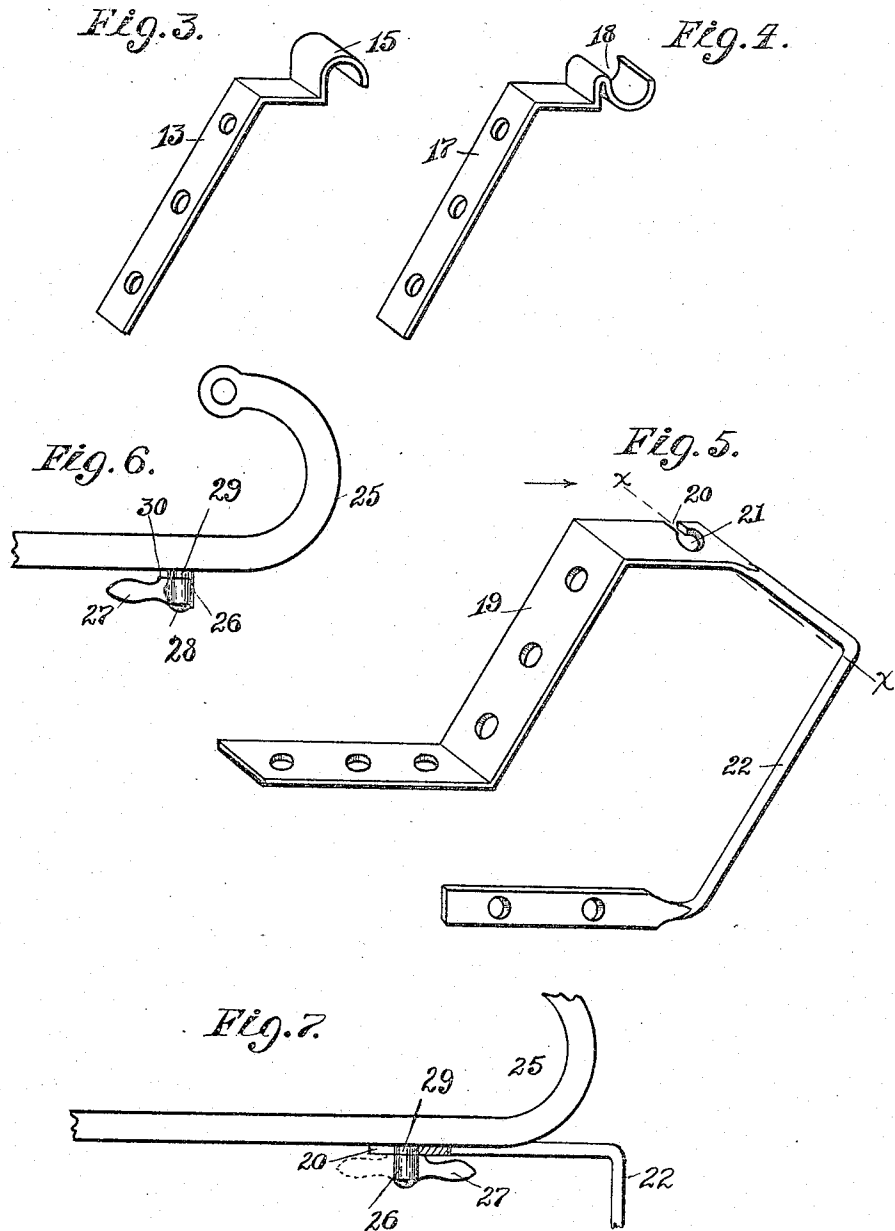
Inventor

By *[Signature]*
Attorney

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UNITED STATES PATENT OFFICE.

ALBERT E. SMITH, OF SOUTH BEND, INDIANA.

SHIFTING-RAIL FOR VEHICLE-SEATS.

942,292.

Specification of Letters Patent.

Patented Dec. 7, 1909.

Application filed February 26, 1908. Serial No. 417,863.

To all whom it may concern:

Be it known that I, ALBERT E. SMITH, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Shifting-Rails for Vehicle-Seats, of which the following is a specification.

This invention relates to shifting rails for vehicles, and it has for its object the construction of such devices as will facilitate the securing or removal of the rail with the top to which it is fastened. By its means, a vehicle top may be attached firmly in place to a seat, or removed therefrom, without the use of tools or any detachable parts, such as nuts or bolts. The use of tools in securing the rail to a seat, as is done in the usual manner, is objectionable for the reason that in the handling of such tool, the highly polished and varnished surface of the vehicle is very apt to be scratched or marred, thus necessitating extra labor to put the vehicle into marketable condition. With the construction hereinafter described, no tools are used and the top can quickly be applied or removed from the vehicle without in the least endangering the finish.

The method of construction is hereinafter fully described, and illustrated in the accompanying drawings, in which like parts throughout are designated by the same figure.

Figure 1 is a perspective view of a seat with the shifting rail in position, but without the top. Fig. 2 is a perspective view of the rail with the top secured thereto. Figs. 3 and 4 are perspective views of a set of clamping brackets to be secured to the seat. Fig. 5 is a perspective view of a slotted seat bracket to which the ends of the rails are clamped. Fig. 6 is a side view of one of the ends of the rail with its clamp. Fig. 7 is a side view of the end of the rail showing how it is secured to the slotted bracket by its clamp. Fig. 8 is a perspective view of the clamp with its shouldered thumb piece.

Bracket 17, in Fig. 4 is provided with a notch 18 on the upper surface of its horizontal extension, which is made of sufficient length to hold the rail at a suitable distance from the seat. Bracket 13, in Fig. 3 is provided with a notch 15, on the under side of its horizontal extension to engage with the top side of the rail 23. These brackets co-act in pairs; one of each pair which has the

notch on its upper surface, viz.—17, being secured to a side of the seat, 10, near its junction with the back, and the other, 13, having a notch 15, under the under side of its extension, is secured to the back near the same corner. Any securing means may be used, such as screws. A similar pair of brackets is secured in like manner near the other corner of the seat, as shown in Fig. 1. The rail is drop forged with upwardly curved arms to which the ends of the top braces are pivoted, and with downwardly extending lugs 28, upon which clamps 26 rotate. These lugs where they join the rail have an enlarged shoulder 29, equal in depth to the thickness of the supporting slotted perforated part of the bracket 19, with which they engage. They are upset at the ends to form a head which keeps clamp 26 from falling off while at the same time it is allowed to revolve freely. Bracket 19 is secured near the front end of the side of the seat and its upper horizontal extension is perforated with a hole 21 of such size and shape as will admit the body 26 of the clamp to pass through freely. A slot 20 just wide enough to pass the shouldered thumb piece 27 of the clamp intersects this hole 21 at one side as shown at 10 in Fig. 5. It will be seen that each bracket 19 has a horizontally directed lateral portion 19' and a downwardly directed portion 22 terminating in an attaching end to be secured to the front of the seat, as shown particularly in Fig. 1, the portions 19' and 22 of said other brackets being spaced from the outer face of the sides of the seat. These three brackets 13, 17 and 19, co-act in securing one side of the rail and it is understood that on the other half of the seat a corresponding set similarly disposed secure the other side of the rail.

The action of the device is as follows: The back portion of the rail is brought up under the notches 15 of the brackets 13 which are attached to the back of the seat. It is then turned down until its forwardly extending ends rest in notches 18 of brackets 17. By turning the thumb piece 27 of a clamp 26 rearwardly, it will pass through the hole 21 and notch 20 of bracket 19. Thumb piece 27 is now turned forward a half turn when its shoulder 30 will engage with the underside of the extension of bracket 19 which may be slightly notched to receive it. But it is evident that by properly proportioning the length of the body

26 of the clamp and the depth of its shoulder 30 any desired degree of frictional contact with bracket 19 may be obtained, and so long as the clamp retains forward position, the ends of the rail will be firmly secured to the seat of the vehicle. It will be further noticed that as the front end 25 is pressed downward to its engagement with bracket 19, bracket 17 will act as a fulcrum upon which the back portion of the rail will be pried upward into firm engagement with the notched part of the rear bracket 13, and thus the rail and its attached top will be rigidly held to the seat.

By simply turning clamp 26 backward so that its thumb piece 27 will aline with slot 20, the rail may be lifted out of its engagement with the various brackets and disconnected from the seat, and in either placing it in position on the vehicle or in taking it off, no tools or extraneous securing means are employed.

Having thus described my invention, what I claim and desire to secure by Letters Patent of the United States is:—

1. In a device of the character described, a shifting rail, brackets adapted to engage the upper and lower edges of the rail, other brackets each having a perforation and a slot leading from the side thereof into the perforation, said rail having shouldered lugs for projection through the perforations of said other brackets with their shoulders fitted in the said perforations, and a clamp rotatively mounted on each lug, the extremity of each lug being upset to prevent detachment of the clamp, each clamp being thereby permanently carried by the rail and having a shoulder for passage through the slot of the corresponding other bracket which binds against the under face of said other bracket when the clamp is turned in one direction to lock the rail against displacement.

2. In a device of the character described, a shifting rail, brackets adapted to engage the upper and lower edges of the rail, other brackets each having a perforation and a slot leading from the side thereof into the perforation, said rail having lugs for projection through the perforations of said other brackets, and a clamp rotatively mounted on each lug, each clamp having a shoulder for passage through the slot of the corresponding other bracket which binds against the under face of said other bracket when the clamp is turned in one direction to lock the rail against displacement.

3. In a device of the character described, a shifting rail, brackets arranged in pairs, one bracket of each pair having a substantially horizontally directed portion whose extremity is turned upwardly and then downwardly to provide a notch to engage over the top of the rail, the other bracket of

each pair having a substantially horizontally directed portion whose outer end is directed upwardly to provide a stop and then directed downwardly and again upwardly to provide a notch to engage under the rail, other brackets, and means to lock the rail in engagement with the last-mentioned brackets.

4. In a device of the character described, a shifting rail, brackets arranged in pairs, one bracket of each pair having a substantially horizontally directed portion whose extremity is turned upwardly and then downwardly to provide a notch to engage over the top of the rail, the other bracket of each pair having a substantially horizontally directed portion whose outer end is directed upwardly to provide a stop and then directed downwardly and again upwardly to provide a notch to engage under the rail, other brackets, each having a substantially horizontal portion provided with a perforation and a slot, the rail having shouldered lugs for passage through the perforations of the last-mentioned brackets with their shoulders disposed in the perforations, a clamp rotatively mounted on each lug and having a shoulder for passage through the slot of the corresponding last-mentioned bracket adapted to bind against the under face of the corresponding last-mentioned bracket when turned in one direction to lock the rail against displacement, the lugs being upset to prevent detachment of the clamps.

5. In a device of the character described, a shifting rail, brackets arranged in pairs, one bracket of each pair having a substantially horizontally directed portion whose extremity is turned upwardly and then downwardly to provide a notch to engage over the top of the rail, the other bracket of each pair having a substantially horizontally directed portion whose outer end is directed upwardly to provide a stop and then directed downwardly and again upwardly to provide a notch to engage under the rail, other brackets, each having a substantially horizontal portion provided with a perforation and a slot, the rail having lugs for passage through the perforations of the last-mentioned brackets, a clamp rotatively mounted on each lug and having a shoulder for passage through the slot of the corresponding last-mentioned bracket adapted to bind against the under face of the corresponding last-mentioned bracket when turned in one direction to lock the rail against displacement.

In testimony whereof I affix my signature, in presence of two witnesses.

ALBERT E. SMITH.

Witnesses:

S. E. BABCOCK,
E. J. LYNCH.