(No Model.)

E. W. SMITH.

CAR SHADE ADJUSTER.

No. 564,903. Patented July 28, 1896.

Fig. 1.

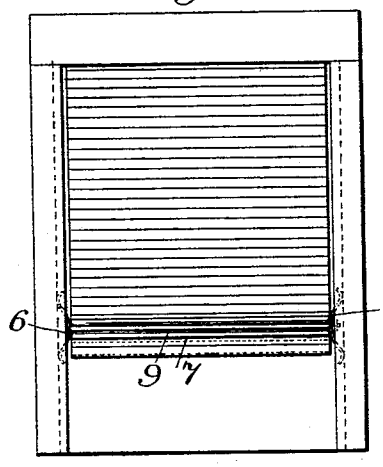

Fig. 6.

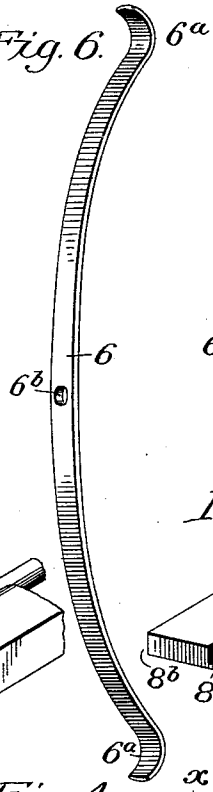

Fig. 2.

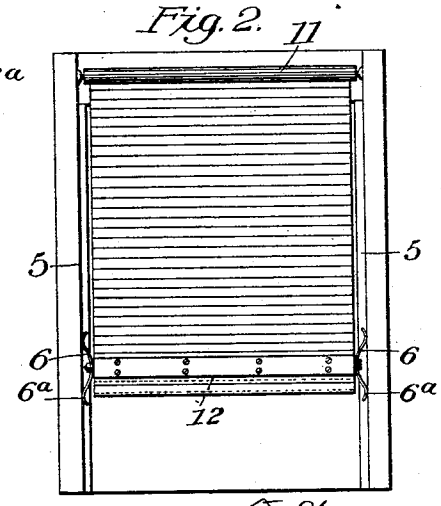

Fig. 3.

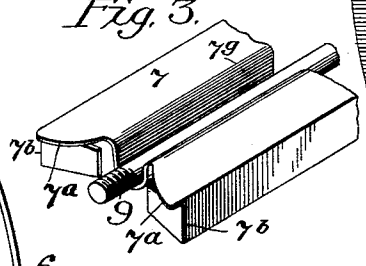

Fig. 5.

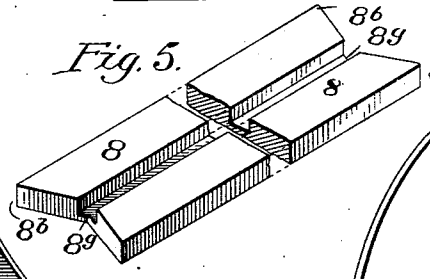

Fig. 4.

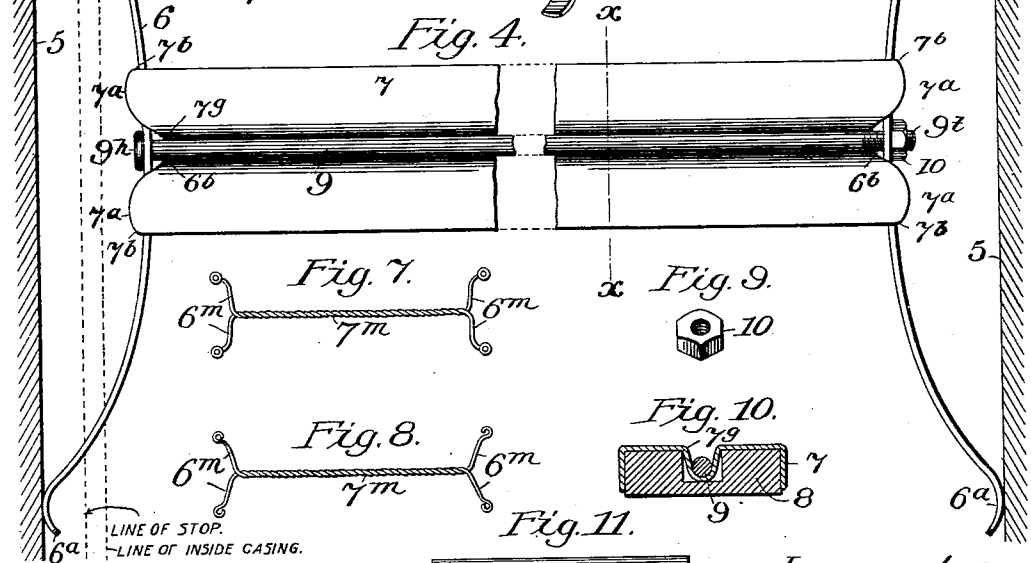

Fig. 7.

Fig. 9.

Fig. 8.

Fig. 10.

Fig. 11.

Witnesses.

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UNITED STATES PATENT OFFICE.

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CAR-SHADE ADJUSTER.

SPECIFICATION forming part of Letters Patent No. 564,903, dated July 28, 1896.

Application filed September 20, 1895. Serial No. 563,137. (No model.)

To all whom it may concern:

Be it known that I, EARL W. SMITH, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have invented certain new and useful Improvements in Car-Shade Adjusters; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in devices for adjusting shades in street-cars and passenger-coaches, whereby the shade may be raised or lowered at will and held firmly in any desired position. In accomplishing this object I employ, in connection with a shade hung on an ordinary shade-roller from which the dogs have been removed or reversed so as to be inactive, a carriage or bar, which is made fast to the lower end of the shade-cloth and adapted to move up or down between the window-jambs with sufficient friction between the bearings and tracks to overcome the tension of the spring in the shade-roller. I secure the necessary amount of friction by fashioning the carriage so as to have four bearings, (two against either jamb of window, their relative positions forming the four corners of an imaginary rectangle,) which are held firmly against the jambs or tracks by means of suitable springs. The rectangular arrangement of the bearings brace each other in such a manner that a push or pull (up or down) on any part of the carriage will cause all the bearings to move simultaneously and retain their relative positions, thus preventing any liability of the carriage to leave its tracks.

The invention will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a front elevation of a car-shade in position to which my invention is attached. Fig. 2 is a back view of the same, showing the shade-roller in position and the manner of attaching shade-cloth to carriage-bar. Fig. 3 is a perspective view of either end of the carriage-bar. Fig. 4 is a front elevation of carriage with a section of bar cut away. Fig. 5 is a perspective view of wood back to be inserted in the carriage-bar. Fig. 6 is a perspective view of either of the two springs which form the carriage-bearings. Fig. 7 illustrates, on a small scale, a modified form of construction of carriage using roller-bearings, which may be grooved and run upon suitable tracks. Fig. 8 illustrates the same without rollers fashioned to move in a grooved track. Fig. 9 is a bur used upon connecting-rod for tightening the tension of spring-bearings. Fig. 10 is a cross-section taken through the carriage-bar on the line $x\,x$. Fig. 11 is a hollow tube for incasing carriage-bar in the modified forms of construction.

Similar reference-characters indicating corresponding parts or elements in these views, let the numeral 5 indicate the window-jambs which form the carriage-track. The carriage is formed by the body part or bar 7, to which is attached at either end the springs 6. The springs are held in place by a rod 9 being inserted through the holes 6^b, one end of rod being provided with a head 9^h and the other end with a bur 10 and suitable threads 9^t for applying the bur. The bar 7 is provided with a groove 7^g, in which the rod 9 is inserted. It is also fashioned at the ends to form the bearings 7^b, against which the springs 6 rest when in position. It is also provided with the projections 7^a, which bear against the edges of the springs 6 to prevent their turning on rod 9. The groove 7^g is made just deep enough so that when the rod 9 is inserted therein its center will be directly in line with the holes 6^b, (the springs being in position,) thus holding the springs 6 from shifting their position in either direction. The wood piece 8 is adapted to be inserted in back of bar 7 and fastened by brads through sides of bar. The bar 7 may be made of Russia iron or any desired sheet metal of suitable weight and firmness.

The springs 6, which form the carriage-bearings, should be of spring metal and sufficiently rigid to retain their relative positions. They should be curved to form the bearings 6^a and the ends rounded to avoid unnecessary friction. They are adapted to

slide up or down against the window-jambs in a grooved track, which may be formed by plowing the jambs or by using a stop, as on ordinary windows adapted for sash, the inside window-casing forming one side of groove.

The strip 12 may be of metal or wood and is adapted to be applied to the back of shade directly opposite the carriage-bar and fastened to wood filling in bar by screws, thus clamping the shade-cloth to the bar.

The modified forms, Figs. 7 and 8, are made of spring-wire twisted together to form the bar 7^m. In using the modified forms it is preferable to incase the bar 7^m in a tube 7^t, which should be inserted in the shade in the same manner as an ordinary shade-slat.

In using the form shown in Fig. 4 it is preferable to fasten shade to back of carriage-bar 7 in the manner above described by using the strip or clamp 12, as the exposed bar thus forms a "shade-pull" or handpiece by which to raise or lower the shade. The shade-cloth may extend as far below the carriage-bar as desired to exclude the light when carriage is at bottom of the window.

The important use of my invention is to enable the occupant of a car to raise or lower the shade to any desired position, by grasping the carriage-bar at any point, without danger of the shade accidentally going too far or getting out of place.

In further explanation of the operation of the mechanism, it may be stated that the spring shade-roller without dogs has a tendency to raise or roll up the shade at all times, and is prevented from so doing by the friction of the carriage-bearings on their tracks. This friction prevents the carriage from moving in either direction without the application of a certain amount of force. The instant the force is withdrawn the carriage rests. The friction may be increased or decreased by turning the bur 10.

The rectangular position of the four carriage-bearings so braces the carriage that when one end is raised or lowered the other necessarily follows. The advantage of this feature is that any inexperienced person can raise or lower the shade by grasping the carriage-bar at any point and pushing or pulling, as desired. If pushed up, the spring-roller immediately takes up the slack in the shade. If pulled down, the shade naturally follows.

Having thus described my invention, what I claim is—

1. In a car-shade adjuster, the combination with the shade and its spring-roller of the carriage-bar 7 fashioned to hold the spring-bearings 6, and their connecting-rod 9, the spring-bearings 6 adapted to move up or down between the window-jambs, the connecting-rod 9 provided with head and bur by means of which the pressure of the bearings is regulated, and the grooves in which the bearings move, substantially as described.

2. In a car-shade adjuster, the combination with the shade and its spring-roller, of the carriage-bar 7 fashioned to hold the springs 6 which form the carriage-bearings, and grooved to hold the connecting-rod 9; the springs 6 which form the carriage-bearings adapted to move up or down between the window-jambs in suitable grooved tracks; the connecting-rod 9 provided with head and bur by means of which the pressure of the bearings against their tracks is regulated; the grooves in which the bearings move; the wood piece 8 adapted to fit in the back of the carriage-bar, and the strip or clamp 12 for fastening shade-cloth to the carriage-bar, substantially as described.

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Witnesses:
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