A. M. SNYDER.

WIND SHIELD SHADE.

APPLICATION FILED MAY 18, 1918.

1,289,944.

Patented Dec. 31, 1918.

Fig. 1.

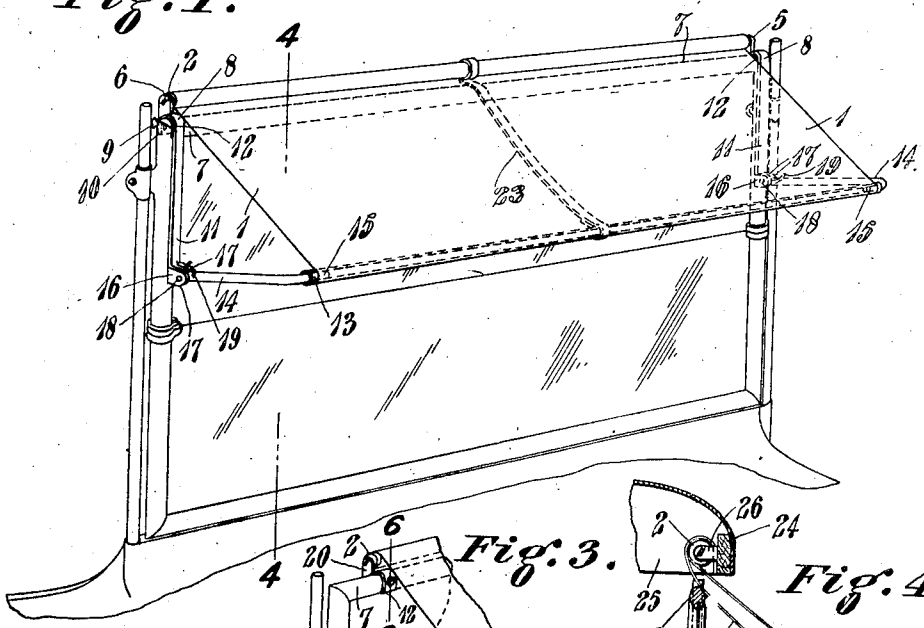


Fig. 2.

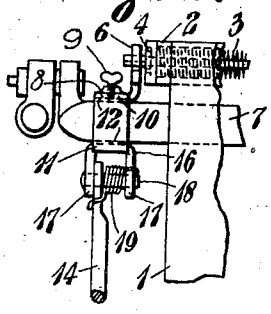


Fig. 3.

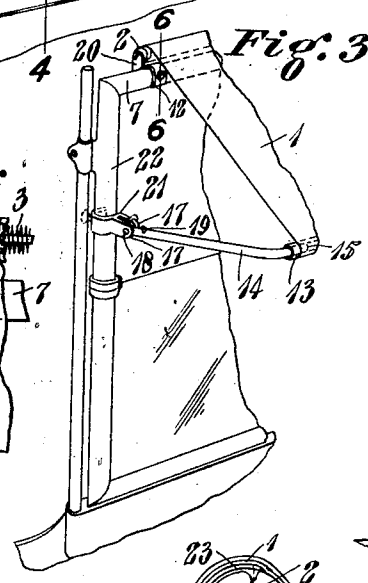


Fig. 4.

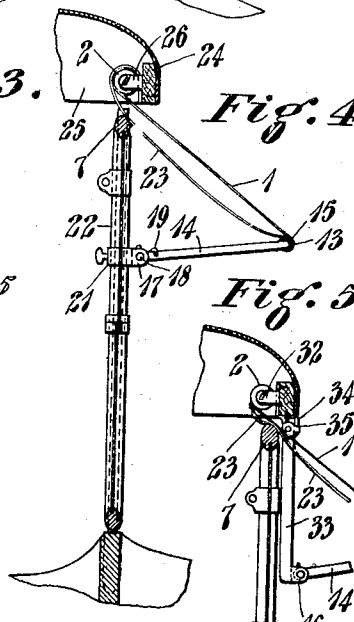


Fig. 5.

Fig. 7.

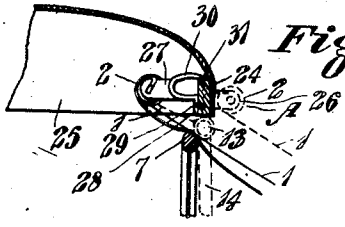
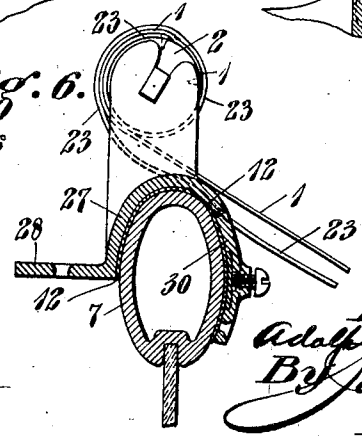


Fig. 6.



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WIND-SHIELD SHADE.

1,289,944. Specification of Letters Patent. Patented Dec. 31, 1918.

Application filed May 18, 1918. Serial No. 235,326.

To all whom it may concern:

Be it known that I, ADOLPH M. SNYDER, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Wind-Shield Shades, of which the following is a specification.

My invention relates to shades or the like, and its object is to facilitate vision through the wind-shield of an automobile or other conveyance by preventing unfavorable entrance of light therethrough, or accumulation of rain, snow or ice or other obstructions on the surface of the glass of the wind-shield. Other objects will appear in the course of the ensuing description.

My invention consists in the combination of parts and in the details of construction and arrangement of parts as will hereinafter be more fully described and claimed.

In the drawings:

Figure 1 is a perspective view of an automobile wind-shield equipped with a device embodying my invention;

Fig. 2 is a partial plan view of the same;

Fig. 3 is a partial view similar to Fig. 1, illustrating a modification of the device;

Fig. 4 is a partial vertical section on a plane corresponding to the line 4—4 of Fig. 1, but showing the vehicle top or cover in conjunction with the wind-shield, and showing how the device is partly mounted on said top;

Fig. 5 is a similar section showing another modification with the device entirely mounted on the vehicle top;

Fig. 6 is an enlarged vertical section on a plane corresponding to the line 6—6 of Fig. 2, but showing a modified bracket; and

Fig. 7 is a partial section similar to Fig. 4 showing another modification of the mounting on the vehicle top.

As I prefer to exemplify my invention, the shade 1, which may be of any suitable flexible material, preferably similar to that used in making the tops of automobiles, is mounted on the shade-roller 2, preferably the ordinary well-known shade-roller almost universally used for window shades in houses, having an internal spring 3 that rotates it when its catch 4 is released (Fig. 2). This shade-roller is mounted in the usual manner in suitable brackets 5 and 6, which are in this respect the same as the ordinary window-shade brackets. As shown in Figs. 1 and 2, these brackets are mounted on the upper bar 7 of the frame that surrounds the glass in the wind-shield; each comprising the unequal-legged inverted U-shaped member 8 that fits down over the frame-bar 7 and has a set-screw 9 through its short leg 10 at the rear, bearing against one side of the bar 7, while the much longer leg 11 extends down along the front side of the wind-shield. Suitable cushioning material 12 is interposed between the member 8 and the surface of the frame-bar.

The front end of the shade 1 is fixed to a tubular bar 13 that extends across the front of the wind-shield; and arms 14 at the sides have front parts 15 bent in and fitting snugly into the end parts of the tubular bar 13.

These arms 14, as shown in Figs. 1 and 2, are pivoted in the brackets 16 that project forward from the lower end parts of the downwardly lengthened legs 11. Such a bracket is shown in detail in Fig. 2; comprising two forwardly extending lugs 17 between which the perforated rear end part of the arm 14 is received on a stud 18 fixed in the lugs 17. A helical spring 19 surrounds the stud 18 and has one end hooking over one lug 17 to the rear of the stud 18 and the other end hooking over the arm 14 forwardly of the stud 18. This spring 19 thus, by its torsional action, yieldably holds the arm 14 downward.

By this means, with the forward end of the shade 1 supported on the tubular bar 13, which, in turn, is supported by the arms 14, the tendency of the springs 19 on the brackets 16 will be to hold the shade 1 in forwardly stretched position when unwound from the shade-roller 2.

As shown in Fig. 1, the shade 1 is wound onto the shade-roller 2 by turning the roller 2 over forwardly of the wind-shield, so that the shade winds on at the bottom of the roller 2.

In the modification of Fig. 3, the bracket 20 is somewhat modified but fastens to the frame in the same way; one modification being in that the roller 2 is carried farther down back of the frame-member 5 and the shade 1 is wound onto the roller by turning the roller backwardly of the wind-shield so

that the shade 1 winds on at the top of the roller.

Either one of these relative positions may be given to the parts, however, in any example.

The brackets 21 are separate from the brackets 20, in the example of Fig. 3, and may be clamped on the frame-sides 22 at any desired height, with the arms 14 pivoted in them and provided with springs 19 as in the preceding example, thus giving any desired forward and downward inclination to the shade 1.

In any example, by virtue of the large number of adjustments permitted by the ordinary shade-roller 2, the shade may be extended as far as desired. As shown in the drawing, the shade is extended until the arms 14 are not quite in horizontal positions. It is generally not preferable to adjust the arms 14 below horizontal position; although it will be understood that this is possible with the device constructed as shown and described if the shade 1 is long enough. The desired position of the shade relative to the wind-shield, however, is that in which it makes an angle of from forty-five to sixty degrees with the vertical surface of the wind-shield. With this relative position it does not obstruct the vision of the driver of the vehicle, yet affords a maximum protection of the wind-shield against rain, snow and the like, and against the glare of light either from the sun when it is near the horizon, or from artificial sources, as encountered in the streets of towns.

Preferably, the springs of the brackets 16 are made weaker than the spring 3 of the shade-roller 2, so that whenever the catch 4 of the shade-roller is released, the shade-roller automatically winds up the shade 1 and draws along with it its forward supporting structure made up of the bar 13 and arms 14, against the resistance of the springs 19. For lowering the shade, a strap 23 is wound onto the roller 2 with the shade 1, being exposed just inside the wind-shield where it may be reached by the occupant of the vehicle, who, by pulling on this strap 23, may unwind it and unwind the shade 1 along with it; the forward supporting structure made up of the bar 13 and arms 14 automatically carrying the front end of the shade 1 forward and downward under the action of the springs 19 and thus keeping the shade stretched at all times. Preferably this strap 23 is also extended forward over the top of the wind-shield and attached to the bar 13 at the front. Thus provided, the occupant of the vehicle can raise the shade by pulling in the opposite direction on this part of the strap after first pulling in unwinding direction to release the catch 4 of the shade-roller 2, so that the shade-roller will automatically wind up the shade as the shade is pulled up by the strap 23. In such case, the shade-roller spring 3 does not have the duty of overcoming the springs 19 of the forward supporting structure.

The mountings of the shade-roller, so far as described, are particularly suitable where there is no top on the vehicle, or where the vehicle is used with the top lowered most of the time.

Where the front end of the top comes close to or over the top of the wind-shield, as shown in Fig. 4, the shade-roller 2 may be mounted on the inner vertical side of the front bar 24 of the top 25. For this mounting, regular shade roller brackets 26 may be used exactly like those used in mounting these shades on window-frames in houses. The operation of the device will be as has been described; and the forward-supporting structure may be mounted on the frame of the wind-shield as shown in Fig. 3, and as before described, in conjunction with this mounting of the shade-roller on the top 25.

The inverted U-shaped bracket 27 which mounts the shade-roller on the top of the wind-shield frame as shown in Fig. 6, may have an extra lug 28, which, when the bracket is on the wind-shield frame extends horizontally rearwardly about midway of the height of the frame-bar 7 and is of no use; but may be used to attach this bracket to the bar 24 of the top 25, as shown in Fig. 7 by passing a nail or screw 29 through the perforation in the lug 28. The front part 30 may have a perforation near its lower end that comes outside the frame-bar 7 when mounted thereon, which may lie over the top of the bar 24 when mounted thereon, with a nail or screw 31 down through its perforation into the bar 24. Thus, the same bracket may be used for mounting the shade-roller either on the top of the wind-shield or on the vehicle top 25, as the user may desire.

In Fig. 5, the modified shade-roller bracket 32, secured to the front bar 24, has the leg 33 pivoted to it, with the bracket 16 for the arm 14 on its lower end, down in front of the wind-shield.

In any of these uses of the shade in conjunction with the automobile top 25, it will be understood that when the shade is entirely drawn up, it still serves as a closure for the narrow space between the wind-shield and the top 25. With the forward-supporting structure suitably positioned in its mounting on the wind-shield frame, at the top or the side, the tubular bar 13 with the front end part of the shade 1 attached thereto will come up closely between the lower edge of the front-bar 24 and the top of the wind-shield, as indicated by the dotted lines in Fig. 7. Thus, added protection against entrance of moisture, dust or other substances over the top of the wind-shield is provided even

when the shade is raised and not otherwise in use. It will be understood that, as with any shade, it will be desirable to have it raised at times when there are no conditions requiring the protection of the shade, as, for instance, at times when the sun is not shining brightly and there is no rain or snow falling to collect on the wind-shield surface. Even under these conditions, where the user finds the top 25 desirable, the complete closure of the space between the wind-shield and top will also be highly desirable. Where there are obstructions inside the top, the shade may be attached outside, to the front of the bar 24, as indicated in dotted as at A in Fig. 7.

When the shade-roller is mounted on the top 25 as in Figs. 4 and 7, and it is desired to lower the top 25, the inwardly-turned parts 15 of the arms 14 are withdrawn from the ends of the tubular bar 13; the arms 14 and their mountings having sufficient resiliency to permit this. Then the shade 1 may be wound up on the shade-roller 2, together with the strap 23, and the tubular bar 13 will be held on the end of the shade close to the shade-roller. The arms 14, under the action of their springs 19, will be held down along the sides of the wind-shield entirely out of the way. Or, in the example of Fig. 5, the legs 33 may be folded back under the top without detaching the arms 14 from the shade 1. The leg 33 is held in downwardly swung position by a resilient lug 34 engaging in a notch 35 in the edge of the leg near its pivot on the bracket 32.

The wind-shields on different automobiles, of course, vary somewhat in width. The shade may be made of a width to fit any given wind-shield after the manner of changing the width of any ordinary window shade. With these ends in view, it is practicable, as in the supplying of ordinary window shades, to make the shade 1 of the greatest width and the shade-roller 2 and bar 13 of the greatest length required for the widest wind-shield that may be encountered; and then for applying such an equipment to a narrow wind-shield the extra material of the shade 1 may be cut off and the ends of the shade-roller and of the bar 13 may be cut off. As is well-known, the ordinary shade-roller 2 is merely a solid wooden cylinder for a considerable distance from one end, with the pivot of that end readily detachable and readily applied again after the required length of this solid end part is cut off. The detachability of the arms 14 from the bar 13 makes it very convenient to cut the bar 13 to any required length.

As shown in Fig. 3, the shade is slightly narrower than the wind-shield, and would therefore be capable of being installed on a somewhat narrower wind-shield. When it is so provided, it will be found in practice that it will be practically wide enough for the widest wind-shield and narrow enough to fit the narrowest wind-shield encountered.

While certain constructional details are deemed preferable in connection with my invention, and I have shown and described these rather specifically in elucidating the construction and use of my invention, as is required, I do not wish to be understood as being limited to such precise showing and description, but having thus fully described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In a wind-shield shade, a flexible shade element, a shade-roller connected to said element near one end of said element, means to operatively mount said shade roller on a part of a vehicle near the top of the wind-shield of the vehicle, whereby said element may be rolled up by and upon said roller, means connected to said element near its opposite end, to stretch said element in forwardly extended position across the upper part of said wind-shield as said element is unrolled from said roller, and a flexible member rolled onto said roller with said element for manually actuating said element in unrolling direction.

2. In a wind-shield shade, a flexible shade element, a shade-roller connected to said element near one end of said element, means to operatively mount said shade roller on a part of a vehicle near the top of the wind-shield of the vehicle, whereby said element may be rolled up by and upon said roller, means connected to said element near its opposite end, to stretch said element in forwardly extended position across the upper part of said wind-shield as said element is unrolled from said roller, and a flexible member rolled onto said roller with said element for manually actuating said element in unrolling direction, said member being connected, near one of its ends, to said element near said opposite end of said element, for manually actuating said element in rolling-up direction.

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