O. E. BYRON.

FOLDING WIND SHIELD FOR AUTOMOBILES.

APPLICATION FILED FEB. 13, 1909.

994,121. Patented June 6, 1911.

2 SHEETS—SHEET 1.

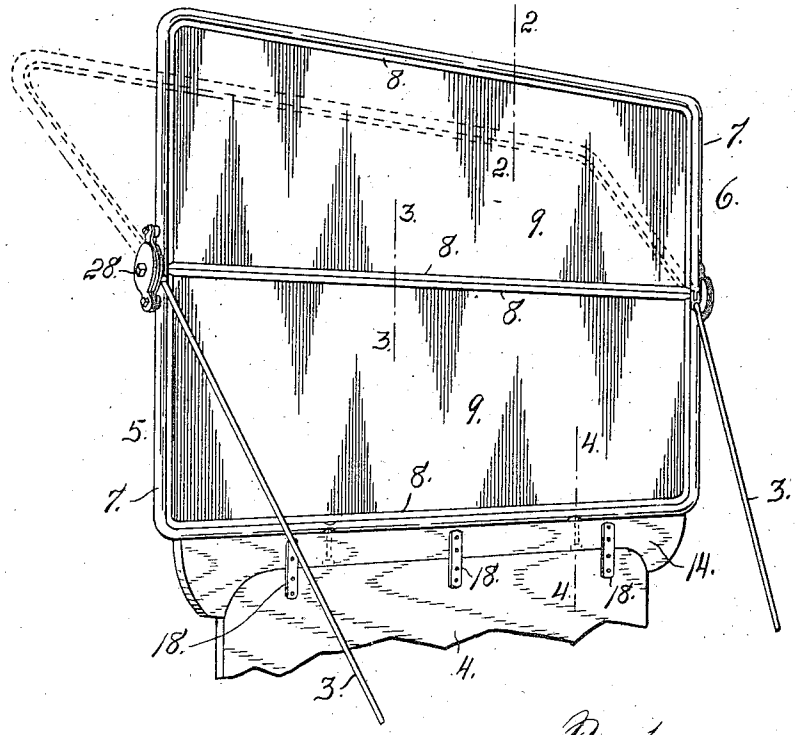


Fig. 1.

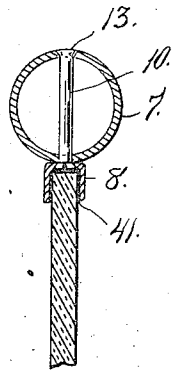
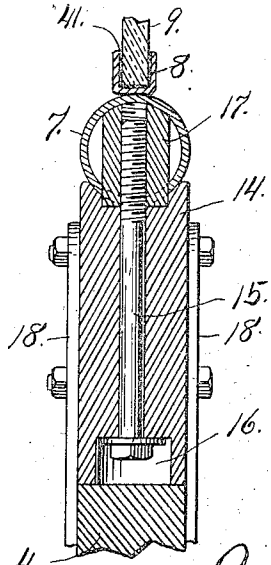


Fig. 2.



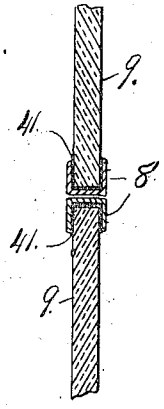


Fig. 3.

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Fig. 4. By A. D. Brien Attorney

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2 SHEETS—SHEET 2.

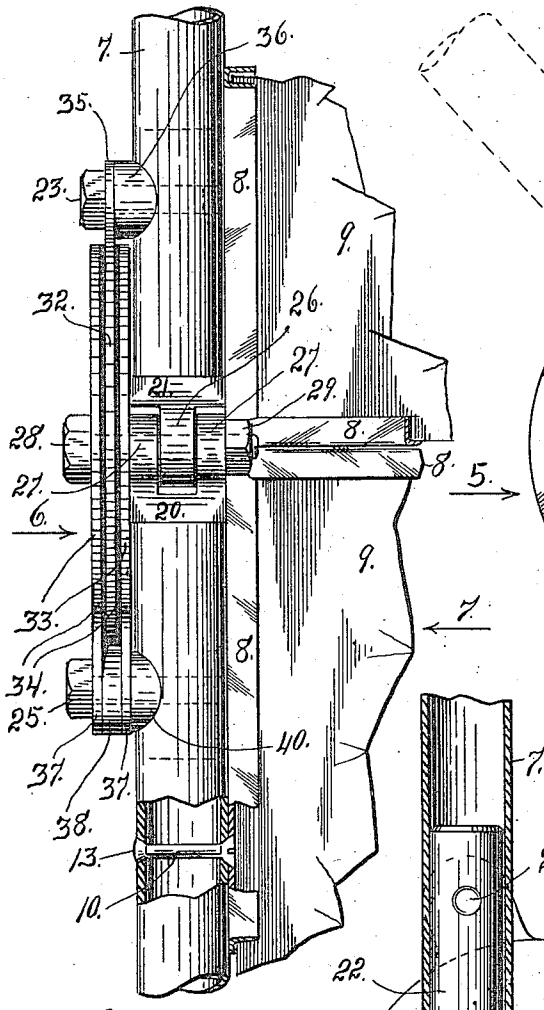

Fig. 5.

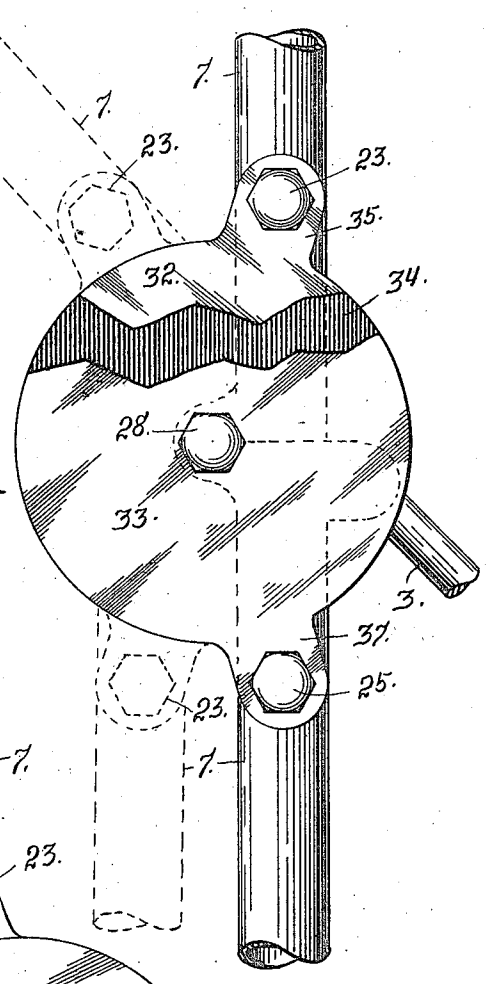

Fig. 6.

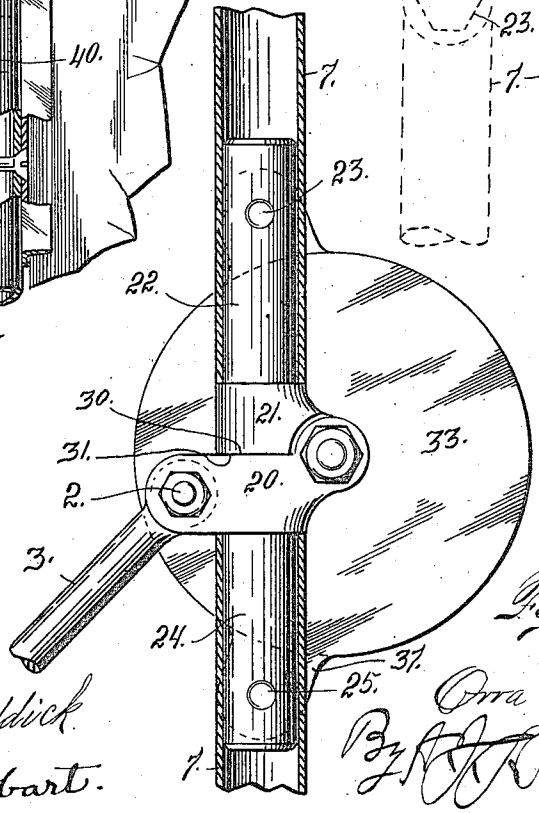

Fig. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

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FOLDING WIND-SHIELD FOR AUTOMOBILES.

994,121. Specification of Letters Patent. Patented June 6, 1911.

Application filed February 13, 1909. Serial No. 477,675.

To all whom it may concern:

Be it known that I, ORRA E. BYRON, citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented certain new and useful Improvements in Folding Wind-Shields for Automobiles; 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 letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in folding wind shields for automobiles, my object being to provide a shield of this character composed of two members connected by a hinged joint, whereby the upper part may be folded rearward or toward the occupants of the vehicle, thus making it practicable to reduce the air resistance to which the machine is subjected in its forward progress, and also making it practicable to completely fold the upper portion of the shield, whereby only the lower portion shall be exposed to the air.

An important feature of my improved construction consists in mounting a number of disks upon a hinged pintle, one of which moves with the folding member of the shield, friction disks being interposed between this movable disk and metal disks mounted on opposite sides, whereby the hinged or movable member of the shield is held in any desired position of adjustment without the use of ordinary locking devices.

Another important feature of my construction consists of a relatively small channel-iron attached to the tubular frame of the shield, the said channel-iron being adapted to receive the glass plates forming the transparent portion of the shield. These channel-irons, connected as aforesaid, make it practicable for the tubular member of the frame to yield within reasonable limits without breaking the glass, or interfering with the glass holding channel members of the frame.

Having briefly outlined my improved construction, I will proceed to describe the same in detail, reference being made to the accompanying drawing, in which is illustrated an embodiment thereof.

In the drawing, Figure 1 is a perspective front view of my improved folding wind shield for automobiles, the same being shown attached to the dashboard of the vehicle, which is partly broken away. Figs. 2, 3 and 4 are sections taken on the lines 2—2, 3—3 and 4—4, respectively, of Fig. 1, the parts being shown on a larger scale. Fig. 5 is a fragmentary view of the construction shown on a larger scale than in Fig. 1. This is a front view showing the hinged construction and is obtained by looking in the direction of arrow 5, Fig. 6. Fig. 6 is a side view of the construction shown in Fig. 5, a portion of the construction being broken away. Fig. 7 is a side view, partly in section, obtained by looking in the direction of arrow 7, Fig. 5.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate the lower member of my improved folding wind shield, and 6 the upper member thereof. The outer framework of each member of the shield consists of a tube 7, to the inside of which is secured a relatively small channel bar 8, which is adapted to receive the glass 9 of each shield member. The manner of securing the glass holding channel bar 8 to the tube 7 is by means of rivets 10, whose heads 12 are countersunk in the bottom of the channel bar groove, the rivets being passed through the tube 7 and upset on the opposite side, as shown at 13. As many of these rivets may be employed as necessary in order to secure the channel iron 8 to the tube 7.

As shown in the drawing, the lower member 5 of the shield is mounted upon a board 15, being secured thereto by a bolt 15, whose head is countersunk in the lower edge of the board, as shown at 16, its upper extremity being threaded into a plug 17, inserted in the tubular part of the frame for the purpose. As shown in the drawing, two of these bolts 15 are employed for connecting the bottom board 14 with the lower member of the shield. It is evident that any desired number of these bolts may be employed. The plugs 17 are applied to the tube for the purpose of reinforcement.

The bottom board 14 is secured to the dashboard 4 of the automobile, by means of metal straps 18, which overlap the two

connected members, bolts being passed through the said straps for securing purposes.

The glass plates of the two members of the shield at their upper and lower adjacent edges engage channel bar members 8 alone, these two members being in close proximity to each other. At the extremities of the last named channel bars 8, two hinged members 20 and 21 are located. The member 21 has a stem 22, which enters the adjacent tubes 7 of the frame, and is secured thereto by a bolt 23. The member 20 has a similar stem 24, which enters the end of the lower or opposite tube 7 of the frame, being secured thereto by a bolt 25. The member 21 has a perforated lug 26, which projects forward from the axis of its stem, while the member 20 has two similar perforated lugs 27, located on opposite sides of the lug 26, the perforations of the three lugs registering. Through these perforations passes the bolt 28 forming the hinge pin which is secured at its opposite extremity by a nut 29. From this it will be understood that there are two hinge members 21, and two coöperating members 20, the members 21 being connected with the upper shield member 6, while the two members 20 are connected with the lower or stationary shield member 5. When the upper shield member is in an upright position or in the same vertical plane with the lower shield member, a shoulder or horizontal offset 30 of the hinge member 21 engages a shoulder 31 on the hinge member 20, thus preventing the upper shield member 6 from moving forwardly beyond its vertical position. However, it is free to move rearwardly for hinging purposes, as indicated by dotted lines in Figs. 1 and 6.

Mounted upon the hinge pin or pintle 28 is a metal disk 32 and two metal disks 33, occupying positions on opposite sides of the disk 32, there being two friction disks 34, located between the disk 32 and the disks 33 on opposite sides. These friction disks 34 are preferably composed of leather, but may be composed of any suitable material for the purpose. The middle metal disk 32 is secured to the upper shield member by means of the bolt 23, while the two metal disks 33 are secured to the lower shield member by means of the bolt 25. The disk 32 is provided with a perforated ear 35, which engages a washer 36, whose inner surface is curved to fit the frame tube 7, the fastening bolt 23 being passed through the said ear and washer and also through the stem 22 of the hinge member 21 inserted in the tube of the frame as heretofore explained. Similarly, the two metal disks 33 are provided with perforated ears 37, spaced by a washer 38 through which the fastening bolt 25 passes, a washer 40 similar to the washer 36 being interposed between the inner ear 37 and the frame tube 7 of the lower shield member. From this explanation it will be understood that the middle disk 32 is secured to and moves with the upper folding member 6 of the shield, while the two disks 33 are secured to and stationary with the lower shield member 5; while the interposed friction disks 34 are mounted upon the hinge pintle, being clamped between the metal disks and serving to produce the necessary friction to maintain the folding member in any desired position of adjustment.

It will be understood from reference to Fig. 1 that the disk construction, both metal and frictional, is duplicated at the opposite sides of the shield.

The lower member 5 of the wind shield is supported by forwardly extending brace rods 3.

Attention is called to the fact that the hinge pintle 28 is located rearwardly of the plane of the shield when the two members are in vertical alinement, to permit the engaging shoulders of the hinge members to separate during the necessary movement of the upper member of the shield.

Attention is called to the fact that the channel irons 8 for holding the transparent plates 9 of the shield, are provided on their inner surfaces with a packing 41 composed of felt or other suitable material, whereby the glass is prevented from coming in direct contact with the metal.

Having thus described my invention, what I claim is:

A wind shield composed of two hinged members, the hinge pintle of the said members extending beyond the edge of the said shield, and disks coaxially mounted on the hinged pintle, on the extending portion thereof, one of the disks being secured beyond its center to one member of the shield, and the other disks being arranged on opposite sides of the first named disk, and secured beyond their center to the other members of the shield, and layers of material also mounted on the extending portion of the hinge pintle and interposed on opposite sides of the first named disk to increase friction.

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

ORRA E. BYRON.

Witnesses:
T. W. FUGATE,
A. J. O'BRIEN.