No. 859,591. PATENTED JULY 9, 1907.

P. DE ANGUERA, JR.

WIND SHIELD.

APPLICATION FILED MAR. 11, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

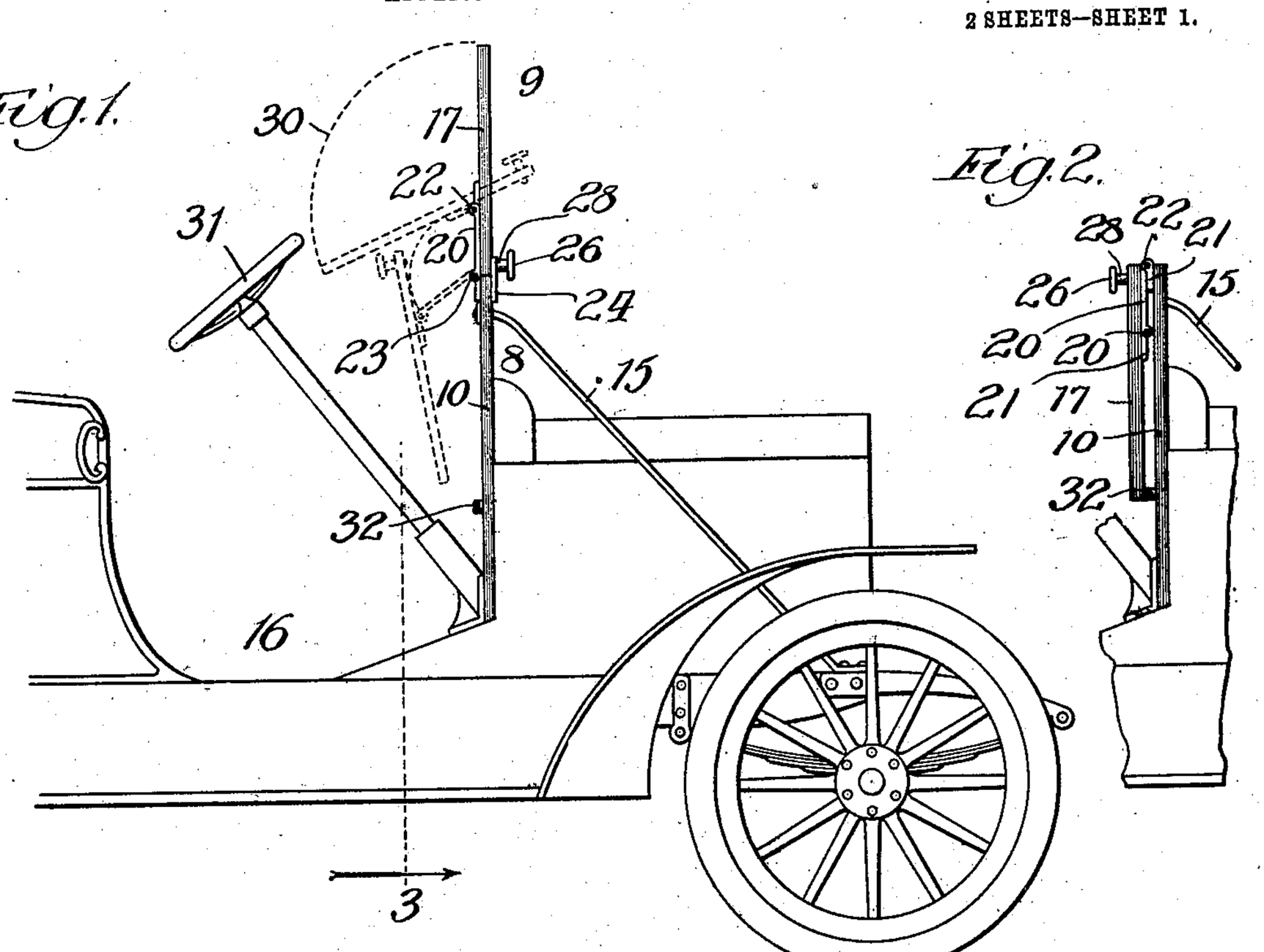
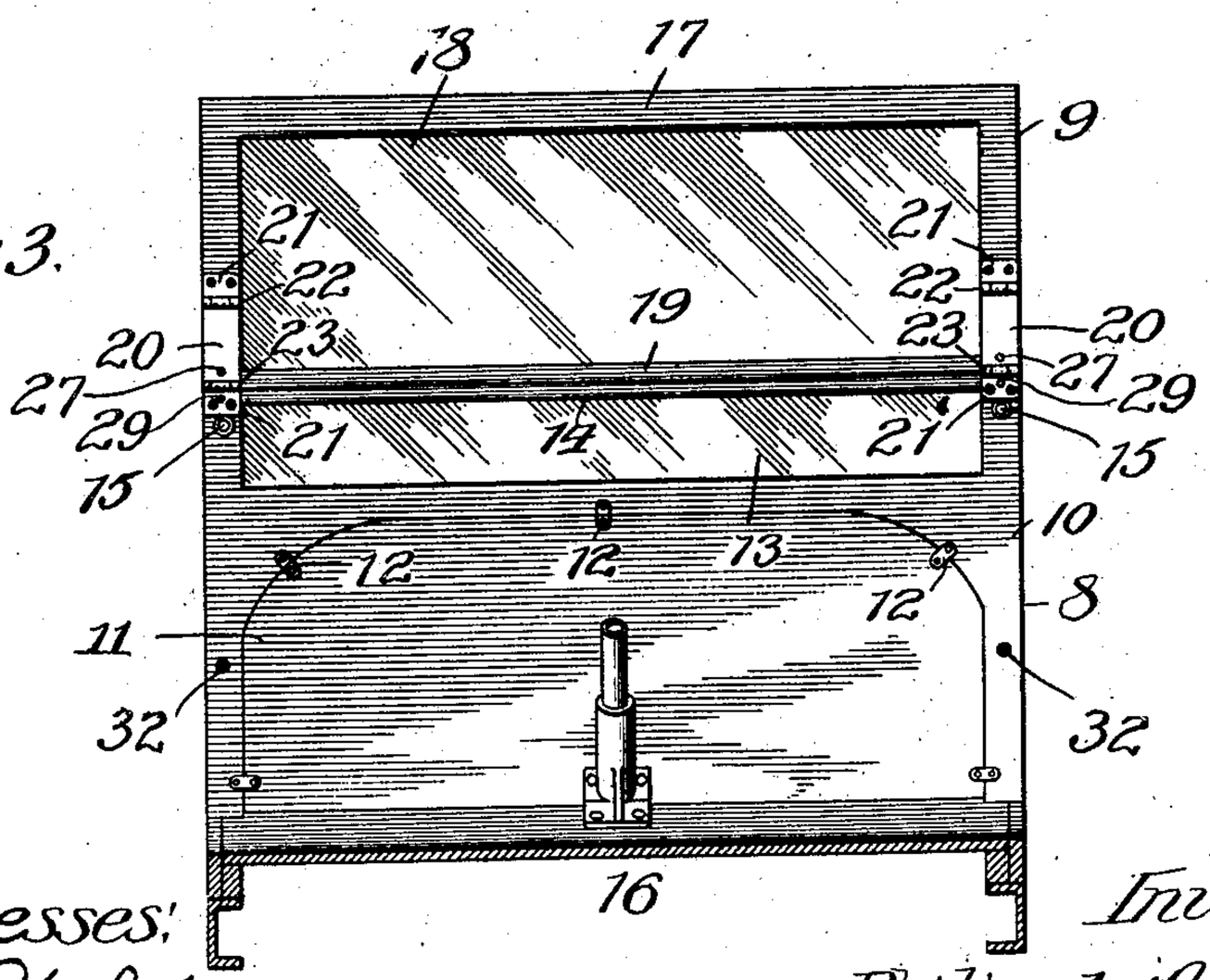


Fig. 2.

Fig. 3.



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2 SHEETS—SHEET 2.

Fig. 4.

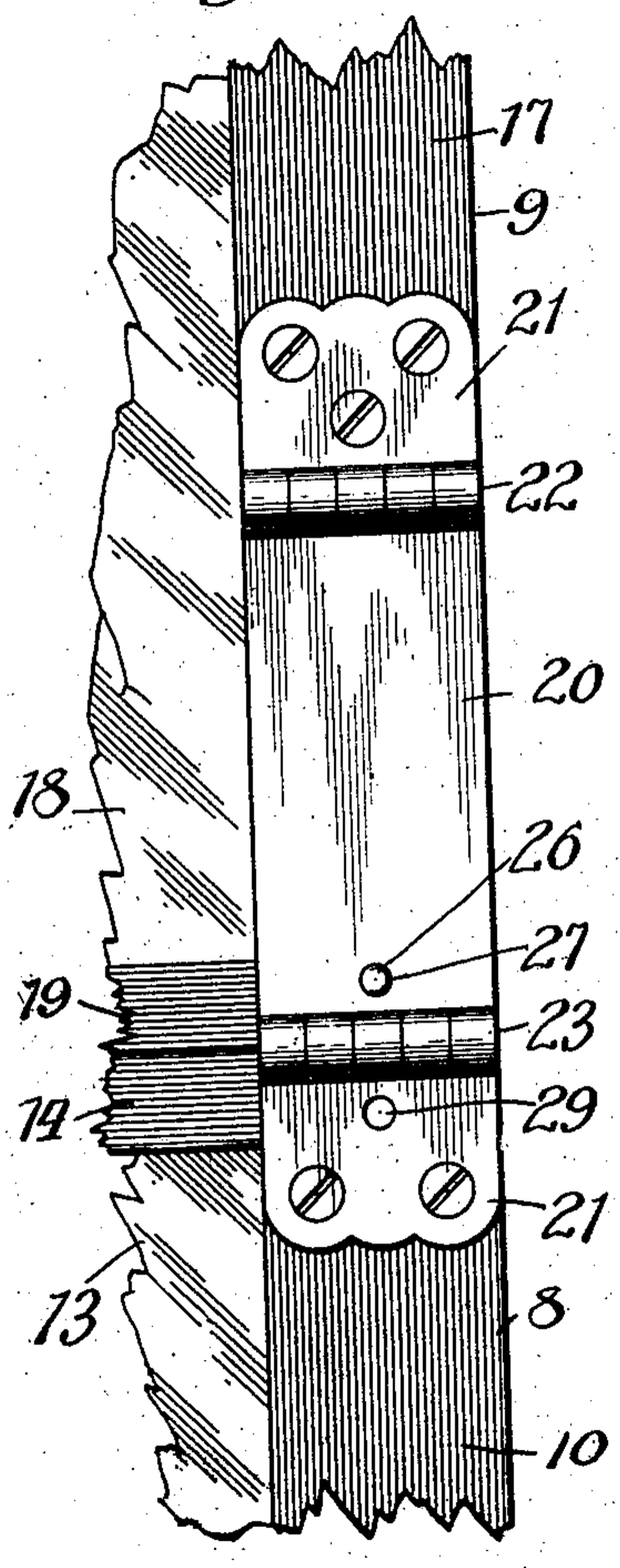


Fig. 5.

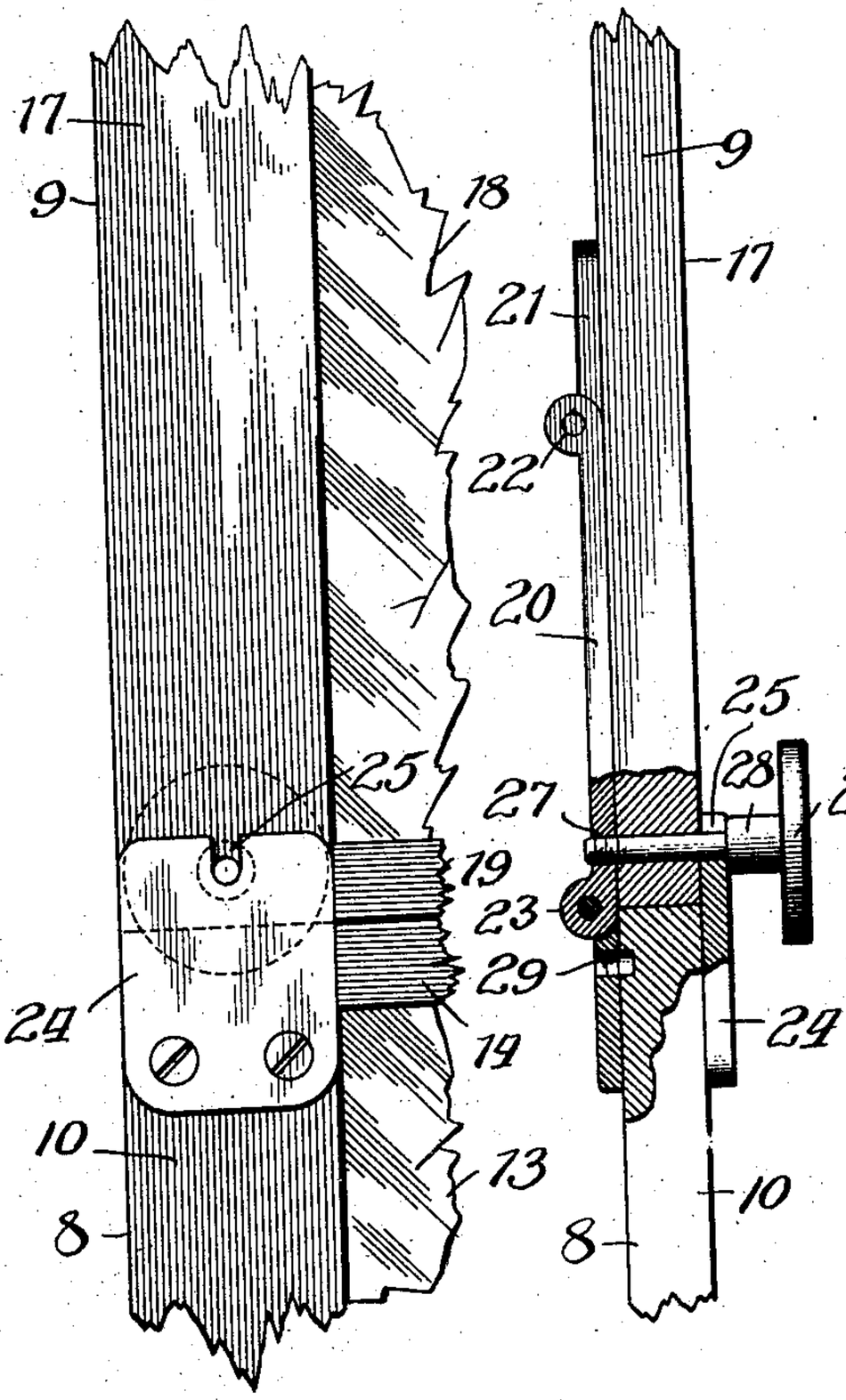
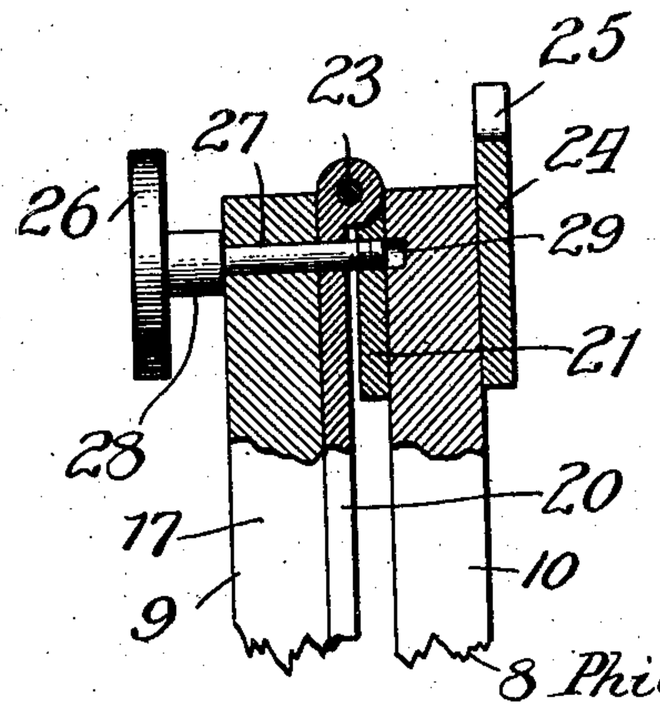


Fig. 6.

Fig. 7.



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UNITED STATES PATENT OFFICE.

PHILIP DE ANGUERA, JR., OF CHICAGO, ILLINOIS.

WIND-SHIELD.

No. 859,591. Specification of Letters Patent. Patented July 9, 1907.

Application filed March 11, 1907. Serial No. 361,763.

To all whom it may concern:

Be it known that I, PHILIP DE ANGUERA, Jr., a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Wind-Shields, of which the following is a specification.

My invention relates to improvements in wind-shields intended primarily for use on automobiles; and it relates more especially to that class of wind-shields wherein provision is made for their adjustment, to permit of their use or disuse, as occasion may demand, without detaching the same from the car.

The object of my invention is to provide a folding wind-shield, and, further, to construct it so that in folding it may be swung inwardly through an arc of as short radius as possible to avoid encountering the steering-wheel, and thus permit of folding it within the limited space between the steering-wheel and the dash.

In the accompanying drawings, Figure 1 is a broken view showing in side elevation the forward portion of an automobile provided with my improved wind-shield; Fig. 2, a view in side elevation of the wind-shield in its folded condition; Fig. 3, a section taken at the line 3 on Fig. 1 and viewed in the direction of the arrow, showing the wind-shield in elevation; Fig. 4, an enlarged face view of a broken portion of one of the two similar sides of the sectional frame of the wind-shield, with their double-hinge connection; Fig. 5, a view similar to that presented in Fig. 4, but showing the opposite face; Fig. 6, a view in broken sectional side elevation of that portion of the sectional frame shown in Figs. 4 and 5; and Fig. 7, a view in broken sectional side elevation of the hinge-portion of the frame, representing the parts in a folded condition and fastened therein.

In constructing my wind-shield, I form it of a lower section 8 and an upper section 9, the lower section having a frame 10, the contour of which, along its lower edge, is made to conform to that of the edge of the dash 11, to which it is preferably connected in any desired way, as by clips 12, overlapping the dividing line between the wind-shield and dash, with one end of each secured to the frame and the opposite end secured to the dash. Within the frame 10 is fastened a pane of glass 13, confined at its upper edge by a strip 14, which is fastened at its ends to the frame 10. To insure rigidity to the wind-shield, I employ guy-rods 15, attached to the frame 10, near its ends, and fastened at their lower ends to the frame of the automobile 16, as shown. The upper section 9 of the wind-shield consists of a frame 17 within which is secured a pane of glass 18 confined along its lower edge by a strip 19, which is fastened at its ends to the frame. To the adjacent ends of the side-bars of the frames 10 and 17, on each end of the wind-shield, and to the inner faces of these bars are secured double hinge-connections 20, each fastened at its ends, at 21, 21, to the respective sides, as by screws. Each hinge is provided with two pivotal joints, 22 and 23, and is preferably arranged in such position upon the respective side-bars that the joint 23 is at the parting-line between the two sections 8 and 9 of the wind-shield. A clip 24 is fastened to the outer face of each side-bar of the frame 10 near its upper end to project slightly beyond the latter, each clip being provided with a slot 25 extending from its upper end. A set-screw 26, provided at each end of the wind-shield, passes through the lower extremity of the respective side-bars of the frame 17 from the outer face thereof, and enters a hole 27 in the hinge, with which it has a threaded engagement. Each set-screw is so placed as to cause it to register with and enter the slot 25 in the adjacent clip 24 when the upper section of the wind-shield is in the raised position shown in Figs. 1 and 3; and a boss 28 on the set-screw impinges against the clip when the set-screw is tightened, thus to firmly clamp the upper section between the clip and hinge at opposite ends of the wind-shield. Below the pivotal joint 23 of the hinge is a threaded hole 29 similar to the hole 27, above the joint 23, so that when the hinge is in a folded position the two holes are in registration for the purpose hereinafter described.

To fold the wind-shield, the set-screws are loosened sufficiently to allow withdrawal thereof from the slots 25 as the hinge is initially turned at its joint 23, to the upper dotted position in Fig. 1, for the purpose of allowing the lower frame-ends of the shield-section 9 to clear the ends of the clips 24 which overlap them. After this has been accomplised, the hinge is again straightened or raised to a perpendicular position, when the upper section of the wind-shield is lowered as shown by the lower dotted representation in Fig. 1, by turning the same upon the joint 22 of the hinge, thus allowing it to swing through the arc illustrated by the dotted line at 30 for the purpose of avoiding encounter with the steering-wheel 31 of the automobile. When the section 9 has been lowered to a point below the steering-wheel, the hinges are allowed to turn upon both joints 22 and 23 in folding, when the frame 17 in its folded condition will bear against stops or buffers 32 on the frame 10, and the holes 27 and 29 are in registration and permit the lowered frame-section to be securely fastened in position by turning the set-screws to engage the threaded holes 29. It is obvious that the hinges may be made in any desired lengths to permit the folding of the upper wind-shield section regardless of its height and the extent of limited space between the steering-wheel and dash.

As salient advantages of my improved construction of inwardly-folding wind-shield may be mentioned its

simplicity, durability and lightness; its adaptability to different types of cars; the ease with which it may be operated; its neatness of appearance; and its rigidity in folded and raised position, which renders it anti-rattling.

What I claim as new and desire to secure by Letters Patent is—

1. In combination with an automobile, a folding wind-shield supported forward of the steering-device of the machine, comprising a lower section rigidly secured to the automobile, an upper section, double-hinge members connecting said sections, each said member having its lower end permanently hinged to said lower section between its ends, and the upper end similarly hinged to the upper section, and means for rigidly securing the upper section in its raised position, for the purpose set forth.

2. In combination with an automobile, a folding wind-shield supported forward of the steering-device of the machine, comprising a lower section rigidly secured to the automobile, an upper section, double-hinge members connecting said sections, each said member having its lower end permanently hinged to said lower section between its ends, and the upper end similarly hinged to the upper section, and means for rigidly securing said upper section against said lower section in the folded condition of the shield, for the purpose set forth.

3. In a wind-shield, the combination of upper and lower sections, double-hinge members connecting the two sections and adapting the upper section to fold inwardly on them, clips on one section adjacent to the hinge-members, set-screws on the other section having threaded engagement with said hinge-members, said set-screws being adapted to engage the clips to secure the upper section when in raised position, and a threaded opening in each hinge-member to receive a set-screw for fastening the two sections together when in the folded condition.

4. In a divided wind-shield, the combination of upper and lower sections, consisting of glazed frames, double-hinge members connecting the frames of both sections at opposite ends of the shield, slotted clips on the frame of one section, set-screws passing through the frames of the other section and having threaded engagement with the hinge-members and adapted to enter the slots in the clip to secure the upper section when in raised position, threaded openings in the hinge-members to receive the set-screws and secure the two sections when in a folded condition, and a stop on the frame of one section forming a bearing for the other section in the folded condition of the device.

5. In combination with an automobile, a folding wind-shield comprising a lower section secured on the automobile and an upper section, double-hinge members connecting said sections, each hinge consisting of an upper end-portion secured to the inner face of the upper shield-section, a lower end-portion secured to the corresponding face of the lower shield-section below the upper end thereof, and an intermediate portion having hinged-joint connections with said end-portions, and retaining means adjacent to the lower edge of the upper frame for securing the upper section to the lower section when in its raised position, for the purpose set forth.

6. In combination with an automobile, a folding wind-shield supported forward of the steering-device of the machine, comprising a lower section rigidly secured to the automobile, an upper section and double hinges connecting said sections, each said section having a frame and each hinge consisting of an upper end-portion secured to the inner face of the side-bar of the upper frame near the lower end of said bar, a lower end-portion secured to the corresponding face of a side-bar of the lower frame below the upper end thereof, and an intermediate portion having hinged-joint connections with said end-portions, with the lower joint coincident with the parting line between said sections, for the purpose set forth.

PHILIP DE ANGUERA, JR.

In presence of—
L. HEISLAR,
R. A. SCHAEFER.