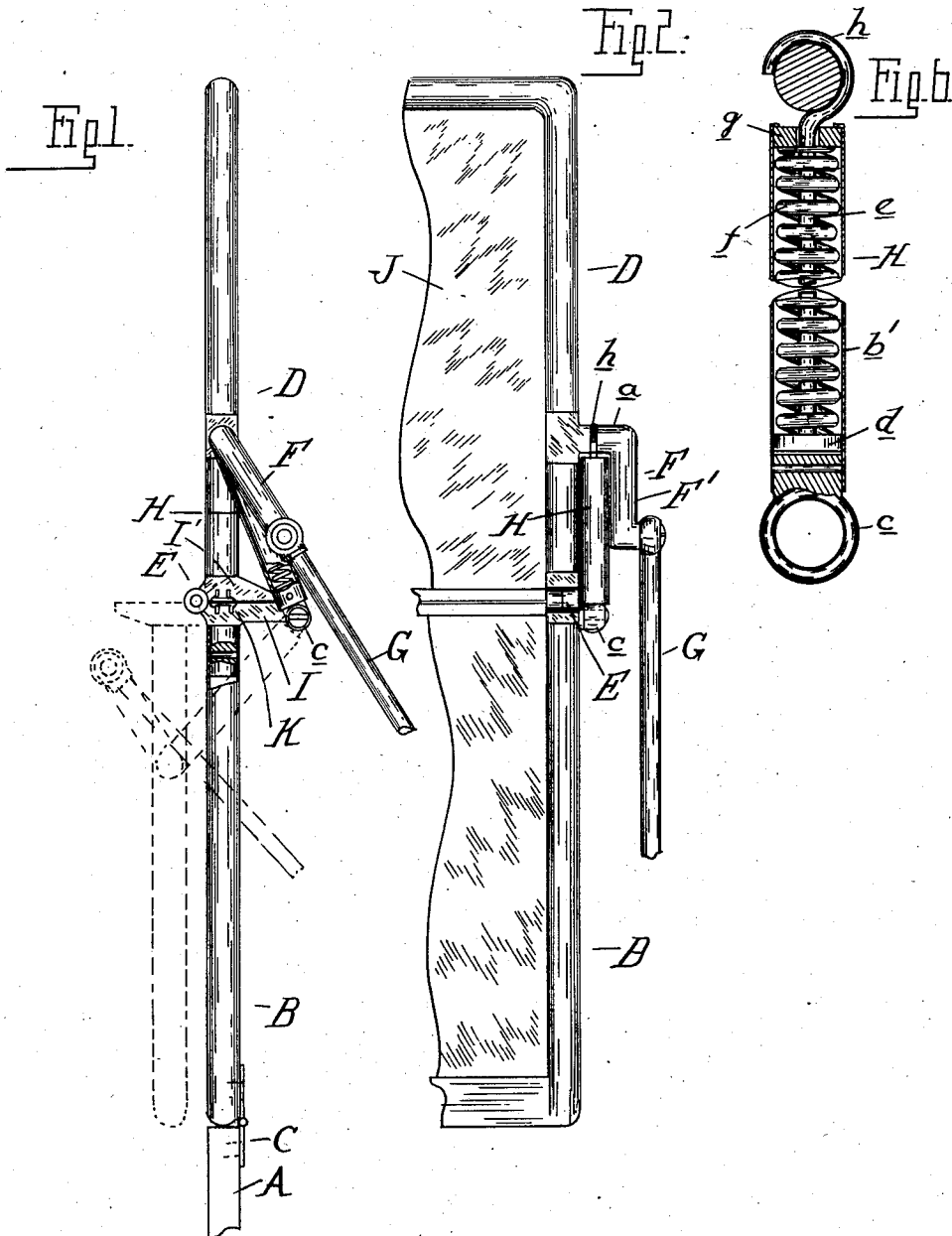


E. L. ACKERMAN.
WIND SHIELD.
APPLICATION FILED MAY 1, 1909.

1,010,715.

Patented Dec. 5, 1911.

2 SHEETS-SHEET 1.



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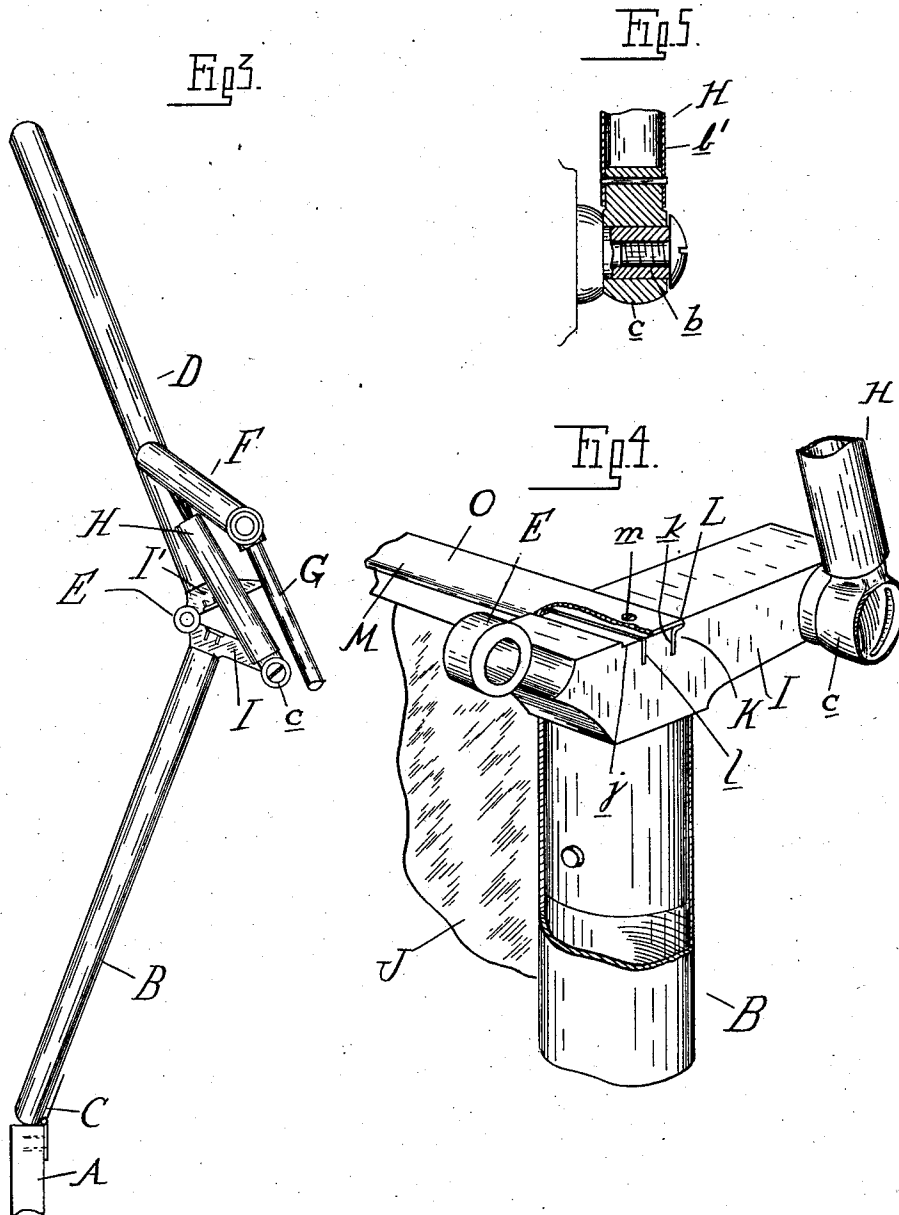
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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WIND-SHIELD.

1,010,715.

Specification of Letters Patent.

Patented Dec. 5, 1911.

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To all whom it may concern:

Be it known that I, EDWARD L. ACKERMAN, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Wind-Shields, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates particularly to a sectional wind shield, especially designed for use in connection with automobiles, and consists in the novel and simple construction of the device, in the peculiar arrangement and combination of parts, and in various details of construction as more fully hereinafter set forth.

In the drawings,—Figure 1 is a view in side elevation of a wind shield made in accordance with my invention, some of the parts being broken away to show the interior construction, and showing in dotted lines the wind shield sections in their folded position; Fig. 2 is a rear sectional elevation; Fig. 3 is a side elevation, showing the sections in partially folded positions; Fig. 4 is a sectional perspective view, illustrating the construction of one of the section frames; Fig. 5 is an enlarged sectional view, illustrating the means of connection between the yielding connection and one of the frames; and Fig. 6 is a detached sectional view of the preferred form of connection.

By reason of convenience in manipulation, the most desirable form of sectional wind shield is that in which the upper section may be lowered when the shield is not required by an inward shifting movement, this being particularly true where the sections are hinged together. Owing, however, to the near proximity of the steering wheel, the space in which the folding or shifting may be effected is so limited that it has heretofore been necessary to employ a relatively narrow upper section that will permit of being shifted inwardly without striking the wheel. Such a form of section, however, has been extremely objectionable, for the reason that the meeting rails of the sections were brought upwardly into the line of vision of the operator, thus materially obstructing his view.

One of the primary objects of the present invention is to produce a sectional shield in which the upper member is of such width

that the meeting rails will be at a distance below the line of vision, thereby obviating the existing defects in prior shield construction, and at the same time will be susceptible of the desired inwardly shifting movement in lowering. In the preferred form of wind shield for accomplishing the objects referred to, I have provided a lower section capable of outward rocking movement, an upper section of the desired width foldable inwardly, preferably into transverse alinement with the lower, and a supporting mechanism for the sections that, in addition to maintaining the latter in their extended and folded positions, will serve upon the inward swinging movement of the upper section to force the lower section outwardly a corresponding amount, so that as the folding is being effected the space between the shield and the steering wheel will be correspondingly increased to permit of the lowering of the upper section without striking the wheel.

Referring to the drawings heretofore described briefly, the reference letter A designates the usual filler board, rigidly mounted upon the vehicle in advance of the steering wheel; B is the lower section of the wind shield, which I have shown as mounted upon the filler board for outward rocking movement, the parts being connected by suitable hinges, as C.

D is the upper shield section, preferably hinged as at E, to the upper edge of the lower section for inward folding movement, and F represents the supporting mechanism for the sections.

Preferably two sets of supporting devices are employed, one on each side of the shield, and being of the same construction the description of one will suffice. In construction, the support referred to comprises an arm F' rigidly secured to the side of the upper section and extending in angular relation thereto, as shown in Fig. 1; a suitable brace G adapted to be secured at its lower end to the vehicle in the usual manner, and pivoted at its upper end to the extremity of the arm; and a yielding connection H between the sections. The preferred form of connection is shown in Fig. 6, consisting of a barrel or cylinder b', an eye member c secured within one end of the cylinder, a plunger d adapted to work within the barrel, a rod or stem e therefor, a coil spring f within the barrel interposed between the

plunger and a washer *g* held within the barrel end opposite the eye, and a loop *h* formed by a continuation of the stems or rods *e*. This spring connection described is applied to the sections, as plainly shown in Fig. 2, the loop or hook *h* encircling an offset *a* upon the arm *F'* and the eye *c* a stud *b* (Fig. 5) formed upon the forwardly projecting extension *I* upon the upper portion of the lower shield section.

From the foregoing description of the mechanism, the manner of operation it is believed will be obvious. The operator upon drawing inwardly on the top of the upper section causes the lower section to rock outwardly a sufficient distance to permit of a clearance between the outer edge of the upper section and the steering wheel, and continued lowering of the upper section restores the lower shield member to its normal upright position and the upper section in parallelism with it. The spring connection between the sections serves to properly hold the latter in their extended position, and also in the folded position. In this manner, the desirable feature of the inward folding movement is obtained, while the width of the upper section is such as to throw the meeting rails below the line of vision of the eye, thereby remedying the objectionable feature heretofore existing. Finally, the entire action in folding and extending the shield is automatic.

For strength in construction and convenience in manufacture, I have provided a novel construction of frame for each section inclosing the usual transparent panels *J*. The novel feature of construction resides in the formation of the meeting rail as shown in Figs. 1 and 4. This rail I have formed from a single strip of metal, rolled or otherwise fashioned to form a trough-shaped body *K* adapted to receive the edge of the transparent panel, and oppositely-disposed flanges *L* and *M* extending in alignment with the base of the body, forming an extended meeting rail surface *O*. The rails as shown are adapted to lie at their extremities in a recess, as *j*, formed in the ex-

tension *I* and corresponding extension *I'* of the sections, while the flanges *k* forming the trough of the body are adapted to engage vertical grooves *l* in the extension members, as plainly shown in the figures referred to. The rails are held in place by suitable fastening devices, as screws *m*, engaging the extension members intermediate the flanges.

In addition to forming an extended surface, the flange or flanges described reinforce the channeled body to such an extent as to effectively prevent any edgewise bending of the rail, with the consequent breakage of the inclosed panel, this function of the flanges or extensions being of primary importance.

It will be observed from the foregoing description of my invention that only one brace connection is employed between the shield and the vehicle, thus simplifying the construction; and its point of attachment to the shield is such that the wind pressure on the shield sections acts to hold the members in the desired extended position. This result is secured through the inward folding of the sections and the attachment of the brace or brace connection, which includes the arm *F'*, to the upper section, and at such distance above the meeting rails as to form a greater area below the point of attachment than above for the wind to press against.

What I claim as my invention is,—

In a wind shield, the combination with a lower section mounted for outward rocking movement and an upper section hinged to the lower section for inward folding movement, of a double crank arm extending forwardly from the upper section, a spring connected at one end to one arm of said crank, and at the other end to the lower section, and a brace connected at one end to the other arm of said crank and at its other end to a vehicle.

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

EDWARD L. ACKERMAN.

Witnesses:

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JAMES P. BARRY.