

PATENT REQUEST: STANDARD PATENT / PATENT OF ADDITION

I / We, being the person(s) identified below as the Applicant, request the grant of a patent to the person identified below as the Nominated Person, for an invention described in the accompanying standard complete specification.

Full application details follow.

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[54] Invention Title DUAL SUN VISOR FOR MOTOR VEHICLES

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ASSOCIATED PROVISIONAL APPLICATION(S) DETAILS

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BASIC CONVENTION APPLICATION(S) DETAILS

[31] Application Number	[33] Country	Country Code	[32] Date of Application

Basic Applicant:

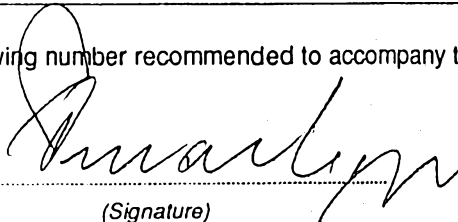
DIVISIONAL APPLICATION DETAILS

[62] Original application number _____

PARENT INVENTION DETAILS (Patent of Addition requests only)

[61] Application number _____ Patent number _____

Drawing number recommended to accompany the abstract _____


(Signature)

9 JULY 1994
(Date)

AUSTRALIA

Patents Act 1990

NOTICE OF ENTITLEMENT

(To be filed before acceptance)

I/We, J. I. MARTYN

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being the applicant in respect of Application No. 01/1994, state the following:-

Part 1 - Must be completed FOR ALL APPLICATIONS.

The person(s) nominated for the grant of the patent:

*is / *are the actual inventor(s)

~~or~~

*has entitlement from the actual inventor(s).....

(eg by assignment, by mesne assignment, as legal representative of, etc)

**** Part 2 - Must be completed IF THE APPLICATION IS ASSOCIATED with one or more PROVISIONAL APPLICATIONS.***

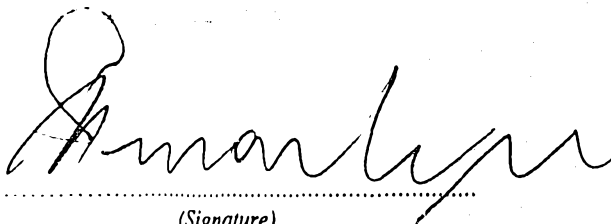
The person (s) nominated for the grant of the patent:

*is / *are the applicant(s) of the provisional application(s) listed on the patent request form

~~or~~

~~has entitlement to make a request under Section 113 in relation to the provisional application(s) listed on the patent request form~~

(eg by assignment, by agreement, etc)



(Signature)

9 JULY 1994

(Date)

(If the applicant is a Company or other legal entity, also indicate the name and standing of the authorized signatory.)

* Omit/Delete if not appropriate

Note: Use form P/00/008b where details for PCT, convention priority, microorganism deposit, additional or divisional application, are required.



AU9467479

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(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 671373

- (54) Title
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- International Patent Classification(s)
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J.I. MARTYN
- (72) Inventor(s)
J.I. MARTYN
- (56) Prior Art Documents
AU 35640/93 B60J 3/02
US 4858982
AU 603143 79487/87
- (57) Claim

1. A Dual Sun Visor for use in motor vehicles, replacing the existing form of sun visor fitted in motor vehicles, comprises of two sun visor blades one of which (the Main Visor) is hollowed within its peripheral frame to take a second smaller sun visor blade (the Side Visor) nested within that frame on its upper or ceiling-facing face, and which is joined by a combination of a telescopic support arm made of two or more tubes of stainless steel or plated aluminium or similar metal, each of a size or sizes to fit firmly inside the next sequentially, allowing a friction-controlled extension-and-return sliding action, and rotating action, in the manner of aerials on portable radio and television sets, a ball or multi-directional joint and spring-and washer set, to the top right-hand corner and a releasable hook and loop fastener or similar on their facing surfaces at or near to the top left-hand corner of the ceiling-facing face of the Main Visor, so that when the Main Visor is swung down from the vehicle ceiling to face the windscreen, the Side Visor may in turn be released from the loop and hook or similar fastener and swung to the right from the Main Visor to face the driver's side window for protection from the sun's rays, independently of the movement or position of the Main Visor, whilst remaining attached to it, and, when required by the driver returned to the front, swung by means of the ball or multi-directional joint to re-nest

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within the hollowed section of the Main Visor face, re-fastened to the main Visor by the releasable hook and loop or similar fastener, after which the combined unit may be used by the driver as a single front or side visor as is the case with the current pattern of sun visors fitted in motor vehicles, or it may be swung upwards to its "up" or ceiling-facing position, there appearing to vehicle occupants as if it were a current-pattern sun visor in its "closed" position, with only the one support arm joining it to the ceiling.

AUSTRALIA

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ORIGINAL
COMPLETE SPECIFICATION
STANDARD PATENT

DUAL SUN VISOR FOR MOTOR VEHICLES

Invention Title:

The following statement is a full description of this invention, including the best method of performing it known to me:-

This invention relates to improvements in motor vehicle sun visors.

Drivers and front-seat passengers of motor vehicles are often faced with the problems caused by flickering sunlight and tree shadows (etc.) entering the front and particularly the side windows, causing annoyance and distraction, and a road-hazard for the driver. This is manifest often and in a random manner in all motor vehicles using Australia's twisting and turning roads. The present remedy is for the driver/front passenger to swing the existing sun visor, from the front to the side and back to the front again, requiring the head to be "ducked" and the face turned away from the road momentarily each time, often frequently. This activity is particularly dangerous for the driver, when on-coming traffic and the stability of the vehicle on the road, are concerned.

These problems are overcome by the present invention, which provides for a Dual Sun Visor for motor vehicles designed with two main parts, that is a Main Visor, substantially as is presently provided in motor vehicles, but with an additional or Side Visor attached to the Main Visor's upper or ceiling-facing face. This Side Visor can be turned to the right (in the case of the driver's-side sun visor) or to the left (for a front-seat passenger), to give protection from sunlight and flickering shadows entering from the side windows.



The essential features of this invention are as follows:

1. What is apparently one present pattern of sun visor, when in the "closed" or ceiling-facing position in a motor vehicle, may be split to provide two separate component sun visors, with the upper (before lowering) visor blade providing a Side Visor, and the lower blade providing a Main or front facing sun visor;

2. The two component visors of the Dual Sun Visor commence their usage from the "closed" or ceiling-facing position and after use they are normally returned to that "closed" position, where they appear in all respects as the present design of sun visor;

3. The Dual Sun Visor is novel when compared to US 4,858,982 (Dykstra et al) because, in the present invention each of the two sun visor blades may be turned horizontally or vertically without inhibiting the operation of the other when in the "open" position yet, when the two are joined or nested together they become one visor joined to the ceiling by one arm, which is no more obtrusive than, and may be operated fully as, the existing pattern of single sun visors fitted in modern vehicles.

By comparison, the citation for (Dykstra et al) has major shortfalls in the operation of its "...multiple offset arms..." (Column 1. Lines 49 – 52, and Figures 2 – 8) which are claimed to "...allow the desired motion of the panels making up the visor...". However, as these two separate and visible arms (56 and 66) are necessarily set in an offset way into the "...pivot mounting brackets..." on the vehicle ceiling or frame, separated both laterally and vertically by some 10 – 20mm (estimated – no scale shown) (Figures 2, 3, 8) to provide in that invention for horizontal movement of the visor blades, any movement in the vertical plane (e.g., from the ceiling) is inhibited or even precluded, for the blades, joined or nested as one as they were beforehand, are subjected to the tension caused by the offset centres of radius of their supporting arms, and the resultant differing arcs of movement as they are swung. Further, there is no provision for any slippage or sliding motion between the two blades which could alleviate the above problem, because of the close-fitting design of the concave/convex "panel" surfaces, as are clearly disclosed in Column 3, lines 44 – 47 and Figures 4 – 6. In view of that it is demonstrated that, before the Dual Sun Visor of (Dykstra et al) can be swung down from the "...raised or stored



position..." in Figure 1, or during such movement, the component blades must release or "pop out" from their nesting position, and are not therefore capable of operation as one homogeneous blade in the lowered position (Figures 2 - 4). The claim in Column 1, Lines 38 - 41 and 45 that "...a single multiplex visor is provided..." by (Dykstra et al), therefore, is disqualified.

The present invention which discloses none of the problems of the US Patent detailed above, is of a novel design, and operates differently and more effectively.

4. The present invention is readily swung to the lowered position and once there, may be swung by the driver from front to right and back again, and used fully as the existing pattern of sun visor in motor vehicles, without any need to disengage the Side Visor from the Main Visor. That of (Dykstra et al) is prevented from doing this freely, for the reasons described above, that is the two "...offset arms..." with their differing and offset centres of pivot on the vehicle ceiling or frame, will not permit such swinging action, unless forced or sprung apart. Again, the present invention discloses none of these problems, and is proposed as novel in this regard.

5. The Dual Sun Visor, when operated as one Sun Visor, without detaching or placing into use the Side Visor, functions in all respects and as conveniently as one sun visor, as presently manufactured and provided in motor vehicles.

The Preferred Version of the invention provides for a Dual Sun Visor which has one of the component visors (the Side Visor) "nested" into a recess or hollowed space in the upper or ceiling-facing face of the other visor (the Main Visor), fitted frictionally to a telescopic support arm which is joined by a ball or multi-directional joint to the right-hand top corner of the Main Visor on its upper or ceiling-facing face and by a releasable hook and loop or similar fastener tab and pad at the left-hand upper end.

Once the combined visor is lowered from the ceiling for use, the Side Visor may be released from the releasable hook and loop fastener or similar pad and swung by the ball or multi-directional joint to the right by up to some 110 degrees of arc largely independent of any movement or non-movement of the Main Visor. It may also be extended by some 150mm towards the rear of the vehicle by use of the telescopic support arm, to allow the driver to select a desired position. In this position the Side Visor prevents sunlight and flickering



shadows interfering with his/her vision; during this time the Main Visor may remain facing the vehicle windscreen, or it may be part or substantially returned to the ceiling (or "closed") position if not required. When neither sun visors (Main or Side) are required by the driver, the two may be married-up by

5 swinging the Side Visor to the front and re-nesting it in the hollowed-out section in the back or ceiling-facing face of the Main Visor, after which the combined unit may be swung back up to the vehicle ceiling by use of its single arm, or retained for use as a single sun visor.

The invention may be made in a Left-Hand Mode for use by a motor vehicle front

10 seat passenger. The description in this Application relates only to a right-hand made equipment, but applies in reverse to the left-hand equipment.

The Side Visor may be released from the releasable hook and loop fastener or similar pad and swung to the side after the Main Visor is turned downward from the ceiling by only some 20 degrees of arc, to permit release from its recess in

15 the Main Visor, and therefore allowing it to be used while the Main Visor is substantially not open nor in use.

Both the Main Visor and Side Visor may be made essentially in the manner of the present range and design of commercially available fittings, frames and materials used in the manufacture of motor vehicle sun visors. The frame of the

20 Main Visor is however hollow or bowed in shape within its peripheral frame, to provide the shaped recess into which the Side Visor "nests" when closed. The substance and thickness of each of the two visors is reduced to some half or less of presently manufactured single padded sun visors, so that, when in the "closed" position the whole or combined visor is substantially of no greater

25 thickness or substance than presently manufactured sun visors.

The ball or multi-directional joint which joins the Side Visor to the Main Visor is made to commercially available pattern. The telescopic support arm comprises two or more stainless steel, plated aluminium or similar metal tubes, of sizes permitting each to fit firmly inside the next sequentially, thus providing a firm friction-controlled extension-and-return sliding action, and rotating action, in the

30 manner of the aerials on portable radio and television sets. They are sufficiently robust to permit long-term untroubled operation. The ball or multi-directional joint is fixed to the frame of the Main Visor by a durable spring-and-



washer set, or similar suitable device, of commercially available pattern.

- 5 The releasable hook and loop fastener or similar tab has a two-sided hooking face to allow adhesion to the releasable hook and loop fastener or similar pad on the Main Visor, when in the closed position, and to a releasable hook and loop fastener or similar pad of some 150mm in length above the driver's doorway when in the open position.

To assist with understanding the invention, reference will now be made to the accompanying drawings which show the Preferred Version of the invention.

In the drawings:

- 10 Fig.1 shows a right-hand Main Visor with a Side Visor "nested" into its recess in the closed position, according to the Preferred Version of this invention.

Fig.2 shows this invention with the Main Visor in the open position, the telescopic supporting arm extended, and the Side Visor in the open (or swung) position.

- 15 Fig.3 shows a sectional drawing of this invention in the closed position.

Referring to Fig.1, it can be seen that the Main Visor 1 is of the shape and style of existing motor vehicle sun visors. The Side Visor 2 is similar in shape to the Main Visor, but sufficiently smaller in area to permit "nesting" into the Main Visor's frame. The ball or multi-directional joint 3 is screwed or attached to the frame of the Main Visor, and a releasable hook and loop fastener or similar tab 4 is hooked to a releasable hook and loop fastener or similar pad 5 sewn or attached to the Main Visor.

- 20 The Side Visor becomes an integral part of the Main Visor for all practical purposes when not detached from it; it provides no obstruction to the Main Visor's operations, whether it is swung down or up, or to the right or front. With the releasable hook and loop fastener or similar tab unhooked, the Side Visor may be pivoted to the right or front and turned up or down, independent of the position of the Main Visor. The Main Visor may be turned down or up while the Side Visor, with its telescopic support arm 6 extended, and hooked to the releasable hook and loop fastener or similar pad over the side doorway, remains in the open position.
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6.

Referring to Fig.2, the invention is shown with both visors in the "open" position. The telescopic support arm 6 is extended and the releasable hook and loop fastener or similar tab is hooked to pad 7.

5 Referring to Fig.3, as Section A - A in Fig.1, is shown the Main Visor and its frame (8) and the Side Visor and its frame (9) "nested" into the recess in the Main Visor.

10 The Side Visor, when attached to the vehicle door arch, in its "open" position is unaffected by movement of the Main Visor, and can stay in place in the open position should the Main Visor be raised or lowered and when the vehicle front door is opened or closed.

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(Replacement page - 24 May 1996)

The claims defining the invention are:

- 5
1. A Dual Sun Visor for use in motor vehicles, replacing the existing form of sun visor fitted in motor vehicles, comprises of two sun visor blades one of which (the Main Visor) is hollowed within its peripheral frame to take a
- 10
- second smaller sun visor blade (the Side Visor) nested within that frame on its upper or ceiling-facing face, and which is joined by a combination of a telescopic support arm made of two or more tubes of stainless steel or plated aluminium or similar metal, each of a size or sizes to fit firmly
- 15
- inside the next sequentially, allowing a friction-controlled extension-and-return sliding action, and rotating action, in the manner of aerials on portable radio and television sets, a ball or multi-directional joint and spring-and washer set, to the top right-hand corner and a releasable hook and loop fastener or similar on their facing surfaces at or near to the
- 20
- top left-hand corner of the ceiling-facing face of the Main Visor, so that when the Main Visor is swung down from the vehicle ceiling to face the windscreen, the Side Visor may in turn be released from the loop and hook or similar fastener and swung to the right from the Main Visor to face the driver's side window for protection from the sun's rays, independently of the movement or position of the Main Visor, whilst remaining attached to it, and, when required by the driver returned to the
- 25
- front, swung by means of the ball or multi-directional joint to re-nest within the hollowed section of the Main Visor face, re-fastened to the main Visor by the releasable hook and loop or similar fastener, after which the combined unit may be used by the driver as a single front or side visor as is the case with the current pattern of sun visors fitted in motor vehicles, or it may be swung upwards to its "up" or ceiling-facing position, there appearing to vehicle occupants as if it were a current-pattern sun visor in its "closed" position, with only the one support arm joining it to the ceiling.
- 30
2. The Dual Sun visor in Claim 1 wherein the two visor blades when "closed" or joined together are of no more joint substance or thickness than the existing design of sun visor in current motor vehicles, with the Side Visor being some half or less of the thickness of the current pattern, and nested completely into the hollowed-out section of the Main Visor.
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3. The Dual Sun Visor in Claim 1 wherein the telescopic action of its telescopic support arm permits the Side Visor, once swung to face the



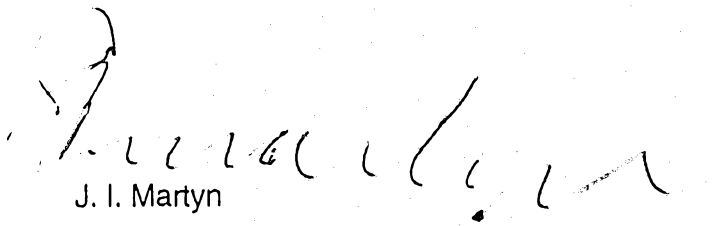
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(Replacement Page – 24 May 1996)

driver's side window, to be slid to the vehicle's rear or front over a range of some 150mm to meet the driver's requirements, and for it to be attached to the door arch above the driver's door by means of a releasable loop and hook or similar fastener on their facing surfaces.

- 5 4. A Dual Sun Visor for motor vehicles substantially as described in the accompanying drawings 1 to 3.

The original claims to this application were submitted by me on 12 July 1994 and filed on 14 July 1994.



J. I. Martyn

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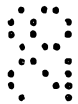
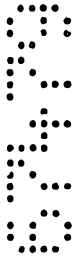


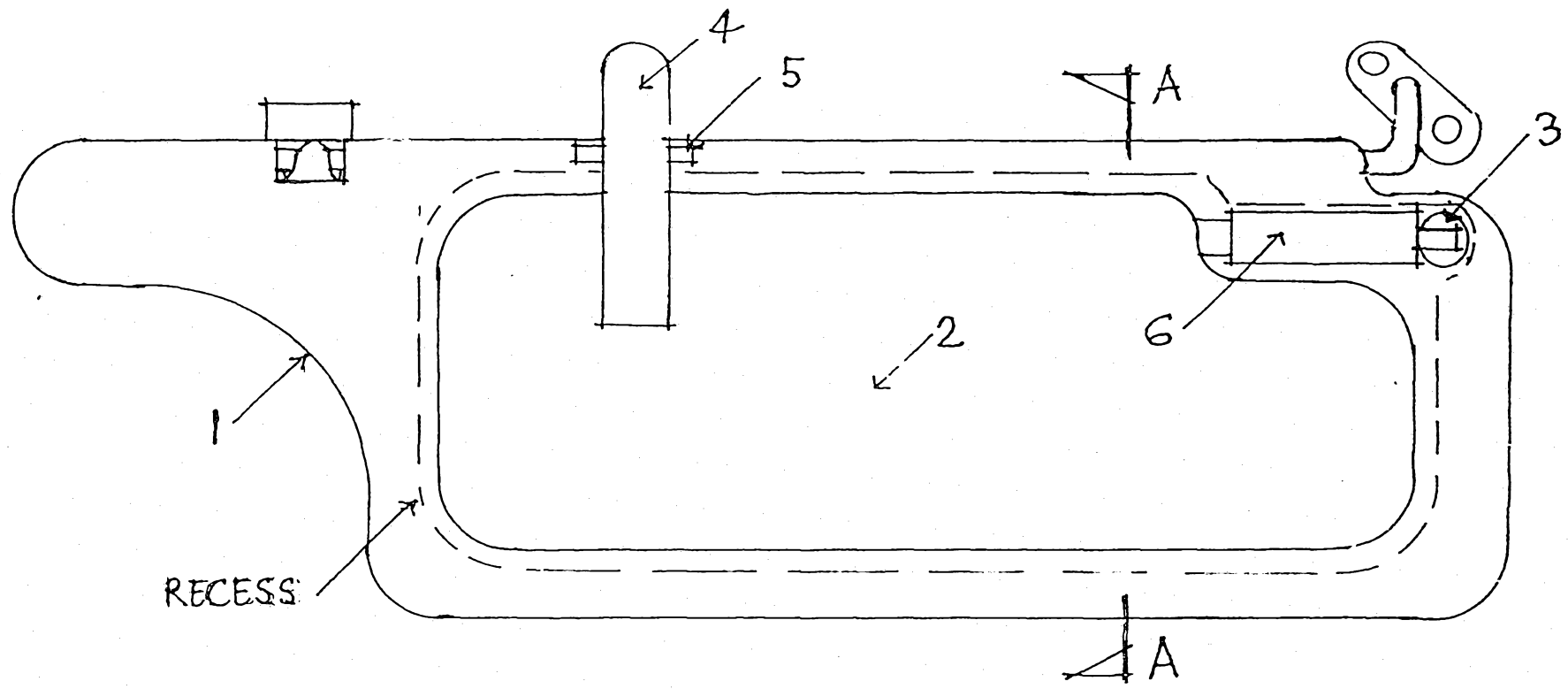
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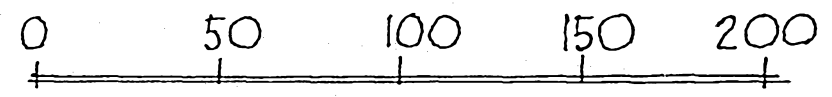
ABSTRACT

A Dual Sun Visor for motor vehicles is disclosed. The device is a Main Sun Visor (1,8) similar to existing patterns, but hollowed at its rear or ceiling-facing face (8) to take a nested second sun visor, the Side Visor, (2,9) joined to it by a ball or multi-directional joint (3), a telescopic support arm (6) and a spring-and-nut set (3) at the right end, and a releasable hook and loop or similar fastener strip and pad (4,5) at the other. The device operates initially as an existing sun visor, until the Side Visor (2,9) is detached from its hook and loop fastener pad on the Main Visor and swung to the right and attached to a hook and loop or similar fastener pad over the doorway as a side visor, after adjusting the telescopic support arm (6) for length. The device may be operated as a single unit and used as an existing pattern sun visor, and is no bulkier or less attractive than the existing pattern. This device provides the means to prevent driver annoyance and distraction by flickering sun rays entering motor vehicles from their side windows, whilst driving.





ELEVATION

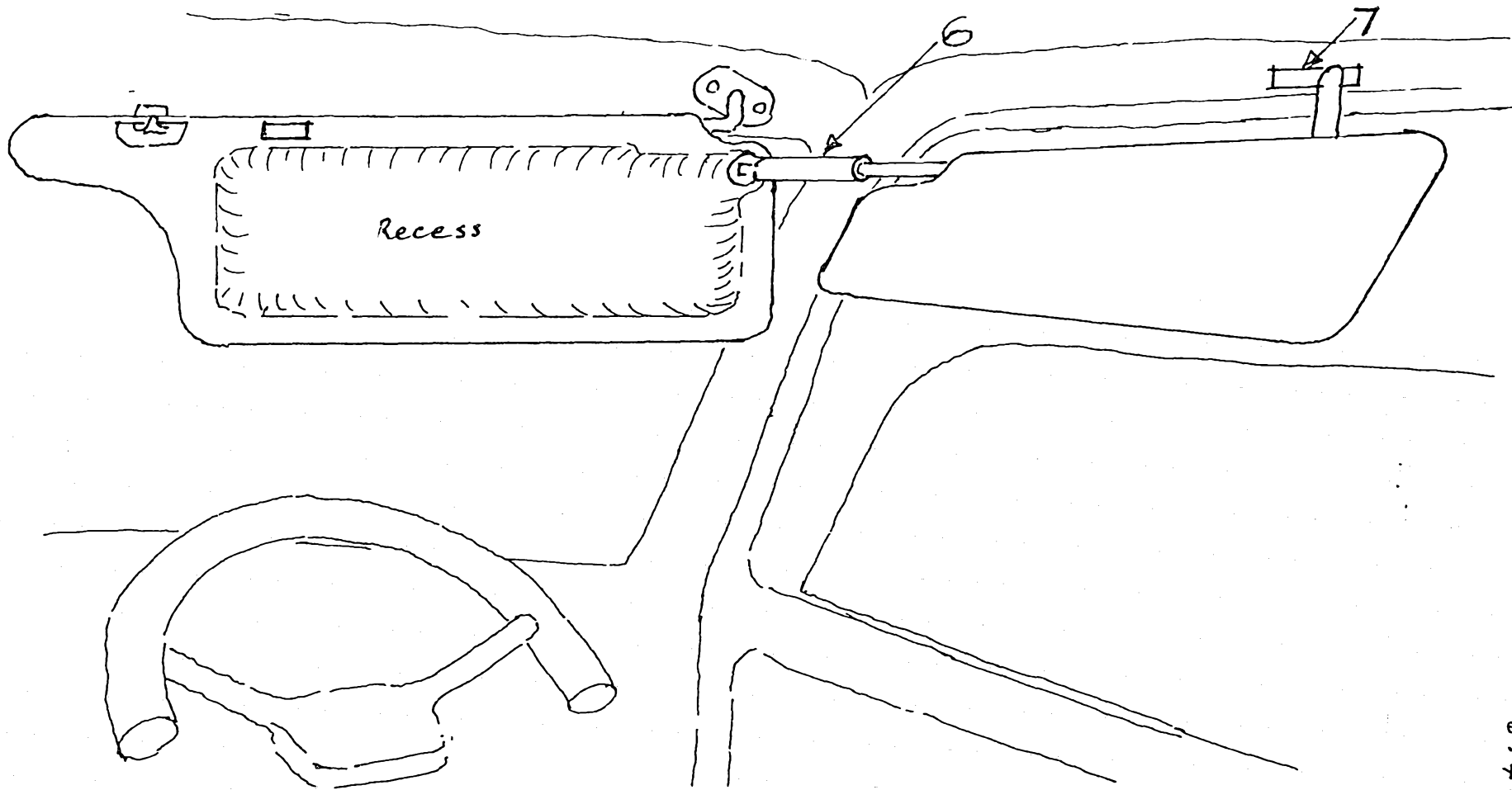


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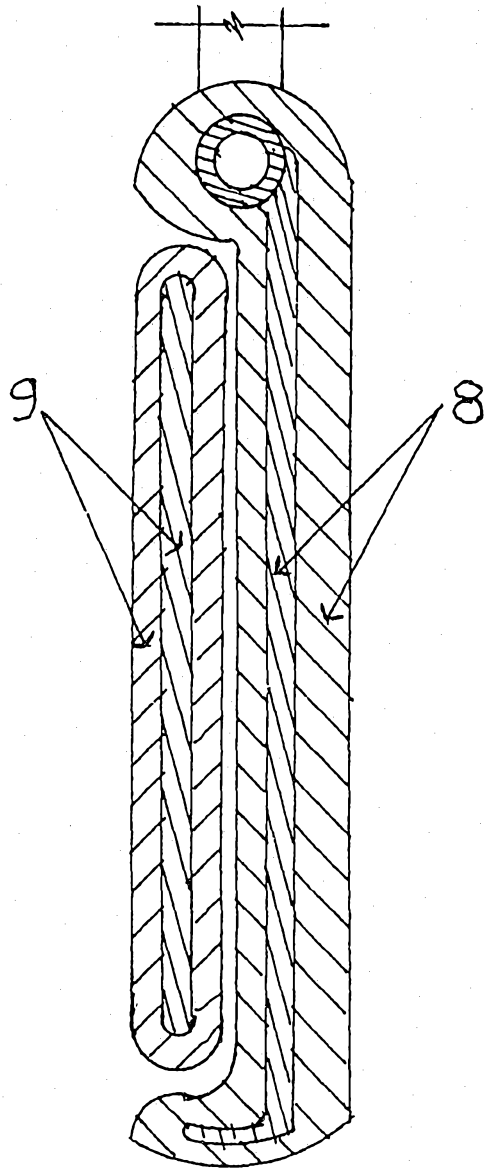
SKETCH VIEW

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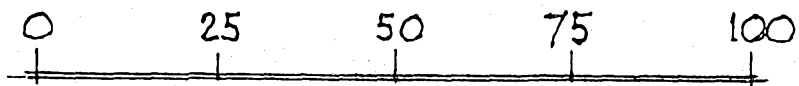
67479/94

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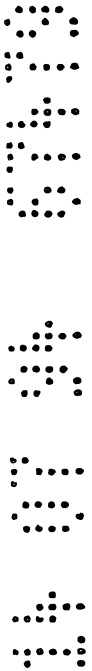


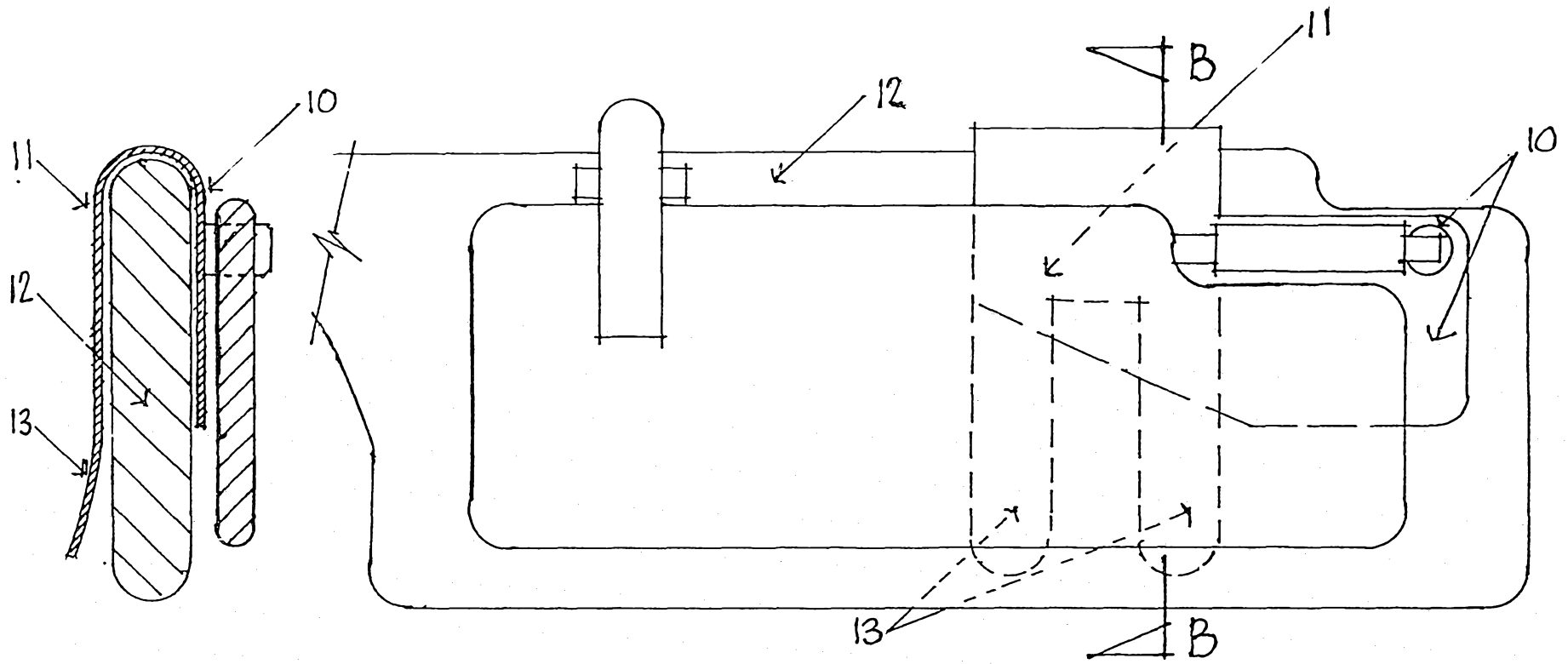
SECTION A-A



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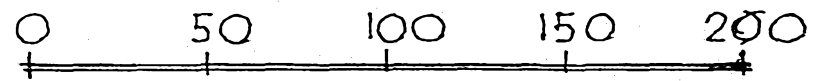
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SECTION B-B

ELEVATION



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