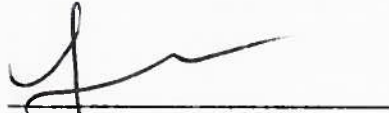


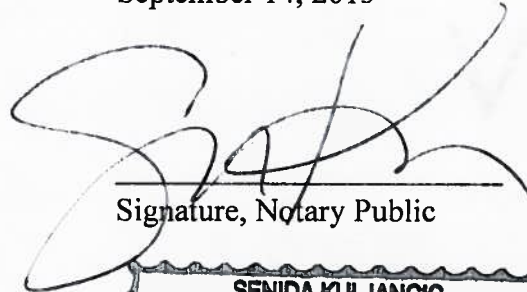
I, Joyce Chen, hereby affirm that the following is to the best of my knowledge and belief, a true and accurate Translation from German into English of the document

Publish Patent Application: 1 247 161 Filing Ref.: A 43139 II/63 c



Joyce Chen
TransPerfect Translations International, Inc.

Sworn to before me this
September 14, 2015



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	Federal Republic of Germany German [emblem] Patent Office Patent publication 1 028 896 Filing date: June 24, 1954 Publication of the application and issue of the patent publication: April 24, 1958	Cl. 63 c 82 Internat. Cl. B 62 d A 20581 M / 63 c
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<p style="text-align: center;">1</p> <p>The invention relates to a wiper bar for windshield wipers, comprising a graduated profile bar with elastic metal strips, with their broad side facing the level of the glass and inserted into lateral slots of the arm.</p> <p>In wiper bars of conventional design a rubber strip is held by a metal bar, which via a hump, also comprising metal, is supported in an articulate fashion in an accept fastened at the wiper arm. For wiper bars operating with arced windshields additionally a brace is fastened like a lever bar, which shifts the compression applied by the wiper arm to the ends of the bar in order to adjust the wiper edge of the rubber blade to the various curvatures of the windshields. Such apparatuses comprising multiple parts develop noise during operation, particularly at the inversion points of the wiping motion. Accordingly, sometimes springs or interim bearings comprising elastic, noise-damping materials are provided between the fastening hump, and its accept at the wiper arm, or instead of metal pins or rivets here parts are used made from rubber or plastic. It has also been attempted to produce the bar entirely from rubber, usually as a hollow profiled part with an inserted metal bar or a fastening part connected thereto. Almost all of the above-mentioned embodiments show shortcomings. The elastic inserts for noise reduction are ground over time by wear and tear, in winter the joints lock up by icing, and the metal parts become unsightly due to weathering. In one wiper bar of prior art, in which the fastening for the wiper arm engages a rear projection of the wiper bar extending over the entire length of the bar, the wiper blade is reinforced by a flat spring, integrated in the rubber part of the wiper bar and arranged with its wider area perpendicular to the wiped surface, which however disadvantageously prevents that the wiper blade is flexible in reference to the wiped area. This way the adaptation of the wiper lip to the surface of curved windshields is impossible.</p> <p>The disadvantages of the wiper bars of prior art are avoided according to the invention, if the wiper bar of the type mentioned at the outset comprises a profile bar at the back produced from rubber or elastic plastic, and shows approximately in the longitudinal center a reinforcement produced in one piece with it or being adhered thereto for an insertion and latching fastening at the wiper arm. In particular in wiper bars according to the invention metal joints and metal parts can be avoided.</p>	<p style="text-align: center;">Wiper bar for windshield wipers</p> <p style="text-align: center;">Applicant: AVOG Elektro- und Feinmechanik G.m.b.H. Bühlertal (Bad.), Klotzbergstr. 1</p> <p style="text-align: center;">Alfred Hoyler, Bühlertal (Bad.) has been named as the inventor</p> <p style="text-align: center;">2</p> <p>The weight of the moving parts can be largely reduced thereby so that the stress upon the drive elements is low. Accordingly here less wear and tear occurs after identical running time. The low weight also meets the demand for increasing wiper speeds. For the use in wiper bars on curved windshields additionally spring elements must be provided, which are adjustable under certain circumstances and allow a good adjustment to the respective curvature of the glass.</p> <p>The invention shall be explained in greater detail using some exemplary embodiments shown in the drawing. It shows: Fig. 1 the side view and top view of a wiper bar with its cross-sections A-A, B-B, and C-C. Figs. 2 to 4 the side views and cross-sections of various embodiments of wiper bars with adjustable pressure springs.</p> <p>In Fig. 1 1 represents the rubber blade, with its profile generally being discernible from the cross-section C-C. A strong back part 2 is connected via a strip 3 with the actual wiper lip 4. The longitudinal springs 5 are inserted in lateral slots, held together at the ends of the bar by the clamps 6. The hump 7 is fastened in the center of the rubber blade, which is either impressed in a mold in one piece with the rubber blade when the blade is produced in the injection-molding method, or if the blade is produced in the injection molding process it is adhered thereto by vulcanization or adhesion. The hump is provided with expansions 8 to achieve higher lateral stiffness as well as an opening through which the central clamp 9 is inserted.</p>
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3	4
<p>Additionally the hump includes an eyelet-like opening 10, which serves for the suspension at the wiper arm not shown. Here the edges of the eyelet may be reinforced by an injection-molded metal edge 11.</p> <p>Such a bar can be cut in the stretched form in a conventional manner at the wiper edge, then the springs 5 are inserted into the slots and clamped. When used on a planar windshield, stretched springs are inserted, in case of curved glass springs preliminarily bent according to the curvature of the windshield. In order to achieve a good contact in the latter case, the embodiments according to Figs. 2 to 4 are suggested. The reference characters and the general design are consistent with those of Fig. 1. For a better distribution of the compression second and third springs 12, 13 are suggested in Fig. 2. In Fig. 3 the second spring 12 is bent at its ends, and the pressure acting at this finger is then changed by displacing the clamp 14 and thus the curvature of the wiper bar can be adjusted. A similar arrangement is finally shown in Fig. 4, however here the spring 12 itself is displaceable via the clamp 15, the clamp 14 in turn serves for adjusting the compression of the spring 12. In this arrangement it is furthermore shown that the rubber blade is adhered or vulcanized to the longitudinal spring 5, allowing a particularly light and narrow embodiment of the wiper bar.</p> <p>The hump for the fastening at the wiper arm is adhered at the opposite side of the spring 5. An appropriate embodiment is also possible for the wiper bars according to Figs. 1 to 3.</p>	<p style="text-align: center;">Claims</p> <p>1. A wiper bar for windshield wipers, comprising a graduated profiled bar with elastic metal strips, with their broad side facing the level of the glass and inserted into lateral slots of the bar, characterized in that the back of the profile bar (1) produced from rubber or elastic plastic, comprises approximately in the longitudinal center an arched reinforcement (7), produced in one piece therewith or adhered thereto, which can be fastened by insertion and latching at the hump-like reinforcement (7) serving as the wiper arm.</p> <p>2. A wiper bar according to claim 1, characterized in that the lateral metal strips (5) are held in their position by clamps (6, 9) in a manner known per se.</p> <p>3. A wiper bar according to claims 1 and 2, characterized in that the additional pressure springs (12, 13) known per se are fastened with their center or with one end using clamps (15) at the elastic metal inserts, while the free ends being curved like fingers and with it being possible that their pressure against the profile bar can be adjusted by different clamps (14).</p> <p>4. A wiper bar according to claim 3, characterized in that the pressure springs (12, 13) are longitudinally adjustable.</p> <p style="text-align: center;">Publications considered: French patent publications No. 854 122, 956 796, 023 442; U.S.A. patent publication No. 2 537 411.</p>

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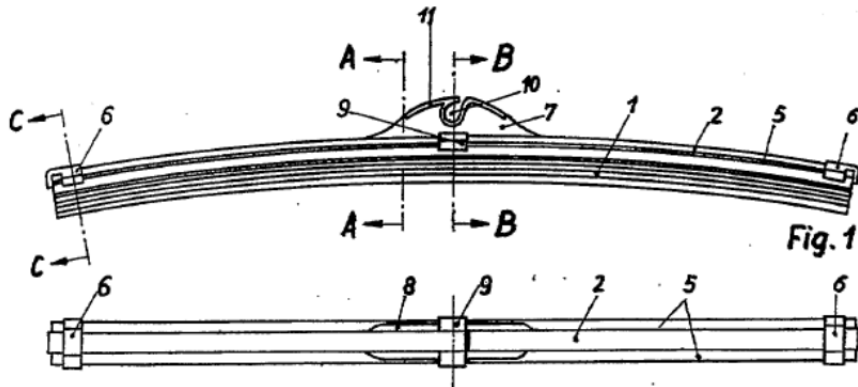


Fig. 1

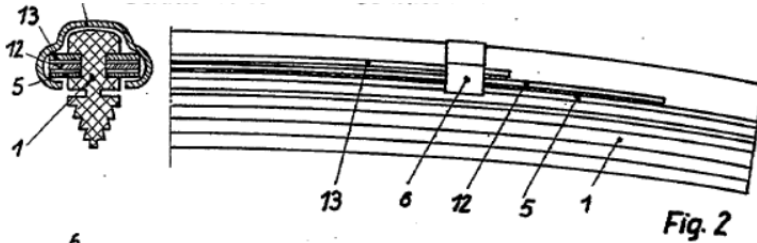
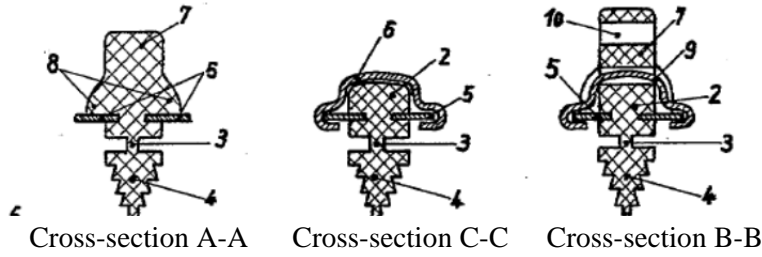


Fig. 2

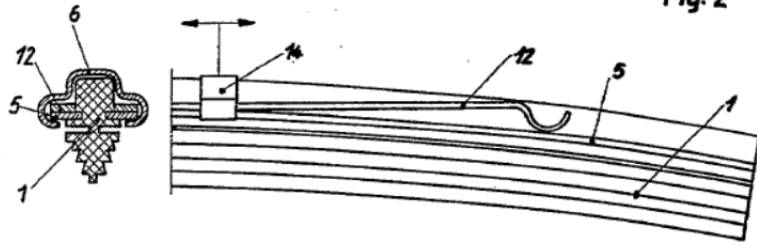


Fig. 3

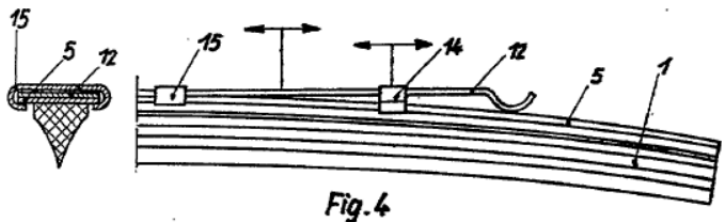


Fig. 4

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