

(12) United States Patent Kotlarski

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(54) WIPER BLADE FOR WINDOW PANES OF MOTOR VEHICLES

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(2), (4) Date: Sep. 15, 2000

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PCT Pub. Date: Jun. 15, 2000

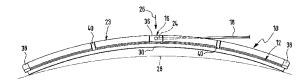
(30) Foreign Application Priority Data

Dec	e. 7, 1998 (DE)	
(51)	Int. Cl. ⁷	B60S 1/38 ; B60S 1/40
(52)	U.S. Cl	15/250.201 ; 15/250.43;
		15/250.32; 15/250.48
(50)	T2: 11 CC 1	15/050 001 050 10

(56) References Cited

U.S. PATENT DOCUMENTS

3,317,945	Α	*	5/1967	Ludwig	. 15/250.43
6,279,191	B1	*	8/2001	Kotlarski et al	15/250.201
6,295,690	B 1	*	10/2001	Merkel et al	15/250.201



6,449,797 B1 * 9/2002 De Block 15/250.201

FOREIGN PATENT DOCUMENTS

DE	1028896	* 4/1958	15/250.43
DE	14 30 589 A	12/1968	
DE	1 505 357	5/1969	
DE	15 05 397 A	10/1969	
DE	196 27 115 A	1/1998	
EP	0316114	* 5/1989	15/250.43
FR	1239780	* 7/1960	15/250.44
FR	2222855	* 10/1974	15/250.43
FR	2222853	* 10/1994	15/250.43
GB	1 429 820 A	3/1976	

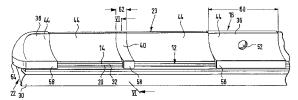
* cited by examiner

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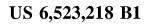
(57) ABSTRACT

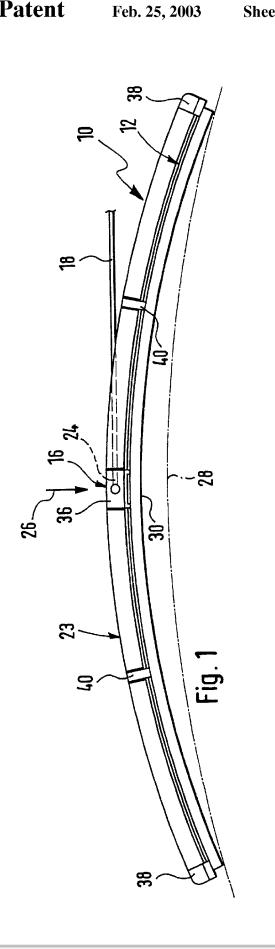
A wiper blade (10) for windows of motor vehicles is proposed, which is equipped with an elastic, elongated support element for an elongated wiper strip (22), which strip comprises a flexible material and can be placed against the window (28) to be wiped with a wiper lip (30) and which on its long sides has opposed longitudinal grooves (34), in which spaced-apart longitudinal rails (32) of the support element (12) are located, which rails are secured in the grooves (34) by at least one retainer (36,38,40) that spans the spacing on the side of the support element (12) remote from the wiper lip (30). A spoiler (23) extends in the longitudinal direction of the support element, and for each retainer (36,38,40), the spoiler has a recess (46,48,50), which extends crosswise to the longitudinal direction of the wiper blade (10). The outer profile of the retainer is at least approximately adapted to the profile of the spoiler.

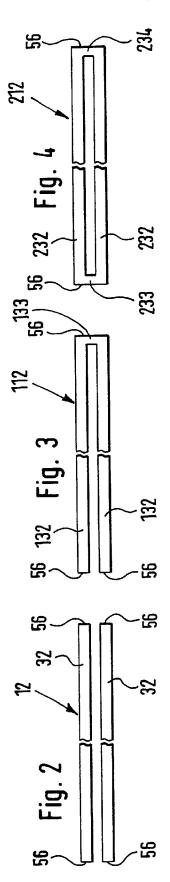
10 Claims, 5 Drawing Sheets

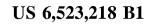


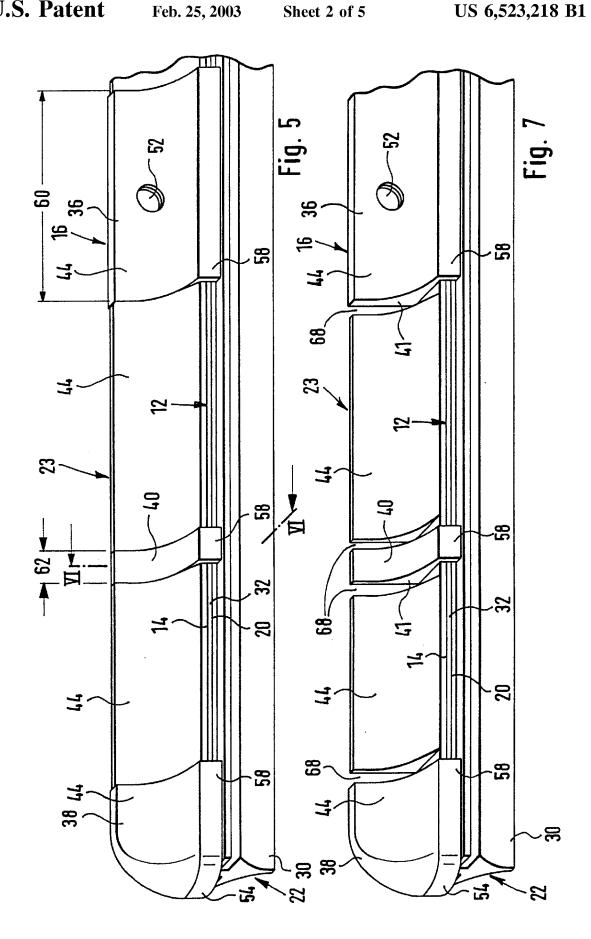














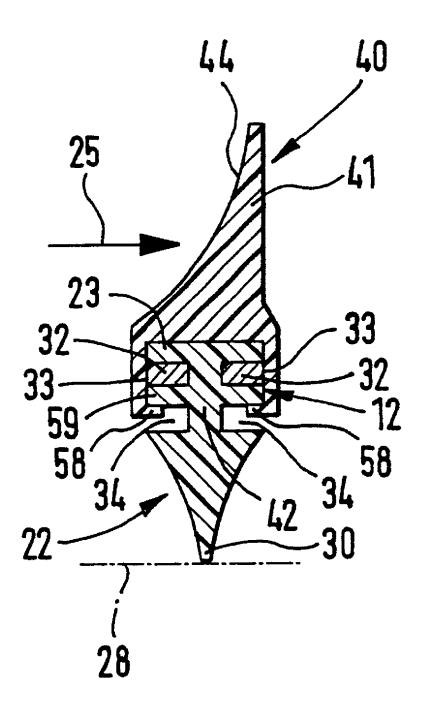
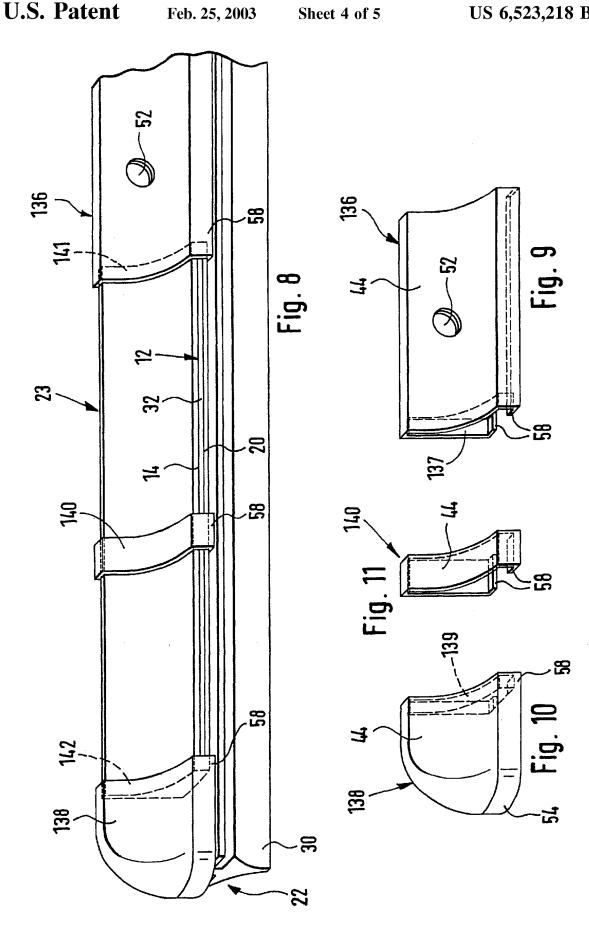


Fig. 6





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