

(12) **United States Patent**  
**Kotlarski**

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(45) **Date of Patent:** **Feb. 25, 2003**

(54) **WIPER BLADE FOR WINDOW PANES OF MOTOR VEHICLES**

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

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DE 1028896 \* 4/1958 ..... 15/250.43

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DE 14 30 589 A 12/1968

(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

DE 1 505 357 5/1969

(21) Appl. No.: **09/601,747**

DE 15 05 397 A 10/1969

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DE 196 27 115 A 1/1998

(86) PCT No.: **PCT/DE99/03015**

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§ 371 (c)(1),  
(2), (4) Date: **Sep. 15, 2000**

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FR 2222853 \* 10/1994 ..... 15/250.43

(30) **Foreign Application Priority Data**

GB 1 429 820 A 3/1976

Dec. 7, 1998 (DE) ..... 198 56 300

(51) **Int. Cl.**<sup>7</sup> ..... **B60S 1/38**; B60S 1/40

\* cited by examiner

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(74) *Attorney, Agent, or Firm*—Michael J. Striker

(52) **U.S. Cl.** ..... **15/250.201**; 15/250.43;  
15/250.32; 15/250.48

(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.

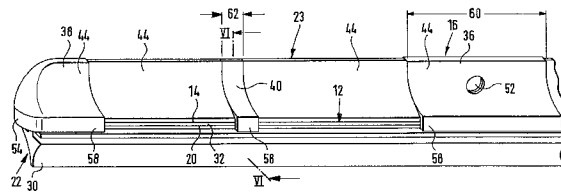
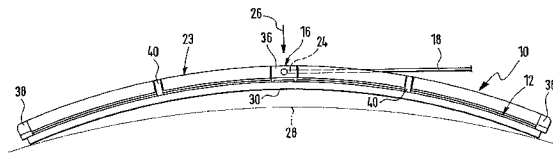
(58) **Field of Search** ..... 15/250.201, 250.43,  
15/250.44, 250.32, 250.361, 250.453, 250.452,  
250.451, 250.48

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**10 Claims, 5 Drawing Sheets**



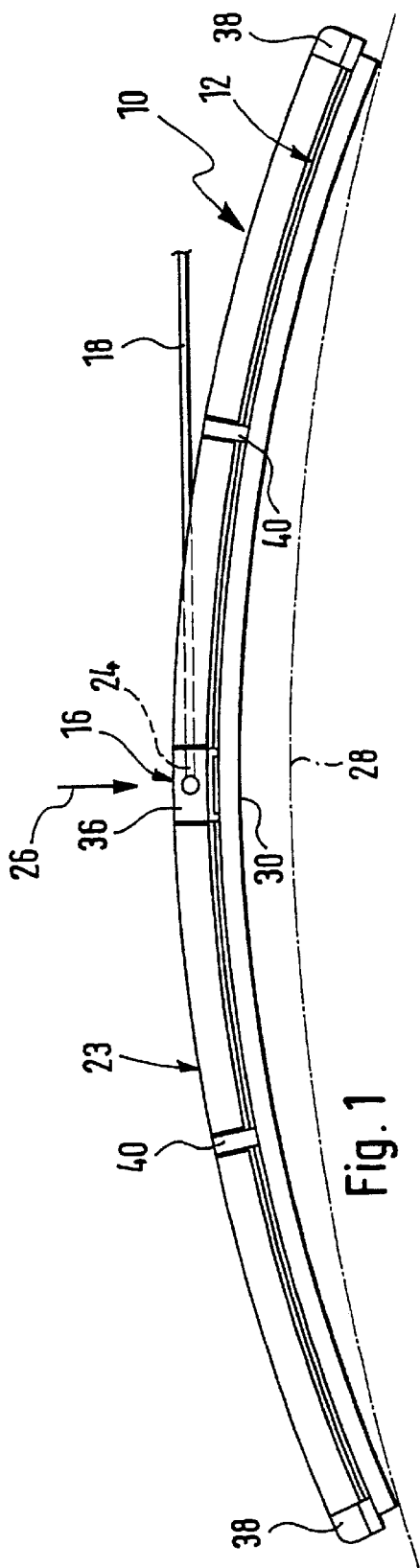


Fig. 1

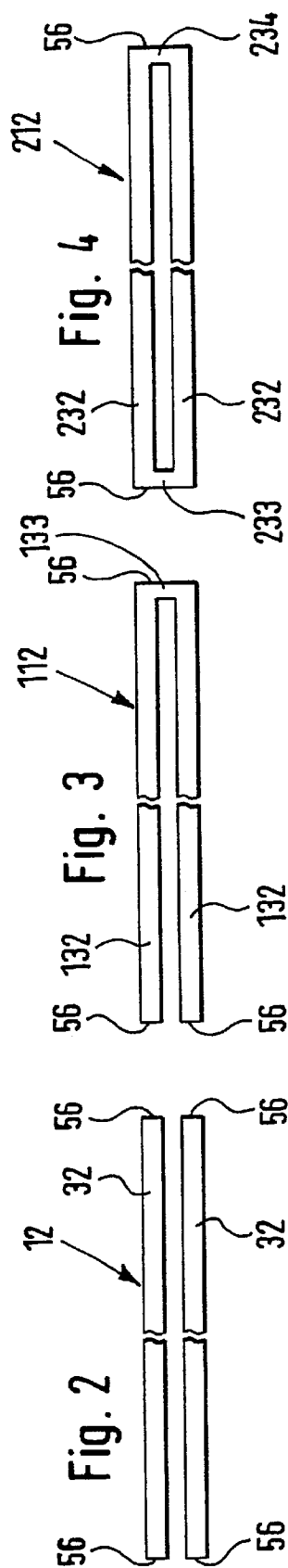


Fig. 2

Fig. 3

Fig. 4

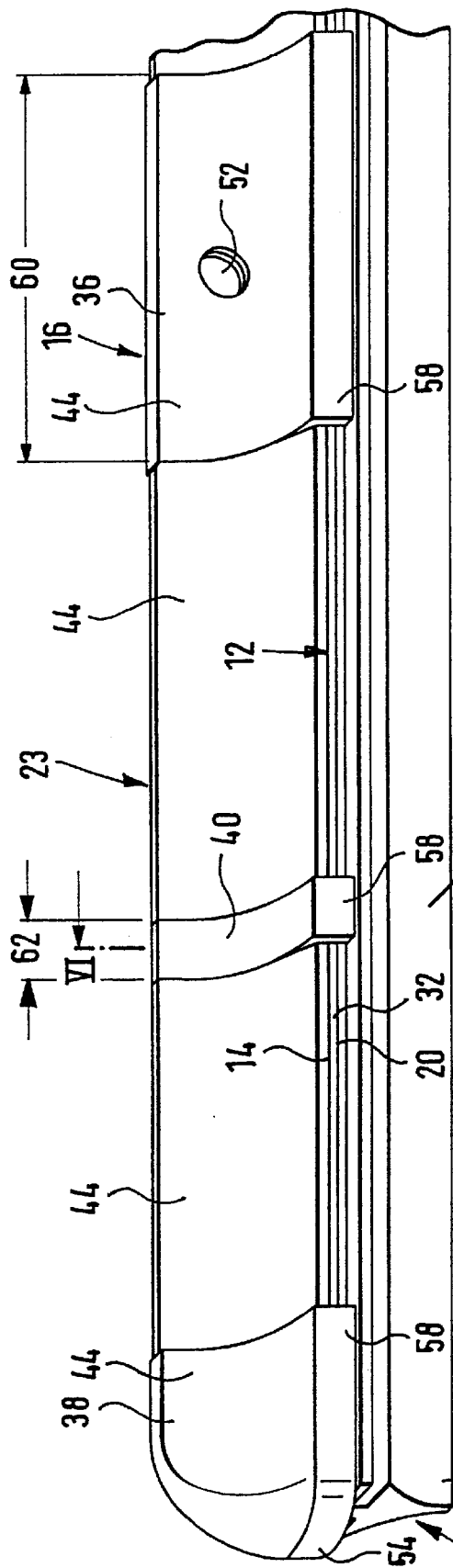


Fig. 5

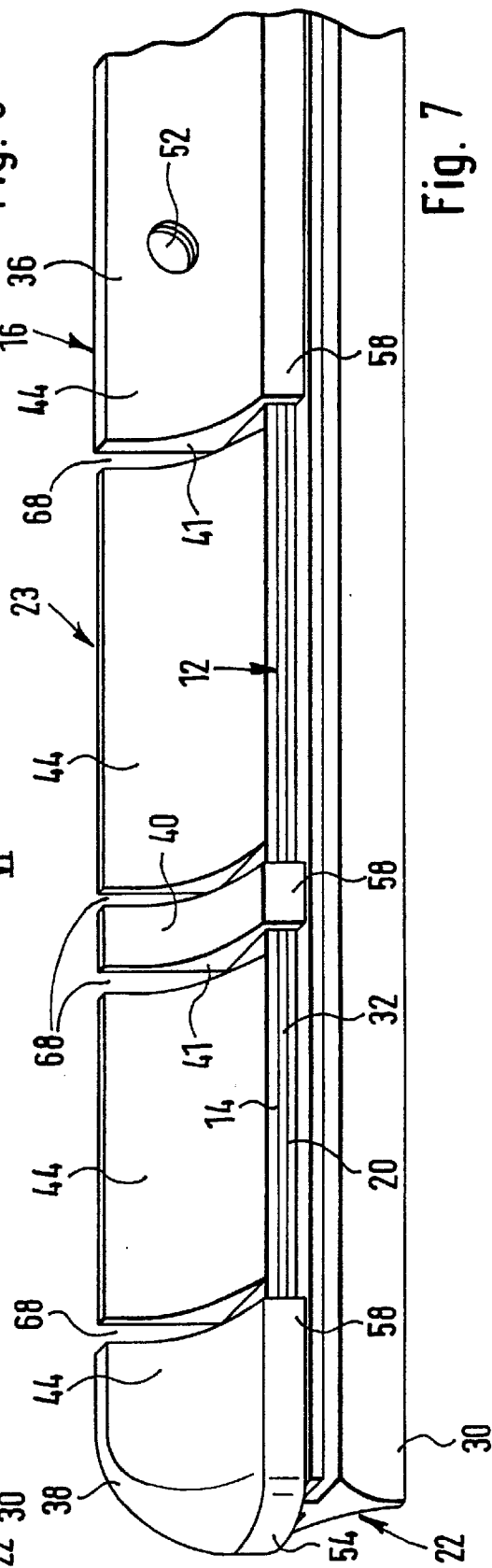


Fig. 7

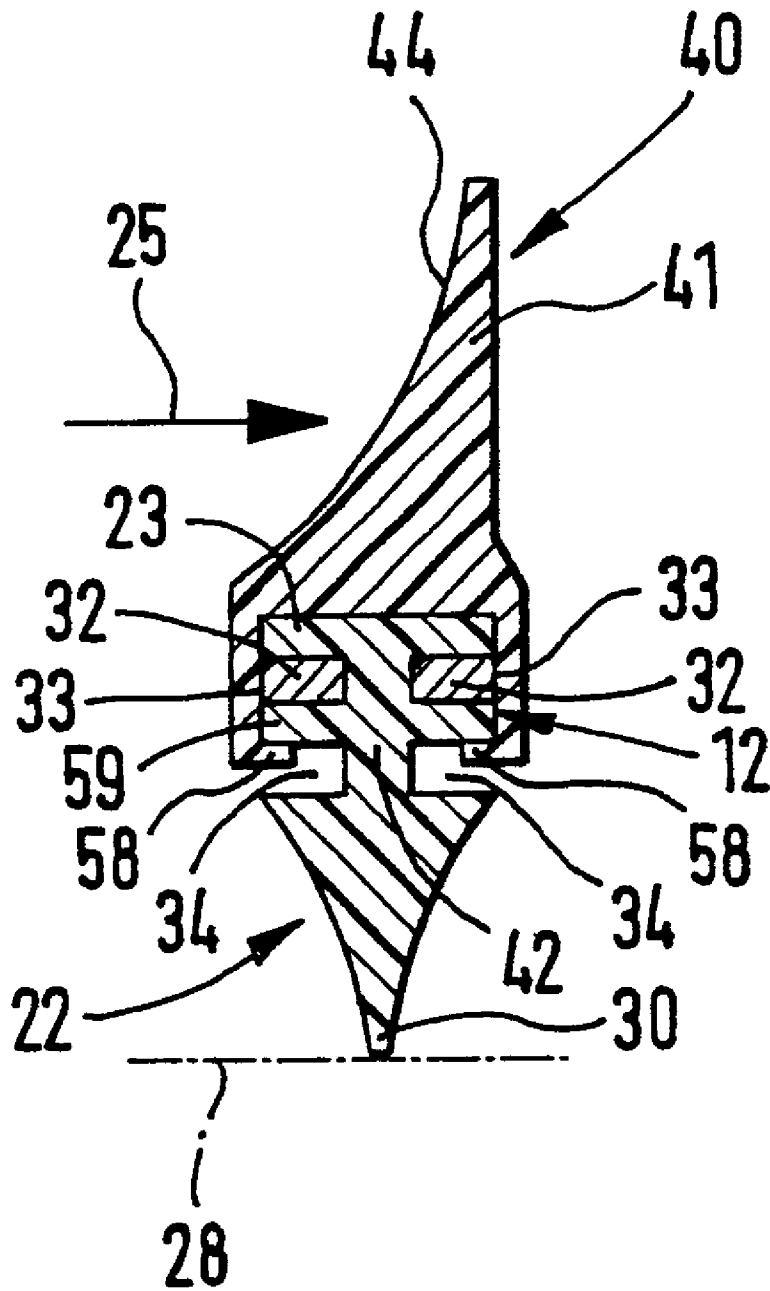


Fig. 6

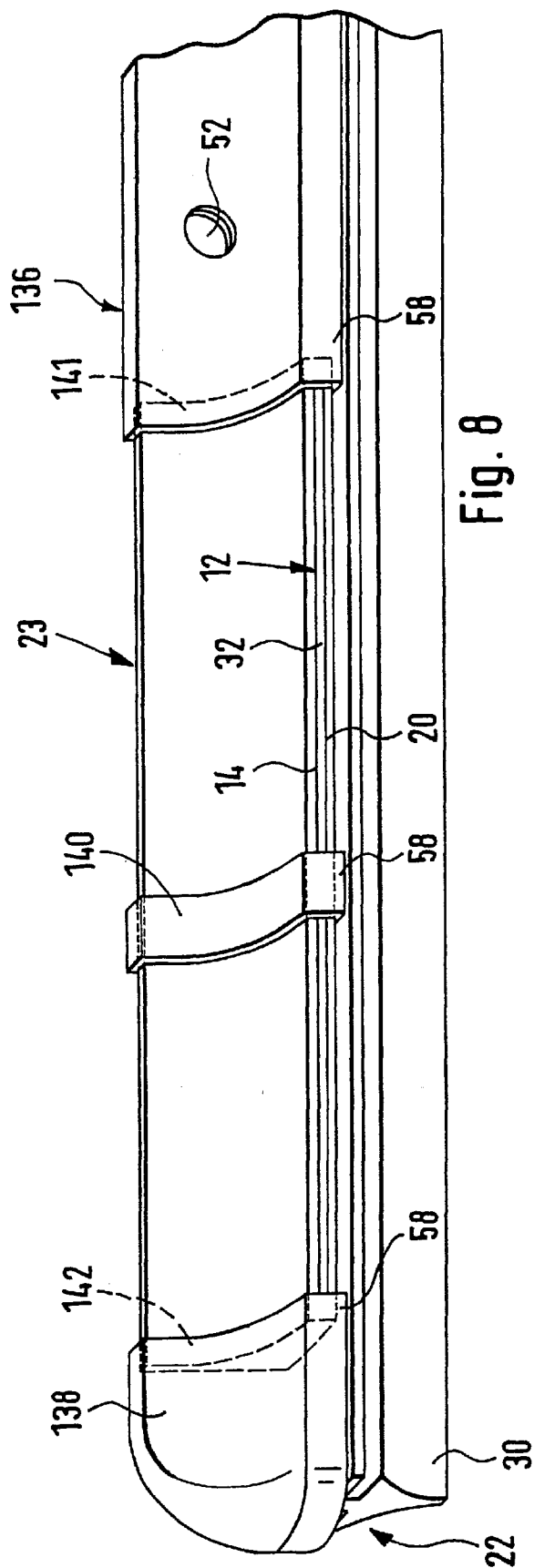


Fig. 8

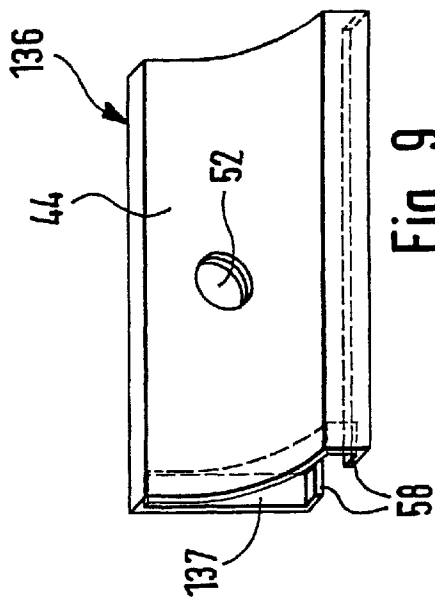


Fig. 9

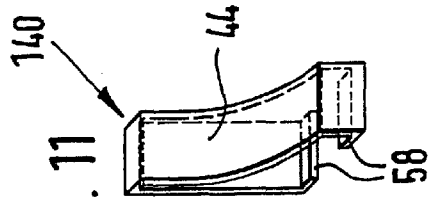


Fig. 11

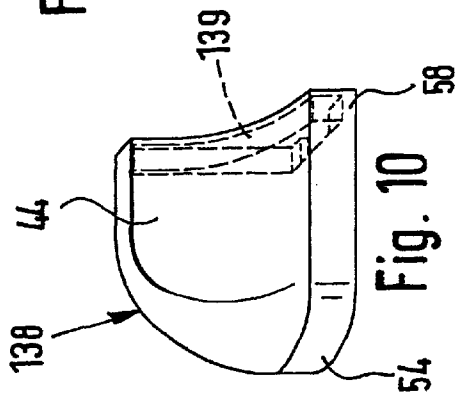


Fig. 10

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