



# United States Patent [19]

[11] Patent Number: **5,732,375**

Cashler

[45] Date of Patent: **Mar. 24, 1998**

- [54] **METHOD OF INHIBITING OR ALLOWING AIRBAG DEPLOYMENT**
- [75] Inventor: **Robert John Cashler, Kokomo, Ind.**
- [73] Assignee: **Delco Electronics Corp., Kokomo, Ind.**
- [21] Appl. No.: **566,029**
- [22] Filed: **Dec. 1, 1995**
- [51] Int. Cl.<sup>6</sup> ..... **B60R 21/32; G06F 17/40**
- [52] U.S. Cl. .... **701/45; 701/46; 180/273; 280/735**
- [58] **Field of Search** ..... 364/424.055, 424.056, 364/424.057, 567, 568; 180/271, 282, 268, 273; 307/15.1; 340/436, 438; 280/735, 730.01, 730.02

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Primary Examiner—Tan Q. Nguyen  
Attorney, Agent, or Firm—Mark A. Navarre

### [57] ABSTRACT

An array of pressure sensors on a vehicle passenger seat senses the presence of an occupant including an infant seat and determines whether the infant seat faces forward or rearward. A microprocessor coupled to the sensors determines whether to allow or inhibit deployment based on the sensor load forces and the pattern of loading. The pattern can identify an infant seat and pattern and loading determine its orientation. Local areas are checked to detect child occupants. Fuzzy logic is used to determine loading and to recognize patterns.

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19 Claims, 4 Drawing Sheets

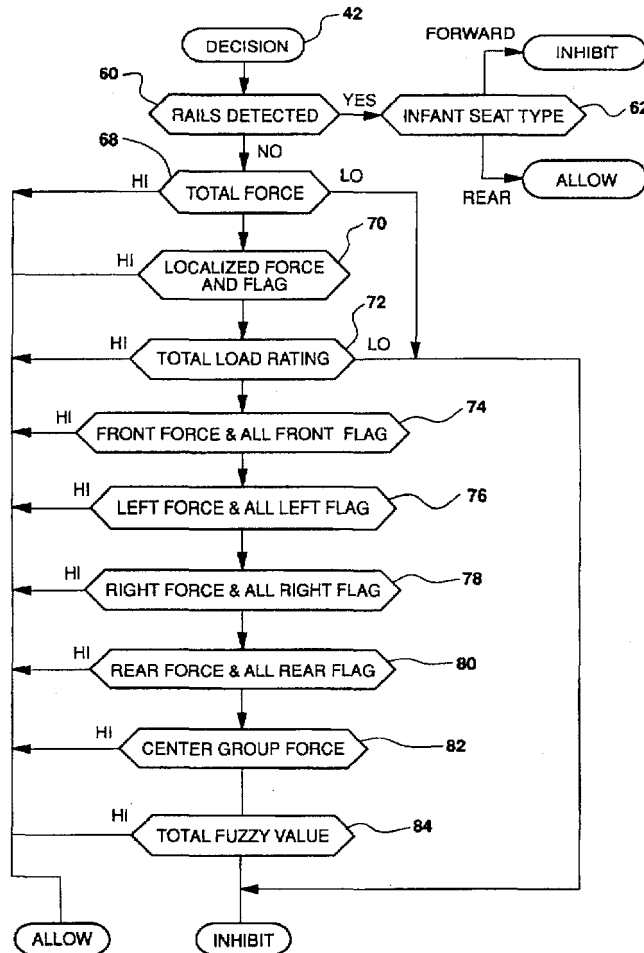


FIG - 1

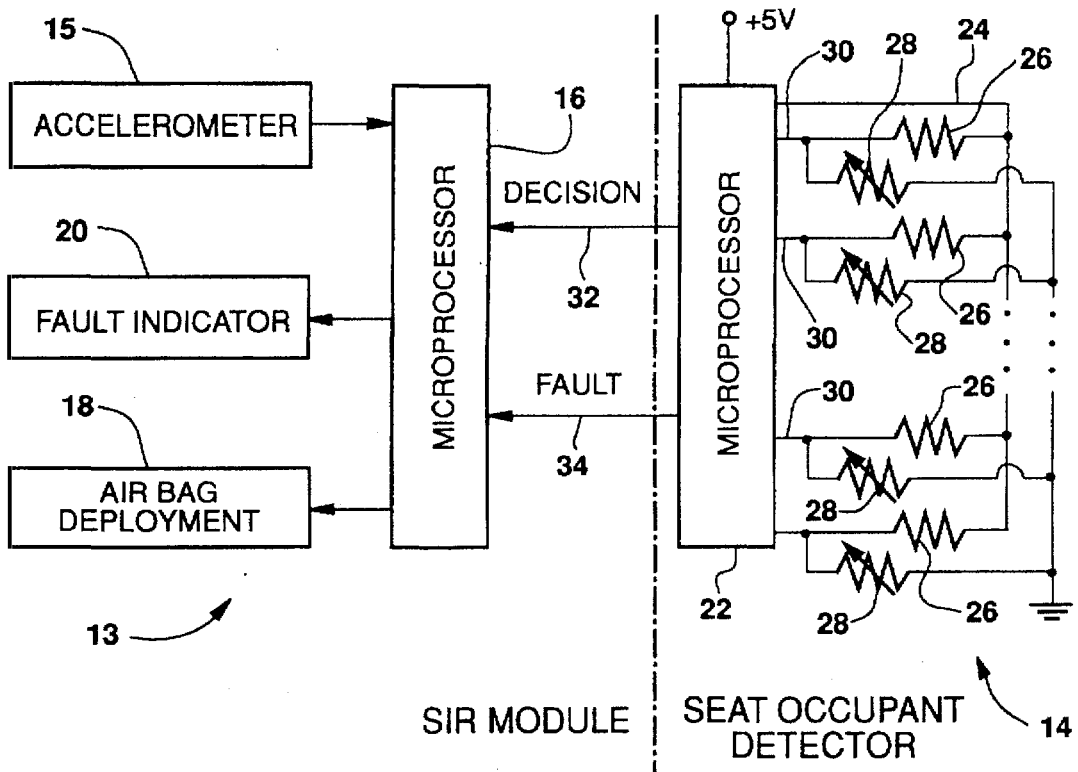


FIG - 2

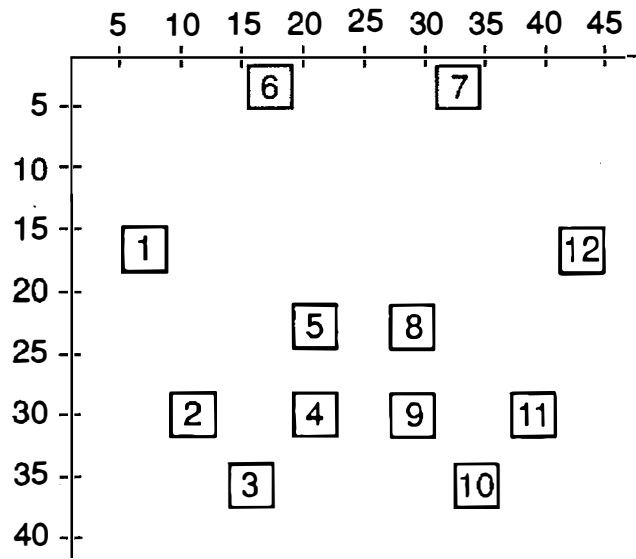


FIG - 3

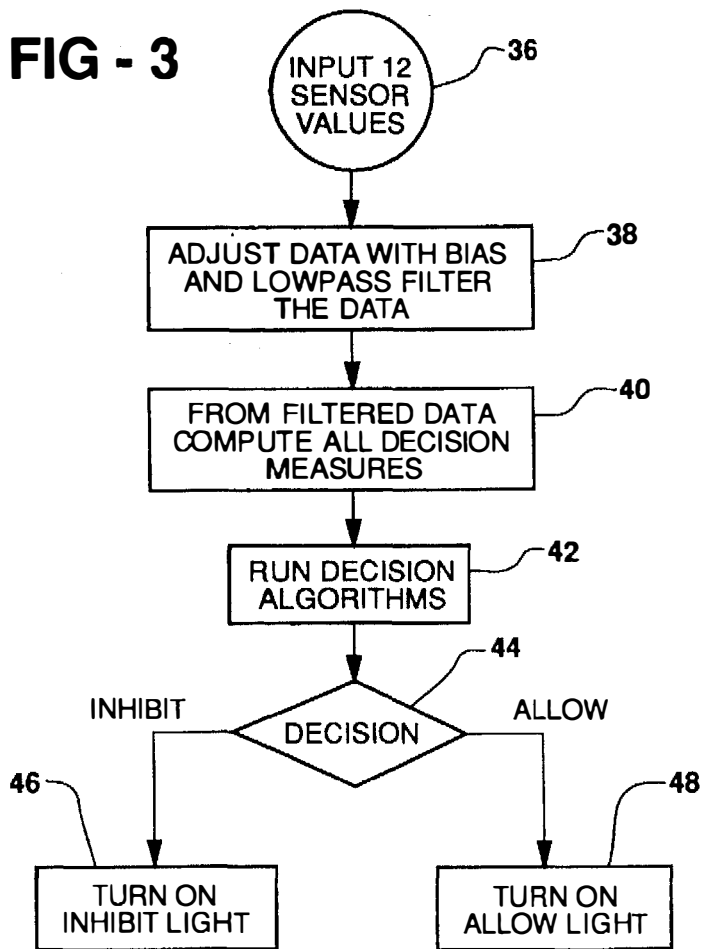
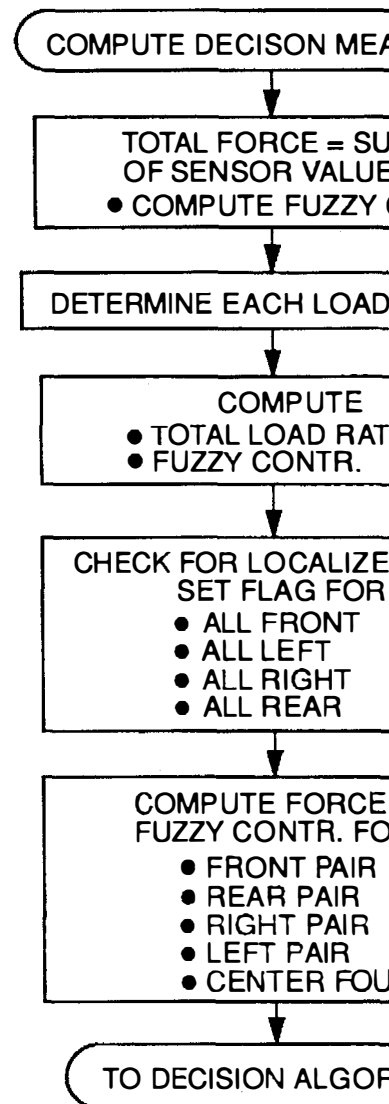


FIG - 4



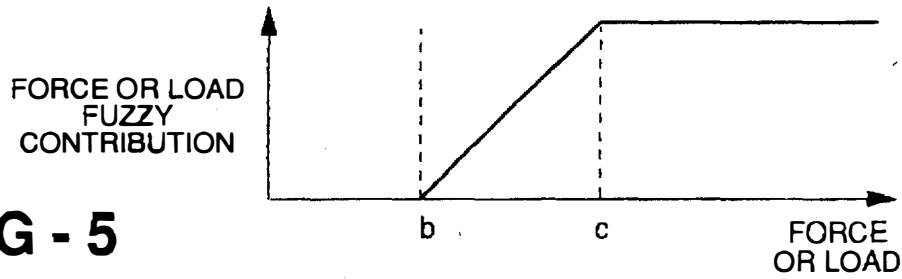


FIG - 5

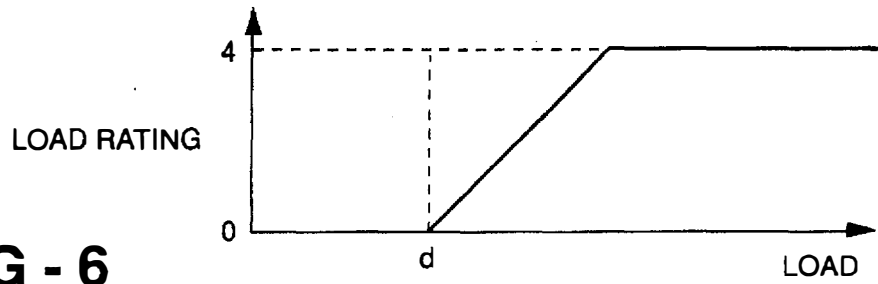


FIG - 6

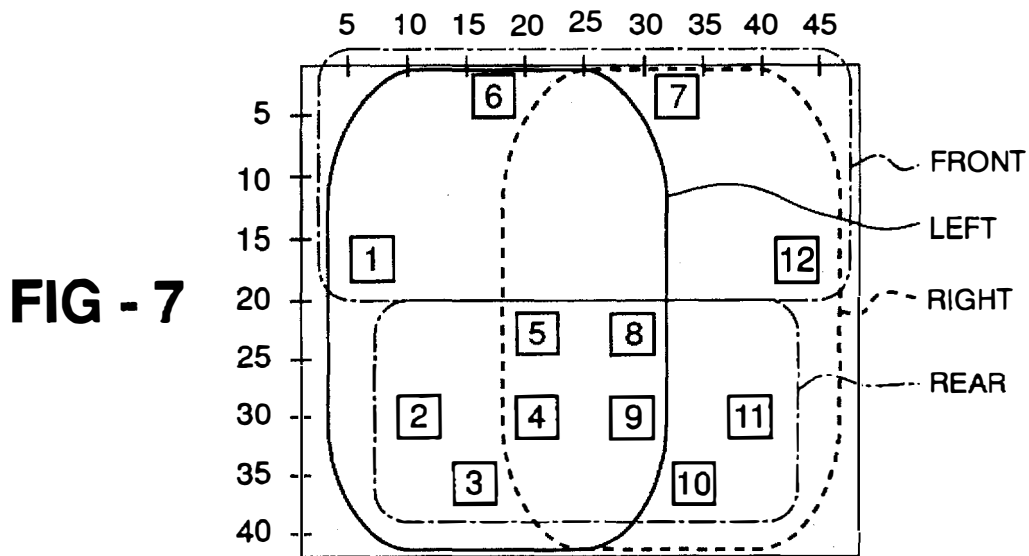


FIG - 7

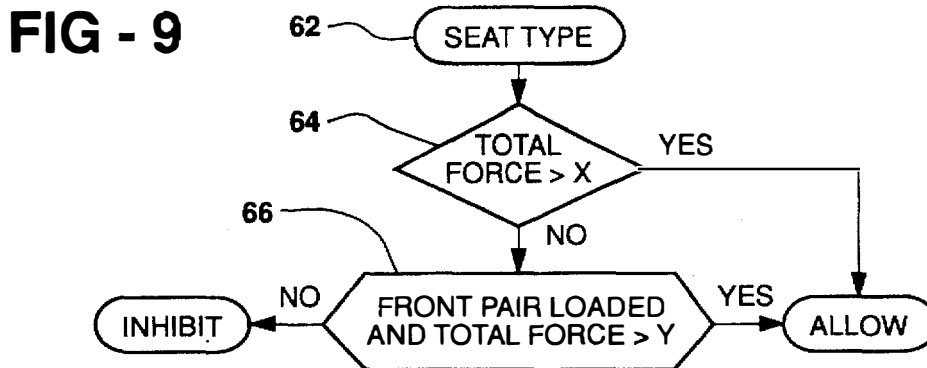


FIG - 9

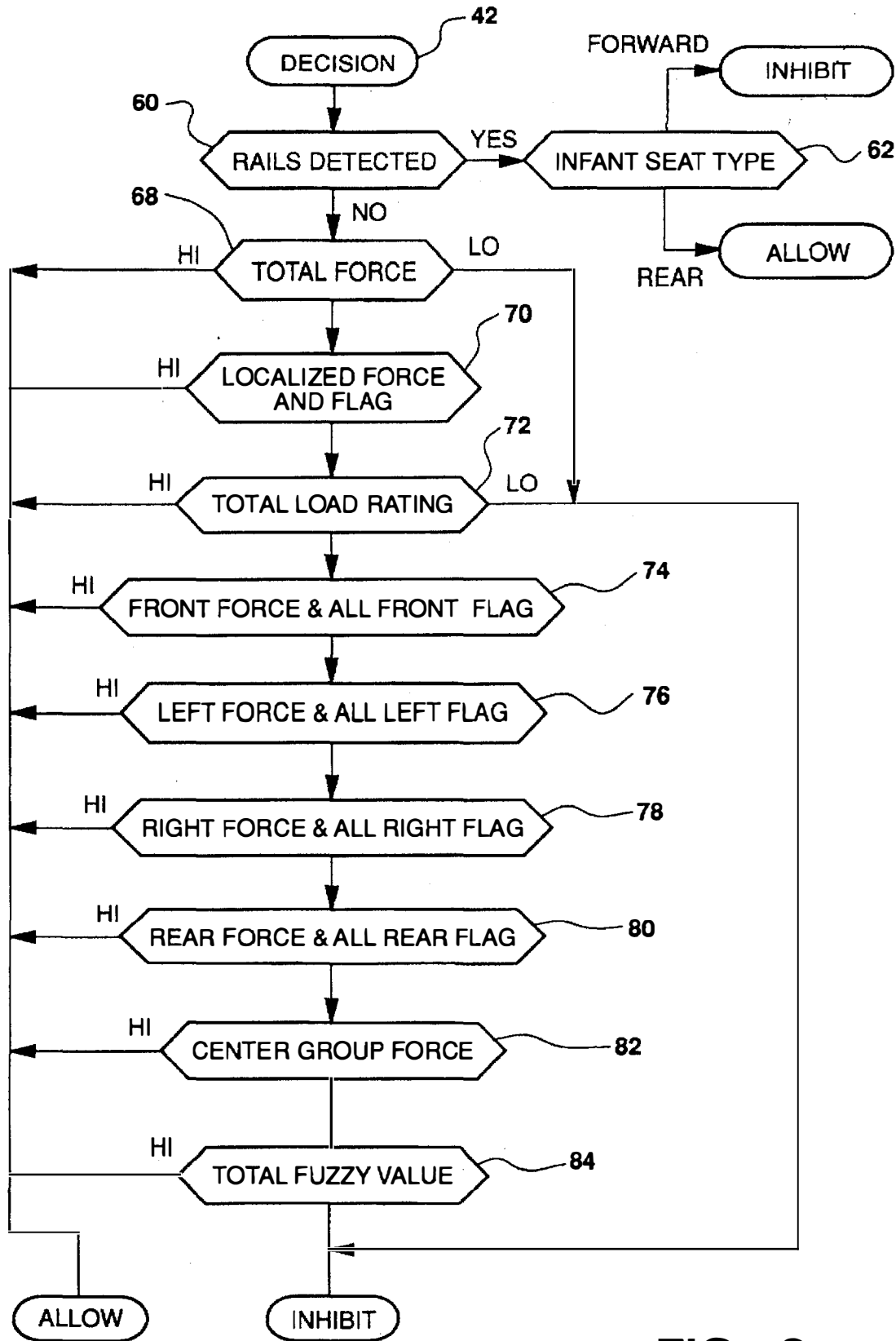


FIG - 8

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