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United States Patent [19]

Förster et al.

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- [54] **TORSION VIBRATION DAMPER**
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of Fed. Rep. of Germany
- [73] Assignee: **Fichtel & Sachs AG, Schweinfurt,**
Fed. Rep. of Germany
- [21] Appl. No.: **599,669**
- [22] Filed: **Oct. 18, 1990**

- [30] **Foreign Application Priority Data**
Oct. 19, 1989 [DE] Fed. Rep. of Germany 3934798
- [51] Int. Cl.⁵ **F16D 47/06**
- [52] U.S. Cl. **192/106.2; 267/167**
- [58] Field of Search 192/106.2; 464/64, 68;
267/166, 167, 286

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[57] **ABSTRACT**

The invention relates to torsion vibration dampers in the power transmission path of a motor vehicle with an internal combustion engine, the coil thrust springs used being particularly in the case of a considerable length in proportion to their diameter, already precurved prior to fitment into their final position. This facilitates fitment and makes it possible to influence the development of friction force as the rotary speed increases.

20 Claims, 9 Drawing Sheets

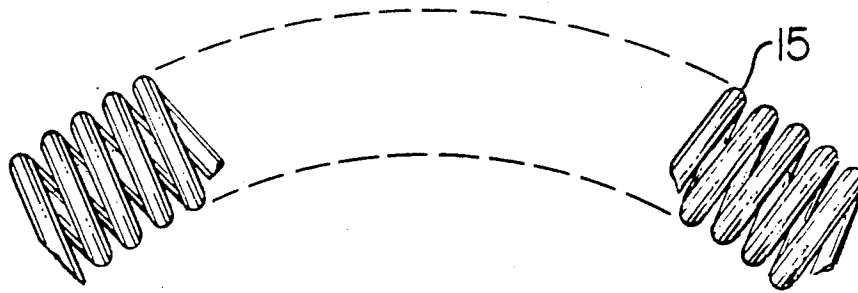


Fig. 1

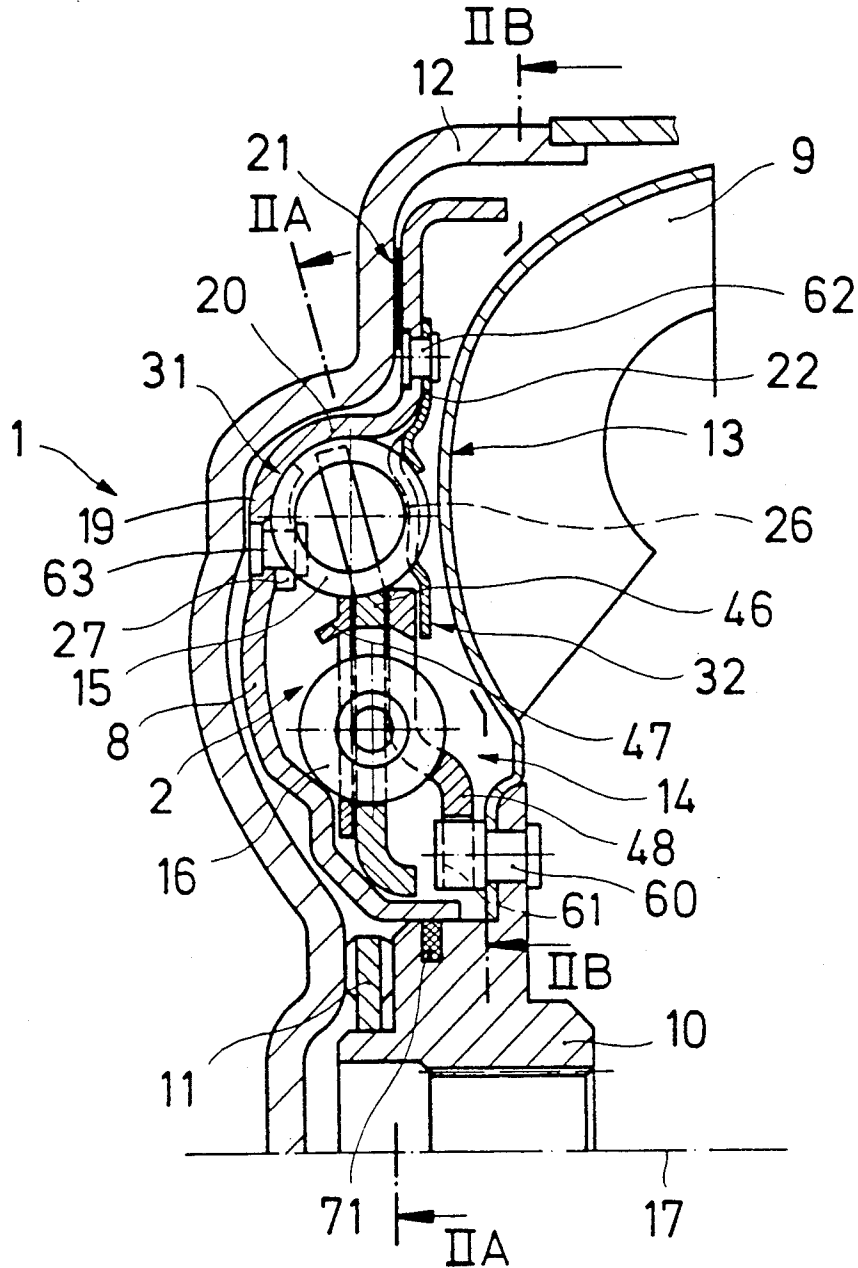


Fig. 2a

Fig. 2b

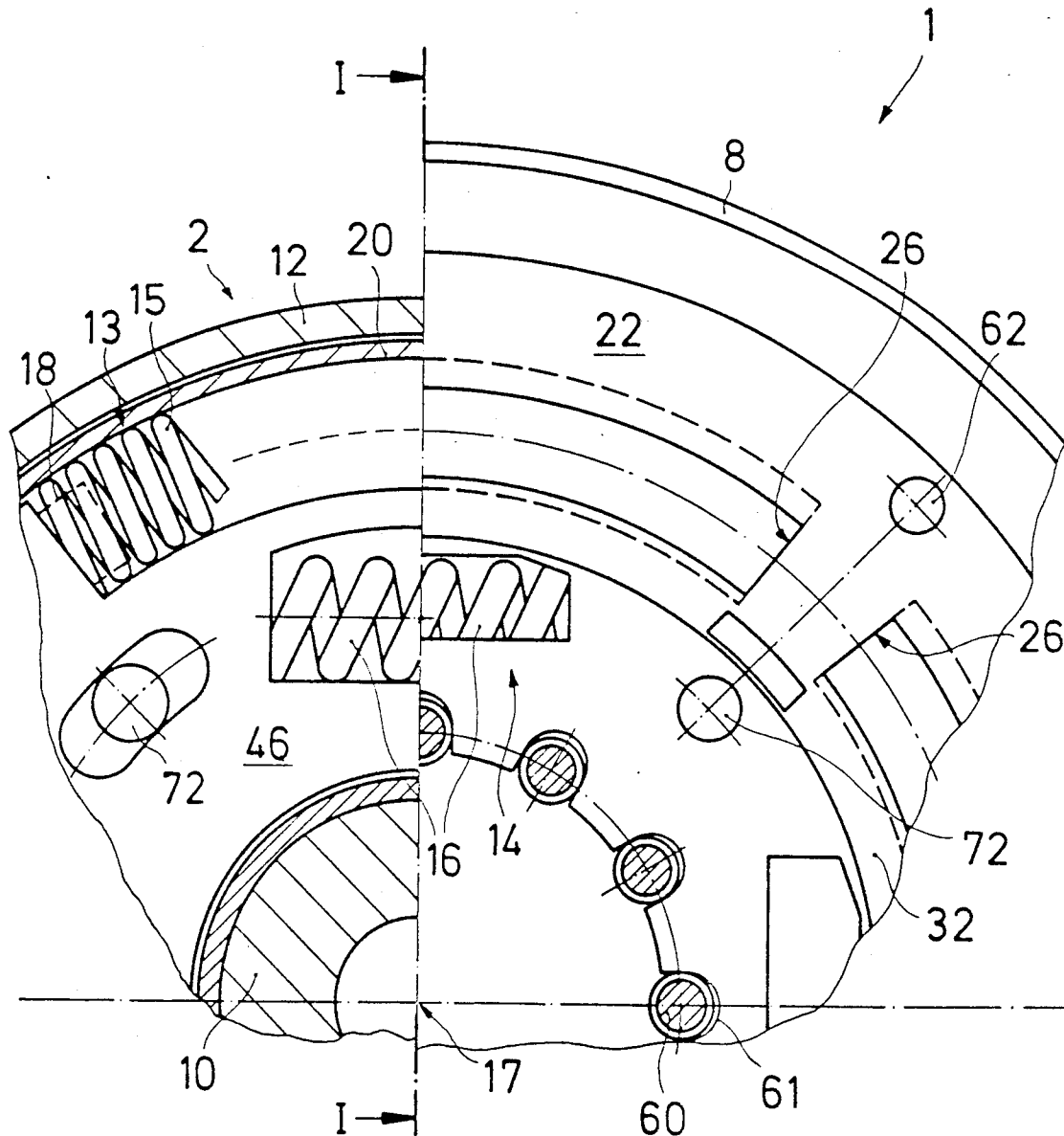


Fig. 3

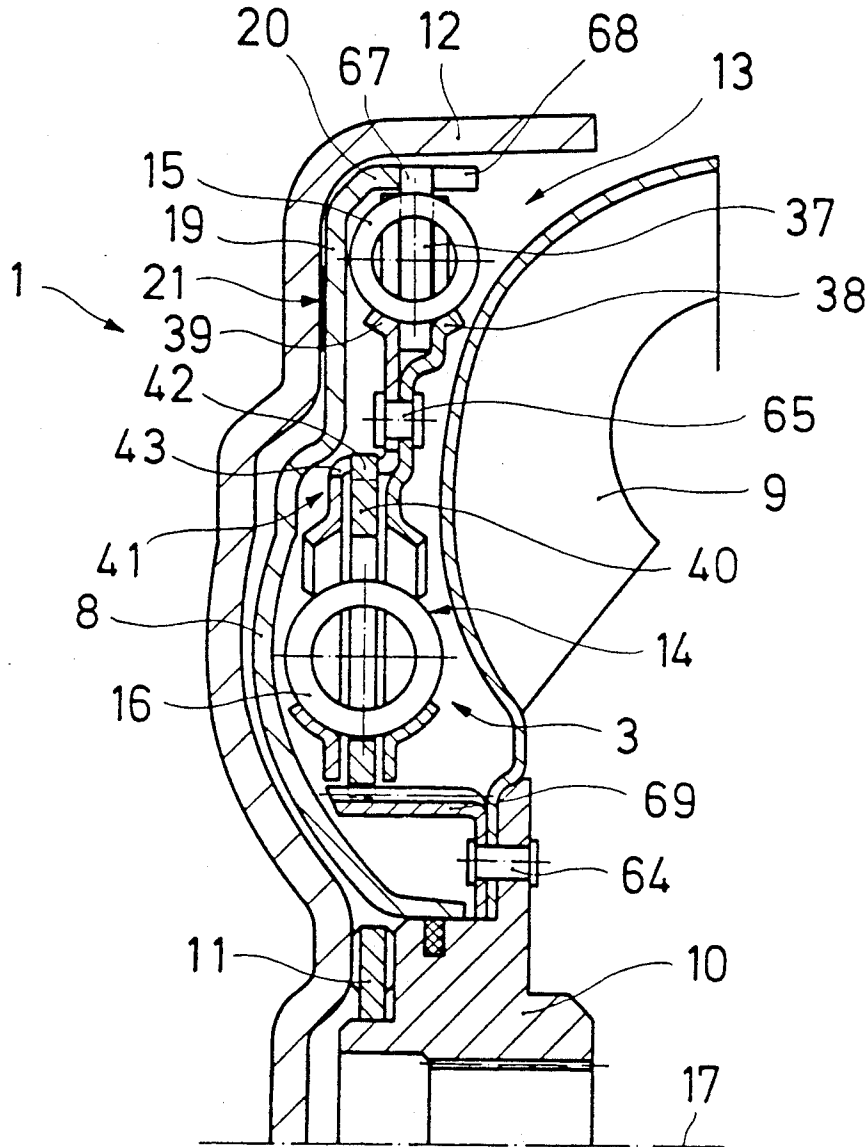
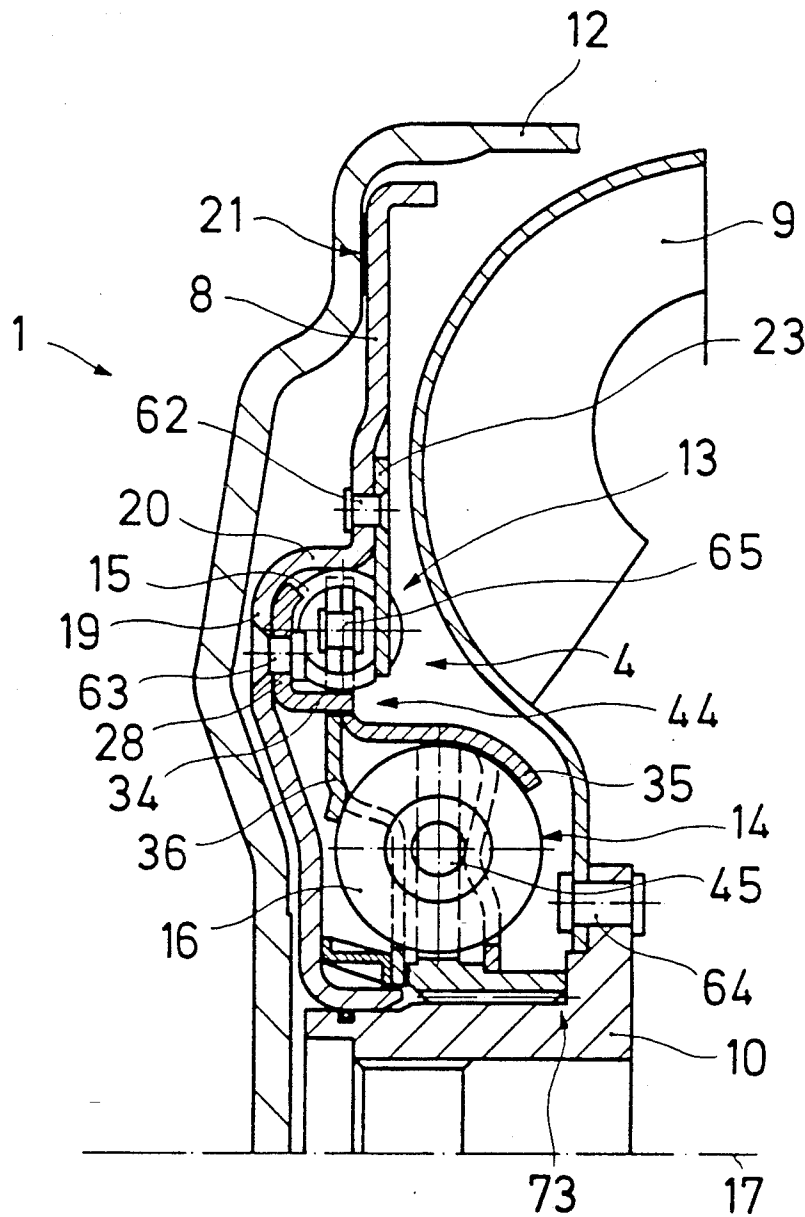


Fig. 4



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