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### United States Patent

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**Öhrle et al.**

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(54) **COMPOSITE DIAPHRAGM FOR  
DIAPHRAGM PUMPS**

(75) Inventors: **Joachim Öhrle**, Herrenberg (DE); **Leon Radom**, Ellhofen (DE)

(73) Assignee: **ULMAN Dichtungstechnik GmbH**, Sindelfingen (DE)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 22 days.

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*Primary Examiner*—F. Daniel Lopez

*Assistant Examiner*—Michael Leslie

(74) *Attorney, Agent, or Firm*—Collard & Roe, P.C.

(57) **ABSTRACT**

A composite diaphragm for diaphragm pumps comprises an elastomer body and a polytetrafluoroethylene (PTFE) coating on its back side. The elastomer body has a shape of a circular dish that has an edge region with a clamping area, a bottom and a flexible section of the diaphragm that connects the edge of the dish with the bottom. The flexible section of the diaphragm comprises a multitude of naps forming elevations on the coated side of the elastomer body. The PTFE coating is a plane ring surface with the area of the flexible section of the diaphragm.

**14 Claims, 9 Drawing Sheets**

