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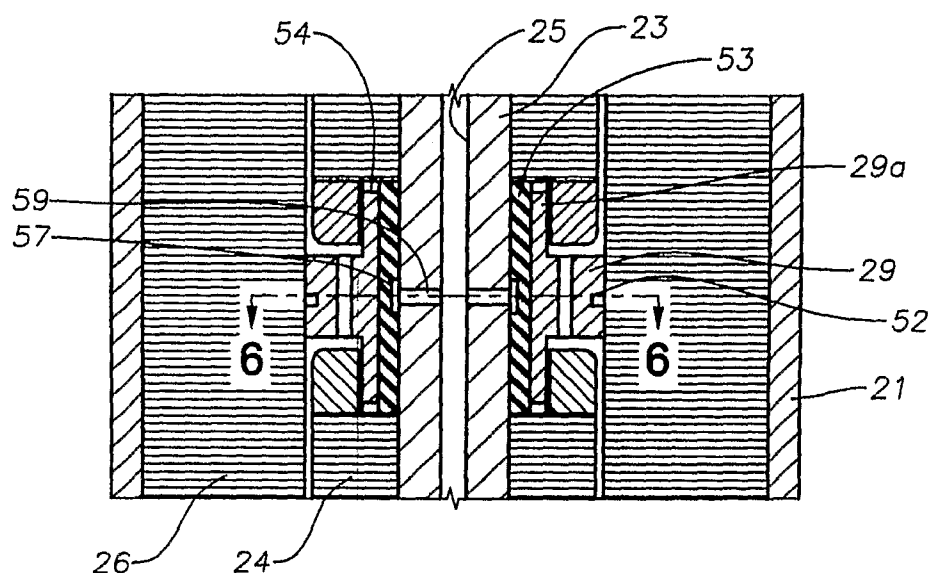
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(54) Title: PRESSURIZED BEARING SYSTEM FOR SUBMERSIBLE MOTOR



(57) Abstract: Pressurized lubricant is used for stabilizing shaft bearings in an electrical submersible pump motor. A lubricant pump is located within the motor housing. The lubricant pump has a set of impellers attached to a lower end of the shaft and rotating with the shaft, the impellers being located in the flow path of the lubricant. A diffuser is located upstream of and adjacent each impeller. The impellers increase the radial velocity of the lubricant, and this velocity is converted into a pressure head at the impeller outlet. The lubricant flows through the first diffuser, through the first impeller, through the second diffuser, and then flows through the second impeller and out into a reservoir. The shaft has an axial flow passage with an outlet at each bearing. The outlet has at least three ports arranged symmetrically around the shaft for discharging lubricant into a clearance between the shaft and bearing to create a fluid film.

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