

[54] GEOTHERMAL ENERGY CONVERSION SYSTEM

[75] Inventor: David Goldstein, Adelphi, Md.

[73] Assignee: The United States of America as represented by the Secretary of the Navy, Washington, D.C.

[*] Notice: The portion of the term of this patent subsequent to Feb. 3, 2007 has been disclaimed.

[21] Appl. No.: 539,942

[22] Filed: Jun. 18, 1990

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 444,350, Dec. 1, 1989, Pat. No. 4,938,026.

[51] Int. Cl.⁵ F03G 7/06

[52] U.S. Cl. 60/527

[58] Field of Search 60/527, 528, 529

[56] References Cited

U.S. PATENT DOCUMENTS

4,938,026 7/1990 Goldstein 60/527

Primary Examiner—Allen M. Ostrager
Attorney, Agent, or Firm—Kenneth E. Walden; Jacob Shuster

[57] ABSTRACT

A generator having a tubular gear made of shape memory alloy in sheet form floatingly supported for rotation about an axis fixedly spaced from the rotational axis of a roller gear. The tubular gear is sequentially deformed by exposure to a geothermal heat source and meshing engagement with the roller gear. Such sequential deformation of the tubular gear is controlled by temperature differential to induce and sustain rotation of the gears in response to which the heat energy is converted into electrical energy.

16 Claims, 3 Drawing Sheets

