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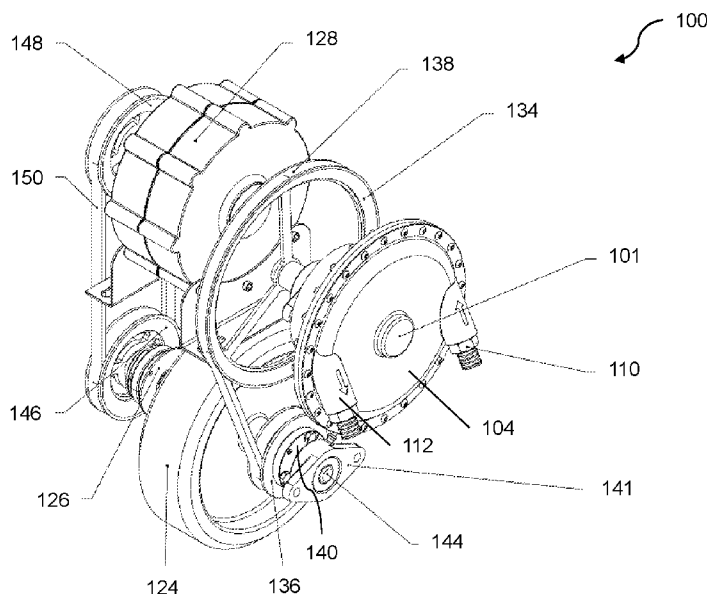
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(54) Title: IN-LINE HYDRO GENERATION SYSTEM

FIG. 1



(57) Abstract: A hydroelectric energy harvesting system comprises a hydropower turbine including a housing having a fluid intake fitting and a fluid output fitting disposed thereon, a plurality of blades circumferentially arranged about a disc and adapted to rotate within the housing, and a gear train rotatably engaged with the disc, and adapted to multiply the rotation of the hydropower turbine. A mechanical flywheel is rotatably coupled to the gear train output and adapted to store kinetic energy. An electromagnetic clutch is coupled to the mechanical flywheel for selectively transferring rotational motion from the flywheel to a motor generator that is coupled thereto. The system is configured for in-line installation into a pressurized fluid system, such that dispensing fluid from the system causes fluid to flow under pressure through the turbine and rotate the blades. The system multiplies and transfers this rotation to the motor generator to generate electricity for harvesting.



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B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y --- A	US 2023/0072544 A1 (Tap Energy LLC), 09 March 2023 (09.03.2023), entire document, especially Figs 1-6	1, 13-14, 17, 21-23, 25-38 --- 2-12, 15-16, 18-20
Y --- A	US 2022/0010781 A1 (Washington, JR), 13 January 2022 (13.01.2022), entire document, especially Figs 1-4	1, 13-14, 17, 21-38 --- 2-12, 15-16, 18-20
Y	WO 2017/195987 A1 (KEUNNAMU CO LTD), 16 November 2017 (16.11.2017), entire document, especially Figs 1-5	1, 21-22, 24
Y	US 2011/0298293 A1 (Veltri), 08 December 2011 (08.12.2011), entire document, especially Figs 1-13	30, 35
A	US 6,267,551 B1 (Dentinger), 31 July 2001 (31.07.2007), entire document	1-38
A	US 2010/0301609 A1 (Kim et al), 02 December 2010 (02.12.2010), entire document, especially Figs 1-13	1-38

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