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(54) Title: RECIPROCATING ACTION DRIVE

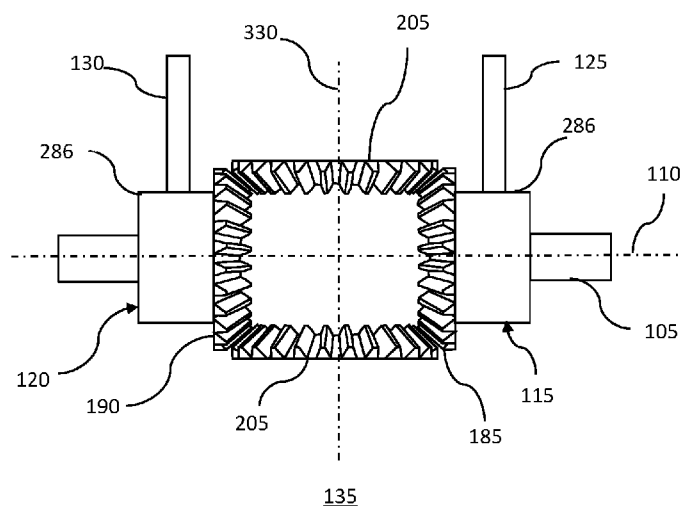


FIG. 3

(57) Abstract: A reciprocating action drive is disclosed in which a pair of magnetically sprung overrunning clutches, each in overrunning connection with a driven shaft, and attached to a reciprocating lever, are joined via a direction reversing mechanism. In one embodiment, the direction reversing mechanism uses bevel gears, two of which are connected to the outer shells of the overrunning clutches. One or more intermediate bevel gears, mounted orthogonally to the axis of the driven shaft, mesh with the others to form the reversing mechanism. In a further embodiment, the reciprocating action drive is used to power a bicycle using a standard chain ring and chain arrangement and a cadence equalizing 3X epicyclic gear train. In a still further embodiment, sprung limit stops limit the range of motion of the reciprocating levers to 60-degrees, and make stopping at the end of the tread less abrupt.

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Esp@cenet, PatSearch (RUPTO internal), AIPN, CIPO, DEPATISnet, EAPATIS, PatSearch (RUPTO internal), RUPTO, SIPO, USPTO		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
D, A	US 8702115 B2 (RADU KRAMER et al.) 22.04.2014, col. 3, line 54 - col. 6, line 54, fig. 1-4	1-8
A	WO 2009/137376 A2 (AMERICAN PRECISION INDUSTRIES, INC. et al.) 12.11.2009, claims, fig. 1-3	1-8
A	SU 1271361 A3 (MEDICOR MYUVEK) 15.11.1986, col. 1, line 5 - col. 2, line 48, fig. 1-2	1-8
☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.		
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