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- **Lin, Heng-I**  
**Tu-Cheng Shih, Taipei**  
**Hsien (TW)**
- **Hsu, Tsang-lin**  
**Tu-Cheng Shih, Taipei**  
**Hsien (TW)**
- **Lin, Jin-de**  
**Tu-Cheng Shih, Taipei**  
**Hsien (TW)**

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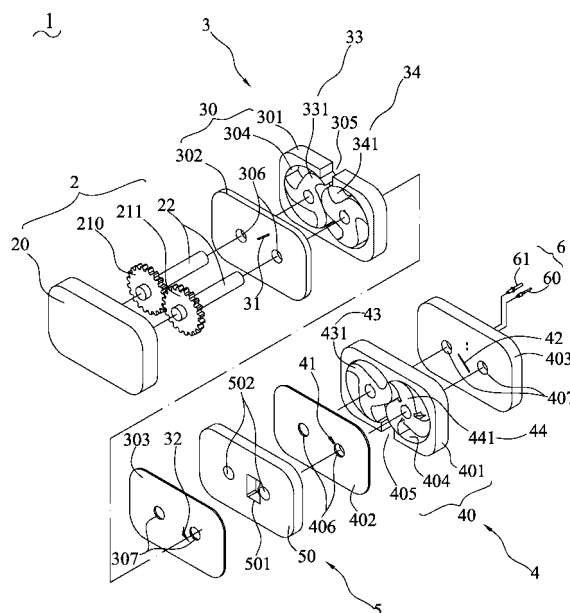
(71) Applicant: **Liung Feng Industrial Co Ltd**  
**Taipei Hsien (TW)**

(74) Representative: **Adamson Jones**  
**BioCity Nottingham**  
**Pennyfoot Street**  
**Nottingham NG1 1GF (GB)**

(72) Inventors:  
• **Chung, Tien-tung**  
**Tu-Cheng Shih, Taipei**  
**Hsien (TW)**

(54) **Rotary positive displacement control system and apparatus**

(57) A rotary positive displacement control system and apparatus includes a transmission assembly, at least a compression assembly and buffer assembly, and an expansion assembly, the buffer assembly disposed between the compression and expansion assembly. The compression assembly includes multiple compression rotors with lobes intermeshing with each other, and the expansion assembly including expansion rotors with lobes intermeshing with each other. An intake and exhaust port respectively located at the compression assembly and expansion assembly. The buffer assembly has a buffer chamber being able to efficiently lead compressed gases to the expansion assembly; meanwhile, residual gases can be discharged from a first and second exhaust slots both disposed on the expansion assembly. The buffer chamber can adjust air compression ratio during process of compression to completely mix vortexes and fuel generated from a high-pressure air stream; after explosions and expansion, power output is transmitted through transmission shafts directly.



**FIG.1**



## EUROPEAN SEARCH REPORT

Application Number  
EP 07 11 3270

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
			F01C F02B
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 23 June 2009	Examiner Tietje, Kai
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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