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(54) **V-type internal combustion engine for motorcycle**

(57) Object: To provide a V-type internal combustion engine, which is capable of mounting lifters for chain tensioners on a rear wall of a rear bank without any interference with a mission case portion, while eliminating the necessity of setting a rearward tilt angle at a particularly small value.

Solving Means: A primary transmission unit 54 and a rear timing transmission unit 46₂ are connected to both ends of a crank shaft 15; and a side wall 95a, on the rear timing transmission unit 46₂ side, of a mission case portion 95 is offset on the primary transmission unit 54 side from the rear timing transmission unit 46₂. With this configuration, it is possible to easily mount the lifters 49₂ for chain tensioners on a rear wall of the rear bank 4₂ without interference with the mission case portion 95.

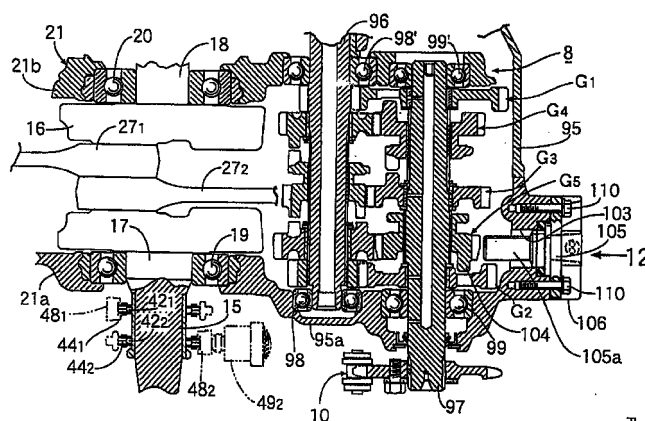


FIG. 9

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EUROPEAN SEARCH REPORT

Application Number
EP 99 11 7047

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 4 589 382 A (TSUBOI MASAHARU) 20 May 1986 (1986-05-20) * column 3, line 26 - column 4, line 58; figures 1-3 *	1,2	F02B75/22 F02B61/06
X	--- PATENT ABSTRACTS OF JAPAN vol. 007, no. 227 (M-248), 7 October 1983 (1983-10-07) & JP 58 119929 A (HONDA GIKEN KOGYO KK), 16 July 1983 (1983-07-16) * abstract * -----	1,2	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			F02B
The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
THE HAGUE		24 October 2000	von Arx, H
CATEGORY OF CITED DOCUMENTS 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 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 & : member of the same patent family, corresponding document			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

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The members are as contained in the European Patent Office EDP file on
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24-10-2000

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4589382 A	20-05-1986	JP 1388760 C	14-07-1987
		JP 58119910 A	16-07-1983
		JP 61057447 B	06-12-1986
		JP 58119929 A	16-07-1983

JP 58119929 A	16-07-1983	US 4589382 A	20-05-1986
