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[54] VARIABLE VALVE TIMING MECHANISM FOR INTERNAL COMBUSTION ENGINE

1-92504 4/1989 Japan 123/90.17

[75] Inventors: **Kazuhisa Mikame**, Nagoya; **Tatsuo Iida**, Toyota, both of Japan

Primary Examiner—Weilun Lo
Attorney, Agent, or Firm—Kenyon & Kenyon

[73] Assignee: **Toyota Jidosha Kabushiki Kaisha**, Toyota, Japan

[57] ABSTRACT

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A variable valve timing mechanism of an internal combustion engine varies the rotational phase of a driven shaft with respect to a drive shaft to vary the timing of the valve. The mechanism includes a first rotary member for a rotation in synchronism with the drive shaft and a second rotary member for a rotation in synchronism with the driven shaft. The second rotary member has a vane. The movement of the vane rotates the second rotary member with respect to the first rotary member to change the rotational phase of the driven shaft with respect to the drive shaft. Hydraulic pressure is supplied to one of the first hydraulic chamber and the second hydraulic chamber to move the vane. A lock member locks the second rotary member to the first rotary member to fix the rotational phase of the driven shaft with respect to the drive shaft. The lock member is held in a locked position when the engine is not running. The lock member is moved to an unlocked position by the hydraulic pressure when the engine reaches a predetermined running condition. The hydraulic pressure maintains the lock member in the unlocked position.

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31 Claims, 14 Drawing Sheets

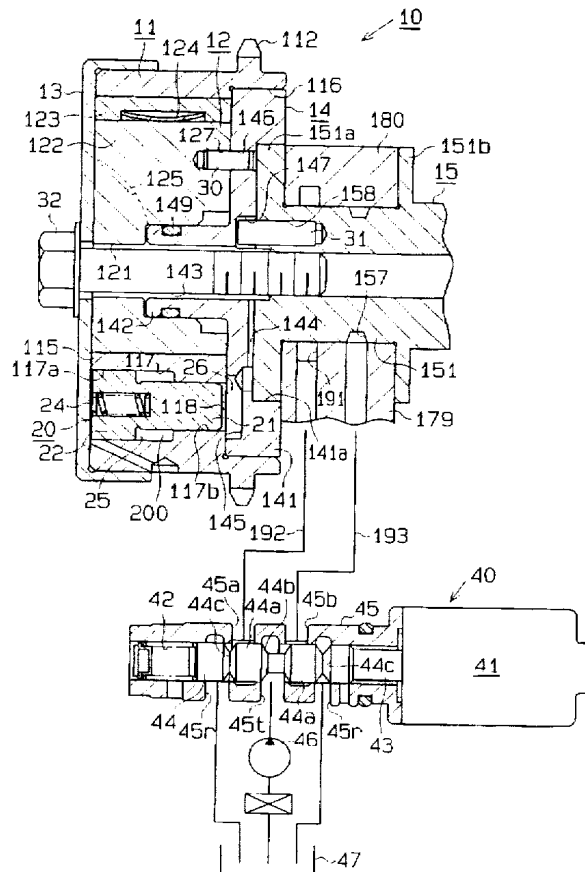


Fig. 2

