The main bearing is set eccentrically to the body of the flywheel, the "heavier" part of the flywheel compensating for the combined weight of the piston and connecting rod to give perfect balance. In the drawing, the extra "throw" of the lower half of the "crank" will be of an equal weight to the top half of the crank and the connecting rod and piston.
Description

Perfect internal combustion engine.

I am of the opinion, as a retired precision engineer, that the 'eccentric' or 'eccentric flywheel' (see drawing) is much neglected. If used in the proper way, my invention will give a finely balanced motor. The amount of eccentricity involved with the flywheel will 'allow for' the weight of the piston and connecting rod combined. This is self explanatory in the lower half of the drawing; where the extra 'throw' of the lower half of the 'crank' will be of an equal weight as the top half of the crank and the connecting rod and piston.
Claims

My invention will apply to
   a) Motor-cycle engines (sample flywheel assembly as shown)
   b) Car engines
   c) Diesel engines
THE DRAWING.

PERFECT INTERNAL COMBUSTION ENGINE.

(ONLY SHOWING THE FLYWHEEL ARRANGEMENT)

A.

PISTON.
'SMALL END'.
CONNECTING ROD.
'BIG END'.
MAIN BEARING.
(ECCENTRIC).
TRUE CENTRE OF FLYWHEEL.

OR.

PISTON.
'SMALL END'.
CONNECTING ROD.
'BIG END'.
MAIN BEARING
Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

<table>
<thead>
<tr>
<th>Category</th>
<th>Relevant to claims</th>
<th>Identity of document and passage or figure of particular relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>-</td>
<td>JP 63235743 A (Nissan) - see eg EPODOC abstract; note hole 10 to imbalance flywheel</td>
</tr>
<tr>
<td>X</td>
<td>-</td>
<td>WO 03/052289 A (Chentimirov) note that the centre of mass of the flywheel is offset from its axis of rotation</td>
</tr>
<tr>
<td>X</td>
<td>-</td>
<td>US5606944 A (Ryobi) - see eg column 7, lines 1-15</td>
</tr>
<tr>
<td>X</td>
<td>-</td>
<td>GB 2091813 A (Hatz Motoren) - see page 4, lines 9-26</td>
</tr>
<tr>
<td>A</td>
<td>-</td>
<td>GB 2114709 A (Nissan)</td>
</tr>
<tr>
<td>A</td>
<td>-</td>
<td>JP 2005083524 A (Nissan)</td>
</tr>
</tbody>
</table>

Categories:
- **X** Document indicating lack of novelty or inventive step
- **Y** Document indicating lack of inventive step if combined with one or more other documents of same category.
- **&** Member of the same patent family
- **A** Document indicating technological background and/or state of the art.
- **P** Document published on or after the declared priority date but before the filing date of this invention.
- **E** Patent document published on or after, but with priority date earlier than, the filing date of this application.

Field of Search:
Search of GB, EP, WO & US patent documents classified in the following areas of the UKC:
- **F1M** Worldwide search of patent documents classified in the following areas of the IPC
- **F16F** The following online and other databases have been used in the preparation of this search report
- **EPODOC, OPTICS, TXTE, WPI**

International Classification:
<table>
<thead>
<tr>
<th>Subclass</th>
<th>Subgroup</th>
<th>Valid From</th>
</tr>
</thead>
<tbody>
<tr>
<td>F16F</td>
<td>0015/24</td>
<td>01/01/2006</td>
</tr>
</tbody>
</table>