

In the past internal combustion engines have employed a single casting that forms a cylinder block having one or more cylindrical passages extending therethrough. Pistons are then disposed in these cylinders and one or more cylinder heads may be secured to the cylinder block for closing the open ends of the cylinders and also cooperate with the upper ends of the pistons to form combustion chambers. The opposite ends of the cylinders may open into a crankcase that is formed by a recess extending longitudinally along the bottom of the block. A sheet metal pan is then normally secured to the block to form a crankcase that encloses a rotating crankshaft driven by the pistons. A plurality of bulkheads on the block may then extend transversely across the recess to divide it into one or more compartments. Bearing caps are secured to the bottoms of these bulkheads to cooperate with recesses in the bulkheads and form the main bearings for supporting the crankshaft. Although this form of construction has been satisfactory in the past, there are many objections thereto when it is employed in a high compression lightweight engine. For instance, this requires excessively heavy castings, the engine is not a basically rigid mounting for the crankshaft, it is difficult to assemble and it is not well adapted for lightweight alloys.