

Gas Engines

RATHBUN-JONES ENGINEERING
COMPANY

TOLEDO, OHIO

RATHBUN GAS ENGINES

CONSTRUCTION DETAILS

Cylinder and Head Construction:—Valves are placed directly in the head, so that the surface of combustion chamber exposed to the burning gases is reduced to a minimum. The heads are readily removed, and both cylinders and heads are provided with large openings through which all parts of both castings can readily be reached for inspection and cleaning.

Piston Construction:—The piston is built with an air pocket in the head which prevents the accumulation of oil on the hot center of the casting.

Five rings are provided, the top one being an ordinary snap ring, the others of special construction such that they always maintain contact against the lower face of the slot instead of working from side to side with the motion of the piston. These prevent the oil from passing into the combustion chamber.

A very valuable feature is the connection through the cylinder wall to the space between the two lower rings, which carries off the burned gases, dirty oil, and products of wear from the cylinder instead of allowing them to work down into the engine housing.

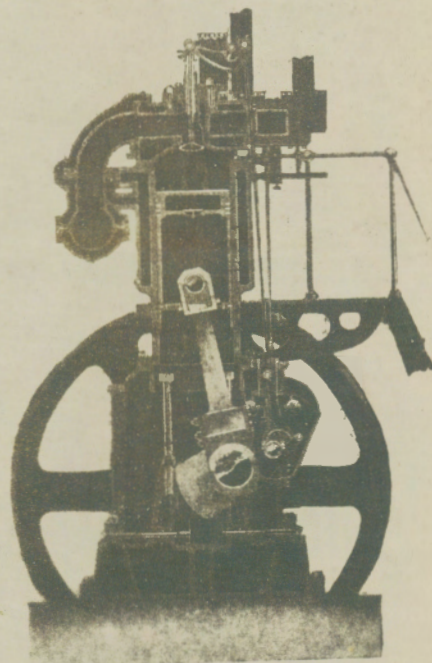
Main Journal Construction:—The Main Journal Boxes are held firmly between jaws which form part of the engine base, giving a very rigid construction, and rest on wedges adjustable from the outside of the engine.

The Journal Cap Studs are continued upward through the housing, forming staybolts, through which all stresses incident to the pressures in the cylinders are carried directly to the main journals, the cast-iron housing not being relied upon to transmit these stresses.

The housing, however, is very heavily ribbed, and in connection with the stay bolts gives an extremely strong construction.

Connecting Rod:—The connecting rod is of forged steel with strap ends, adjustment at both crank and cross head being obtained by wedge and bolt. Boxes at crosshead end are of phosphor bronze working on a hardened and ground steel pin. The malleable iron boxes at crank end are tinned and then lined with genuine babbitt.

Housing Construction:—The housing has unusually large doors, thus providing for most convenient access to the rods, journals and operating mechanism.



Section showing details of construction