

Gas produced by the first method, while generally of high calorific value, is costly, as already mentioned. Water gas, produced by the second method, is much cheaper; but as it contains much hydrogen is a very inflammable gas, and on this account cannot be used with the high compression pressures now employed in gas engine practice. These high pressures are necessary if a high efficiency is required of an engine.

The third method, however, gives a cheap gas, well suited for gas engine work, and will be treated more fully in this thesis.

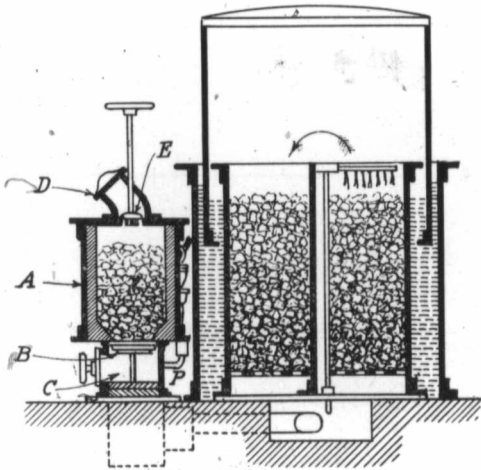


Fig. 1.

Nearly all fuels containing carbon can be used for the production of producer gas. It must be noted, however, that if the gas is going to be used in a gas engine cylinder, it must be of uniform quality. It must also contain no tar or other impurities in order to avoid trouble with the valves.

To Mr. Dowson we owe the first successful producer gas plant. His plant was designed to work with anthracite coal. This coal is non-caking, and, being nearly pure carbon, contains very few condensible hydrocarbons or tar. It is therefore an ideal fuel for the gas producer.