

III. MODE OF OPERATION AND CYCLE OF INTERNAL-COMBUSTION ENGINES

(1) General

In an internal-combustion engine, the energy contained in the fuel is directly used for the performance of work. Fuels used for driving internal-combustion engines are primarily won from mineral oil. In several countries where mineral oil is not available from natural sources, or in small quantities only, but substantial coal deposits can be mined, coal is used as a basic material for the production of fuels by way of various chemical processes.

The fuel for internal-combustion engines must be easily inflammable, either immediately or after a certain rise in temperature. In the combustion process

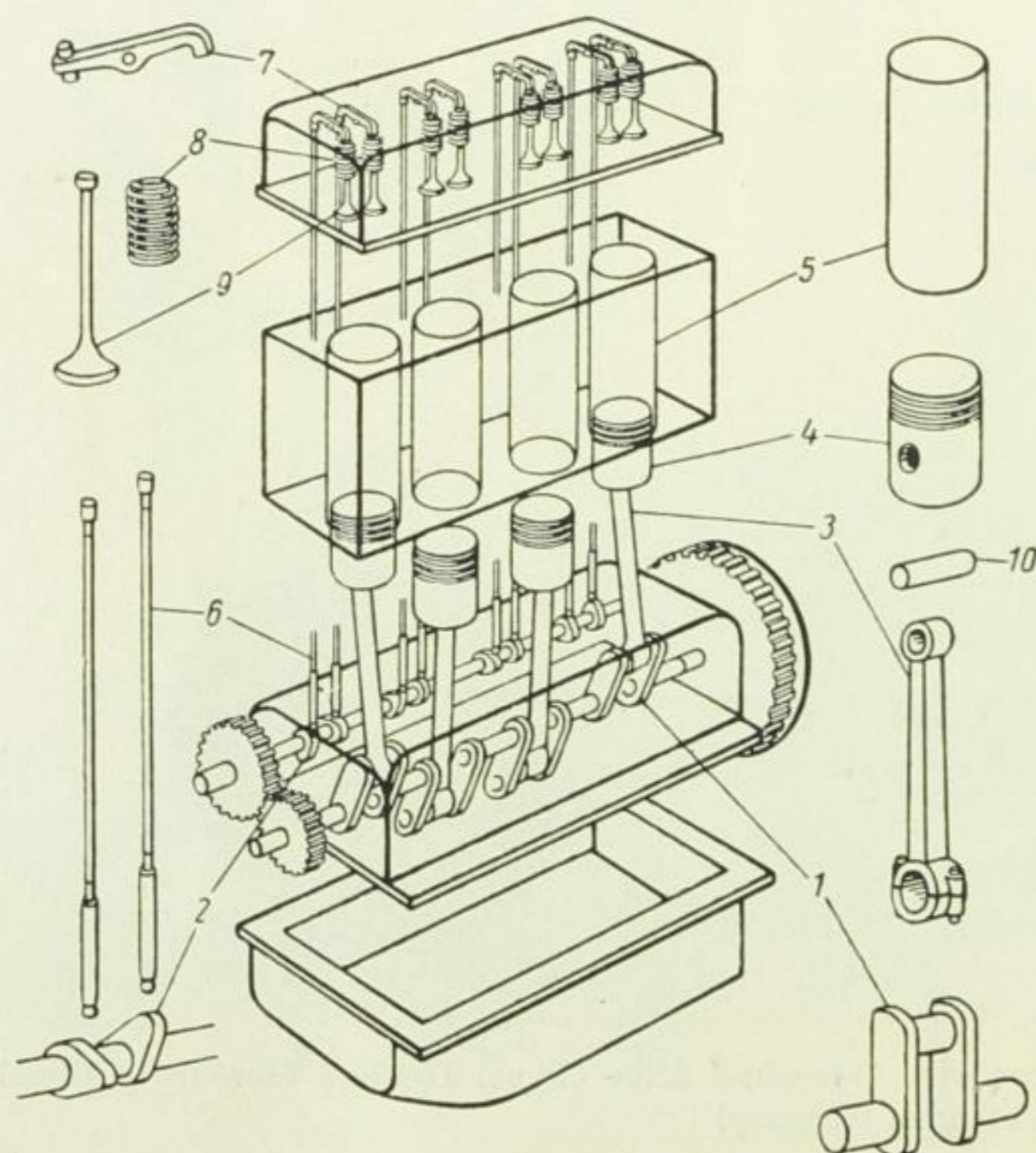


Fig. 21. Major units of construction of the engine

- 1 Crankshaft
- 2 Camshaft
- 3 Connecting-rod
- 4 Piston
- 5 Cylinder liner
- 6 Pushrod
- 7 Rocker
- 8 Valve spring
- 9 Valve
- 10 Piston head