

The *engine block* (Fig. 17) is made up of several castings and consists mainly of the *cylinder block with crankcase*, the *cylinder head* and the *oil pan*. Since cylinder block and crankcase of tractors are frequently combined into one casting, this is called *monoblock of cylinder and crankcase*. Cylinder head and oil pan are firmly fastened to cylinder block and crankcase by means of screws. Heat-resisting gaskets are inserted between the contact surfaces to provide for a perfectly sealing joint.

The *crankcase* houses the *crank-drive assembly*. The main units of construction are the *crankshaft*, the *connecting rod* and the *piston*. The cylinder block consists of several *cylinders* in which the *pistons* move up and down. The *cylinder block* is covered on top by the *cylinder head* which embraces the chambers of combustion (Fig. 18). The *oil pan* is the lower end of the crankcase. Lubricating oil is collected in this pan. The power generated by the

engine is transmitted to the road wheel via the *transmission system* or the *power train* (Fig. 19). The major units of construction of the transmission system are the *clutch*, the *change-speed gear*, the *axle drive* (also called final drive), and the *differential gear*.

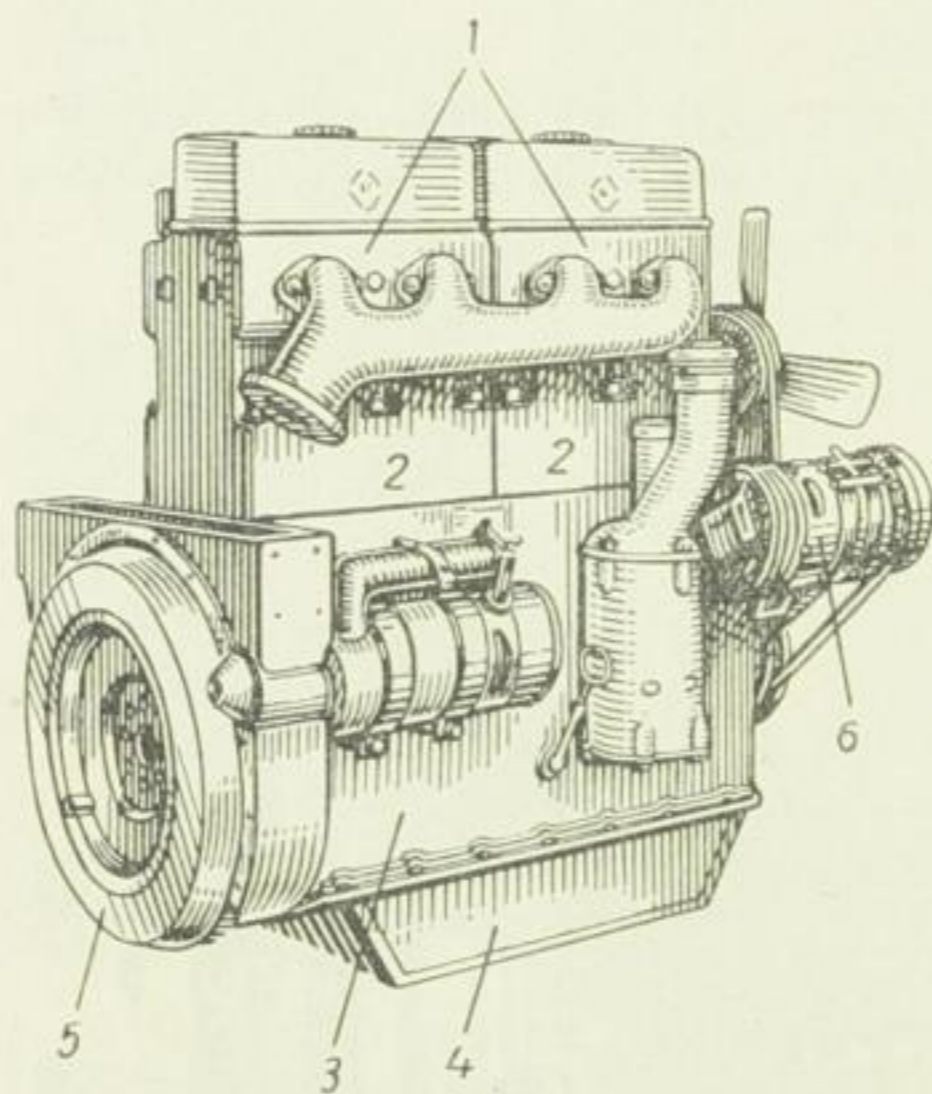


Fig. 17. Engine block

- 1 Cylinder heads
- 2 Cylinder blocks
- 3 Crankcase
- 4 Oil pan or sump
- 5 Flywheel
- 6 Dynamo

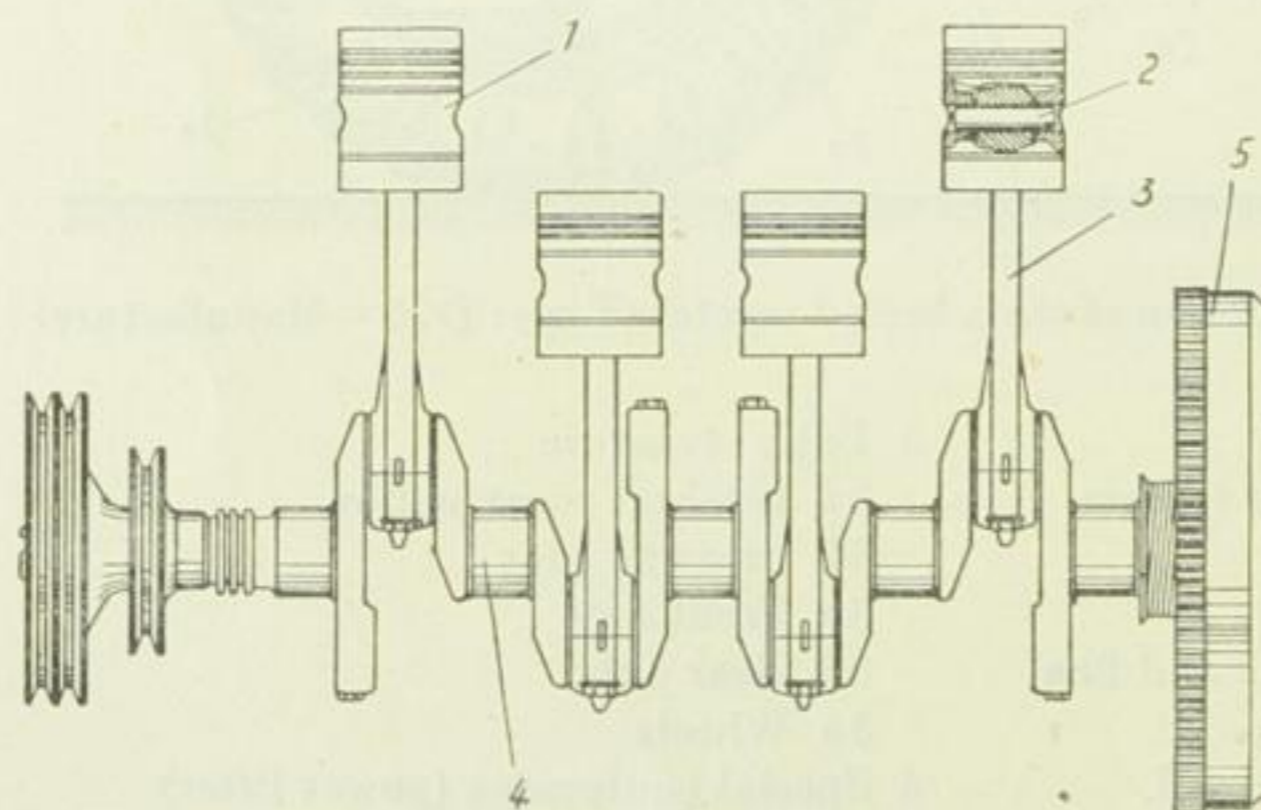


Fig. 18. Crank assembly

- 1 Piston
- 2 Piston head
- 3 Connecting-rod
- 4 Crankshaft
- 5 Flywheel with gear ring