the most successful rifle

ever designed

THE FAMOUS Soviet AK-47 assault rifle was designed by Mikhail Kalashnikov. Severely wounded as a tank commander during the Second World War, he was invalided out of the army and during his convalescence he submitted drawings of a new rifle, the now famous AK-47.

It was first introduced into the Soviet Army in 1953 as the Avtomat Kalashnikov (AK-47). Since then it has withstood the test of time, and, without any doubt, the Kalashnikov is the most successful assault rifle ever designed.

The AK-47 is such a success because it is:

1. sufficiently accurate, with an effective range of up to 500 metres and the maximum sighted range of 800 metres;
2. very easy to manipulate;
3. very easy to maintain. You only need to clean it constantly with motor or machine oil;
4. very light and can be carried comfortably in any terrain, i.e. in relation to weight;
5. very simple and does not have many small parts that can easily get lost when being disassembled; and
6. robust enough to stand up to the demands and punishment of the battlefield.

The AK-47 is a gas-actuated automatic weapon. Above the barrel lies a cylinder containing a piston. As the bullet is fired and passes up the barrel, a small portion of the propelling gas passes through a port and drives this piston backwards. At the rear end of the piston rod is a carrier which holds the bolt. As the rod and carrier move backwards, a shaped cam track in the carrier engages with a lug on the bolt and revolves the bolt, unlocking it from engagement with the rifle breech.

Once unlocked, the rearward movement of the carrier withdraws the bolt, pulls the empty cartridge case from the chamber and ejects it. At the same time a return spring is compressed, and the firing hammer is cocked by the movement of the carrier. Then the spring forces the carrier and rod back, collecting a fresh cartridge from the magazine and loading it into the chamber. The bolt stops, but the carrier continues forward so that the cam now rotates the bolt in the opposite direction and locks it into the rifle barrel ready for firing. As the operator pulls the trigger, the hammer springs up and hits the firing pin in the centre of the bolt, and the cartridge is fired, to begin the process over again.

By moving a lever on the right hand side of the rifle, the operator can select automatic fire, and in this case the rifle will continue to load, fire, eject and reload so long as the trigger is held down, firing off rounds at a cyclic rate of about 600 rounds per minute, though since the magazine holds only 30 rounds this rate obviously cannot be achieved in practice. In fact, with the fire selector set on 'auto', a rate of 90 rounds per minute would be considered acceptable.

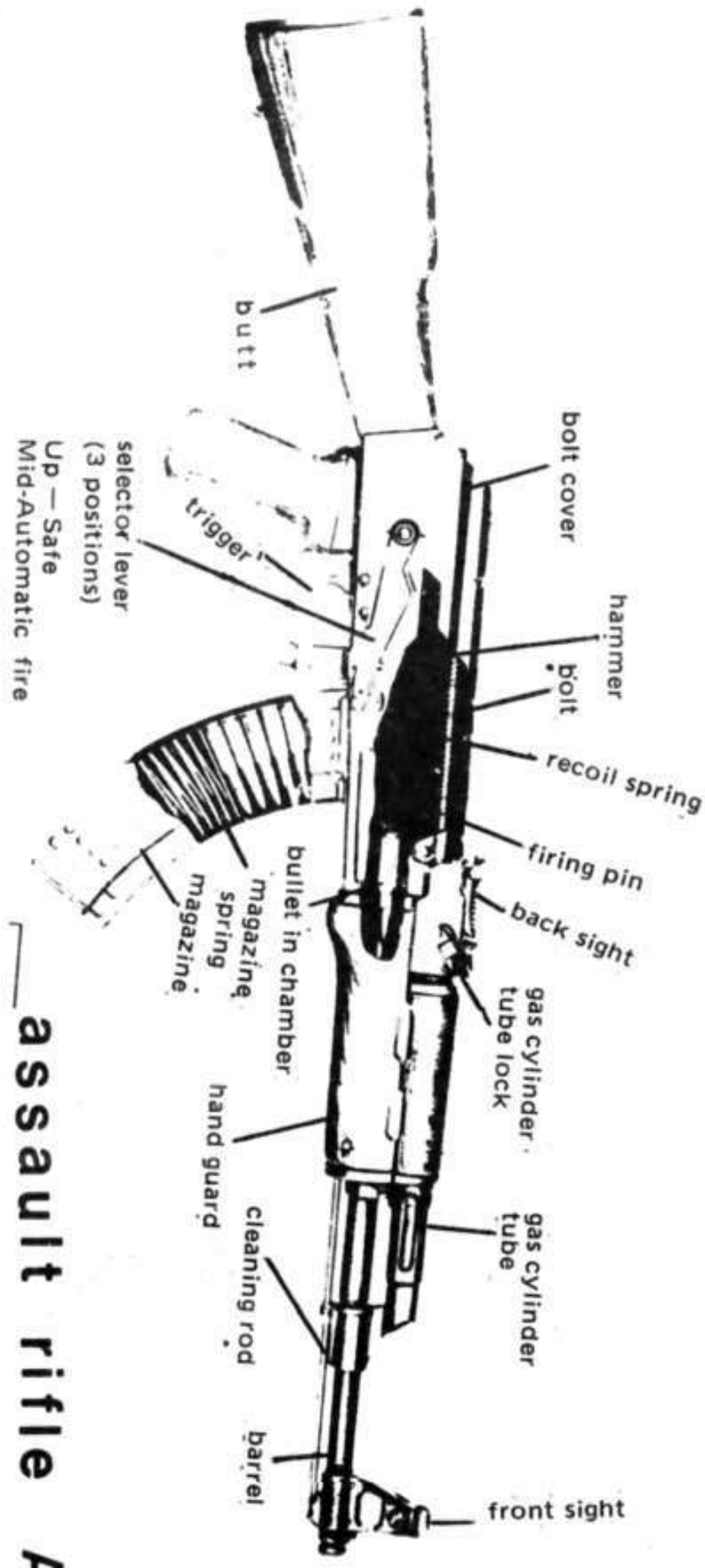
MODERNISED VERSION

In 1959 a modernised version of the AK-47 was produced. Called the AKM, it uses stamped steel for the receiver and riveting for the assembly. It also has a higher muzzle velocity, a longer sighted range, and less weight than the AK-47. Both the AK-47 and the AKM can be found with wooden butts or with folding steel stocks. Motorised and airborne troops use the lighter folding stock version which is called the AKMS. It is preferred by underground fighters since it becomes shorter when the butt is folded and therefore easier to conceal.

The AKM can be fitted with a NSP-2 infra-red night sight and a knife bayonet that can also function — unlike that of the AK-47 — as an insulated wire cutter and miniature saw. Additionally, a grenade launcher attachment can be fitted to the basic model. A silencer can also be fitted to the basic AK-47.

The AK design is now produced in many socialist countries, sometimes with slight differences. China calls it the Type 56 and fits a folding bayonet to the muzzle. Rumania fits a wooden front pistol grip so that it can be used as a sub-machine gun, while the Hungarians use a perforated metal fore-end a nylon front grip. Butts of natural wood, laminated plywood and plastic materials are employed by the different countries.

Due to the demands of modern warfare, a new version — the AK-74 — was



assault rifle AKM

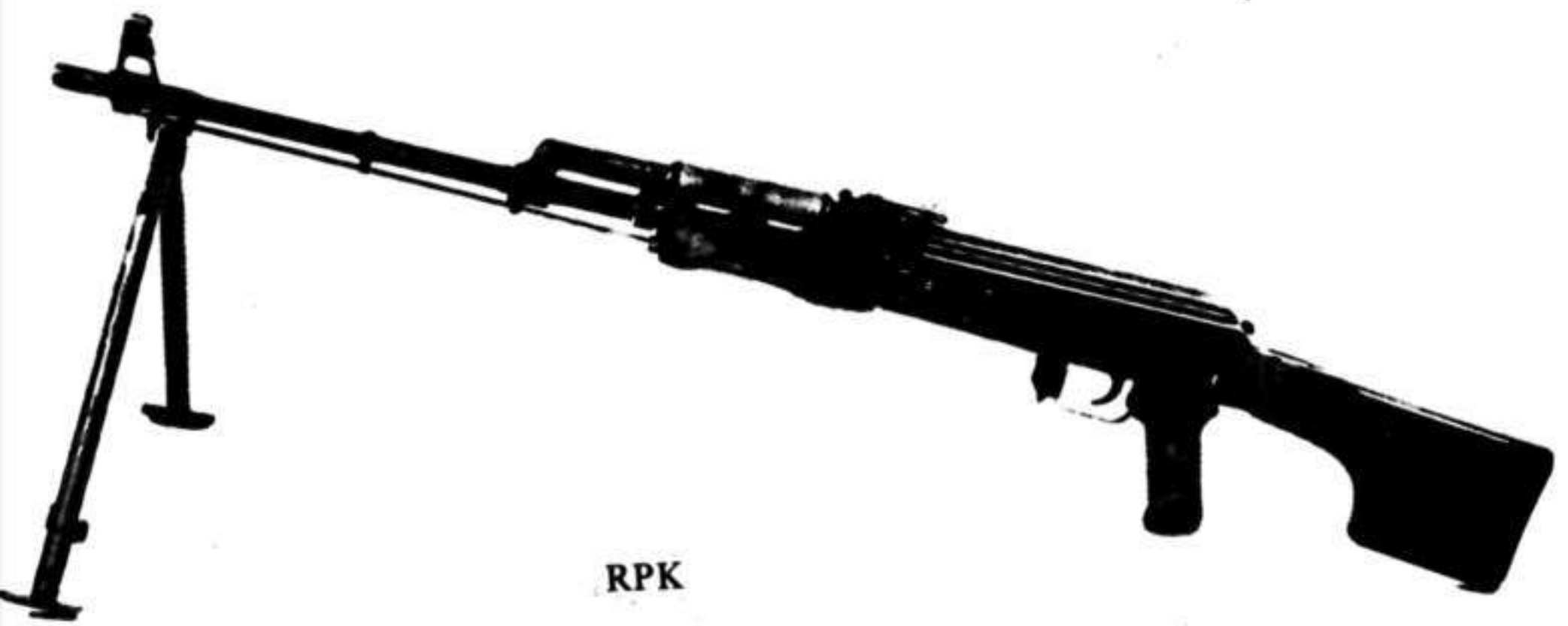
AK–74

introduced. It is an AKM essentially but with a smaller 5.45mm calibre. The advantage offered by a small calibre is that it ensures a lighter cartridge with less recoil. That steadies the rifle so that automatic fire from the shoulder is more easily controlled and more accurate. The magazine, made of plastic, still holds the standard 30 rounds.

The most prominent recognition feature of the AK-74 is the muzzle brake and compensator which directs some of the emerging gases up and to the right to counter the rifle's tendency to climb when fired on automatic. It also reduces the recoil force, making the weapon easier to shoot. The AK-74 also has an increased muzzle velocity (900 metres per second as against 715 metres per second) which provides a flatter trajectory and so greater accuracy and impact force.

The AK design has also extended to acting in a light machine gun role, namely the RPK and the PKM models. The RPK is essentially a bipod-mounted AKM but with a longer, stronger barrel, a different stock and a larger capacity magazine (40 rounds). The PKM weighs nearly twice as much as the RPK, fires a full power 7,62mm cartridge and, belt fed, is capable of sustained long-range fire.

One western specialist on arms, commenting on the AK-47, said: *"The AK rattles but it is the rifle today that can be relied upon more than any other".*



RPK