



1 Cetme rifle with bipod legs folded against fore-end. Change lever, on left side above trigger, can be set for semi-automatic, full-automatic, or safe. The tube above the barrel houses the recoil spring tube, and serves as a mount for the front sight. The cocking handle folds against the left side of the rifle and does not move during firing. Wood-stock and retractable metal-stock forms of this rifle are made. The retractable-stock rifle is for airborne units, tank crews, and other troops requiring a compact weapon. The Cetme shown is the West German G3.



2 With the bipod legs swung down, the Cetme can be used as an automatic rifle. This rifle has a well housed-in mechanism, is easy to field-strip without tools, and can be easily maintained.

THE CETME RIFLE

A Spanish-developed assault rifle is now standard in the West German and Spanish Armed Forces
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CETME ASSAULT RIFLE

Mechanism Type: Delayed-blowback, selective-fire
Caliber: 7.62 mm. NATO (German designation 7.62 mm. x 51)
Weight: 9.65 lbs. with magazine and bipod
Barrel Length: 17.7"
Over-All Length: 40.2"
Magazine Capacity: 20 rounds
Sights: Taper-post front; aperture rear
Sight Radius: 22.6"
Rifling: 4 grooves, right twist
Cyclic Rate of Fire: 500-600 rounds per minute
Accessories: Sling, bipod, telescope sight, infrared sniperscope, recoil booster for firing blank cartridges

THE Cetme assault rifle in cal. 7.62 mm. NATO is now standard in the Spanish and West German Armed Forces. This rifle is named after *Centro de Estudios Tecnicos de Materiales Especiales*, the Spanish government organization that developed it. The West German designation for it is G3 which stands for *Gewehr 3* (Rifle 3).

The Cetme is a delayed-blowback rifle with detachable box magazine. Of selective-fire type, it has a folding bipod, and can be used as a semi-automatic or full-automatic rifle. A scope can be mounted on the receiver for adapt-

ing the rifle to sniper's use, and an infrared sniperscope can be attached for night combat. Rifle grenades can be launched from its flash hider, and a recoil booster can be attached for firing blank cartridges.

The history of this rifle began during World War II when the Mauser Works in Germany was developing special military rifles. One of these rifles, the *Geraet 06H* (Equipment 06H), was of delayed-blowback type with locking rollers. Adapted to the 7.9 mm. short cartridge, it could be fired semi- or full-automatic. It also had an interchange-

able barrel adapted to the DWM 7 mm. short experimental cartridge.

During the course of its development, designation of the *Geraet 06H* was changed to *Sturmgewehr* (assault rifle) *45(M)*. The abbreviated designation was *StG 45(M)*. Development of this rifle was incomplete when the war in Europe ended.

In 1948, German engineers at Mulhouse, France, used the bolt-locking system of the *StG 45(M)* in developing military rifles. One of these rifles was made for a French 7.65 mm. short cartridge, and others were made for the U. S. .30 carbine cartridge. These rifles never got beyond the prototype stage.

Following this, the Cetme organization in Madrid, Spain, developed a rifle which used the locking system of the *StG 45(M)*. This development was accomplished under German technical supervision.

Special Cetme cartridges

The first Cetme rifles were made in cal. 7.92 mm. and 7.62 mm. for special Cetme cartridges with short cases. These cartridges had long, pointed aluminum bullets with copper-alloy jackets over the middle portions.

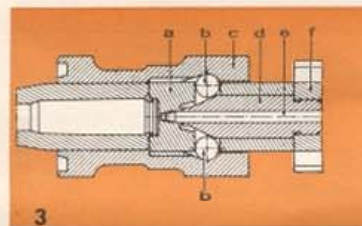
When the 7.62 mm. NATO cartridge was adopted by several countries, the Cetme was made for this cartridge, and the special Cetme cartridges were dropped. This rifle is made in Spain by Cetme, and in Germany by the firms

of Heckler & Koch and Rheinmetall. An advantage of the Cetme, especially from the military standpoint, is that it can be produced with relative ease. Made largely of sheet metal, it is well adapted for modern manufacturing methods. According to the Cetme organization, it can be made in 9 hours. In comparison with this, production of the Mauser bolt-action carbine requires 14 hours, and production time for the German Model 44 assault rifle used in World War II was 15 hours.

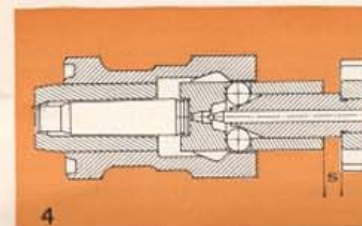
G3 firing test

The author conducted a limited firing test with a German G3 version of this rifle, and it appears to be sufficiently accurate for military use. Like all light-weight automatic weapons adapted to a powerful cartridge, this rifle has a distinct tendency to climb in full-automatic fire. This limits the accurate range for full-automatic fire to about 75-100 yds. When fired from the bipod in short bursts, the rifle appears to be fully capable of furnishing cover fire for advancing troops. Controllability is not outstanding, but seems to be as good as with the Browning Automatic Rifle.

U. S. military issue ammunition was used in this test. The cartridge cases were stretched rather badly, though no case separations occurred. Ejection appeared to be a bit weak, although this may have been due to differences in U. S. and German ammunition. ■



3 The Cetme has a delayed-blowback action and fixed barrel. The bolt head (a) has 2 separate locking rollers (b). When the action is closed in position for firing as shown, the rollers are in contact with their rounded locking recesses in the barrel extension (c). They are held in this position by the locking piece (d) which carries the firing pin (e). The locking piece is connected to the bolt-head carrier (f).



4 When the rifle is fired, pressure is transmitted from the cartridge case to the bolt head and then to the locking rollers. The rollers bear against the inclined surfaces of the locking recesses and are forced inward to unlocked position. While this is happening, the rollers thrust the locking piece with attached bolt-head carrier to the rear. The time required for the bolt-head carrier to move back the distance S to unlocked position delays opening of the action until the pressure has reached a safe level.

The pressure is somewhat higher at the moment of unlocking than in gas-operated guns. This causes an extraction problem which is solved by providing a number of longitudinal flutes in the chamber walls. Powder gas entering the flutes aids in preventing cartridge cases sticking to the chamber.