

# How Blanks Help Train Armed Forces

They provide a degree of battle realism with safety

By FRANKLIN H. MILLER

**S**MALL arms metallic blank cartridges used for training, signaling, and firing salutes were introduced into the U.S. Army at the time single-shot breechloaders came into general use. Early examples of such cartridges are those for use in cal. .50-70 and .45-70 Springfield single-shot rifles. Loaded with

blackpowder, these rounds were closed at the top with a paper wad. The case mouth was partially closed with a crimp and then lacquered to prevent entry of moisture.

Improvements in arms and ammunition resulted in adoption of the Model 1892 Krag bolt-action cal. .30-40 magazine rifle by the U.S. Army. A paper-bullet blank cartridge, designated Model 1896, was used in this rifle. To prevent the hollow paper bullet from injuring personnel, the bullet was loaded with a 5-gr. charge of E. C. smokeless blank fire powder. When the cartridge was fired, this charge was ignited by the main powder charge and caused the bullet to break up.

The Model 1903 Springfield cal. .30 bolt-action magazine rifle, which followed the Krag, used the Model 1903 blank cartridge with hollow paper bullet. This arm was modified to fire Model 1906 (.30-'06) ammunition, and the Model 1906 and Model 1909 blank cartridges were used in the modified rifle.

Cal. .30 Model 1903 and Model 1906 blank cartridges have hollow paper bul-

lets containing E. C. blank fire powder to cause bullet breakup during firing. The Model 1909 cartridge, however, has a paper wad in the case mouth instead of paper bullet. Like earlier cal. .30 blank cartridges, the charge in the Model 1909 is E. C. blank fire powder.

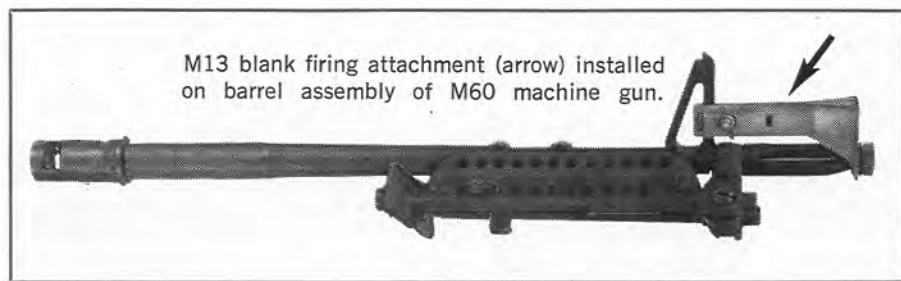
## Problems with the semi-auto

Introduction of the M1 Garand cal. .30-'06 semi-automatic rifle in 1936 gave the advantage of increased firepower, but blank cartridges did not produce sufficient power to operate the rifle mechanism. Using the Model 1909 blank cartridge which was standard at that time, the soldier had to operate the rifle manually for each round, and firing was no faster than with a bolt-action rifle.

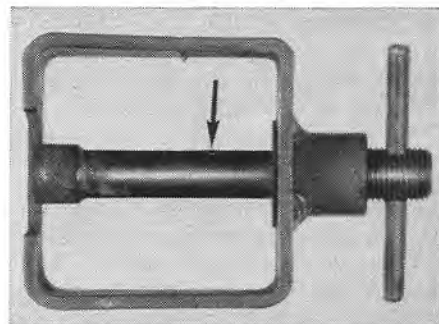
In 1957, the U.S. Army adopted the M14 automatic rifle in cal. 7.62 mm. NATO. The blank cartridge for use in this rifle is designated M82. It has a one-piece brass case with the front end shaped to conform approximately to the configuration of a bulletted combat round. The propellant is held in the car-



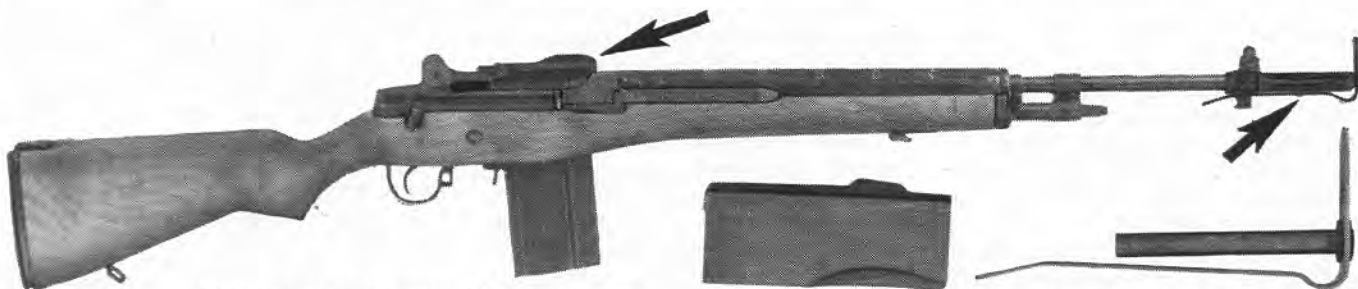
M16A1 rifle equipped with XM15E1 blank firing attachment (arrow) and 40 mm. M203 grenade launcher.



M13 blank firing attachment (arrow) installed on barrel assembly of M60 machine gun.



XM15E1 blank firing attachment for M16A1 rifle. Arrow points to gas vent hole in side of gas flow restricting tube.



M14 rifle equipped with M12 blank firing attachment and breech shield (arrows).

Breech shield (l.) and blank firing attachment for M14 rifle.

## Gun Law Enforcers

Continued from page 30

Both ATFD investigators and police fired back.

Prior to raiding the Ballew apartment, the officers hammered on the door of the apartment above with a search warrant also directed only to the "occupant." In this instance, the occupant proved to be 10-year-old Miriam Murphy, who was baby-sitting with a baby. The child said her mother told her not to open the door for anyone, but she finally heard someone shouting "police" and decided to take a chance and open the door. The officers searched the apartment, found nothing and left. Mrs. Josephine R. Murphy, Miriam's mother, said she returned to find the floor strewn with clothes and a big dent in the door where the officers had beat on it.

The search warrant return was signed by ATFD Special Investigator Marcus J. Davis. Also participating in the raids were ATFD Special Investigators Louis E. Pace, L.D. Callans, Donald R. Sloan and possibly others. An ATFD spokesman said three or four investigators were involved. A police spokesman said "a dozen."

Maryland's top Federal prosecutor, U.S. District Attorney George Beall, a brother of U.S. Senator J. Glenn Beall (Md.), praised the ATFD investigators. "From our point of view," Beall was quoted, "they did nothing extraordinary, nothing reckless, nothing culpable, nothing wrong." He added that their performance was "a letter-perfect execution of their search warrants with the exception of the unfortunate incident that occurred."

Afterward, the investigators found "One baseball-type plastic-body hand grenade, one canister grenade, one hand grenade canister, one military hand grenade fragmentation type." The return did not indicate whether they were inert or live, but an ATFD spokesman said they contained no powder or bursting charges.

They also found "remnants of sawed-off barrels and stocks"—but no firearms of illegal length or with parts sawed off.

In addition, they found a large quantity of firearms and ammunition, and most of the arms were "fully loaded." Among these were 13 boxes of 20-ga. shotshells, 14 of 12-ga., and one of 16-ga. magnum, and many M1 carbine, .30-'06, and other cartridges.

Ballew's collection consisted of 14 black-powder arms and eight cartridge arms: nine cap-and-ball replica revolvers, three flintlock replica pistols, two cap-and-ball rifles, one cal. .22 semi-automatic pistol, an M1 carbine, two .22 rifles, a 20-ga. over-and-under, a 12-ga. double, a 12-ga. pump, and a military rifle with bayonet.

The Montgomery County police, at last report, were holding all of Ballew's firearms. A police spokesman admitted that they were taken without a search warrant but explained that they had to be held because Ballew was subject to a Maryland State charge of "aggravated assault with intent to commit murder."



U.S. Army blank cartridges (l.-r.): .50-70 Gov't, .45-70 Gov't, .30-40 Krag Model 1896 (paper bullet), .30-'06 Model 1909, 7.62 mm. NATO M82, 5.56 mm. XM200.

tridge by a wad, and the case mouth is sealed by a drop of lacquer and crimped.

To provide realism in training when firing blanks, this rifle has an accessory called the M12 blank firing attachment which partially closes the muzzle and thereby causes buildup of sufficient gas pressure to operate the rifle action. Another accessory used when firing blank cartridges is a breech shield. There is incomplete obturation of the breech at time of firing, and the shield prevents propellant residue from blowing into the shooter's face.

The M12 blank firing attachment is attached to the M14 rifle by inserting the hollow steel tube of the attachment into the rifle's flash suppressor. A spring-steel clip, attached to the tube, is then snapped over the bayonet lug. The breech shield lug is inserted in the clip guide slot of the rifle and retained by a spring-loaded detent.

### For M60 machine gun

Another current U.S. arm which fires the M82 blank cartridge is the M60 machine gun. Ammunition for this gun is loaded in standard M13 belt links, usually 100 rounds per belt. Normal functioning is accomplished by use of the M13 blank firing attachment which is attached to the gun by means of a split bracket extending from the front of the hollow steel tube to both sides of the front sight. The attachment is clamped securely to the sight by a wing nut.

Introduction of the M16 automatic rifle in cal. 5.56 mm. presented several challenges to designers of blank cartridges and blank firing attachments. The gas system of this rifle is susceptible to clogging under certain conditions, one being when the rifle is used with blank ammunition. After several years of design evaluation, the XM200 blank cartridge was standardized for this rifle. Careful selection of propellant, primer, and lacquer seal material used in this round reduces residual deposits in the gas tube to an acceptable level. The XM15E1 blank firing attachment for this rifle is presently undergoing evaluation by the Government. If this attachment is adopted, its nomenclature will be changed to M15A1.

Development of blank ammunition and associated firing attachments was done primarily to provide the greatest amount of safety to troops during training without impairment of combat realism. Although every precaution has been taken toward elimination of hazards in using this equipment, the following three basic safety rules should be practiced by every soldier: (1) never point the arm toward anyone when firing blank ammunition; (2) never fire a blank cartridge when an obstruction is in the gun bore (this includes, but is not limited to mud, snow, dirt, and a bullet); (3) never fire a bullet round in a gun equipped with a blank firing attachment.

The use of blank ammunition is a valuable asset in providing realistic training for a modern army. ■