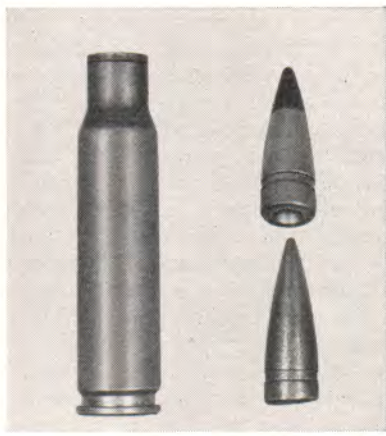


DUPLEX CARTRIDGE

ON May 7, 1964, the U. S. Army standardized a new 7.62 mm. ball cartridge designed along lines indicated by combat and test experience. The official designation is Cartridge, 7.62 mm: Ball, Duplex, NATO, M198, and its distinctive feature is the use of 2 bullets in the cartridge.

It has long been evident that by far the most important limitation on combat effectiveness of small arms is their very low rate of hitting. In 1951 the Army initiated a long-term research, called for identification the Salvo program, to improve its position in this fundamental matter. By 1962 the direction for a radical improvement had been decided on, and initial development of a Special Purpose Individual Weapon or SPIW (not a conventional rifle) was contracted to 3 industrial concerns and one government establishment. Test of the 4 resulting products is now going on, and one will be selected for further action.

The military Services are also testing weapons offered to them, and have procured limited quantities. These are of conventional form but reduced caliber, giving advantages of light weight, and the reduced power makes full-automatic weapons easier to control. However, this class of small arms has not improved the hitting rate in a fundamental way, and the



Components of 7.62 mm. NATO Duplex Ball Cartridge M198, showing hollow base of forward bullet and slanted base of rear bullet to give desired dispersion.

basic problem thus remains.

THE AMERICAN RIFLEMAN has kept its readers informed on these developments.

The duplex cartridge represents a radically different approach. When the 7.62 mm. weapons system was adopted in 1957, the Salvo research had progressed and the duplex cartridge was designed in 1958 to make use of some of its findings. The cartridge has now been adopted.

The development was done by Winchester-Western, under contract to the Army.

The round contains 2 copper-plated steel bullets weighing 80 grs. each, the tip of the rear bullet fitting into a hollow base of the front one. Base of the rear bullet is flat, intentionally angled to give it the desired dispersion. The head form of both bullets is same as that of other standard bullets in this caliber, though body length is less. Muzzle velocity of the front bullet is 2800 f.p.s. and of the rear bullet approximately 2600 f.p.s.

The front bullet shoots into approximately 1½" mean radius at 100 yds., corresponding to a 10-shot group of about 5" diameter; and the rear bullet into 12" mean radius (measured from group center of the front bullet) or about a 40" group. At 300 yds., mean radius of the front bullet is 6" and of the rear about 3 ft., corresponding to 10-shot groups of 1¾ ft. and 10 ft. respectively. One bullet thus gives about the accuracy of the ordinary rifle cartridge and the other spreads 6 times as much.

Careful tests indicate 25% to 100% increase in hits, in various situations. This is an improvement of very considerable practical importance.

The M198 cartridge functions in all standard arms in cal. 7.62 mm. NATO—the U. S. M14 rifle, M60 general purpose machine gun, and M73 tank machine gun, and arms of other countries. Identification is by the exposed bullet tip painted light green.

This does not replace existing standard rounds but will supplement them, to an extent to be determined. — NRA TECHNICAL STAFF

restriction, and it could lead to more uniformity and a more sensible type of legislation.

Because the 15 States which have no constitutional provision regarding the right to have and bear arms include New York, Illinois, and California, the number of persons who would be affected, if the provisions of the 2nd Amendment were extended to the States, would be 40% of the population.

In conclusion, we should note that Justice Douglas, speaking in January 1963, eleven months before the brutal assassination of President Kennedy, said these prophetic words:

"Fear of assassination often produces restraints compatible with dictatorship, not democracy."¹⁸

It is important, in these most difficult times, that we stoutly stand up for our constitutional rights, those liberties which are rightfully ours.

The importance of the National Rifle Association and our affiliated state associations and clubs in informing our members and the public about detrimental legislation, can be characterized by this further quote from Justice Douglas:

"We have a Bill of Rights designed to keep government out of private domains. But the fences have been broken down; and machinery to restore them has been denied. The Bill of Rights—with the judicial gloss it has acquired—plainly is not adequate to protect the individual against the growing bureaucracy. He faces a formidable opponent in government, even when he is endowed with funds and with courage. The individual is almost certain to be plowed under, unless he has a well-organized active political group to speak for him. The church is one. The press is another. The union is a third. But if a powerful sponsor is lacking, individual liberty withers—in spite of glowing opinions and resounding constitutional phrases."

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