

dope bag

From the tens of thousands of questions and letters on guns, ammunition and their use that the *American Rifleman* receives every year, it publishes here the most interesting. Receiving answers to technical questions is a privilege reserved to NRA Members. Question-letters must contain the member's "code line" from an *American Rifleman* mailing label or membership card. Nonmembers with questions may submit them with a membership application and dues.

Initials carried in "Answers" indicate handling by: Stanton O. Berg, William S. Brophy, Donald L. Davis, William C. Davis, Jr., P. M. Dickey, Roy F. Dunlap, C. E. Harris, E. H. Harrison, Ellis Lea, Herschel C. Logan, H. E. MacFarland, Bert Popowski, Robert N. Sears, Charles R. Suydam, Charles H. Yust, Jr.

M14 Rifle Status

What is the status of the 7.62 mm M14 rifle in the armed forces? I know the 5.56 mm M16A1 was adopted as standard during the Vietnam war, but don't recall hearing that the M14 was withdrawn from service or declared obsolete. Is it obsolete? If so, what is the reasoning behind that decision?

Answer: The M14 rifle is not obsolete. It is still standard, as is the M16A1, but has been replaced for general issue to troops by the M16A1, and retained for special purposes where tactical considerations might dictate its use.



7.62 mm M14 rifle

The M14 is still a good rifle, but its principal disadvantage in comparison to the M16A1 is the heavier weight of the M14 and its 7.62 mm ammunition. The M14 rifle and 100 rounds of ammunition carried in loaded 20-rd. magazines weighs 17 lbs. For the same 17 lb. load, the soldier can carry the M16 rifle and 280 rounds of 5.56 mm ammunition in 20-rd. magazines. Comparisons of effectiveness on a round-for-round basis don't tell the whole story. A more appropriate consideration is whether 280 rounds of 5.56 mm ammunition are more effective than 100 rounds of 7.62 mm ammunition.

According to *Jane's Infantry Weapons*, NATO studies have indicated that more than 90% of infantry targets are engaged at ranges less than 400 m, where the 5.56 mm round compares favorably with the 7.62 mm. Various studies have also shown that the lighter recoil of the 5.56 mm weapon increases the rapidity with which aimed shots can be fired, and improves the probability of hitting the target. While the 7.62 mm round is more effective than the 5.56 mm at long ranges, proponents of the 5.56 mm system maintain that

Questions & Answers

this advantage is outweighed by other advantages of the lighter system. At ranges greater than about 400 m, targets can be more effectively engaged by machine guns or other heavy support weapons than by rifle fire of either caliber.

—W.C.D., Jr.

Age-Hardening Of Alloys

The cast bullet information in "Lead Alloys Age-Harden," (The American Rifleman, August, 1977, p. 66) is certainly revealing. In that connection, an experimenter (the only one who has done anything on this that I know of, except for the above report) states that alloys containing only tin and lead do not age-harden, and some even soften in time. Is this correct?

Answer: It is correct. The August, 1977, report you refer to should have added that age-hardening of bullets depends on the antimony content. Without that, the hardening does not take place.

Unlike the extensive technical literature on lead-tin antimony alloys there is very little (except as to solders) on alloys of only tin and lead. One investigation, however, established that such an alloy containing 5% tin showed no measurable hardness change during observation for four months, while the hardness of a similar alloy with 10% tin actually decreased slowly through most of that time.

This brings out a further disadvan-

tage of the costly, ineffective 1-10 tin-lead alloy that was recommended to handloaders for so long. On the other hand, users of the more reasonable low-tin mixtures are seldom concerned about exact hardness. They can assume that their bullets will remain practically unchanged after casting.—E.H.H.

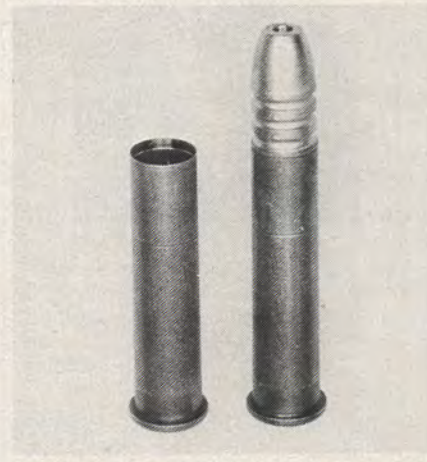
Reamed Case Mouths

Belling case mouths to avoid damaging cast bullets adds an operation to the loading procedure and reduces case life. Is there a way around these disadvantages?

Answer: One alternative is to ream the case mouths so bullets may be started by hand.

This may be done with inside neck reamers such as the Forster or Wilson. The reamer is first used on fired cases as they come from the chamber to insure clearance between the bullet and the neck. The case is then sized and the reamer run into the case mouth for a distance of about one-fourth of the bullet's diameter. This second use of the reamer allows the bullet to be started in the case by hand. It is then seated to the desired depth in a die.

The neck reaming operation needs to be done only once. After that, fired



Reaming sized .45-70 case mouth to .460" diameter to a depth of about .11" allows hand starting of .459" diameter cast bullet.