FEATURES:

How Big is Handloading ........................................... Neal Knox 10
Stairstep Loading The Magnums ................................. John Wootters 20
Top Handloads For Doves ....................................... Don Zutz 26
Pet Loads - .308x1.5 .......................................... Ken Waters 30
G.I. Brass .................................................. Roy Smith 33
New Oehler Chronographs .................................. Bob Hagel 34
Handloading For The Nambu ................................ Ivan Prall 36
Springfield Logbook .......................................... Al Miller 38
Du Pont 'Introduces' IMR-4831 ................................ Neal Knox 41
Loading the .45-60 WCF ........................................ James Barnard 42

DEPARTMENTS:

Editorial .................................................. 6 Answers, Please .......... 16
Tip to Tip ................................................ 8 Loading the Old Ones .... 18
Lock, Stock & Barrel ...................................... 10 Cartridge of the Month ... 46
Reader By Lines ......................................... 15 ProductTests ........... 63
Propellant Profiles ........................................ 56

Your July - August Cover

Hard-to-get cartridge cases can usually be formed from more popular brass. The RCBS Form & Trim die is shown in use, forming .250 Savage cases from .30-06 brass. With the correct forming dies, case conversion becomes a simple process. Use of the forming dies is described in "Making Cases for the Nambu," page 36 and "Pet Loads: The .308x1.5", page 30 of this issue. Photo by Richard Aldis using a 4x5 Graphic View camera.
While the newest and fastest cartridges are of greatest interest to most of our readers, in the past couple of years we've been receiving an increasing number of questions concerning obsolete cartridges of the black powder and early smokeless powder era. While some might credit this to nostalgia, I suspect it's simply because the old cartridges are fun to shoot. But they do present special problems, particularly in obtaining cases, components and reliable loading data safe for the particular action for which the cartridge is chambered. The member of our staff eminently qualified to answer these questions is Ken Waters, who has compiled some of his recent letters in this new column. — N.K.

How would you recommend loading the .45-70 cartridge for use in hunting elk as well as deer? My Remington Rolling-Block rifle has been fitted with a new barrel of modern steel, so there should be no problem in using jacketed bullets and smokeless powder loads.

G.J., California

Since I haven't used a .45-70 for game larger than deer, I've placed most emphasis on accuracy and increased bullet expansion, plus lighter recoil and lower bullet cost. I happen to believe that lighter bullets [300 to 350 grains] driven at adequate though not necessarily maximum velocities, will give better expansion and therefore quicker kills on light-framed game of deer size with this cartridge. And as for accuracy, contrary to a recent article I read on reloading the .45-70, I have not found it necessary to use heavy bullets in order to obtain good accuracy. In fact, some of my finest accuracy groupings with the .45-70 has been with the new Hornady and Sierra 300-grain bullets.

Accordingly, for use in deer hunting with the .45-70, I'd select either Hornady's 300-grain hollow-point or Sierra's new 300-grain flatnose soft point. And for loads, considering the strength limitations of an old Remington Rolling-Block action [even with a new barrel], I'd use 43.0 grains of IMR-3031. Listed by Lyman as maximum for the 1873 Springfield, that load is sufficiently powerful and has proven exceptionally accurate in our test rifles.

For elk however, I believe the emphasis should be on penetration rather than quick bullet expansion, indicating a need for both a heavier and tougher bullet. Hence, with elk in mind I'd go to either the new Speer 400-grain soft point or the old time-tested Winchester and Remington 405-grain factory bullets, with a load of 42.0 grains of IMR-4895. That load is heavy enough for the old Rolling-Block action, yet should do the job you have in mind, assuming proper bullet placement and a range of not much over 100 yards.

Black Powder In .38-55

It is my understanding that the number "55" in the cartridge designation .38-55 refers to the charge in grains of black powder with which this cartridge was originally loaded. Why then am I unable to get 55 grains of black powder into a .38-55 case and have enough room left to properly seat a bullet? How were these cartridges loaded in the days when black powder was used? I have a Marlin Model 1893 rifle in this caliber.

A.M., Indiana

The cartridge which we know today as the " .38-55 Winchester" was originally developed for Ballard and Marlin rifles, and was first known as the .38-55 Marlin-Ballard. The early brass shells of the 1880's were thin with "folded-heads" and were capable of holding 55 grains of black powder. Later, as the more strongly constructed "solid-head" cases came into use, it was found that case capacity had been reduced to about 48 grains due to the thicker brass head and walls. The name was left unchanged to avoid confusion.

According to an old Marlin catalog, the .38-55 cartridge [as factory loaded for use in the Model 1893 Marlin] contained 48 grains of Fg black powder and a 255-grain bullet cast 1-part tin to 30-parts lead, and had a muzzle velocity of 1,316 fps. As you probably know, the
Marlin Model 1893 was adapted to use smokeless powder with velocities up to 1,700 fps in .38-55 caliber, and either factory cartridges or handloaded ammunition with proper charges of a suitable powder may be used. That is a good strong rifle and should prove accurate with the right bullets and loads.

If you use black powder, be sure to clean both rifle and empty cases well after using, not later than the evening of the same day.

Higher .25-35 Velocities

I recently obtained a practically new 1894 Winchester take-down rifle in .25-35 caliber. It's a real beauty and fun to shoot. I do a lot of bench rest shooting, but now my question is, how "hot" can I get with it? Naturally, I will stay within the limits of the action's strength, but am not sure what this is. However, I would like to shoot a deer with it and feel I need more velocity than is provided by the factory loads. Thank you in advance for any information you can give me on this gun and caliber.

J.K., California

The mean working pressure of the Model 1894 Winchester rifle is considered to be 38,000 psi, with either the .25-35 or the .30-30. It should not be exceeded; to do so may result in "springing" the action, causing these rear-locking lever actions to rapidly develop excess headspace.

The .25-35 had quite a reputation for accuracy years ago, but I must say that the carbine I once owned in that caliber wasn't particularly accurate. If you have one that is though, I suggest that you take care not to over-load it. The following loads [taken from a 1936 Du Pont Manual] are the heaviest recommended by any authoritative source I know of for the .25-35. Data was taken in 26-inch barrels.

<table>
<thead>
<tr>
<th>Bullet Wt.</th>
<th>Grs./powder</th>
<th>Velocity</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>30.0/3031</td>
<td>2,795</td>
</tr>
<tr>
<td>100</td>
<td>27.0/3031</td>
<td>2,450</td>
</tr>
<tr>
<td>100</td>
<td>29.0/4320</td>
<td>2,465</td>
</tr>
<tr>
<td>117</td>
<td>28.0/4320</td>
<td>2,295</td>
</tr>
<tr>
<td>117</td>
<td>26.5/3031</td>
<td>2,350</td>
</tr>
</tbody>
</table>

From the above, it should be apparent that the only safe way to obtain high velocities with this cartridge and rifle is to use 87-grain bullets. At the speeds developed by the .25-35, especially in a 20-inch barrel carbine [which would be about 90 to 100 fps less than a 26-inch barrel], I believe 87-grain bullets would be all right for deer. In fact, they might well give quicker kills, as a friend of mine has found with his .250-3000 Savage.

One thing though: Be sure that whatever bullet you use has a nose sufficiently blunt as not to risk setting off the primer of the round ahead of it in the tubular magazine. For this reason, you will be restricted to either flat-nose soft points, or bullets having very blunt round noses. Both Winchester and Remington still offer 86-grain jacketed soft point bullets with flat-nose, but you may find they have to be ordered special.

.38-56 Winchester

I should like to know more about my Model 1886 Winchester rifle in .38-56 caliber, such as how many were made in this caliber and when they were discontinued? I would like to fire this rifle occasionally; would this reduce its value as a collector's item?

My rifle has a small screw hole on the left side of the receiver towards the front, from which the screw is missing. Can you tell me what this was for, as the functioning of the gun isn't affected?

F.D., Missouri

The Model 1886 Winchester rifle was produced from 1886 until 1935, at which time it was replaced by the Model 71. A total of 159,994 Model 86's were produced, but I do not have any figures showing how many of them were in .38-56 caliber. The .38-56 caliber was dropped in 1911 as by then higher velocity cartridges were becoming popular. However, this was a very popular cartridge in its day, especially in the East. Major Ned Roberts, with whom I co-authored a book, thought the .38-56 one of the very best of the older cartridges for deer and black bear. It was usually more accurate than the larger capacity Express cartridges, yet its 255-grain flat-nose bullets got through brush well and proved to be excellent game-stoppers. I've owned three .38-56's, still have one, and they've all been fine rifles.

I assume your rifle has been fired at least a few times, and more probably quite a lot, hence continuing to use it should not detract from its value. Naturally, it should be used with due care and not abused, and should be neither re-blued or altered in any way as these things would result in lessening its value.

The small threaded hole you refer to on the left side of the receiver close to the breech was intended to receive a screw holding the front end of one of the old side-mounted Lyman No. 21 or 38 receiver aperture or "peep" sights.

We carve 17 1/2 lbs. of steel bar... to bring you this 5 oz. "STD" standard mount.

Leupold
P.O. Box 588
Beaverton, Ore. 97005

July-August 1975
ANYONE WHO OWNS or otherwise may have had the opportunity to squeeze the trigger of a Type 14 Nambu pistol has probably wondered about its target shooting capabilities. These guns usually have an exceptionally soft trigger squeeze and the action riding above the hand lessens recoil disturbance, at least for me. And the slender barrel protruding directly above the hand points like a finger to locate the target.

Original cartridges are expensive collectors' items and in any case are not reloadable due to the odd-sized Berdan primer. There are no reloadable 8mm Nambu cases on the market; none have been imported, and the commercially available ammo advertised in various gun publications is far from satisfactory. These are produced from either .38 Specials with turned down rim, or .41 Long Colts with turned off rim. Both sizes are too small for the chamber and at the very best give inaccurate results; at the worst the cases split releasing a cloud of smoke and powder gases.

U.S. Army Ordnance in 1948 conducted exhaustive tests of handguns. Against such stiff competitors as the Walther P-38, Tokarev 30/33 and the .45 ACP, the often-derided Nambu Type 14 proved to be the most accurate handgun used by the major armies of the world. When I read the results of this test, I decided the time had come to resurrect my Iwo Jima souvenir. Obviously if no one was going to sell me the proper ammo, I would have to follow the teachings of Aesop and make my own.

The bottleneck Nambu cartridge resembles the .30 Luger, but the body is a little larger and semi-rimmed. The service loads give a 102-grain full-jacketed bullet a muzzle velocity of about 1,050 fps.

Since I wanted cases which fit well, I rejected the previously mentioned .38 Special and .41 Colt cases, as well as the .38 Super, which is also sometimes used in forming 8mm Nambu brass. I decided to alter Winchester-Western unprimed .30 Remington brass since these were most easily obtainable through my dealer, though other sizes of rifle cases could have been used. The .30 Remington rim is about .006-inch larger at the rim than the Nambu, but all Nambu service rounds I have examined have been undersize for the chamber, probably to allow smooth chambering of dirty cases or brass which has corroded in the tropical climates where this gun was often used.

The same dealer sold me a set of RCBS 8mm Nambu forming, reaming and loading dies, plus a shellholder. The new cases were cut to .9-inch length, using a parting tool in the lathe; this operation reduced the effort of shaping the long rifle case in the forming die, but it can be done that way, cutting off the surplus with a hacksaw. After shaping in the forming die, the cases were trimmed to a final length of .86-inch. Some published Nambu dimensions, taken from service cases, show slightly less length, but it is better to trim to the maximum length that the chamber will accept, since this gives a little more neck to work with.

Using an electric drill with the RCBS reamer, with the cases supported in the reaming die, the surplus neck brass was removed. With the rifle cases, this is a considerable amount. Since the case...
walls are relatively thick this close to the base. Because of the amount of brass which must be worked in forming pistol cases from rifle brass, you may find it necessary to anneal both before and after forming to obtain good case life. However, I didn't, and have lost a minimum of cases due to splitting.

As a final step before running the cases through the regular sizing die the mouths were chamfered both inside and out, then washed and dried. Normal loading techniques were used, except for seating the bullets and crimping separately.

Selecting a bullet had been no problem, for Hensley & Gibbs makes a 4-cavity mould, No. 116, which casts a 104-grain bullet of the same contour as the Japanese service round. The bullets were sized to .323-inch.

While many automatic pistol cartridges cannot be crimped, since they headspace on the case mouth, the 8mm Nambu can be, due to its bottleneck design. However, it should be remembered that chamber tolerances were allowed to drift in most military wartime production guns, and that a normal-sized cartridge could have excess headspace. To eliminate this possibility it's a good idea to fire-form the cases by seating the bullets far out, so the head is held firmly against the bolt face by a bullet bearing against the lands. This length can be determined by gradually seating a bullet deeper until the action will just close on the cartridge. Of course, such loads must be chambered individually. After fire-forming, size the cases only the minimum necessary amount to insure smooth functioning, then seat the bullets to 1.25-inch overall, the length of the Japanese service round.

One other caution: bear in mind that most of the sparse data on the 8mm Nambu was developed using modified pistol cases, which have considerably more capacity than cases made from rifle brass. After some experimenting, I found the ideal load to be 2.8 grains of Bullseye, significantly less than the 3.5-grain loading recommended by George Nonte in the January-February 1973 Handloader; Nonte was using .38 ACP brass. My 2.8-grain load gives perfect functioning of the action and superior accuracy.

If you don't mind altering a souvenir, the target-shooting capabilities of the Nambu can be greatly enhanced by installing an adjustable sight such as the one shown on the gun in the photo. I ground off the rear sight and mounted a Micro sight in its place. A cobbled-up home-made front sight gives the matching height. This may not be much for looks, and it may horrify collectors of Japanese militaria, but the gun shoots like a house afire.

Though I made these cases for a Type 14 Nambu, these loads work equally well in the Type 94. The latter "modern" Japanese automatic, introduced in 1934, was a poor design to begin with, made worse by the sloppy workmanship, and in good condition, should be safe to shoot, but the crude, late versions are better left on the wall as decorations. Aside from the rougher workmanship, atrocious trigger pull and dangerous external sear, the Type 94 lacks the natural-pointing characteristics of the Type 14 and the earlier Model 1904.

If you have a souvenir Japanese automatic in good condition, you can return it to use by making your own 8mm Nambu cases. Though the initial per-round cost is a little stiff, considering the investment in new rifle cases and special dies, it's much less expensive in the long run than buying cobbled-up ammo made from undersize pistol cases, for your new brass can be reloaded almost indefinitely.