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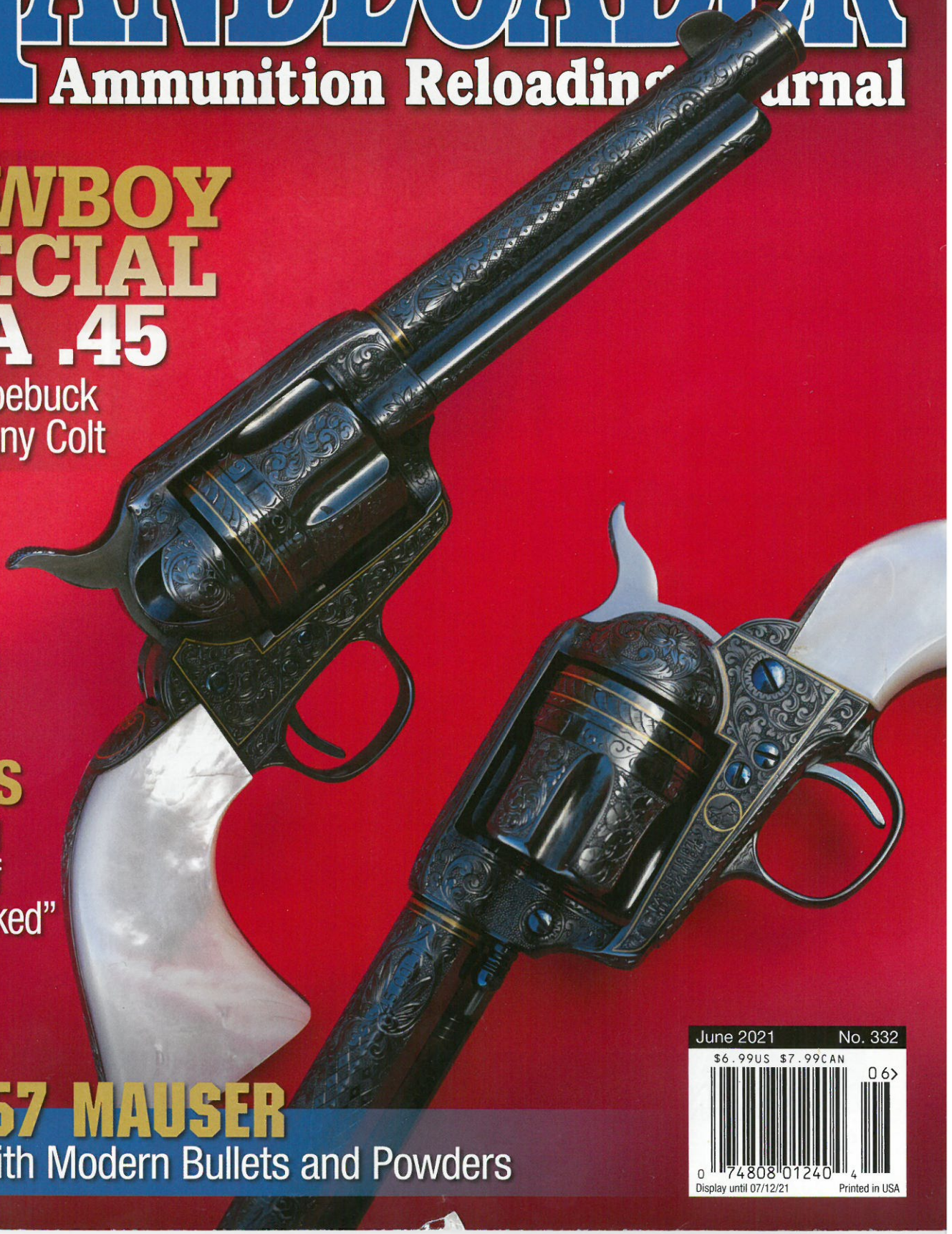

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Mannlicher's Bundle of Trouble

Different bullets tried in the 9x56 Mannlicher-Schönauer include the (1) Berry's 124-grain plated hollowpoint, (2) Hornady 125-grain HAP, (3) Hornady 170-grain InterLock Spire Point and (4) Prvi Partizan 180-grain solid. Only the two Hornady bullets proved suitable.

Still, the 9x56 M-S is Too Good Not to Shoot

Terry Wieland

In a 1994 *Pet Loads* article, Ken Waters described the 9x56mm Mannlicher-Schönauer as the most troublesome cartridge he had ever encountered. From brass to chamber dimensions to bullet diameter to sizing dies, everything – *everything* – presented difficulties. Only Waters' weakness for medium-bore cartridges, and the fact that he'd acquired a beautiful custom rifle, kept him at it until every problem was solved.

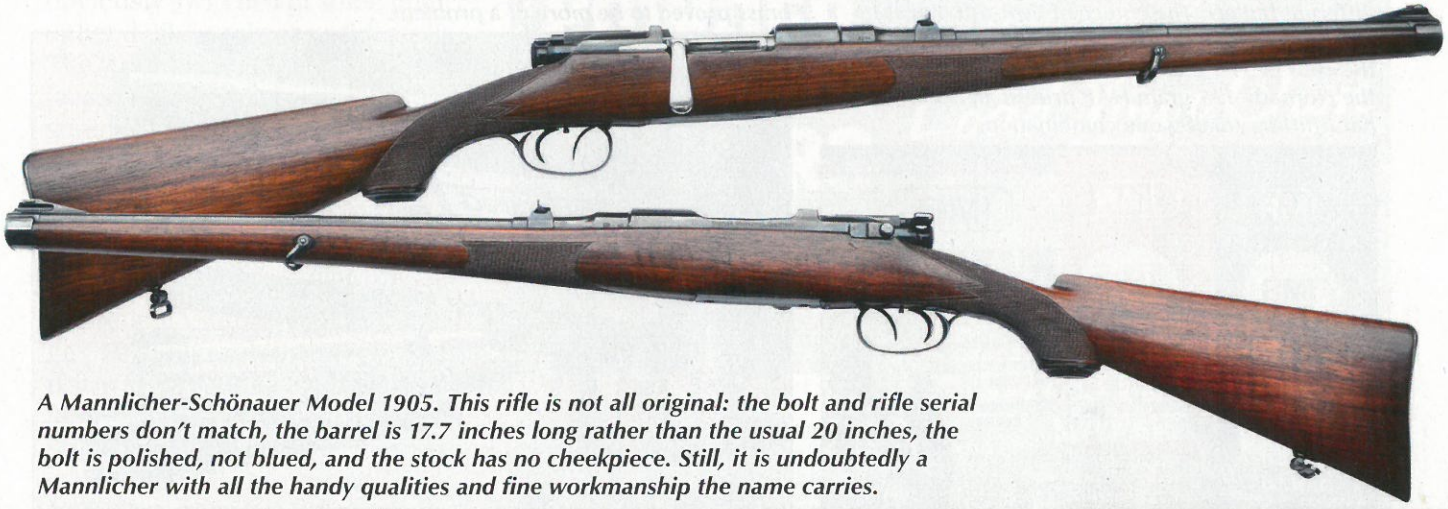
The 9x56 M-S was the second of four in the early series of rimless cartridges introduced by Steyr-Mannlicher. First came the 6.5x54 (1903), then the 9x56 (1905), 8x56 (1908) and finally the 9.5x57 in 1910. They were chambered, in order, in the Models 1903, 1905, 1908 and 1910, which makes it easy to keep track of which is which. That, alas, is about the only easy thing about them.

The Mannlicher cartridges closely resemble the Mauser line that appeared during the same period. Mausers proved more popular since they were chambered by other gunmakers using Mauser actions; as a result, both brass and ammunition is more readily available today. If they were interchangeable with the Mannlicher cartridges, all would be rosy. Except, they are not supposed to be. Except, sometimes they are. Which can make life exceedingly confusing.

In the 9x56 M-S and 9x57 Mauser, the dimensional differences are so slight as to be invisible to the naked eye. The Mauser is a millimeter wider at the base and a millimeter longer in overall length, but its body is a millimeter or two shorter, which places the Mannlicher shoulder farther forward. In theory, this should mean that it cannot chamber in a 9x57 rifle (but sometimes it can) while the 9x57 should not chamber in a 9x56, except – you guessed it – sometimes it can, too.

In the 1930s, Remington produced hybrid 9x56/9x57 ammunition that was supposed to work in either. It accomplished this seeming impossibility by adopting all the minimum dimensions and keeping pressures exceedingly low. How well it actually worked is anyone's guess, but at least it provided usable brass for handloaders.

Surprisingly, the best group, printing exactly where the sights were aligned (a six-o'clock hold at 50 yards) was obtained with the Hornady 125-grain HAP at 1,562 fps, powered by IMR Trail Boss.



A Mannlicher-Schönauer Model 1905. This rifle is not all original: the bolt and rifle serial numbers don't match, the barrel is 17.7 inches long rather than the usual 20 inches, the bolt is polished, not blued, and the stock has no cheekpiece. Still, it is undoubtedly a Mannlicher with all the handy qualities and fine workmanship the name carries.

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The Hornady .355-inch, 165-grain FTX (left) and the 170-grain InterLock Spire Point both worked well and either would be a good deer and black bear bullet.

Last year, I acquired a Mannlicher Model 1905 and set about finding ammunition for it. Fortunately, Quality Cartridge now offers brass and Redding stocks dies. Alas, Quality's brass will not chamber in my rifle, even after being run through the full-length die. This suggests that my chamber is exceedingly tight, to the point of not meeting CIP specifications, because as far as I can tell, the Quality Cartridge brass is dimensionally perfect. To add to the merriment, Quality Cartridge 8x56 M-S brass chambers in it perfectly, but I did not have enough to neck up for this little project.

Fortunately, I have a good supply of reworked 8x56 M-S brass fashioned by Bob Hayley a decade ago for my Model 1908. It necks up easily and works just fine. I also had some 9x57 brass that I had made from new Norma 9.3x57 brass. Guess what? Both the 9x57 and unaltered 9.3x57 brass will chamber easily. The only thing the rifle stubbornly refuses to accept is brass specifically made for it.

None of this is going according to the script. Baffled, I tried all four variations in my 9x57 rifle, a C.G. Haenal built on an early Mannlicher-type action, just to see what would happen, and it happily chambers all of it, including the 9x56 that it's not supposed to. *Aaaarrrggh.*

In the 1980s, in *Rifle* No. 86 (March-April 1983), John Van Marter wrote a report on the 9x56 M-S. He experienced almost exactly the same anomalies with brass that I did, finding that 9x57 chambered like it was made for it.

Now bullets. Ken Waters found that his bore measured a maximum of .353 inch; mine slugs at .3525. This pretty much rules out the use of standard .358-inch bullets, but I found five others that offered potential: three from Hornady (InterLock 170-grain, .355-inch Spire Points, 165-grain, .355-inch FTX and 125-grain HAP), as well as Prvi Partizan (Graf & Sons) 180-grain .352 roundnose bullets intended for the .351 Winchester Self-Loading cartridge, and Berry's plated 124-grain hollowpoints (.356) made for the 9mm Luger.

I also obtained some .356-inch, 200- and 250-grain spire points from Buffalo Arms and tried them in the preliminary testing. Of five identical rounds, two had flattened primers and stiff bolt lifts while the other three were quite mild, and the extreme spread in velocity was an astonishing 445 fps. The excess-pressure signs were disquieting, and I abandoned the effort.

The original 9x56 M-S factory load fired a 205-grain bullet at 2,114 feet per second (fps), which is almost identical to the .35 Remington. As Waters discovered, the 9x56 can be juiced up 100 to 200 fps from the .35 Remington level, and has the added advantage of using a spitzer bullet. This becomes a real asset when you drop down to a 170-grain bullet.

The rifle I obtained appears to be an all-original Model 1905 until you look at it closely. The name and model engraved on the action ring

Three powders that all performed well, albeit with different bullets. The choice of IMR-4064 or IMR-3031 would depend on which is more accurate with the 165- or 170-grain bullets, while Trail Boss and the Hornady 125-grain HAP proved an accurate and hard-hitting small-game combination.

The 9x56mm M-S dies are a stock item with Redding, but bullets and brass proved to be more of a problem.

9x56 M-S Handloads

bullet (*grains*)	powder	charge (*grains*)	overall loaded length (*inches*)	velocity (*fps*)	extreme spread (*fps*)	5-shot 100-yard group (*inches*)
125 Hornady HAP (.356)	Trail Boss	16.0	2.60	1,562	60	1.32*
165 Hornady FTX (.355)	IMR-3031	49.0	2.87	2,393	41	3.80
		50.0		2,440	43	3.83
		51.0		2,487	52	N/A
	IMR-4064	51.0		2,411	36	4.04
170 Hornady InterLock SP (.355)	H-4895	30.0	2.87	1,809	256	N/A
		40.0		1,912	98	N/A
		42.0		1,966	49	N/A
		44.0		2,061	82	N/A
	IMR-3031	46.0		2,229	18	N/A
		47.0		2,279	38	N/A
		48.0		2,335	26	3.88
		49.0		2,433	33	2.47
		50.0		2,469	40	N/A
	IMR-4064	48.0		2,244	28	N/A
		49.0		2,290	70	N/A
		50.0		2,326	61	5.40
		51.0		2,415	40	5.10
		52.0		2,469	54	N/A

* Groups shot at 50 yards.

Notes: A Mannlicher-Schönauer Model 1905 with a 17.7-inch barrel (1:12 twist) was used to test all loads. Federal GM210M primers were used throughout.

For more data on this cartridge please visit LoadData.com.

Be Alert – Publisher cannot accept responsibility for errors in published load data. Listed loads are only valid in the test firearms used. Reduce initial powder charge by 10 percent and work up while watching for signs of excessive pressure.

– *Patent Mannlicher-Schönauer Model 1905* – is fine, and the adjacent serial number – *3xxx* – suggests early manufacture. However, it has a 17.7-inch barrel, the same as the Model 1903, when all the sources insist the '05, '08 and '10 models had 20-inch barrels. Its bolt and bolt handle are polished rather than blued, a feature that did not appear until much later. (It was standard on the 1950 and subsequent models.) Since the serial number on the bolt does not match the one on the barrel, it was obviously switched at some point, either deliberately or accidentally. The stock is numbered 13xxx, and lacks the cheekpiece which was a standard feature on every Mannlicher I've ever seen, from the very earliest.

Given all of the above, could it have been chambered for the 9x57 Mauser instead of the 9x56? There is no indication the barrel has been altered in any way, and if it was opened up to accept the 9x57, then standard 9x56 should still chamber in it. All of these are questions that can never be answered since the Russians seized the Steyr records in 1945. All we are left with is conjecture, and a sweet little rifle that is a pleasure to carry and a joy to shoot, hybrid though it must be.

One of the tricky things about shooting any of the early Mannlicher-Schönauers is that the spool magazines were sculpted to fit one cartridge and bullet combination, and no other. Switch a 1903 (6.5x54 M-S) magazine with a 1908 (8x56 M-S) and it will probably work poorly at best. The 1905 was intended for a 205-grain roundnose bullet, not a 170-grain spire point. Fortunately, this turned out not to be a problem, unlike my 1903, which stubbornly insists on long, roundnose 140- to 160-grain bullets, or it won't feed at all.

With some rifles, you search for the best combination of bullet weight, velocity and accuracy to create the optimum hunting or target load; with others, you end up desperately seeking anything – *anything* – that works. My 1905 is one of the latter.

Beautifully made and finished though they are, the entire series of early Mannlicher sporting rifles – in my experience and, apparently, in Ken Waters' as well – need to be treated as individuals. Unlike buying a car, where you fill it with gas and drive away, these are more like horses. Until you saddle up and climb aboard, you are not sure how they will react or what they require. Accordingly, creating ammunition is something that must be approached cautiously, with an eye to getting a few rea-

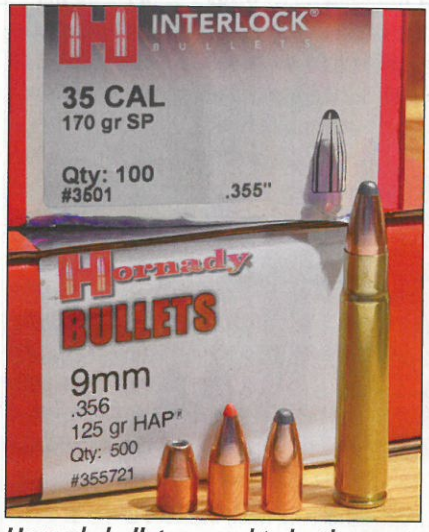
Mannlicher's Bundle of Trouble

sonable loads that provide the performance you want.

The two Hornady bullets are almost ideal. Presumably, the 170 grain is intended for the .350 Legend, and the 165-grain Flex-Tip for the .35 Remington in a tubular magazine, but both work just fine in my Mannlicher 1905.

Another bullet that could be useful is any 147-grain, solid or hollowpoint, made for the 9mm, but they were also unobtainable. And yes, I tried both begging and bribery. Acquaintances who had any in their secret stashes were demanding an inordinate ransom in primers, which are even harder to come by. Thanks, but no.

Fortunately, I have a good supply of Hornady 125-grain hollowpoints made for 9mm pistol cartridges. Because the bullet measures .356 inch, I wanted to keep pressures down, and loaded it light. Exactly what you would use a 125-grain hollowpoint for, in a rifle like this, I really have no idea. Rampant possums? Raccoons in the corn? Clays tossed on a dirt bank? Whatever you might decide, through some quirk of fate the combination of these bullets, with IMR Trail Boss, delivered a load that is dead accurate at 50 yards, shooting right where the sights are aligned, with almost no recoil.



Hornady bullets proved to be the most useful in the 9x56 M-S.

The medium bore, medium power class of cartridges, from left: (1) .35 Remington, (2) 9x56 M-S (Kynoch), (3) .358 Winchester and (4) .350 Remington Magnum. The 9x56 falls between the .35 Remington and .358 Winchester in power.

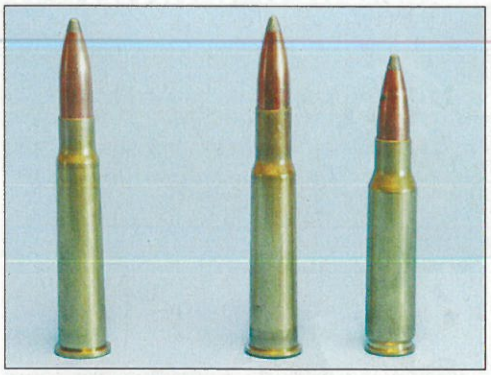
The .352-inch, 180-grain Graf & Sons solid proved to be so erratic that I abandoned it early on. Velocities were low and varied, and accuracy was nonexistent.

This left the Hornady 170 and 165 FTX. Some calculations with the old Powley Computer suggested IMR-3031 as the ideal powder (as I suspected it would) but recommended a load that seemed excessive. There is a digital rendering of the Powley found at kwk.us, and using the same data, it suggested a load of IMR-3031 that was six grains lighter! Accordingly, I started with it (see table).

With this as a basis, I tried both IMR-4064 and H-4895 for comparison. Hodgdon H-4895 delivered low velocities with unacceptable variations, while IMR-4064's performance was comparable to the IMR-3031. It's really a question of which is more accurate in your rifle. Either powder at around 51 or 52 grains fills the case almost to the mouth.

All of this experimentation was done with the resized 9.3x57 brass, which has a capacity of 61 grains of water, while the refash-

(Continued on page 61)



The U.S. Army semi-copied the .303 British (left) when developing the .30-40 Krag (center), but gave the .30-40 a much longer neck. However, in 1920, the very short-necked .300 Savage appeared (right), which almost matches the powder capacity of the .303 and .30-40.

chambered in the curve-shouldered Weatherby magnums have developed the dreaded donut, probably due to lacking a sharp shoulder/neck junction. If anybody has encountered donuts in those Weatherby rounds, I would appreciate hearing about it.

Annealing necks regularly also tends to result in finer accuracy, due to more consistent neck tension on seated bullets. In fact, many benchrest and other target shooters anneal their cases after every firing. After considerable experimentation, however, I have never found any advantage in annealing hunting brass that often, even in super-accurate custom rifles like the Sisk 6.5 PRC or my New Ultra Light Arms .257 Weatherby Magnum.

For those rifles I anneal cases after every four firings, but separate the brass into "lots," depending on how many times they're fired. Once-fired brass goes into a labeled Ziploc bag, twice-fired brass into another bag, etc. When loading a box of ammunition, I use cases from the same bag, and when they all end up in 4-times-fired bag, I anneal the entire batch. (This may seem obsessive-compulsive, but hey, what fun would handloading be without some OCD?)

Another trend harkens back to the semi-worship of long necks more than a century ago. Quite a few "modern" rounds with longer necks and relatively short bodies avoid the dreaded donut entirely because a seated bullet's butt doesn't encounter the shoulder/neck junction. Among them are the all-time most popular cartridges for short-range benchrest shooting, the .222 Remington and its successor, the 6mm PPC.

The standard Sporting Arms and Ammunition Manufacturers' Institute (SAAMI) overall length for both cartridges is long enough for popular bullet weights in each cartridge to be seated without ever encountering a donut, though the leeway is a little greater in the 6mm PPC. As an example, the bullet I've started using lately in my bench rifle (due to Berger discontinuing its 65-grain Boat Tail Target) is the Berger 68-grain Flat Base Target. The base ends up about .03 inch from the shoulder/neck junction.

One other recent 6mm accuracy cartridge, David Tubb's 6XC, was designed to avoid the donut even when using heavy target bullets in fast-twist barrels. Tubb used the .22-250 as the parent case, shoving the shoulder back to lengthen the neck, then blowing out the shoulder to the "accuracy" 30-degree angle. As a result, even long, high-ballistic coefficient (BC) boat-tails can be seated above the shoulder/neck angle.

Of course, very long boat-tails also help avoid the donut, because the full diameter bullet shank is generally .18 to .22 inch in front of the bullet's rear end. This is why the new .300 PRC cartridge allows high-BC bullets up to around 210 grains to be seated donut-free – thanks to a combination of a fairly long neck, short body and generous overall length of 3.700 inches.

This longer-neck/shorter-body is of course what Townsend Whelen admired about the .30-40 Krag, though the Krag's shoulder/neck junction is so gentle it would be extremely unlikely to develop donuts! •

Mannlicher's

(Continued from page 54)

ioned Hayley brass holds 58.5. This makes a difference when using the Powley Computer (either original or digital). The starting loads for the 165- and 170-grain bullets, with either IMR-3031 or IMR-4064, should be fine regardless of the brass, but it wouldn't hurt to check case capacity anyway.

I never did get to the load recommended by the original Powley slide rule before I ran out of case capacity. It would have been a *seriously* compressed load. This anomaly with IMR-3031 in the Powley has been noted before, which is why the digital version errs on the prudent side. Anyway, by the time I got above 2,400 fps with the 170-grain bullet, the recoil was becoming a little exuberant for my taste. In a rifle that weighs 6 pounds, 6 ounces, shooting a 170-grain bullet at near 2,500 fps, recoil is noticeable to say the least.

In order to conserve powder, bullets and primers in these uncertain times, I shot groups only with loads that looked most promising – that is, combining adequate velocity without being excessively punishing. The loads I tested with the 165- and 170-grain bullets, using both IMR-3031 and 4064, were near maximum with compressed powder. However, I included the velocities obtained with lighter and heavier loads for reference.

The bottom line of all this, is that I would get some of Hornady's 125-grain HAP, 165-grain FTX and 170-grain SP bullets, and combine them with IMR's Trail Boss 3031 and 4064. Out of that, a handloader should be able to get a good short-range varmint and plinking load as well as a fine deer and black bear combination.

And a final work of caution: Should you happen to have (or find) some suitable 200-grain roundnose bullets, I would consult the digital Powley Computer and start with its moderate and sensible recommendation, and only approach the loads arrived at by the original Powley slide rule with extreme caution. •