Pumpkin-rolling —with Accuracy

By ELMER KEITH

THE .45-70 HEAVY-BULLET LOAD, OVER SEVENTY-FIVE YEARS OLD, IS ACCURATE -- AND FOR SHORT-RANGE WOOD'S SHOOTING A DEADLY CARTRIDGE ON THE LARGEST OF GAME

BY MODERN STANDARDS the old .45-70 is a pumpkin roller. Its trajectory curve resembles the rainbow, yet it is accurate. At Fort Harrison, Montana, the long infantry 'trap-door' Springfield made a ten-shot possible at 600 yards on the B target from sand-bag rest—this with ancient Frankford Arsenal 500-grain black powder loads. Its predecessor, the .50-70 trap-door Springfield, won the Wagon Box fight against the Sioux under Red Cloud. Later, at the Custer and Rosebud fights, the slow single-loading .45-70 cavalry carbines proved no match for the good Winchesters in the hands of the Sioux. The Indians outnumbered the troops in about the same ratio as the fire power of their Winchesters did the Springfield single-shot carbines. Nevertheless while the .30 Krag became the service cartridge in 1892, the .45-70 saw use in the Army up into the Spanish-American war of '98. In that war some outfits were still armed with the long infantry trap-door .45-70, and every time a Springfield was fired at the enemy the cloud of smoke brought down a barrage of snapping 7 mm. nickel-covered bullets.

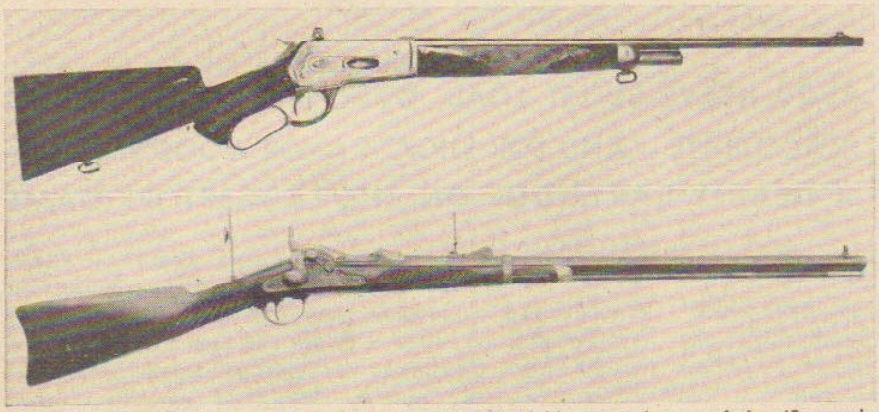
When I was a kid in Helena, there were a great many .50-70 Springfields around, as well as about an equal number of .45-70 Springfields. Many of the .50-70 rifles had come in over the Bozeman trail by ox team, more of them had come by ox train from Fort Benton; the .45-70's were brought into the country by many ex-Army men and Civil War veterans. Ammunition was plentiful and through the kindness of an old-timer, I fell heir to a .45-70 Springfield cavalry carbine and a case of 1000 rounds of Frankford Arsenal infantry loads with 70 grains of F. G. powder and 500-grain bullets. The carbine load was only 50 grains of black powder and a 405-grain bullet and recoil was not excessive with that load, but when the heavy infantry load was used in the carbine, recoil was plenty heavy for a skinny youngster of 13 years. The carbine was, however, very accurate and I learned much of long-range shooting with it.

I used the rifle on everything until I acquired a good set-trigger model '74 side-hammer Sharps for the .44-77-470 load, then that became my hunting rifle. Later I went to the .40-90, .45-100, and .45-120 Sharps, but the trap-door Springfield carbine killed considerable game and afforded me a lot of excellent practice. Later I owned and used a set-trigger .45-70-420 Sharps Creedmoor rifle with full-length Mogg telescope. It was very accurate. Since those days I have owned many different .45-70 rifles, but for hunting use I always liked the top-ejection Marlin and the model '86 Winchester the best.

A typical instance of the action of the 500-grain bullet backed by 70 grains of F. G. black was on a big bull elk I killed many years ago. I was working around a steep slope through brush and some timber, watching the hillside about 100 yards across a creek from me. Elk tracks were plentiful and what air movement there was was up the creek, while I worked down. The bull must have heard me, as he crossed the creek and went out on the other side, stopping in a big open place to look back toward me. As his nose turned and twisted trying to catch my scent, I placed the bead of the model '86 close behind the shoulder for a high lung shot and squeezed the trigger. I plainly heard the plunk of the heavy 500-grain slug striking him. Dropping down under the smoke, I saw him throw up his head and run around the shoulder of the hill, out of sight, with the horns lying along his back. There was time to give him a couple more, but being certain of my aim I did not try to shoot again. On crossing the creek and picking up his track, bits of frothy blood on the off-side, where the heavy slug had ploughed into the clay bank, were found where the elk had stood. Cutting a sharp stick I dug the bullet out of the bank. Then I gave him about fifteen minutes before trailing him. He had gone around the shoulder of the ridge, where he must have died traveling. He had rolled off the elk trail and down about 50 yards into the log-choked bottom of another small tributary creek. He lay on his back with horns driven deep into the soft earth, all four legs sticking up in the air. The position was ideal for dressing him out, but I later had a time getting horses down to him and out with the quarters and head. When I opened up the bull the chest

An example of what can be done to a .45-70 Officer's model Springfield is this gun restocked in curly maple by Alvin Linden, the late great stockmaker. The barrel was left full length over Linden's protest

cavity was filled with clotted blood and the meat was well bled out. The slug had penetrated both lungs, about four inches down from the spine, cutting a rib on the off-side. The entrance hole was not much over a half-inch in diameter, yet the bull had left a good blood trail on both sides after two jumps, from where he was hit until he rolled off the hillside. The bullet, when dug out of the hillside, was well expanded, but whether from impact with the elk or the clay bank, I could not determine. It performed well on an animal difficult to kill.



The '86 Winchester (above) and the Officer's model Springfield were only two of the rifles made for the .45-70 load. Both guns pictured here are in possession of the author but Keith does not fire the accurate Officer's model Springfield since it is in almost perfect condition

The .45-70 cartridge is ideal for reloading, but the hunter must remember it has a heavy bullet, is a smashing killer for close-range brush and timber shooting, and one should never attempt to make it a high-velocity load. Usually high-velocity loads mean short 300-grain bullets and they are seldom as accurate as the longer 405-, 420-, or 500-grain bullets. The 300-grain soft-point Winchester high-velocity load is, however, a very useful deer load which cuts down the lead necessary on crossing, running shots. Many old-timers carried a few of these loads handy, with the rifle sighted for 100 yards with the 405-grain smokeless load, and when a shot was obtained at deer out at 200 yards, the 300-grain high-velocity load was substituted for the heavier bullet.

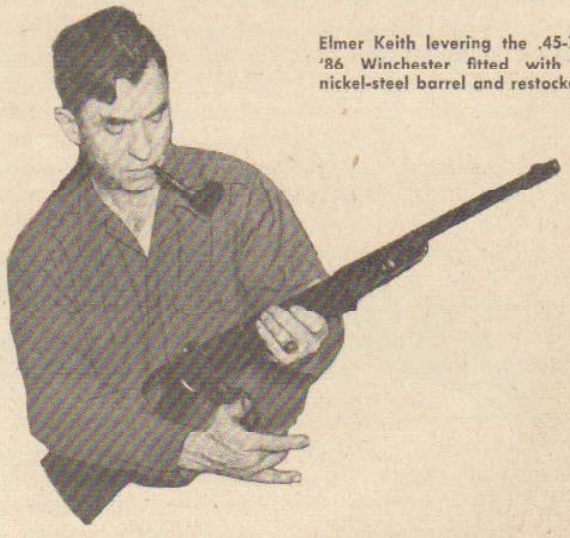
One can load the old cartridge with about anything from the round ball, cast a little oversize and backed either with a light charge of black powder or around six or seven grains of Du Pont No. 5, for rabbits and grouse, up to the heaviest black or smokeless loads. Black powder loads should have cast bullets of about one to sixteen tin and lead temper, sized to completely fill the .457-inch groove diameter, while round balls should be cast three or four thousandths oversize to give a longer bearing in the lands. You can safely use any amount of black powder you can get in the case and seat a bullet. I often used 85 grains of F. G. in the Sharps .45-70 by pouring the powder through a long tube slowly to settle it in the short case, then seating a heavy card wad with a wad of deer or elk tallow about one-eighth-inch thick, and the 420-grain paper-patched lead slug cast one to sixteen and seated friction tight. It made a very good long-range load. All heavy black powder loads, however, soon foul the gun and give off a very objectionable smoke cloud. At times in dense damp timber, you simply have to drop to the ground or run to one side to be able to see your game after the shot. Except in the trap-door Springfield and other rifles with actions limited to the black powder pressures of 25,000 pounds, one is far better off with smokeless loads and with soft-point metal-jacketed bullets.

The cartridge really comes into its own when used in the excellent solid-frame lightweight model '86 Winchester with 22-inch nickel-steel barrel. For all American game shooting in timber or brush up to 100 yards, or a little over, this rifle with good receiver sight and the 405-grain soft-point smokeless load is hard to beat; and the cartridge is only excelled by the same bullet in a handload at around 1700 to 1800 foot-seconds velocity. The factory 405-grain soft-point smokeless load gives 1310 foot-seconds velocity, only 100 feet higher than the 500-grain government black powder load in the long infantry rifle. The load is purposely held down to low velocity because it is also used in so many older rifles, trap-door Springfield, Remington rolling block, Remington-Lee, Winchester-Hotchkiss, and many others, but a good '86 Winchester will safely handle pressures up to 40,000 pounds, while the old black powder loads were limited to 25,000 pounds chamber pressure for safety.

Among the older smokeless loads, the man who wants the 300-grain soft-point high-velocity load can use 30.8 grains of Sharpshooter for 1886 foot-seconds velocity with only 23,200 pounds pressure. This is the old factory high-velocity load. It can be greatly improved with modern powders, and velocities of around 2200 foot-seconds with the 300-grain bullet can be had safely. A charge of around 50 to a maximum of 52 grains of Du Pont 4198 powder will give equal velocity with the 300-grain bullet. Different rifles vary somewhat in groove diameter, so the exact charge cannot be given for all rifles as some require a grain or two less for the same results.

With the 405-grain soft-point—to my notion the best bullet of all in this cartridge for average big-game shooting—you can easily improve on factory ballistics. One very fine load was the 405-grain soft-point bullet backed by 32 grains of Scheutzen powder, which gave 1650 foot-seconds velocity with only 25,000 pounds pressure and was very accurate. The same load with ten grains of black powder priming and black powder primers gave even higher velocity and both were very accurate, making two-inch and sometimes even smaller 100 yard groups from 'tight' rifles. With the ten grain black powder priming, pressures were increased to 30,000 pounds.

With Du Pont 4198 powder the 405-grain soft-point can safely be given a velocity of around 1800 foot-seconds or a trifle more by using 48 to a maximum of 50 grains. With



Elmer Keith levering the .45-70 '86 Winchester fitted with a nickel-steel barrel and restocked

Du Pont 3031 excellent velocities can be obtained with either the 300-grain bullet or the 405-grain soft-point. With the 300-grain slug, 48 grains of powder give a velocity of 1675 foot-seconds and if higher velocity is desired 57 grains of 3031 powder will give fully 2000 feet a second. With the 405-grain jacketed soft-point a charge of 53 to 54 grains of 3031 will give 1800 to 1900 foot-seconds, a very deadly load for anything on this continent up to 100 yards.

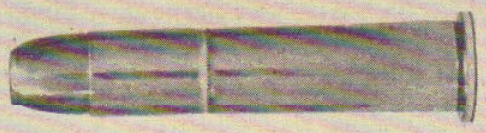
When you push the 405-grain flat-nose soft-point at 1800 feet or more, you have a killing load. While the black powder loads had about the same practical trajectory as the .22 long rifle cartridge and, when loaded up to 1300 to 1400 foot-seconds, closely approached the trajectory curve of the .22 long rifle high-speed, the more powerful handloads with velocities of 2200 feet for the 300-grain and 1800 to 1900 feet for the 405-grain bullets take the cartridges completely out of the black powder trajector class and more closely approach the actual killing power of the .405 Winchester and the .400 Jeffrey cartridges.

Personally, I much prefer a good model '86 Winchester with 405-grain soft-points at 1800 feet or better to any .405 Winchester model '95. The action is nicer, capable of being reloaded while you keep a loaded round in the chamber and the arm at full cock, as when watching wounded game. With the model '95 in any caliber, if you push a cartridge down in the magazine without being sure the rim of the cartridge is forward of the one below it, you will hopelessly jam the rifle. With the '86, you can push hulls in through the loading gate by feel alone, and as long as you push them completely home there is no danger of jamming the action. The '86 action is just as fast as any model '95, and while many very experienced hunters who have used the .405 on lion—Forbes, Colby, Gus Peret, and Teddy Roosevelt—swear by it, I would personally much prefer the .45-70 model '86 with 405-grain at 1800 to 1900 feet.

The .405 has long been a stand-by with experienced Alaskan guides for big bear but Jack Johnstone prefers his old .50-100-450 model '86 for the work, and if there was a factory load with the 405-grain soft-point at 1800 to 1900 foot-seconds I believe many would prefer the .45-70 to the now-obsolete .405 model '95. If Winchester would only chamber and bore their excellent model 71 for the .45-70 load and bring out a modern load for it with the 405-grain soft-point at 2000 feet, it would make the finest lever-action timber or short-range rifle extant and be far superior to their present .348 caliber in this model for all large game at close range. Remember, dangerous game is not really dangerous until it is in close proximity to the hunter, and when that is the case he doesn't need high velocity but rather a big caliber with a heavy bullet that will penetrate well and also deliver a heavy knock-down wallop.

On deer the 300-grain .45-70 high-velocity load is a quicker killer than the slower 405-grain load, but the reverse is true on elk, moose, and the larger bear. The 405-grain .45-70 slug, or the 500-grain grooved government bullet for that matter, will not drop a deer in its tracks with broadside lung shots as quickly or as often as will a .270 or .30-'06 150-grain or a 180-grain .300 Magnum, but it will not waste half as much meat either and will always leave a blood trail where the light high-velocity bullet often does not.

If hunting in open or partly open country where your game will present 150- to 300-yard or longer shots, then forget the .45-70. However, if the hunting is in dense timber and brush where you can seldom see more than 150 yards and the game is usually encountered at 100 yards or less, then the old cartridge is right at home. I would personally prefer a good lightweight 22-inch nickel-steel barrel model '86 Winchester in .45-70 caliber for such timber hunting to any .30 or smaller caliber rifle ever invented, including the scope-sighted .300 Magnum. I want something that will plough through brush and limbs without disintegrating, something that will go through a beast broadside and leave not only a good wound channel but a good blood trail as well. When black powder loads and cast bullets are used, the old 330-grain Gould hollow-point, backed by 70 grains or 75 grains of F. G., is a splendid killer on any deer and a load that was preferred by a good many old-timers. Frank Waterman also liked the 350-grain .45-75 soft-point metal-jacketed bullet very well when properly handloaded with smokeless powder, and he has killed his full share of elk and deer as well as moose and bear. On light animals like deer neither the 405-grain black powder carbine load or the 500-grain infantry load will open very large holes with their round noses simply because velocity is too low. The flat or hollow-points open much better wound channels on such light game, but on heavy game the heavy round-nose slugs are right at home, usually expanding plenty on the heavier, tougher muscles and bones. ◆ ◆ ◆



On June 6, 1872, Congress approved an Act authorizing the selection of a breech system to be used in muskets and carbines for the U. S. military service. In pursuance of the Act, a board of officers, with Brigadier General A. H. Terry, U. S. Army, as senior member, was selected to study the various breech systems. The Board selected the Springfield system. The Springfield rifle, as approved, was essentially the same as the Springfield musket model 1870 which had been placed in the hands of troops for trial. The most outstanding difference was the change in caliber from .50 to .45. The .45-70 thus came into being with the Springfield model 1873. Subsequent models 1877 and 1879 incorporated minor changes which applied to both the rifle and the carbine.

The original service cartridges for the .45-70 were loaded with a 405-grain bullet for both the rifle and the carbine. The rifle cartridge, however, was loaded with 70 grains of black powder while the carbine cartridge was rationed to 55 grains. In the early 1880's the government was experimenting with the 500-grain bullet later used in the rifle.

Many rifles, including Winchesters, Remingtons, and Marlins, have been chambered for the .45-70 and over the years a large variety of bullets, from the 140-grain round lead ball to the 500-grain, have been manufactured commercially.

At the present time no rifles are being chambered for the .45-70 but the ammunition is still being produced by loading companies. These companies have apparently standardized on the 405-grain soft-point bullet loaded to a muzzle velocity of 1310 feet a second. Pressures are held to the lower level of about 28,000 pounds a square inch to permit use in the old guns. ◆ ◆ ◆