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Jade Artzer and Leaona Anderson helped Conservation Officer Mike Hopper ram the powder, wad and bullet into a rifle at the Youth Skills Day this fall.

— Photos by Tom Betz/The Goodland Star-News

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# Muzzle loading still popular

By Dana Paxton

The Norton Telegram  
dpaxton@nwkansas.com

Many types of firearms have been used throughout history, but one of the oldest, the black powder or muzzle-loading gun, is still around today and still produced for a growing number of hunters interested in a challenging experience.

According to Richard D. Frantz, author of "A Chronology of Black Powder", two men are thought to be the first inventors of this type of firearm. Roger Bacon, a friar, built the first one in 1214. The second was a monk by the name of Berthold Schwarz, who produced his version in 1330. Funny how two men of the church were the first to make a weapon to kill with.

The name is self explanatory: they're loaded from the muzzle with gunpowder, a patch and bullet. Then you need a way to get a spark to light the powder.

The style of how the gun is made changed over the years. Some were hand-held pistols, some cannons and some rifles. The first type was called a touch lock. The black powder was poured into a pan on the side of the gun, so the gun had to be held sideways to fire. Next came the match lock, followed by the German version made in 1510 called a wheel lock. This gun was accepted for military use in 1590. When using muzzle-loading rifles in battle, accuracy wasn't an issue. Efficient mass firing was the key to winning, and these weapons did the trick.

Before long, the flint lock came along. This used a piece of flint stone to create the spark to light the powder. This gun was also called the fire lock or the dog lock.

The next type didn't come until 1805, when a Scot invented the percussion lock. At the base of the charge sat a small cap covering the nipple. When struck by the hammer, it puts off a spark igniting the powder. This type of firing mechanism was waterproof and unlike the others before it, it had no pan for holding the powder.

In the mid 1400s, gunsmiths began installing rifling, spiral grooves on the inside of the barrel, but it would take 400 years to become common on the battlefield. The spirals give the bullet in a spinning motion as it exits the end of the barrel, greatly increasing accuracy.

Mass production of muzzle-loading rifles began during the Civil War. The most commonly used rifle was the Springfield Rifle Musket, an American-made gun with a single-shot percussion lock. It used the first bullet-shaped projectile, not a round ball as had been used in the past. With rifling of the barrel, this gun shot for range and accuracy, anywhere between 400-500 yards. Over 1.5 million were made.

The next and the second most used rifle during the Civil War was the British Enfield. It was also a single-shot muzzle-loading musket. This weapon was standard for the British Army from 1853 to 1867. Over 900,000 of these guns were shipped to the Americas during the Civil War.

All of these gun are useless without black powder. During the Civil War, there were three

main suppliers of the needed powder, DuPont, Lafflin and Rand & Hazzard.

Three things are needed to make the powder, potassium nitrate, sulphur and charcoal. These elements combined create a chemical reaction needed to ignite, form a gas and force the bullet from the muzzle. This is a highly explosive mix; all it takes is one spark. Since it was so explosive, black powder was expensive and dangerous to transport.

The first know domestic production was in 1675 in Milton, Mass. Making the powder became standardized in 1800. In 1804, DuPont Powder Mill was established on Brandywine Creek near Wilmington, Del. By 1810, the firm was the largest producer of that time and it continued into the age of smokeless powder.

In 1825, a company in Europe looked at the different granulations of the powder, which led to today's grading system of powder. "F" determined the size of screen the granules would pass through. The "g" in the grading system stands for granulation. There are several types of grades of powder today. The "4F" is the smallest, used in Flint Locks and small-chambered revolvers like the .22 and .32 caliber. The "3F" is recommended for muzzle-loading rifles of .50 caliber or less. The "ffg" is used in larger rifles, cartridge or not, and the target class load for pistols. Last is "fg," the largest granulation, used in cannons, large-bore guns of 10 gauge and up for shotguns and double rifles of 8, 6 and 4 bore.

In 1970, U.S. based Dan Pawlak and Hornaday Bullet Co. came up with a substitute for black powder called Pyrodex. This new powder still absorbed some moisture, but less easily fouled, and not classified as an explosive, so it was cheaper to ship. This form requires compression to burn correctly, so it could not be used in a pan-type flint lock.

The DuPont powder plant caught fire and burned in 1970 but the firm rebuilt, only to sell out in 1975 to Gearhart and Owens Co. Currently, several mills continue to produce black powder, including G-O, Elephant and Harvey & Clay.

To hunt with this type of firearm is a challenge. You seldom have the time to reload to get off a second shot before the game disappears, so you'd better make the first one count.

The muzzle loader is easy to load, yet great caution must be taken when doing it, as the wrong load could cause the barrel to split and blow up. The first thing to go in the muzzle of the barrel would be the properly measured amount of black powder. This depends on the size of gun being shot. Second is the patch, a small piece of cloth, and third is the ball. All of this is then forced down the barrel with a ramrod to tightly pack the contents at the bottom. The percussion cap or powder in the pan is then placed and you are ready to fire.

Kansas has three seasons set for muzzle-loader hunters, mostly earlier and longer than regular rifle seasons. Deer season is from Sept. 30 to Oct. 30, antelope season from Sept. 27 to Oct. 4 and elk season Sept. 1 to Oct. 3.

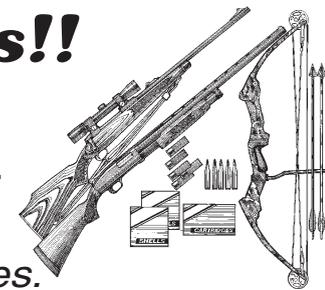
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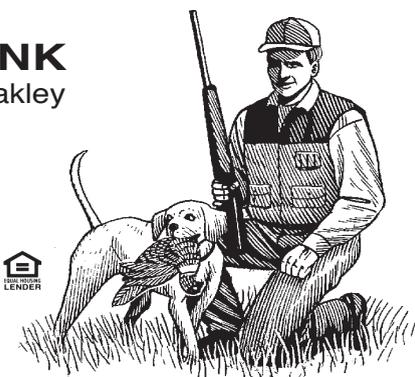
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