

Hitting the Mark

*"This is my rifle. There are many like it, but this one is mine.
My rifle is my best friend. It is my life. I must master it as
I must master my life."*

—from *The Creed of a United States Marine*

> What invention revolutionized infantry warfare, put food on the table for American frontier families and has enthralled millions of action movie fans? The rifle.

As early as the 13th century, Chinese warriors used portable fire lances (bamboo or metal tubes that shot projectiles by using gunpowder). Handheld firearms spread quickly across the Eurasia continent; the Mamluks, the Mongols and the Muscovites all used firearms in the 1300s. Eventually, western Europeans adapted the fire lance technology and created smoothbore firearms—primitive weapons often described as small, portable cannons.

Rifles, designed to be fired from the shoulder, are distinct from their smoothbore counterpart (the musket) because of the pattern of grooves, or "rifling," edged into the barrel's walls. These grooves impart a spin on the bullet that elongates the distance over which the rifle can fire accurately—much the way a competent quarterback spins the football to increase the distance and accuracy of a pass. In the early 18th century, Benjamin Robins, an English mathematician, used Newtonian mathematics to show that elongated bullets, if fired from rifled barrels, would exhibit increased accuracy over longer distances.

Not surprisingly, the rifle's accuracy made it a favorite among American colonists. "Nowhere else was the cult of accuracy so rigorously worshiped as in colonial America," notes military history

expert Alexander Rose in his book, *American Rifle: A Biography*.

But military commanders were slow to utilize the early rifle because it was prone to mechanical problems. The black powder used to reload the weapon often mucked up the barrel, and reloading was a painfully slow process. Also, conventional European infantry tactics involved the two opposing armies lining up and exchanging volleys. Accuracy over a long distance wasn't all that necessary when the enemy was crouching stationary less than 100 yards away. While specialized sharpshooters were enthusiastic early adopters of the rifle (gaining notoriety in the Revolutionary War and the War of 1812), the rest of the army relied on smoothbore muskets.

That changed with the invention of the Minie ball in the 1840s—a bullet system, named for its French co-developer Claude-Étienne Minié—that effectively solved the slow loading problem (an expanding "skirt" on the bullet made it easier to reload than earlier tight-fitting bullets) and increased the shooting range to 300 yards. By the mid-1800s, rifles had become the weapon of choice on the battlefield, figuring prominently in the American Civil War, the First Boer War and the Russo-Turkish War.

Around this period, the American Oliver Winchester began marketing and manufacturing the Winchester repeating rifle, which became wildly popular among frontiersmen in the later 1880s, earning its reputation as

"the gun that won the West." Innovations like smokeless powder in the 1890s only increased the rifle's appeal.

The rifle's development throughout the 20th century is impressive. What started as a single shot firearm has evolved into a modern weapon capable of emitting an average of 500 to 800 rounds per minute. It's hard to believe that contemporary offerings like the M-16 and the AK-47 have any connection to the primitive peashooters of the 17th and 18th centuries. But that connection—which unites American colonists, Turkish defenders and contemporary NATO forces—continues to captivate historians and rifle enthusiasts alike. —

