

# Browning: One Man's Impact

John Moses Browning was the most prolific gun designer ever — yet his guns were marvels of simplicity and reliability.

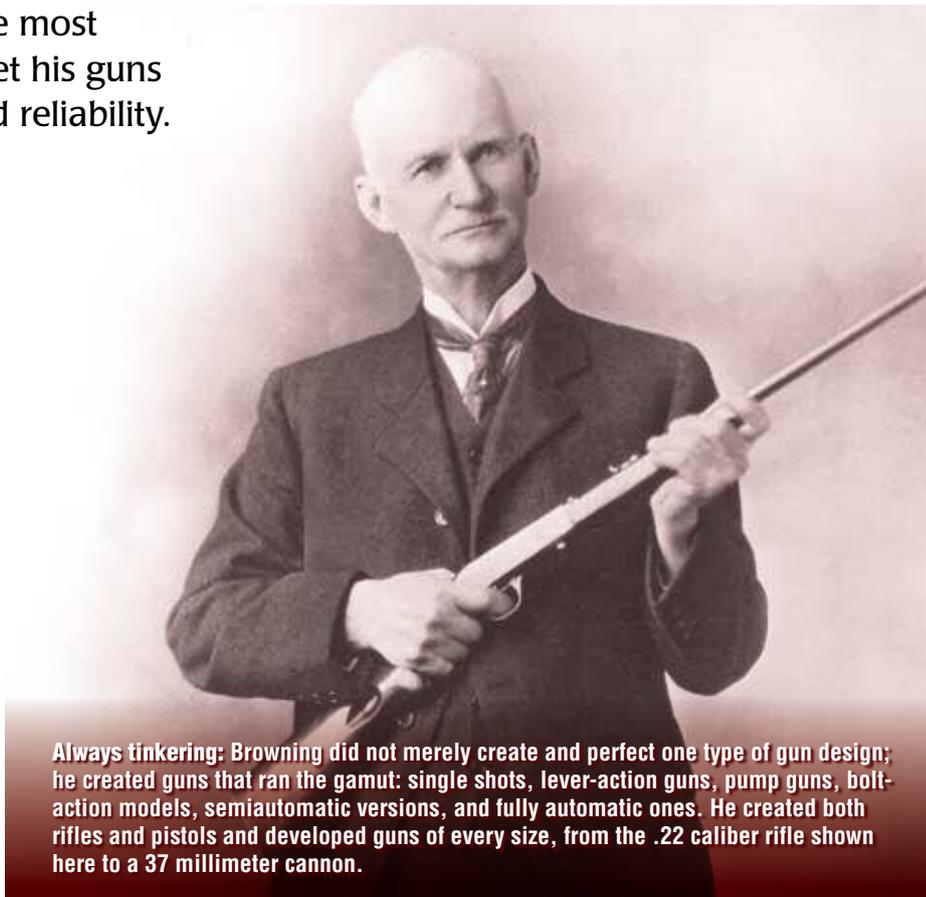
by Charles Scaliger

On a particular fall day in 1889, the members of the Ogden Rifle Club of Ogden, Utah, were out in force. The men were target shooting, but doubtless found the brilliant fall colors of aspens and oaks on the high peaks of the Wasatch Range a distraction. Enticing too were the flocks of migratory waterfowl wheeling overhead and grouse calling in the brush. But all rifles that day were trained on paper targets, although one of the competitors, an unusually tall man with stern but handsome features, was having trouble concentrating on hitting the mark. As his good friend Will Wright took a shot with his rifle, the taller man noticed how a clump of desert weeds in front of the rifle was knocked back by the blast from the gun.

It was not the first time the tall man or any of the spectators had seen such an event; the big bore rifles fashionable on the Western frontier always produced a formidable muzzle blast. But the tall man, who was, at age 34, already an accomplished gunsmith and firearms manufacturer, found himself for the first time taking notice of the muzzle blast and pondering what it meant. Every discharge of a gun released a tremendous amount of energy, much of which was dissipated in the blast out of the muzzle. Now the tall man found himself wondering whether that burst of energy could somehow be put to use.

Unable to concentrate any longer on the competitive shoot, the man called his two brothers and left the shoot. Asked for an explanation, he said only, “An idea hit me — biggest one I ever had.”

On the way back to town, the tall man began thinking aloud, explaining to his two brothers his belief that the energy from the muzzle blast might be harnessed



**Always tinkering: Browning did not merely create and perfect one type of gun design; he created guns that ran the gamut: single shots, lever-action guns, pump guns, bolt-action models, semiautomatic versions, and fully automatic ones. He created both rifles and pistols and developed guns of every size, from the .22 caliber rifle shown here to a 37 millimeter cannon.**

Ogden Union Station Collection

somehow. “It might even be possible to make a fully automatic gun,” he surmised, “one that would keep firing as long as you had ammunition.”

To a casual listener in the late 19th century, such an idea would probably have seemed preposterous, even though rapid-fire weapons were no novelty; the French and Belgians had deployed the first mitrailleuse in the 1850s, and the American Civil War saw the deployment of the famous Gatling gun. These guns, along with the Gardener gun developed in the 1870s, were all operated by hand cranks, and were not capable of true automatic fire. The Maxim gun, the first true automatic weapon, which used recoil force to cycle the gun, was developed in 1884, and could fire roughly 600 rounds per minute. The gun was deployed to devastating effect by British forces in colonial Africa.

But the idea of a gas-operated automatic weapon was an altogether revolutionary idea and its originator, unassuming Utah gun-maker John Moses Browning, the most creative inventive genius ever to apply his talents to the creation of firearms.

## Pedigree

Browning had a gun-maker's pedigree. His father, Jonathan Browning, grew up in frontier Tennessee and made a living repairing and building firearms on his own account. He eventually settled in Quincy, Illinois, on the Mississippi River, at a fateful time in that state's history: 40 miles upstream, an obscure and much-reviled new religious sect, the Mormons, were building a settlement.

One day a Mormon stopped by Jonathan's shop, and began telling the Tennessee gunsmith about the new religion. Be-



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**The .30 caliber “Browning Peacemaker”** was the first gas-operated machine gun in the world. It got its nickname in action during the Spanish-American War. Though a recoil-activated machine gun — the Maxim — was already in use amongst the world’s armies at the Peacemaker’s inception, gas-operated machine guns would dominate from that point forward.

fore long, Jonathan and his wife converted and moved north to Nauvoo, the Mormon settlement, where Jonathan’s gunsmithing skills soon proved invaluable to the Mormon settlers. When the Mormons were driven from Illinois and forced to move westward, Jonathan went along, keeping the pioneers’ guns in good repair for the arduous and dangerous trek across the high plains to the valley of the Great Salt Lake. Jonathan and his family settled in Ogden, 40 miles north of Salt Lake City, and soon built a prosperous gun smithy.

John Moses Browning grew up in sparsely settled 19th-century Utah, when Indians still came regularly to the town looking for food or to trade with the Mormons. The arrival of the railroad in Ogden transformed that tiny settlement into something of a hub, bringing with it increased business for Jonathan Browning and his sons, who all worked in the family business.

Although all of Jonathan’s sons were hard workers and able gunsmiths, John Moses stood out from a very early age. When he was 10, John constructed his first gun using only a broken flintlock barrel, a piece of wood, and some wire and scrap tin. Crude though the weapon was, it sufficed to shoot three prairie chickens with a single shot.

Proud of his accomplishment, young John doubtless expected lavish praise from his father. Instead, the elder Browning, upon examining the firearm, shook his head and said, “John Mose, you’re going on eleven. Can’t you make a better gun than that?”

Abashed, John took apart the firearm, reflecting as he did on his father’s gentle rebuke. Had he taken a little more time and care, he could have made a much better weapon. The rest of his life was eloquent testimony that his father was right. John Moses Browning, son of a Utah Mormon pioneer, became the most prolific firearms inventor the world has ever known, designing dozens of new guns, from single-shot rifles to anti-aircraft cannons, and accounting for more than 100 patents.

### Manufacturer to Inventor

His career as an inventor began modestly enough. With his brothers, John took over his father’s gun shop, enlarging and expanding the business. In 1878, when he was 23 years old, John invented his first marketable gun, a single shot rifle which quickly became one of the most popular firearms in the intermountain West. By the early 1880s, the Browning brothers had produced roughly 600 of the meticulously crafted rifles. The income from Brown-

ing’s invention was enough to enable him and his brothers to slowly expand their Ogden business, but conferred neither fame nor fortune.

All of that was to change, however, when a salesman for the Winchester Repeating Arms Company happened across a rifle the likes of which he had not seen before. The name and place of the manufacturer, “Browning Bros. Ogden, Utah USA,” were stamped on the barrel. The salesman, knowing that his bosses were always interested in potential competitors, purchased the weapon for 15 dollars and sent it to the Winchester factory in New Haven, Connecticut.

The management at Winchester, who had neither heard of Browning Bros. nor ever seen a single-shot rifle of such high quality, was indeed interested. The rifle’s serial number, 463, indicated that hundreds of the guns had already been made, a significant new competitor from a completely unexpected quarter.

T. G. Bennett, vice president and general manager of Winchester, boarded the westbound train within a week of receiving the mysterious new rifle, determined to find its maker and, if possible, purchase the rights for its manufacture.

The imperious, no-nonsense Bennett must have cut quite a figure in the dusty streets of Ogden in 1883, the well-heeled, professionally attired Easterner on the rough and ready streets of a young western railroad town. He lost no time locating the Browning Brothers gun shop on Ogden’s Main Street, where, despite his bewilderment at the youth of John and his brothers, he offered to buy rights to the exclusive manufacture of John’s gun.

It was the great turning point in John’s life, a moment that, though neither Bennett nor Browning could possibly have foreseen it, would prove pivotal in the military history of the modern age. For John Moses Browning, despite the success of his business, was an inventor, not a manufacturer, at heart. He confessed to Bennett that he already had the details for a new rifle — a repeater that could handle large cartridges, something none of the repeating rifles then made could do — fully fleshed out in his mind. If Winchester were amenable, he would be happy to work on that gun as well.

Bennett, with a successful businessman’s

instinct for superior talent, paid John \$8,000 for the rights to the single shot rifle, and an alliance that lasted 19 years was born. True to his word, John soon developed a working model of what would become the Winchester Model 1886 Lever Action Repeating Rifle. After securing a patent, John traveled to New Haven with his brother Matt to give Winchester the right of first refusal. Bennett was delighted with the gun and purchased the rights to it for an undisclosed but (for the day) very substantial sum — probably in the realm of \$50,000 dollars. By now thoroughly convinced of the young Utah's genius, Bennett asked John to design a lever-action repeating shotgun for Winchester — which Browning had ready a mere eight months later. The Model 87 repeating shotgun, though not the first repeating shotgun ever produced, was the first truly successful one.

The next two years, from 1884 to 1886, were a time of astonishing creative output, to the mutual benefit of John Moses Browning and Winchester. During that brief span, John developed and Winchester purchased from him no fewer than 11 different guns. Although not all of John's firearms were put into production — Winchester thought highly enough of his abilities as an inventor that it purchased all of John's patents to prevent any of them from going to competitors — the Browning-designed rifles and shotguns that were produced utterly revolutionized American sporting arms.

Despite the popularity of his inventions, however, John Moses Browning — unlike celebrity inventors of comparable genius like Thomas Edison — remained relatively unknown outside the rarefied world of gun manufacturing. His name was not attached to any of the new Winchester arms, which was probably how the modest westerner preferred it.

John Moses Browning, like the rest of his family, was a member of the Church of Jesus Christ of Latter-Day Saints. In those days, the Mormon Church frequently called older married men on missions, and in early 1887, at age 32, it was John's turn. He was called away from wife, children, and gun inventing to serve a two-year mission in Georgia. Once during his mission, he and his companion stopped to visit a sporting goods store that had on display a brand new Winchester 87 repeating shotgun. The proprietor was surprised at how facilely the besuited out-of-towner handled the weapon and operated the action. When the proprietor observed that John obviously knew how to handle the gun, John's companion replied, "He ought to. He invented it."

Upon returning from his mission in early 1889, John Browning resumed his firearms inventing with undiminished zeal. He continued to develop new hunting rifles for

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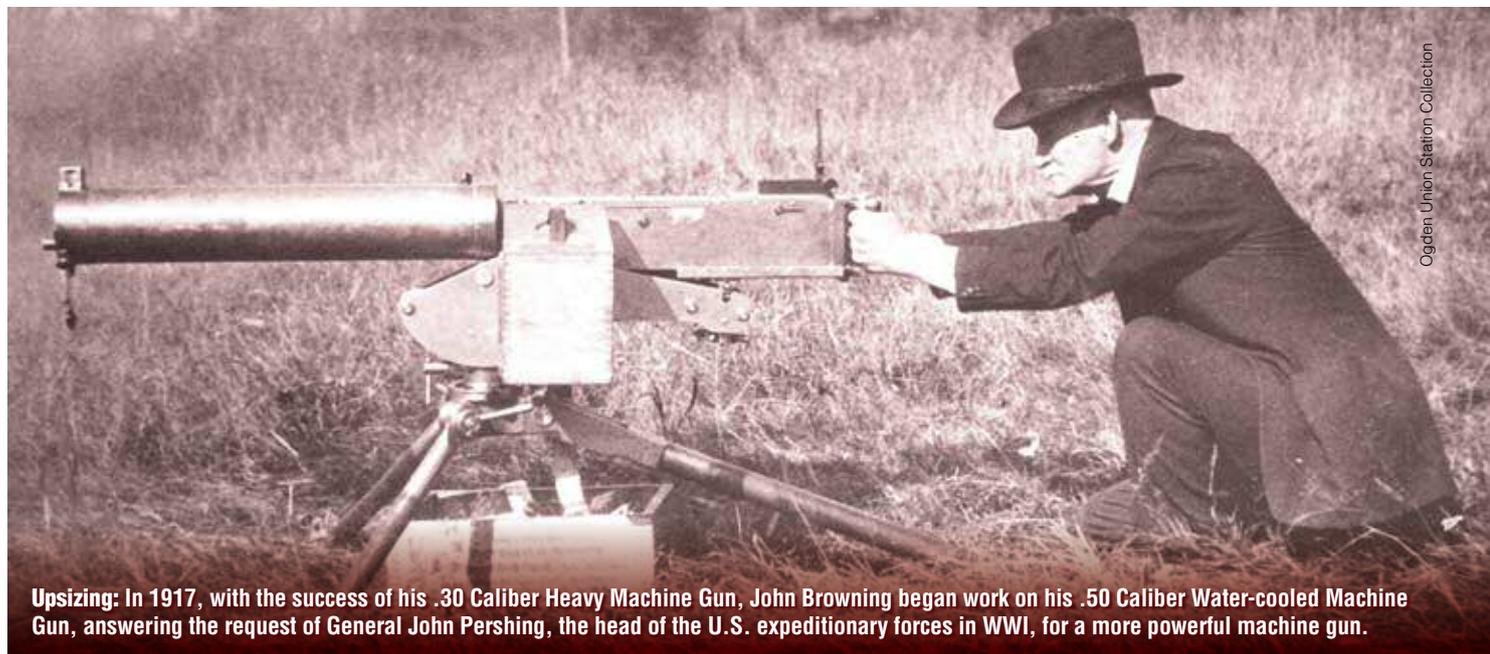
Winchester into the 1890s, but it was the episode at the Ogden Rifle Club, when John noticed the energy from the muzzle blast in a new light, that directed his genius in a new direction, one that would have life-or-death consequences for countless millions: the development of military arms.

### **Gas-operated Guns**

By the morning following his initial burst of inspiration, John had worked out a design for the first gas-operated automatic weapon of any kind, and by late afternoon of that same day, he and his brothers had the first crude model assembled. After a number of refinements in the design, Browning was ready to tell Colt — unlike Winchester a manufacturer of military guns — about his new invention. He wrote the Colt Company in November 1890:

Dear Sirs,

We have just completed our new Automatic Machine Gun & thought



Ogden Union Station Collection

**Upsizing:** In 1917, with the success of his .30 Caliber Heavy Machine Gun, John Browning began work on his .50 Caliber Water-cooled Machine Gun, answering the request of General John Pershing, the head of the U.S. expeditionary forces in WWI, for a more powerful machine gun.

The amount the government was offering — \$750,000 — was only a fraction of the more than \$10 million John Browning could have made on royalties for already-booked orders for his newly designed .30-caliber machine gun. But John did not hesitate. “Major, if that suits Uncle Sam, it’s all right with me.”

we would write to you to see if you are interested in that kind of gun. We have been at work on this gun for some time & have got it in good shape.... The one we have just completed shoots the 45 Gov’t charge about 6 times per second and with the mount weighs about 40#. It is entirely automatic and can be made as cheaply as a common sporting rifle. If you are interested in this kind of gun we would be pleased to show you what it is & how it works as we are intending to take it down your way before long.

Colt’s response was cordial but guarded; the Gatling gun had not been terribly profitable, but they were willing to have a look at the new machine gun if John were ever in the Hartford area. A few weeks later, John and Matt traveled to Hartford with their new invention. They were received warmly by Colt officials who were only too keenly aware of Browning’s reputation with Winchester. John Hall, the president of Colt, was extremely cordial and happy to arrange for the Browning brothers to demonstrate their new weapon on the company firing range. The machine gun, mount, and four 50-round belts loaded with .45/70 caliber rounds were set up, and the odd-looking machine gun prototype fired all two hundred rounds in a few seconds without a single misfire. Colt officials were suitably impressed, but still skeptical that such a weapon could be manufactured and marketed profitably. John offered to return to test fire the gun for military observers anytime Colt was interested.

A few months later, Hall contacted the Brownings with important news: the Navy was interesting in seeing the new machine gun, but insisted on a demonstration of

three minutes of continuous fire. With a firing rate of about 600 rounds per minute, Browning’s machine gun would have to fire 1,800 rounds without a hitch. The technical challenges of such a demonstration included preventing the barrel from overheating and getting two thousand rounds stitched into the canvas belts that fed the

gun. According to Hall’s letter, the Navy wasn’t expecting perfection, but was interested in the principle of the new gas-powered gun. John Browning, however, would settle for nothing less than perfection. He toiled away with his gun, including the design of the belt, until he was convinced it would put on a good show. Then he took the train back to Hartford.

The second test was much more formal, with one of the Navy officers timing the affair with a stopwatch. John gave the spectators cotton wads for earplugs, loaded the gun, and pressed the trigger.

The machine gun roared for 20 seconds, churning efficiently through the first 200 cartridges. John clipped on the second belt

and continued firing. As hundreds of spent cartridges piled up on the floor, the barrel of the gun turned blue, then red. A mist of superheated, near-microscopic lead particles stung John’s skin, but he continued firing. When the gun fell silent after three minutes and 1,800 rounds of continuous firing, the witnesses applauded loudly, shaking John’s hand and slapping his back. The revolutionary machine gun had performed perfectly.

It was a few years before what became the Colt Model 1895 Automatic Machine Gun went into production, but the weapon proved its worth many times over in the Spanish-American War at the end of the decade. In the years that followed, Browning continued to develop new machine guns of different calibers and using both water and air as cooling agents, but the basic gas operating mechanism, possibly his greatest single invention, became and remains the standard for machine guns.

Browning was quick to apply the principle to other kinds of firearms. By the mid-1890s, he had developed the first of many semiautomatic pistols, for which the rights were sold to Colt. His first semiautomatic pistol to go into production in America,



U.S. Army

**In the mud:** John Browning’s son, 2nd Lieutenant Valmore Browning (shown), trained U.S. troops in WWI on his father’s gun designs. This gun is being tested in Meuse, France, October 5, 1918.

the Model 1900 .38 caliber Colt, was the first semiautomatic pistol to be commercially produced in the United States. Its signature trait (aside from the gas-operation principle), and also a Browning invention, was the slide, whereby the barrel covering slid back with each firing to eject the spent cartridge and cycle a new round into the chamber. This invention, too, has proven its worth many times over; almost all modern semiautomatic pistols use the slide design. Browning's best-known pistol, the .45 caliber Colt 1911, is one of the most popular handguns ever made, both among civilian and military users, and has spawned countless imitators.

Browning also applied the gas-operation principle to shotguns, building the first autoloading shotgun in the late 1890s and securing a patent in 1900. Unfortunately, Bennett and Winchester were not impressed with Browning's latest invention. Apparently convinced that the sporting public would continue to prefer pump, double-barrel, and single-shot shotguns, the management at Winchester, for the first time since their association with Browning, dragged their heels, reluctant to make a commitment to purchase the weapon. Exasperated, Browning finally went to New Haven and, after an abrupt exchange with Bennett, collected the gun and departed, never to work with Winchester again.

Browning then took his gun to Remington, whose president, Marcellus Hartley, had expressed great interest in the new weapon. But in a drastic turn of events, Hartley died of a heart attack while Browning and his new shotgun were waiting in the company foyer.

Disappointed but undeterred, Browning decided to try the Europeans. Fabrique Nationale d'Armes de Guerre, Europe's most storied arms maker, whose sprawling manufactory dominated the Belgian city of Liege, had already shown interest in Browning and was the very first producer of a Browning-designed semiautomatic pistol, the Model 1900 .32 Caliber, which began production for all markets outside the United States in 1899.

The gun designer from Utah sailed for Europe in February 1902 for the first of what was to be many trips. The Europeans at Fabrique Nationale gave him a rapturous reception; Browning's semiautomatic



**Walking fire:** During WWI the U.S. Army desired a light machine gun to provide suppressing fire on enemy positions, one they could walk with and shoot at the same time. The French-made light machine guns were highly unreliable. The Army adopted the Browning Automatic Rifle, called the B.A.R.

pistol was proving a monumental success, and the Europeans were anxious for any new ideas from the man they eventually nicknamed "Le Maître" — "The Master." By March, Browning and FN had hammered out an agreement to manufacture the new semiautomatic shotgun, which quickly proved as popular as all of Browning's other inventions.

### Waging War Intellectually

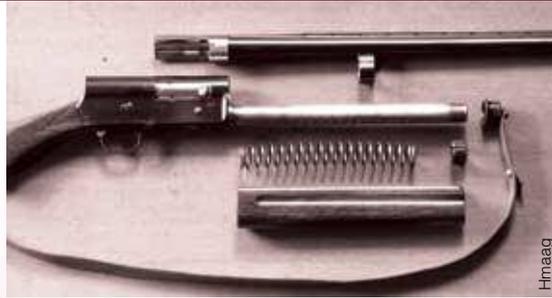
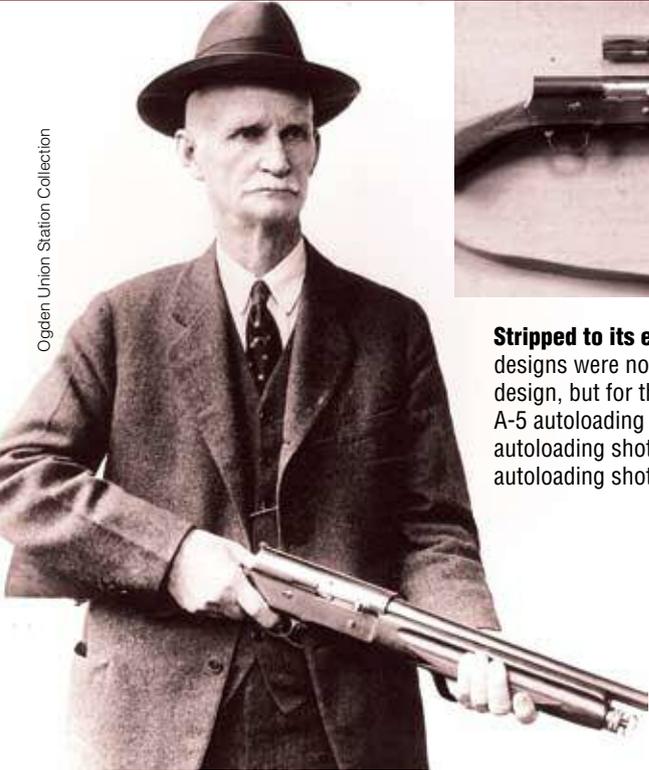
The outbreak of World War I was the great crisis of Browning's lifetime. The gun that started it all — a .32 Caliber FN Model 1900 semiautomatic pistol wielded by the Serbian assassin Gavrilo Princip — was a Browning invention. American entry into the war in 1917 created a demand for more effective automatic weapons. America, the country that had given the world the gas-operated machine gun, found itself woefully undersupplied, the 1,100 machine guns actually available to the U.S. military consisting entirely of obsolescent models like the 1895 Colt and the 1904 Maxim. Germany, by contrast, already fielded tens of thousands of more-modern machine guns.

From their inception, machine guns, with their massive magazines, turrets, and cooling systems, were little more mobile than cannons. From aircraft, pillboxes, and the decks of ships they could take a

terrible toll, but the U.S. military wanted something more: the capacity for "walking fire," whereby soldiers with easily portable automatic weapons could advance on an enemy while spraying them with a heavy suppressing fire. Yet again, John Moses Browning rose to the occasion, producing for an exhibition in February 1917 the Browning Automatic Rifle or B.A.R. The device fired a 20-round clip of .30/06 caliber bullets, could be set for either single shot or automatic fire, and, weighing a mere 17 pounds, could be comfortably carried and fired from the hip or shoulder. Like so many Browning designs, the B.A.R. was a marvel of simplicity, consisting of 70 pieces that could be taken apart completely and reassembled in less than a minute.

The U.S. military quickly adopted the B.A.R. for all branches of service, and the gun was a battlefield staple for decades to come, one of two Browning guns (the 1911 Colt .45 was the other) to become a standard military issue.

The U.S. government also required a new machine gun equal to the rigors of prolonged trench warfare. Here, too, Browning was happy to oblige his country. In April 1917, Browning brought a newly designed .30 caliber machine gun to the Springfield Armory where government weapons were tested, and proceeded



**Stripped to its essence:** Many of Browning's gun designs were notable not only for their revolutionary design, but for their simplicity. Shown is Browning's A-5 autoloading shotgun, the world's first successful autoloading shotgun. It was the second-best-selling autoloading shotgun in U.S. history.

So appreciative was the federal government for John Browning's generosity with his inventions in a time of national crisis that no less than the U.S. secretary of war, Newton Baker, wrote him a personal letter of appreciation:

My dear Mr. Browning:

I have learned from Major Little of the patriotic and generous attitude taken by you in the negotiations for the use of your patents of light and heavy machine guns in this emergency, and beg leave to express my appreciation for it. You have performed ... a very distinct service to this country in inventions, and contributed to the strength and effectiveness of our armies. You have added to that service by the attitude you have taken in the financial arrangements necessary to have your inventions available to the government.

When the first B.A.R.s and Browning .30 caliber machine guns entered the war in the fall of 1918, a Browning was available on the battlefields of France to inaugurate them. John's son Val, who had helped in the manufacture of both weapons, was sent to France to train Americans in the use of the new weapons, and was the first to use each of them in the field against the enemy. A heavier machine gun requested by General Pershing, a .50 caliber model, was also developed by Browning but was not in production by war's end. It did be-

come a staple of U.S. forces in later wars, alongside the B.A.R. and the .30 caliber machine gun. Both machine guns were used to devastating effect on aircraft in the Second World War, and the B.A.R., because of its ruggedness and portability, proved especially effective in jungle warfare in the Pacific theater of that war.

## Ode to the Man From Ogden

After the war, John Browning, now in his late 60s, continued to innovate. His last major invention, a 37-millimeter cannon commissioned by the U.S. military, was a sign of things to come — though Browning himself would not live to see them — of modern warfare that would move from the trenches to the skies.

John Moses Browning did not long outlive the war that had seen his invention used to greatest effect. In 1926, he passed away of a heart attack while working at what had become his second home, the Fabrique Nationale at Liege. The ship bearing his body back to his homeland was met by a military escort, and he was eulogized by another grateful secretary of war, Dwight Davis. Reminding the mourners that no invention of John Browning's had ever proven a failure, Davis went on to confer an extraordinary compliment on the late inventor: "It is not thought that any other individual has contributed so much to the national security of this country as Mr. Browning in the development of our machine guns and our automatic weapons to a state of military efficiency surpassing that of all nations."

Nor will John Browning, whose many inventions have carried his name and fame far beyond his own time, be remembered only for his military inventions. Scarcely a sportsman or target shooter today can take the field without making use of one or more of Browning's inventions. In all he secured 128 different patents, and the company his family founded is still in operation, though its headquarters, Ogden, is no longer a dusty frontier village but a mid-sized modern city. The life of John Moses Browning was an American success story of the highest order, of an unassuming genius whose inventions changed the course of modern history, who reaped great rewards for his unique abilities but willingly subordinated self to country when his talents were needed most. ■

to fire 20,000 rounds without a single malfunction. After a brief pause, Browning repeated the feat, expending a total of 40,000 rounds at a rate of 600 rounds per minute without a jam or any other mechanical problem. Browning's astounding demonstration set a new benchmark for machine gun performance, and persuaded the government to make him an offer for full manufacturing rights for the machine gun, automatic rifle, and .45 semiautomatic pistol for the duration of the war.

A government representative made the offer to John and his brother Matt, admitting to them that the amount the government could tender was "only a fraction of what you would receive from royalties on orders already booked, and it may not be acceptable." The amount the government was offering — \$750,000 — was no mean sum, but only a fraction of the more than \$10 million John could have made on the aforementioned royalties.

Nevertheless, John Browning did not hesitate. "Major, if that suits Uncle Sam, it's all right with me." After the government official left, Matt reminded his brother how much money he stood to lose by accepting the government's first offer. John answered simply, "Yes, and if we were fifteen or twenty years younger, we'd be over there in the mud."