

Figure 1. Flintlock rifle by John Moore of Albany, probably ca. 1810-1815. This exhibits an unusually elaborate version of the "New York State" patchbox design. Photo courtesy James Whisker.

# Growing Dominance: The Rise of New York State Gunmakers, 1825-1875

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In order to understand the rise to dominance of New York State gunmakers in the nineteenth century, it is necessary to understand first a few elements of the history of the state.

Before the Revolution, upstate New York was nearly all unsettled. Modern Albany and Schenectady had been established by the Dutch more than a century earlier; and the valley of the Hudson had become settled for as much as 15 or 20 miles to the west of the river in most places, but roughly to the Connecticut and Massachusetts lines on the east. A finger of settlement had made its way up the Mohawk River west of Schenectady for about 80 miles; many of these people were German-speaking. Otherwise, all of upstate New York was uninhabited by white people except for a very few scattered farms not far from the Hudson.

With the coming of our present Constitution and the federal government, the floodgates opened about 1788, and most of upstate New York was settled in the decade that began in 1790. People came in great numbers, mostly from Connecticut and Massachusetts, and almost every place between the Hudson and Lake Erie was settled at about the same time. Exceptions are the deep, wild Adirondacks (very thinly populated to this day), the "Southern Tier" counties along the Pennsylvania line in the southwest corner of the state, and just a few other places.

This was mostly good farming country, and it also had lots of water power for grist mills, sawmills, and all the other things that pioneers needed. Between 1800 and 1810, a network of turnpike roads developed, whose main arteries ran along the valley of the Mohawk from Albany to Rome, about 100 miles, and in another case about due west from Albany to Lake Erie, almost 300 miles. Although the roads weren't very good by modern standards, they made transportation possible, and places on them, like Auburn, Geneva, Canandaigua, and Batavia (which are modest cities today), became important centers. Then, in 1824, the Erie Canal, the largest work of civil engineering the world had ever seen, opened, and the cost of shipment of produce and freight dropped about 90%. Buffalo, the western terminus, became a big city, and places on the new route—Utica, Syracuse, and Rochester, for example—grew in a spectacular way. (The population of Rochester roughly doubled every decade from 1820 to the Civil War.) Almost the whole commerce of the new west went through upstate New York, and by the 1830s,



New York had become the Empire State. In the 1840s came the railroads, at first more or less paralleling the canal, and New York's commercial preeminence was assured. All sorts of industries were set up and upstate New York became heavily populated and very prosperous.

There had been gunsmiths among these people from the beginning, but we know very little about them. When the Swedish botanist Peter Kalm traveled through the colonies in 1749, he reported that he lodged in Albany with a gunsmith with whom he discussed wood for gunstocks, but whose name he did not give us. In 1788, John Harris came from Harrisburgh, Pennsylvania, to a place just west of modern Auburn, where he ran a tavern and a ferry across Cayuga Lake. He apparently made rifles as well. It was in about 1790 that the gunsmith William Antis came to Canandaigua from Sunbury, Pennsylvania. (In Pennsylvania, he had spelled his name "Antes," and the very few surviving guns he made are marked that way, but in New York State he consistently spelled it "Antis," and so did his children and grandchildren. No explanation for the change is known.) In 1791, a man named Reuben Earll or Earl, who came from modern Fonda, NY, bought land in what is now Ilion. His deed identified him as a gunsmith, but before long he, too, was running a tavern and whether he ever did gun work in Ilion is not known.

These are names that have turned up pretty much by chance, and there are a few others. But records for those very early years are very thin, and only occasionally is an individual identified with a specific trade. There is no reliable way of getting much of an idea of the general trade of the gunsmith

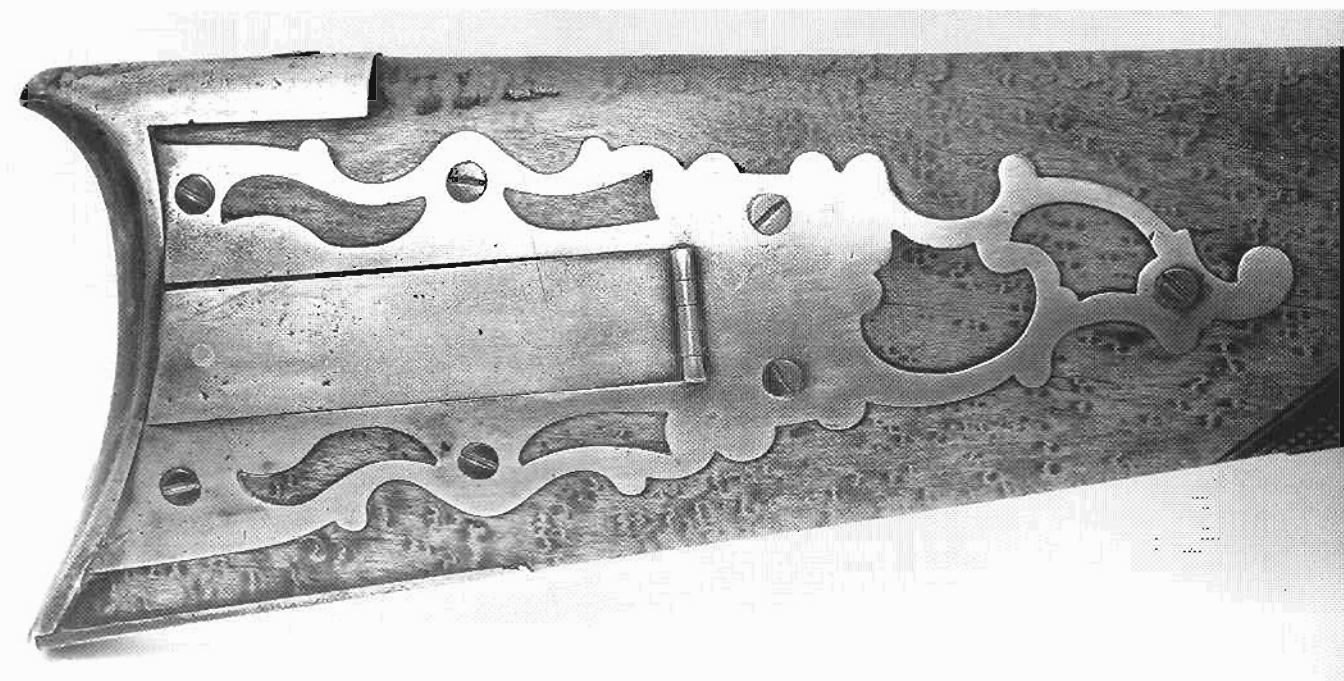
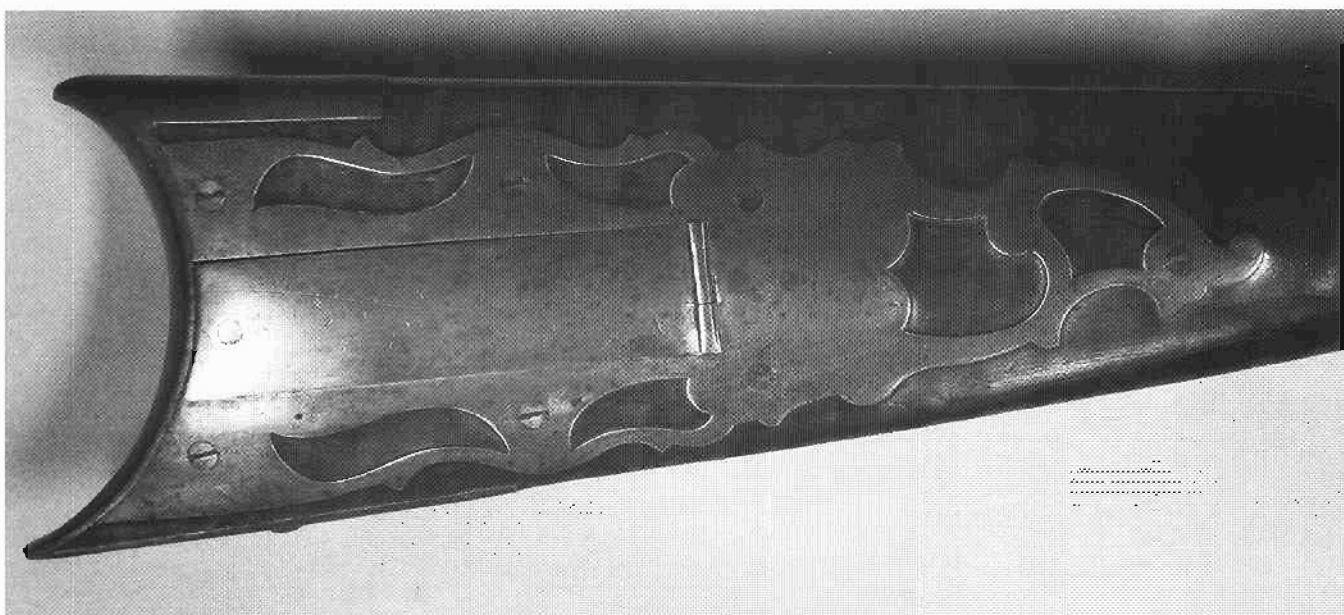
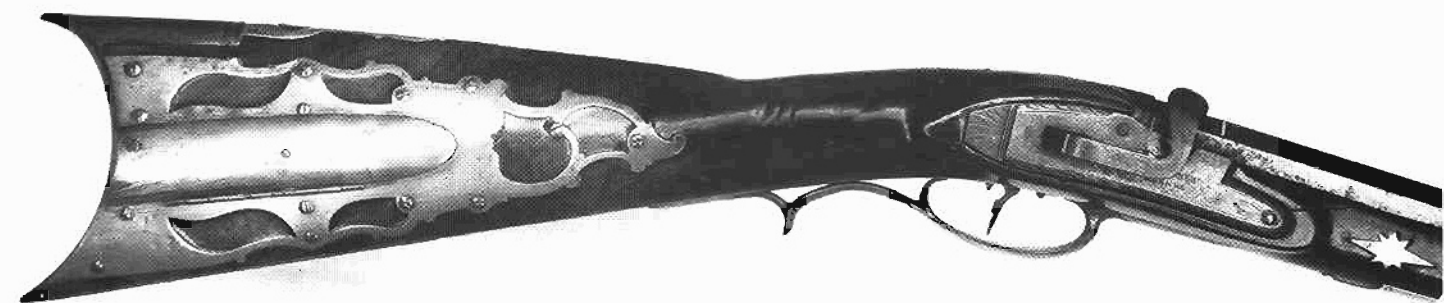


Figure 2. Three versions of the "New York State" patchbox. The top rifle is by William Gardner of Geneva and dates from the earlier 1830s; it has the lock form patented by Ephraim Gilbert of Rochester in 1829. The middle rifle is by Joseph Medbery of Rochester, built in the later 1820s. The lower rifle is unmarked but was probably made by Ambrose H. Chapin, who was in Earville from 1837 on, but who worked at some unlocated place before 1837. Photos courtesy James Whisker (top); Rochester Museum & Science Center (middle); and William Butz (lower).

in those early decades, but people turn up as gunsmiths with increasing frequency as settlement develops, and, in addition, mention of rifles as distinct from muskets appears with increasing frequency.

The earliest systematic record is the *Industrial Census of 1820*, and that lists only six gunsmiths in all upstate New York. But we know positively that some men who are not listed were, in fact, there and at work: for example, Samuel Marckley and Ephraim Gilbert in Rochester, Castle Southerland in Geneva, William Antis (the younger) in Canandaigua, and Thomas Medbery in New Berlin, among many others. They may have been omitted because the census included only industries whose product exceeded \$500 in the year 1819-1820; at the low prices of this financially depressed time, a small shop may not have had production enough to meet this criterion. Furthermore, the census was viewed with some suspicion: people were afraid that its financial and production statistics were to be the basis for new taxation of some sort.

But we know more and more about the trade as decade follows decade. City directories began to be issued in the growing centers, and they listed the trade of every inhabitant. In December, 1826, Rochester, with a total population of under 8,000, had at least three, and perhaps four, gunshops, employing thirteen men. Utica had two shops in 1817 and about four gunsmiths, one of them Riley Rogers, who made very nicely finished fullstock rifles of the type loosely called "Kentuckies" today. But there were lots of gunsmiths in rural villages and some who lived and worked right out in the country. Many were very stable: Lewis Devendorf of Cedarville lived his whole life in that village, and his whole adult life in one house. Earl Loomis lived out in the country at a crossroads still called "Loomis's Corners" (though no Loomises have lived there for many years), in a house that his father built and that still stands. And often enough, they had competition. The little village of Alabama Center, New York, about 40 miles or so west of Rochester, had three gunsmiths, and two of them were there at the same time.

(There is a curious note about New York-made "Kentucky" rifles: all across the state, between about 1810 and about 1840, one design of patchbox outnumbered all others put together. It is illustrated in Figures 1 and 2. While this form turns up in Pennsylvania, the New York trade consisted mostly of men from New England and, in fact, several users of this patchbox form can be specifically linked to Massachusetts. It was not confined to one locality: it shows up on rifles made in significant communities from Hudson and Troy and Albany right across the state to the west. It appears in the Mohawk Valley, in Utica, in Auburn, in Rochester, in Bingham-

ton, and in many small places as well. I once examined the account books of a small time blacksmith and gunsmith named Anthony Snyder from the village of Waterloo, who left the trade about 1822 and folded between the leaves, I found brown paper patterns for this patchbox form. Why this form should be the characteristic New York State patchbox, I cannot say.)

What did these craftsmen make? They made rifles. Shotguns were nearly all imported, mostly from Birmingham in England, and were sold at retail. Pistols were uncommon until mid-century, and mostly came from Birmingham, like shotguns. But the English gun trade—which could make a shotgun in Birmingham and ship it to America and still undersell an American-made gun—did not make rifles for export. Rifles were made locally.

In the early years of the century, gunsmiths apparently expected to make everything: to forge and weld barrels, to make locks, and to cast and finish "trimmings," which was the term for butt plates, trigger guards, and so on. Early gunsmiths' ads from before about 1810 or 1820 commonly seek scrap brass or copper, which they apparently recast into gun trimmings. But things changed after the War of 1812.

A bustling trade in gunlocks sprang up with Birmingham, England, and by the time when the cap lock was established as the usual type, practically all gunlocks used in the northeast came in from England. A gunmaker could buy a lock cheaper than he could make one. Such locks commonly have a name stamped on the lockplate, often with the word "Warranted." I have run down a number of these names, and in every case but one the name has been that of a wholesale importer of hardware. (The one exception was the name of Patrick Smith of Buffalo, a large-scale gunsmith who advertised that he provided gun materials to the country trade, and who imported locks under his own name. His business was big enough to make it practical for him to import in wholesale quantities.)

By the 1820s there were also specialized barrel forgers who used water power to blow their forge fires and to drive triphammers for welding iron. Gunsmiths characteristically bought barrels from these people as unfinished blanks: welded tubes with a hole all the way through, no doubt rough reamed, and ground octagon on the outside. Most of them were iron, made by forging a flat "skelp" into a tube and welding it hot under the hammer, the seam running parallel to the bore. Later on, better-quality barrels were drilled out of solid cast steel: remember that a barrel stamped "cast steel" was not a casting, but was machined of what would be called crucible steel today—steel that had been melted during the steelmaking process to ensure that its



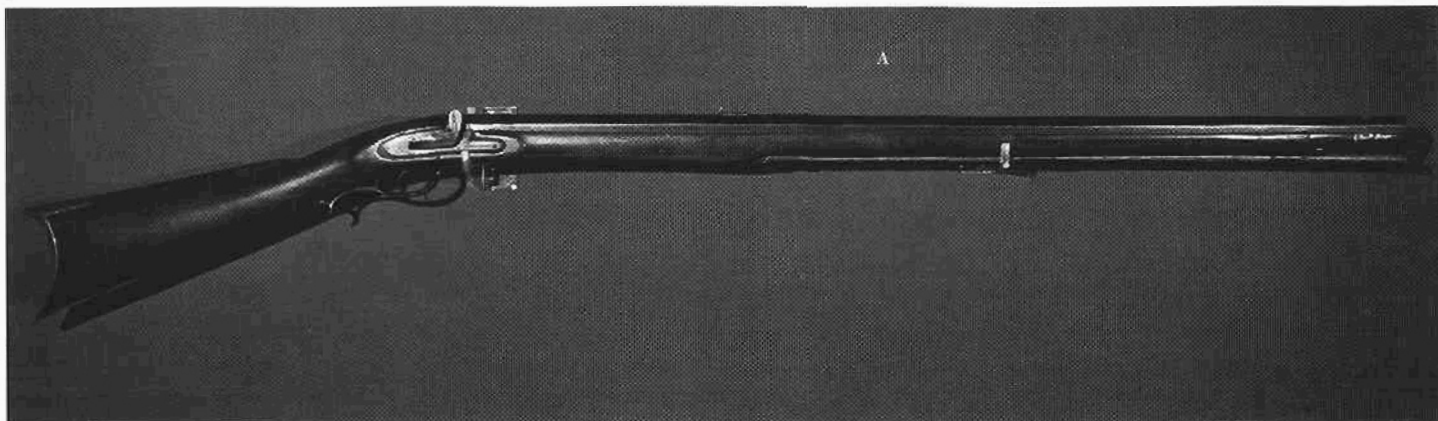


Figure 3. Fullstock rifle by Ephraim Gilbert of Rochester with the side-striking lock that he patented in 1829. This example, marked "Patent," dates from the early 1830s. Similar plain rifles were made by a number of western New York makers. Photo and rifle courtesy Rochester Museum & Science Center.

carbon content would be homogeneously distributed. It had to be machined, because high carbon steel would not readily weld in the forge. (Remember also that before roughly the Civil War, all steel was high-carbon tool steel; modern low-carbon mild steel did not exist.)

We know of about a dozen forges that furnished barrels to gunsmiths in the 1820s and 1830s (and there were no doubt others that we don't know about). But gradually, E. Remington, of what is now the village of Ilion (that place name did not exist before 1844), came to dominate the barrel trade. He had been far-sighted enough to move his country forge to the banks of the Erie Canal in 1828, and by the 1830s, he was shipping barrels to distant customers and was turning out more than 8,000 per year. His gunsmith-customers expected to finish ream and rifle these barrels, fit breech plugs and sights, and do all the other detail work.

By the early 1830s, the fashion for fullstock rifles was gone and halfstocks became increasingly the norm. Percussion ignition had come in the later 1820s too, first in the form of pill locks and shortly as cap locks. The characteristic New York State rifle of the later 1830s was a cap lock halfstock rifle intended for a patched round ball and usually around .38 or .40 caliber. A good many that we see today are larger, but the bores are very often not original. The iron barrels wore quickly and were often "freshed out" or rerifled, getting bigger and bigger in the process until they could no longer be recut because the next cutting was going to damage the threads for the breechplug.

By this time, the use of long patchboxes had also gone out of fashion, and plain rifles often had no patchbox at all; better ones had round patchboxes, more or less fancy. The gunsmith usually bought these through his ordinary trade channels, along with other trimmings. A few men, among them Calvin Miller of Honeoye, cast their own trimmings or had them cast at some local foundry.

Soon after 1840 came the fashion for elongated bullets of various shapes instead of round balls. Because such bullets are difficult to start base first in the muzzle, plunger-like bullet starters became common, and octagonal barrels were turned round for an inch or so at the muzzle to accept them. A barrel so turned for a starter can be dated as later than 1835 or 1840 with some confidence.

Specialized target rifles arrived in the very early 1840s, too. Alvan Clark of Massachusetts had patented the false muzzle in 1840 and assigned the rights to the famous target rifle maker, Edwin Wesson of Hartford. Wesson, in turn, tried to collect royalties from gunsmiths who made false muzzles, but the effort turned out to be in vain: the idea was not complicated and gunsmiths freely adopted it with or without Wesson's permission. Wesson died unexpectedly in 1849 without solving the problem.

Target shooters began to shoot from bench rests, and rifles became heavier and heavier. About 1840, someone thought of using a telescopic sight; the first effort seems to have been the marriage of a surveyor's theodolite to a rifle in Syracuse. By the time John R. Chapman wrote *Instructions to Young Marksmen* . . . (published in 1848 but written in 1844), target rifles commonly had telescopes. Chapman recommended Morgan James, already renowned as a maker of target rifles, to make telescopes, and in the 1840s and 1850s, a number of other riflemakers made telescopes, too. Where they learned to make the optical elements—if indeed they did not buy them from opticians of some sort—we don't know. By the coming of the breechloader, roughly speaking, telescope making had begun to devolve upon specialist makers like William Malcolm in Syracuse (himself once a gunmaker) and L. N. Mogg of Marcellus, southwest of Syracuse. While telescopes were made elsewhere, New York State seems to have led the trade until about the 1890s.

Many makers produced these heavy target rifles: not

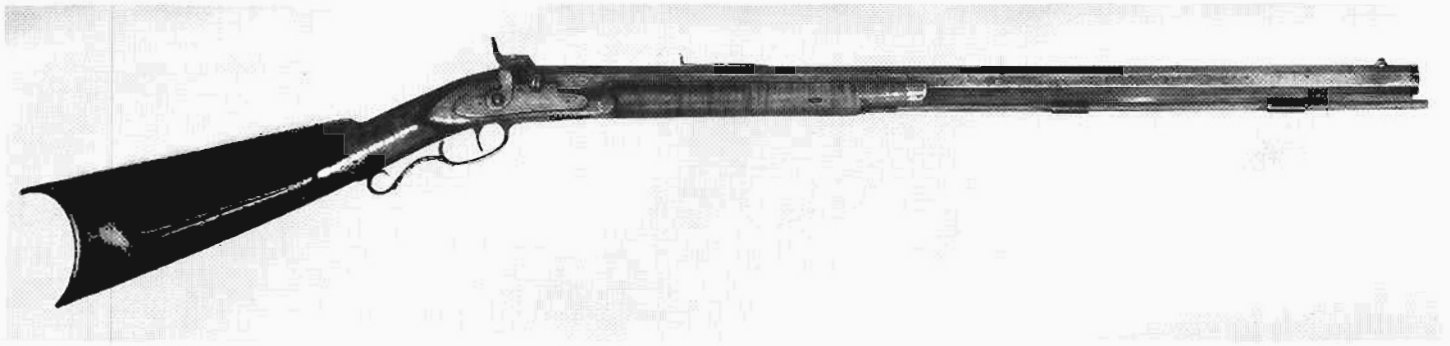


Figure 4. Rifle by Leonard Fortune of Newport, N.Y. Originally a longer fullstock, this was cut down to a halfstock and had its barrel shortened, probably in the 1840s. Photo: author; rifle: The Adirondack Museum.



Figure 5. Characteristic half stock rifle by William Dixon of Adams, N.Y. The aperture rear sight is of unusual form, but otherwise the rifle is of a very common type; made in the 1860s, it is like hundreds of rifles made between about 1840 and 1870 in New York State. Photo: author.

only James and his one-time partner George Ferriss, both of Utica; Nelson Lewis of Troy; R. R. Moore of Cortland; B. W. Amsden of Saratoga Springs, and other gunsmiths of repute, but also dozens of small men. At least one heavy rifle is known by Earl Loomis, most of whose guns are single halfstock rifles, and there are many more marked with little-known names.

These New York State rifles mostly lack the folk art quality that is associated with "Kentucky" or Pennsylvania rifles of the great days. Their makers did not have to forge and finish locks, nor did they have to do the heavy sledge-hammer work of welding barrels: they bought such components from specialist suppliers. Such purchased barrels were better by far than the hand-forged product of a half-century earlier. And even small parts were better. The modern lathe with its slide rest had come by the 1840s, and accurately turned work lay within the capacity of small shops. Though their machinery looks flimsy today and was ordinarily driven by a foot treadle, it was precision equipment compared with a lathe of, say, 1800, which would have had no carriage at all, and on which iron was turned with hand-held tools. Many a New York State gunsmith routinely made false muzzles that fitted perfectly, though how they set up to drill the required four pin holes truly parallel with each other and the bore has so far eluded me. There were no spiral twist drills until after the Civil War; a false muzzle must have been made on a lathe using spear-point drills. If a drill jig of some sort was used to guide the drill, no one seems to have written a description of it.

In the middle 1850's, styles began to change. In-

creasingly, the product of New York State shops became a double barreled combination gun—a gun with one rifled barrel and one smooth barrel. In western New York, very roughly west of a line from Binghamton to Syracuse, such guns were usually built as over and unders—that is, with barrels superposed one on top of the other, the rifle barrel normally on top. By about 1860, combination guns had become the most common product. East of the Binghamton-Syracuse line, they were often side-by-side and seem never to have displaced the single rifle as completely as they did in the west.

The smooth barrels were of three types. First, and very uncommon, was a smooth barrel intended for the same ball or bullet used in the rifled barrel. Second, and by far the most common, was a smooth barrel with thick walls, often of a caliber about .10" or .15" larger than the rifle—say a .40 caliber rifle paired with a .55 caliber smoothbore. Last, and again uncommon, though by no means unknown, came a thin-walled smooth barrel—what we today would call a shot barrel. Some of these were of smooth iron, apparently supplied by Remington or another barrel forge, and occasionally we see a gun with a smoothbore twist barrel salvaged from a fowling piece and bearing a Liege or Birmingham proof mark.

These guns were not used to shoot at flying game. Upland bird hunting was the sport of city gentlemen, not country hunters who wanted meat in the pot. One country hunter is said to have explained that he never needed to fire at a flying bird; he could always get a sitting shot. The smooth barrel might be loaded with coarse birdshot for waterfowl shot on the water or for foxes, but more commonly with a

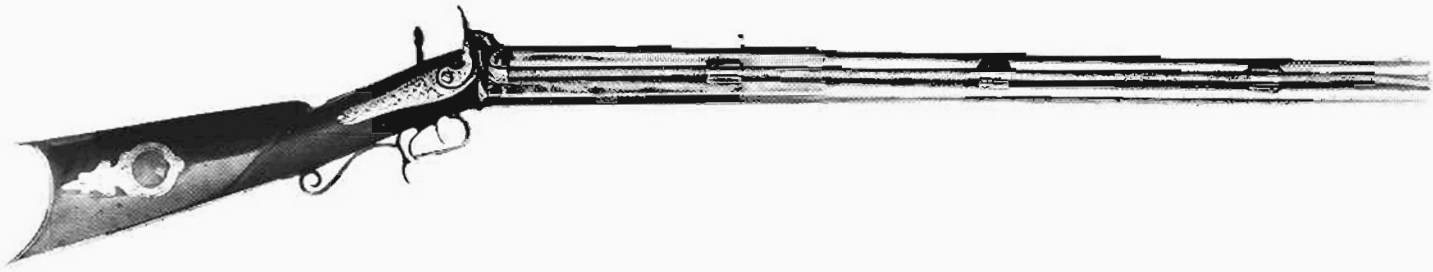


Figure 6. Over and under combination gun by Marvin F. Crandell of Gowanda, N.Y., probably in the later 1860s or early 1870s. This example is fancier than most. Photo courtesy James Whisker.

single ball for deer. The advantage of such a combination gun was that it gave two shots, but avoided the complication of adjusting two barrels to shoot to the same point of aim. If the gun was well built, the lower barrel would shoot close enough at, say, 30 yards. And unlike a rifle, the smooth barrel could be loaded very hastily if need be: put in a charge, drop a heavy ball on top of it, cap the gun, and hold the muzzle up until the time came to shoot. Good enough if a deer were down and needed to be dispatched.

A few very competent makers built double rifles, some side-by-side and some over and under. The Adirondack Museum has a double rifle by L. L. Hepburn (of Colton; after 1872, of Remington fame) with two short .38 barrels one over the other. The gun apparently used a charge of 50 or 60 grains of powder behind a .38 caliber elongated bullet, and it weighs only a little over seven pounds. It must have been the ultimate Adirondack hunting rifle—short, light, handy, and with ample power.

Why did gunmaking flourish in New York State? There seem to have been two reasons: prosperity and opportunity. The rapid settlement of New York and the coming of the Erie Canal and its network of subsidiary canals, and shortly thereafter the railroads, made New York into the Empire State. People became prosperous, whether urban tradesmen, country storekeepers, or rural farmers. Hard times, such as the Panic of 1837, did come, but in general, the citizens of New York did well. Upstate back roads and rural villages are filled to this day with big comfortable houses that were built between about 1825 and 1875 and that testify to the taste and affluence of their builders.

New York was not alone in this, though it was a leading example. There were prosperous farmers and merchants (and mill owners, too) in New England and Pennsylvania, and no doubt in other states. But for those citizens who wanted to go hunting and who could afford it, New York had game, too.

A number of sources, including no less than Timothy Dwight, President of Yale and not-so-facetiously called "the Pope of Connecticut," testify that four-footed game had

vanished from southern New England by not long after 1800. But even in the New York State of today, the Adirondacks, the deep Catskills, and the rougher Southern Tier counties remain a hunting ground for deer, and they were still more so in the time of the muzzle loader. Speaking of the Genesee country, soon after 1800, a pioneer said, in effect, "I never saw a country where deer were so plenty," and pointed out that one only had to go get one—they were never hard to find. Deer had been hunted out of the populous central counties by the mid-nineteenth century, but the blooming transportation system made it easier and easier for hunters to reach the wild areas where they still thrived.

(When I was growing up in Otsego County, it was remarkable—worth reporting to the local newspaper—to see a deer in daylight, and it had been for decades. By the mid-1940s, they were coming back, and before long, there was a "shotgun-only" open season. Today it is fairly common to see bunches of 15 or 20 deer in some disused pasture almost any August afternoon.)

So it seems to be the combination of fairly prosperous customers with the continuing presence of several hunting wildernesses that spurred the New York gun trade to become the dominant one in the country in the days of the cap lock muzzle loader. The existence of an efficient system of transportation had its effect, too: Remington was producing almost 10,000 barrel blanks a year by mid-century, and shipping almost all of them to destinations near and far. Locks were coming in from Birmingham in thousands, too.

Country riflemakers also had better lathes and rifling benches (commonly with internally-rifled iron guides) than ever before. Workmanship was possible to higher standards than in the days of the War of 1812: for one example only, by the 1860s Nelson Lewis of Troy commonly threaded the stem of a tang peep sight at 48 threads to the inch—20% finer than the spindle threads on a modern micrometer, and a fine thread even by today's standards. There are many other examples; even leaving out the superiority of machine-drilled cast steel barrels, the improved machinery and tools available



Figure 7. Pair of pistols built with US Model 1842 barrels slightly shortened at the muzzles by Otis Churchill of Albany in the 1840s. The locks are marked by Adam W. Spies of New York City, a major hardware importer for decades, and came originally from Birmingham. Photo courtesy Office of New York State History, New York State Education Department.

to country riflemakers by the mid-nineteenth century made for rifles that are far better pieces of technology and far better-finished than the possibly more artistic productions of Pennsylvania in, say, 1790 or 1800. And a highly finished rifle from a fine New York State maker like Billinghamurst was a very fine product in its own right, too, with its mechanically true surfaces well polished, its fancy walnut, and usually its extensive, if delicate, engraving.

All this—population, transportation, prosperity, available hunting and growing interest in precision target shooting, and greatly improved technology—had its effect. By the middle 1830s (or a very few years later), the center of gravity of the trade in sporting rifles had moved from Pennsylvania to New York State. Exact and reliable statistics seem impossible to get. One thinks immediately of comparing the various censuses, but it doesn't work.

Before the *Census of 1850*, the US Census recorded only the name of the head of each household and the number of male and female inhabitants who fell into various age groups—and the definitions of the groups changed from decade to decade. The trades of men over 16 and the names of all inhabitants were not recorded until 1850. Each census included a schedule of Products of Industry Other than Agricultural, which was supposed to record the statistics of

every industry producing more than \$500 worth of product annually. It would seem simple to compare the results of the count in Pennsylvania and New York in, say, 1850 and 1860. But clearly the figures are not comparable. In 1850, 7,786 men were recorded as employed in gunmaking in New York, and 2,995 in Pennsylvania, but the respective figures from the 1860 Census are 220 for New York and 339 for Pennsylvania. A drop of more than 97% in New York State in one decade is literally incredible. There is something wrong with the underlying figures.

Furthermore, examination of the county-by-county returns shows that in 1860 no gunmaking establishment was recorded for Onondaga County, even though John Rector was certainly active in Syracuse with almost ten men in the shop—probably the biggest gunshop in upstate New York—and no establishment is recorded for Rensselaer County, where Nelson Lewis had about six men working. Both counties had a number of lesser shops, too, but for reasons unknown, they weren't shown in the totals. And the definition of a gunsmith is suspect, too: most of the men who worked for Remington in Ilion and some at Watervliet Arsenal in West Troy are shown as gunsmiths, together with numerous pepperbox and pistol filers in New York City. All these were working in gunshops, but were presumably not capable of making a gun.



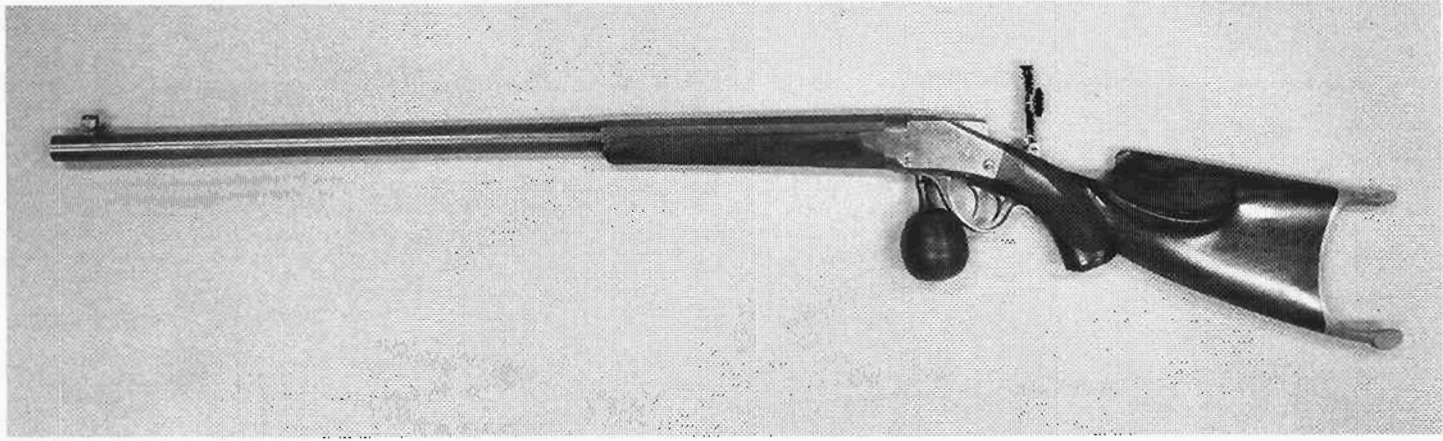


Figure 8. Target rifle by A. O. Zischang of Syracuse, using a Sharps Borchardt action, about 1895. Zischang made everything except the action itself and the front sight. The caliber is .32-40. The rifle belongs to the original owner's grandson. Photo courtesy Rochester Museum & Science Center.

Worse yet are figures from the 1880 Census, by which time the majority of country shops had gone out of business. That census shows 1,926 gun- and locksmiths in New York, and 839 in Pennsylvania. How many of each? We don't know. It seems impossible to recover reliably comparable statistics.

But an idea of the scale of the New York trade can be gained from my own figures. Since about 1950, I have kept track of New York State gunsmiths. In the case of important makers like Billingham, I have pages of biographical data. For some obscure men, I have only some single passing reference to the fact that there was such a gunsmith. But I have record of practically every gun I ever saw (or that was reliably reported) that bore the name of a New York gunsmith. I recently counted the sheets, leaving out all apprentice boys (unless they are known to have followed the trade further), all employees of factories, all of New York City, and all other questionable entries. I found that I have record of 760 gunsmiths, plus 379 more who are definitely known to have made and marked rifles. Practically all these men were at work in the decade 1850-1860, and rough counts of similar lists suggest strongly, as do census comparisons, that the numbers in Pennsylvania were much lower by that time.

Reputation had moved to New York, too. After the death of Edwin Wesson in 1849, Morgan James of Utica was the renowned maker of target rifles—the one individual gunsmith that the British Parliamentary Commission visited in 1853. Billingham, George Ferriss, and R. R. Moore were in James's class, as well as were a few men less well known like Nathaniel Choate of Auburn, arguably the best workman of all. All these men were also well-known for hunting rifles, as were Nelson Lewis of Troy, John Rector of Syracuse, and James O. Robson and Patrick Smith of Buffalo. Men who worked alone like Joshua Pittenger of Wellsville, Amos Davis of Deposit, Fred Smith of Fleming, and Lewis Devendorf of

little Cedarville could turn out a rifle of fine construction, finish, and accuracy and so could literally hundreds of New York country gunsmiths in a list far too long for us now.

But the end came. The Civil War boosted firearms technology tremendously. In particular, it brought not only the breechloader, but the machinery to make metallic cartridges by the hundreds of thousands or even millions, all practically precisely alike. (Credit for the coming of the breechloader is not often assigned to the designers and makers of cartridge machinery, but without cartridges, the breechloader was useless.) Metallic cartridges not only had to be precisely made, but they imposed a demand for high precision on gunmakers: the cartridge had to fit the rifle, but the rifle also had to fit its cartridge. Despite a few valiant tries, the country gunmaker with his light foot lathe and hand rifling bench could not achieve precision production in quantity, and his trade was doomed.

Two things happened coincidentally in 1873. Winchester began to market what can reasonably be described as the first fully successful breechloading repeater, and the American financial market collapsed in what has become called the Panic of 1873. Financial hard times followed, and this depression ruthlessly combed out the country gunshops, which were only marginally viable at best and were already succumbing to the competition of factory-made rifles. New York State gunsmiths left the constricted trade they knew and became hotel keepers, machinists, farmers, or whatever brought home the bacon—including in one case the experienced gunsmith Sylvester Van Horn of Oneida, who became a dealer in Italian bees.

A few gunsmiths succeeded in making the transition to the factory system—most notably Daniel Lefever and W. H. Baker—but they were exceptions. After the Civil War, very few young men came into the trade as apprentices (the whole apprenticeship system was breaking down anyway),

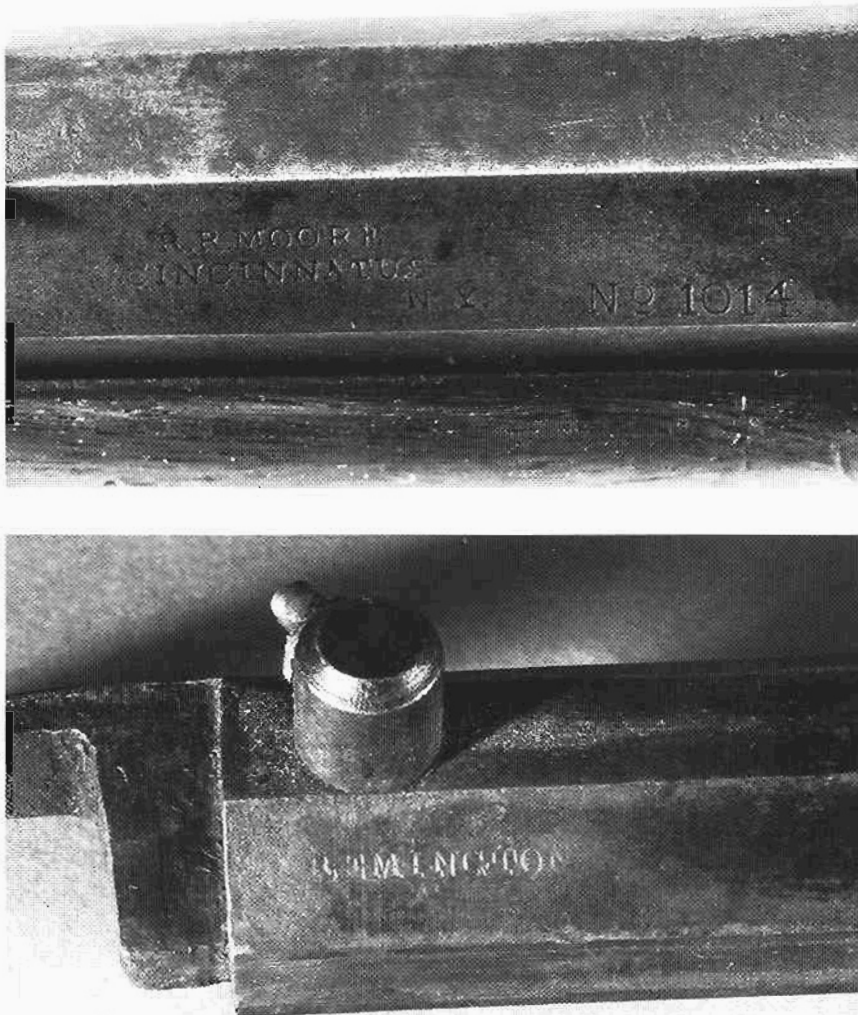


Figure 9. Top: a characteristic maker's mark on a New York State rifle. Rensselaer R. Moore moved from Cincinnati to Cortland in June, 1866. He was among the early makers to serially number his rifles. This one, No. 1014, was made about 1863, and is a very plain halfstock rifle. Bottom: a characteristic stamp of the barrelmaker on a Remington barrel, fitted below the wood. The transverse marks left by the grinding wheel can be seen in the photo. This is the same rifle shown above. Both photos courtesy William Butz.

and as men born early in the nineteenth century died, retired, or were forced into other trades, there was no one to replace them, and no business to do anyway. By 1875, many a well-known name had vanished, and by 1880, there were next to no gunsmiths who made a living at it in New York State. H. V. Perry kept on in Jamestown, selling sporting goods and making almost nothing but heavy target rifles for a vanishing group of customers, until about 1895. But by 1890, there was only one man I know of who made his primary living as a gunsmith in upstate New York: the German August O. Zischang of Syracuse, who found a market for his splendid target rifles among Schuetzen shooters, mostly of German background.

The wonderfully well-made rifles that came from these shops, most of them individualized products representing the

individual skills and styles of their makers, were at an end, replaced by the machine-duplicated rifles of the factories. In 1898, some perceptive writer for an uncited paper in Gowanda in southwestern New York wrote for his 50th anniversary issue a sort of obituary for the gun trade. Writing about the local gunsmith, Marvin F. Crandell, the paper said that he

“... is a gunsmith and has been in business at this place for a period of fifty years. Formerly he made guns, but the introduction of modern machinery put an end to that branch of his business and he now devotes his time to repair work.”

Marvin Crandell died April 6, 1909, aged nearly 80. Rather sadly, the paper had reported four years earlier that

“... the beautiful place built by Marvin Crandell some years ago ... has been sold. . . .”