

*No bolt-action rifle
can match the Model 70's
long history with
American deer hunters!*





The Ageless Winchester Model 70

In 1936, Winchester's flagship rose from the Depression as the gold standard of rifles. Still is.

By Wayne van Zwoil
B&C Professional Member

“The Rifleman’s Rifle.” It has the ring of refinement, a crowning achievement. But Winchester’s Model 70 ascended a relatively short ramp. The company’s first successful bolt rifle, the Model 54, was but a decade old when the 70 was conceived.

The 54 followed the .45-70 Hotchkiss, abandoned soon after its introduction in the 1890s. In 1897 the Lee Straight Pull appeared, only to die six years later. During World War I, Winchester built Pattern 14 and Model 1917 Enfield rifles for British and American troops, a task that would catalyze efforts to develop a bolt-action hunting rifle. By 1922 Winchester designers had pruned the weaknesses of the Lee, Hotchkiss, and Enfield. The 54’s coned breech derived from the 1903 Springfield. Its receiver and bolt, its safety and extractor mirrored a Mauser 98’s. The ejector, after a Newton design, scotched the need for a slotted lug. The barrel, of nickel steel, lay in a slender walnut stock with schnabel forend, sharp comb, and “shotgun” (not crescent) buttplate. The 7 ¾-pound Model 54 cocked on opening and was strong enough for .30-06 pressures. While the safety proved awkward under a scope, few shooters then owned scopes.

The new Winchester rifle sold well, thanks in part to a new cartridge announced for it. The .270 was essentially a .30-06 necked to launch 130-grain bullets at 3,100 fps—lightning speed in 1925!

But celebration at the New Haven plant died in October 1929. Winchester Repeating Arms was hard-hit by the market crash; in 1931 it faced receivership. On December 22nd of that year, it was bought by Western Cartridge Company. Chief executive John Olin considered the Model 54 a profitable venture, so T.C. Johnson and his staff refined the rifle they had engineered, equipped it with a beefier “NRA” stock and, in 1932, added the speed lock.

Initially offered only in .270 and .30-06, the 54 soon added eight other chamberings. These were, in order of increasing rarity, the .22 Hornet, .30-30, .250 Savage, 7mm Mauser, .257 Roberts, .220 Swift, 7.65mm Mauser and 9mm Mauser. Sporter versions of the 54 are most common; nine others included Target and Sniper models with Marksman-style stocks, leather slings, and scope blocks. Prices in 1936 ranged from \$59.75 (Sporter) to \$111 (Sniper’s Match). The Model 54’s single failing was its trigger, which also served as a bolt stop and thus fared poorly in competition. While hunters seemed to accept the mushy trigger, they balked at the top-swing safety, which precluded low installation of Bill Weaver’s 330 scope. Also, the 54’s speed lock didn’t work as predicted, and misfires ensued.

Winchester’s Model 54 was cataloged and available through 1941, albeit production slowed to a trickle during the last five years. Of 52,029 Model 54s shipped, 49,009 were boxed by the end of 1936.

A Glimmer in the Gloom

Work on a new bolt-action Winchester was authorized December 29, 1934, but it commenced slowly. In the mid-1930s men eating from soup kitchens had little money for rifles. The Model 54 was still quite popular. And the Marksman stock designed for the Model 70 target rifle had yet to prove itself on 54s. As the economy got to its feet and the target

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TOP: An early bolt face shows Mauser-style extractor, ejector slot, and lug tapered for coned breech. BOTTOM: This 1970s era bolt face shows face-mounted extractor, plunger ejector, and split lug for anti-bind rail.

The O'Connor Connection

It was time, he wrote, to burn powder. "I lay down in the muck, got into a nice tight sling with my left hand hard against the front swivel. I have great faith in that old .375 Magnum. It is a standard-grade Model 70 Winchester, remodeled by Griffin & Howe of New York, and it wears a Lyman 48 as well as a Kollmorgen 2 3/4x scope.... I fed a cartridge into the chamber ... then held for a shoulder shot."

O'Connor's bullet, a "new, experimental Silvertip," dropped the bear instantly. He noted that his rifle had "taken all three great predators—African lion, Indian tiger and Alaskan brown bear."

As *Outdoor Life's* shooting editor, Jack O'Connor carried many rifles and used many cartridges. It's no secret he favored Winchester's Model 70 among bolt guns, and the .270 and .375 for much of his hunting. The .375 he reserved for heavy game. Jack made much editorial hay defending the likes of the .270 from attacks by what he called "the big-bore boys." He allowed that when someone writes "the 7x57, the .270 and the .30-06 are not adequate for elk and are barely powerful enough for deer, I begin to snort and fume. My blood pressure rises, and before you know it, I am batting away at the typewriter."

Like Old Betsy, his G&H .375, O'Connor's signature .270 was a Model 70. Actually, he had two stocked and finished by Al Biesen, the Spokane, Washington, gunmaker who courted O'Connor early on with an offer to build him a rifle. "That was in 1937," Al told me, "at the beginning of Jack's career. He didn't like the first rifle I sent him, a Titus-barreled Springfield. So I made him a .30-06 on Mauser metal. He bought it." A contemporary of O'Connor's, Biesen purchased his Spokane home "for \$8,000 in 1948, soon after Jack wrote his first article about me." That year, O'Connor moved with wife Eleanor from his native Tucson to Lewiston, Idaho.

O'Connor's first .270 was not a Model 70, but a 54. He got it in 1925, birth year of the .270, and used it on hunts in the desert southwest for mule deer and black bears. He had it restocked by R.D. Tait of Dunsmuir, California. O'Connor bought his first Model 70 .270 in Tucson in 1943. Alvin Linden stocked it in time for Jack's first Canadian pack trip that year. With a Weaver 330 scope, he used it to shoot his first bighorn, mountain goat, caribou, and moose.

In 1950, Pachmayr Gunworks of California built O'Connor a Model 70 in .257. He scoped it with a Weaver K4. That year he also bought a pre-war 70 magnum. Besides his first brown bear, tiger, and lion, that .375 accounted for "about 50 lions" after Jack gave it to Tanganyikan professional hunter John Kingsley-Heath after their 1959 safari.

Al Biesen turned down and shortened a standard barrel to supply O'Connor a lightweight .270 on Winchester's 70 action in 1953. It wore a 4x Stith Kollmorgen scope in Tilden mounts. Next year, Jack got a big Wyoming elk with that rifle. It became a favorite, serving him on hunts to India, Iran, and central Africa—and to the Yukon, where it downed a 40-inch Dall's ram. In 1957, as Jack was recovering from an automobile accident, Biesen brought to his hospital room a K4-scoped Model 70 in 7x57, reportedly on Winchester's last barreled action in that chambering.

Two years later, Jack bought a Featherweight .270 M70. He turned it over to Biesen, who stocked it in French walnut and added refinements by then standard on rifles for O'Connor. Fitted with a Leupold 4x Mountaineer scope, it would become one of Jack's go-to rifles, a fitting match to his first Biesen .270.

Other Model 70s graced the gun racks of Jack O'Connor, who died at sea in 1978. No one has a better grasp of their history than Buck Buckner, who knew O'Connor personally. Buckner contributed a great deal to the book "Jack O'Connor" by Robert Anderson. The chapter on rifles is Buckner's and has a most complete and detailed list of the rifles carried by the dean of America's gun writers.

LEFT BACKGROUND: O'Connor took this photo of his favorite Model 70 in 1971 during a Stone's sheep hunt.

LEFT: Second only to the .30-06 in pre-64 M70s, the .270 (introduced in 1925) got kudos from O'Connor.



ABOVE: Wayne killed this Rocky Mountain goat after an exhausting climb. The rifle... a Winchester M70 in .325 WSM. BELOW: In the .300 H&H chambering, the Model 70 became our first successful .30 magnum rifle. BOTTOM: A fine M70 clone—the Model 1999 from Montana Rifle Company.



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stock helped win matches, Winchester started building Model 70s. The first receivers got serial numbers January 20, 1936. On January 1, 1937, when the M70 was officially released, 2,238 rifles were boxed and ready to ship. List price: \$61.25.

The new rifle resembled a 54, but its trigger had a separate sear permitting adjustment in take-up, weight, and over-travel. The bolt stop, pivoting on the trigger pin, was also separate, and worked through a slot in the lower rear section of the left lug race. For long-action rounds, the bolt stop arrested the left lug. One of three bolt stop extensions (to fit the .220 Swift, .250 Savage, and .22 Hornet) were mounted on the extractor collar to limit bolt throw for shorter cartridges.

Firing pin travel on the Model 70 was increased 1/16 inch to eliminate the misfires that had come on the heels of the 54's speed lock. The change boosted lock time by 20 percent, to 3.5 milliseconds for most cartridges. To augment the 54's bolt-head gas ports, Winchester added a hole in the right side of the 70's receiver ring. The first M70 safety was a tab atop the bolt shroud. It swung horizontally and cleared most scopes. Four years later it was moved to the side. The safety had a middle detent, which prevented firing but freed the bolt to cycle. The bolt handle, lowered to 45 degrees, swept rakishly to the rear. Its receiver notch acted as a safety abutment, should the lugs fail. The square bolt shoulder on the first 70s precluded low scope mounting and was later eliminated. Like the 54, the 70 had three guard screws, but a machined floorplate, hinged in front and latched by a spring-loaded plunger in the guard, supplanted the 54's fixed magazine cover and guard.

Model 70 receivers were machined from solid bar stock, each beginning as a 7 1/2-pound, chrome-moly billet. After 75 machinings, a receiver weighed 19.3 ounces. It measured 8.77 inches long and 1.357 inches through the receiver ring. After hand-filing to finish, receivers were roll-marked with Winchester's logo on the left wall, a wavy matte pattern impressed on the top of ring and bridge. Heat-treating followed spot-hardening of the extraction cam behind the bridge. Receivers were immersed in a 1,200-degree salt bath for 24 hours, then Rockwell-tested to 47C. This test left a dimple in the cocking-piece groove in the tang. Sandblasting, tumbling, polishing, and bluing readied the receivers for assembly.

Early Model 70 barrels had the same contours and threads as M54 barrels; they interchanged. But barrel materials had evolved. Stainless steel appeared in 1925. By 1932 chrome-molybdenum had become standard. M70 barrels were drop-forged, straightened by hand with a 15-pound hammer,

then turned true on a lathe. They were deep-hole-drilled and straightened again. Each bore was then reamed to the proper diameter and hook-rifled by a cutter slicing progressively deeper on several passes, one groove at a time. Rifling took 11 minutes per barrel. After lapping with cadmium lead lubricated by carborundum oil, those first barrels were threaded (16 threads per inch on the 1-inch shank) and, depending on model, slotted for rear sights and front sight hoods. Ramps, forged with the barrels on early 70s, were hand-stippled. Later they were soldered on, machine-matted. Each barrel was stamped underneath with the caliber designation and the last two digits of the year, plus the inspector's mark.

Parts, Stocks, and Cartridges

Chambering came next. The last of four reamers left the chamber undersized for head-spacing. The barrel was roll-marked right and left on top, given a caliber stamp, then polished and blued. (During World War II, the right-side roll-mark was eliminated; a single left-side mark carried the chambering too.)

Most small parts for the first Model 70s were drop-forged, then machined. The floorplate hinge and bolt sleeve came from bar stock; the extractor was fashioned from 1095 spring steel. The bolt body, straightened after treating, got an inspector's stamp at the base of the handle before bluing.

Model 70 stocks were roughed by band-saw from 2x36-inch blanks of black walnut (Marksman and Super-Grade and special-order stocks were 3.8 inches wide before contouring). Standard stocks went to an eight-spindle duplicator for shaping. Drum-sanding followed. Inletting was finished by hand; so too final sanding (with 240-grit paper). Minor flaws were repaired with stick shellac, glue or wood welding. The first M70 stocks got clear nitrocellulose lacquer finish over an alcohol-based stain and filler. These lacquers contained carnauba wax, which produced an oil-like sheen. The war made carnauba wax scarce; harder lacquers then appeared. Hand checkering with carbide cutters readied stocks for assembly.

Headspacing followed final chamber polish, trigger adjustment, and a function check. Barrels and receivers got the Winchester Proof (WP) stamp after digesting one "blue pill" cartridge, which generated 70,000 psi. After each bolt body was etched with the serial number, the rifle was fired for a 50-yard zero. Next it was cleaned, inspected, disassembled, reassembled, inspected again. Finally, it was tagged, oiled, greased, wrapped in brown waxed paper and nested in a corrugated cardboard box.

The Model 70 had much to offer

hunters: a comfortable stock and an accurate barrel, a bull-dog Mauser extractor that controlled feeding, plus an adjustable trigger and a low-slung bolt handle that swept by scope bells. The receiver swallowed long belted magnums like the potent .300 and .375 H&H. Besides these heavies, early M70s chambered the .22 Hornet, .220 Swift, .250-3000 Savage, .257 Roberts, .270 WCF, 7mm Mauser, and .30-06. Between 1941 and 1963 nine more cartridges were added; however, only eight appeared in catalogs. (Winchester "Gun Salesman Handbooks" distributed in 1947 included the .300 Savage, chambered until 1954.) More M70 chamberings arrived in the 1950s and early 1960s, all Winchester cartridges: the .243, .264 Magnum, .308, .300 Magnum, .338 Magnum, .358 and .458 Magnum. Most have enjoyed great success, though their introduction came shortly before the Model 70 suffered what has become the most infamous re-design in all rifledom. Of the 581,471 M70s built before its 1963 overhaul, 208,218 were .30-06s; 122,323 were .270s. Rifles in .35 Remington and .300 Savage totaled 404 and 362, respectively.

By the early 1960s, Model 70s had come in 29 styles and 48 sub-configurations. Featherweights with 22-inch barrels appeared after the War to replace the heavier M70 carbines with 20-inch barrels. The .308 and

.358 chamberings were listed only for Featherweight rifles. Super Grade 70s had special stocks and a floorplate stamp but no distinctive metalwork. The 70's tang changed during the 1940s, following the move to a side-swing safety. The safety tab shape changed too. The bridge, initially matted, was later left smooth and drilled for scope bases. Bolt knobs, solid at first, were hollowed in the 1950s. Changes in bolt sleeve, bolt stop, striker spring retainer, and other components were largely phased in unannounced. Late Model 70 stocks had higher combs for easy aim with scopes. Checkering patterns remained the same, but checkering quality deteriorated as 1963 approached.

A Chill Wind

Winchester's Model 70 proved less appealing to company accountants than to hunters. In 1960 number-crunchers in New Haven decided to arrest plummeting profits by trimming production costs. Two years later engineers had agreed upon 50 changes. These were implemented in 1963. On October 1st of that year, number 700,000 appeared on the first "new" 70. Winchester could not have anticipated its reception.

Riflemen howled with rage. Vicious denunciations targeted the stock's pressed checkering and a barrel channel with gaps

wide enough to swallow car keys. The recessed bolt face had a tiny hook, not a Mauser claw. The early 70's machined steel guard was supplanted by aluminum, solid action pins by roll-pins, the bolt stop's coil spring by music-wire. A painted red cocking indicator under the bolt shroud had as much appeal as the white stock spacers that followed.

In the early 1970s, I asked Winchester's management if the early M70 might return. "Never," was the reply. "It'd cost too much." But engineers did refine the new rifle. In 1966 an anti-bind rail smoothed bolt travel. Six years later an XTR version wore a more attractive stock. Featherweight rifles got a truly handsome stock in 1980. A short-action 70 arrived in 1984. A short run of low-priced, push-feed Model 70 Rangers vanished too soon. They had plain but well-finished hardwood stocks on the same metal used for ordinary 70s. Mine have shot well. The 70's first synthetic stock appeared around 1985. In 1987 the Mauser claw returned on some models. Stainless steel rifles debuted four years later.

Olin divested itself of Winchester Repeating Arms in 1981, licensing the name to investors who formed the U.S. Repeating Arms Company (USRAC). But profits stayed out of reach. Beset by rising labor costs in a slow market, USRAC filed for Chapter 11 bankruptcy in 1984. Five investors purchased



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the company in 1987. One was the Belgian firm of Fabrique Nationale (FN), which came away with a 44-percent share. In 1991 the French conglomerate Giat bought FN. When Giat's Jack Mattan arrived from Belgium to take the reins at USRAC, he told me that "Winchester is the greatest name in the gun world. But it has focused too long on production. Shooters don't need a new rifle every year. We must recruit new customers."

But though Winchester's flagship bolt rifle had grown more fetching since the dark days of 1963, sales couldn't cover production costs. The factory in which 20,000 workers had toiled during the second world war was doomed. Even on my first visit, when it struggled on under Olin's umbrella, the great New Haven plant harbored mostly ghosts. Oil-soaked hardwood creaked hollowly in rooms with neither people nor machinery. Lonely cells still functioned, workers in soiled aprons feeding an aged lathe or inspecting, with sepulchral stares, modest stacks of completed rifles. The factory that had undergirded the Allied war machine and served generations of sportsmen now gasped with the echoes of solitary footfalls. In March 2006, the New Haven plant closed. Union contracts had driven annual losses "into seven figures." Alas, Winchester's Model 70 died 70 years after its debut, behind bricks stained by decades of industrial soot, under skylights still blackened to foil the Luftwaffe.

Postscript

No rifleman expected the Model 70 to be left for dead. It had, in fact, already been

Model 70 Featherweights: circa 1960 with Redfield scope (top) and circa 2000. Notice stock shapes.

cloned. The Dakota 76 was a refined M70. The Kimber 84 carried its primary features. The Montana Rifleman had replicated it with investment castings. In 2000, FNH USA, the U.S. subsidiary of FN Herstal, had taken the last of New Haven's production for its Special Police Rifle, built in FN's modern Columbia, South Carolina plant.

Winchester manufactures the Model 70 there now. In many respects, it's a better rifle than ever.

CNC machines hold tolerances tighter. All eight versions (in two action lengths) wear Mauser-style claws and blade ejectors. One-piece bottom metal trumps the separate guard and magazine tab of early M70s. Stainless and chrome-moly barrels are hammer-forged, in 16 chamberings. Wood-stocked rifles feature nicely checkered walnut. Synthetic stocks by Bell & Carlson are the best of their kind, with alloy bedding blocks for enhanced strength and accuracy. Pachmayr Decelerator pads make shooting more comfortable.

The M.O.A. three-lever trigger is not as simple as the original, nor to some aficionados as good. It works.

With list prices starting a penny below \$800, the Rifleman's Rifle is less affordable now—though when it came to market at \$61, you could buy a house for less than \$10,000. In 1963, when \$154 bought you any M70 hunting rifle save the .458 African, gasoline sold for 28 cents a gallon, and Ford's Mustang was about to debut at \$2,700.

I've owned enough Model 70s to fill a wheelbarrow; too few, given my enduring affinity for the rifle. I've sold many I'd beg to have back, have passed up others I felt were indulgences unfitting the head of a young household. Still, those I've carried have forged many fine memories afield.

High atop an Oregon ridge, over frosted rock on the cusp of dawn, I peered through a 3x Lyman and triggered a 1948 M70 to send a hand-loaded .270 bullet toward a mule deer buck 300 yards off. The 130-grain softpoint flew true. So did a .30-06 bullet years later, on a spine a few air miles away, when a very fine buck almost out-foxed me by hiding in a dry, steep place no deer would choose.

Model 70s have toppled several elk for me, including a bull galloping across a slope at 180 steps. He somersaulted to the bite of the .300 Winchester. That rifle should still be with me. Its bolt ran silkily, and it delivered 1-minute accuracy. It went the way of a lovely .338 that tagged a moving elk just before the bull made Montana timber, the 200-grain Power Point cleaving its heart.

A Model 70 killed my first caribou, on a hunt that stranded us behind beached canoes fronting a wall of sea ice north of Hudson's Bay. Another Model 70 in .300 Holland downed my first eland, a monstrous bull that broke cover a garage-length away and tumbled to my 180-grain Core-Lokt on the sprint. I clutched that rifle some days later when, at night, I encountered a herd of elephants in a remote vlei. The cows scented me, came for me. I scurried cross-wind through tall grass and lay pressed to the earth as they ghosted up, trunks raised, poised to kill. The breeze held.

I'm indebted to the Winchester Model 70. Not so much for game it has taken for me, but for the journeys we've taken—to far-off places, times now past. The 1948 rifle is still with me, as is a .375 that killed my first buffalo. A handful of others. When you've a chance to pick up a Model 70, do. If you're thinking of selling one, don't. And never limit yourself to one wheelbarrow. This is the Rifleman's Rifle! ■



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Model 70