RECREATING THE COLT DOUBLE BARRELED RIFLE

THE KODIAK MARK IV FROM PEDERSOLI

Kenny Durham

If ever there were a gun that captures the essence of hunting large and dangerous game it has to be the side-by-side double barreled rifle, especially those from 19th Century.

Even though double rifles were built in several European countries by well-known makers, the double rifles of the British makers were among the most prized and commanded the highest prices. The names Holland & Holland, Alexander Henry, J. & W. Tolley, Isaac Hollis, and William Moore are just a few of the famous English gun builders from Birmingham and London whose clients included royalty. For example, I have a percussion double rifle made by William Moore wherein the rib is inscribed "William Moore & Co., Gun Makers to HRH (His Royal Highness) Prince Albert."

Double rifles of the 19th Century evolved from flintlock to percussion in the 1840s. By the 1870s the gun shops of England were turning out black powder cartridge double

rifles of the finest quality for hunting the world's largest game animals. Today, we think of .45 caliber as being a "big-bore" but back then a .45 was considered to be only a "medium-bore" caliber. The big-bores were .50 caliber and up. Above about .60 caliber, rifles were given the designation of "bore" size rather than "caliber." Bore sizes are equal to gauge sizes in shotguns. In other words, 12 bore equates to 12 gauge, which equates to the diameter of which 12 round balls of lead weigh 1 pound. Double rifles in 12, 10, 8, and 4 bore (slightly over 1" in diameter) were loaded with heavy charges of black powder and an equally heavy bullet. I recently saw a Holland & Holland double rifle in 4 bore. Engraved on the right side of the frame is, "Powder Charge 12 Drams." That is approximately 330 grains of black powder! The brass shell is 4 inches long and the bullet, depending upon the shape, weighs between 4½ and 5 ounces. That is a lot of powder and lead!

On the milder side, black powder cartridges usually designated as "express" cartridges in .40, .45 and .50 caliber were more popular for all-around hunting. Cartridges such as the .450/.400 BPE (Black Powder Express), .500/.450 BPE, .577/.500 (.500 No. 2 Express) were some of the most popular. Bullet weights in these cartridges ranged between 300 to 400 grains with powder charges ranging from 4 to 7 drams of black powder to provide a muzzle velocity about 1950 fps. For example, my J & W Tolley .500/.450 is marked "Charge 5 Drams" and meant to shoot a .45 caliber bullet weighing around 326 grains.

My first awareness of a double-barreled rifle occurred as a teenager one evening while watching the movie "The Snows of Kilimanjaro" with my family. In the movie, Harry Street, played by actor Gregory Peck, shoots a charging rhino with a double-barreled rifle, which in my ignorance I thought to be a shotgun. I remarked rather impertinently to my father, "How could you kill a charging rhino with a shotgun!" Dad explained to me that the gun was not a shotgun, but rather a double-barreled rifle firing very powerful cartridges. Although I was not particularly interested in such a gun, the memory has stuck with me all these years.

In the United States, the repeating rifle became the gun of choice for hunting and has remained so to this day. Even in the arena of upland game and waterfowl hunting, the repeating shotgun eventually became the preference for hunters. The American makers of fine side-by-side shotguns saw their sales dwindle to a point where they either went out of business, such as Parker Bros., were absorbed by other manufacturers, such as A.H. Fox by Savage Arms, or simply dropped the side-by-side from their offerings such as Remington, Winchester, and Colt. Additionally, it seems that there was little interest in the U.S.A. for breech loading double-barreled rifles. Custom gun makers of the muzzle-loading era commonly built multi-barreled rifles of various designs, but they quickly became obsolete with the development of the self-contained metallic cartridge and the repeating rifle. However, the Colt Patent Firearms Mfg. Co. did delve into the making of a double barreled rifle, but it was not a serious business effort.

An original Colt double rifle (above) Only 36 were made. The Mark IV (below) is similar but is not an exact copy.

THE COLT PATENT FIREARMS MFG. CO. DOUBLE RIFLE

Colt designed and built a very fine side-by-side shotgun with exposed hammers, designated the Model 1878. From 1878 to 1889 over 27,000 were produced. In 1879, Samuel Colt's son, Caldwell Colt, designed a double-barreled rifle based on the 1878 shotgun but having a smaller frame. The Colt double rifle was chambered for the .45–70 Govt. cartridge, having barrels measuring 28" in length. But, the rifles were never mass-produced or even offered as a custom rifle in their catalogue. From 1879 to 1885 only 36 of these rifles were made. It is believed they were made as presentation gifts, by Caldwell Colt, to his friends and associates. Today, they are the rarest of Colt firearms and all of them known to exist reside in collections. One rather peculiar fact is that at least two of these rifles were later converted into shotguns; one by the barrels having been bored out to .28 gauge, the other wherein the left barrel was bored to fire .410 shells and the right to .28 gauge.

The massive breech is designed to handle the most powerful .45-70 ammunition intended for modern rifles.

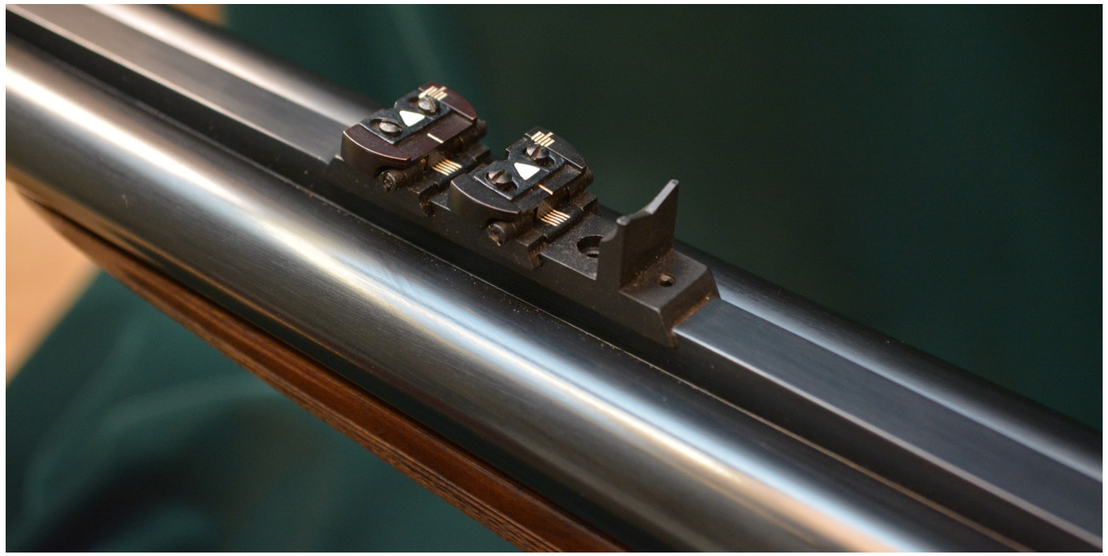
RECREATING THE COLT DOUBLE RIFLE

Although owning and shooting an original Colt double rifle is out of the question for all practical reasons, one can own a double rifle patterned after the Colt. The Davide Pedersoli Company of Italy has been producing a replica of the Colt double rifle for several years. It is based on the original Colt design but is not an exact reproduction of such. The Pedersoli Kodiak Mark IV is actually a better design for hunting than was the original Colt. Whereas the Colt had 28" barrels, the Mark IV is available in either 24" or 22" barrels, thus making it quicker on point of aim and less cumbersome to carry.

Also, anyone who has ever handled an original Colt 1878 or 1883 shotgun knows how much the buttstock drops at the heel. The Colt rifle was the same way; a lot of drop at the heel. Such is okay for a shotgun but not the best for a rifle. I have an original Colt 1883 shotgun and the drop at the heel measures 2½" whereas the Mark IV drops only 1½" and has a much straighter comb. But, like the original Colt, the Mark IV is chambered for the .45–70 Govt. cartridge. Additionally, the Mark IV is available in two other chamberings; 8 x 57 JRS and 9.3 x 74 R. And one more option—the Mark IV, upon request, can be fitted with a set of 20 gauge shotgun barrels.

*Ammunition used for testing (left to right) Remington Express with 405 gr. bullet, Black Hills Cowboy with 405 gr. lead bullet, *Hornady 350 gr. smokeless powder load, *Tru Bore 435 gr. bullet black powder load, *Tru Bore 540 gr. bullet black powder load. (*hand loaded by author)*

In 2014 I made arrangements with Pierangelo Pedersoli to purchase a Kodiak Mark IV for testing and hunting, chambered for (as you might guess) the .45–70 cartridge. Over the past year I have fired almost 200 rounds of ammunition through the rifle including factory smokeless, hand-loaded smokeless and hand-loaded black powder ammunition using a variety of bullet weights.



The fixed shallow "V" express sight is dead on for close shots out to 60 or 70 yards. The flip-up sights are adjustable for windage and elevation.

Bead front sight used on the Pedersoli double rifle.

Although the Mark IV with its barrels of modern steel and a very stout breech, is built to fire the most powerful .45–70 ammunition available, it is from the black powder era, thus making it irresistible to not shoot ammo loaded with black powder and lead bullets

A MATTER OF REGULATION

Double-barreled rifles are unique in that they are intended for only one purpose—hunting. They are not target rifles nor meant to be fired from a bench rest. They are intended to be fired offhand, often at dangerous game charging toward the hunter with the intent of doing them great bodily harm. Also, unlike other rifles, the barrels of double rifles are regulated to place shots from both barrels in the same place at a distance of usually 50 to 75 yards. In order for this to happen, ammunition having a specific bullet weight moving at a specific muzzle velocity is required for the rifle to correctly "regulate". In other words, the rifle is designed to fire one specific loading of ammunition. The way in which the rifle recoils is a major factor in determining where the bullet strikes. To this end, the Mark IV is regulated to fire standard factory .45–70 ammunition loaded with a 405-grain bullet. In fact, Pedersoli uses Remington .45–70 ammunition for regulating the barrels of the Mark IV (405 gr. bullet, 1330 fps). However, that does not mean that one is limited to that particular load in order to get acceptable regulation of the barrels. By varying the bullet weight and/or the velocity one can create ammunition that regulates well, which is part of the enjoyment of owning and shooting a double rifle.

TESTING THE KODIAK MARK IV

In testing the Mark IV, I used five different loadings of ammunition; two smokeless powder factory loadings of standard velocity, one smokeless powder high velocity "express" handload, and two black powder handloads.

All of the testing was done firing from a bench rest at 50 yards with some limited firing at 200 yards. Although I mentioned that double rifles are not intended to be fired from a bench rest, it can be done accurately if the rifle is held by both hands as if shooting offhand, the barrels being supported on the rest slightly ahead of the forearm. Such is how I test fired the rifle. In order to determine the accuracy of each barrel independently, I fired either 3-shot or 5-shot groups from each barrel; a group from the right barrel, then a group from the left

Group shot with Remington factory ammunition.

Of the factory ammunition tested the Black Hills Cowboy Ammunition regulated the best. The two low shots are a result of sight picture; the front bead covers the black center at 50 yards.

barrel. One other factor I should mention is that I was using the standard MLRA, 100-yard target of which the black bull measures 8" in diameter. The brass bead on the front sight is 0.10" diameter and, at 50 yards, covers the black center of the target thus making it a bit difficult to hold a fine bead on the target, so to speak. Due to the front sight covering the target, the rifle is likely more accurate than my testing shows it to be. The rear "express sight" consists of a fixed shallow "V" for close range and two adjustable "flip-up" sights for farther distances.

REMINGTON .45–70 EXPRESS RIFLE AMMUNITION

The Remington ammunition loaded with 405 gr. jacketed bullets at a listed velocity of 1330 fps yields groups exactly as one would expect. I fired 3 shots from the right barrel then 3 shots from the left barrel. The group from the right barrel struck the target about 1½" to the right and measured just over 1½". The group from the left barrel measured 1¼", was a bit closer to the center, and about ¾" below the right-barrel group. The firing range on which I was shooting also serves as a Cowboy Lever Action Silhouette range. To see how the Remington ammunition might perform I set up some full-sized turkeys at 150 yards. I had no problem knocking them down with shots fired from either barrel.

BLACK HILLS .45–70 COWBOY AMMUNITION

Black Hills .45–70 ammunition is loaded with a 405-

grain flat point lead bullet having a muzzle velocity of 1250 fps for Cowboy Action Shooting. This was actually the last ammunition I fired in the evaluation process. However, it produced some very fine results. In this instance, I fired the right and left barrel in sequence rather than firing a group from one barrel then the other. Eight rounds were fired, six of which were well centered and the last pair struck low, which I attribute to sight picture. There is no doubt the rifle likes this load. One characteristic of the Remington and Black Hills ammunition that should be noted is that both are loaded to black powder velocities.

BLACK POWDER HAND LOAD – 435 GR. LEAD BULLET

Several years back I had Steve Brooks (TRU-BORE bullet moulds) cut a .458 mould for me to use as a "chicken" bullet for black powder cartridge silhouette shooting. It is simply a modified design of the M1881 500 gr. bullet for the .45–70 Springfield rifle having a flat nose that's a bit shorter than the 500 grain. Cast from 25:1 alloy it weighs 435 grains. Loaded with 62 grains of Swiss 1½ Fg black powder, this load proved to be the most accurate and the most fun to shoot. At 50 yards the groups from both barrels, 5 shots from the right barrel, followed by 5 shots from the left, printed in the same spot. Five of the ten shots went into the two-inch diameter "10 ring" with the other five just above them with the total group measuring less than three inches. I set up some ram silhouette targets at 200 yards and fired at them from the bench. The right bullet struck the shoulder and the left bullet struck in the neck 5" from the first shot. Such is excellent accuracy from a double rifle at 200 yards.

BLACK POWDER HAND LOAD – 540 GR. LEAD BULLET

The Mark IV has a 1:18 rate of twist therefore I wanted to test a long, heavy bullet. One of my favorite .45–70 silhouette loads is a Brooks TRU-BORE Creedmoor bullet that weighs 540 grains cast from 30:1 alloy loaded with 68 grains of Swiss 1 ½ Fg black powder. Although this load was accurate when fired from each barrel it did not regulate well at all. The right barrel printed a 3-inch group 3½" high and right of center.

Five-shot group at 50 yards fired from the left barrel with Swiss Powder and the 435 gr. bullet.

Five-shot group at 50 yards fired from the right barrel with Swiss Powder and the 435 gr. bullet.

This load proved to be the most accurate and best regulated when comparing left & right targets

Target shot with Hornady 350-round nose and 55 grains of IMR 3031.

The left barrel printed a good six inches to the left and also high. But, when I held to the right of center near the "8" ring and fired another 3-shot group from the left barrel the group printed a very similar group to the right barrel. I suspect I was not controlling the recoil very well when firing the first left-barrel group. Allowing for where I was holding on the target for the second group, the realistic dispersion of the barrels with this load is approximately eight inches. My guess is, and I will do further testing, that a 500 grain bullet behind about 72 grains of black powder would regulate much better.

SMOKELESS POWDER HAND LOAD – HORNADY 350 GR. BULLET.

With the BPC News being a "black powder cartridge" magazine, I have included this loading with some trepidation about stepping on the toes of "purists" of the "Holy Black." But, knowing that readers will be curious regarding the use of more powerful ammunition and the fact that the Mark IV, although patterned after a black powder rifle, is designed to handle any reasonable .45–70 "PUBLISHED" load by bullet or powder manufacturers, I have included one that performs extremely well.

Here is one example wherein a lighter weight bullet propelled at a higher velocity will still regulate well in the Mark IV. The Hornady 350 gr. round nose bullet loaded with 55 grains of IMR 3031 powder produces a listed velocity of 2000 fps and yields excellent hunting performance. Having used this load in other rifles, I wanted to see how the Mark IV would handle it. The 3-shot groups from both barrels were the same size. However, the right barrel printed about 4½" right

and 3" high, while the left barrel averaged about 1½" right and 1" high. Shooting offhand at ram silhouette targets from 200 yards, I was able topple them over with either barrel. They went down like they were hit by a truck!

FEATURES OF THE MARK IV

The Pedersoli Mark IV locks up tight, but is smooth to operate. The fit and finish of the rifle is excellent with deeply blued barrels and color case-hardened frame, locks, and furniture. The barrels are nicely struck having a perfect taper with no waves anywhere; exactly what one would expect in a quality double rifle. The stocks bear a glossy oil finish having a traditional hand-cut checkering pattern similar to the original Colt. The buttstock has a cheek rest, is fitted with a classic recoil pad, and the pistol grip has the familiar "Colt" curve, but not as pronounced as the original.

The length-of-pull measures 14¾" which is a bit long for me. The firing pins are spring loaded to retract and the locks have rebounding hammers, which are good safety features. The weight of the triggers is about 3 lb., just right for a hunting rifle. All screw heads are "timed" meaning the slots are parallel to the bore; another sign of a quality double rifle.

The only additional feature that would make the gun better would be automatic ejectors. The listed weight is a bit over ten pounds; mine is a bit more. Overall length with 24" barrels is 40½ inches. The cost of the standard Mark IV varies from $5250 to $5860 depending on the vendor. Although this is a tidy sum of money, it is a bargain compared to most double rifles of this quality. If one wants a double rifle from the black powder era for hunting and just plain fun shooting, the Mark IV is a great choice. For those of us preferring to shoot black powder, it is capable of taking any game animal in North America. ♣

See ya at the range,
Kenny Durham

The Kodiak Mark IV has graceful lines and a very balanced appearance. Overall length is 40½" with 24" barrels. Note timed screws.