

## The Winchester Model 1876

by Kirk Durston



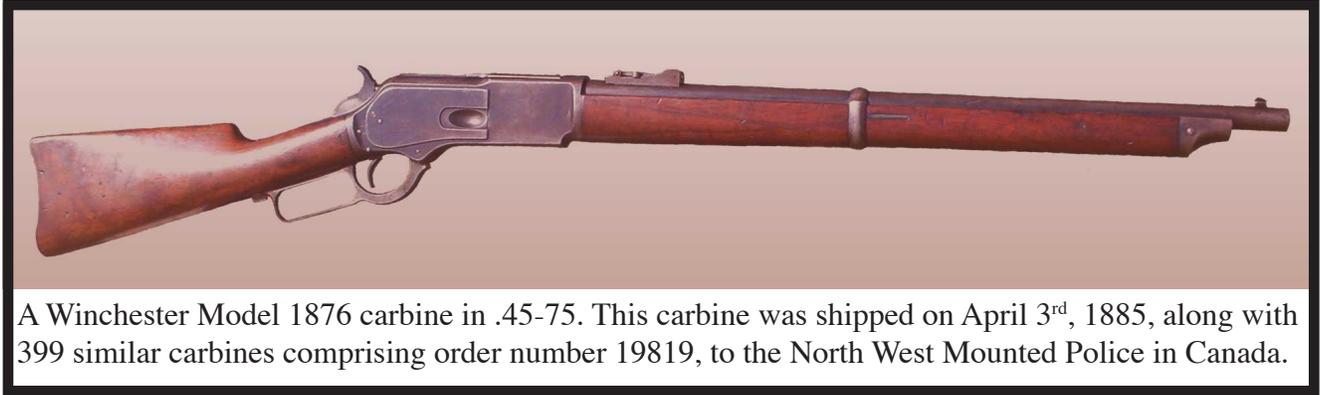
As the eastern Arizona sky paled into dawn on July 17, 1882, Na-tio-tish, and his band of more than fifty Apache warriors waited quietly on the far side of a fork of East Clear Creek. A single troop of cavalry had been following them for days, led by Captain Adna R. Chaffee, and Na-tio-tish intended to ambush the troop as it slowly threaded its way toward them. Unbeknownst to the Apaches, however, Chaffee had with him renowned scout, Al Sieber, who had discovered the ambush. In addition, four more companies had joined Chaffee's US army regulars during the night.

Chaffe and his men carefully drew up to the rim, opposite the Apaches who lay below in ambush. As two companies approached from downstream, and two more from upstream, each man holding his military issue Springfield 45-70 carbine at ready, Chaffee's men opened fire on the Apaches below. The smoke of black powder began to form a haze around the US Cavalry, as the 405-grain bullets from the troop's 45-70's sped to their targets below. Among the military issue carbines was a single, lone Winchester rifle that stood out from the rest, a formidable but graceful looking weapon with a barrel noticeably longer than the Springfield carbines all around. The man using it calmly aimed, fired, and levered in another round, the unique, milk-bottle shaped casings falling one by one into the sand, where they would lay for one hundred and twenty-three years.

In the summer of 2005, a member of an archeological party investigating the site of the Battle of Big Dry Wash, brushed the sand away from yet another deeply tarnished milk-bottle shaped brass casing, noticeably different from the numerous straight-walled 45-70 empty cartridge casings found at the site. The headstamp read W. R. A. Co. 45-75 W.C.F., and all of the 45-75 casings found at the site appeared to have been fired from the same rifle, a Winchester Model 1876. It is not known with certainty who that rifle belonged to, on the day of the Battle of Big Dry Wash, but it is purported that the famous scout, Al Sieber, was using a Winchester 1876 at that time. Since the US regulars would have been using their military issue 45-70 Springfields, and since Al Sieber was Chaffee's scout that day, there is good reason to believe that those old, tarnished brass casings were once fired by Sieber himself in that final battle between Apaches and US army regulars.

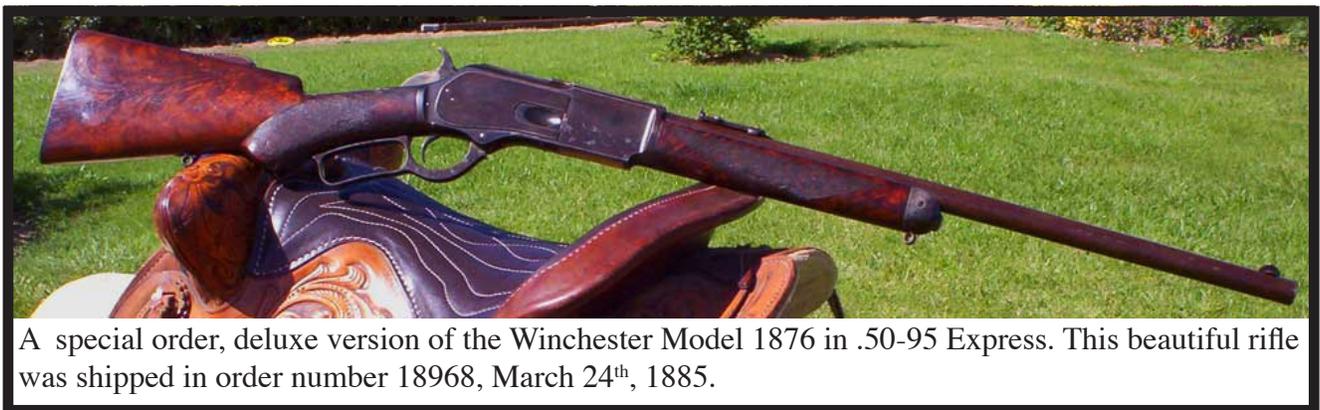
A visual comparison between the Winchester Models 1873 and 1876 can easily lead one to believe that the Model 1876 is merely a scaled up version of the Model 1873. In reality, the roots of the Model 1876 go back to about 1865, when Oliver F. Winchester began to design and develop a new type of repeating rifle with removable side plates. The first rifles were shipped to the Swiss Confederation in 1866, and some other governments in 1867 and 1868. These rifles were chambered for several 45 and 50 caliber center-fire cartridges. In 1869 the project was put on hold. An example of a Winchester Model 1868 can be seen today in the Cody Firearms Museum in the

Buffalo Bill Historical Center in Cody, Wyoming. The receiver on the Model 1868 looks almost identical in size and appearance to the receiver of the Model 1876.



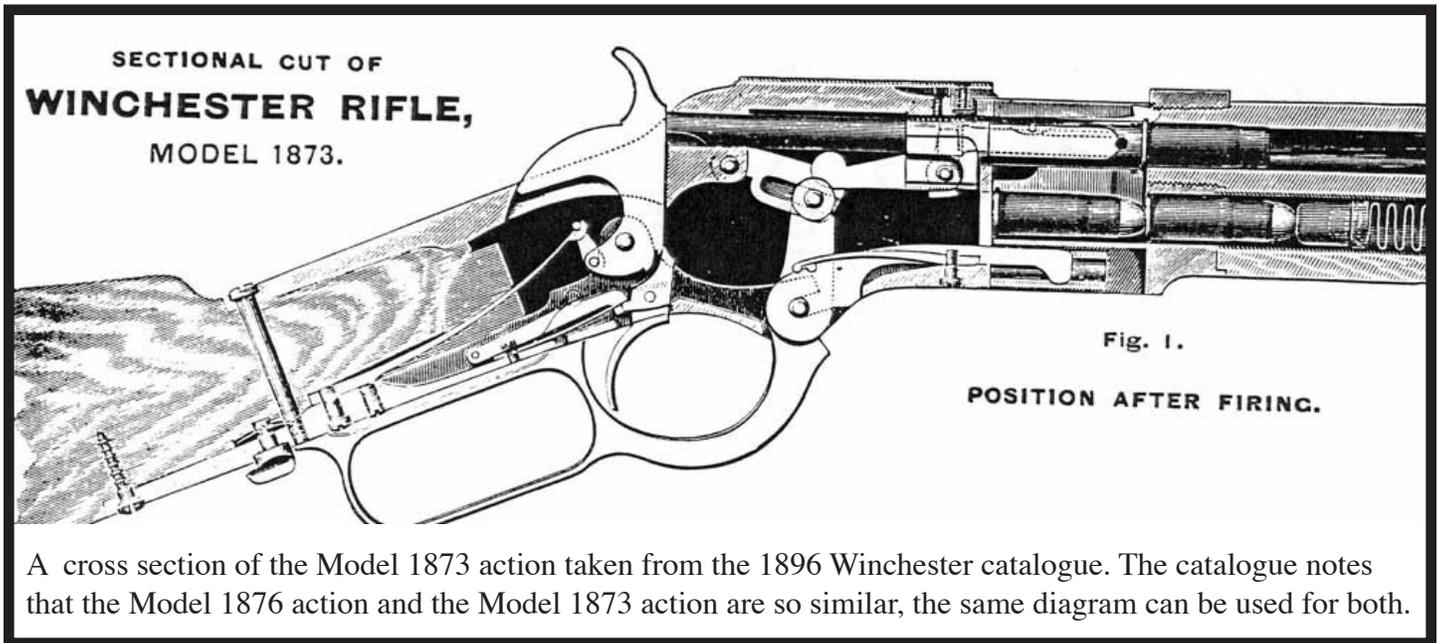
The development of a large-bore repeating rifle resumed again in 1873 and 1874, using receivers based upon the Model 1868 frame. After some refinements, and testing of a variety of calibers, some prototypes were presented to the public at the 1876 International Exhibition in Philadelphia. Because this public debut occurred on the 100<sup>th</sup> anniversary of the Declaration of Independence, the new Winchester Model 1876 was named the ‘Centennial Rifle’.

Production of the Model 1876 began in June of 1877, chambered for the distinctive, milk bottle-shaped .45-75 that fired a 350 grain bullet with a muzzle velocity in the neighborhood of 1,385 fps. In 1879, two other cartridges were offered, the .45-60 W.C.F. and the .50-95 Express. The .45-60 fired a 300 grain lead bullet at a muzzle velocity of about 1,315 fps and the .50-95 sent a 300 grain bullet down range at about 1,493 fps. In 1884 the final cartridge, the .40-60 was added. It fired a 210 grain bullet with a muzzle velocity of about 1,475 fps. According to the 1896 Winchester catalogue, all bullets were cast from 1 part tin to 16 parts lead, with the exception of the .40-60 W.C.F., which was cast from 1 part tin to 20 parts lead.

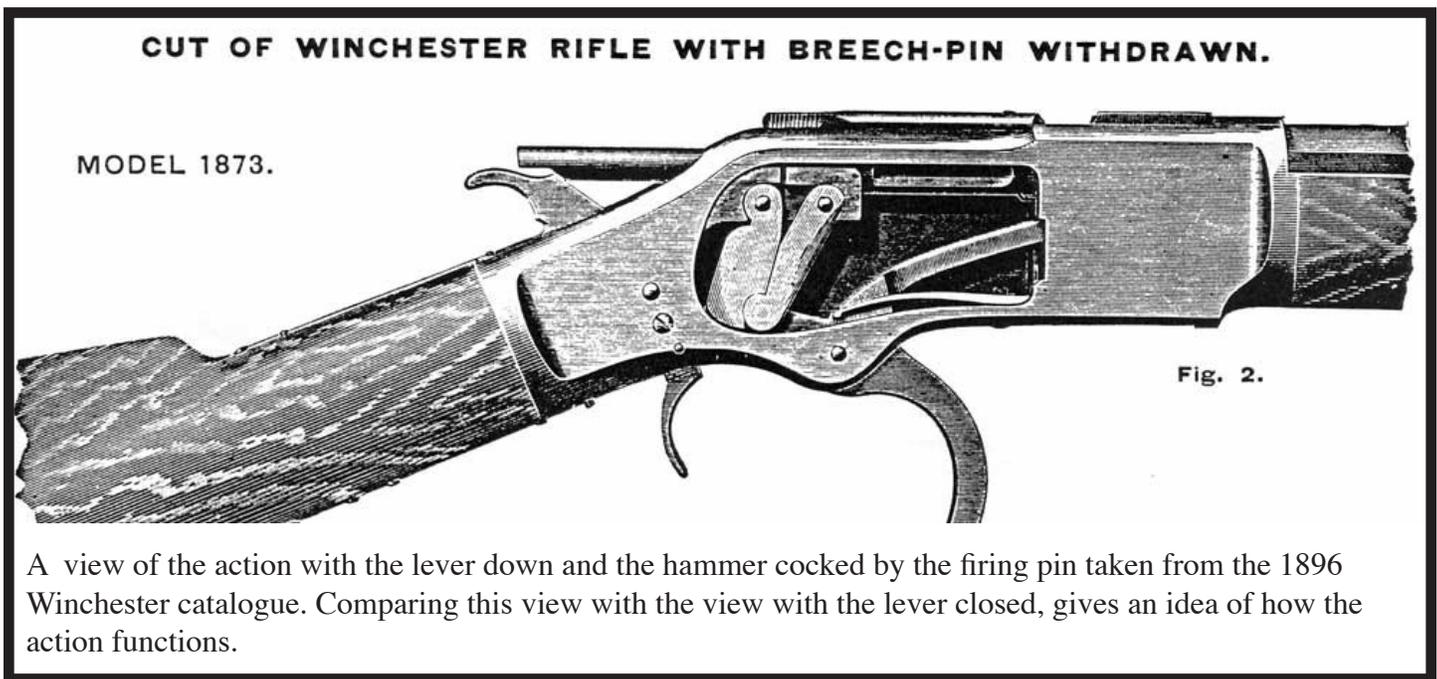


My first, hands-on introduction to the model ‘76 began with a notice in my rural mailbox, stating that there was a package for pickup at the general store in a village six miles away. Whatever plans I had that afternoon were immediately set aside as I hopped into the truck and made the round trip to pick up the parcel containing a Winchester 1876 in .45-60 that I had bought from a collector in Alberta, Canada. When the parcel was opened, there she lay, reeking like greasy rags and in dire need of a careful cleaning. It was obvious that it had been a very long time since the old classic had last been fired. About 80% of the finish was still on the metal, but it had turned a dark, chocolate brown. From the serial number, and the little bit of history I was able to gather from the collector, the rifle had been made in 1882, the same year as the Battle of Big Dry Wash. It was brought out to Alberta with the very first settlers sometime between 1883 and 1886.

As I began a very careful dismantling and cleaning of the old rifle, taking pains to remove only the caked-on, hard oily residue and dirt without marring the original finish of the gun in any way, it soon became clear that taking apart and reassembling a Model 1876 is straight-forward and relatively simple. For those who might be interested in such a project, the diagram I used was the cut-away diagram for the Model 1873 in the 1896 Winchester Catalogue. The rifle cleaned up nicely. The bore was lightly pitted, but the rifling was still clear from throat to muzzle.



A cross section of the Model 1873 action taken from the 1896 Winchester catalogue. The catalogue notes that the Model 1876 action and the Model 1873 action are so similar, the same diagram can be used for both.

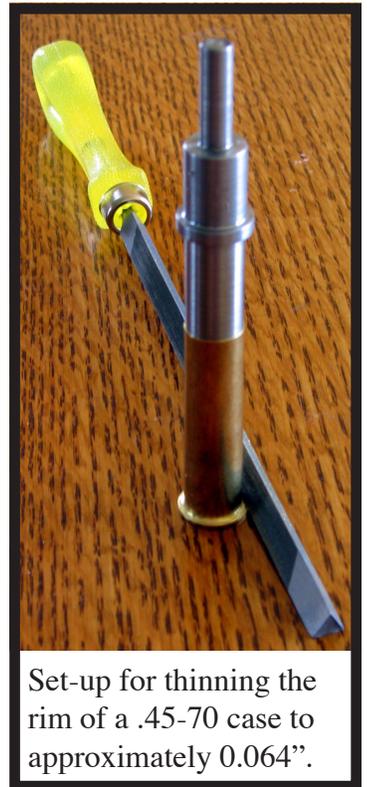


A view of the action with the lever down and the hammer cocked by the firing pin taken from the 1896 Winchester catalogue. Comparing this view with the view with the lever closed, gives an idea of how the action functions.

### Reloading for the .45-60

Once the rifle was back together, it was time to make some cartridges. Cartridge cases for the .45-60 can be made from 45-70 brass. The process has two steps to it. First, the case is shortened to the original .45-60 length of 1.855 to 1.890 inches. Next, the rim thickness had to be reduced. Original .45-60 brass reveals that the rim thickness was

about 0.057 to 0.058". Cases formed from .45-70 brass have a rim thickness closer to 0.064 to 0.068". If a vintage 1876 still has a headspace close to original factory specs, the lever will not be able to close due to the thicker rim. On the other hand, if your vintage '76 will close on brass made from .45-70 stock, then you know your headspace as loosened up, probably at the expense of the pins in the toggle linkage. To avoid reducing the depth of the primer pocket, I had to reduce the rim thickness by filing down the front face of the rim. This can be a very tedious chore, so a friend of mine made a simple tool, one end of which was .458 inches in diameter, and the other end approximately 1/4 inch in diameter. The 1/4 inch end fit in the chuck of my hand drill and the other end inserted tightly into the case. It was then a simple matter to hold a file to the front face of the rim as it was spinning and thin the rim down. I made up six of .45-60 cases from some unused .45-70 brass I had on hand and then ordered a box of 20 from Rocky Mountain Cartridges. These folks machine their cases from solid brass stock, anneal the mouth of the case, and properly headstamp it. The cases were beautiful. The only thing I had to do was to reduce the diameter of the rim slightly so I could fit the cases into my Lee .45-70 shell holder.



I used an old Lee .45-70 handloader kit to reload, although I was not able to resize the cases after each firing, which made for some tricky bullet insertions into the somewhat loose neck. Crimping held the bullet in place, but I would advise the handloader to get a proper set of dies if doing anything more than a small amount of shooting. I had on hand some original .45-60 cases, so weighed out exactly 60 grains of Goex FFg for each one. I used a polyethylene wad between the powder and the bullet. Some powder

compression was necessary to seat the bullet. This black powder load gave me an average velocity of 1,307 fps.



A comparison between three classic 45 caliber Winchester cartridges. On the left is the .45-90, in the center, the familiar .45-70, and on the right, the .45-60 used in the Winchester Model 1876.

I prefer not to use black powder in vintage rifles, simply because I'm never 100% sure that I've got all the residue out of any pits in the barrel. For this reason, I wanted to develop a smokeless load that would be safe in the '76. Powders slower than 2400 tend to give a lower pressure spike, for the same velocity and all other things being equal, than black powder. The downside of this is that the lower pressure spike for slower smokeless powders will fail to 'bump up' the bullet to fill the bore, if your bullets are a bit undersize. On the other hand, slower smokeless powders will give you original black powder velocities but with a lower pressure spike, making it easier on your old rifle.

The velocities and pressures you will get for the same load will vary depending upon the case capacity of your brass. For the results shown below, I used 26.2 grains of XMP5744 under a 300 grain cast bullet (actual weight 318 grains).

	Original WRA brass	Reformed .45-70	RMC brass
Avg. velocity (fps)	1,269	1,301	1,335
Extreme spread	30	48	12
Standard deviation	13	19	6

The original WRA brass has the largest case capacity and the Rocky Mountain Cartridge brass has the lowest. You can see that case capacity does affect velocity and pressure. For this reason, a fellow needs to be careful with smokeless reloading data and start a bit on the low side to allow for possible differences in case capacity.

One other load that seemed to work well for me was 22 grains of IMR SR4759 in the RMC cases, which gave me an average velocity of 1,337 fps. James Barnard has published an article on reloading for the .45-60 in the July-August 1973 edition of *The HANDLOADER Magazine*. One load that looks attractive to me, but that I never tried, is 26 grains of IMR 4198 under a 300 grain #457191 cast bullet to give 1,290 fps. Barnard used toilet paper filler in all his loads, but I might recommend trying the load without the filler. Filler can be a tricky thing and if a person is not experienced in using it, a vintage 1876 is probably not the place to start the learning process.

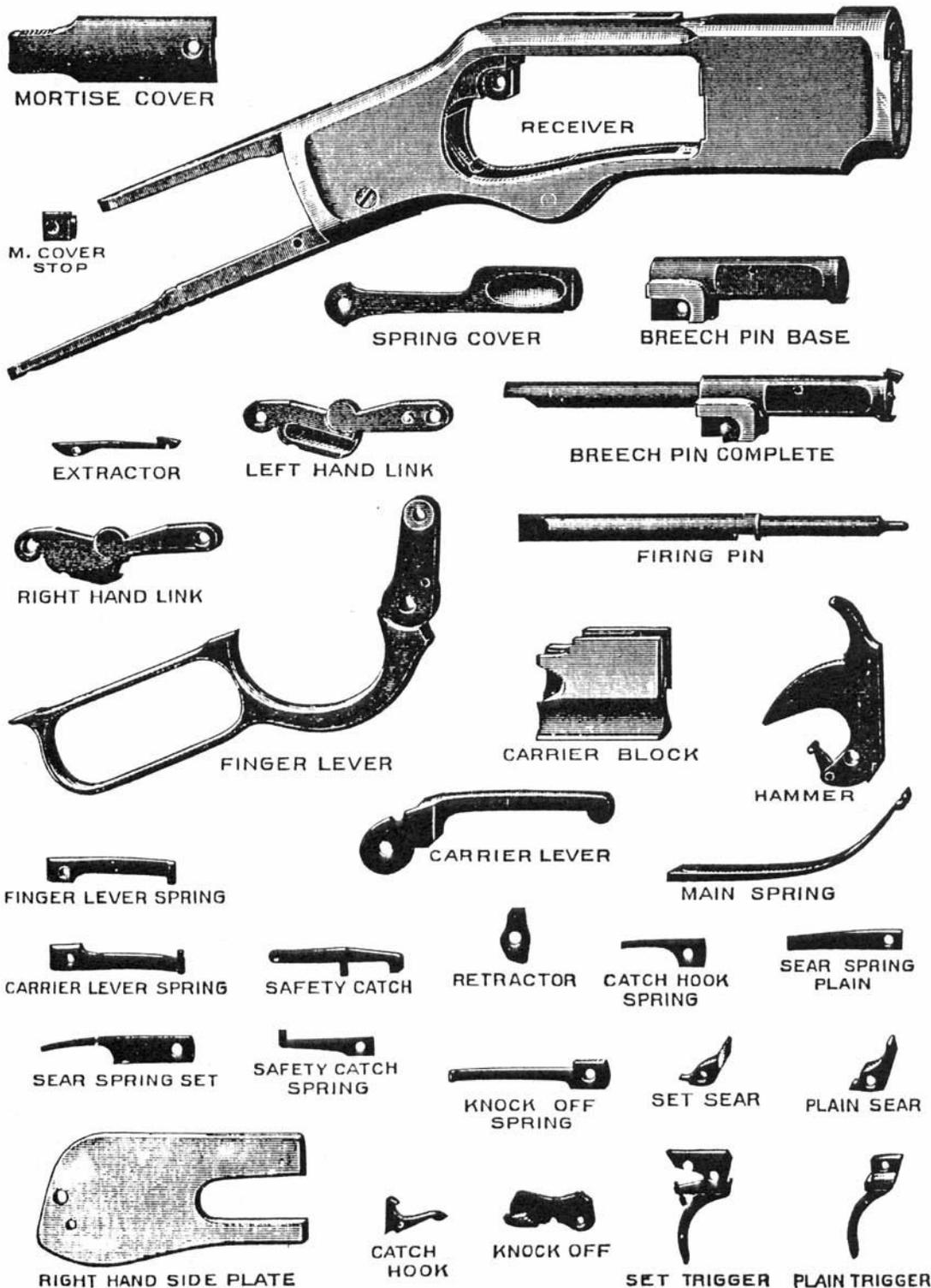
My old rifle had a bore that had about 50% wear on the rifling, and quite a bit of roughness and pitting. Nevertheless, with the gas check version of #457191, I was able to get 5-shot groups at 50 yards that were under 2" and as good as 1 and 7/16". Shortly after I started shooting the old classic, I took it for a stroll down along the bean field, just in case I saw a Ground Hog. Sure enough, I spotted one at a later paced-off distance of just over 50 yards. I raised that long, 28" octagon barrel and drew a bead in the critter. One thing you can say about a 28" octagon barrel is that the front bead doesn't move around too much, due to the weight of the barrel. I squeezed the trigger and the 300 grain, flat point bullet passed through the groundhog, smashed through a flat rock, and burrowed in the low dirt bank at the edge of the field. Without going into a lot of detail regarding what the bullet did to the Ground Hog, let me just say that a .45 caliber, 300 grain bullet with a flat nose on it, must generate a lot of hydraulic pressure.



The author's Winchester Model 1876 .45-60. This octagon-barrelled rifle was made in 1882 and journeyed out to Alberta with the first settlers in the mid-1880's.

It was my plan to take that old Winchester '76 deer hunting that fall. However, as the time drew near for hunting season, a fellow I knew took a shine to my old '76 about the same time as I started noticing a nice, original Winchester 1886 extra light takedown .45-70, circa 1902, he had. We ended up trading and although I'd have to say that I'm delighted with my '86 extra light, I also have to confess that I have regretted parting with that old '76. If I'm ever fortunate enough to get my hands on another one, I won't be parting with it so easily.

**COMPONENT PARTS**  
OF THE  
**WINCHESTER REPEATING RIFLES,**  
MODELS OF 1873 AND 1876.



A chart showing the major components of the Model's 1873 and 1876 action, taken from the 1896 Winchester catalogue.