

## VOLCANIC AND HENRY FIREARMS.

by DR. JAMES R. LUCIE

Ladies and Gentlemen:



DR. JAMES R. LUCIE

When Pappy Knode called me long distance and even paid for the call to ask if I would prepare a speech to give before this group, I knew he was in trouble. And despite the fact that he won't ever sell me any of his good guns but sells them to all my friends around me, I figured I'd better lend him a helping hand. My reasoning was that I should speak in order to get him away from the mike in order that he could work on his camera. I think he has more troubles with that camera than I do with speeches.

I selected Volcanic and Henry firearms as this is where my first interest in guns began and I initially put as much time and study into this particular field as I could afford. I'll never forget the first time I ventured out of this field and into the Colt world and Hank Stewart had to pull me out of a fake deal that I'd gotten into clear up to my ears. I think it was a couple of years before I poked my nose out again.

At any rate, conversation with advanced collectors reveals there is historical confusion concerning the embryology of Smith and Wesson and Volcanic firearms so if you will bear with me for a few moments, I would like to resume a little background. Later I will illustrate a few points.

In June 1854 Horace Smith and Daniel Wesson set up manufacturing partnership in Norwich, Connecticut under the name of Smith and Wesson. Approximately one year later because of severe financial difficulty they agreed to sell and a group of New Haven financiers bought the assets and incorporated the Volcanic Repeating Arms Company, capitalized with 6000 shares of common stock at 25.00 dollars per share. Smith and Wesson received 2800 shares in the new corporation plus \$65,000.00 cash. For this Smith and Wesson assigned Volcanic rights to the use of firearms improvements in certain of the Hunt, Jennings, and Smith and Wesson patents owned by the original partners.

The genesis of lever action repeating firearms will be brief in this discussion but for purposes of continuity and clarity let us now give again the well known genetic tree: The concept was originated by Walter Hunt's patent #6663 of the combined piston breech and firing cock repeating gun of August 21st, 1849 and Lewis Jennings tubular magazine repeating firearm patent of December 25th, 1849 patent #6973. Following some large degree of colorful legal entanglements involving the Massachusetts Arms Company and Col. Sam Colt's enterprises, the firm of Smith and Wesson became financially solid. This in spite of Wesson being defeated by Colt in the courts. By this time the Hunt and Jennings patents had been transferred to one George Arrowsmith of New York, who had in his employ one Stephen Taylor. It was to this man that a composite patent of a Hunt-Jennings firearm was issued and the records next show that one Courtlandt C. Palmer gave financial aid to foster the Hunt-Jennings project and it was Palmer who contracted with Robbins and Lawrence of Windsor, Vermont to manufacture 5000 of the Jennings rifles.

During the period of the Jennings contracts an employee of the Robbins and Lawrence firm by the name of B. Tyler Henry approached Smith and told him why the Jennings was considered a failure and gave Smith some new light regarding improvements. A pivoted lever at the front of the trigger guard was what was needed over the old ring trigger. Smith patented this on August 26, 1851 #8317 and Henry's name appeared on none of the new patents, indicating Smith had financed the project. It is generally agreed by most students of arms that the improvements to come in the following years were due to Henry's ingenuity and advanced thinking.

From 1854 to 1856 Smith and Wesson concentrated their efforts on lever action repeating rifles and pistols using the Hunt-type loaded ball. These pistols were made in three calibers; .31, .36, and .44. Weaknesses and shortcomings of these firearms were the heavy corrosive effect of mercury fulminate, the rather disturbing habit of the "chain firing", and of course the low velocity of the projectile.

In July 1855 Smith and Wesson and Palmer acquired the patent rights #10535 and #11496 to Rollin White's revolver and in August 1855 all of the manufacturing equipment, parts, pieces, and models left over from an estimated 1200 manufactured pistols made during Smith and Wesson's partnership with Palmer were moved to Orange Street at New Haven and formed the Volcanic Repeating Firearms Company. Wesson went along with the new Volcanic Company as superintendent and B. Tyler Henry went back to his old job at Robbins and Lawrence. Early in 1856 Wesson left the Volcanic Company to again join Smith to work on the Rollin White idea. This left the Volcanic Repeating Firearms Company without a superintendent and in fact left the entire structural framework of the organization including the stockholders without a single person who knew one thing about firearms. Oliver Winchester's speculation in Volcanic was \$2000.00 but he persuaded William C. Hicks, a Colt employee to come into the new firm. Hicks took over the operation with 50 plus employees and the same type of firearms and ammunition was produced as did the old Smith and Wesson firm. No particular improvements were made. Winchester had a flare for publicity and some tall tales were told in British newspapers and the arm won premiums at state fairs and for a while sales picked up but because of extremely poor accuracy and low fire power the firm finally was declared insolvent in mid 1857. Before the firm went into final receivership, Winchester formed the New Haven Arms Company and purchased the Volcanic assets. Henry became plant superintendent again and the arms continued to be called Volcanic Repeating Firearms. Four pistols and three carbines were listed as of 1859 by the New Haven Arms Company. Calibers were listed at .30 and .41 or called #1 and #2. The four pistols were described as a No. 1 four inch pocket pistol, a No. 1 six inch for target practice and a No. 2 six inch Navy and a No. 2 eight inch Navy. The carbines were 16, 20, and 24 inches.

Regarding the total numbers of pistols and carbines made, there is little information available. It is known that 1200 Smith and Wesson iron frames were made. The total number of brass frames is speculative. The highest number I have seen is 3199 which is an engraved 8 inch model although literature researched out says slightly over 3200 is the highest number. There is no specific information available regarding the numbering systems used. I mean the interchangeability of pistols and carbines. Interestingly enough we know one fact; there exists 20 inch carbine serial number 1702 and there exists 8 inch pistol serial number 1702. There are not enough examples such as this to conclude if this was policy or if this one known example was factory error. I believe this would be a tremendous field of study for some dedicated student and undoubtedly could shed some very interesting light. Regarding distribution, we know the Company sent several hundred to Europe, mostly to Prussia and several hundred where shipped to South America.

#### THE HENRY RIFLE

The economic structure of the New Haven Company, like that of Volcanic's went downhill rapidly and by 1861 was ready to go into receivership. It is considered that the Volcanic arm itself was popular, but lacked proper ammunition. It was with this thought that the arm went through a slight metamorphosis. Using Henry's new 44 cartridge which had a muzzle velocity of 1200 fps instead of Volcanics 500 fps, we enter in with the Henry Rifle. This redesigned arm was patented on October 16, 1860 patent number 30446, using Henry's name. This new gun, called Henry's patent Repeating Rifle was the turning point for the New Haven Arms Company. The Volcanic era had ended.

Many testimonials were quickly made for the new Henry rifle. By the end of 1858 Henry had developed a flange-type rim fire cartridge which had an annular recess around the rim in which fulminating powder was placed. The cartridge had conically shaped 216 grain bullets with a powder charge of 30 grains. Later the bullet was changed to a flat nose, the base marked with an "H" and as mentioned earlier this cartridge developed a muzzle velocity of 1200 fps as compared to the lowly volcanic ammunition with 500 fps. The modifications Henry made on the Volcanic primarily concerned a split type firing pin which struck 2 sides of the curled over fulminate greatly reducing the possibilities of misfire and next modifying the gun to extract rimfire cartridges. The change to 44 caliber was doubtless an attempt to gain military favor. Winchester was particularly eager to gain a military contract and he had many early failures with the ordnance board, as they did not see any advantage of these over other breech loaders. In fact Brig. Gen. James Ripley wrote to Honorable Simon Cameron, Secretary of War in late 1861 that the increased weight and increased cost, multiplicity of ammunition and differing principles of firearms would be objectionable and suggested refusal of any further introduction of new arms, including the new 16 shot Henry.

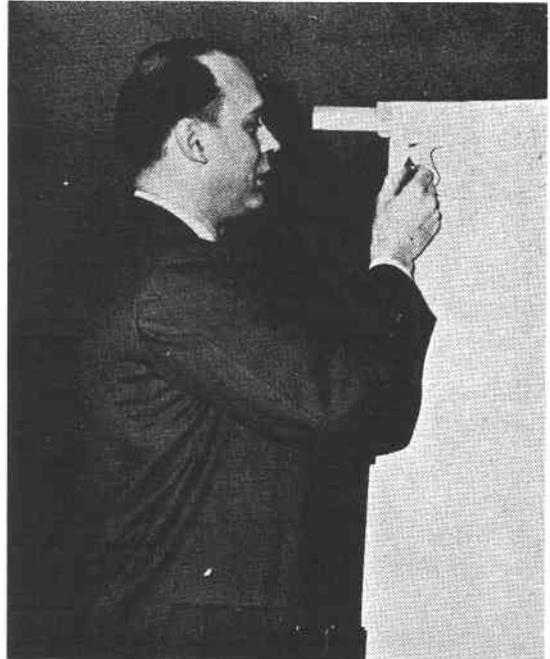
Later during the Rebellion Period from mid 1863 to November 1865 after Lee's surrender to Grant at Appomatox Court House April 9th, 1865, the Federal Government purchased 1731 Henry rifles and approximately five million cartridges. 1731 Henrys was the total purchased by the Ordnance Department and this took place from July 23, 1863 to November 7, 1865. This comprises 1730 Henry Rifles and one Henry Carbine. Distribution wise, 104 were sent to the state of Kentucky for a company of Sharp Shooters, many to individual officers in the army and the navy, some to the West Virginia mounted cavalry, the 7th, 23rd, 51st, and 66th Illinois Infantry. 240 were sent to the 1st District of Columbia Cavalry and early in 1864 8 companies of Cavalry from Maine were added to the 1st District of Columbia Cavalry and for them 800 Henry rifles were purchased by the War Department. As a comparison, the Ordnance Department procured 94, 196 Spencer carbines, 4612 Colt Revolving Rifles and 1731 Henry rifles.

However estimates of the number of Henry rifles used in the Civil War range to over 10,000, the majority of these being purchased by State Militias or privately. This probably explains the large disproportionate amount of government cartridges purchased for the relatively limited order of Henry rifles. Henry rifles saw outstanding use at Rome Cross Roads, Snake Creek Gap, Altoona, Ga. General Corse gave many glowing accounts of the superiority of the Henry rifle firepower, particularly in comparing it to the Spencer.

Though the Henry was patented in 1860, the first model was not ready for delivery until July of 1862 and as I mentioned the total sales of the New Haven Arms Company was less than 11,000 rifles. It listed for 42.00 dollars retail with the ammunition going at 10.00 dollars per thousand. In spite of the fact that the New Haven Arms Company emerged from the Civil War in sound financial condition, less than 500 rifles were sold after cessation of hostilities. However the rifles that saw military service continued to see much service after the hostilities. The rifle was a complete surprise to the Indians - who customarily drew the single shot fire power from the white man then would close in on him. For this they named the gun the "spirit gun". Steve Venard, a Marshall of Nevada City gave much publicity to the Henry, when he used one to kill three stagecoach bandits and later was presented with an inscribed Henry by the Wells Fargo Company.

The gun had several weaknesses, such as a tendency for the firing pin to break, denting of the tubular magazine and resulting in failure of cartridge advancement, and jamming of the cartridges due to fouling by dirt in the tubular magazine. Winchester realized these shortcomings and so he obtained a Connecticut charter in 1865 to incorporate a new organization. He sold out his interests in the shirt business and devoted full time to his new company now called the Winchester Repeating Arms Company. The new company was valued at 450,000.00 dollars and the first firearm to be produced was announced in 1866 and this was called the model 1866 which was the first gun to bear Winchester's name. This rifle differed in that a side loading gate was employed and the tubular magazine was completely closed up. Muskets, carbines, and sporting rifles were made in this model. The firing pin was double pronged and now all the major difficulties of the Henry were overcome. Other patents were considered, such as the Smith patent for a hinged loading gate at the bottom of the receiver and the Briggs patent #58937, a device whereby there was a sliding foreend, exposing a loading port in the magazine tube. And there were others - - -.

I think it prudent that some mention be made of the martially marked Henrys. Martially marked Henrys belonging to the group of 1731 pieces fall into a serial range of approximately 2700 up to 3400. These have C.G.C. stamped on top or side flat of barrel just anterior or I should say forward to the receiver. These initials are for Charles G. Chapman, a civilian employed by the Springfield Armory attached to the New



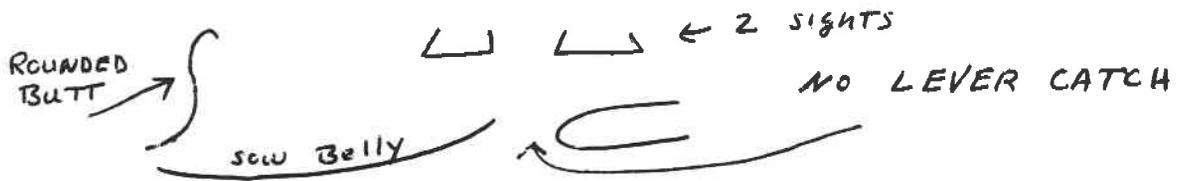
DR. LUCIE ILLUSTRATES  
HIS TALK ON WINCHESTERS

Haven Arms Company during production of the U. S. Government contract orders. Now I'll no sooner give this range of martially marked Henrys when somebody like Harry Knode is going to show me one way out of line with C.G.C. on it. The letter "H" which is Henry's inspection mark is found in close proximity to Chapman's initials on the receiver and at times it will be found on the barrel. On all Henry's you will find the H stamp on the lower tang of the receiver if the piece is approximately in the 6000 or less range and the letter W for the Winchester stamp if the piece is above 6000. There are however exceptions to this rule. Production figures place the quantity made about 14,000 plus. The iron frame series of course are intermingled with the early brass frames, the highest known iron frame I've been able to run down is 355. Interestingly enough my silver plated engraved specimen is #11 and brass and #10 and #12 are both iron. It has been suggested that the series were not 100% consistently consecutive. As an example, #2 exists as a known iron frame. Last night Jack Malloy informed me that #2 in brass frame reposes in the Smithsonian. I just know one thing; I wasn't there when they made them but I did ask Harry Knode but he said he couldn't remember.

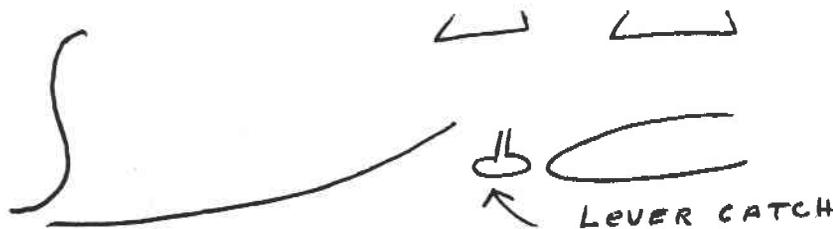
### VARIATIONS

Variations fall into six definite groups. Much help on describing these variations came from my good friend Jack Malloy, since two of the variations I have never seen.

1. First variation or model ranges up to about serial number 350 plus. This model characterized by the rounded butt plate, "sow belly" curve to the bottom of the stock and two notches for rear sight fixtures. In addition there is no lever catch. I might add at this point that sling swivels were optional on all models and all serial ranges.



2. The second variation or model is precisely the same as the first but the lever catch has been added. These range in serial number up to about 900.



3. The third variation or model breaks down into an A and a B group. Here we lose the "sow belly" curve but retain the rounded butt plate. In group A would fall those rifles that retain both rear sight notches. In group B are those specimens which have lost the rear sight notch on the receiver and have it only on the barrel.



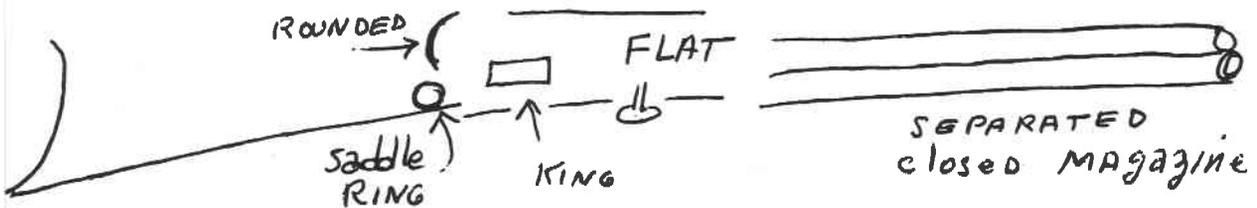
4. The fourth variation is the most common type. In this model the stock again has no longer the "sow belly" curve and now the rounded butt plate has been replaced with the straight curved butt plate.



5. The fifth variation has the Kings improvement of the side loading gate and the magazine is closed.



6. The sixth and last variation has the greatest amount of variation characterized by a separated closed magazine tube, rounded rear receiver, flat sided receiver and saddle ring. These serially range between 13851 and 15090. There are not many of these floating around.



Thank you for listening and I hope I have been of some help.