The Mysteries of the Cass Repeating Rifle of Utica, New York

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With fifty years, more or less, of gun collecting, you would think that I had seen them all, including the common types and the very rare. However, there is always another that comes to light, proving that the field has not been completely covered.

Very little has yet been recorded with respect to the Cass patent firearm. The Cass rifle should *not* be classified as a collectors' item, because only two specimens are known. One of them is in the Smithsonian Museum and has been there for a number of years. I was not familiar with the specimen in the Smithsonian and had never had an occasion to examine it until recently. The other one was found in a private collection in Houston, Texas. Its appearance is striking and after viewing this rifle for the first time, I realized that there is even more to it than meets the eye.

The Cass repeating rifle is very much out of the ordinary and certainly deserves some recognition. It is about .38 caliber and is a percussion 26 shot repeater. The Houston Cass Rifle is marked in several places "Cass Patent" and the barrel is stamped "G.T. Abbey".

After much time spent on researching Milo Cass with no luck, I called on my very good friend Chuck Suydam who immediately came forward with what he had on hand, along with the name of Holman J. Swinney of Rochester, New York. Chuck said, "You should be able to get everything you need right there!"

I got in touch with Mr. Swinney and related my problems in trying to get information on the Cass rifle. Mr. Swinney, a retired museum curator and well-known author, has done lengthy research on New York gunsmiths and has written a monograph on New York gun makers. He replied, "I'll be glad to help you all I can," and mailed me a nine-page letter, giving me a detailed history of the Cass family, and a followup letter of five pages on George T. Abbey.

I will quote one of Mr. Swinney's comments with regards to the Cass rifle: "Smithsonian has an example of the Cass Patent Repeating Rifle which I saw some forty years ago and it seemed to me so impractical, not to say down right dangerous, that I never regarded Cass as a gun maker, and for that reason have never pursued him very hard."

However, this is what I learned from Mr. Swinney's research.

Milo M. Cass was first listed in the Utica, New York, city directory in 1840 as a cabinet maker by trade, and

remained as such up to the year 1865.

It is reported that Milo Cass made cases for guns, thus becoming interested in the gun trade, and that may have prompted him to develop his repeating rifle. In 1849 at the Fair of the American Institute held in New York City, Milo Cass was awarded a Silver Medal for inventing a repeating rifle firing twenty-six times at one loading. This is the only reference known connecting Cass to firearms.

However, on March 30 of this year, I had the privilege of visiting the Smithsonian National Museum of American History and, with the assistance of Ed Ezell and Harry Hunter, who are in the Division of Armed Forces History, I was able to closely examine the Cass rifle in the museum.

After examining this rifle, I am inclined to believe that this is the rifle which is mentioned in the Eighth Annual Report of the American Institute in Albany, New York, 1850.

Comparing the Houston rifle with the Smithsonian rifle, there are but few differences. The Houston Cass has an octagonal barrel marked "G.T. Abbey". The lock is marked "G.T. Abbey" and the rifle has a German silver capbox. The Smithsonian Cass has a round barrel, unmarked; the lock is marked "G.T. Abbey." Both rifles have twenty-six cartridge chambers and only twenty four nipples on the revolving disc. There are numerous Cass Patent markings on both rifles.

Since George T. Abbey's name appears on the barrel of the Houston Cass Rifle, it leads us to believe that George Abbey had a part in the making of this rifle. George Abbey's father, Robert, was a gunmaker born in England in 1778, who later immigrated to the U.S.A. from Bedford, Bedfordshire. Robert Abbey's son, George, was born in

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1823 and is listed in the Utica, New York, directory as serving his apprenticeship under his father's guidance. The 1840 directory has listed "George T. Abbey, Gunsmith and Cutler." In the 1849 Utica directory, George T. Abbey is listed as a gunsmith with $1,000.00 invested in business, 75 gun barrels worth $150.00, locks and trimmings, $100.00, and employing three hands, including the owner. This information gives me reason to believe George Abbey was the maker and Milo Cass the inventor of these rifles.

In one of the American Society articles I found a listing of a Robert Abbey, working as gun maker in Augusta, Georgia, 1842. Could this have been a brother of George Abbey?

I finally located, in the Bannerman Catalog dated 1945, pictures of about 125 firearms patents, most of which I had never heard of or seen. The Cass rifle was among them and was definitely one of the lesser known.

I secured a copy of the M.M. Cass magazine firearms patent papers, Number 5814, patented September 26th, 1848. After many hours of studying the patent papers and the rifle, I somewhat disagree with Mr. Swinney's thinking. My contention is that Milo Cass was the inventor, and I would classify him as a genius. His repeating twenty-six shot belt rifle was of a completely new design and was not a copy or improvement of any existing older mechanism. After close examination of the rifle at hand, I find that it will function safely, and shows signs of having been fired numerous times. The only complaint which I would have is the weight of the rifle, 18 pounds, along with its bulky stock.

In the patent, Milo Cass states:

"I do not claim to be the inventor of an endless chain or belt, nor of an endless chain or belt of metallic charge chambers with solid ends and percussion cap tubes. But, what I do declare as my invention, and desire to secure by Letters Patent, is 1.) the employment of an endless chain of cartridge boxes open at both ends for conveying the cartridges in succession to the chamber of the fire arm in combination with the table G for preventing the descent of the cartridges, the guide tube for guiding the ramrod, and propelling axle C, perforated through at right angles, for the passage of the ramrod F through the same in driving the cartridge from the conveyor into the chamber of the gun, as herein set forth.

2.) I also claim the employment of the jointed lever M, in combination with the endless chain of cartridge boxes for revolving the same, propelling the ramrod or piston, and closing the segment stopper into the hollow breechpin as described.

3.) I also claim the use of a revolving disc of nipples containing percussion caps, in combination with the lock for producing successive discharges, as described, irrespective of the endless chain of cartridge boxes and jointed lever, and other parts of the fire arm.

In testimony where of I have hereunto signed my name before two subscribing witnesses this 20th day of July, 1848.

MILO M. CASS

Witnesses - L. Washington Sr.

- William P. Elliott

You may note that Milo Cass describes only three distinctive operations in his patent: The endless chain riding on a table to prevent the descent of the cartridges; the dual purpose lever to revolve the chain, along with the plunger to push the cartridges into the chamber, and the revolving disc on the lock plate containing nipples.

Milo Cass uses the complete alphabet describing various parts of the rifle in his patent papers! Letter E is for the cartridge boxes. He states that they "may be made of metal, wood, horn or any suitable material. They may be made of a rectangular form and bored through. The bore is a little greater than the bore of the barrel to which they are to be applied and the length equal to the length of the cartridge. If the boxes are made of wood, they may be affixed to a leather band with some adhesive substance, or any other suitable manner." He also gives several methods of fastening in the event other types of boxes are used.

Any number of cartridge boxes may be arranged on the endless strap band or chain, and this improvement may be applied to any gun, pistol or other firearm. The revolving priming cap disc can also be applied to almost any description of firearm, and will be found highly useful as a continued self priming and cap preserver.

As to the rifle at hand, the "cartridge boxes" are made of brass tubing and are fastened together by pins to a flexible chain.

There are four distinct operations required to bring the firearm to the point of being ready to discharge.

First is loading the twenty-six boxes with paper cartridges. A lid on the top of the stock opens and reveals ten of the metal cases which hold the paper cartridges. When these have been charged, a nipple wrench may be inserted into a small opening in the side of the stock to revolve the chain so that the balance of the chain may be loaded.

Second, there is a lever under the breech of the barrel. Turning it one quarter turn opens the passage to the breech chamber.

This breech plug is similar to a modern gas jet or valve, is a tapered cylinder in form.

Third, the main lever M working downward first activates a gear which rotates the chain H. This places a charge directly in line of the breech opening. As the lever is lowered further it engages a ramrod F, driving the cartridge into the breech. It also seats the cartridge and cuts the paper, exposing the powder to the vent. Closing the main lever to normal position, along with the breech lever, completes the loading.

Fourth, when the hammer is cocked it rotates the disc which holds the twenty-four percussion caps, placing one in a position to fire.

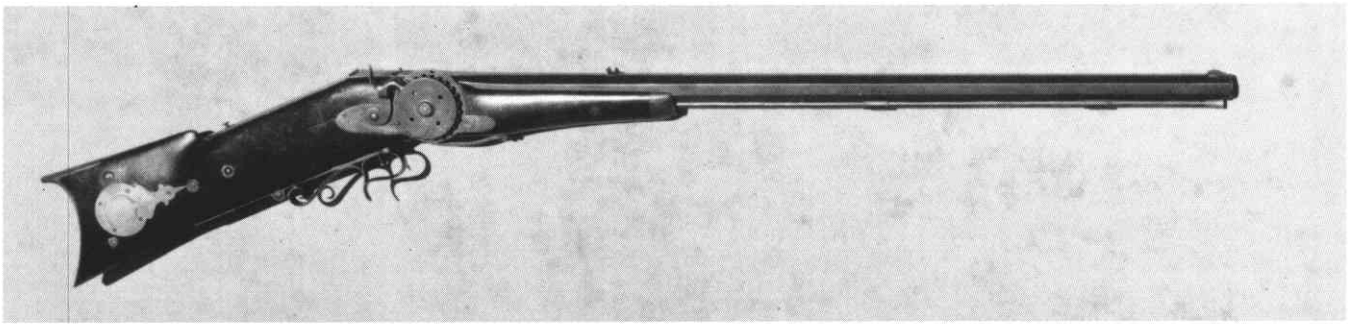
I am leaving it up to you to judge whether Milo M. Cass was an inventor or had nothing other than a brain-storm.

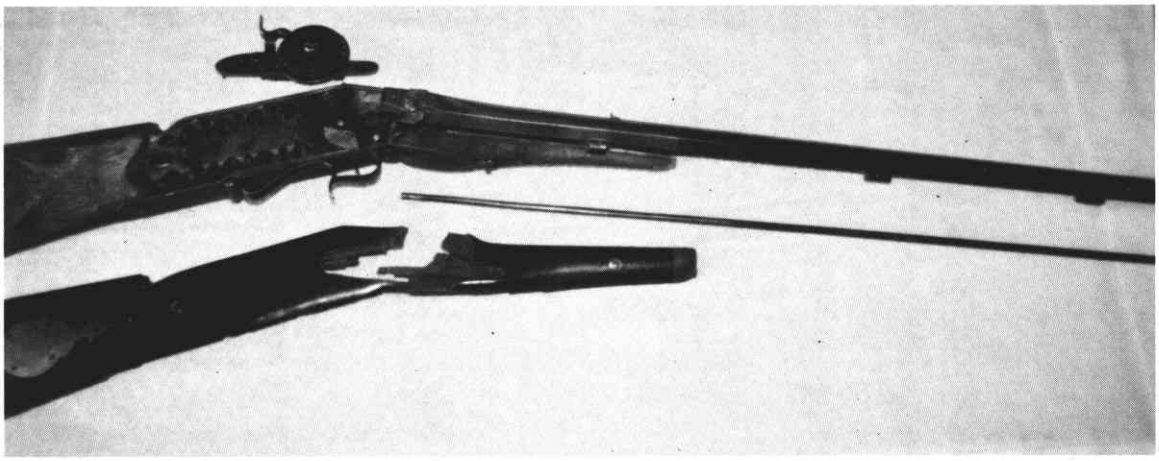
The question now arises: how and when did this rifle come to Texas? It is unbelievable to me that a frontiersman

would carry such a weapon in his journey westward: it is much too heavy and bulky, and only a very limited number were made. My contention is that possibly sometime during The War Between the States, George Abbey or some of his relatives moved south to take up gunsmithing in Texas, bringing along one of his products.

Again, I leave that mystery up to you. I want to close by thanking Chuck Suydam, Holman Swinney, Ed Ezell and Harry Hunter for their generosity in sharing their research, and especially Johnny Carughi who owns one of the two known Cass rifles.

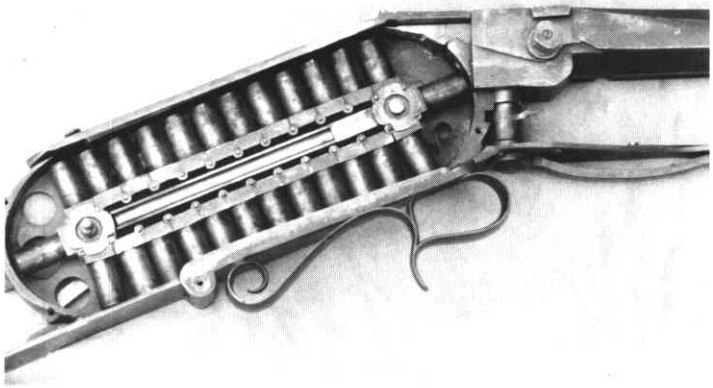
LOOKING AT THE CASS RIFLE



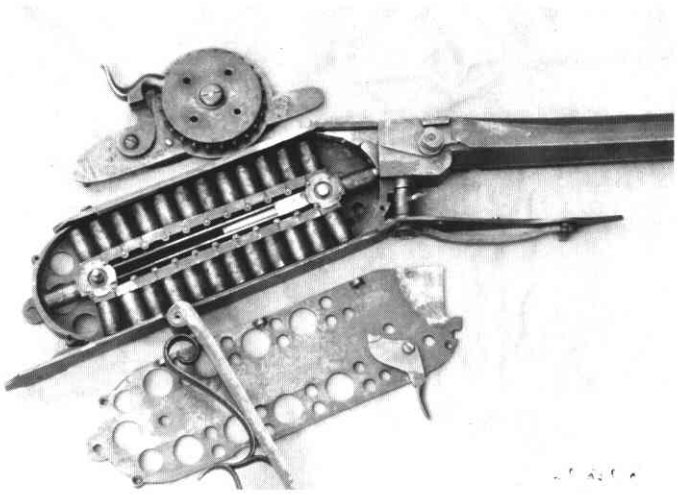


The lock and right half of the split stock have been removed.

A closer view with all of the stock removed.

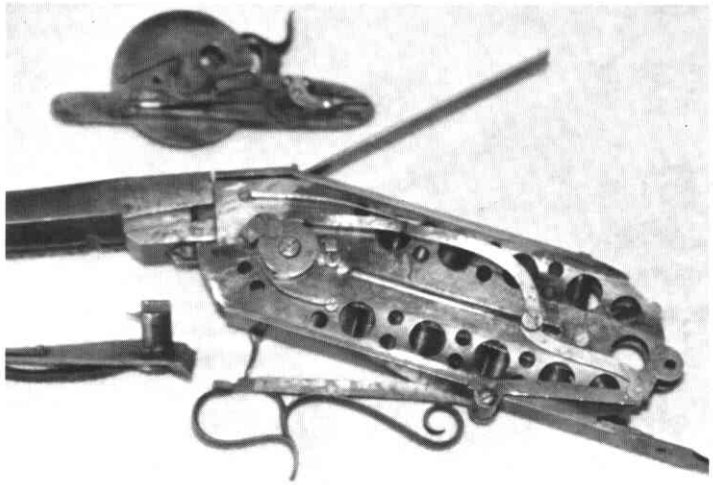


Right side of the action, lever closed, loading ramrod in rest position.

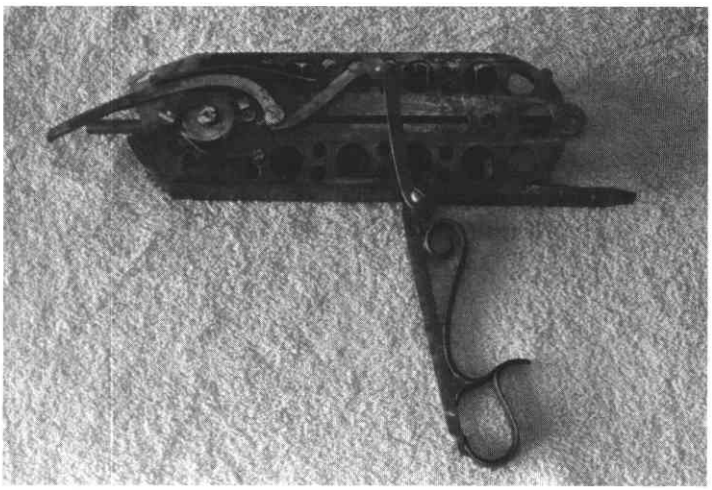


Now the ramrod has pushed a cartridge into the chamber. Note nipples on wheel above, trigger on plate below.

All at rest. The bottom of the swivel breechblock can be seen above and to the right of its lever.



The trigger guard lever starts down, ramrod starts forward, nipple wheel arm slightly forward.



The action out of the frame: lever full down, ramrod and nipple wheel arm forward.

The swivel breech and its lever.