The TOOL SHED

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# TRADE AXES & TOMAHAWKS – AUTHENTIC OR REPRODUCTION

*By Mark Miller*

*Iron Indian trade axes during the fur trade era have long been a sparsely written about subject in books. Those that are written are often intended to sell books with pictures of them instead of actual information about them. Ironically some of those showcased in books are misidentified as well. The unfortunate part of being a beginning collector is being biased to the point where you often try too hard to identify things you are not sure of into the category you are collecting. The hard part is resisting that impulse to call everything a tomahawk or trade axe. Recently I sold an old adze/axe combination tool and the buyer wrote me back that he had just started collecting tomahawks and was convinced it was an 18th C. French tomahawk. (They always think they are French.) This was despite the fact that I was a 25 year collector of antique tools and fifteen years collecting trade axes/tomahawks. Some people just can't be saved from themselves. That sad experience told me there was a need and this was my motivation for writing this guide.*

A squaw axe, trade axe or camp axe are essentially the same thing. The trade axe primarily came in 1 lb., 2lb. and 3lb. sizes, with blades measuring on average 7" long by 3" wide. Spike tomahawks varied considerably more but with weights closer to the 1 lb. size with some exceptions. Tomahawks are a different form of trade axe in that it has a spike on one side and a small axe blade on the other. Pipe tomahawks of course, have a pipe and blade. There are also Spontoon Tomahawks, Halberd Tomahawks, Hammer Poll Tomahawks, Belt/Bag axes, Celt form Tomahawks and variations of the above, but let's keep this simple if we can. Some definitions might help also. The poll is the rear of the axe head behind the eye hole. The eye is the hole where the handle goes into the head of the axe. A 'haft' is just another word for handle and was a term used in 18th C. records. The blade is everything forward of the pole. A steeled edge (made from expensive Blister or Crucible Steel) refers to the last 1/2" or more of the blade edge that has had a forge welded harder carbon steel edge applied to the softer iron. Many of these were re-steeled again and again over their life times as they wore down.

Remember that when you are buying, buy the axe - not the story about it.

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## NEXT MEETING

**April 5, 2009 –1PM**

HOST Masonic Lodge Highbridge, NJ

Jim Bode will demonstrate "square rule timber frame construction" including the making of trenail pins with a froe and shave horse. The cutting of timber frame joints including a squaring off joint and mortise and tenon joints.

*Please mark your calendar*

## Collectors of Rare and Familiar Tools Society of New Jersey


| | |
|---|---|
| President | BOB GARAY, Hopatcong, NJ<br>e-mail, takeadip@optonline.net |
| Vice President | DON KAHN, Hackensack, NJ |
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The purpose of CRAFTS of New Jersey is to encourage interest in early trades and industries, and in the identification, study, preservation and exhibition of tools and implements used and made in New Jersey as an integral part of our heritage.

Membership in CRAFTS is open to anyone who shares the above interests. Annual dues per person or couple are fifteen dollars for the membership year of July 1 through June 30. Membership fees may be sent to: Jim Bode, P.O. Box 372, Claverack, N.Y. 12513 (write check payable to CRAFTS of New Jersey).

CRAFTS of NJ meetings are held at the HOST Masonic Lodge in High Bridge, N.J.

Take 1-78 to Route 31 exit at Clinton. Go north on Route 31, two miles to second traffic light at the High Bridge exit. Turn right and go about half a mile to Dennis Avenue. Turn left, then straight to the Masonic Lodge (on the left).

Tailgate sales in the parking lot begin at 10 A.M., meeting starts at 1 P.M.

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Articles, especially about early tools and trades, are encouraged and may be sent to the Editor.


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**CRAFTS WEBSITE**
**www.craftsofnj.org**
Containing general information about CRAFTS and its activities including: meeting schedules, *Tool Shed* articles, etc.

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## New Members

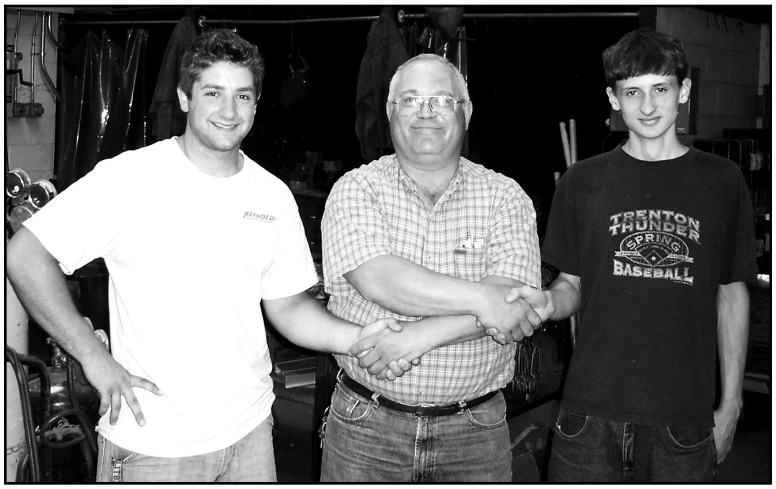
Calvin Smith Dequincy, LA
Mark Worthington Upper Montclair, NJ
Mark Kenny Annandale, NJ
James Witkowski Flemington, NJ
Joseph Guttman Kintnersville, PA
Joseph Weiss Somerville, NJ
James Sloan Mims, FL
Harold Unruh Loomis, CA
Bob Wagner Bridgewater, NJ
Richard Dal Braccio Randolph, NJ
Pete Powers Oneonta, NY

# President's Corner

I just returned from our February meeting and basked in the sweetness of a perfect day of tools. I arrived early as I had prepared a large pot of stew. I planned something hearty and hot would go over big on a cold February tail-gating session. As I got to the lot the temperatures were in the low 60's and there was plenty of action already in progress. The warm weather had brought out the early-birds. The tailgating picked up quickly as all anticipated a special treat because Frank Klauz was the presenter for the afternoon. The presentation by Frank was outstanding and the packed house gave him a roaring applause at the conclusion. (Dave Nowicki will expand on this presentation in his write-up for the June Tool Shed.)

As I mingled around the stew pot I saw plenty of tool action. Two members mentioned that the stew pot reminded them that the Museum of Crafts in Madison has a new exhibit. It is celebrating its 40th anniversary with a new exhibit on Colonial cooking "Food for Thought" I was happy to inform them that CRAFTS had just sent the Museum a $200 endowment to assist them with their historical educational programs. I wondered if they wanted my recipe for Hobo Stew? CRAFTS is fortunate to be able to offer these types of contributions to groups through the Micalizzi Endowment. Also this past year we presented $500 to two students who have displayed talents related to Industrial Arts crafts.

In our goal of timely communication with members we would like to gather members' e-mail addresses. An easy way to do this presently is for any member who wants to receive important meeting information to e-mail our webmaster at "webmaster@craftsofnj.org. Mention who you are and you are a CRAFTS member, your e-mail will be registered. This way we will receive your e-mail address and can get notices out efficiently. ■

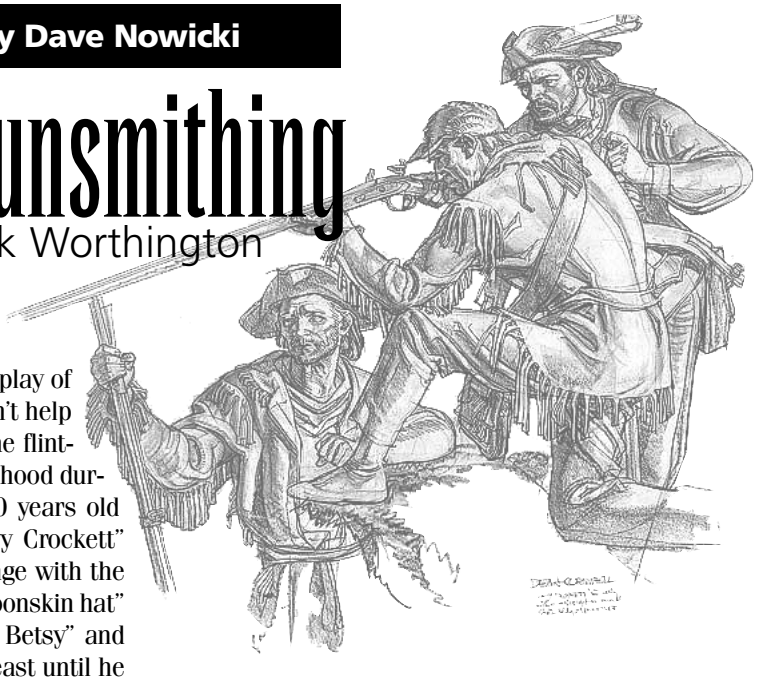



**Left** *is William Carlin, who enjoys metalworking, graphics and woodworking. One of his big accomplishments is building their home with his dad.*
**Right** *is Tom Regan. Tom is an accomplished metalworker and diver. He will use the CRAFTS award to fuse his talents by training to become an underwater welder. Of course* **center** *is CRAFTS own "Mr. Fisher Anvil" Josh Kavetts.*

**November Meeting by Dave Nowicki**

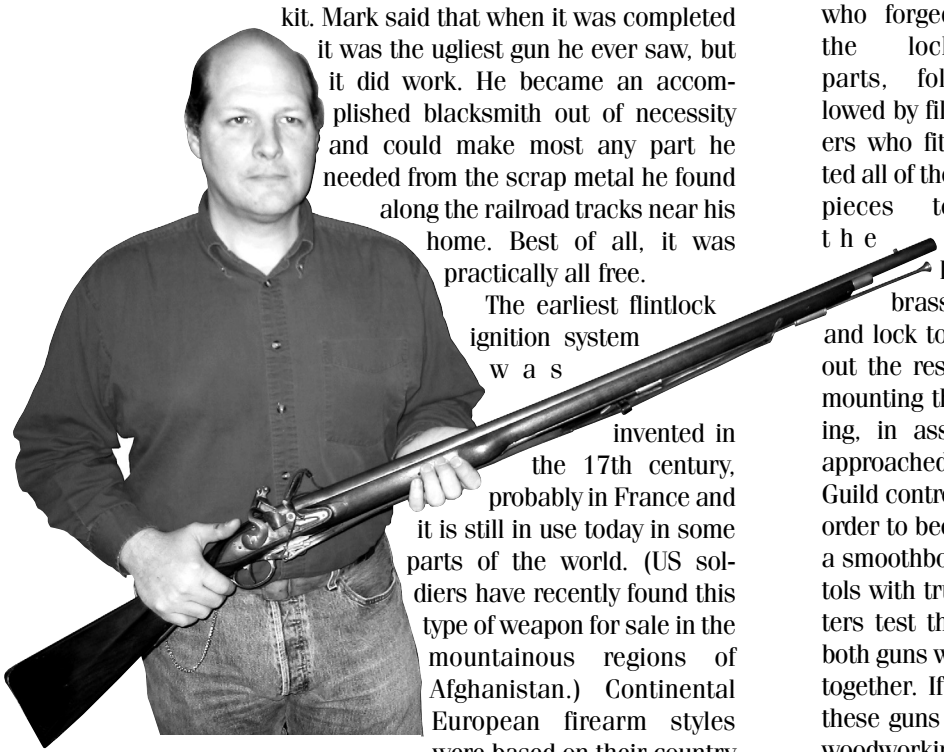
# 18th Century Gunsmithing

## Presented by Mark Worthington



As I was watching Mark set up his display of tools and especially the guns I couldn't help but remember my first memory of the flintlock rifle. It took me back to my childhood during the 50's. I was probably 9 or 10 years old when Walt Disney's version of "Davy Crockett" was shown on television and became all the rage with the neighborhood kids. I distinctly remember his "coonskin hat" and his "Kentucky rifle", which he called "Old Betsy" and the fact that he always carried it with him, at least until he served in Congress. Another show which came later featured Daniel Boone as the hero; he also carried a long rifle. Until now, just about everything I knew about 18th century gunsmithing came from those old TV shows. I did find out later that many of the so called Kentucky rifles were in fact, made in Lancaster and Berks counties in Pennsylvania.

Mark gave us a little background on how he began his foray into 18th century crafts 22 years ago. It began when he needed parts for his gun making hobby. His gun making started when, at 15 years old, he made his first gun from a kit. Mark said that when it was completed it was the ugliest gun he ever saw, but it did work. He became an accomplished blacksmith out of necessity and could make most any part he needed from the scrap metal he found along the railroad tracks near his home. Best of all, it was practically all free.



*Mark Worthington Holding an English Brown Bess*

The earliest flintlock ignition system was invented in the 17th century, probably in France and it is still in use today in some parts of the world. (US soldiers have recently found this type of weapon for sale in the mountainous regions of Afghanistan.) Continental European firearm styles were based on their country of origin and their manufacture within the system of Guilds that controlled the various crafts. The firearms which were subsequently developed here in the colonies were an amalgamation of European firearm styles. The English Guilds used separate crafts to manufacture their firearms. Each trade was responsible for building a separate part of the gun. There were barrel makers who forged the barrels, lock makers who forged the lock parts, followed by filers who fitted all of the pieces to the lock. There were foundrymen who cast all of the brass and iron parts, stockers who fitted the barrel and lock to the stock and then others who finished fitting out the rest of the gun, i.e., attaching the trigger guard, mounting the butt plate and who did all of the final finishing, in assembly line fashion. The Guilds in Germany approached firearms manufacture a little differently with a Guild controlled by master craftsmen making their guns. In order to become a master firearms maker you had to make a smoothbore long gun, a rifled long gun and a pair of pistols with truly interchangeable parts. As a part if the masters test the pistols were disassembled and the parts of both guns were mixed together and then randomly put back together. If any part did not fit the test was failed. Also, these guns were required to show the utmost in elaborate woodworking and metalworking, illustrating the high level

*1762 British musket flintlock*

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# 18th CENTURY GUNSMITHING

*Continued from page 3*

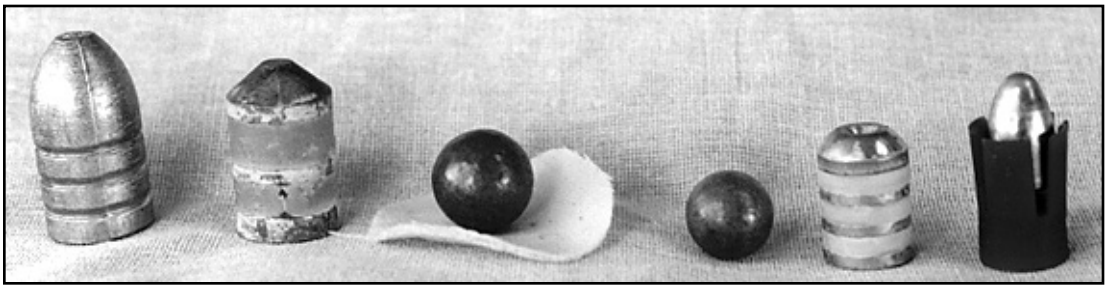
of craftsmanship that was expected from those who hoped to attain the title of Master. In the American colonies there were no guilds and gun making didn't follow the same path as in Europe. As people emigrated to this country they brought with them the craft skills that they trained for in Europe, so, early on, you had people making guns who might have been trained in stock making who produced beautiful stocks but their metal working skills left something to be desired and by contrast, metal workers who could make beautiful locks but produced rather clunky looking stocks. This imbalance in skills improved over time but some of the guns made by those first generation colonial gunsmiths just didn't have the finished look of those produced by their European counterparts. Also, English, German and French parts, barrels, locks and even complete guns were being imported and were less expensive than those produced here.

*An assortment of early flintlock firearms*

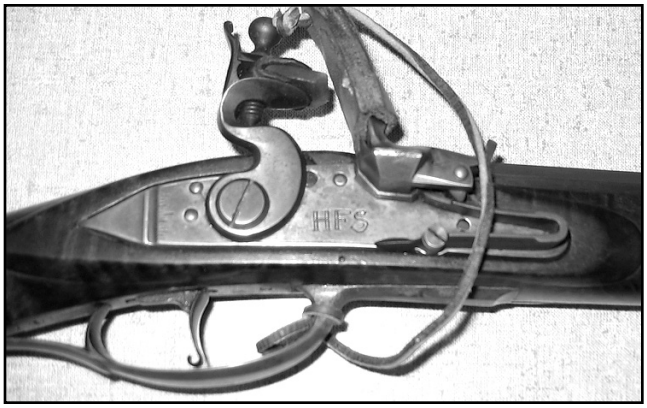
**The first step is forging the barrel**

For the iron work, the tools a gunsmith needed were typical of the blacksmith and metal worker, a forge, anvil, tongs hammers and swage block. The barrel making bench and the barrel boring bench were unique to the gunsmith. The first step in making a gun was forging the iron barrel. A barrel tube was formed by bending a "U" in a flat sheet of wrought iron stock along the full length of the barrel, and forge welding it closed. An alternative was to weld a spiral strip of wrought iron and forming it into a barrel shape. The resulting tube was drilled out from breech to muzzle in order to make the inside of the barrel clean and uniform which was followed by smoothing the outside of the barrel. In this way, the inside and outside of the barrel were always straight and uniform. A breech plug, basically a bolt, was added by drilling out the breech, threading it and screwing in the plug. The flintlock could be made by forging the parts and then spending days filing each part to shape. This effort was made much easier by making a swage or die for each part so that it was pre-shaped during the forging process. That way, all you had to do was worry about the grain direction of the wrought iron when forming the piece. The direction of the grain in wrought iron is as important as it is in wood. In both, when the grain is running in the wrong direction, the part is likely to fail. Think of the short grain in the horns on a saw handle. When a saw gets dropped, usually on its handle, it's the short grain in the handle that usually breaks. The same was true with the hammer in the flintlock. If the grain ran across the hammer, it would eventually fail at the weakest point. Each lock was then hand fitted. Four parts of each lock needed to be made of steel; the feather spring which keeps the pan closed, the main spring which drives the hammer, a sear spring which keeps the gun from firing accidentally and the face of the "steel" or striker, which was either welded onto or riveted to the wrought iron striker that the flint hits to create the spark, as wrought iron will not spark when struck by a flint.

The typical wood used to make stocks was walnut especially for military weapons. Other woods used were cherry, maple, beech and even persimmon. For civilian

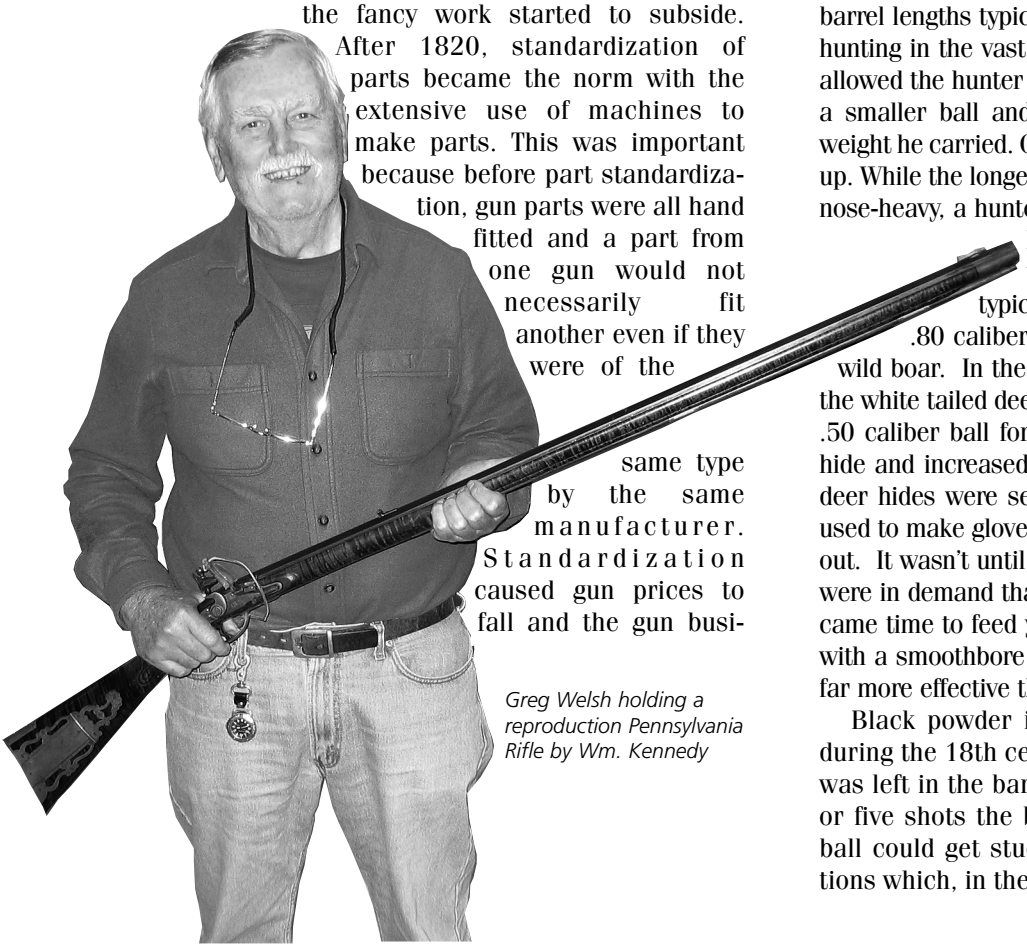


*An array of muzzle-loading projectiles.* ***Left to right:*** *a .58 caliber "Minie ball" (a hollow-based conical bullet); a commercial "Buffalo Bullet" conical from Thompson/Center; a .54 round ball and its patch; a .50 round ball; a .45-caliber "Buffalo Bullet"; and a .38 caliber pistol bullet in a sabot to be fired from a .45 caliber rifle. The size, shape, and weight of the projectile used demand proper rifling twists: round balls use slow twists (1" in 66" to 72") while the various conical types usually shoot better with a faster (1:45 to 1:20) twist rate.*




*Flintlock assembly on a rifle made in the 1980s by William Kennedy, Orignally from Peapack, NJ. The engraved "HFS" stands for Historic Firearms Society, established by Kennady.*

rifles, curly maple was the wood of choice after the American Revolution. As people returned from the war and their new country began to stabilize, soldiers returned to the farms, businesses, trades and crafts which were required to make the country grow. Some were able to acquire sufficient wealth to afford some of the finer things and this was the time when engraved brass and silver mounts along with heavily carved stocks in fancy woods, became more common. By 1820 the fancy work started to subside. After 1820, standardization of parts became the norm with the extensive use of machines to make parts. This was important because before part standardization, gun parts were all hand fitted and a part from one gun would not necessarily fit another even if they were of the same type by the same manufacturer. Standardization caused gun prices to fall and the gun business really expanded. Mark mentioned that Roy Underhill, "The Woodwright", was said to maintain that machines created the end of handwork and caused things to become rectilinear.



*Greg Welsh holding a reproduction Pennsylvania Rifle by Wm. Kennedy*

**Rifles vs. smoothbore guns**

A rifle has grooves engraved on the inside of the barrel. 18th century rifle barrels typically had seven grooves in a spiral, which caused the tight fitting ball to spin when the gun was fired. The spin is what gave the rifle its accuracy beyond a hundred yards. The rifling or grooving was created by drawing an iron die, with a steel cutter, through the barrel from the breech to the muzzle with a twisting motion to set a spiral. The die was attached to a rod which was indexed to create the spiral and was drawn through the barrel seven times to cut the standard seven grooves. A smoothbore gun, like a shotgun, does not have any grooves and is accurate up to 100 yards. Rifled barrels were used in Europe (eastern France and the Germanic States) from the 16th century onward. Of the guns made in the colonies, most all were smoothbore weapons. A smoothbore was much more versatile than a rifle because it could shoot a ball, shot of different sizes and even rock salt when you wanted to discourage thievery from your fields and orchards. Professional hunters in the colonies during the 18th century tended to use rifles because they could be used for large game over long distances. The long rifle, with barrel lengths typically 46 to 48 inches, was developed for hunting in the vast forests of the colonies. A longer barrel allowed the hunter much better accuracy and he could use a smaller ball and less powder which cut down on the weight he carried. Over a period of weeks this weight added up. While the longer barrel caused the gun to be somewhat nose-heavy, a hunter could lay the barrel over a branch or his arm when it was braced against a tree to sight the gun. In Europe hunters typically used larger caliber weapons, .70 to .80 caliber than in the colonies, primarily to hunt wild boar. In the colonies, where the primary game was the white tailed deer, a professional hunter typically used a .50 caliber ball for deer. This caused less damage to the hide and increased his profit. It was during this time that deer hides were sent to Europe by the millions and were used to make gloves and knee breeches that wouldn't wear out. It wasn't until the west was opened and Buffalo hides were in demand that hunters used larger calibers. When it came time to feed your family though, hunting small game with a smoothbore weapon was less expensive to buy and far more effective than a rifle.

Black powder is notorious for fouling a barrel and during the 18th century, up to 25 percent of the powder was left in the barrel after the gun was fired. After four or five shots the barrel needed to be cleaned out or a ball could get stuck. This problem had many ramifications which, in the worst case, could jam the barrel ren-

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# Trade Axes & Tomahawks

*Continued from page 1*

*This beautiful spike tomahawk was recently found by metal detector Kevin Hughy of St. Ignace MI. near the old Fort Buele*

Certainly documentation can be very important and if the axe is authentic then maybe the story is- but buy the axe on its own merits first! Then consider whether the documentation is sound. Experience is your best educator along with reading all you can about what is a trade axe and what LOOKS like a trade axe or tomahawk.

It helps a great deal to learn about all the other axe types to avoid these costly mistakes. Using the internet, many old, cheap foreign made axes are coming to the U.S. being sold as authentic Native American trade items. Some of those already have a patina, but luckily don't quite fit the typical pattern of our trade axes or tomahawks. There are some countries such as Pakistan, India, and Latin American countries as well as reproduction makers in the U.S. still currently making these axes by hand forging, so that criteria is certainly not enough either. I've noticed the Pakistan forged axes sold today have an exaggerated small lobe at the bottom near the eye but too far forward; about 1/3 of length compared to genuine ones where the pinched lobe is very near the eye. They are also 1/2 as thick.

There are shops in France where a hand forged axe identical in shape to our trade axes can still be purchased. Consider that tomahawk reproductions have been made during the early reservation days and continuously ever after for over 120 years. So how do you tell the authentic period ones from the reproductions and tourist items? Sometimes it requires a little science, experience, and detective work and in the end you may never be 100% sure which period some came from.

Patina is usually a dark black smooth color that does not rub off if it has been collected many years ago and it is a very stable and protective surface that should never be cleaned further. One of the reasons people say never to clean your antiques is because you may be removing evidence of its authenticity! The climate it was stored in or found in also can make a difference in its appearance. I have seen many that have a pale dull reddish appearance with areas of sand colored background that came from the western states and is likely due to being in that dry climate for centuries. I'm sure a metallurgist would have a name for that type of oxidation but I have been unable to find it. Patina can be added by fakers with chemicals but is only attempted primarily on the most expensive (profit making) ones like the pipe tomahawks. Chemicals will often leave a mottled patina maybe even with drip marks where the liquid dried. Rust pitting is very difficult to fake. Cast Iron is a material often used in reproductions, which because of its brittleness was not practical as a weapon or axe tool. Cast iron will have a visible seam down the center where it

Patina is usually a dark black smooth color that does not rub off

*The photograph on the **left** show spike tomahawks on the left and trade axes on the right.*

*The photograph **above** shows the variations in eye shapes. The top right axe is a "Biscayne" axe from the Neutral Tribes area, the one below that was used in the Great Lakes area. As you can see, the spike tomahawks vary in general shape much more than the trade axes. This is only a small sampling. There are many more variations of authentic spike tomahawks which is why they are sometimes so hard to distinguish from the many other odd axes we find in the marketplace.*

comes together in the mold. Cast steel is the term describing the process of making steel and is not meant to describe it as being 'cast' in a mold as in the case of cast iron. Confusing? Oh yeah, but that is just scratching the surface.

Drop forging is another technique of producing axes of entirely cast steel. The photo of the axe on the right has a molded appearance to it and no signs of being hand forged. Drop forging is the process of setting the red hot blank in a die and punching out the shape in either a single strike of a multi-tonnage press or in successive stamping where each step in the process becomes closer to the finished product. Drop forging cast steel was not economically viable until after the Civil War, so these type axes would not have been used much during the historic Indian fur trade period, if at all.

*Small drop forged wood axe.*

*This small round polled trade axe was found in the 1960's in the Nelson River next to Hudson's Bay Company's Norway House during an unusually low water level exposing many ice chisels and other axes. Norway House was established in 1814 and acted as inland storage facility for York Factory and also made York boats. The edge is steeled only about 1/8" and one can see the 'grain' of the iron after having been so severely oxidized.*

Faked aging can be added by leaving an axe in a manure pile for six months or so but an experienced collector can still tell the difference. Look for normal rust pitting, hand forging, angles of the blade, shapes common to other types of axes. Also, does it have a laid-on steel edge about 1/2" wide added to the iron blade? Steel was at a premium cost at the time and needed to be forged to the iron by an expert smith, so modern fakers rarely, if ever, try to go to this extreme unless much more money is involved, such as in pipe tomahawks. Also, corrosion rates are different on iron versus steel, so it's easier to see on pitted ones and the steel edge is a shade darker in color. In fact, pitting in general on authentic trade axes is so common that if it does not have any at all be suspicious. Some true trade axes were made without the re-enforced steel edges added due to the extra labor/cost involved. The Indians soon caught on to this and demanded axes that would not break, however that didn't stop the practice of selling unsteeled axes. Those with inlays of pewter or silver or engraving are very rare but there are many fakes of these running around.

I suggest educating oneself with scholarly writings on the topic. I recommend the authors George Neuman, Timothy Kent, Harold Peterson, Carl P. Russell, Carolyn Gilman and many of the fine archeological books and papers that are written from all over North America. One thing about perusing the archaeological digs - you won't find any "faked" tomahawks or trade axes there.

A typical trade axe is made of two straight angles from the poll, but those blades that sweep up on top or flare down on the bottom angle would most likely not be trade axes. In other words, you ideally want to see a 90 degree angle straight out from the eye for the top of the blade with the bottom portion of the blade around 130-150 degrees from the eye/handle. Of course there are exceptions, but until you become expert, it is best to stay away from the exceptions. These were made to be simple, quickly made tools so extra work was avoided in the trade unless it was a presentation piece. Some axes that are double bladed have been represented as tomahawks but none have been documented. Some ice harvesting axes with long nosed blades and spikes on the other side, (occasionally reground to make it look similar) are represented as tomahawks they aren't. Ice hatchets/axes come in many sizes but most have an elongated blade with a very rounded edge and a short stubby spike pointed abruptly downward (if they haven't reground it). Spiked tomahawks were usually fairly symmetrical and balanced in weight.

Recently excavated ones will naturally have the flaky rusty look to them and zinc electrolysis may be needed to save it. If its core is solid enough the best way of cleaning these is to lightly tap the solid portion with a hammer so the vibrations will knock off the loose flaky rust. This will not harm the object unless it is too far gone to matter and will leave a solid enough surface to treat with zinc electrolysis or Extend Rust Preventative (which can be removed later if need be) or a just light coating of oil. The red colored rust is still actively attacking the iron so that needs to be removed. Moisture can hide between cracks and crevices. Drying it out completely is necessary before treatment, even if you have to dry it at 185 degrees in the oven for awhile. Otherwise you risk sealing in the hidden moisture to make it even worse. The main point to all this is to stop the corrosion from continuing further. Clean as little as possible and ONLY when necessary to preserve it.

The oldest documented trade axes known are from the 1520's to mid-1600's "Biscayne" axes are made by a combination of inletting a hollow in the middle of a red hot flat

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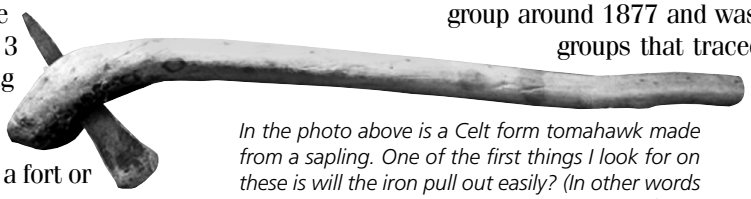
## Trade Axes & Tomahawks

*Continued from page 7*

iron bar with a fuller hammer and then folding it closely around a mandrel. These are much more robust axes than the later axes that were made by others - often 3 lbs - hence surviving longer in the ground. Also individual blacksmiths that were local to a fort or trading post had their own preferred method. Some used a drift - a tapered oval iron blacksmithing tool, ,,some preferred a mandrel (cone shaped iron shaper), and some preferred a hardy tool on the anvil, or drilling it out (especially for smaller eyes for some spike tomahawks) and filing it oval by hand.



*In the photo above is a Celt form tomahawk made from a sapling. One of the first things I look for on these is will the iron pull out easily? (In other words could it have been placed there more recently) and does the wood look as old as the iron? Is there darkening of the wood where the iron penetrates?*

The actual number of trade marks and trade axe makers is amazingly numerous. So far I've catalogued 700 different makers and marks in the last 8 years and am still adding to the list for a potential book I am writing called "A Survey of Indian Trade Axe Makers." Of course this covers a range of 300 years and involves half a dozen countries so perhaps it is not that surprising. There is an excellent website written by Kevin Gladyzs that covers French-made trade axes better than any book written to date as well as many other French trade items.

*Maker's mark on trade axe.*

Some axes that are often mistakenly or purposely sold as Indian trade axes or tomahawks are tobacco cutters, African trade axes, fireman's hatchets, modern factory-made axes with the some resemblance to trade axes, fraternal axes such as TOTE (stands for the no longer secret phrase, "Totem Of The Eagle"), shingling hatchets, belt axes, old sugar axes, lathing hatchets, scythe handle tangs, or South American trade axes, plain old hand forged hatchets, killing poll hatchet (used for killing cows and such), etc. Another point to be considered is that not all axes which are legitimately excavated from a historic fort or site, are necessarily from that trade period. They could be from a later time period, .like last year - or perhaps even from an earlier time. Unlike stone-age artifacts where the time periods are so much more vast, we cannot tell by the layers in the soil.

A type of fraternal axe that shows up frequently confusing the general public as well as experienced collectors, are ones made by The Order Of The Redman, which began as a group around 1877 and was an offshoot of other fraternal groups that traced their ancestry to the Boston Tea Party, where colonialists dressed as Indians disposed of some overtaxed tea. They made and wore numerous Indian items such as buckskin shirts, pants, beads, headdresses, moccasins, etc., and ceremonial axes and tomahawks. After 130 years, now some of these old axes have a genuine patina similar to the authentic tomahawks. The TOTE mark which I mentioned in the paragraph above usually has an eagle engraved on it as well. You will even find one of these fakes pictured in Harold Peterson's classic book on "American Indian Tomahawks", pg. 105, so they fool the best of us sometimes. This is why I find it so important to learn about all axes that have similarities to the authentic ones. If nothing else, it gives one a little more peace of mind to narrow the field of possibilities when paying a couple hundred dollars or more.

*This tomahawk above was said to have been used in the "Whitman Massacre" in 1847 (there is some dispute in that provenance). In 2005 the tomahawk was stolen from the Whitman Mission Museum near Wala Wala, Washington. In 2006 it was returned by mail anonymously with a note asking for forgiveness. More likely he couldn't fence it because it was so identifiable. The FBI is still investigating the theft.*

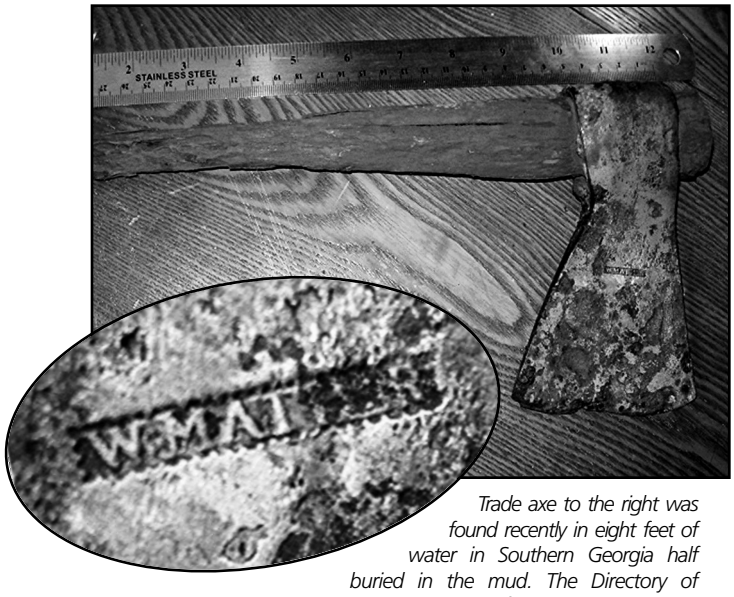
What to look for in original period hafts (handles)? Certainly they can easily double the value of a tomahawk or trade axe so they are often faked for this reason. Let's get down to brass tacks.Original period tacks were made of solid brass with brass square tapered shafts.Occasionally they were made with square tapered iron shafts brazed to the brass top, but that was not until 1870 and was not in widespread use until about 1900. If the axe has brass tacks you want to first check if it is solid brass or plated brass by using a magnet, then if it passes that test you might very

carefully check the shaft to see if it is round or square. If one of the tacks is missing (as it often is) look at the hole left to see if it is round or square. Modern carpet tacks are brass plated with round steel shafts Another thing to look for is patina which should be a deep dark brown color on the brass exposed. Also there should be darker rings where dirt has accumulated around the tacks an., clean underneath them. What is the drawback with these tests? Solid brass tacks with square shafts are still being made today in very small amounts by reproduction artists and as for patina--well there's always the manure pile for that. I have tested how long it takes for these reproduction tacks to develop a patina, just left them outside in the Fall and by Spring time they were about as dark as the old originals 250 years old. Also there are people selling the original brass tacks from worn out colonial trunks which would match the period of tomahawks -- I wonder what the buyers of these are using them for? It could be for those detail demanding reenactors but I still wonder. So the moral here is don't accept brass tacks as an absolute sign of authentic Indian artifacts...just as a possible indicator.

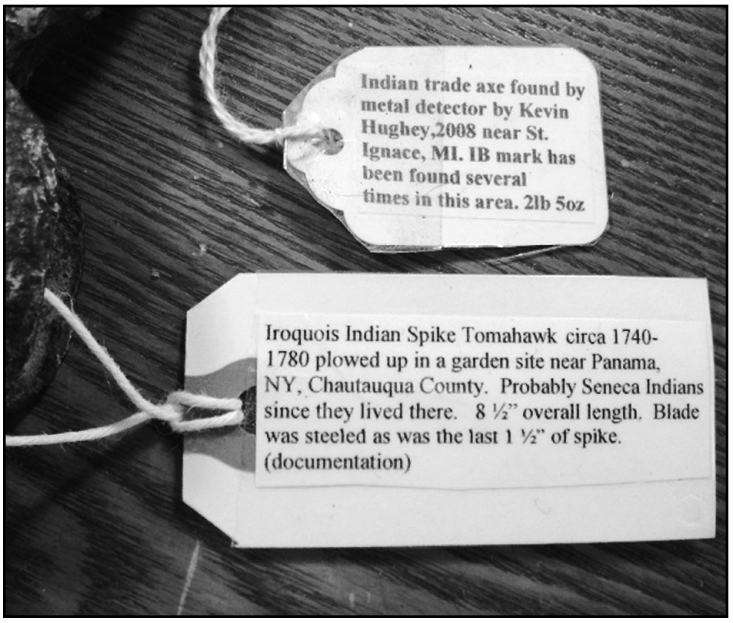
Period handles should have a darkening of the wood next to the top and bottom of the eye hole because iron oxide tends to leach into the wood it comes into contact with over the centuries. If you don't see this darkening be suspicious. With authentic all steel tomahawks there is often little natural leaching into the wood (because of the higher carbon content) so check for normal wear between the eye and haft if you can see in there. If there are iron square nails on top holding the haft on check to see if there is any iron leaching from those nails to the wood. There should be.

Brass pipe tomahawks are commonly faked. Many have been made as honest reproductions in which some sellers will advertise as period items. The brass should be a dark brown color that does not rub off with your finger. The brass should also be uniform in color throughout instead of a mottled color as is often seen with chemically "aged" brass. If there is a steel bit dovetailed into it naturally should be much more worn/pitted than the brass. Remember--rust is easy to fake but pitting is very hard to fake. Pipe tomahawks in general are the most often faked since they are by far the most valuable category of trade axe. Complete pipe tomahawks sell at a minimum in the $1,500-$10,000 range or more so if you are buying one for far less than that it may be too good to be true. Tomahawks (pipe & spiked) with a heart shaped cutout in the blade are frequently reproduced and should immediately be suspect until proven innocent. Yes there are authentic ones but not that many!

Documentation can be very valuable both to the buyer and to the seller who is trying to get the best price, but more importantly it is most valuable to history. Sadly many axes which are being discovered today at old fort sites by those fantastic metal detecting folks are sent to the buyers without even a small note with a signature indicating where, when and by whom it was found. Some of the better sellers will take the time to do those things and one I know even provides a map/copy of the location of discovery. What I try to do is type what I know about each axe and where it was found, etc., in the smallest font, and then print it out. Then I cut this out, cover it with packaging tape over a stringed packaging ID tag and tie the string to the object. This way the information follows the axe. Any other documentation that doesn't fit on the tag goes in a separate notebook of documentation. I can't stress enough the importance of documenting everything you can about these newly discovered axes, or anything else you collect, even if you think it is unimportant. Once that chain of information is broken and its history is lost—it is lost forever. ■

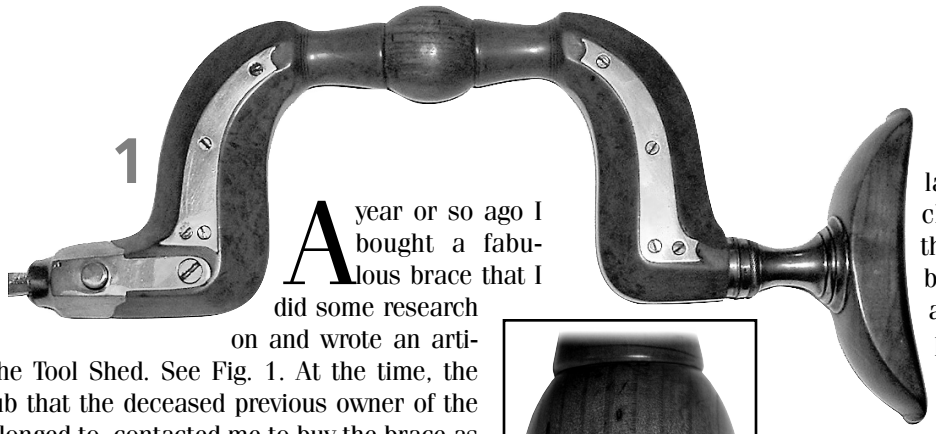



*Trade axe to the right was found recently in eight feet of water in Southern Georgia half buried in the mud. The Directory of American Tool Makers says this mark was identified as an adze maker in New Jersey during the 1700's. Anyone with information about this maker please contact the author at -* **mwmedgar@embarqmail.com**



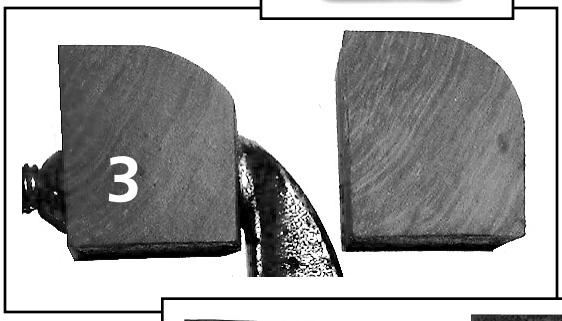
Kean Kuttin's

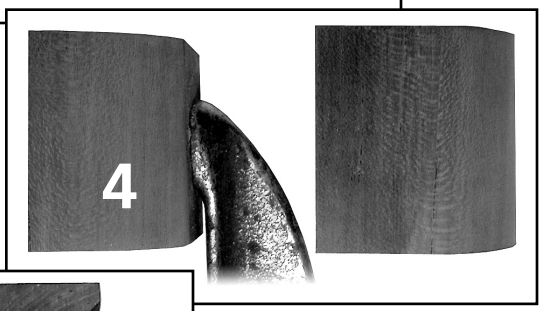
# WHICH ONE HAS THE TONI?

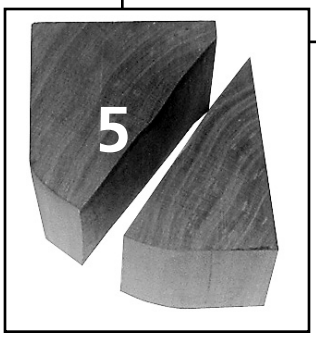



A year or so ago I bought a fabulous brace that I did some research on and wrote an article for the Tool Shed. See Fig. 1. At the time, the yacht club that the deceased previous owner of the brace belonged to, contacted me to buy the brace as a memento to his craftsmanship. According to them, and his son, he made the brace. It wasn't long after that that I found out that this style brace was made by I. Stein from Germany. This did not dampen my enthusiasm to the fine details of the piece.

One of these details was the center rotating ball and how it was assembled. See Fig. 2. I was familiar with the center balls of the "gent's" braces and knew that they were in two pieces. But as hard as I looked (even under magnification) I could not see a seam line on my "yacht" brace. As the previous owner was German, I asked a few foreign brace experts about the center ball. They showed me a few that had a brass center ball. That pretty much proved that a one piece ball was possible by a fine craftsman. He could make a very tight press fit with a wedge into the end split of the spindle and a slot in the bottom of the mating hole (something like the spreader and rungs on a chair). So I went with the one piece ball.




Woe unto me, another one came up that Bob Garay bought and showed it to me. It was exactly like mine down to the last detail. BUT, there was a clear line of demarcation of the two pieces of the center ball. So I went back to mine and looked under high power, and was just about able to see what I thought was a demarcation line. But, here's the rub. There was no gap in the grain lines that occurs when you cut through due to the thickness of the saw kerf. I have made these balls before and cut them in half with a very fine blade, but you could still see a slight gap in the grain. Now what?

My last hope was that it was split not sawn. But that would not produce a straight line and it could be seen. In desperation, I tried it. I used cherry, as that is what the original maker used for the center ball. What a surprise I got!

Look at Figs. 3 & 4. They show an unsplit piece and a split one. Fig. 3 is in the flat view and Fig. 4 is in the round view. Unfortunately you know which is the split one, as it has the clamp on it. And if your eyes are very good, you might see the split. If you then go back to Fig. 2 and look at the ball center between two grain lines you will see the split. It looks exactly like a fine grain line. And there is not the slightest gap between annual rings or ray lines!Just to prove that I didn't screw up again, I loosened the clamp to show the two pieces split. See Fig. 5. It proves that "you can't always judge a book by its cover". ■

Lot #331
C.B. Rose Type Brace

CRAFTS of New Jersey

Lot #211
Risque Lady's
Legs Calipers

# TOOL AUCTION

## Saturday, April 18, 2009

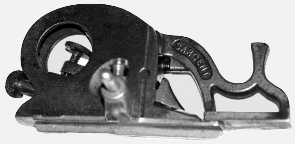
*NEW LOCATION* ➧ OLDWICK FIRE HOUSE ➧ *NEW LOCATION*
Route 523, Oldwick, NJ

**SALE STARTS AT 9:30 AM INSPECTION AT 7:30 AM**

## 550+ LOTS

See the enclosed Auction Flyer for details, or
go to our website **www.craftsofnj.org** for additional information and photos.
For further information: call Greg Welsh 908-439-3266 or Steve Zluky 908-534-2710

Lot #176
Standard Rule No. 3 Size
Smooth Plane



Lot #300
Sargent No. 1507
1/2" Rabbet Plane
"Lady Bug"

Lot #305
Stanley #85
Scraper Plane
"SW"

Lot #352
Henry A. Foss
Patent Toy Size
Block Plane

# 18TH CENTURY GUNSMITHING

*Continued from page 5*

dering the gun useless or if a jam wasn't realized and a second ball was fired could cause the breech to explode. On the battlefield, cleaning your weapon was a luxury usually not afforded to a soldier in a firefight. The solution was to use a smaller ball. With a .75 caliber round you could put in a .69 caliber ball after the barrel fouled. Because there was quite a bit of extra room for the ball to rattle around in the barrel, there was a loss of control in the direction of the ball as it came out of the barrel. The solution to this was the invention of the mini ball. This bullet shaped projectile had a lead skirt that flared out when the gun was fired and shaped itself to the size of the barrel. The improved accuracy now allowed the shooter to hit a man sized target 300 yards away instead of the typical 80 yards. By the time of the civil war the barrel fouling problem was solved by issuing each soldier a cartridge pack of 10 balls with the 10th cartridge being a "Williams Bullet" which had a ribbon of lead at the base to which was peened a disc of iron which cleaned out the barrel when it was fired. Later improved powder manufacturing did away with black powder and its inherent fouling problem.

Mark Worthington provided a most remarkable presentation and provided a tremendous amount of information on the history and use of 18th century firearms. We had a full house with a spirited question and answer session following the program. I know everyone who attended came away with a little more knowledge on this subject than they came in with. I took away quite a bit more. ■

The TOOL SHED

CRAFTS of New Jersey
P.O.Box 372
Claverack, NY 12513

## Upcoming Tool Events

**March 14** – PATINA Spring Tool Sale and Auction
Damascus, Maryland Volunteer Fire Association
Activity Center, Damascus, MD
www.patinatools.org

**March 25** – Tony Murland Auctions
The Limes Hotel
Needham Market, Suffolk
www.antiquetools.co.uk

**March 27-28** – Martin J. Donnelly Antique Tools Auction
Ramada Inn Hotel, Indianapolis, IN
800-869-0695
www.mjdtools.com

**March 28** – David Stanley Auctions
The Bretby Conference Center
Burton-on-Trent, UK
www.davidstanley.com

**April 4** – M-WTCA Local Meeting
Broadway, VA
Contact: Vaughn Simmons
540-432-0617

**April 5 – CRAFTS Meeting**
Masonic Lodge, Highbridge, NJ
www.craftsofnj.org

**April 3-4** – Brown's 18th Dealer Show and International Antique Tool Auction
Radisson Inn, Camp Hill, PA
800-248-8114
www.finetoolj.com

**April 18 – CRAFTS Auction**
Oldwick Fire House, Oldwick, NJ
www.craftsofnj.org

**April 24-25** – Martin J. Donnelly Antique Tools Auction
Holiday Inn Everett Turnpike, Nashua, NH
800-869-0695
www.mjdtools.com

**May 27-30** – EAIA Annual Meeting
Kansas City
www.eaiainfo.org

**June 18-20** – M-WTCA National Meeting
Lexington, KY
Contact: Bob Fields 704-393-1282

## Want Ads

**NEED HELP** disposing of your tools or home items? Entire or partial house clean-outs available. Call Steve Zluky, (908)534-2710.

**WANTED:** Old open frame band saw, where the lower wheel is heavier than the top wheel. Need not be complete. Ed Hobbs, 4417 Inwood Rd, Raleigh, NC 27603-3315
hobbsed@portbridge.com

**WE ARE DIGGING DEEP** INTO OUR PERSONAL TOOL COLLECTION AND WILL ONLY BE SELLING IT ON OUR WEBSITE. CHECK IT OUT! At www.JimBodeTools.com
The largest Antique Tool Website on earth! Jim and Trish Bode PO Box 372 Claverack, NY, 12513, USA Jim@JimBodeTools.com.

**WANT TO BUY** – Stanley No. 40 scrub plane iron & cap. Wanted also parts for Stanley No. 39 - slitters, depth stop, 3/8" & 3/4" irons, & cap screw. Bob Garay – takeadip@optonline.net

**JUST A NOTE** to advise anyone interested that I have just added a number of articles and other information to the web site Yesteryears tools.com Thanks, Tom Lamond - Tom@yesteryearstools.com

■ ■ ■ ■

**Next Meeting • April 5, 2009 –1PM • HOST Masonic Lodge • Highbridge, NJ**