October, November, December 2007   Issue 76

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Front Cover
John Rohner Hammer collection.
From top to bottom....
James B. Meek, Mitch Moschetti
Ralph Alpen, Eric Gold
Ken Hunt, Amayak Stepanyan
Hans Rohner, Ron Smith.

Photo by pilkguns.com
See page 20 for more photos and article.

Back Cover
Ralph Bone, a much loved and respected member of FEGA leaving the GRS Grand Masters in August 2006. Sadly Ralph passed away 4 months later on December 1st 2006 at the age of 77.

Photo by Sam Alfano

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L
ead times in doing a newsletter are always difficult for me. As I am typing this, most of the US is in a heat wave with temperatures in the triple digits and I am going to talk about our annual Exhibition in late January!!! The problem is that both winter and the show will arrive before I know it.

This year’s shindig in Reno should be fantastic and I’m looking forward to it. We have a great line up for the Monday Seminars as noted in this issue and I’m looking forward to seeing them. Make sure to make plans to stay for Monday to attend.

Last year we brought back the “Members Welcome” on Thursday evening and it turned out to be a huge success. We’re going to continue with this again this year so be sure to make plans to be around Thursday between 5:00pm and 7:00pm and join in. Just like last year, this will be a very informal and sometimes “cozy” get together in my suite at the Silver Legacy. We’ll supply a “barebones’ supply of refreshments and snacks and you are welcome to bring a snack or your own refreshments as well. This will be open to all FEGA members and their “significant others” and it’s a chance for everyone to relax and visit with one another. The only catch to all of this is announcing the location of the room. I won’t know the location of the room until I arrive but keep an eye on the forum on fega.com for a room number. I’ll try to spread the word once I get there as well. If I can get permission, I may have some information at the elevators guard station.

Due to hotel security, you may need to be a hotel guest to go to the room. In some cases, you may be a “guest” of someone else with a room and go up with them.

That leads me into my next sermon... PLEASE book your rooms at the Silver Legacy and be SURE to use group code FEGE 08. Why?? The first reason is you’ll receive a $6.00 per night breakfast coupon. You’ll also be “close to the action”. Staying at the Silver Legacy is where the welcome, show, banquet, meetings and seminars are held. You’ll also find many members hanging around after the show at one of the local watering holes and get a chance to visit as well. And most importantly, is the fact that we MUST sell a certain amount of rooms to hold the show here. The Silver Legacy credits the guilds $10.00 per night for each room booked through our group code. You don’t really have to spend any more and you support both guilds at the same time.

Before I get off my soap box urging everyone to attend the annual event, I must remind everyone that besides seeing the world’s greatest engraving and going away with a wealth of new techniques and tips, there is the “human factor”. In the modern world of videos and the internet, one can learn more than ever but the nothing beats a “hands on” experience. A picture may be worth a thousand words but seeing it in person must be worth a million! And, of course you’ll find that along the way you’ve just made a lot of lifelong friends!

Speaking of lifelong friends, there is an article in this issue about Ray Phillips. He has the distinction of actually knowing me “more” than a lifetime... OK, let me clarify... My father started gunsmithing and a gunsmith supply business in 1946. In the 50s Ray was buying sights and things from my father before I was born. In 1979 I purchased one of Ray’s Ngraver tools. Ray wrote back to tell me about the items he used to get from my father. Sometimes it can be a very small world. My father made quality items for the gunsmith trade to fill a need and years later Ray is making quality items for the engraving trade. The acquisition of the Ngraver and many of his tools got me started in engraving. I still have many of those tools and punches on my bench today.

Since then, I’ve gotten to know what a great guy Ray is. He’s been a “fixture” of the FEGA shows as long as I can remember and has earned the respect from all engravers and I’m guessing most of us have some of his tools on his bench. All you need to do to find him is head to his table. I don’t think he EVER takes a break from it. If he’s not demonstrating something, chances are he is sharing a good joke with someone.

There is also an article on Ray LeTourneau. While I haven’t known him as long and as well as others, he too has been good to FEGA. I’m also one of those “lucky” ones that won one of his fine vises in our FEGA raffle. Thanks, Ray! It’s not only a great product but we thank you for your long standing support of FEGA.

And while on the subject of engraving equipment, I would like to say “Happy 30th” to D J Glaser and the GRS Company on their 30th anniversary of being in business! Wow.... Suddenly I feel a LOT older than I did before I started this article!

I guess time does fly when you are having fun! Ω
I have designed this tool for myself to use in sharpening gravers without the use of a power hone. This tool evolved from a picture of James Meek’s tool holder in his book from the 1970’s. I wanted to have a tool that would show the correct angles marked on the controlling parts holding the graver. This is what happened to come out after several years of changes. In 1988 I decided to learn some of the basic engraving needed to do simple jobs. My general gunsmithing took most of my time so engraving was placed on the back burner. I will give the dimensions of the tool parts and if you have a lathe you could make one for yourself. Some of the dimensions will probably be left out, but you should be able to look at the pictures and make the tool. (Figure 1)

The upright shaft (Figure 2) is .375 dia. X 3.725 long. The shaft is milled flat on the back side for the stop screw to hold the extension arm square with the base. A 8 X 32 tpi set screw is used hold in place until final assembly and then it is SUPER GLUED in place when all parts are lined up.

The extension arm is 2 pieces. The short section is .500 square X 1.200 long. The other end is .312 in square X 3.000 inches long with one end turned down to .250 dia for .375 long. This is inserted into the short section and is hold in place by a 8 X32 tpi set screw. Later on you will need to adjust the .312 square with the front angle cross section.

The bearings (Figure 3) are about .746 in diameter and the hole is about .234 in. diameter. The number is (American made with N.D. 36) on the side. The metal base is .625 inch X 3 inches plus the end is turned to fit inside the bearing hole. A .010 surface for the base of the bearing to fit up against is shown. An 8 X 32 tpi hole is about .500 in. deep to hold the bearings on the base.
The angle dial (Figure 5) is 1.000 dia. X .250 thick. The graver holders are made from .500 dia. X .950 length round bar and drilled out to .375 dia. The inside parts are machined from .375 dia. round bar. The square holder is cut with a .375 inch end mill to just over 1 half of its dia. The flat holder is milled with a slotting saw. After these parts are finished I used super glue to hold them inside the .500 dia. parts. Thumb screws are 8 X 32 tpi and the ring for holding the graver in place is .750 dia. X .250 thick. There is a set screw in the angle dial to hold the parts together. I placed the screw at the zero location and you can see in the next picture. (Figure 5a)

The angles on the heel or face are shown in the picture. (Figure 6) The large dial for the angles from zero (0) to create the heel lift can be set to any angle. 0 to 45 left and 0 to 45 right will cut the 90 degree used by many engravers. 0 to 30 left and 0 to 30 right will create the 120 degree heel. Etc. The face is cut with the (F) turned to the bottom marker place.
Tool to mark the angles on the 0-90 scale (Figure 7) This is the slow part in making the tool. I made this jig to hold the .750 dia. Part inside and mark from the notch. Nothing like a micro indicator as this!!!

Above (Figure 8) is the jig from marking the large dial for the angles.

On the left (Figure 9) you can see a graver held in place with the thumb screws. In this case it is a flat graver.

If you want a radius on the bottom of the heel of the flat graver just run it up the ramp (Figure 10).
My name is Francis Heuse, I’m 39 and I live in Beyne-Heusay, a village close to the town of Liege in Belgium. Back in XIX century, my family was known as Damascus barrel makers. As a young boy I remember that I always felt a great interest for art, drawing and creating things with my hands.

In 1984, at the age of 16, I attended the engraving classes at the Ecole d’Armurerie de Liège. I spent four years in this school learning, animal drawing, ornamental drawing, ornamental engraving, lettering, inlaying, pantograph engraving, and basic jewelry.

I’ve learned the craft from Masters Engravers as René Delcourt, Philippe Grifnée, Charles Leger, Jean Dossin, Jean-Marie Florent and famous artist drawer Serge Englebert, and many other teachers of great value.

Below you will find school’s information translated from the school website: www.leonmignon.org but also pictures of my engraving and school workshop and some personal notes about my years at the school.

History

Today Belgian engravers are the inheritors of five hundred years of gun making in the area of the town of Liege, Belgium. Before the creation of the gunsmith school of Liege, apprentices had to learn their craft directly in the workshop of the master. Each profession involved in the making of a gun, was separated from the other, and the master often jealously kept his secret of fabrication.

As the gunsmith trade grew very much through the centuries, becoming step by step an industry, the need of a school that could provide the best qualified workers for this trade became a necessity.

In 1897 the Authorities of the town of Liege founded the Ecole d’Armurerie de Liège. Masters with extreme knowledge of their profession were hired and became the teachers of the new school. The reputation of high standard of the school grew with the years, in specialties as fine mechanic and tool making, gunsmith, stock making and fitting, jewelry, watch making and engraving.

The quality of the instruction has attracted students from many countries like: France, Italy, Canada, South-Africa, Japan, United-States, etc.

The school is located close to the center of the town of Liege. It is a professional and technical public school, which can take in charge more then 250 students divided up in all the different specialties.

At the school of Liege, it is possible to study engraving for four years, in which, two years are obligatory for most of the students to get a professional qualification certificate and an end of study diploma. One more improvement year can be added to the cycle to obtain an improvement certificate.

The weekly schedule is not only composed of the general and technical courses, but also of four hours of technical drawing, in which are studied the ornaments, plants, animals, hunting and nature scenes; and fifteen to eighteen hours of practical courses in the workshop. The complete schedule counts thirty-six hours per week.

In a concern of being multifunctional, the first two years of engraving classes are coupled to the jewelry courses.

There is no particular predisposition needed to attend the engraving classes, except motivation and artistic sense, but having followed some good drawing courses can be useful.

Cost of Study and Career Opportunities

The cost to study is about 150 euros per year. This price includes the tools and various school charges. Accommodation, food, laundering and transfer have to be added if necessary.

The school itself doesn’t have any boarding, but it works with three other boarding schools. Also private accommodations are easy to find in the neighborhood of the school.

The general characteristic of the engraver are much perseverance, a lot of courage and obstinacy, neatness and will. On the practical side, creativity, refine artistic sense and a great manual ability are required. Courses of technical
drawing, material knowledge, history of art, and management will assure a solid technical and cultural formation to the student.

The study of computer assisted engraving machine gives an interesting opening on new careers.

Engravers and chiselers have been formed at the Ecole d’armurerie de Liege, for more than a century. Students that learned to engrave arms with push graver and chisel easily found opportunities of career with the local gun shops and also later at the FN which counted dozens of fulltime engravers. The modern processes of engraving that were developed to lower the cost of fabrication have lead to a large diminution of career opportunity in this particular specialty. However, the finishing by hand engraving is still incomparable, even to the eyes of non connoisseurs. Those who have the talent, the will and the instruction can certainly very well make a living with engraving.

It can also be surprising to know that engravers can make careers in new technologies sectors as fine mechanic and cast making.

The Techniques and Equipment

The principal technique of engraving taught at the school, is hammer and chisel engraving in the standing position, but it is also possible to learn the push graver technique. After years of training, the standing position gives the advantage to the engraver to move quickly beside the vise and to accompany the curves and the scrolls he is cutting. The teachers not only teach the drawing and the technique to engrave, but also, are particularly concern about the time required to engrave. The engraving qualification exam at the school consists of an engraving that has to be done in the work shop in a limited time.

The standing position technique doesn’t require very expensive tools, and each student can easily get his or her own tools to work at home with out large expense. Of course it is impossible to enumerate all the tools used by the engraver as each artisan and each job require some special tools but the tools described below can already allow the student to start very well his training.

The school provides hammers and chisels as well as a work station to all the beginners.

Workshop

The work shop should be a calm room with large window for a maximum of daylight. Light: A large pair of fluorescent tubes with a deflector. Bench: The bench must be heavy, steady and vibration free. Vise: The vise must turn on itself on 360 degrees; it must be solidly attached to the bench. Its rotation must be controlled with a tightening system. Hammer: The hammer head is made of steel, it must be well balanced, and its face must be round and convex. The handle is made of wood, usually ash tree; it must be light, tough and elastic. Chisel: In the past the chisel was made of one piece of carbon steel, it was a square section of 10 millimeters that was forged on one end to make a square section tip of 2 millimeters. Today the chisels are usually made of a steel square section handle on which a chisel tip is fixed with a screw, solder or hot glue. Scriber: The scriber must be as light as possible, with a very thin hard tip. Pencil: A 0.3 mm mechanical pencil will work very well. Clay: Plasticine clay. Chalk: White chalk powder. Compass: A steel scriber compass. Sharpening stone: Norton sharpening stone lubricated with kerosene or diamond sharpening plate.
The Ornament Drawing Class

The two different drawing classes at the school are ornament drawing and subject drawing. Both categories are indispensable to lead to a good engraving skill.

The ornament drawing is a very important class, it gives the opportunity to the student to learn and understand the layout of the engraving. The teachers start with very simple drawings that have to be copied by the student. The ornament becomes more and more complicated as the level of the student gets higher.

One of my ornament drawing teachers was Mister Jean Dossin, who has been a professional engraver for many years before becoming a teacher. His knowledge of ornament layout was extraordinary, and his teaching was essential to us.

The Subject Drawing Class

The subject drawing is also a very important class because the students have to compose and engrave animal and subject scenes and also hunting scenes. This class is not only turned to engraving, but it gives the opportunity to the student to improve his artistic sense and his creativity.

When I was in school, my artistic drawing teacher was the talented Serge Englebert who is a complete artist drawer laureate of many distinctions. He has taught me the black pencils techniques and he has also encouraged many students to express themselves as artist drawer.

I’ve drawn this shark study in Mister Englebert class, we had the freedom to choose our subject and create our own scene.

The Engraving Class

Jean-Marie Florent’s workshop which is set at the second floor of the school; the high windows procure a good daylight necessary for the students that usually don’t use magnification system.

Back in September 1984, I first met my engraving teachers René Delcour, Philippe Grifnee and Charles Leger. In the next years I’ve also studied with excellent teachers Jean-Marie Florent and Jean Dossin. These teachers were always dedicated to all the students, at all time they were conscientious and attentive to the needs and expectations of all the learners.

At the beginning after I had learned how to mirror polish a square plate of mild steel with sanding clothes, a hammer and a chisel were lend to me. My first engraving exercise was to completely cover the steel plate with as even as possible straight lines. When the teachers were satisfied with the straightness and the...
evenness of my lines I got the permission to start the next exercises.

The next plates to be engraved were composed of simple ornaments as marguerites, and acanthus leaves border. When I engraved those plates I was seconded by my teachers, and I could learn the lay out of the ornament, the evenness in the depth of the cuts, and the geometry of the chisel tip and how to sharpen it.

As the school has been founded in relation with the gun trade, the engraving classes are also oriented to the gun engraving trade. Many different styles and techniques of engraving exist, and I had to learn fine English scrolls style with bouquets or subjects, Royal English style, Renaissance style, light cut engraving, deep engraving, carving and gold inlay.

Francis Heuse's Engraving

In 1987, I was awarded of the first price of engraving from the Association of the Masters Engravers and Flexographes of Liège.

In 1988, I was honored to receive the Vestiaire Liberal price from Minister Jean Gol as a reward for my work and ethical qualities.

When I left the school and after one year of obligatory military service, I needed to get a regular and stable job to make a living. As a beginner professional engraver times were hard, so I became a policeman and found the security of employment. However I keep on practicing engraving and here are some pictures of my work.
Conclusion

Enthusiasm for the profession of engraver is high today, because of a major change to compare to the eighties. This major change is the World Wide Web which is a fantastic tool that opens the doors of the world to the artisans and the artists. The internet is a place where the share of information, advice and extraordinary engravings between members of the profession and novices is particularly active. As the FEGA web site, today many web sites are dedicated to the promotion of the engraving profession and the excellence of this art form.

However, as great as the exchange can be on the web, nothing could ever replace the direct teaching of the master engraver teachers who share their expertise in the engraving schools through out the world. To all these teachers I express my deep gratitude and my sincerest thanks.
Ray Letourneau Part 1 (The Man)

By Barbara Letourneau

A

Over a lifetime you can look back and see the people that were instrumental in the direction your life has taken and the ways in which their mentoring and teaching influenced those directions. Ray LeTourneau was born into a family of machinists, artists, teachers, missionaries and people with uncanny mechanical skill, the first child of Harlan and Dorothy Letourneau. His birth on February 16, 1931 followed several generations of ancestors born in this country since the 1700’s. He was born in Stockton, CA and lived in the San Joaquin Valley until he went away to college in Texas following graduation from Oakdale High School in 1950.

Due to the loss of his father when Ray was a small child he was often with a maternal aunt and uncle during his formative years. His uncle, Norman Higgins, taught him to weld, repair machinery at his dry cleaning plants and also introduced him to ranching, roping and to rodeo at a young age. Most of all he learned an incredible work ethic from this man and feels he was truly a mentor in the best sense of the work.

Another important person in his early life was Bud Morris who had a silver shop in Oakdale where he designed and made bits, spurs, buckles and other tack ornaments. While Ray was still in high school he worked after school and on weekends for Bud learning everything he could about the silversmith trade. A few years ago Ray was asked to contribute information about Bud to a history of early bit and spur makers.

In 1952 Ray went to Longview, Texas to attend LeTourneau Technical Institute which had been started by his grandfather’s brother right after WWII. At LeTourneau he studied machine science and also worked in the machine shop which provided a lab to reinforce the classroom study. After 2 years he returned to California to begin his career as a machinist and also to continue his vocation as a bull rider, the latter lasting some 20 years. (Must have been one tired bull...Sam) His first job out of school was for Colburg Boat Works in Stockton, CA. Over the next 50 years he worked in a variety of job shops becoming a Master Machinist. He also continued to pursue a secondary career in which he made trophy buckles for rodeos throughout the western states, from the late 50’s to 1980. Along with the buckles he made his fair share of bits and spurs plus continued to rodeo on weekends until an arm injury put a stop to it in 1968.

Ray became interested in firearms when he purchased his first at a gun show in Portland, OR in about 1966. It was an old military weapon that he converted to sporter. As with anything he is interested in he reads books and in any way he could learned more about all types of firearms. Over a period of 20 years or so he built a number of rifles for himself and others including the stocks. In about 1980 he began to experiment with engraving some of his own guns but soon realized the old Victor vise that he had always used did not have the stability he felt was needed to engrave guns or any larger items. Over the next few years he continued to engrave and would talk with engravers Ed Pugh and Ed Kane (who lived in the area) about how they all felt a larger, more stable vise would be an advantage. He decided the only way to find out was to make one himself. At the time his shop at home was only set up for engraving, gunsmithing, reloading and stock work but not much in the way of machine tools so he got permission from John McGehee at Ukiah Machine and Welding (where he worked) to build this vise after hours. In 1989 the first Behemoth Block was made, followed by a few others before we moved to Oregon in 1992. At that time he had a larger shop built and purchased the lathe, milling machine and other tools he needed to produce the vises in his own shop. To date he has sold them all over the United States, including Hawaii and Alaska, Canada and most recently in Australia. It is interesting to note these vises were first produced as a tool for gun engravers, but in recent years the majority that he sells are going to bit and spur makers plus folks who are engraving everything from banjos to motorcycle parts.

He makes some other tools including the Swartley Palm Tool. His friend Bob Swartley carved a prototype of the tool out of wood and sent it to Ray asking if he thought he could reproduce it in metal. Ray said he was sure he could and that was the beginning of that tool. He makes other holding fixtures and tools as time permits, but since everything that comes out of his shop is produced by him time becomes a real issue. He is always happy to share knowledge with others thinking that if you do not share what you learn it is of little value.

He did not retire “from his real job” until age 70 and is now, 6 years later thinking he might retire one of these days. I doubt that happens anytime soon as ‘he loves what he does and does what he loves’. He has taken time to become a student of history, geography, politics, the world wars, aircraft and the aces of both side of any conflict and just about anything else that comes to mind. Music is another passion everything from the classical composers to Jazz and even some opera. We’ve been married 41 years with 4 daughters and 5 grandchildren.

The Behemoth Block has been a real odyssey for both of us as we have always been blessed with meeting wonderful people but this has opened our lives to some of the most talented, interesting and good people we would ever hope to know, many of whom we are pleased to call friends. This tool has been much more than a business venture, it has given Ray an opportunity to provide a service to others, do work he loves and for his customers to know when they receive this vise or other tools the guy who did the work will stand behind it and is accessible to them. ∞
How to be a winner!

Don’t know about you but I just love surprises, that is, after I determine they are not going to cause damage. Here’s one for you to consider.............

Ray LeTourneau has been donating one of his fine ball vises to FEGA for a number of years for a fund raising raffle at the Reno show. I have several time tried to win one as I wanted the extra weight and from what I hear extra smooth rotation it offers. Even got aced out one year by Ralph Bone who bought the ticket right before I did.

Now, for me to win a raffle requires significant movement of planets and stars, more than one ever expects to see. So, obviously, none of my tickets have been successful. I had planned to buy that “winning” ticket this year and if that failed, as I expected, I would just go ahead and buy a vise from Ray. Problem solved!

Well, Sunday afternoon in Reno I was trying to figure out what I had done to my laptop when I heard it announced they were getting ready to draw for the vise and I said to myself “well, idiot (a term I frequently use) you forgot to buy that ticket so just get ready to cough up some dough and order a vise”.

Now, when someone built about as stout as a cape buff comes stomping towards me I take serious notice. As luck would have it, James McClellan had a big smile on his face so I relaxed a bit. Then the argument began. He said...”you better go get your LeTourneau vise had purchased a ticket and put on it...”if I win give it to Sam Welch”. You could have floored me, without the feather. I do believe Paul has started an interesting custom and I surely do thank him!

Now, about the vise. Ray builds an exceptional vise of good weight and smooth movement. I have found it to be solid and an outstanding work tool. It is worth every penny of Paul’s money (just joking). If I had purchased the vise from Ray I would still be as pleased as can be.

I recommend you keep trying to win one. You might have a friend you didn’t realize. It is still a bargain if you have to buy one!

And a BIG thank you goes to Ray LeTourneau for his support of FEGA and for building such a nice piece of equipment. Ω
The engraving world is certainly changing! In the last decade or so, single-point engraving – or gun-style engraving – has crossed over into the western arena. Once considered almost taboo, gun-style engraving on silver belt buckles, conchas, and saddle silver has become popular. Engraving the steel surfaces on bits and spurs has gone from optional to mandatory for the patrons of the top makers. The art of bit and spur making has gone from the blacksmith’s shop to the craftsmen’s studio.

Conversely, many traditional gun engravers are interested in the tools and techniques of the “cowboy artist”. They may not want to enter the world of silversmithing, but for various reasons, they are interested in learning the method of bright cutting. Often a gun engraver is asked to engrave a piece of jewelry, a set of wedding bands, or even a special belt buckle. Perhaps he wants to make a bracelet for someone special or just wants to add a bit of flair to his gun engraving. Whatever the reason, learning the techniques that make up western engraving will broaden any engravers portfolio.

For the gun engraver, making the transition is both easier and harder. Easier because you have good tool control. Harder because you have to think and move differently. (I have long realized that engravers are a bit mule-ish, myself included. No offense to the mule trainers that might be reading this.)

The position of the forearms and elbows is important. The elbows need to be up (think of trap shooting) and the arm held fairly straight from tip of tool to the elbow. The wrist should be fairly flat. As with gun engraving, the tool should be held steady and the turns and curves made by turning the block (vise). The job of the hand that holds the graver is to meter out the cut, meaning the speed of rotation and the depth of the tool into the metal. In a nutshell, bright cut engraving is the mastery of this rotation of the flat graver into the metal.

**Tools:** Common flat gravers vary in width from #36 (.010”) to #45 (.079”). They can also run bigger, up to a 48 or 49. The tools I use most are the #36, #37, #39, #41, and #45. The smaller two are used just for wriggling. The larger three can do both wriggling and bright cutting. Face angles of these flats is a matter of personal preference. I like 45 degrees for two reasons: I use a 20 degree belly, and I like the strength of the slightly steeper face. Many bright cutters use a 40 degree face, but then use a 15 degree belly. Some even prefer a 35 degree face. Belly angles can be 15 to 20 degrees. I like the 20 degrees because I can get deeper, brighter cuts. The belly should be about .015” long, then have a radius. Because your cuts will only be as bright as the graver, be sure to use the ceramic lap with some spray diamond. Follow up with a stroper or two on the smooth side of a piece of skirting leather that you have spritzed a couple of times with the diamond spray.

We also use liners. The liner I use for leaf highlighting is the 18/10. For cross hatching, I use a 28/10 or a 30/10. The first number refers to the pitch and the second to the number of lines on the tool. These liners should have a slight radius on the face so that curves may be made smoothly. Remember – there is no belly on a liner! All of the sharpening and shaping is done on the face.
Wipe the bottom of the tool on the flesh side of that same piece of skirt leather. (Squirt that side with a bit of diamond spray, too.) This will polish the lines and remove burs that sharpening has left.

Getting started: Wriggle cuts usually come first. The majority of the scrolls you see will have a “spine” that is wriggled. You can use any flat you like, but the finer wriggle cuts usually look best. Wriggling is done by hand, and you have to “brace” the graver into the metal to get the best results. A good tool to start with is the 41. Push one corner of the graver into the metal and then rock back and forth. Your wrist should be rotating from side to side – not in a circular motion (a common mistake). Think of walking the tool ahead going from corner to corner, corner to corner..... If you allow your wrist to “swim”, your wriggle line will never be straight. Remember that this is a forward motion, and you need to keep some forward pressure on the graver. The second most common mistake is to push down on the graver. You should achieve your depth by the angle of your arm, not by pushing down. A good wriggle cut will have a nice continuous curl of metal coming up ahead of it. Once you are comfortable with the 41, try the 39, then 37, etc. The smaller ones take noticeably less bracing. The bigger ones take more horsepower. Practice getting a nice, open wriggle line. The lower the graver, the more open the cut will be. The higher the tool is held, the tighter the wriggle cuts will be. When you watch a western engraver wriggle, he is moving pretty fast. Speed is not the issue here, rhythm is. Start slowly. Once you develop your rhythm, the speed comes naturally.

The bright cuts: The traditional bright cut pattern is made up of four cuts: bright cut, cap cut, leaf cut, and closure cut. As mentioned earlier, all these cuts are made starting with one corner of the graver and rolling the graver into the metal. The bright cut starts with the inside corner of the graver, the next three use the outside corner of the graver. (We cannot say “right” or “left” corner because it changes depending on whether you are cutting to the right or the left.)

The bright cut is the biggest and brightest of the four. I consider it the “melody”. All other cuts are made to accompany the bright cut – to set it off. When practicing the bright cut, think of traveling up the line, then starting your curve. The arc is approximately a quarter-circle. The path you are following is not a pure radius. The shape of this arc is important as every cut is built on this first bright cut. You want to start out feather-light, and end up with good depth and have about 7/8 the width of the graver in the metal. If your graver is wanting to come out as you are rotating down, you need to increase the depth of the cut. Do this with your shoulder, not your wrist.

Now the trick is getting out. How you exit a cut is as important as how you enter. When you reach the end of the cut, stop the forward motion but maintain pressure on the graver. If you are using power, keep the tool in the metal with some pressure behind it, and just lift your foot. Now snap the chip off with a forward rolling motion that continues the arc.
Easy for you to say, I know! Just practice it a few times. Start by breaking the chip out going straight ahead. You will notice that the very end of your cut is a bit straight and somewhat awkward looking. Now break the chip off while rolling your graver towards your left shoulder (the right shoulder for those left-handed engravers). Stop short of using your shoulder as a de-burring tool. Never cut your way out. This leaves an unsightly point on the end of the cut. That leads to the engraver trying to make the cuts shallower so that coming out is not so hard. You don’t want to do that, either. Make no mistake – this style of engraving is harder on the gravers, your hand pieces, and you. As you get the techniques down, it will get easier on the gravers and you. Your hand piece, if you use power, will take the brunt of the work. Consider this before you start – the smaller hand pieces, designed for fine shade work – are not the best choice. You need a work horse here.

Keep in mind that with all bright cutting, you must apply some forward pressure, or bracing, on the graver. How much depends on the cut you are making. This is not necessary with gun engraving, and can even be a detriment. This can throw the gun engraver off and is one of the reasons that make the transition from one style to the other harder. For a couple of years, when I was going from a bright-cutting job to a gun project (or vice-versa) I would grab a steel (or copper) practice plate and spend 15 – 20 minutes getting back into the other style.

Now for the cap cut. This is made using the opposite corner of the graver you used to make your bright cut. This cut outlines your bright cut. Keep this cut light and delicate, but still get a little bit of depth and width at the end. It should come clear around the front and end exactly at the deepest part of that bright cut.

Next comes the leaf cut. You will be leaving some space between the cap cut and the leaf cut for highlighting later on. I judge this space by watching the off side of my graver, but it is OK to draw your line. Using the same corner of the graver that you used for the cap cut, but make your leaf cut bolder. It should be almost half the width of your graver. These cuts (the ones made with the outside corner of the graver) need to end as squarely as possible – not bull-nosed like the bright cut. With these cuts, you want to snap off the chip straight ahead. Easier.

The closure cut is just what it says. It closes off the leaf area for highlighting later. Again, using the outside corner of your graver, tuck just inside your leaf cut and cut a nice arc down to the top of your cap cut. There, you have it!

Highlighting: Highlighting is much like leaf cuts. You start with the outside corner of your liner (18/10) at the bottom of the scroll and travel up to the end of the leaf. You want to start with just a line are two in the metal, then rotate the tool down to pick up more lines as you go. Try to end up with all the lines in the metal by the time you reach the end of the leaf. This requires a light touch and a very low tool angle. Each line should throw up its own metal curl. If you don’t see a curl, you are too light. If you see one big chip, you are too deep! You will need to use a bit of downward pressure on these liners, especially if you use them straight. When using a straight liner like this, I rest my left thumb on the top of it. That seems to be just the right amount downward pressure. (Most western engravers use bent liners or,
like myself, modify their liners, but that is another story.)

Cross-hatching is done with the 28/10 (or 30/10). This starts at the bottom of the widest part of the leaf (near the center of the scroll). Using the corner of the tool that is the closest to the end of the leaf, brace your liner into the metal. Now, by rotating the block into the liner, roll the liner flat. You don’t really push this liner, you just brace it and let the block do the moving. Ideally, your line closest to the end of the leaf will run parallel to the closure cut and the other lines added as you curve up – ending at the top of the leaf – until that last line makes just a dot. (Of all the teaching I have done, this cross-hatching is the hardest to explain, though it is one of the easiest cuts to make.)

If you can master the four basic cuts and the highlighting, you can do pretty much anything. The secret is in mastering them. Once you get them down on a flat plate, you will need to practice them on a curved surface. Try some wide, low-dome wire, preferably sterling.

When teaching gun engravers how to bright cut, I find the most common error is in holding their elbows down and in. This hinders the movement of the graver. This style of engraving requires movement! By raising your elbows, you give yourself room. You also want to cut at an angle that goes slightly more across your body than ahead. Having your elbows up helps with that as well. It is harder to make bright, sweeping cuts (be they short or long) if you are cutting straight ahead. For those who have the GRS Magnum hand piece, try that barrel shaped end. Its shape makes you naturally hold the graver at a more correct angle, which helps a lot.

As I mentioned earlier, this can be some tough work. Do not put your finer hand pieces through this. There are three criteria when choosing a hand piece for bright-cutting: It needs to be tough; it has to be held in your grasp, not just sit in your palm; and it needs to have a foot pedal (so you can stop the graver while still maintaining pressure). Until the GRS Magnum came along, I would not give up my trusty GRS 710 hand piece. Now, with the Magnum, I can go from steel to titanium to brass to silver… to just about anything. It has the barrel shape handle that is preferable for this style and it also allows you to change from flats to squares without having to realign your tools – a real convenience for those who do many different styles.

In conclusion: I have often said that bright-cutting is harder to learn, but easier to master. These cuts have to be made perfectly, and they have to be made perfectly the first time. There is no going back to “clean up” a cut. But, once you have them down, you can do just about anything. Ω

(Editors note: You can see Diane demonstrating Western Brightcut on the 2006 seminar DVD/video tape available at www.fega.com)

These pictures will also be available on the FEGA web site at www.fega.com in the members section in a larger format so you can study them better.
Ray Phillips, the originator of the Ngraver Company, is a fine example of the old time true American practical inventive genius.

Most of us know him as the ever helpful and smiling guy demonstrating his fine line of engraving tools at the FEGA Exhibition in Reno, at the NRA Annual convention or another fine gun or jewelry show.

Those of us who have been privileged to know Ray Phillips and the Ngraver Co. for most of the 30 years they have served our industry know some of the inventive knowledge he brings to bear in the design, production and manufacture of their fine line of tools and supplies.

A little background history about Ray may help to explain the great care and reliability that is built into every tool and product that bears the Ngraver name.

Ray Phillips proudly served in the US Airforce as an aircraft engine mechanic during WW2.

As you know, this is a job requiring great skill and responsibility.

Ray developed a passion for precision machining and assembly.

The life of the flight crew was in his hands. After his service and upon discharge from the Airforce he saw an opportunity to buy war surplus aircraft engines and rebuild and install them in the ex-GI planes that were being re-sold to the civilian market. Ray built this into a successful and highly respected business. He then sold his interest in that business to his partner to move on to other challenges.

One of the next of many exacting challenges that he undertook was employment by the US Navy as an inventor in the underseas boat, submarine, development service. In combination with the US Department of Navy he is the proud holder of many patents for undersea equipment, many still highly secret.

A lot of his inventive genius helped in our eventual victory in the Cold War, allowing our submarines advantages over our potential enemies. I know we are all thankful for the peaceful end to that era.

While working for the Navy Ray undertook highly skilled gunsmithing and the rebuilding and restoration of fine firearms in his spare time. He also applied some of his technical know how and interest to the field of photography. His photographs have appeared on the cover of the “Rifleman,” the journal of the National Rifle Association.

During this time he became interested in engraving and the need to restore some of the worn or damaged decorative work on some fine old guns.

He applied his inventive insight to the problem of developing a power driven handpiece to aid in and speed up this work. Among the criteria that he wished to retain with a powered handpiece was the ability to cut engraving that showed, upon close examination by a knowledgeable viewer, the progression cuts that are imparted by a hammer and chisel. This is desirable in most restoration and re-cutting of older work and easily
accomplished with the Magna-Graver.

Ray, being a true Connecticut Yankee, reasonable cost and reliability were other major factors he considered in developing his power tool. Knowing that most gunsmith and jewelry businesses were already equipped with an electrically driven flex shaft machine to perform the myriad of chores around the shop, Ray looked towards using that as the power source for his handpiece.

Much midnight oil was burned designing, model making and prototype development. The proper drawings had to be prepared and the complicated claims made.

He applied for his patent to the US Patent office on September 22, 1975. The patent was granted and issued on June 21, 1977. An interesting sidebar to his handpiece patent is that as Ray was still working for the US Navy as an Inventor in his day job. Therefore the original patent was jointly issued in the name of the US Navy as well as Raymond J. Phillips. A government rule stipulates that anything invented by an employee inventor and patented, whether on or off the job, must also be granted to them. The Navy later gave him the full personal rights to his invention.

Many later patents have been issued covering improvements and modifications to his original handpiece design. Just to mention two, these include the Magna-Graver to produce more power and the Vari-Pact adjustable impact tool for a wide range of power strokes.

Ray has developed many other tools and product over the years to add to Ngraver Company’s fine line of products.

He developed the machine tooling and facilities to manufacture a wide variety of gravers, lining tools and dotting punches made especially to withstand use on the harder steel of American made firearms.

These are suitable for use in his or any other power handpiece, his fine line of Belgium style hammer driven handles or in a burin palm graver.

Another of his fine products is the Scroll Master Template kit. This enables the beginner to produce perfectly shaped scroll backbones in many sizes, both clockwise and counter.

The templates are also a great aid to the more experienced engraver needing to produce perfectly matching pairs of scrolls of the same size and facing left and right.

Many experienced engraves who can hand draw their scroll find them useful to lay over their design for a quick visual check of their symmetry.

Another of the fine products that Ngraver offers is the Star and Scroll stamp set. These are used to stamp a design into the metal. The scroll design can be used as it is stamped to create borders or it and the star design can be undercut and inlaid with precious metal. Together with these metal stamps Ray provides custom stamps for marking the products of engravers, jewelers and industry. He also makes roll stamping dies as used to apply the lettering to gun barrels etc.

The Ngraver Company has been largely a family run business since its inception. It has been staffed by Ray, his wife Alma, his son Brian and in the early days by two of his daughters.

Alma has largely retired from active duty now, as have both daughters. Age and business pressure creeps up on all of us, just ask me! Ray and Brian are no exception to the rule.

We all look forward to a time when we can relax a little and just do the things that catch our fancy. Both of them have developed great interest in the production of the custom stamps and would like to pursue stamp making during a well deserved active retirement from the everyday business of running the Ngraver Company one day soon.

If they should decide to step back from active duty it is my sincere hope that someone will step forward to take their place and continue to maintain the great service, goodwill and integrity of this valuable icon of the engraving world.Ω
John Rohner is a legend among engravers. His engraving work first appeared on the cover of the American Rifleman in 1955 and graced that magazine’s cover again and several others in years to come. His interest in the art and ideas about technique were responsible for the creation of the Gravermeister with his brother-in-law Don Glaser and thus is the R of GRS. It was John’s numerous connections in the engraving world as well known hammer and chisel guy that allowed a pneumatic engraver to slowly gain acceptance in those early times where machine work of any sort was feared and often hated in engraving shops.

He was a friend and contemporary of great names in the gun and art world like Len Brownell, Elmer Keith and Maynard Reece. He helped many young engravers get started like Steve Lindsay and Eric Gold and was the reason Lynton McKenzie went to Colorado after he left New Orleans.

Above and beyond his skills as an engraver, it is his long term interest in the art that has created one of the most unique engraving collections in the world, a series of engraved chasing hammers. These works of art in miniature are done by so many notables in the engraving world, past and present that it boggles the mind to see such an assembled collection. The artists represented are (in no particular order) James B. Meek, Mitch Moschetti, Ralph Alpen (worked for Ithaca gun), Eric Gold, Ken Hunt, Amayak Stepanyan, Hans Rohner (John Rohner’s son), Ron Smith, Lynton McKenzie, Jim Kelso, Al White, Ray Virmontez, Bob Evans, Ben Shostle, Ralph Bone, Rudy Salizar (who also made many of the hammers), Sam Alfano, Mike Dubber, Don Glaser, Ben Lane, Lance Kelley, Bob Swartley, Winston Churchill, Rachel Wells, Sam Welch, Rene Delcour, Mark Smith, E.C. Prudhomme (finished less than a month before his death), George Sherwood and even one by John Rohner himself.*

As you can see from the names, this collection spans quite a few years, three decades in fact. Currently there are hammers being done by Scott Pilkington, Phillip’e Grifnfee, Walter Kolouch, Barry Lee Hands, Hans Obiltschnig, Dan Goodwin, John Barraclough, Dan Cullity, Warren Sellke and Leonard Francolini. He says he slowed down on getting more engraved because he ran out of hammers, but he is currently working on a new supply.

At age 84, John is still active and engraving nearly every day. You can see the fruits of his labor with the SAA finished last year. He has since finished a Colt 1908 and is currently working on another SAA.

*The full collection has been photographed by Scott Pilkington and is being collaged in the manner of the cover photograph and will be cataloged with full information.
AROUND THE TRAPS

FEWA MEMBERS WORK

Lee Griffiths (USA)

Floor Plate by
Claus Willig (Germany)

Arturo "el gorupo" Rojas (Mexico)
A Colt 38 super deep relief engraved using chisel and hammer only with turquoise and ruby incrustations 24 karat gold plated with mirror polish finish mounted on genuine ivory grips deep relief carved by Arturo as well.
RENO NOTICES JAN 25-26-27 2008

HOTEL BOOKINGS
Exhibition Coordinator, Jan Billeb

Reno 2008 is going to be here before we all know it! Not that anyone is getting any older and time going faster. It is time to make your hotel room reservations, and start looking at airline tickets. Call the Silver Legacy at (800) 687-8733 and reserve in group code FEGE08. The room rate is $105 per night plus taxes. Yes, this rate is not cheap, but hotel rates in most parts of the country are raising. Seems demand is too good. Just remember, staying at the Silver Legacy helps assure that we have a display room and meeting space. It doesn’t cost you more, and the Silver Legacy credits the Guilds with $10 per night per room against our expenses. Plus, you get the convenience of being close to the show, a $6 per day food coupon, and free bus transportation over to the Convention Centre if you’re attending SCI. The Guilds need your support by staying at the Silver Legacy.

If you’ve never displayed, think about it - and seriously. This is the best opportunity in the country to have contact with THE people who truly appreciate your firearms engraving. Email me at acgg@acgg.org or call (307) 587-4297 if you want to see the display rules and receive a reservation form. I’ll be glad to answer any and all questions - or refer to you someone who knows the answer.

When you’re making plans to attend, don’t forget about the seminars on Monday. And reserve tickets for the Saturday evening banquet and auction. This is an excellent opportunity to meet people and enjoy the camaraderie of being a Guild member. Hope to see many of our friends back in Reno - and meet lots of new ones.

FEGA AWARDS
Lee Griffiths

The awards have become a nice part of the exhibition enjoyed by most and endured by the rest. Here is a listing of the awards that were presented at last year’s exhibition. I still have to check with the sponsors but assuming no changes the line up for the upcoming show will be as follows:

- Williams Gunsight Best Engraved Rifle
- Smith & Wesson Best Engraved Handgun
- Connecticut Shotgun Mfg. Co. Best Engraved Shotgun
- GRS Best metal on/in Metal Inlay or Overlay
- Glendo/GRS Artistic Uniqueness
- People’s Choice Best Table
- Award of Merit 2x
- Engraver’s Choice

In order to be qualified to enter any of the competitions You must be a current member of FEGA of at least 6 months and also be exhibiting at the show with your own table. The pieces to be entered must have been completed within the last three years and the work on the entered piece be completed as to engraving. Unblued and uncolored firearms are eligible if the engraving is complete. The piece must be assembled and in a photographable condition. Exceptions are the two awards from Glendo/GRS. The entered piece need not be a firearm but the engraver must still be a member with his/her own table. The artistic uniqueness award encourages unusual subject matter for the engraving and non typical canvases. In other words something other than a firearm is allowed and encouraged.

Last year at the business meeting an award was approved for stock carving. This award will begin in 2009. Joe Rundell gave an outstanding seminar on stock carving at last year’s exhibition and we are excited to see what great things appear as a result. Bring what you have done to this year’s show and I’m sure Joe will enthusiastically review your efforts. He is one of the best anywhere in the world and provides a unique opportunity for help and advice.

In my few short years with the guild I have seen the level of work steadily improve making the judging more and more difficult. I believe it has also been part of the quality improvement as a whole. The top winners have always been good but now the gap between the top and below is about gone. Many pieces show up each year worthy of recognition. As long as we keep the awards in perspective and realize they are a very minor part of the show and what we do, they will remain where they rightfully belong. The awards are for fun and a momentary pat on the head.

Please join all of us at the show. Get a table, bring your wonderfully scratched up pieces and if you have questions contact me before or at the show. The judging will be held Sat. morning after the business meeting.

FEGA/ACGG AUCTION & RAFFLE
David Clevinger

The 2007 FEGA/ACGG auction and raffle was a wonderful success thanks to the generous donations from supporters of both guilds. Up for bid were items for engravers, gun makers, art lovers and much, much more. The funds raised are an integral part of running and funding a successful show. This year we hope to be even more successful and with your help we can be. January 25-27 will soon be here so we are again asking for donations for the various auctions and raffles. If you would like to donate tools or supplies useful to engravers or gun makers, classes, engraved or engravable items, artwork, books, or any other items, please send them to Bruce Farman Auction Co-Chair, 2563 Wm. E. Sutton Rd., Bremerton, WA 98311. Please include a completed donation form, available at ACGG.org, and good quality photos with your item so that Bruce can more easily update the auction catalogue. This year we will also have an online auction catalogue so that everyone can see in advance what items have been donated. The catalogue will be made available at FEGA.com in the near future. Be sure to check the site often.

Please contact either of the Auction Co-Chairs with any questions.
Bruce Farman (360) 692-4188, email: bcfarman@earthlink.net
David Clevinger (303) 403-4608, email: deengraving@yahoo.com
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IS THIS YOUR LAST ISSUE ??????

Please look at your mailing label! This has your “expiration date” on it. If the date is expired you WON’T be getting any more issues of THE ENGRAVER.

For many years all memberships expired on July 1st but because of many requests, memberships expire one year from join or renewal date. Because of this, it makes it harder to send out “bulk mailing” of renewal notices. You will have to make sure your membership is up to date to make sure you don’t miss any issues of THE ENGRAVER!

In the last issue there was a renewal form enclosed. If you need to renew please fill this out and return as soon as possible. You can also renew online at www.fega.com as well. Please be sure to update any personal information as well! We want to make sure you get the latest issues on time.

RENO SEMINARS 2008

Sam Welch: on multi color or metal raised inlay. This will include using gold, silver, platinum and soft iron with emphasis on soft iron use in inlays and for repair or correction filling unwanted lines, pits and lettering.

Marty Rabeno: will be presenting a seminar on Bulino engraving. He will be giving a live demonstration showing the tools and techniques involved in engraving lines and the dot method. How to go about creating scenery and animals giving depth, shade and value to your work. Marty will take you step by step through the whole process and introduce you to the art and secrets of Bulino engraving or as Marty likes to say “Sketching with a graver”

Bob Evans: on acid etching and techniques involved in the process. More be announced on this in the next issue.

GLENDO CELEBRATES 30TH YEAR

On August 8th Glendo Corporation celebrated it’s 30th anniversary with an employee lunch. We know them better as GRS, suppliers of engraving equipment and educating future engravers with their engraving classes in Emporia, Kansas.

Happy birthday Glendo, from all the FEGA members. May there be many more to come.

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A gathering of this magnitude is unequaled in the history of engraving — and it happens in only one place in the world. Without these skilled professionals, such an opportunity would not exist. GRS would like to recognize and honor these fine representatives for their contributions to the art of engraving.

The GRS Training Center has programs for everyone from beginner to Master. Contact us and tell us your engraving aspirations. With your dedication and our training, perhaps you will someday join the ranks of those who take part in the Grand Masters Program.
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