



SCHSM

Southern California Home Shop Machinists

November 7, 2020

OFFICERS

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|----------------|-------------|
| President | Doug Walker |
| Vice President | John Miller |
| Secretary | Ron Gerlach |
| Treasurer | Jim Endsley |

COMING EVENTS

December 5 Virtual Meeting
Sat, 5 December 2020, 2:00p.m.
via Zoom

PREFACE -

The virtual November meeting of the Southern California Home Shop Machinists was called to order at 2:00 p.m. on Saturday, November 7, 2020. We met in the cloud from our individual homes via Zoom. There were 27 members in attendance.

CLUB BUSINESS –

Doug called the meeting to order and handled a few business matters before turning over the proverbial microphone to the special guest arranged by Don Huseman. The guest was none other than Tom Lipton, the Oxtool Youtuber known for his many Youtube videos on metal working techniques. More about this later. Doug's business dealt with Gunther's yard which will be held this year but with no food services. Secondly, Doug read the letter that he, with the help of a few members, composed for Bob DeVoe's brother Dave.

Tom Lipton visit: Tom started out with a discussion of his mechanical education which was primarily seat of the pants since he never attended college for a formal degree. His discussion was temporarily sidetracked by a few Don Huseman questions. The first was directed at his use of gloves in the shop. Tom deflected this by saying that he uses them less now but still does occasionally use them. He stressed that he was doing this in a safe and knowledgeable manner. He obviously was not grabbing any rotating chucks or work pieces with gloved hands. His use is mainly around the handling of stock and heavy work. Don's next question was about the use of a Volstro Head on a Bridgeport milling machine. There were several comments from members and Tom about these heads.

Tom's early life was influenced by his Father and the various shops he maintained at their homes as the family went through the typical steps of buying up to progressively larger homes and property. Though slight on the machine tool side, his dad's tools were well outfitted for welding. This became his first passion as his dad's initial training led to more and more welding practice; first for the pure joy of it then to small welding jobs. He became a natural in the Junior High and High School shop classes and spent as much time helping others as he did with his own projects. After a series of short-term inconsequential employment stints, he got into a long-term sheet metal apprenticeship and employment stretch where he met Doug, the first of his noted mentors. This gentleman instilled in him an appreciation for fine craftsmanship. The next influence on his career was from Charlie, a toolmaker, who was a great source of information and stories. It was Charlie who got him on the high path of fine metal working.

Then came a brief period of unemployment when he was flush with cash and had no responsibilities. The last thing he wanted was a job,

but his girlfriend (eventually his wife) nudged him into an interview at Chlorox where he was encouraged to start work in the R&D department as a machinist and fabricator. This led to another long-term employment stint and exposure to several new mentors that shaped his development. One such gentleman was an old Dutch machinist that passed many of his tools on to Tom after his passing. Tom still uses many of these tools to this day. The next phase of his employment history was with a small startup involved in a variety of low quantity custom machine tool designs and builds. This provided more opportunities for learning new techniques and technologies. The most recent phase of his employment is currently on going and is with Lawrence Berkley Labs where he currently heads up a group within the Fabrication and Technology Department. He has somehow managed to juggle this full-time employment with his Youtube video creations which can be an incredibly time consuming effort.

Tom addressed some questions about quenching oil, water-based grinding/machining coolants and CAM software and then launched into a couple of stories about funny events and impressive jobs he was involved in the past. The first story was entitled "I Can't Believe I Did That". He was working at an early job that was arranged by his neighbor. He wanted to turn an aluminum part in the lathe but since there was already a SS part chucked up he could not make use of the lathe. The neighbor said he was not yet done with the part and went off to lunch. This gave Tom the opportunity to remove his neighbor's SS part from the chuck, insert his aluminum part for its machining and then reinserting the SS part back into the lathe chuck. Being a machining newbie, he did realize at the time what a bone head move that was. However, his little maneuver actually went unnoticed and nothing was mentioned. Fast forward about 10 years and the tables were turned with Tom hiring his neighbor into a company. During some casual conversation, Tom mentioned that little incident and his neighbor did remember the incident but had no idea the part had been swapped out and replaced. He could only surmise that he came back from lunch, did a final check and decided it was complete. They both still laugh about it to this day. The second story was about the creation of a very intricate machine at Chlorox that allowed the repeatable and systematic staining, measuring, washing and remeasuring of pillowcases. This was done to allow the accurate determination of the cleaning power of various compounds without the interference of human bias in any of the processes. Tom was asked if he was going to finish the Etching Press that he had started. He noted that the only remaining tasks involved the fabrication of the



largest and heaviest pieces. The final product was going to be quite large and weigh around 3500 lbs. He did not want the big partially finished parts laying around unless he had time to finish the job. When asked who his most impressive fellow Youtuber was he said hands down that Robin Renzetti (Robrenz) was the guy. The discussion was finished with a visual tour of his 3500 square foot shop. He walked around showing the various tools that many may have recognized from online videos. He also noted the upstairs living quarters he shares with his wife.

After Tom's visit was over, Doug read the condolence letter he composed and sent to Bob DeVoe's brother Dave. A copy of this letter is included at the end of this newsletter. For those newer members who may not have been familiar with Bob or his career and hobby experiences he was a long-time member of the club who had a wealth of knowledge and experience. He passed away in September at the age of 90. Bob would frequently share his knowledge with the group giving presentations on diverse topics such as thread cutting/measurements, aluminum extrusion molds, V-anvil micrometers, transfer punches just to name a few in the last couple of years. Besides membership in SCHSM, Bob was also a founding member of WAPA (Western Antique Power Associates) for old gas and steam engines and was active in a wood turning group. More details about his interesting life can be found at <https://www.forevermissed.com/robert-j-devoe/about>. Those members who had the opportunity to visit Bob's home shop in Glendale have been amazed at the vast assortment of tools and materials he had carefully arranged and stored. There was so much there, it took many hours to take it all in. One very notable thing he did was to dig out the entire underground footprint of his house to create a 7' deep storage area that was very meticulously organized and labeled. He was an interesting club member and will be missed.

SHOW and TELL

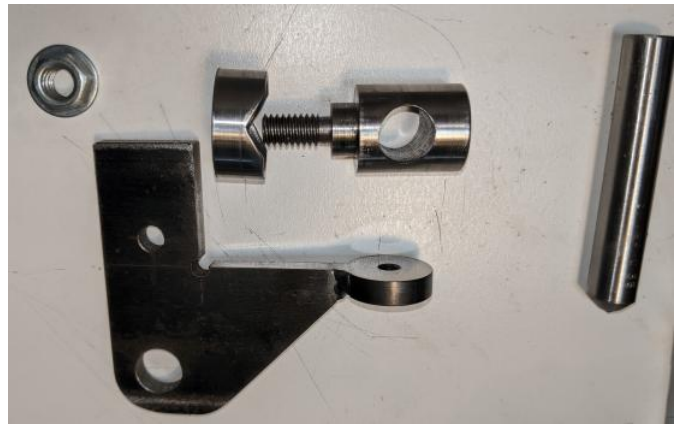
Ron Gerlach showed some progress pictures of his Myford model MG12 OD/ID grinder since it is nearly complete. He had given a presentation at a previous meeting on the scraping he had done to correct the wear in the two sliding way surfaces. He finally got around to prepping, priming, and painting the 40 or so individual components that make up the machine. The 40 components along with the hundreds of fasteners and unpainted parts are now assembled. Here are a couple of views of the machine. He mentioned a 4-prong electrical



connector to mate with the one on the machine for powering the coolant pump. It was an odd ball UK component that would cost about \$140 to buy and ship. He decided to make his own connector out of some banana plugs, a chunk of PCB material and some scrap bronze sprinkler parts. It included a locking nut made from a



bronze worm gear. He also showed a magnetic base wheel dresser he made by re-purposing an old Brown&Sharpe magnetic surface gauge base. He made a plate that mounted to existing holes in the base and added a clamping holder that could accept NIB shanks from 3/8" to 1/2" diameter. The



NIBs can be positioned at any angle desired and can be mounted on either side of the plate. Lastly,

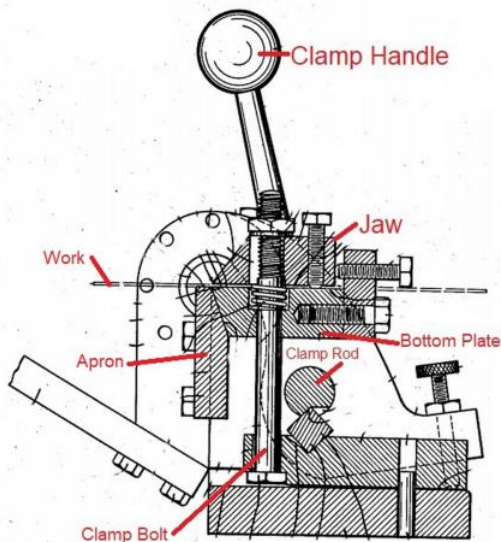


he showed two tools he is going to make for the grinder, a Centring (their spelling) Sleeve and an ID grinding stone adapter. Both will be made from pre-hardened 4140 obtained from McMaster-Carr.



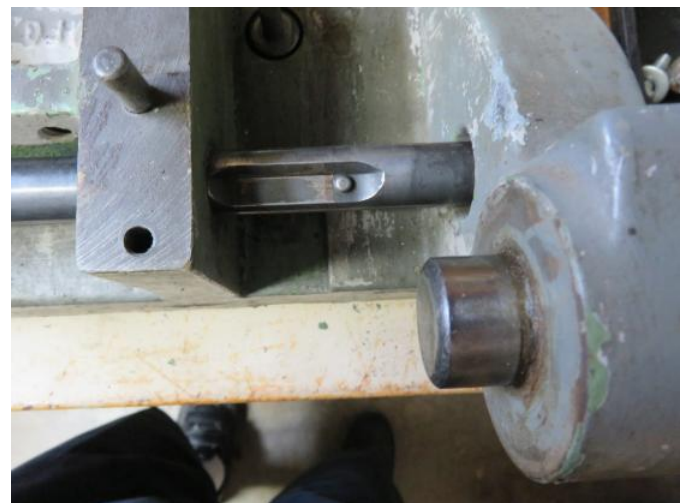
The centering sleeve will have a 2MT socket and a custom 12 Degree outside taper to fit the Myford work head.

Dan Snyder discussed the refurbishment of his 12" Diacro finger brake. He had obtained this at a sale, but it had sat in his shop untouched for some time because it needed some work. He made the right decision to tear it down to its bare essentials to inspect the various components and determine what was needed to return it to its original operating condition. He chose to clean and repair only, not wanting to spend the time with painting or making it pretty. He had no luck



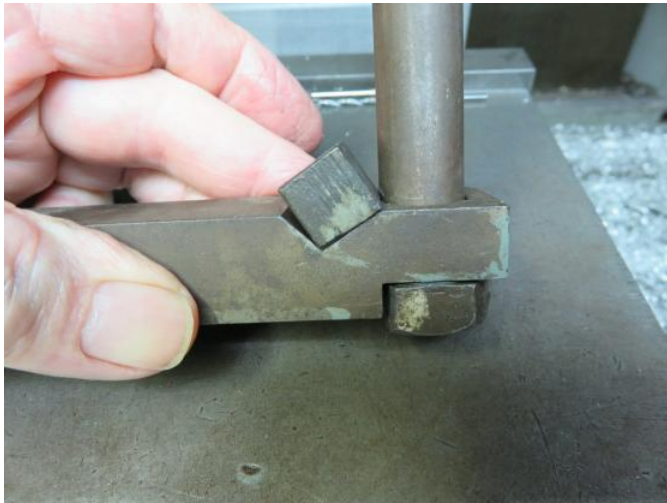
The key to the smooth and positive clamping action is the notched lever shaft shown below, in

finding a good manual for it but did find very useful drawings for the mechanism in the patent drawing shown above. The following pictures show the base, hinge assembly and bearing plate. Note the nice beefy nature of these castings. This is no surprise considering how solid and smooth these old tools are in operation.



conjunction with the square part shown below which sits in a >90 degree crotch on a large lever arm. This square piece can rock in the crotch as the notched shaft is turned. The notch in the shaft is off center so when it turns it supplies cam like motion pushing down on the little cube as it rocks in the crotch. Opposing forces then keep the shaft in position in the clamped mode.





The two following photos show the base as the some of the parts are mounted back in place.



Finally, he showed the completed brake in operation with the fingers mounted and a piece of sheet metal clamped in place. It turns out that several other club members have this same model or the bigger 24" model. There were numerous discussions about the fingers and how they were shaped. There was also a discussion about a little

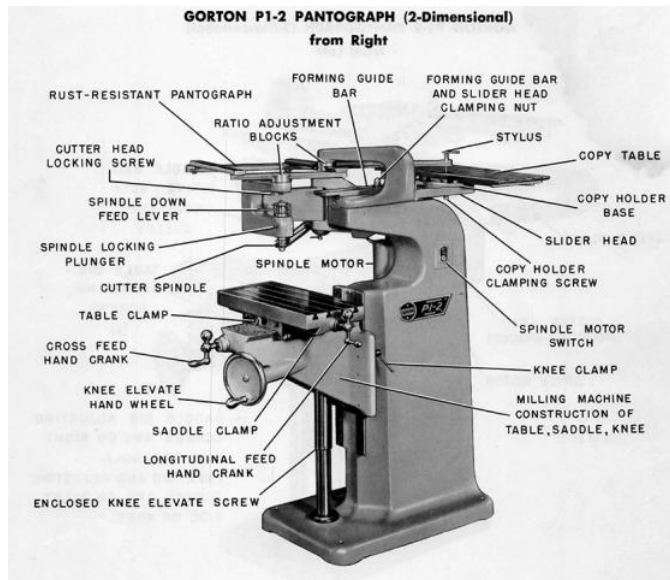


spring on the side of his brake that keeps the adjustable table snug up against the adjustment screws. Not all the members with these tools recalled seeing this spring. He wanted to replace the spring, so he found a good candidate on eBay but had to make a new set of standoff-mounts to accommodate the style of spring that he purchased.



As a side note, Dan noted that the Century Spring products commonly found at hardware stores are usually marked with "C" numbers but when he contacted Century they informed him there was no master list which detailed the specifications for each of these C#s. They have an internal cross reference that equates each of these C#s to a specific internal part number and a specification. If you contact them, they will gladly provide you the specifications but are not willing to divulge their master cross reference list or their internal part numbering system. This no doubt gives them the ability to charge different rates for different customers for essentially the same spring.

Matt Rulla showed pictures of his beautiful pantograph restoration. It may be incorrect to call it a restoration because it may actually be better looking and more precision than the original factory product. Here is an image extracted from a manual which shows the entire machine and identifies the various components.



The machine was claimed to have been in good condition when he purchased it but close examination proved otherwise. Here are some shots of it before he started his work. Before prepping and



painting he scraped all the way surfaces to achieve smooth and accurate travel for all the sliding parts. The following pictures show several views of the sliding way surfaces after spotting on a surface plate with blue die. The worn surfaces are clearly visible by the absence of contact with the blued surface plate. The series of photos show the various pieces mounted in homemade fixtures to provide a sturdy base for scraping. The scraping progress looks excellent. He admitted that he probably went a little overboard but it is a well-known fact that scraping can be addictive especially when one is not pressed for time.



With the scraping completed he then did all the prep work of sanding, filling and masking off of machined surfaces. The paint he used was a two-



part epoxy paint for farm implements available from Tractor Supply. This is no doubt unavailable in California due to the strict VOC regulations here.



The final result was a beautiful and accurate machine ready for work.



Bernie Wassinger showed the progress he was making on an old Breisch Olds hit-n-miss model engine and his Holt 4-cylinder engine model. The Olds engine kit has not been made in thirty plus years. It is the original kit designed and supplied by Paul Breisch that utilized all cast iron and bronze castings. Here he has the base mounted to fixture plate to hold it perpendicular to the mill table as he bores the main crankshaft bearing journals.

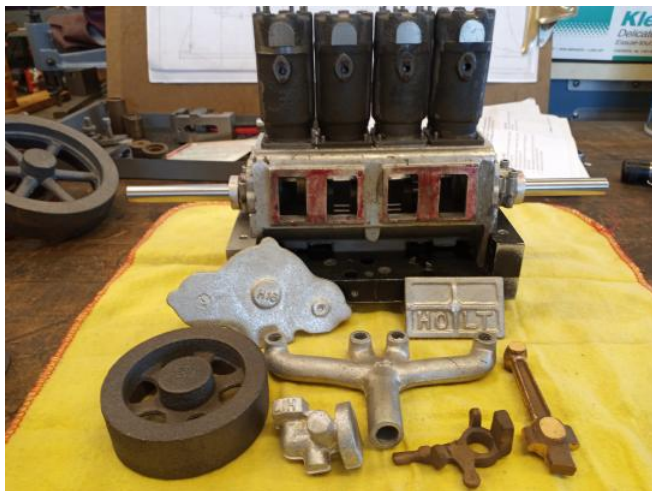


He also showed some updated images of the Holt 4 cylinder engine he had reported on at an earlier meeting. He now has a nice crankshaft with very little runout. He was unsatisfied with previous versions and this time he chose to build it up by making parts with shoulders, press fitting parts together and welding as he went along. He then checked each small subassembly for any runout and made corrections if necessary before pressing and welding the next section.



The other images were of the crankcase being line bored and the semi assembled engine with the jugs in place on the crankcase and some of the other misc. unfinished parts in the foreground. The line boring shot shows the crankcase mounted

on a special fixture that is then mounted in his quick-change tool holder.



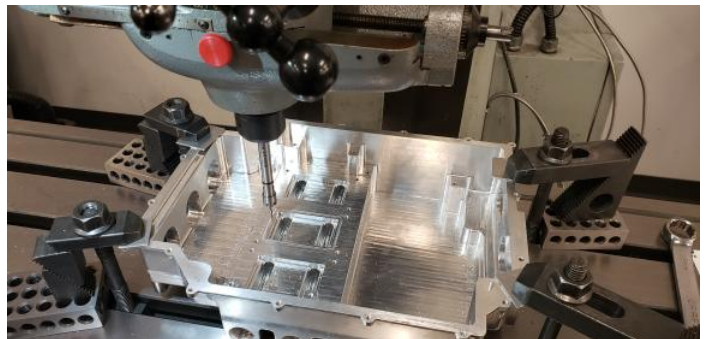
We all look forward to seeing both these engines popping along on their own power. Lastly, Bernie showed a cool little fixture that was merely a block with a variety of precisely ground flats of various heights. The beauty of it was that these heights are to be used in conjunction with a 5" sine bar to set up common angles such as 5, 10, 15, 20, 30, 45 degrees etc.



Bill Heather showed photos of the foundation for his new backyard shop which ultimately will replace his storage unit shop. It will be interesting to hear and see updates as the construction progresses.



Bill also showed some pics of his Volstro head in operation cutting some nice, curved gasket tracks in an aluminum housing that was needed at work. His company purchased and received these complex CNC machined parts, but the O ring gasket channels were missing. Sending them back would have taken too long so Bill volunteered to bring in his Volstro head to do the complex curved machining on the mill, thus saving many weeks or possibly months of time.



----- Doug's Letter Sent to Dave DeVoe and Wife Sue -----

October 28, 2020
5288 Thornburn Street
Los Angeles CA 90045
310-367-1838

Dave and Sue DeVoe
155 St Vincent Court
Danville CA 94526

Dear Dave and Sue,

As the president of the Southern California Home Shop Machinists club (SCHSM), I convey our deepest condolences for your loss. Bob DeVoe was a very active member of the club for many years and so many people remember him fondly.

This is supposed to be a letter of condolence for the loss of your brother, Bob, from the SCHSM group he belonged to. It is also very much a letter from my own heart.

As a friend, I remember his participation in activities and his friendship to everyone in the group. I appreciated the presentations he often made to the group. Not everyone is willing to do that.

"Back in the day", he gave us a presentation on the Lawn Boy engine project he had spent much time on. Also, Bob often dipped into his long history to give us insights into Just-In-Time manufacturing stories, including some true disasters that JIT was designed to circumvent or overcome.

My heart goes out to you and your family during this time.

Yours truly,

Douglas Walker
President of SCHSM
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SCHSM welcomes presentations by members or guest speakers on any subject related to metal working activities. If you have some knowledge or experience you feel may be of interest to our members, or if you know someone that may have something interesting to relate, please consider making a presentation at a meeting. Presentations may be a little longer and more detailed than a show and tell, and may be accompanied by slides, video, or physical displays. Probably every member has some experience they can share, and this is the purpose of SCHSM. Please contact President Doug Walker to make arrangements to give a presentation.

SCHSM met in Classroom AJ115 on the first floor of the Industry and Technology building of El Camino College, 16007 Crenshaw Blvd. Torrance, California, at 2:00 p.m. on the first Saturday of every month until March of this year. Meetings are now held via Zoom. This will continue until at least March of next year.

If you would like to contribute an article to this newsletter, or make a comment, contact the editor, Ron Gerlach. He can be reached via the SCHSM Groups.io Group, or at r7734g@hotmail.com.

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