



SCHSM

Southern California Home Shop Machinists

January 2, 2015

OFFICERS

President	Michael Vulpillat
Vice President	Paul Chretien
Secretary	Ken Rector
Treasurer	Jim Endsley

COMING EVENTS

February Meeting

February 6, 2016

2:00 P.M.

El Camino College

Old Tool Swap Meet

February 20, 2016

Anderson Plywood

4020 Sepulveda Blvd

Culver City

March Meeting

March 5, 2016

2:00 P.M.

El Camino College

Picnic

June 11, 2016

Alondra Park

Preface

The January monthly meeting of the Southern California Home Shop Machinists convened at 2:00 P.M. on Saturday, January 2nd, 2016 in classroom AJ115 on the first floor of the Industry and Technology Building at El Camino College in Torrance California. There were 27 people in attendance.

President Michael Vulpillat called the meeting to order and member Frank Schettini once again had something for the troops. Frank generously offered a piece of cold rolled round, 3x17 inches, for auction for the benefit of the club. The auction was won by Phil Potter. Thanks Frank!

Ken Rector reported on the activities of the Nominating Committee. The member roster was divided into three sections with each committee member assigned to call one section to solicit volunteers. No one has yet agreed to serve as President or Vice-President. The committee will continue to search for volunteers to serve as officers. The election of officers will be held at next months meeting on February 6th.

Editorial

The SCHSM is a lively and enterprising group that has interesting monthly meetings, participates in several outside activities during each year and supports an annual picnic event. The club activities are well attended and the club is able to maintain a small treasury without collecting dues. These are all positive accomplishments and it seems that members may be justifiably proud to belong to our group.

Belonging to a group is a two sided proposition. On the one hand, members gain something from the group and that is most obvious for the SCHSM. In our group members gain from the experiences of the other members, and that is the primary purpose of the group. At each monthly meeting and at other group activities we are exposed to ideas and examples we can take directly to the shop. We also talk with other members and develop friendships with people of similar interests. Those are the reasons for joining the SCHSM.

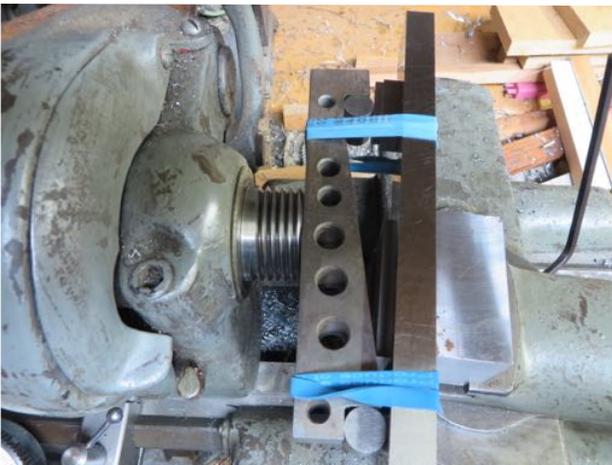
On the other hand, members contribute to a group. SCHSM members make presentations and display their projects. Without regular presentations and a method of communicating knowledge there would be no reason to participate and the group would dissolve.

Further, members contribute to a group by serving it. It would not be surprising to find that all organized groups expect members to - amongst other things; bring guests, prepare and fulfill meeting assignments, maintain a friendly club environment, treat members and guests with respect and courtesy and serve as an officer when called upon. These goals are from the Toastmasters International list of promises and may also serve to guide SCHSM members.

So, it's a give and take proposition. If you have taken away a little knowledge or made new friends or enjoyed eating lunch in the park, please give a little thought as to what you might do in return. Step up and take a turn contributing by serving as an officer.

Presentations

Lewis Sullivan gave a presentation of his experiences fitting back-plates to lathe chucks, complete with slides from Machinery Handbook. Lewis is fitting an L00 backplate to a 5C collet chuck he purchased on-line. He determined the interface taper on the chuck to be 20 minute angle and set about to machine the corresponding angle on the spud of the backplate. As Lewis admitted, if you cut too much you need the famous Ron Church* Putting On Tool to correct the problem. In Lewis' case the putting on material was an aluminum ring he carefully bored to a $-.004$ " fit, heated to about 400F in his oven and slid onto the plate. When cooled, the plate and ring were turned again, more carefully until the taper fit with $.002$ clearance between the plate and chuck. Tightening the bolts pulled the plate, now tight against the taper, down onto the back of the chuck. Lewis tested the assembly and found it to be outside his tolerance for TIR. He made another aluminum ring to more precise tolerances and obtain less than $.001$ " TIR. Lewis showed Handbook pages giving the amount of expansion to be expected when heating different materials and tolerances for fits. He also installed a backplate on another chuck using a cast iron ring. In this case he heated the ring and cooled the chuck in the freezer overnight. The ring slipped right on. Lewis passed around sample rings and the finished products. This was a very interesting presentation with a lot of value to our members.



Dan Snyder gave a presentation about the Peterson Flush Arbor. This is an arbor that allows mounting milling cutters at the extreme end of the arbor to facilitate side and face cutting. The tool is manufactured by Fuller Manufacturing Inc. in Sutter Creek California. Dan purchased the main body portion of the tool at a swap meet and fabricated the missing parts. The arbor body has a stem to mount in a collet and a tapered nose to mount a split bushing with a matching tapered ID and straight OD over which the cutter is mounted. Dan needed to make this bushing and a pusher washer. The cutter is held on the arbor by tightening a flat head screw in the end of the arbor, thus expanding the bushing by pressing it up the tapered section. He showed how he measured the taper and how he set the lathe compound to match using a sine bar. The accompanying image shows his fixture for holding the sine bar and thickness gauges against the spindle nose to adjust the angle of the compound. Dan illustrated his presentation with several slides.

A representative of PVNet spoke for a few minutes about the PCNet Technology Center in Rolling Hills Estates. They would like to recruit members to mentor young people in their programs. PVNet is a non profit organization that provides programs in game design, video editing, 3D printing, computer programming and other technologies. Anyone interested in volunteering to help can find more information at PVNET.com or contact them by phone at 310-541-7992 or email Education@PVNET.com.

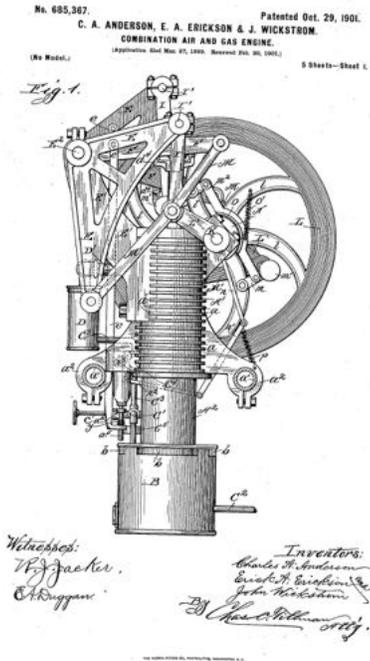
Show and Tell

Paul Chretien showed a Baby Bullet vice he recently completed. The vice is a replica of the Baby Bullet vice manufactured by the Wilton Tool Manufacturing Co. during the 1950's. Paul's re-creation was produced from plans offered by Tom Lipton (oxtoolco.com) to accompany his build series documented on youtube. It is a fabrication made from several machined pieces and Paul explained the process and showed drawings. In a previous show and tell Paul told how he used an annular broach tool to cut circular curves to define the shape of the fixed and movable jaw parts. This month he told how he used a ball end mill and offsets derived from auto cad drawings to cut the irregular curves on those parts. Legend has it that this process is called kettering after the name of the specialized mill produced by a Ketter Co before the days of cnc machining. The main parts of Paul's Baby Bullet are two weldments for the fixed and movable jaws and Paul told of the difficulties he encountered when doing the welding. Finally, he told of the many hours of grinding, filing and sanding to produce the sensuous curves of the vise. This was a very interesting project.



* Ron Churnich was the author of a blog, *Model Engine News* which appeared monthly for ten years beginning in 2000 and contained articles about every aspect of model engines and their building

Phill Potter brought in a double acting oscillating vertical air engine he made for last years Picnic contest. Phill explained his method for determining the valve hole positions and his use of o-rings and teflon tape for seals. The engine is just the size to match the contest rules and is a good runner.



Ron Gerlach brought in a Dremel Tool mount for his lathe tool post made from aluminum. The mount has a threaded ring to fit the nose of the Dremel Tool with a stem that can clamp in the quick change tool holder. Ron told of his experience using aluminum brazing rod, with flux, available in his local hardware store made by Bernz-o-matic. He said the brazing rod was easy to use with a propane torch and worked quite well.

Fred Bertsche showed castings for an Anderson, Erickson and Wickstrom Sterling Engine he obtained at an estate sale. The original engine was patented about 1906 and Fred's castings kit will make a wall mounted engine that drives a small fan. Fred would like to contribute the castings to the club as an organized club build project. He has the casting set and plans and members agreed it would be a good project. It was suggested that Fred speak with Graham Hollis to find out about organizing a project like this. Then he might make a list of sub-assemblies which members can work on. This seems like a good idea.

The 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 or video, or physical displays. Probably every member has some experience they can share and this is the purpose of the SCHSM. Please contact President Michael Vulpillat to make arrangements to give a presentation.

The SCHSM meets in class room AJ115 on the first floor of the Industry and Technology building of El Camino College, 16007 Crenshaw Blvd. Torrance California, at 2:00P.M., on the first Saturday of every month. The building is near Parking Lot B. Enter the campus on Manhattan Beach Blvd.

If you would like to contribute an article to this newsletter or make a comment about the newsletter, contact the editor, Ken Rector, via the SCHSM Yahoo Group, or at kdrhoo@yahoo.com.

Find us on the web at www.schsm.org.

