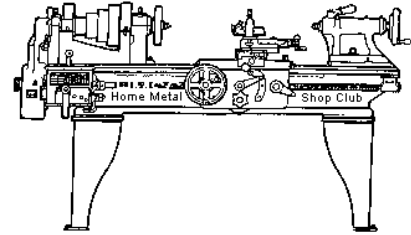




May 2016
Newsletter

Volume 21 - Number 5



<http://www.homemetalshopclub.org/>

The Home Metal Shop Club has brought together metal workers from all over the Southeast Texas area since its founding by John Korman in 1996.

Our members' interests include Model Engineering, Casting, Blacksmithing, Gunsmithing, Sheet Metal Fabrication, Robotics, CNC, Welding, Metal Art, and others. Members enjoy getting together and talking about their craft and shops. Shops range from full machine shops to those limited to a bench vise and hacksaw.

If you like to make things, run metal working machines, or just talk about tools, this is your place. Meetings generally consist of **general announcements**, an **extended presentation** with Q&A, a **safety moment**, **show and tell** where attendees share their work and experiences, and **problems and solutions** where attendees can get answers to their questions or describe how they approached a problem. The meeting ends with **free discussion** and a **novice group** activity, where metal working techniques are demonstrated on a small lathe, grinders, and other metal shop equipment.

President <i>Vance Burns</i>	Vice President <i>Norm Berls</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Emmett Carstens</i>	Librarian <i>Ray Thompson</i>
Webmaster/Editor <i>Dick Kostelnicek</i>	Photographer <i>Jan Rowland</i>	CNC SIG <i>Martin Kennedy</i>	Casting SIG <i>Tom Moore</i>	Novice SIG <i>Unfilled</i>

This newsletter is available as an electronic subscription from any page of our [website](#). We currently have over 990 subscribers located all over the world.

About the Upcoming 11 June 2016 Meeting

The next general meeting will be held on 11 June at 12:00 PM (Noon) in the club meeting room of the [Barbara Bush County Library](#), 6817 Cypresswood Drive, Spring, TX 77379 - [map](#).

Visit our [website](#) for up-to-the-minute details, date, location maps, and presentation topic for the next meeting.

General Announcements

[Videos of recent meetings](#) can be viewed on the HMSC website.

The HMSC has a large library of metal shop related books and videos available for members to check out at each meeting. These books can be quite costly and are not usually available at local public libraries. Access to the library is one of the many benefits of club membership. The club has funds to purchase new books for the library. If you have suggestions, contact the [Librarian Ray Thompson](#).

We need more articles for the monthly newsletter! If you would like to write an article, or would like to discuss writing an article, please contact the [Webmaster Dick Kostelnicek](#). Think about your last project. Was it a success, with perhaps a few 'uh ohs' along the way? If so, others would like to read about it. And, as a reward for providing an article, you'll receive a free year's membership the next renewal cycle!

Ideas for programs at our monthly meeting are always welcomed. If you have an idea for a meeting topic, or if you know someone that could make a presentation, please contact [Vice President Norm Berls](#).

Recap of the 14 May 2016 General Meeting

By Joe Sybille, with photos by Jan Rowland



Twenty-eight members attended the 12:00 p.m. (noon) meeting at the Parker Williams County Library, 10851 Scarsdale Boulevard, Houston, TX 77089-5714. One visitor, Paul McKneely, attended the meeting. There are forty-six members in good standing with the club.

President *Vance Burns* led the meeting (right photo).



Presentation



Club member, Norm Berls, gave a presentation on 'The Cleaning and Lubrication of a Mill Drill'. The motivation behind this task was Norm's own Rong Fu mill/drill and a recent project requiring accurate depth settings. Maintaining settings on the vertical axis of his mill/drill proved difficult and were unreliable. The course and fine vertical adjustments were constant sources of frustration. After thirty years of accumulated grease, swarf, and machining debris, Norm decided to disassemble, clean, lubricate, and reassemble the vertical axis. He showed pictures of the mill/drill and described how he and fellow member, Dan Harper, performed the task.

Since this was the first time he had disassembled the vertical axis, Norm was surprised to discover that some of the fasteners had imperial threads with metric heads. He replaced the fasteners with imperial sized stainless steel ones. Tools used for cleaning included a scraper, screw driver, tooth brush, and brake cleaner.

The results of this undertaking led to smoother operation of both the course and fine vertical adjustment screws. No longer were there sudden jumps of the quill when setting depth of cut.

Safety Moment

Vance Burns showed a video of a security camera recording of a fatality at a paper mill. The accident occurred when a worker placed his hand too close to two moving parallel rollers of a press. The rollers grabbed the workers hand and pulled him through the press, instantly killing him. The lesson learned here is to never place one's hands near moving rollers.

Gene Rowan described how an errant shop air hose swirled and struck and injured him. Fortunately for Gene, the injuries were superficial abrasions on the arms and hands. The air hose fitting had worked its way loose from the stationary fitting, and even though the two connected fittings were tied off the safety tie broke and the hose fitting still injured a worker.

Show and Tell

Vance Burns revealed a source of 304 stainless steel tubing: the local muffler shop. Stainless steel exhaust pipe in diameters of 1 1/4" to 6" may be found at the typical neighborhood muffler shop.

Tom Moore showed and then donated to a fellow member two sets of standards for checking hardness in metal.

Dan Harper exhibited a gear and broaches that he made.



John Hoff displayed and described how he made a part for an antique candy machine (left photo).

Rich Pichler illustrated and described how he anchored a safe to the foundation of his house (right photo).



Problems and Solutions - *Ask the Blacksmith*

A member requested suggestions for improvements to his design for a heat treating station. The station, as he envisioned it, would be a mobile cart approximately 24" wide by 48" long by 30" high, capable of supporting about three hundred pounds, and have a top layer of fire brick. Recommendations included placing two swivel wheels at the front of the cart and replacing the fire brick with a sheet of one half inch thick carbon steel.

The same member designed a bench rest for target shooting. He requested suggestions on improving his design. Suggestions offered pertained to making the design simpler

Another member requested suggestions on forming a tool to support his rock collecting hobby. The best suggestion offered was to get a leaf spring from a salvage yard and make his chisel from that material. Typically, leaf springs are made from high yield strength carbon steel. As result, a chisel made from this material would return to its original shape despite bending and twisting while gouging through dirt for rocks.

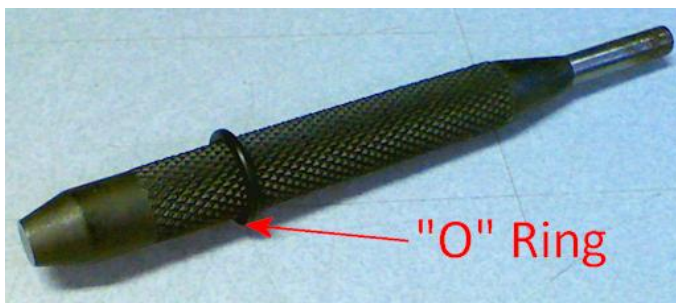
Another member with difficulty removing a three jaw chuck from his lathe asked for recommendations on the best way to do so. Suggestions ranged from using an impact wrench on a socket held in the chuck's jaws to using a torch to heat parts of the spindle nose to facilitate chuck removal.

Articles

The O-Ring's Other Side

By Dick Kostelnicek

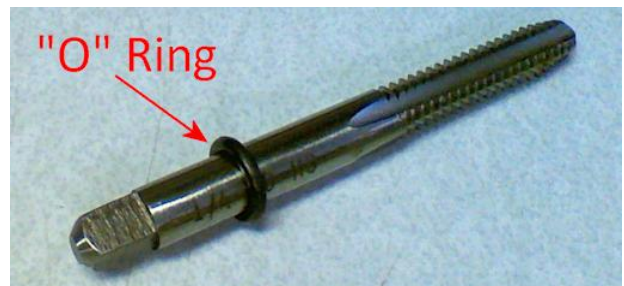
O-rings are toroidal, elastomeric fluid seals (right photo). Well, that's their ordinary use. In my shop, these tough rubber-like bands perform alternative services.



Place an O-ring on the round shank of a pin or center punch near the end where it's struck by a hammer (left photo). When you lay down the punch on an inclined surface, it will roll in a circular arc rather than straight down hill and onto the concrete floor.

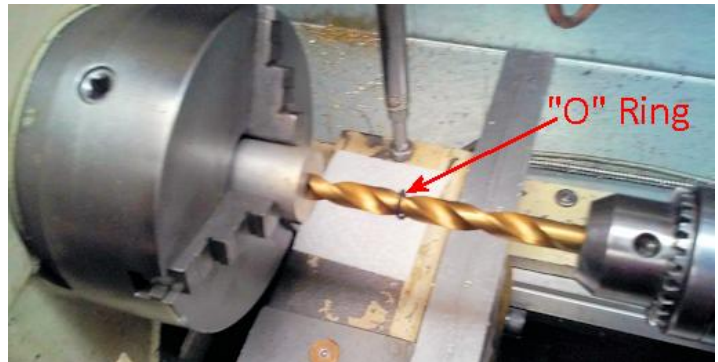


I keep all taps having like pitch diameter and lead in the same storage compartment. In order to differentiate left from right hand taps, I place an O-ring on each left hand tap's shank (right photo). Hence, I no longer grab the wrong handed tap and wonder why it won't make thread.





There are two nuts located on the threaded height adjusting post of an Aloris style tool holder (Left photo). To set the holder's height, the top-most nut is jammed against the lower one. Often, there is a metallic compression washer inserted between adjacent faces of the two nuts. I use an O-ring in place of the metal washer. Depending on how much the upper nut is tightened, the elastic O-ring pushes the two nuts apart with just the right force so that the height is maintained but still can be easily finger-adjusted.



To roughly monitor the depth that a drill has penetrated its hole, I place an O-ring on the bit (right photo). I used to use masking tape for this purpose. This technique is useful on the lathe and especially when using a hand held drill motor.

When the bit produces long stringers that might push the "O-ring out of position, I move it one drill diameter behind the actual depth point. Leaving one drill diameter between the O-ring and the top of the hole is easy to judge by eye.