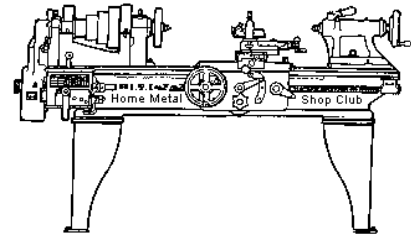




April 2017

Newsletter

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<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
Brian Alley

Vice President
Ray Thompson

Secretary
Joe Sybille

Treasurer
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Librarian
Ray Thompson

Webmaster/Editor
Dick Kostelnicek

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Jan Rowland

CNC SIG
Martin Kennedy

Casting SIG
Tom Moore

Novice SIG
John Cooper

This newsletter is available as an electronic subscription from the front page of our [website](#). We currently have over 1027 subscribers located all over the world.

About the Upcoming 13 May 2017 Meeting

The next general meeting will be held on 13 May at 12:00 P. M. at the Spring Branch Memorial Library, 930 Corbindale Road, Houston, TX 77024. Brian Alley will give a presentation on 3D Printing – An Additive Process.

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. Also, 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 Ray Thompson.

Club member Rich Pichler announced a design contest among members. There will be two designs for consideration. One will be for a business card holder and the other for a business card. The winner of each category will win a full year's membership. **See attached link for details.**

Recap of the 08 April 2017 General Meeting

By Joe Sybille, with photos by Jan Rowland



Sixteen (16) members attended the 12:00 P.M. (Noon) meeting at South Houston Library, located at 607 Avenue A, South Houston, TX 77587. There were no visitors present today. There are thirty (32) members in good standing with the club.



President *Brian Alley* led the meeting (right photo).

Presentation



Former club member *Bill Swann* gave a talk on 'Solar Everywhere Now', in which he described the current state of solar panel installations, particularly in Texas. See Bill's other article on solar panels (photovoltaic arrays) at the HMSC website in [volume 16 no. 10 newsletter](#).

Bill began by citing recent milestones in solar panel installations. Among those cited were two that had a local impact. One pertained to a business and the other a municipality. For example, in July 2012, IKEA placed into service its rooftop mounted 812 kilowatt energy system for its Houston store. Recently, the city of Houston awarded to SolaireHolman 1 LLC a Power Purchase Agreement (PPA) to purchase for 20 years 30 megawatts of power for approximately \$0.048/kilowatt hour. SolaireHolman has built the largest solar plant in Texas. The 50 megawatt solar photovoltaic project is on 360 acres 12 miles north of Alpine in Brewster county Texas. (See project development profile [at this link](#).)

Bill then discussed the current costs of installing photovoltaic arrays either on rooftops or at ground level. He gave rules of thumb for determining array size for expected watt output. He continued with examples of roof mounting systems of photovoltaic arrays.

Solar panel technology has improved over the years and expected efficiencies of about 81% after 40 years of service are now common. The return on investment for a solar panel installation depends on several factors, among them the energy harvested and the costs of installation. A DIYer may save a little when compared to a turnkey system installed by a dedicated solar panel installer.

Of interest to homeowners who are contemplating a solar panel installation is the recent enactment by the Texas legislature to prohibit home owner associations (HOAs) from restricting the installation of solar panels at residences. Also, the city of Houston now requires that all new residential construction be solar ready. This means at least 600 square feet of clear space on the west or south roof must be available for photovoltaic array installation.

Bill maintains a website for in-depth information on photovoltaic systems. References and links to other resources are provided. Here is the [link to his website](#).

Safety Moment

President Brian Alley showed a safety video on workers who were unwilling to take responsibility for their unsafe actions in the workplace.

Show and Tell



John Cooper showed the results of repurposing an inoperative hydraulic jack to a machinist jack and a spanner wrench (Left photo).

Brian Alley displayed an example of a 3D printed nut on a bolt (Right photo).



Problems and Solutions

A member asked for suggestions on the best way to dispose of scrap metal. Suggestions included setting the metal at curbside the night before rubbish pickup day.

Articles

How to Lose Weight

By Vance Burns

I overheard something astonishing on one of my wife's podcasts. The exercise guru was talking about the basics and said "to lose weight you have to **eat less and do more**". There – I just saved you thousands of dollars and countless hours in research.

The logic is undeniable. People who obey logical health rules are healthier than those that do not. People who obey logical and time-honored machine investment rules are happier than those that do not. With all the correspondence and questions I have had with novice machinists over the years, I can safely say the lure of cheap used machinery is as addictive as junk food. You know it's going to get you in the end but you can't help it. It very satisfying... that day. A moment on the lips, a lifetime in the shop.

Have you ever heard any of these ?

- What cost a king's ransom 50 years ago can be had for a song today, and I CAN FIX IT!
- It's only a HALF gallon of chunky Monkey, and I will go to the gym tomorrow.
- That slight wear in the ways can be worked out, no problem. I see guys on Youtube do it all the time.

- You can't eat just one, besides it is easy to lose weight. I've seen it done on TV.
- I am getting this marvel at 0.05 cents per pound. So really, the more I buy the less I am spending!
- The cookies were on sale!
- When I saw it in this guy's garage it was love at first site!
- Well, it looked good on me in the store...
- I've got to learn this somehow, and I am pretty good at fixing things. This way I will learn while doing.
- I'm basically a good eater most of the time, so it will not be a problem!
- My current (lathe/mill/computer/grinder/CNC) just doesn't work worth a darnn.
- I am so tired of eating the same old thing.
- If I don't get that machine I will not be happy.
- I am putting my will power on hold, just this once; I just want to be happy.
- I am an impulsive tool buyer.
- I am an emotional eater.
- I need a larger machine.
- I have big bones.

Sound like anyone you know? People pay personal trainers thousands of dollars to be that voice of reason. Most of us treat reason like that ugly relative you hide in the closet when the pretty tool saleslady comes to call.

You will get a lot of free advice if you ask how to lose weight. People will tell you to buy American. When a tool is worn out, its origin is less important than its destination - which might be the scrap heap. People tend to sloganeer when what you wanted was help. If you want to retroactively punish some nasty unnamed foreigner by targeting a system's origin rather than its remaining reservoir of functionality, you will defiantly strike a blow against Your Self Esteem. Don't let your eyes be bigger than your stomach. I have an acquaintance who bought what amounted to a house-kit. Good idea, saved lots of money. They didn't know how to build a house. What they live with now is exactly what you would expect, a house built by a novice. Do you want to use the lathe to make stuff or fund a rookie to remake a lathe?

Some people can eat anything they want and not gain weight. You hear these guys that snap up bargain used equipment and resell it at a huge profit. What they don't belabor is the amount of time it took and the costly gaffs they learned from to make equipment buying look easy. It's not easy – they are smart, hard-knocks smart. If one of them is your brother-in-law and owes you money, you may have a chance. Like exercise, if you stick with it long enough the used machinery business will pay off. If you quit when it gets tedious, you just got an expensive education in used equipment ownership. In the end, you may shipwreck your hobby.

Fat people do not lose the battle in front of the refrigerator; they surrender at the grocery store. Maybe the silliest thing you can do is buy too much. Every brother-in-tools will happily tell you need a gizmo larger than the largest thing you plan to build. While that is true, you've got to be realistic, so ask them if you can borrow their credit card.

I don't think that cheap stretchy exercise thing on TV is a good deal, so what **should** I buy? Your wife already knows that answer – “nothing”. It's a hobby. So “what do I need” takes a back seat to the better question “what can I afford?”. Sure, you are thinking that if you wait long enough the Craig's List stars will align because Donald Trump will clean out the garage and put that pristine Monarch 1955 10ee up for a scrap price and you will be the first one to see it and spring with cash in hand. Can that happen? Yes. Can you wait that long? Your wife already knows that answer – yes, yes you can.

Some of you already have the self control to buy the smallest bag of baked chips or the half pint of sugar free ice cream. If you know what you are doing you will not have read this far other than for entertainment. If you know what you are doing you will have already done it. If you don't know what you are doing buy smart, buy with a safety net and guarantees. While these adjuncts are not free, they can minimize the effects of inexperience and knowledge gaps.

Stick with the wholesome food everyone has thrived on for generations; avoid fad diets. Buy the same thing hundreds of others have and were happy with 12 months later, with very little buyer's remorse. Look for the guys that bought that device and are hotroding it on Youtube. If it has become popular and no one is bitching about it, it might be worth your time to look.

Don't see dieting as punishment, it is getting your life back. This is a hobby. You should look forward to that trip out to the shop. If the thing in the shop challenges you and brings out your A game, then that's great. If it frustrates you and causes you regret all day long, it was a mistake. We have no fault divorce in the Home Metal Shop Club; learn and move on. Sell it quickly; be honest with the Craig's Lister that then comes knocking on your door. If, you have to take a bath on the deal, thank God and Greyhound she's gone. You will be a thousand pounds lighter and be able to fit stuff in the shop you couldn't before. Healthy food is not expensive because it is the best investment you can make. Unless you are buying a boat anchor, you can waste a lot of money trying to make a silk purse out of a sow's ear machine. Been there, done that and received the due penalty for my error.

In closing let me quote from the 1955 edition of Machinery Handbook, c16,v1-3 “Whenever a man is laboring in the shop he has pain, because his hour came and he spent his meager funds foolishly; but he that leant his heart to the words of the wise bought quality. Verily, the wise machinist's heart no longer remembers the sacrifice because of the joy that a better machine has been brought into the shop. Happy is the man that hath his garage full of good tools: he shall not be ashamed.” Amen.