



The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

No. 136

August 2007

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Editor's Desk

Victor Kozakevich

I ran across an article recently about a group in Berkley designing metal cookstoves for refugees in Africa. My curiosity sparked more research, and I ended up learning far more about burning wood than I imagined.

This is kind of relevant to some recent news about alternatives to fossil fuels, grasses to alcohol and all that. For instance, people were running car engines on hydrogen before WWII.

It turns out that, in making charcoal by depriving burning wood of sufficient oxygen, it will give off hydrogen and carbon monoxide gas, both of which can be burned. To deal with wartime fuel shortages, several European carmakers sold conversion kits that could power cars or busses. Basically, fill a metal tank with dry wood, ignite it, filter the wood gas, and then pipe it to the carburetor. Some kits had a bag to hold the excess gas produced.

A similar method was used about a hundred years ago to produce city gas, but the fuel was instead coal. Maybe we will make what was old, new again.

Next Meeting

Thursday, Aug 2, 2007

7:00 PM. Meetings held at:
 Charles River Museum of Industry
 154 Moody Street
 Waltham, Massachusetts

Membership Info

Annual dues of \$25 (via checks made payable to "NEMES" and mailed to our membership secretary) for the calendar year are due by December 31st of the prior year.

Missing a Gazette? Send mail or email to our publisher.

Addresses are in the left column.

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President's Corner

Dick Boucher

The Meeting

Our speaker this month will be David Perreault. David will be speaking to us about guitar building and the tooling and fixturing he has devised to create the instruments. David and his brother have been a regular exhibitors at our February show. The centerpiece of his display this year was his great one-lunger tractor.

Miscellaneous Ramblings

Well, Bea and I have been enjoying the summer months. The young chap who built the sailboat in our barn last fall treated us to Exhibitors Passes to the *Wooden Boat Magazine*, "Wooden Boat in the Water Show" at Mystic Connecticut. A feature of the pass was a tour of the engine room of the Sabino, a steam powered coastal ferry from the Cascio Bay area. The engineer and fireman gave a great explanation of the works in the engine room and we had a great Q&A session before the steamboat took its first voyage of the day. Later in the day we took the half-hour cruise around the bay. It's really great watching the engine just loafing over as the boat cruised past all the wooden boats on display. Dan, the boat builder also has a lot of interest in his boat and is going to have a photo article in one of the wooden boat magazines.



The next event was the Pepperell engine show. Norm Jones, as usual, had his canopy set up as a focal gathering point for the members of the society who took in the show and of course the exhibitors from the society. I had the opportunity to sit and have a good talk with Don Strang. Don is one of our founding members and has been having some serious health issues the last couple years. A couple of months ago, I mentioned Professor Chaddock's Quorn cutter grinder and asked if others had built such a machine. The answer is yes, Don built one many years ago and that led to his quest for a designing and building a machine of much less

complexity for sharpening the four facet drill. Don gave us a number of presentations on his study of the common twist drill and its sharpening back in the early days of the Society.

The final gathering we attended was the Annual Micro-car meet at the Waushakum Live Steamers track. Micro-cars are generally described as cars having engines smaller than 250 cc. Many are based on a motorcycle engine, transmission, and drive wheel.

So we got in small cars and small steam locomotives all in one day.

The cars were great but the one that caught my eye was an unusual creation of Max Hall. It is a hybrid he calls the "TriHi" (see picture). A small one cylinder diesel engine in the trailer, which burns vegetable oil for fuel, powers it. The engine turns an AC generator that creates DC to power the electric motor in the power car of the hookup.



Max agreed to be our October Speaker and will be giving running demonstrations of the car at the Sudbury Day Festival in Sudbury town center September 15 from noon to 5PM and possibly at the Alt Wheels meet at the Larz Anderson Park in Brookline at the end of September. If that date is confirmed I will mention it in next month's Gazette. Keep these dates in mind as seeing the car operate will probably make his presentation at the meeting that much better for us.

Dick B.



The Meeting

Todd Cahill

The July meeting is one of two poster sessions the club has during the year. Shown are a few highlights of what was brought in by members.



Frank Dorian brought in a collection of different measuring tools. Among them was this light wave micrometer



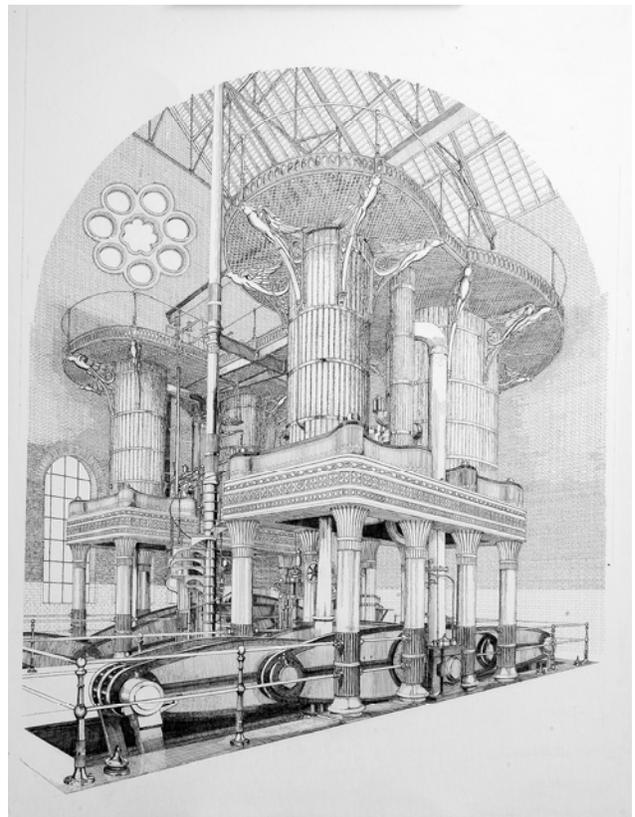
Joe Ng made this budget camera car. He showed the videos produced with it at the Waushakum Live Steamers club track.



Errol Groff is working on this Ray Hasbrouck designed Steam Engine. It requires no castings and is designed to be used in a boat.

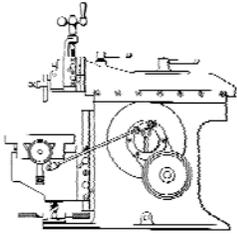


Bill Bracket made this rather temperamental wooden clock.



Yours truly has taken a break from engine building to execute this drawing of a James Watt and Co. Waterworks Engine. The original was located in Birmingham, England and the extent of the decoration was very fine. I used technical pens to do the drawing. The smallest one leaves a line width of 0.004".

Todd



Shaper Column

Kay Fisher

Shaper of the Month

Tomas Blanchard's 8" Boxford

This month's story is one of acquisition and rebuild. Tomas Blanchard from Napa California submitted this story about his 8-inch Boxford.



Boxford After Paint Photo by Thomas Blanchard

"I just bought a Boxford shaper and am having a great time cleaning and polishing the bright work. I found some galling on the ram ways but 722 strokes with my diamond stone flattened out the high spots and the gib settled in so it is sliding nicely. From the history available to me, this little machine has spent most of its life in storage. I plan to make it the queen of my shop. I am considering a DC conversion to gain variable speed.

I have polished the "bright work" with a Blue 3M 1X42 polishing belt, which got the metal brighter than a charged buffing wheel, and sealed with lacquer. It is interesting that this "Made In Halifax, England" Boxford came with a lantern style tool post.

In the switch box, I found a barely discernible assembly card dated 1973 stating the machine was to go to customer "Garrett".



Before - In Pickup Photo by Thomas Blanchard

The switch box was covered with a single phase motor starter made in USA. It was ugly as sin, so it is removed. I developed a cover that I feel is easier to modify and flush with the cabinet.



New Motor Starter Photo by Thomas Blanchard

Power goes from the fuse to the lighted switch on the left. When turned on, it is lit indicating line power available to the center miniature magnetic switch. Press start and the right hand light turns, on indicating power to the motor.



Before Paint Photo by Thomas Blanchard

The Ram traveled faster on the forward motion! After reading shaper column 4 (motor direction), I changed the motor leads to correct the problem.



After on Casters Photo by Thomas Blanchard

I put casters on it as it must be portable in my shop.



Before Paint 2 Photo by Thomas Blanchard

I bought this machine unseen after running a post on Craig's List. The first and only response came in 7 minutes. I had no knowledge of the Boxford brand but when I researched shapers at the Yahoo "Metal_Shaper" group, I found a link to a site in the UK describing Boxford shapers.

<http://www.lathes.co.uk/shapers/index.html>



Polished bright work Photo by Thomas Blanchard

I then realized I had made a good deal. The previous owner and I had served apprenticeships out of the same local. He agreed to deliver; he wanted to see my shop! We've become chums. \$300 delivered seemed more than fair.



Traverse adjust Photo by Thomas Blanchard

I got the paint color as close to original as possible by matching the color on the inside of a door.

The wiring of the new starter is a story of not counting on the supplier to have any knowledge of their product. I plan to add limit switches as mentioned in shaper column 55.

This Shaper, serial number 70154, finished manufacturing in May 1975, and was sent to Brodhead Garret Company.

Time for this machine to go to work.



New paint Photo by Thomas Blanchard

I plan to replace the cheap plastic knobs with some that I will make; however I need to make a radius tool holder first. I also plan to fabricate some special tool holders, either copying or very similar to those by Rudy Kouhoupt."



After Pulley Cover Photo by Thomas Blanchard

Thank you Thomas for that interesting story.

Keep sending me email with questions and interesting shaper stories.

My email address is:

KayPatFisher@gmail.com

Kay



Shop Tips

Homemade Hacksaw

By Bob Neidorff

Everyone knows that I'm cheap and that I really like to make things. But you're probably asking yourself why I would make my own hacksaw. There are three answers to that question. First, I needed a hacksaw with a really deep throat. Second, I'm cheap and third, I like to make things.

All of my hacksaws are the same style. They have an adjustable frame with clicks for each different size blade. They have a semi-fixed pin at one end and a pin on a screw at the other end. The screw is filed square to fit a square hole in the hacksaw frame.



A Craftsman light duty hacksaw



Close-up photo of the Craftsman blade tightening mechanism

From my experience, this style of hacksaw is versatile, but flawed because the blade can twist in the adjustment points. There is a better style of hacksaw, made by Westward, DeWalt, Stanley, Lenox, and others, that has fixed blade pins and a frame that tightens. This style of saw is less versatile, but much more rigid, so the blades last longer and the cut is straighter.



Photo of a Lenox hacksaw, a much better tool.

I set out to make a hacksaw that was as rigid as the Lenox style saw shown above, but also had a very deep throat. I also decided to use only material on hand and do the job quickly. The result is shown below. This saw is made from surplus 1½" bedframe steel angle, 5/16" threaded rod, and ordinary hardware. Here's the result:

The frame pivots around cross pieces. The blade is tightened by a long threaded rod at the top. To prevent the frame from twisting, there are two cross pieces below the threaded rod, one behind the frame and one in front. This may have been unnecessary, but made the saw even more rigid. I didn't put a handle on the saw. The steel angle is easy enough to hold and pull. The dimensions are not critical so I'm not including detailed drawings, but if you have any questions, feel free to contact me.



Photo of Bob's deep-throat hacksaw

Parts list:

- 2: 1½" x 1½" x 13" Steel angle from an old bed frame for the left and right
- 2: 1½" x 1½" x 12½" Steel angle from an old bed frame for the cross braces
- 1: 5/16-18 x 14" Threaded rod to tighten the frame
- 1: 5/16-18 Nut
- 1: 5/16-18 Wingnut
- 2: 6-32 x ½" Screws to hold the blade
- 2: 6-32 Nuts
- 2: ¼-20 x ¾" Hex-head bolts to hold the cross brace to the sides
- 2: ¼-20 Plastic ring nuts (the kind that stay put)
- Flat washers

It's crude and ugly, but for my job, it worked very well. It's great for unusual spots. It's easy to switch blades and it didn't take much time or effort to make. An unexpected benefit is that I can disassemble the saw into a few straight pieces and store it in a small space until the next job.



Treasurer's Report

Richard Koolish

Balance as of May 24, 2007	8749.85
June Gazette	-192.62
Membership flyers	-73.50
Speakers fee	-50.00
4 Memberships	+ 90.00
Balance as of July 19, 2007	8523.73



For Sale

Shaper Work CD

Put out in 1944 by the New York State education Department this 326 page manual is chock full of valuable tips and information on using the King of Machine tools....The Shaper. Covered is everything you need to know about the care and feeding of the shaper, use of the shaper, even how to sharpen tools for the shaper. Scanned and saved in Adobe Acrobat format. The CD now has a lot more info on it, and the price has increased accordingly. \$10.00, shipping included.

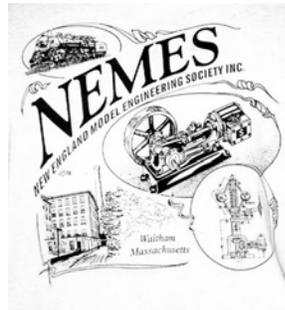
Errol Groff
180 Middle Road
Preston, CT 06365 8206
errol.groff@snet.net

NEMES Shop Apron



Look your best in the shop! The NEMES shop apron keeps clothes clean while holding essential measuring tools in the front pockets. The custom strap design keeps weight off your neck and easily ties at the side. The apron is washable blue denim with an embroidered NEMES logo on top pocket.

Contact Rollie Gaucher 508-885-2277

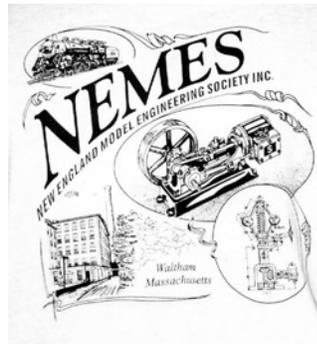


NEMES clothing

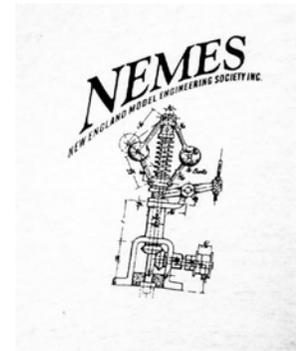
NEMES Tee Shirts

NEMES tee shirts and sweat shirts are available in sizes from S to XXXL. The tee shirts are gray, short sleeve shirt, Hanes 50-50. You won't shrink this shirt! The sweat shirts are the same color, but long sleeve and a crew neck. Also 50-50, but these are by Lee. The sweat shirts are very comfortable!

Artwork by Richard Sabol, printed on front and back:



Rear



Front

Prices:

	Tee Shirts	Sweat Shirts
S - L	\$12.00	\$22.00
XXL	\$14.00	\$24.00
XXXL	\$15.00	\$25.00

Add \$5 shipping and handling for the first tee shirt, \$1 for each additional shirt shipped to the same address. Sweat shirts are \$7 for shipping the first, and \$1.50 for each additional sweat shirt.

Profits go to the club treasury.

Mike Boucher
10 May's Field Rd
Lunenburg, MA 01462-1263
mdbouch@hotmail.com



**MARK
THIS
DATE**

Upcoming Events

Bill Brackett

To add an event, please send a brief description, time, place and a contact person to call for further information to Bill Brackett at thebracketts@verizon.net or (508) 393-6290.

Bill

Aug 2nd Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA
781-893-5410
<http://www.neme-s.org>

Aug 5-6 Scribner's Mill Show
Sebago Lake Region near Harrison ME
207-583-6455

Aug 11-12th Straw Hollow Engine Show
Boylston, MA
J. A. Resseguie 508-869-2089

Aug 18th 30th Annual New England Auto Auction
Owls Head Transportation Museum Owls ME
<http://www.ohtm.org/>

Aug 19th 9:00am The Flea at MIT
Albany Street Garage at the corner of Albany
and Main Streets in Cambridge
<http://web.mit.edu/w1mx/www/swapfest.shtml>

Aug 24th- 26th 37th Annual Meet
Wauhakum Live Steamers
Holliston MA
<http://www.steamingpriest.com/wls/>

Aug 26th Vintage Motorcycle Meet & Antique
Aeroplane Show
Owls Head Transportation Museum Owls ME
<http://www.ohtm.org/>

Sept 6th Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA
781-893-5410

Sept 15-17 Lee's Mills Steamboat meet
Lake Winnepesaukee Moultonboro NH
603-476-5617

Sept 8-9 Dublin Show
RT 101, Dublin, NH 603-863-4696

Sept 9th Pickup Truck Meet & Antique Aeroplane
Show
Owls Head Transportation Museum Owls ME

Sept 14-16th Pioneer Valley Live Steamers Fall Meet
Southwick Ma
www.pioneervalleylivesteamers.org

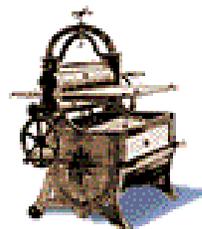
Sept 16th 9:00am The Flea at MIT
Albany Street Garage at the corner of Albany and
Main Streets in Cambridge
<http://web.mit.edu/w1mx/www/swapfest.shtml>

Sept 23rd Earth Movers & Shakers & Antique
Aeroplane Show
Owls Head Transportation Museum Owls ME

Sept 29-30th Connecticut Antique Machinery
Museum Fall Festival
Kent Ct. John Pawlowski President
P.O. Box 1467, New Milford, CT 06776

Sept 29th 9:00-4:00
The Original Yankee Steam-Up
New England Wireless and Steam Museum, Inc.
1300 Frenchtown Road East Greenwich, RI
<http://users.ids.net/~newsml/>

Sept 30th 12:00-5:00
Roland's Shop visit
90 S. Spencer Rd. Spencer Ma.
508-887-2277



NEMES Gazette Editorial Schedule

Issue	closing date for contributions
September '07	August 24, 2007
October '07	September 21, 2007
November '07	October 19, 2007
December '07	November 23, 2007