

# The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

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## Editor's Desk

Mike Boucher

Hi folks,

It seems like it wasn't that long ago when I announced my retirement from being editor of the Gazette, and now the May issue is here. As previously announce, May my the last issue.

I would love to be able to introduce the next editor, but that person is still yet to step forward and volunteer. So, unless someone decides to step forward and take on the mantle of editor, this will not only by my last Gazette, but the last Gazette period.

I know I don't want to see the Gazette disappear, and I hope most of the membership agrees with me (otherwise all the time put in on it by myself and several other people is for naught). At this point, the demise of the Gazette seems more likely than not.

If someone out there is willing, please contact me ASAP. Don't assume someone else will do it. Personal

Continued on Page 2

## Next Meeting

Thursday, May 6, 2004

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

## Membership Info

Annual dues of \$25 (via check made payable to "NEMES" and mailed to our treasurer) for the calendar year are due by December 31<sup>st</sup> of the prior year.

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

Addresses are in the left column.

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experience with volunteer organizations has taught me that most people are more than willing to let someone else volunteer...

Being editor has been a rewarding experience. I've gotten to know more people in the club. I've gotten better at using MS Word. I've learned a lot from reading the articles, and I read them much closer than I did when I was just reading and not editing. I've gotten "first dibs" at one For Sale ad!

I hope that I've made the Gazette, and through it, the club, better than it was when I started, and I hope that the membership has gotten something out of it.

While I'm not going to be editor, I'm sure I'll occasionally write an article or two, and take photos for publication. Hopefully there will be future issue for me to submit them to.

C'ya  
Mike



## ***President's Corner***

Norm Jones

### ***The Meeting***

Our speaker for the May meeting will be John McNamara of the Wiscasset, Waterville & Farmington Railway Museum. John's talk will describe their effort to rebuild this historic Maine 2-foot gauge railway. A brief video will be shown, along with photos of the running gear rebuild being done on their 12-ton steam locomotive, which was built by Vulcan Iron Works in 1904.

### ***May Meeting Location***

On May 6<sup>th</sup>, we will meet in the Appleton Room instead of the Jackson Room. We have met in the Appleton Room in the past. You can enter the Appleton Room through an entrance which is next to the walkway, adjacent to the river. You can see the entrance just after crossing over the footbridge from the parking lot. The number "190" is above the door.

### ***Painting Dilemma***

A few weeks ago I decided to rehabilitate a "park bench" that resides in my backyard during the summer months. The task included disassembly and sanding of the eight pieces of wood that make up the seat and back of the bench. I thought that I had followed the recommended preparation outlined on the can of "Rustoleum America Accents", using the specified primer followed by two coats of finish. The primer was an oil-based primer in a spray can. The paint was latex, brushed on. It looked great until I put the bench outside, after which it rained for an extended period of time. Much to my dismay, the paint peeled off, both between the wood and primer as well as between the finish and primer, leaving me with a bench that looked worse than when I began the project.

I called an applications engineer at Rustoleum to ask what went wrong and was told that I should have used their "latex primer". There was no mention of latex primer on the can. They offered to replace the paint. I declined the offer since the easiest solution is to discard the wood altogether and not to use that type of finish in the future. I told them that in the future, I will stick to the regular Rustoleum products. I never liked latex paint in the first place!

### ***Open Doors Lowell National Historical Park***

The Lowell National Historical Park will be sponsoring their annual "Open Doors" event on May 7 and 8. At this time they have various building open to the public that are not normally accessible. Check out their web site to see what might interest you: <http://www.nps.gov/lowe/>

Some of the ones that I might check out are:

- #4 Streetcar Museum, 25 Shatuck St. Friday, May 7, from 6:00 to 9:00.
- #23 Feeder Gatehouse, Moody St. Saturday, May 8, from 1:00 to 4:00.
- #29 Pawtucket Gatehouse @ Northern Canal, School St. Saturday May 8, from 9:00 to 12:00.

See you on May 6th

Norm



## ***The Meeting***

Steve Peters

The meeting started with the usual recognition of first timers. This meeting we had two. Welcome! This was also the 9<sup>th</sup> anniversary meeting of NEMES. It is hard to believe NEMES is 9 years old, and stronger than ever.

Other announcements included:

- The May meeting will be held in the Appleton room.
- Trinity Collage held its annual robotic fire fighting contest – Apr 16<sup>th</sup>.
- Plans are being made to inventory the library.
- No more information on the proposed NEMES shop apron order.
- No new news on NEMES tax filing status.

The main speaker, John Nowak, took us through a history of cutting granite, starting back in time when granite was first being formed. Granite starts as lava. As lava cools, crystals start to grow. If the cooling is fast, the result is fine grained granite. Over time, the granite is pushed up toward the surface. During the last ice age, the granite was uncovered by glaciers.

Man first used the natural rubble left when the glaciers melted. The rubble was collected and used to build churches. Later, man learned to use fire and water to heat up the boulders and shatter them. The resulting rubble was used as a building material like the natural rubble. After 1764, gun powder was to create rubble.

In 1803, the first split sheets of granite were used. The granite was split using metal chisels and wedges. Several industries supported the creation of granite sheets. Blacksmiths created the tools, wagons were needed to transport the granite, and builders started using granite in many different ways. Later, the railroad and ships were

used to transport the granite. Quincy Massachusetts became a center for the production of granite. The fishing industry used it for docks and moorings. These mooring stones can be found today.

Just before World War II, granite was used for manhole covers, curbing, and paving roads. After WWII, concrete became a cheaper alternative to granite, and replaced it in many of its uses. Today's technology allows granite to be shaped and polished.

The presentation was followed by questions and answers. Most of the questions were about the current technology used to cut and polish granite.

Steve



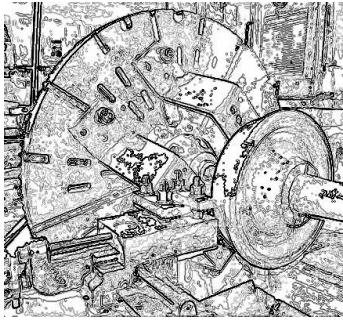
## ***Treasurer's Report***

Rob McDougall

As of 3/31/04

Balance as of: 2/29/2004	<b>\$7,436.65</b>
Dues Received for 2004	250.00
Contribution from NEMES Show refreshments stand	440.00
Contribution from Sweat Shirt sales	220.00
Interest Income	.67
Gazette Production Expense	-180.90
Cabin Fever refund	-44.55
Guest Speaker Fee	-50.00
Balance as of: 3/31/2004	<b>\$8,071.87</b>

Rob



## ***Shop Hints***

Compiled by  
Mike Boucher

### ***Handy Handle***

By Fred Jaggi

A friend of mine, Colin Leath, made some handy handles for his C clamps. Just drill a hole in a modern golf ball and epoxy it to the handle.



Fred

### ***Left Hand Drills***

By Fred Jaggi

My B&A 4-6-6T ¾" scale locomotive has oil holes in the axles, so that the needle bearings can be lubricated. For neatness, I sealed the holes with 6BA flat-head socket cap screws, which use a tiny hex key. This winter, I wanted to oil the bearings; but the hex socket in the screw stripped and I couldn't remove the screws.

After a lot of thought, I ordered a left hand drill bit from McMaster Carr <http://www.mcmaster.com> I placed the drill bit in a battery operated drill, set the drill to reverse, and the screws popped right out.

My machinist friends tell me left hand drill bits work much better than easy-outs for removing frozen screws. They even can be made by regrinding a conventional drill, although with some difficulty.

I noticed a whole set for 15 dollars or so in a Harbor Freight flier. They're probably not very good, but should be good enough for removing stuck screws.

Fred

### ***Silver Brazing***

By Bob Beecroft

I got a very nice note from Mario L. Vitale, Art Volz' engineering partner,:

"Art shared the photos of your tool holder with me. Beautiful job! How did you get such a nice neat fillet of braze at the joint. Did you use 'stop off', or sheet stock braze alloy to control the amount of braze alloy? Again, well done!"

*[Editors note: I'm pretty certain the above mentioned photos of the toolholder have been published, but I can't find them on my disk. As an example of Bob's brazing work, here's a photo of a brass "button" on the end of a screw.]*



Well, an appropriate answer to Mario's nice compliment would be: Thank you, no, no, and thank you again.

Sometimes, despite the old saw about you can't learn anything when you're talking, I can, and do sometimes learn something. Here, I learned about some changes in the industry supplying brazing supplies, met some nice folks on the phone, and got the new and straight scoop on these products.

The perhaps less appropriate and certainly longer answer written previous to the paragraph above is as follows:

Actually, one side has a larger fillet than the other and a small pinhole. That shows that I haven't silver-brazed in a while. There's no file work here, though 'good enough' sometimes is, something that I've still not learned well enough! I didn't use stop-off or sheet. The key is close but not tight fit; a couple of thousandths clearance. I then dipped the end of the shank into the slightly thinned paste flux, fit the parts together, heat to temperature, and let-in the silver.

For a time I built custom road and track racing bicycles. I brass-brazed some lug-jointed ones in the common tradition (lugs being the specialized 'sockets' used to join the tubes). I fillet-brazed some, using large smooth fillets at the joints, with no lugs, another fairly common traditional method. Old-time Schwinn heavy-weight bikes had the fillet brazed look, but were actually made from heavy gage, rolled and welded steel with flared ends to simulate the fillet brazed look. They were resistance welded, I believe, and roughly cleaned up with a pretty coarse wheel. On the other end of the spectrum, the Schwinn Paramount was state-of-the-art.

Finally, I became addicted to silver-brazing, at least for the lugged frames. Having spent hours, and sometimes even days, filing fancy curves and what-not into lugs, I wanted to join them using less heat than that required with brass alloys. The silver flows easily (absolute cleanliness being key here) and comes to a fine line at the joint. With practice, that edge can be left with just a tiny fillet, and little or no post-braze filing is required at the joints. All that's required is a wash in hot water to remove any flux left, then a light abrasive blast cleaning to remove any further traces of flux and also to give some 'tooth' for the primer. Given that, it's ready for the many hours of painstaking paint and detailing work that comes next with a real custom bicycle.

After some research and some experience with several other brands and alloys, I settled on Engelhard's 'Silvaloy' alloy #355 (now known as A56T, see note 1), and Engelhard's UltraFlux white paste compound (note 2).

For spectacular fillet-brazed joints, I found Eutectic's Xuperbraze 16 XFC (note 3) fluxed alloy to be just wonderful. It requires 1400-1600° F, a bit less than common brass alloys; just dull-red heat. I used to be able to make such nice joints in fillet-brazed work that I really didn't want

to file them smooth. That smoothed over, filed joint was what was expected, so that's what I did. Today, we commonly see production MIG-welded, blasted and Bondo-filled joints that have the appearance of high-end or custom work on factory-built, low-end off-road bicycles.

Nowadays it's much more common to see aluminum frames. Carbon fiber is everywhere, too. The very best of the high-end, fillet-jointed, factory work on steel or aluminum is now very nicely TIG welded. Good ones have the joints left in the as-welded state. I've seen some very fine work. Maybe the public at large has come to appreciate the fine ripple of well-done, hand welded work, whether in steel, aluminum, and less commonly, titanium. I'm sure a good welder can do great work just as quickly as a poor welder, and ultimately, the good welder's work saves them money, having no post welding 'fillet' added, along with the additional post cure sanding, shaping and finishing.

Bob Beecroft

Fallbrook, CA

<http://www.theaerosmith.com>

Notes:

Engelhard sold off the brazing portion of their business to Wolverine Joining Technologies, Inc. They can be found at:

<http://www.wlv.com/joining/Default.htm>

I've included other references to Bellman-Melcor, Incorporated. On the telephone, they were very helpful with information about the change in stock numbers, even though I wasn't placing an order. They might be a great place to do business. Your local welding supplier can order any of these if they don't stock them.

1) Engelhard's Silvaloy 355, now known as A56T:

[http://www.bellmanmelcor.com/silvaloy\\_A56T.htm](http://www.bellmanmelcor.com/silvaloy_A56T.htm)

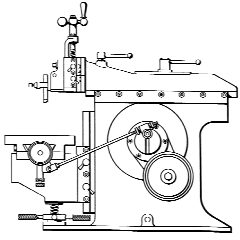
2) Engelhard's UltraFlux:

[http://www.bellmanmelcor.com/docs/MSDS-White\\_Flux.pdf](http://www.bellmanmelcor.com/docs/MSDS-White_Flux.pdf)

3) Eutectic 16XFC:

[http://www.castolin.com/products/brazing\\_en.html](http://www.castolin.com/products/brazing_en.html)

*Bob*



## *Shaper Column*

Kay Fisher

### *Lewis Shaper and Vise Quest*

Art Volz, in Houston Texas, has been collecting unique shaper things for some time. This is his story of acquiring a rare shaper and matching vise.

"In October 1999, my neighbors across the street went on vacation to Rome. They asked me to pick up and dispose of their daily Houston Chronicle newspaper. I agreed. I don't normally read the Chronicle. Every now and then, though, I'll buy a Friday morning edition and scan the classified ads for "machinery". The first Friday that they were gone, I picked up their paper and instead of immediately tossing it into the trash, I looked under "machinery".

Eureka!! A 10-inch metal shaper was being offered at \$240, along with a huge odd-ball vertical mill. I called. The seller said that another guy was coming from the other side of Houston to buy it at noon. I said that I would call him at one o'clock to see what had transpired. At one, I called again. The other guy hadn't arrived yet, but had called and said he would be late.

I asked the seller whether he still had the mill, to which he replied that he did, and I then arranged to see it at 3 PM. When I arrived, the supposed buyer of the shaper hadn't arrived yet and hadn't called again. I looked over the mill. It was a gargantuan (HEAVY) obscure vertical of the WWII era. I decided that it would be best if it were melted down to make iron for new machines.

I turned my attention to the shaper sitting on an angle iron stand in the rear of the garage shop. I couldn't believe my eyes: It was a Lewis.

It looked to be one of those kits that had been purchased by a vocational school, machined and assembled by the students, and then retained in the school shop. I quickly convinced the seller, a retired South African engineer, that my \$240 in his hand was better than the money from the other guy who still hadn't arrived. As we talked--and I disassembled the Lewis into easily handled

segments transportable in the rear of my van (a Quest, what else?) the seller asked "Did I give you the tool holder yet?" Out of the goodness of his heart, he then gave me an original Atlas adjustable tool holder. I exclaimed (this was during my pre-internet days): "These can't be found anywhere! Thanks!" I asked him about the shaper's vise. He said that the vise had already disappeared when he got the shaper.



Lewis 10" Shaper

photo by Art Volz

Time passed. In the spring of 2000, I finally got on the internet. One of my first finds was the Chaski metalworking group:

<http://www.chaski.com/wwwboard/index.html>

In March, a member from Detroit, Ron B., advertised a Logan/Montgomery Ward 10 x 24 lathe for sale at a reasonable price. I struck immediately, sent a down payment, and agreed to pick it up the weekend before NAMES 2000 in Detroit, as I would be both visiting family in Lansing and attending NAMES. I love that lathe! And I really needed one since my circa 1890 motorized velocipede Barnes 4-1/2 had lost its Babbitt spindle bearings in a fire in my shop fire 5 years ago.

While at NAMES 2000 and 2001, I searched every vendors' table. No one had a Lewis vise or knew of one being offered for sale. I kept my nose to the ground and my gum-shoes moving. I scoured the internet for leads and religiously scanned eBay offerings on a daily basis. Nothing. I did find a Lewis horizontal milling machine vise on eBay along with a Lewis mill.

The mill vise is exactly one-half the scale of the shaper vise, with 3½ inch wide jaws compared to 7-inch wide jaws. But the seller wouldn't sell that

vice separately. (I still NEED a Lewis 3½ inch vice for my Lewis mill - the one Burton built.)

While at NAMES 2001, I spoke with Rich C. (the "Green Bay Steamer") at his table with the Chicago Model Club. I had a notebook, with pictures of the Lewis shaper, open on the table. A voice to my right exclaimed "I built one of those - back in the 40's." The 80-ish year old gent told me how he had machined a Lewis shaper from a kit of parts and that his son now had it. I asked him if he still had the blueprints for the vice. He did! Several months later he sent me dimensioned drawings of the Lewis vice.

That winter, still not getting any leads on an actual Lewis vice, I made a mock-up/working-model of the Lewis vice from the prints. I modified some of the parameters for simplification and ease of machining with the intent of making a set of patterns and having raw castings made in ductile iron.



Model Lewis Vice (Top) photo by Art Volz

However, I couldn't find a local foundry that would do quality one-offs at a reasonable price. I did send my model to both Marty E. (Phoenix) and Rich C. (Green Bay) for review and comment, but never went back and made the patterns. I just kept looking...and looking...and looking.

I was unable to attend NAMES 2002, although I was in the Lansing area, but corresponded with Mario V. (St. Lewis/Detroit) who would be there. I got Mario to attend the "reception" that Scott always has on the Friday evening before NAMES, where he met and had suds with Peter V. (Sudbury). When Joe Mama finally acquired a Lewis shaper in October 2002, he posted a set of pictures of it at our site. An original Lewis shaper

vice came with Joe's shaper. At the time, I remarked that if Joe didn't want the vice, I'd immediately buy it from him, but he refused. A few days later I received email from Peter V. with a set of three pictures of a vice he had seen at NAMES that year.



Lewis Vice photo by Art Volz

He didn't know it was a Lewis vice when he took the pictures, but knew that it was a shaper vice. He considered buying it at the time, but was unsure whether it would fit his Alba. Seeing Joe's vice and now knowing that I was looking for a Lewis vice for my shaper, Pete sent me email saying that he had seen the pictured vice at NAMES and that it had been offered for sale by Ron B from Detroit. Pete offered to contact him if I wanted the vice.

Small world! Ron B sold me my Logan lathe. I told Pete that I knew Ron and would try to get in touch with him. His old email addresses bounced so I wrote Ron a letter. The post office returned it to me as he had moved, but the USPS had, fortuitously for me, printed his NEW address on the yellow return label.

Time passed. Other projects/activities demanded my attention. At Thanksgiving, Mario remarked that he had missed a Lewis vice at one time. Mario has a Lewis shaper too. I responded that he had missed TWO Lewis vises. I told him of the one that he didn't "see" at NAMES. To make a long story a bit shorter, Mario offered to deal with Ron B. for me and was able to purchase that Lewis vice. I had him take it home to "try out" on his Lewis. I received that vice yesterday from Mario.



Lewis Vise (Top)

photo by Art Volz



Lewis Vise (Bottom)

photo by Art Volz

It is now sitting on my kitchen table next to my painted model. They're kissing twins.

Interestingly, there is a round-cornered rectangular lozenge-shaped boss on top of the rear jaw. It is stamped "D MAGILL". In the old days, machine shop students often made useful tools, which they took with them and used throughout their lives. I still have a 1"- 2" micrometer that I machined in 1960 while taking the required machine shop course in engineering at Notre Dame. It is one of my prized possessions.

In 1942, a set of Lewis shaper vise castings and prints were only \$4.75, with quoted freight per CWT to Detroit at \$3.21. The vise kit's shipping weight at 40 lbs would cost about \$1.30 for a total student cost of about \$6.10. Not cheap for 1942, but affordable and a super student project. The vise that D. Magill made is virtually a virgin - only one "trial" errant "learning" cut can be seen on the

top of the jaws. Magill apparently ran out of time, as the jaw plates are still in the process of final machining. I wonder where this vise had been for the first 60 years of its life.

The vise that Mario sent to me has jaws 7-inches wide and a depth of 1½ inches. The jaws open 4¼ inches and the vise stands 4½ inches tall. The most amazing spec, however, is its weight: only 27 lbs as weighed on my bathroom scale. I had expected it to weigh close to 40 lbs as my copy of the 1942 Lewis catalog listed the shipping weight of the vise kit at 40 lbs. 27 Lbs is sweet! The 6-inch shaper-style vise that I received last week (via eBay, the Chicago made vise from J.E. Plunket who also made small IC farm duty engines around 1909) weighed 41 lbs. Compare this light weight Lewis vise to a typical Kurt clone 6-inch milling machine vise at about 100 lbs. Generally speaking, shaper style vises are quite a bit lighter than the same jaw size milling machine vises.

So there you have it: a story of a quest completed and a quest continuing. Does anyone know of a Lewis 3½ inch milling machine vise for sale? It looks exactly like the pictures of my Lewis shaper vise at our site (photos from Pete V.) (See the Lewis Vise Album)

Thanks to all!, especially Mario, Pete, Ron, Rich and Marty!

Elated in Houston North on a cold winter day...

*Art*

Thanks Art for that wonderful acquisition story. Keep sending me letters and email with questions and interesting shaper stories.

My mailing address is:

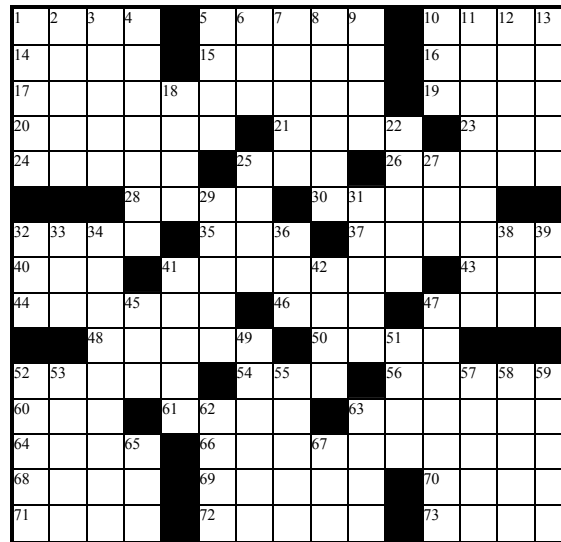
Kay R. Fisher  
101 N. 38<sup>th</sup> St. #129  
Mesa, AZ 85205

My e-mail address is:

[KayFisher@att.net](mailto:KayFisher@att.net)

*Kay*





**Across:**

1. Women or girls
5. Incline
10. Poisonous snakes
14. Nomadic person from Northern Scandinavia
15. Lubricating device
16. Rotation
17. Color of an indicating material used for 66 across: Pr\_\_\_\_\_
19. Prefix meaning one thousand
20. Words can never hurt you, but these can
21. What you can get for a five and a five
23. Word in the Postal Creed
24. One who makes devious plots: Sc\_\_\_\_\_
25. One way to wire a three-phase motor; the other way is "delta"
26. Highly esteemed
28. Dorothy's dog
30. Poe's black bird
32. Clumsy people
35. NEMES first president, to his friends
37. Given title to by way of a formal document
40. Longer wavelength invisible burning rays from the sun (abbrev.)
41. A device for measuring or transferring a dimension
43. A rock band from the 1970s, more often known by this abbreviation than their full name
44. Get back your losses
46. Little or young dog
47. One direction of motion
48. Go in

50. A specification or parameter (abbrev.)
52. Type of Native American home
54. Copies of the first part of the Christian bible (abbrev.)
56. Mixes or agitates
60. Everything or a brand of laundry detergent
61. Pace
63. A supernatural being, or an internal energy source
64. Food for a carnivore
66. Method for restoring worn machinery
68. Ratios or fractions (abbrev.)
69. Put up, as a skyscraper or barn
70. An urban district in Buckinghamshire, England known for its large public school
71. Put one foot in front of the other
72. Tales of the supernatural
73. Dispatched

**Down:**

1. Type of fund
2. Source of waste
3. Soothing salt
4. Upright harpsichords or pianos
5. Male offspring
6. Freedom (abbrev.)
7. Reduce (as in fear or pain)
8. Castrate or spay
9. Source of lumber
10. Inquire
11. Fixture for rotating in precise amounts
12. One who flies an airplane
13. Make noise while asleep

18. Prefix meaning air
22. When pigs will fly
25. A warm natural fiber
27. A civil war general
29. To walk or run about in an idle or slatternly manner [Obsolete]
31. Skilled at a task
32. Belonging to us
33. In the middle of the distribution (abbrev.)
34. A work-holding device for a lathe
36. A tiny, light bite
38. Nickname for a student from Yale
39. A computer operating system popular in the 1980s
41. More adorable
42. A derogatory term for a face
45. First in a count
47. Supplies with clothing
49. Type of motion that's not linear
51. An organization that defends wildlife from abuse (abbrev.): \_\_\_\_\_A
52. Packs down
53. Put into office by voting
55. A belief or doctrine
57. Really mad
58. A city in Wisconsin with a college by the same name
59. Medical device for holding open a blood vessel or orifice
62. Sound used to get attention
63. Airplanes that can fly faster than 775 miles per hour (abbrev.)
65. A small measure, commonly found in recipes (abbrev.)
67. Dedicated Channel (abbrev.)

*Answers will be in next month's Gazette.*



## For Sale

### 3 Phase Converter

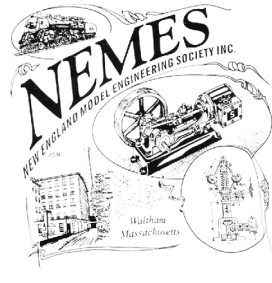
Home-made rotary 3-phase converter available. Used for many years to run a 1-1/2 horse Bridgeport, with no problems at all. Nice to be able to tap a hole and just slam from fwd to reverse and actually do it! This contraption consists of a 5 or 7 (I can't recall) horse, 3-phase motor, with a little single-phase one on top to run it up to speed. Then you flip the belt off with your fingers, then power-up the big machine. Switches and boxes are included, all on a wood frame base. It's heavy - not gonna go in the trunk of a 2-door. I'd like to get \$50 for it.

Steve Earle  
24 Palmer Rd.  
Plympton, MA 02367  
(781) 585-6504  
[ssmugwump@earthlink.net](mailto:ssmugwump@earthlink.net)

### 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. \$5.00 shipping included.

Errol Groff  
180 Middle Road  
Preston, CT 06365 8206  
[errol.groff@snet.net](mailto:errol.groff@snet.net)

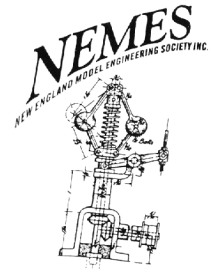
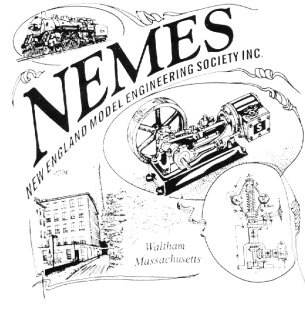


## NEMES clothing

### 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  
[mbouch@hotmail.com](mailto:mbouch@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 [wbracket@rcn.com](mailto:wbracket@rcn.com) or (508) 393-6290.

### **May 2 - NHPOTP engine show**

RT 113, Dunstable, MA  
Robt Wilkie (207) 748-1092

### **May 6 - NEMES Monthly club meeting**

7PM - Charles River Museum of Industry,  
Waltham, MA (781) 893-5410

### **May 16 - MIT Flea Market**

9AM-2PM. Albany Street Garage, corner of  
Albany and Main Streets in Cambridge, MA  
<http://web.mit.edu/w1mx/www/swapfest.html>

### **May 22 - Jim Paquette's open house**

114 High St. Uxbridge MA. 9:00 AM – 2:00 PM.  
(508) 278-2203

### **May 23 - Waushakum Steam-Up meet**

Holliston, MA. John Mentzer (508) 359-8794  
<http://Steamingpriest.com/wls>

### **May 25-27 - EASTEC Exposition**

Eastern States Exposition Grounds  
<http://www.sme.org/eastec>

### **May 29-30 - Gas Engine Show and Flea Market**

Rt 10 between 93 and 142. Bernardston, MA  
Vickie Ovitt (413) 648-5215

### **May 30 to Oct 31 10:00-5:00**

American Precision Museum  
196 Main Street, Windsor, Vermont  
<http://www.americanprecision.org>

### **May 30 - Fiddleheads, 4x4's, Emergency Vehicles & Antique Aeroplane Show**

Owls Head Transportation Museum, Owls Head,  
ME. <http://www.ohtm.org/>

### **June 3 - NEMES Monthly club meeting**

7PM - Charles River Museum of Industry,  
Waltham, MA (781) 893-5410

### **June 5-6 - Cranberry Flywheelers show and swap**

Plymouth Airport. Plymouth, MA  
Dave Moore (508) 697-5445

### **June 5-6 - GSG&SEA show @ Dave Dearborn's**

Rt 3, West Campton, NH. (603) 726-3257

### **June 13 - Hot Rods, Customs, Stock Cars & Antique Aeroplane Show**

Owls Head Transportation Museum. Owls Head,  
ME. <http://www.ohtm.org/>

### **June 12-13 - Green Mountain Flywheelers Engine Show**

Rte. 119, Hinsdale NH,  
Doug Wood (802) 254-6758

### **June 12-13 - MAPA show at fairgrounds**

Skowhegan, ME, Joe Kelly (207) 862-2074

### **June 20 - MIT Flea Market**

9AM-2PM. Albany Street Garage, corner of  
Albany and Main Streets in Cambridge, MA  
<http://web.mit.edu/w1mx/www/swapfest.html>

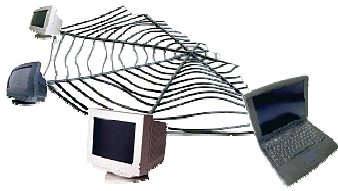
### **June 26-27 - Central Mass gas and steam show**

Orange MA, Dave Songer (978) 544-5295

### **June 26 - International Motorcycle Show & Auction**

Owls Head Transportation Museum, Owls Head,  
ME. <http://www.ohtm.org/>

Bill



## ***Web Sites of Interest***

### ***Telescope Making Automata***

Dick Koolish made an animated figure of an amateur telescope maker grinding a mirror, which he showed at the April meeting. He took a series of photos and made an animated GIF of it.

<http://wits2020.net/~rmk/automata/>

## ***Shop Photos***

By Mike Boucher

You've all heard me talk (endlessly?) about my trials and tribulations in setting up the "new" shop.

Since it's my last Gazette, here are a couple photos of what the shop looked like as of about 3 weeks ago.

In the top photo, you'll see my Aamco 7" shaper (on an Aamco supplied cabinet!), my Rockwell mill, the bed for a Rivett lathe (on the floor), and a South Bend heavy 10 lathe (circa 1980's)

The bottom shows the infamous dividing wall, with the shiplap siding. You'll see my drill press, workbench (already nicely cluttered!) and a granite surface plate on a homemade stand.

Maybe some of you can visit sometime!

Signing off...

*Mike*

### ***Surplus Center***

Dave Robie sent along this commercial site. They sell all sorts of surplus items, including motors, power transmissions, electrical, hydraulic, air cylinders, etc. Most of the stuff is new.

Surplus center  
1015 West 'O' St  
Lincoln NE 68528.

<http://www.surpluscenter.com/>

### ***Granite History***

Dick Koolish sent me a link about the history of Granite.

<http://ci.quincy.ma.us/tcpl/legacy/history/history.htm>

