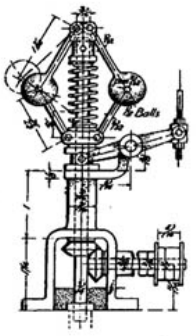

The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

No. 165 Jan. 2010

Gazette Staff

Editor	Frank Hills
Publisher	Bob Neidorff
Events Editor	Bill Brackett
Meeting Notes	Todd Cahill

NEMES officers

President	Dick Boucher
Vice Pres.	Frank Dorion
Treasurer	Richard Koolish
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Director	Mike Boucher

NEMES web site

http://www.neme-s.org

Contact Addresses

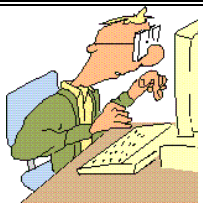
Frank Hills, Editor
464 Old Billerica Rd.
Bedford, Ma. 01730
hills@aerodyne.com

Dick Boucher, President
130 West Main St
Georgetown, MA 01833
rlucienb@juno.com

Richard Koolish, Treasurer
212 Park Ave.
Arlington, MA 02476-5941
koolish@alum.mit.edu

Bob Neidorff, Publisher
39 Stowell Road
Bedford, NH 03110
Neidorff@ti.com

Bill Brackett, Event Editor
29 East Main St
Northborough MA 01532
thebracketts@verizon.net



Editor's Desk

Frank Hills

My Watch is Smaller…

When I was seventeen I worked for The Museum of Our National Heritage in Lexington MA. It was an atrociously boring job, but it did have its perks. I had the chance to see long forgotten collections that few in the general public ever saw. One day my boss took me to a huge vault. Inside, among many other things, was a collection of watches. There was a jewel decorated gold one, and right next to it, an early Timex. There were huge pocket watches that rivaled many a Grandfather clock for their lunar and date displays and one of the first self winding watches ever made. I think it was from the mid 1800s. But only one watch really wowed me. This pocket watch was the size and thickness of a quarter. It had all three hands and a date display. It was simple and beautiful. It was built in the early 1700s. Sorry, I can't remember the exact date. Many years later I saw a Nova special on TV. It was about ocean navigation, but more specifically, about the solution of the longitude problem. The solution was a carefully constructed pocket watch.

–Continued on page 2

Next Meeting

Thursday, Jan. 7, 2010

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

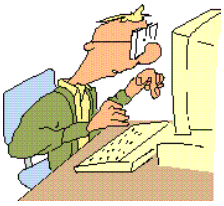
Membership Info

New members welcome! Annual dues are $25 (mail applications and/or dues checks, made payable to "NEMES", to our Treasurer Richard Koolish, see right) Annual dues are for the calendar year and are due by December 31st of the prior year (or with application).

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

Addresses are in the left column.

Contents



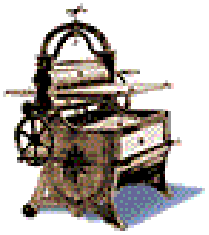
Editor's Desk

-continued from page 1

In navigation, you need two coordinates to locate yourself. One is latitude, the number of degrees north or south of the equator you are. Simple observation of the stars and sun had taught navigators how to measure this. But longitude was a problem. It was possible to take this measure from the stars, but it was complex and very time consuming. Something much simpler was required to be practical. And it was simple. If you know what time it was when you started your journey, and you can see the sun or stars to see what time it is where you are, you know who many hours east or west of your starting point you are. There are only twenty four hours in a day. Even hundreds of years ago it was easy to measure to within minutes where you were. The problem was building a clock that wouldn't suffer from a ship's motion. Up to this point, the most accurate clocks were large. Adjustment of a pendulum and solar observation would do the trick. But the larger the mechanism, the more it was effected by motion. Ultimately the solution to the longitude problem was a well built watch, carefully mounted in a gimbaled and spring-suspended case. They showed a recreation of one of these 16th century watches, better known as chronometers, on the program. It reminded me of the early guidance systems used in rockets. How appropriate. Its only job was to show the time where the ship had started.

A recent conversation with a friend about this TV show reminded me of that collection I saw so long ago in the museum. I wondered, was it the development of the chronometer that inspired the pocket watch industry? Not really. Personal clocks had been around since the 1400s. They were large and cumbersome things hung around the neck or from your clothes because they were too big for your pocket. They were more of a status symbol than a utilitarian device. They had to be continually reset to the time shown on much larger, more accurate time pieces to remain correct. The real connection between the chronometer and the "modern" 16th century pocket watch came with improvements in manufacturing techniques that made them accurate over long periods. Glass, and later, jewel bearings, better quality materials, better tools, all contributed to a finer mechanism. More importantly, it wasn't just clocks that benefited. A quick look through history will show that 1600-1700 was a time of great technological growth. This growth was to foreshadow, or should I say enable, the industrial revolution.

Next month, "Jump Off the Bridge, or Extend It?"



NEMES Gazette Editorial Schedule

Issue	closing date for contributions
Feb. '10	Jan. 25, 2010
Mar. '10	Feb. 22, 2010
April '10	Mar. 22, 2010

Dues Are…Due?

Yes folks, it's that time of year again! NEMES dues for 2010 are $25.00 Please send a check made out to NEMES to:

Richard Koolish
212 Park Ave.
Arlington MA 02476

Please print neatly and in English! Mr. Koolish is an intelligent man, but he doesn't read Sanskrit!

Name _____

Street _____

State _____ ZIP _____

Phone _____

Email _____

President's Corner

Dick Boucher

The Meeting

It is with regret that I have to inform the membership that our member Ray Hasbrouck passed away on December 26, 2009. Ray was a prolific designer and builder of small to medium size steam engines and his contributions to the hobby will be sorely missed.

The meeting this month is our traditional bi-annual poster meeting. This is an informal meeting with a chance to just talk to fellow members and look at their finished projects or works-in-progress. I particularly like this meeting as it gives me a chance to talk with members about their projects.

The Cabin Fever Show bus is definitely on again this year. There is still time sign up for the bus as there are still some seats left.

Miscellaneous Ramblings

The barn project was finished in 12-degree weather. The building is now closed in with the new floor and walls. I have just a bit of trim work to complete next spring. With the finishing of the project I have discovered I have a lot more driveway to clear snow from now that the pile of lumber used in the repairs is gone.

With that project completed, I am finally hunkering down in the shop for the winter. The first order of business is to give the place a good cleaning. It is amazing how much clutter has found its way in during the inactive months.

The Frodo locomotive building project is progressing very nicely. The participants are all still showing up every Monday evening with the exception of the younger fellows who still have school commitments, but they are here whenever studies are running light.

With the passing of Ray Hasbrouck I would like to suggest that we have an area of our February show dedicated to Ray and all engines built or in progress by show attendees that were designed by Ray be displayed in that area. We can talk about this at the January and February meetings.

Dick B.

Francis HasBrouck
Mar 2 1921 - Dec 26 2009

NEW PALTZ Raymond Francis HasBrouck, age 88, of New Paltz died Saturday, December 26, 2009 at Benedictine Hospital, Kingston.

Known to family and childhood friends as "Frannie", Ray was born at home in New Paltz to the late Grace Ferris HasBrouck and the late Raymond Morton HasBrouck on March 2, 1921.

Throughout his life, his permanent residence would never be more than 3 miles from his childhood home. Together with his five siblings, he experienced the small town life of farming, the family florist business, and weathering the Great Depression. He was an adventurous youth, and, in 1941, at the age of 20, he rode his 1932 Harley Davidson motorcycle from New Paltz to the western U.S. and back, recording his trip through photos and text in his journal. He went as far as Salt Lake City and the Grand Canyon covering 6000 miles in 22 days and riding through 14 different states. His interest in motorcycling continued throughout his life; he rode a Honda CB 350 for many years, and purchased one of the first Can AM Spyder 3-wheeled Trikes, which he rode up until November 2009.

In 1942, wartime found Ensign Raymond F. HasBrouck in the Engineering Division of the US Merchant Marines, Kings Point Academy, where he earned the Scholastic Award for cadets with the highest academic record. After earning his engineers license for both diesel and steam ships he served at the officer's rank of lieutenant on 5 different liberty ships, most often in the capacity of second assistant engineer.

Near the end of his active duty, Raymond and his bride, Annie Katrina Christensen joined in holy matrimony on February 10, 1945 at the New Paltz United Methodist Church during one of the fiercest area blizzards on record. Following the war, he worked two years for the HasBrouck Florist, the family business in New Paltz, until beginning his career with IBM as Design Engineer. This career gave him the opportunity to travel as far as Boulder, Colorado and even the Netherlands, wherever his experience was need. Raymond (he was "Ray" HasBrouck at work, and, subsequently to his steam buddies and other folks) retired in 1983, after 35 years with IBM, and enjoyed years filled with travel, engineering hobbies, home maintenance,

motorcycling, and continuation of his civic responsibilities, serving on both the town zoning and planning boards of New Paltz, and the board of trustees for the Elting Memorial Library.

Ray was a lifelong lay leader at the New Paltz United Methodist Church, where he will be sorely missed for his tireless commitment and generosity to church organizations. He was also active in numerous steam and model engineering organizations, and continued to design engines of various sizes and to market plans for them worldwide. He traveled regularly to meet with other modeling and engineering enthusiasts and exhibit his engines. In 1984, Ray built "Tinkertoy", a steam-powered 14 foot canoe, which boasted a steam engine and boiler of his won creation- on which he sailed often with his wife, Annie, on many lakes and rivers of the Northeast. He even designed and built a steam-powered bicycle, and built the first, accurate, working replica of the engine that powered the Civil War iron clad ship, the Monitor.

When Annie was stricken with Alzheimer's disease, Ray shouldered the burdens of caregiver for several years, and later visited her daily, for nearly 11 years, in Montgomery Nursing Home. Throughout her illness, he cared for her constantly, and proudly used his life's savings to finance every bit of her care.

Ray was diverse and uniquely intelligent individual whose integrity and commitment have given his surviving friends and family powerful memories of a fine man.

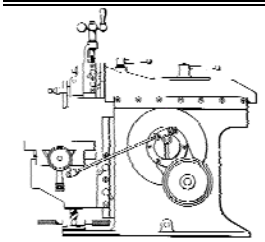
He is survived by a daughter, Karen and her husband Thomas Hubert of Rhinebeck, NY; Son, Brian and His wife Mari Wittek HasBrouck of Laurel, MD; Granddaughter, Lisa Sheyon and her husband Tim Farkas of Poughkeepsie, NY; Grandson, Adam Jamal serving in the US Marine Corp.

Besides being predeceased by his wife, he is predeceased by: a daughter, Ellen Mary HasBrouck, a brother, Forrest HasBrouck, and three sisters, Elizabeth Newkirk, Grace Graham, Mary Jane Thorley,

Calling hours will be Tuesday, December 29, 2009 from 2-4 and 7-9 pm at Copeland Funeral Home, Inc., 162 South Putt Corners Road, New Paltz, NY.

The funeral will be Wednesday, December 30, 2009 at 11:30am at New Paltz United Methodist Church, 1 Grove St., New Paltz with Rev. Dorothy Caldwell officiating. Burial will follow in Lloyd Cemetery, Highland.

Funeral Arrangements are by Copeland Funeral Home, Inc., 162 South Putt Corners Road, New Paltz, N.Y. 12561. (845)2551212. If anyone wishes to express condolences online please go to http://www.copelandfhnp.com/



Metal Shapers

By Kay R. Fisher

Shaper Hack Saw by Mike Dault

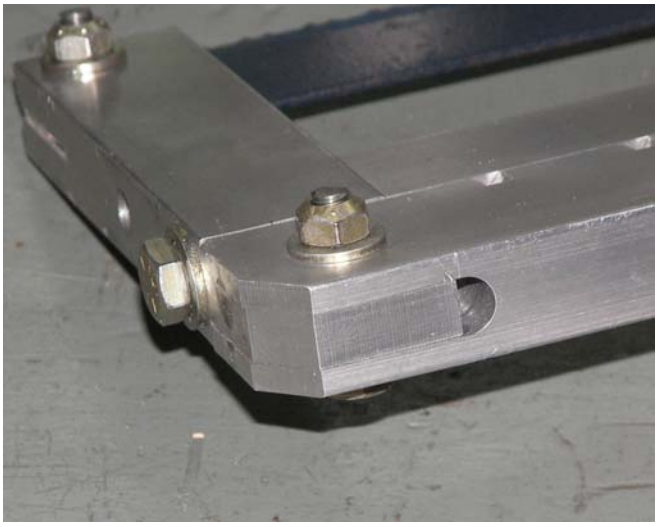
Mike Dault read an old shaper column and decided to build his own version of the Hack Saw.

The following is his contribution.

Hack Saw Complete Photo by Mike Dault

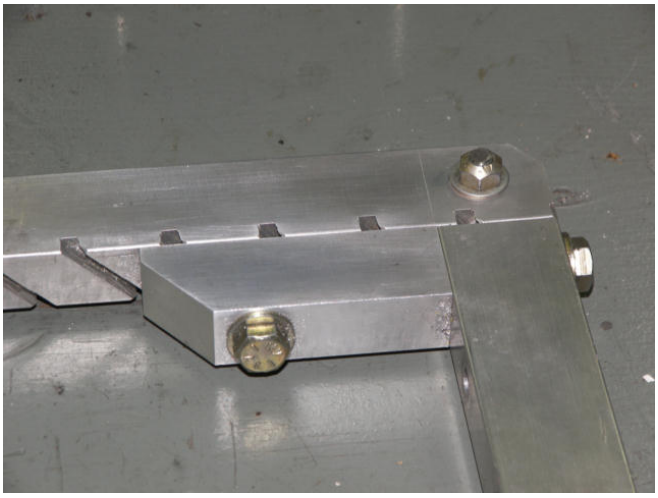
"I built it around a 14" hacksaw blade. I used some ¾" x 1 ¼" aluminum bar that I had kicking around the shop. When the blade is tensioned, there is a very slight bow across the top of the frame. I felt that it was too light, so I added a block of steel to the front. It's installed on my Elliott 14m shaper. It would be perfect if it had power downfeed, but I guess I'll have to live with almost perfect.

Those slots on the top bar are diagonal. The aluminum bar I used came from a fabric display in a furniture store. They hung fabric samples on hangers or some such thing.



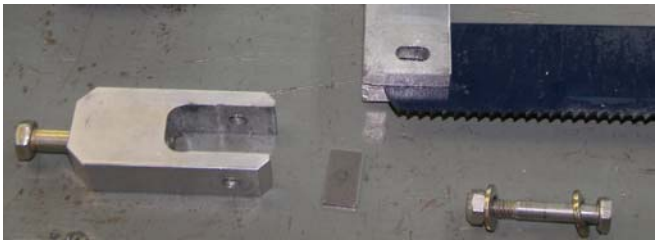
Corner Joint Photo by Mike Dault

The top corners are joined with bridle joints and held together with ¼" coarse-thread bolt and lock nuts.



Corner Reinforcement Photo by Mike Dault

Because I used aluminum, I felt it necessary to reinforce the corners and used $^{5}/_{16}$" coarse thread 1¾ inches long on a small piece of the same aluminum. It worked just fine. When the blade is under tension, there is a very slight bow in the serrated top bar and the corners remain square.

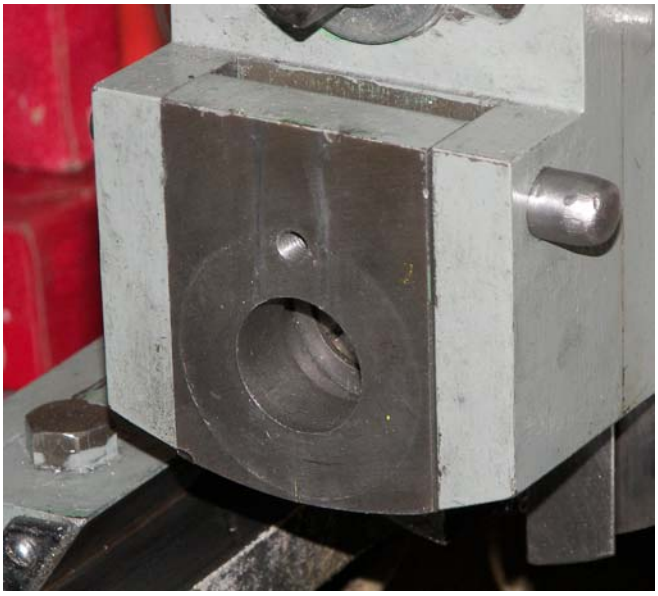


Blade Tensioner Photo by Mike Dault

There is a $^{5}/_{16}$" coarse-thread bolt in the yoke used to tension the blade. The little steel plate is slipped in between the yoke and the front of the frame to prevent the bolt from mashing into the frame.

Counter Weight Photo by Frank Frump

As the saw was pretty light, I plained down a block of mild steel and bolted it to the end. It weigh 4 lbs. Because it did not look pretty and I have the stuff on hand, I spent an hour at the kitchen stove and gave it a dozen coats of rust bluing.



Clapper Mod Photo by Frank Frump

I took the clapper of the shaper and drilled and tapped a $^{5}/_{16}$" hole onto which the saw is bolted. The biggest stuff I have cut is 4" aluminum round and 2½" steel round. It worked like a charm."

Thanks Mike for that great construction article.

Keep sending me email with questions and interesting shaper stories.

My email address is: **KayPatFisher@gmail.com**

Kay

Shop Safety

By Bob Neidorff

Caution: Brake Cleaner + Torch = Death!
Avoid brake cleaner for any job involving a torch. This short article by “Brew Dude” in American Iron Magazine talks of how heating something cleaned with brake cleaner using an argon-shielded welding torch produced phosgene gas, which is lethal at the 4 parts per million level! In other words, it only takes the tiniest amount to kill you. Although the details of this accident are a bit fuzzy, the caution is real. Be careful! For more information:

http://www.brewracingframes.com/id75.htm

Bob Neidorff

New Member! New Contact! New Museum!

Dennis De Witt, president of the new Metropolitan WaterWorks Museum, Inc. (MWM) has joined NEMES. The museum will be created over the next year in the former Chestnut Hill High Service Pumping Station at 2450 Beacon St., opposite the Chestnut Hill reservoir. MWM is the successor to the former Friends of the Waterworks, which worked for fifteen years to save the building and the engines. It includes some of the Friends' key former board members. However, it is substantially a renewed and expanded organization solely focused on creating and operating the museum.

The museum's 1887 "Richardson Romanesque" granite and brownstone building was designed by Arthur Vinal, with an addition of 1897 by Edmond Wheelwright. Each was the Boston City architect at the time. The city's engineer was Joseph P. Davis.

In its original section is an 1894 triple expansion Leavitt pumping engine with a unique side-by-side arrangement of the engine and the pump whose double-acting pistons are at an approximately 30° angle to the horizontal and are operated by a rocker arm system which also drives the separate flywheel. It also has Reidler valves. It was last run under steam in the mid-1920s but is in an excellent state of preservation. It is a designated National Historic Engineering Landmark.

Next to it is a horizontal double-expansion 1920s Worthington Snow pumping engine. Although not normally mentioned, there is also a much smaller single-cylinder engine on the lower level -- possibly originally used, it has been suggested, for pumping condensate. More needs to be learned about it.

The 1897 addition was built to house an Allis triple-expansion engine, which is still in place. The Allis and Worthington were in regular use until 1954 and occasional use into the 1970s.

While the engines are in good condition and substantially intact, a few "souvenir" type items are missing from the Worthington & Allis (name plates & gauges), which the museum is hoping will eventually find their way back to the engines.

The museum is also developing a secure archive to allow scholars to study drawings and records related to the building, the engines, and their operation. It is very interested in help with that effort, including locating documents. In addition to an involved board of director of over 20 people, the museum has a professional Museum Director and a half dozen interns and part time volunteers.

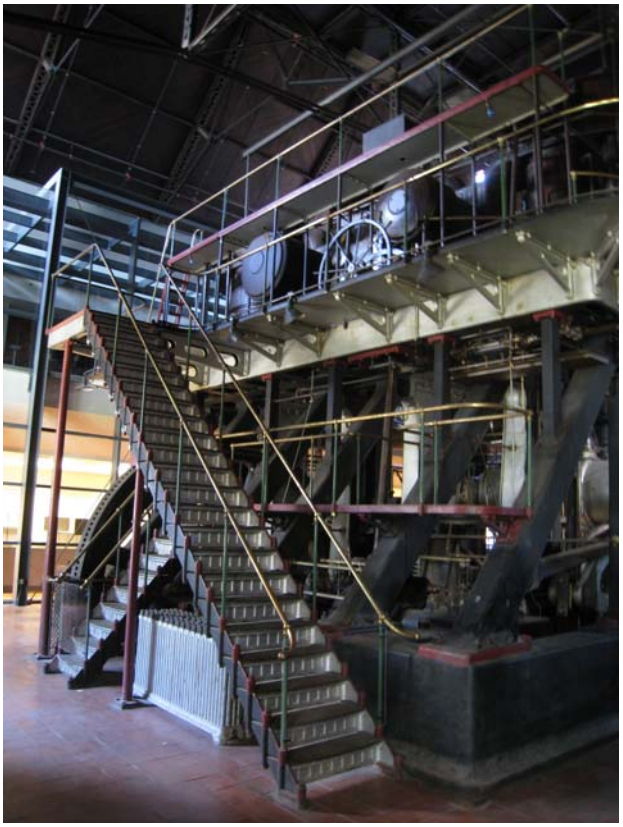
The Allis with The Worthington in The Archway

The engines will be the museum's principal exhibits. The museum will be designed to display them and the space they occupy to best effect. The museum will also tie the story of the engines into the broader stories of Boston's metropolitan social, civic, and architectural development during that period, as well as that of its water supply system. It is not presently assumed that the two larger engines could be operated under steam. (The boilers and coal store portion of the building, as well as the rest of the site, have been converted for residential use.) However, there is an interest in

exploring the possibility of demonstrating the operation of engines of these types through models -- including the possibility of steam operation.

Dennis De Witt and the museum would like to hear from people knowledgeable about its engines in particular and about stationary steam engines in general.

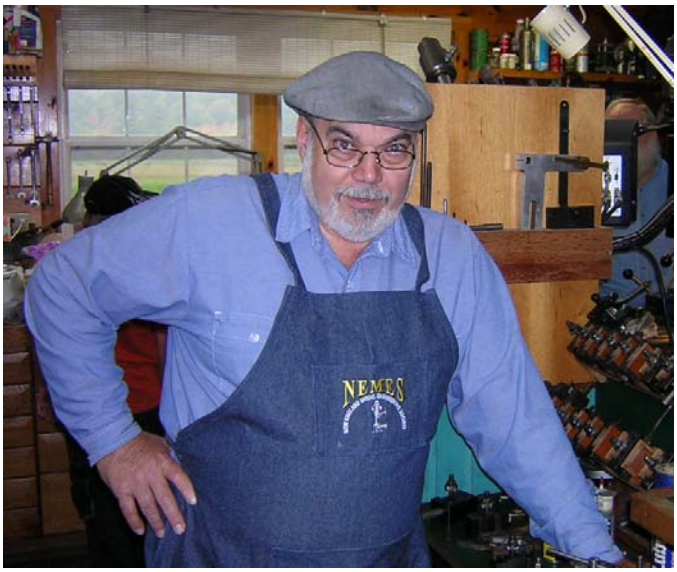
The Allis with The Worthington and The Leavitt Beyond The Archways



The Leavitt with The Museum's All Glass Office, Exhibit Space, and Meeting Room Unit Beyond

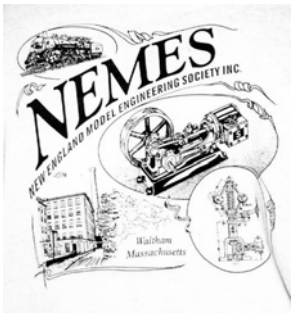
For Sale

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

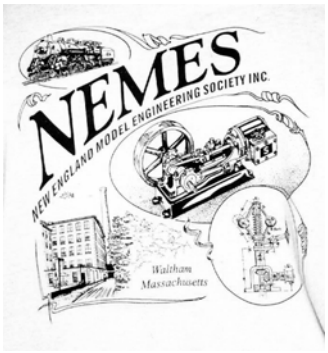


NEMES clothing

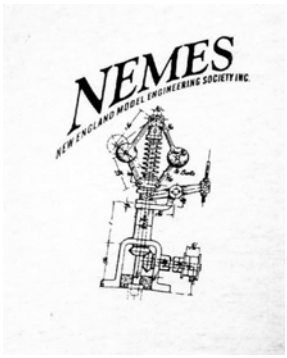
NEMES Tee Shirts

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

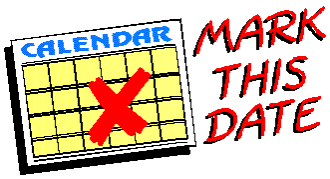
Prices:

	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



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

Jan 1st New Years day run
Waushakum Live Steamers
Holliston MA.
http://www.steamingpriest.com/wls/

Jan 7th Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA 781-893-5410
http://www.neme-s.org

Jan 15th - 17th
Cabin Fever Expo Bus trip
Dick Boucher 978-352-6724
http://www.cabinfeverexpo.com/

Jan 30th-31st
Amherst Railway Society Big Railroad Hobby Show
Eastern States Exposition, West Springfield, MA.
http://www.amherstrail.org/

Feb 4th Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA 781-893-5410
http://www.neme-s.org

Feb 20th Saturday 10AM-4PM
14th Annual NEMES Model Engineering Show
Charles River Museum of Industry
Waltham, MA 781-893-5410
www.neme-s.org/NEMES_Model_Engineering_Show_10.pdf