

# The NEMES Gazette

The Newsletter of the New England Model Engineering Society,  
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**Our Next Meeting is at 7:00 PM on April 3rd, 1997  
at the Museum, 154 Moody Street, Waltham Ma.**

## From the Editor's Desk:

Well, This issue completes the first year of the NEMES Gazette, and next month will be the start of Volume 2. It's hard to believe a whole year has gone by already.

One of the things that has always fascinated me is printing, especially intaglio printing from engraved plates. Which brings me to the stamp I'm using to mail all of the Gazettes this month. Not only is it a nicely engraved stamp, but it is the first time in history that the United States has put out a triangular stamp. Half are printed in orange, and half in blue. Somewhere down the list of things I want to try is producing a little sticker of some sort from an engraving.

I've been thinking for a while that I needed a bigger/better lathe, and the right opportunity popped up last month so I'm now the proud owner of a 14 by 30 Flat Belt Monarch Engine Lathe. It's even home in my cellar waiting to get cleaned up and put back together thanks to a great guy (Dick Boucher) who went above and beyond the call of duty and helped me move it home. With the lathe in pieces on the cellar floor, I'm looking forward to the talk Thursday on how to get it properly aligned.

See you next Thursday night. -- scl

## The Founders Corner by Ron Ginger

It was just one year ago that we had our first meeting. I recall my discussions with Karen at the museum and my hope that we could get 20 or maybe 25 people interested in this group. It is really amazing to me to see how many people have found this of interest, and to recall all the meetings and activities we have had in this year. It has certainly been a thrill for me to find this much interest.

Many of you have told me how pleased you are that I started this group, and I appreciate your kind comments, but all I did was provide the spark to start this - you all by your attendance and support are what makes the group work.

I look forward to many more years of meetings, shows and making more friends that share this interest in things mechanical.

**TREASURER** We have a new treasurer for the club, Kay Fisher. Kay will be handling the collection of dues and the payment of our expenses. I will work with Kay to keep our membership list accurate. I really appreciate his help with this.

**BUS TRIP TO North American Model Engineer Show** Well, I can't let a newsletter go without a word on the bus trip! All the arrangements are complete, I have collected the checks and mailed the money off to the bus company. Now all we have to do is wait for the big day. I will be sending a letter directly to all the bus riders with final details, but if anyone else has decided they would like to go we can still accommodate a few more. Please call me at 508/877-8217 if you want to join the tour.

I expect we will have lots of photos and experiences to share with all the club members next month!

**E-MAIL LIST** We mentioned at the last meeting that Bob Macilvane had created an E-mail list for our club. So far a few people have signed up and we have had a couple exchanges of interesting information.

For those of you with e-mail access, simply send a message to listserv@adra.com and include a line in the message that says SUBSCRIBE NEMES Your Name. This will add you to the list and then you can join the conversations.

**NEXT MEETING** At the last meeting Howard Evers mentioned an article in PROJECTS IN METAL by one of our members, Steve Wellcome, that he thought was a very good technique for checking the alignment of a lathe. Steve got the idea for that article from Arthur Gaucher, Rolands father. There was a lot of interest in hearing about that technique, but since we were already short of time it seemed best to delay the discussion until the next meeting. So, our main speaker for the April meeting will be Roland and his father to talk about lathe alignment.

I hope to also have a few good Show and Tell items. Lets go guys, there are a lot of you that have never brought in something to show or talk about. Let's hear from you!

We will also have some additional refreshments and a bit of celebration of our 1 year anniversary. See you all on April 3.

-- Ron Ginger

## Calendar of Events

Thursday April 3, 1997 -- NEMES MEETING at the Charles River Museum of Industry, 154 Moody Street, Waltham, Ma 02154, telephone 617-893-5410

Thursday thru Sunday, April 24 to April 27, 1997 -- Big Bus Trip to the NAMES show in Wyandotte Michigan, with a side trip to spend a day at the Henry Ford Museum

Thursday May 1, 1997 -- NEMES MEETING at the Charles River Museum of Industry, 154 Moody Street, Waltham, Ma 02154, telephone 617-893-5410

Thursday June 5, 1997 -- NEMES MEETING at the Charles River Museum of Industry, 154 Moody Street, Waltham, Ma 02154, telephone 617-893-5410

### The Meeting, March 6, 1997

The meeting started with a few words from Ron Ginger. He asked if anyone was there for the first time, and several people were. The bus tour to the NAMES show in Detroit is definitely on. We have 28 people signed up to go, which will come to \$155 each for the bus. There are 47 seats on the bus, so there is still room for more people to sign up. If more people do sign up, then the price per person will come down some. The show promises to be lots of fun and lot's of interesting people packed into two intense days.

In February Ron talked to Rudy Kouhopt at the Cabin Fever Show. PM Research, Meriden, Sobel, and HSM all had booths at the show and there were about 35 model exhibitors. Next Years Cabin Fever Show will be Jan 31 and Feb 1 1998, so put it on your calendar. Ron asked Rudy if he'd come talk to NEMES at one of our meetings. He'll be here at some point, but a date hasn't been set yet. Ron also asked Eric Whittle if he could stop by Boston on his way back from the NAMES show to talk to NEMES, and he said yes. He won't be here till 1998 though because he only makes the trip from the UK to NEMES every other year.

Everyone enjoyed the Loctite Presentation in February, we should consider other presentations from companies in the metalworking fields. Norton on grinding and carbide inserts were mentioned as things people would like to hear presentations on. Hal Robinson is going to contact a sales rep he knows. It'd be nice to get the main topic set three or four months ahead.

Bob McIlvie has set up a NEMES email list. (see the Founders Corner.)

Everyone had a good time at the show, so we should do it again. We need to pick a date soon, somewhere around the first weekend of March. Let Ron know if you have any suggestions for next years show. The show was pretty close to overflowing the room, and both the Club and the Museum made money, so it was good for NEMES and good for the Museum.

The Loctite speaker sent Ron a Box of books on how to use Loctite Products correctly -- He'll try to remember it for the next meeting.

Show and Tell started with Don Strang. Bill Bracket is going to do up a set of CAD drawings of the Drill Grinder Don had at the show and Don wanted to know who was interested in building one. Don also suggested using soda bottle rubber plugs in your lathe's tailstock to keep swarf out of it. A four facet point on a combination center drill would be better than the normal point that they usually come with. An IV drip valve can be used to meter cutting fluid from a hanging bottle of cutting fluid. If anyone has a Gorton Pantagraph, Don is looking for a missing part for his. He'd like to examine the part on someone else's so he can make a replacement for his machine.

Ed Mann brought in a lathe aligning tool he had made from a piece of 1/2 inch iron pipe. First he held it in the chuck and put a 30 degree chamfer on the inside of each end so he could mount it between centers. Then he mounted it between centers, driving it from one end and with the dead center at the other end and turned a piece about an inch long at each end so that both were the same diameter. Then he put a third section turned to the same diameter in the middle of the pipe. To use it, mount it up between two good centers in the lathe you are checking. Use a dial indicator on the carriage to check the two ends of the tool. They should be the same. If they aren't, then use the adjustments in the tailstock to line things up.

Ed Kingsley brought in the drill display he had mentioned earlier. It had a variety of drills on it, wood, carbide, starting drills, combination starting/countersink and others. A real starting drill wond center on a prick punch crater, it'll start drilling right into the side of the crater. He had a copy of Ed Haas's Steamboat Notes newsletter from California, and suggested that we should exchange newsletters with Ed.

Howard Evers wanted to know if Arthur Gaucher or Steve Welcome were present. He had an article from HSM a couple of years ago by Steve telling about how Arthur had taught him to align a lathe. He left a copy for the library. He used the method on his lathe and says that it cuts very well. The method is simple and fast. After the article appeared in HSM Steve got \$20 in the mail from someone saying his lathe was finally cutting straight and to buy a beer on him. He bought some 5/8 by 8 left hand ACME threaded rod for a project, so he's got a bunch left over if anyone else needs some.

Kay Fisher has begun to get some feedback on the NEMES Profiles that he sent out. Here's the list of the ones he has now:

Wayne Singer has another 20 of the shop stools he showed us back in February for \$15 each.

Mike Boucher visited Clark's Trading Post in New Hampshire for the annual running of the Lombard Log hauler this year. See his letter later about his trip later in this issue.

George Lagasse had a digital readout setup connected to a lead screw. He has info on an HP shaft encoder as well. It reads to incredible precision, but is only really as good as the lead screw it's connected to.

Dave Robie suggested that the Steam Toy Enthusiasts get together in Taylor Michigan from 7 to 10 PM on the Friday before the NAMES show would be a good side trip to take for the people going on the NEMES bus trip to the show.

After the break the meeting resumed with the main speaker for the night, Roland Evans, who told us about his experiences building his third steamboat. His first was a completely automated RC tugboat, which is now downstairs in the museum. Ron met him at a wooden boat show, but his third steamboat, which is the subject of his talk, has an aluminum hull. He heard about the Pioneer Valley RR Group, and when he visited them he met another guy who had an RC tug, so he knew that

he wasn't the only one in the world who was into steam boats, then it 78 or so he went to a meet in Kingston Ontario. There were 7 boats there and he got his first ride in a steam boat. His wasn't ready yet.

His first full size steam boat burned wood, but as he needed a bigger boat that would sit at a dock rather than always go on the trailer, it started to grow and grow. He decided the new boat was NOT going to burn wood. His 25 foot boat did burn wood, but the 35 foot one, no way was he hauling all that wood. He decided on diesel fuel.

The more planning and engineering you do up front, the better off you are in the long run. He needed an engine. You can get antiques, but they are old and fragile. He got a set of castings from Bill Lowe - 83 of them, and machined his own engine. He used 4x8 Masonite board in the attic over his garage to loft the hull. The hull is built of welded 3/16 inch aluminum, mig welded with a constant current machine. He'd never welded aluminum before, so he practiced till he could make a good weld. He learned how to do it from a friend who's in auto body work. Welding the hull requires care. You can't just start at one end and do the whole seam in one go. It would take the temper out of the plate so it wouldn't curve properly, and it would also get hot and expand so that it'd be all rippled when it cooled and shrank back down again.

When he started looking at the engine characteristics and trying to match a propellor to them he realized that it wasn't going to be an off the shelf unit. His engine turns relatively slowly, 250 RPM. Even with the gearbox he uses to speed the prop up to 1.6 times the engine speed, it's still only going 400 RPM. For a slow turning prop you need an oversquare propellor (pitch greater than diameter.) Under a 1.3 / 1 ratio of pitch to diameter the prop will start to loose efficiency. To get a prop that matched his engine he had to make it himself. He made a pattern for one blade, and had it cast up. Then he took the cast blades, machined the hubs to fit together, and made a pattern for the complete prop, which he had cast. He brought an extra prop casting to pass around so that we could all see it. His prop has about 10 per cent slip, while a typical power boat prop has about 25 per cent slip.

His boiler is 100% automated. It runs 230 psi with 100 degrees of superheat. He decided on 12 volt power, and got a Belmar Marine Alternator that starts giving usable power at 700 RPM, and will put out up to 40 amps. So, then he needed a 12 volt automated oil burner. He wanted it to be reliable and not to give him any problems. He built a circuit using a Honeywell fire eye and a permanent magnet motor. He has a backup sensor set to turn things off if the pressure hits 290 psi, and the primary sensor starts the burner up when the pressure falls below 200 psi and turns the burner off when it gets up to 230 psi. The burner is the biggest load on the electrical system, so he needed to do whatever he could to cut the load. The ignition circuit draws 7 amps, while the burner takes 30 to get going and 20 while running. After the burner has been on for 30-35 seconds the ignition cuts out. If the flame goes out the

Honeywell fire eye will shut the burner down in 10 seconds. The burner is set for 4.5 gallons an hour so in the 10 seconds you don't get very much fuel accumulating. The boat has been in the water now for eight years and the original control is still okay. A spare circuit is part of the kit he takes with him whenever he goes out in the boat though, because without it he can't raise steam. When he's cruising the burner kicks on and off about once a minute, and the loudest noise comes from the gearbox.

The boiler feed and the condenser vacuum are handled by the same engine driven pump. At first the pump gave him problems, but he made the ports twice as big and hasn't had any troubles with it since. The boiler feed is controlled by a mercoid SS ball floating in the water column, with a rod going up to a SS nipple at the top of the column. A ferrous slug is at the top of the rod, and magnetic switches monitor the position of the slug. An Asco 12 volt 300 psi rated solenoid valve is used as a bypass valve. When the water goes down 3/4" the valve closes and the pump starts pumping into the boiler instead of into the hot well. A bit further down is another switch that acts as a failsafe. Usually the engine driven pump will keep up with the water use, but there is an electrically driven pump for emergency use. Usually when the electric pump kicks in (which incidentally shuts down the burner because of the excessive current draw to run both,) it's because there was a valve left open somewhere to cause the engine to use more than the normal steam. After a cruise he will typically run the engine at the dock to charge the batteries. 230 psi and 100 degrees superheat is still pretty close to saturated, so it doesn't need a lot of lube. There are oil valves to oil the high pressure piston when running - if it squeaks. He had to replace the ring in the HP cylinder, but it wasn't because of wear, he broke it taking it apart to inspect it. The condenser water discharges into the hot well, where the feed water comes from. He has an ABS plastic oil separator with 64 square feet of area. The oil sticks to the plastic, and he only needs to clean it once a year.

For the vacuum and pressure gauges on the dash he uses 1/8" SS lines. They have a damping effect so that the dash instruments give nice even readings, while the gauge mounted directly on the low pressure cylinder shows a bit of bounce.

Why use a condenser and run a vacuum at the exhaust? The condenser creates a 26 or 27 inch vacuum, which is almost 15 psi extra that you get from the condenser. 1200 pounds pushes down on the each connecting rod, through a 5 1/2" stroke. He's got a keel condenser with 12 square feet of area that's made from a boxed in 1 1/2 by 3 inch channel iron.

The only thing in the boat that he didn't build is the boiler. He had designed a boiler with 100 square feet of heating surface and was going to build it, but the engineer at the boiler company that was going to handle the certified welding and the paper work fell of the wagon and the management of the company didn't want to bother to go ahead on it without him. So, he

bought a Bryant Boiler with 56 square feet of heating surface. It's supposed to be able to handle a 5 1/2 gallon per hour fuel burn, but a 4 1/2 the stack temp is pushing 700 F so he limits it to that. He's added an economizer so the stack temp is down, but he still holds it to 4 1/2 gph.

He built the boat over a three year period. The inside is American Walnut, and the windshield is curved glass he salvaged from a 5 and dime entrance that was being remodeled. He did his homework, and when he launched it it sat right on the design waterline. It takes 800 lbs to lower it an inch into the water. He has a semi planing hull, so if he took 1500 lbs out and put a big diesel in his boat would do 20 knots. As it is, his hull speed is about 10 miles per hour, and by slowing down to 8 he can halve the fuel burn.

He had a failure once on the Hudson river. The fuel filter plugged up and the burner quit. He ran the engine about 1/2 and hour without the burner on. It was a special marine filter because he figured he'd be able to get one at any marina, but he couldn't. Now he has a big unit from a diesel truck with a water separator and a clear sediment bowl at the bottom. Those you can get anywhere. It plugged again on him in the Erie Canal. He took it apart and cleaned it out with a wire and diesel fuel. Next morning he ended up in the hospital from the additives in the diesel fuel. He recommends liquid glove to keep the chemicals off your skin.

He hasn't had any problems with electrolysis, and doesn't use any sort of sacrificial anodes on the boat. The only thing that isn't aluminum in contact with the water is the propshaft, and that's stainless steel. The alloy that the prop was cast from has minimal copper, so it's not a problem. If he ever has a problem, he expects to just cut out the bad area and weld in a new piece of Al plate.

### **Tips And Techniques**

**by Ed Kingsley**

Since we've been discussing Drills and the black art of actually making holes, for the past few months, let me start with a few more thoughts about that.

I've been underwhelmed (have you or anyone you know ever been 'whelmed?') by my lack of ability to layout, punch, centerdrill and drill holes with any degree of accuracy, even though I've gone so far as to use optical center punches and measure each step of the process with digital calipers. Somewhere in the sequence, something always goes awry.

Without any conscious afthought (I often do my best work this way ...), I did one of the steps a bit differently the other day, and may have actually stumbled on something. Instead of starting the drill press, bringing the centerdrill up to speed and THEN attempting to engage the prick punch, I 'eased' the centerdrill into the prick punch and THEN turned on the drill press. I kept a nominal pressure on the centerdrill as it came up to speed and gently eased it into the material I was working on. When I did this to two holes in the same workpiece, and then measured the distance between them, I discovered that I was off by LESS than .001". Previ-

ously, using the old method, I'd never been able to get the 'spot holes' closer than within .003" - .005" of the layout distance.

I have done this 5 more times and each time the results are LESS than .001" difference, center to center, from the punch marks. Another process I employ, to great success, is using a Starrett 6" Machinist's Level to make sure the surface of the workpiece I'm holding in the vice, is parallel to the drill press table. The vice I use is from an Atlas Shaper and while convenient, has a tendency to 'lift' the edge of the workpiece. By "leveling" the workpiece, I can be sure that the hole will be as perpendicular to the top surface as the condition of the drill facets will allow.

The last Drill item is this: Don Strang will be holding a meeting of those members interested in building his micro drill sharpening device, at 6:15, at the Museum, prior to the next meeting.

Half an Inch to Save a Foot (or Two) ----- I'd like to echo the thoughts of Max ben-Aaron, who mentioned the sale of rubber matting at Bldg. #19 and it's benefit to your general well being. I was in Bldg. #19 on Friday of last week and saw the matting he referred to. It is identical to the matting that my wife bought me for my birthday last April and which I raved about in this column shortly thereafter. I heartily recommend that you buy a few and spread them out in front of all your machines. Your legs, feet and back will all appreciate your thoughtfulness.

A Different Tack ----- For Christmas, I bought my wife a bottle of "Goo Gone", a strange substance that claimed to quickly remove, among other things, adhesive residue. Christmas is a prime time to find yourself in need of something to remove adhesive residue(s) from all manner of gift packaging, and I have to admit that the selection of this particular gift was not entirely altruistic. Even better than I could have hoped for, "Goo Gone" makes short work of the almost impossible task of removing the paper and adhesive from "old" pieces of acrylic plastic, a job I abhor as much as I enjoy buying odd pieces of the stuff for next to nothing. Penury has its own price to pay, however, and I've paid it for many years, until I discovered "Goo Gone". Available at Brooks Drugs.

GROUP METAL BUY ---Only nine people signed up to purchase either the 12L14, Free Machining Steel or the Grey Cast Iron that was offered to the membership at the last meeting, a less than anticipated response to what I think is a great opportunity.

The 12L14 offered is in larger diameter rounds than that bought previously and in square sections which weren't available from the previous supplier. The Grey Iron is the stuff of cylinders, piston rings, flywheels and 5C Collet chucks. Think of the 6" round and 6 1/4" square stock as future face plates, mounting platforms and work holding fixtures. The square 12L14 is perfect for those nonstandard T-Nuts and holdowns you were always meaning to make.

The stock is priced by the foot, but you can buy it by the inch. Think ahead, this is an offer that may not be

repeated for long time. The offer will be open through the next meeting only. If you can't make the meeting but would like to buy some stock, contact me at (617) 233-3671 or Email: Edk4@aol.com. Details are in last month's newsletter.

### Classified

Jim Chetwynd bought the Power Model Supply gear hobber castings from PMS and he needs the drawings so he can get started on it. PMS is out of the drawings or he'd just spend the \$60 and get a set. The drawing number is KTW5D. He has the reprints from the 1949 Model Engineer, which is for a similar but not identical machine. If you know where Jim can get the drawings, let him know. (617) 665-1978

### Why I Am A Machinist, forwarded to us by Kay Fisher from the Internet

Everybody needs to find a job that fits them. When I was kid I looked at a lot of different jobs and here is what I found out about machinists.

When machinists go hunting, they generally get bigger deer than most folks. When they go fishing, they generally catch so many fish that their arms get tired from reeling them in.

Machinists tend to be better looking than the average. This means they have better social lives than almost anybody else. Some folks from a university did a study and found that machinists get lucky about 43 times as often as most folks. At least that's what I heard.

Machinists almost always have better looking spouses, smarter kids, greener lawns, redder roses, and generally seem to have fewer weeds in the garden. Their cars seem to run a little faster and use a little less gas. Things generally seem to work better for a machinist than they do for the rest of the world.

Machinists do things that no one else can do. They live and excel in a world where things too small to see make a big difference. They possess special skills and unique knowledge.

Machinists do real work in a world full of made-up stuff. Machinists make real things like cars and tools and a better America.

Machinists tend to be more honest, better friends, and slightly better adjusted than the world in general. It comes from making a career in a professional world of exact specifications and real deadlines. It seems to show in their character.

Machinists just generally seem to be clearly superior human beings, which is why I am a machinist. That, and all the good jobs were taken. -- Kurt Johnson

### NEMES Profiles update from Kay Fisher

Here's the list of profiles received by Kay, If you haven't sent him yours, get to it if you want to get the info on everyone else. the list:

Leslie Russell, Bill Brackett, Michael Boucher, Robert "Mac" McIlvaine, Errol Groff, James H Chetwynd Jr., Rob C. McDougall, Ed Kingsley, Doug White, Kenneth J. Launie, Jay Stryker, Howard W. Evers, Rick Tomer, Fred Jaggi, Dave Robie, Richard K. Wells, Edgar Rodgers, David Stickler, Gene Martha, John A. Wishneusky, Steven

S. Cushman, Joseph M. Donahue, Herb Cotterly, Leo Klos, Everett Chapman

### A Lombard Weekend, by Mike Boucher

Yesterday (2/24/97) I trekked up to Lincoln, NH for David Clark's annual "Lombard Weekend". Over the course of many years, David, Leon Noel, and a few other people restored a Lombard Log Hauler to running condition.

If you don't know what a Lombard is, here is a brief description: Start with a locomotive style boiler with a saddle tank. Under the smokebox, put skis. Under the cab, put "caterpillar tracks". The drive is similar to a Climax, except the cylinders/crossheads are parallel to the boiler/ground. The crankshaft is connected to a differential, which then connects via a chain drive to the cat tracks. Bore and stroke of the engine is (if I remember correctly) 8" x 12". Valve gear is Stephenson. There are two operators required to run the engine, one in the cab controlling the throttle and "Johnson bar", and one on a seat in front of the smokebox steering via a wheel connected to the skis via a gear reduction. All things considered, it's a pretty strange looking beast. This one had #70 on the builders plate, and it was built in 1915 in Waterville, ME.

One weekend every winter, when time off from work and snowfall allows, they steam it up and run it around their yard (directly across from Clark's Trading Post on rt. 3). The path they take is about a 300 yard oval. I got there at about 11:00 AM on Sunday, temps in the low 30s, and there were probably 50 people there, watching, riding, and photographing. They had a small portable stairway that they would pull up to the cab and let people have rides, riding on the woodpile.

Under normal operating conditions, the Lombard would run under 200 psi, but since this was doing no real work, they kept it to 100 psi. After a few minutes of photography and video, I climbed into the cab and said hello to the engineer, Dave Dearborn. I've known Dave for several years, so he and I were catching up on our Winter projects when the steersman gave two toots of his whistle, signaling move forward. Since two people are required to run the Lombard, there are two whistles on the steam dome, one cord goes forward to the steersman, one back to the engineer. Like doubleheading steam engines, the steersman gives a signal and the engineer replies with the same signal.

Dave opened the cylinder cocks, put the Johnson bar in full forward, gave two tugs on his whistle cord, and eased out the throttle. Away we went, moving at about 5 mph. At one point, there is a small dip down in the course. Dave shut the throttle just at the crest, and when we started down he pulled the Johnson bar back just past center, slightly into reverse. This is the only form of braking on the engine! Just at the bottom of the grade, Dave shoved the engine back in forward and opened the throttle, and we never came to a stop. When we got back to the loading area, we had to pull past the stairs and back up to them. It was pretty neat to hear the whistle signals for stop and back up being traded between the two operators.

I asked Dave what it took to try driving it. He said, "just ask!" and called Leon over, who was the steersman at that point. Dave told Leon that I wanted to steer, and Leon said, "climb up!" After pulling the stairs away from the cab, Leon climbed up next to me, gave me quick instructions about following the ski tracks, and signaled ahead. A few seconds later and we were moving. Like a car with no power steering, trying to move the skis when stationary is not a trivial task, but once moving, its not too bad. Mind you, there still a LOT of effort in moving the wheel, but a less than I expected. It was almost more work keeping the skis the direction you want them (they tend to want to move when the hit a bump in the track) than moving them. One pleasant side effect of being steersman is you REALLY get to hear the stacktalk, as your seat is about 6 inches in front of the smokebox door. The radiant heat from the smokebox helps, but it's still a pretty cold ride, I can barely imagine what it was like out there in the Maine woods in the dead of winter...

Dave also offered to let me be the engineer. After a brief rest to warm up in the garage (where you could get "Lombard Stew", hot dogs, and other snacks, including "Lombard Lager" - i.e. homemade root beer - sold by the local church, yum!) I climbed back into the cab and took my place in the engineers seat. It's not

too much different than driving a locomotive, you don't have to worry about steering! The steersman signaled forward, I opened the cylinder cocks, put the engine in forward, and eased out the throttle. It doesn't take much to get the engine moving, maybe 1" (out of a full travel of 12") and we were on our way. Dave told me when to do the braking, like he had, and we came to a stop for a few seconds (not quite quick enough with the throttle) and started on our way again.

I got to drive and steer for two laps over the course of the day, and had a great time. I finally headed home about 3:30 PM, with 25 minutes of video and a roll of photos fully exposed.

Dave Clark, Leon Noel, and all others involved with the restoration should be congratulated on bringing such a unique engine back to life!

If you're interested in attending next years Lombard weekend, all you have to do is send Dave Clark a SASE and when the dates are scheduled, they'll drop the announcement in the mail about 2 weeks in advance. Of course, I don't have Dave's address with me, but if anyone wants it, send me private e-mail and I'll get it for you.

c'ya Mike ----

# *The NEMES Gazette*

c/o Stephen C. Lovely

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