

The NEMES Gazette

NEW ENGLAND MODEL ENGINEERING SOCIETY INC.

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August 2005

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Editor's Desk

Victor Kozakevich

Thanks to everyone who exhibited a project at the July poster session. It's always a treat to see what fellow members have been doing.

I'll admit I was taken with Steve Earle's CNC rifle action. I'd seen something related described at a website called CNCgunsmithing.com. The father of the site's author just happens to own an aerospace machine shop with state of the art tools, lucky dog. Anyway, he's been able to locate CNC files for various gun parts on the internet and has built half of a dozen models.

What this implies is that someday, hobbyists, when in need of a part for their antique car or an obsolete tool, will be able to download a CNC file for the part and carve one out on the mill. Maybe someday, we'll be trading tool paths for model gas and steam engines as readily as college students trade mp3 music files. Think about it; perhaps your CNC mill could be capable of reproducing itself, with improvements! Won't that be a brave new world?

Next Meeting

Thursday, August 4, 2005

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

Norm Jones

The Meeting

Our speaker for the August meeting will be Keith Pederson of Cap Inc. His talk will be about solid modeling using a program called Solidworks.

The newest CAD systems are solid modeling systems for the creation of parts and complex assemblies. These systems model life-like parts that can have simulated gravity and can be put into motion. They can also be fabricated using rapid prototyping systems.

The future of design in the U.S. may depend on these innovative systems to allow manufacturing to compete with low labor costs systems in other countries. Keith Pedersen of CAP, Westborough will discuss how Solidworks and Dimension 3D printers work together for rapid prototyping.

Steam boating on the Merrimack

I received a call from friend and fellow NEMES member, Russ Steeves, on July 13. Russ asked me if my wife and I would be interested in joining him and Les Russell for a ride on his steamboat "Redbud" on the Merrimack River the following morning. Needless to say, I eagerly accepted his invitation.

Many of you have seen Russ's beautiful Fitchburg and Northern locomotive at our shows or at a Washakum Live Steamers meet. Redbud is Russ's latest project which has been in the works for about two years. Redbud's maiden voyage and first boiler firing (fueled with redbud wood prunings from the namesake tree in Russ's front yard) took place on May 21 2005 at Lees Mills on Lake Winnepesaukee.

The "mountain girl" hull featuring a fan tail was fabricated in Colorado by Jim Thayer. It is constructed of fiberglass with mahogany trim. The length is 19' with a beam of 5 1/2'. The

boiler is a "Roberts" with 16 square feet of heating surface. The engine is home built of compound design with the high pressure cylinder bore of 2½" X 2 ¾" stroke and a low pressure cylinder bore of 3 ¾" X 2 ¾" stroke. It develops approximately 5 HP @ 600 RPM. Operating pressure is 80 to 100 PSI.

The canopy collapses for traveling on the road and storage in Russ's garage, a tight fit with 1" to spare between the back wall and the garage door. Overhead clearance is at a minimum as well!

We formed a caravan from Russ's home in Chelmsford to the launching ramp on the Merrimack River in Lowell Mass. The ramp and adjacent parking lot were completed last year. Perfect timing! It took about an hour to get everything together and steam up. This picture shows Russ building a fire in the boiler.



This picture shows the Redbud in the water ready to go. Les Russell is on the dock and Leslie Jones is in the bow.



We steamed up river for about an hour. The whistle got a good workout as we acknowledged various people along the shoreline. I am sure the presence of a steamboat on the river is a most unique sight. We arrived back at the dock at 11:00 AM, in time for Russ to take his daughter Mary Ellen, her children and a friend for a ride. I am sure that they had a great time just as we did.

You can see Redbud along with many other steamboats if you go to the annual Lees Mills Steamboat meet between Sept 9 and Sept 18. I went to the meet last year for the first time and had a great time. Thanks very much Russ for a most enjoyable ride on Redbud. See you on August 4



The Meeting

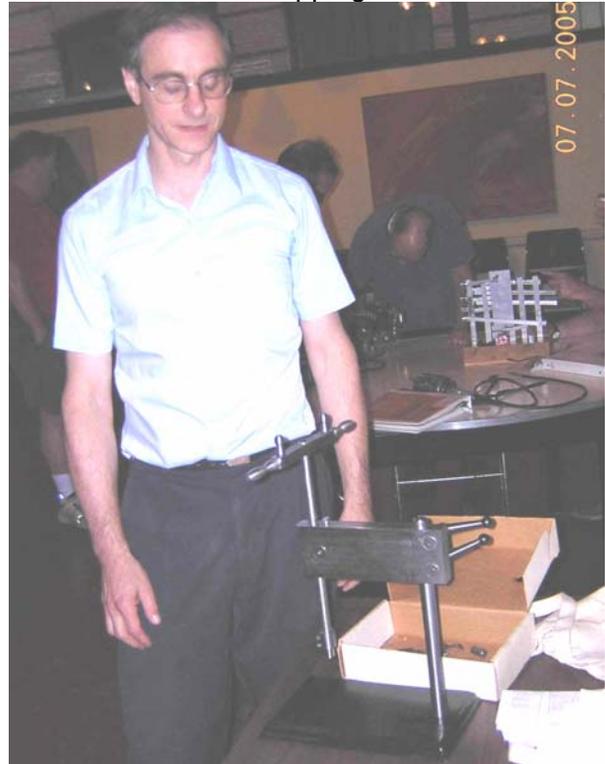
Max ben-Aaron

The July meeting was held in the Jackson Room of the Charles River Museum of Industry.

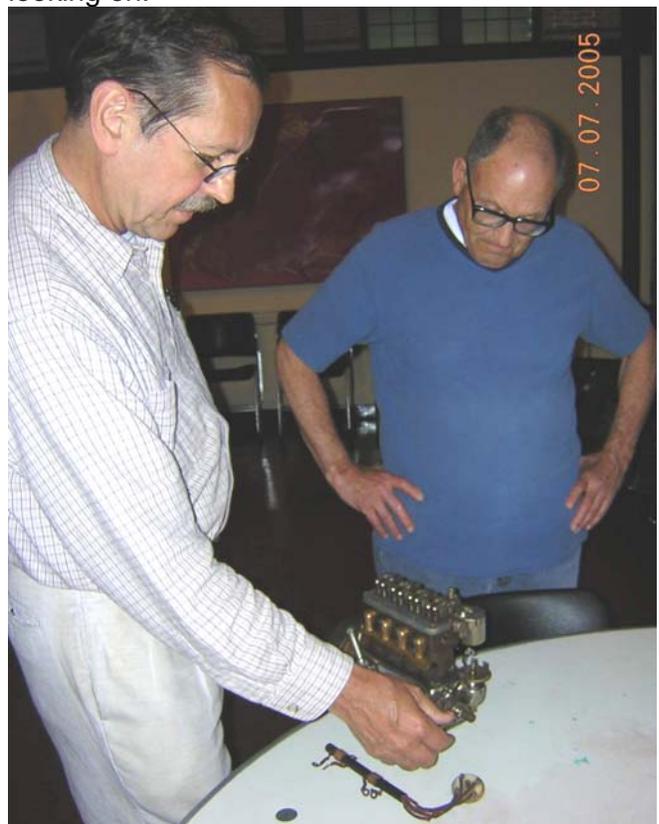
Traditionally, the July meeting has been a 'poster session' and this year was no exception. It gives members a chance to find out what other members have been doing and to see and appreciate their fine handiwork, as well as to socialize.

Gail Martha makes it extra special by bringing her handiwork: a sinfully delicious selection of cookies and soft drinks. Many thanks to Gail for her thoughtful and gracious contribution.

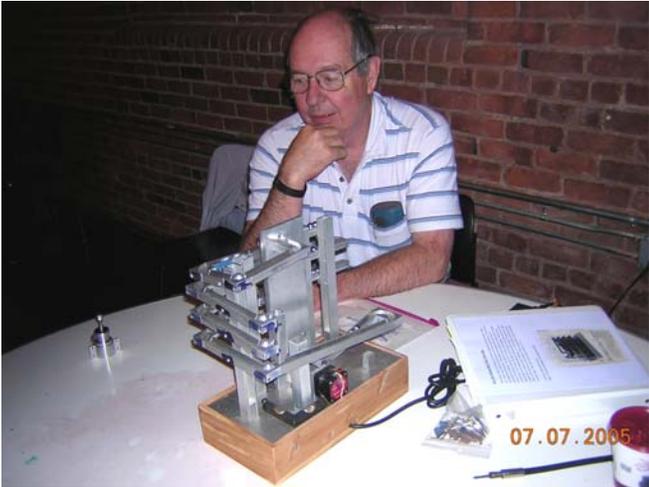
Bob Neidorff shows his tapping fixture:



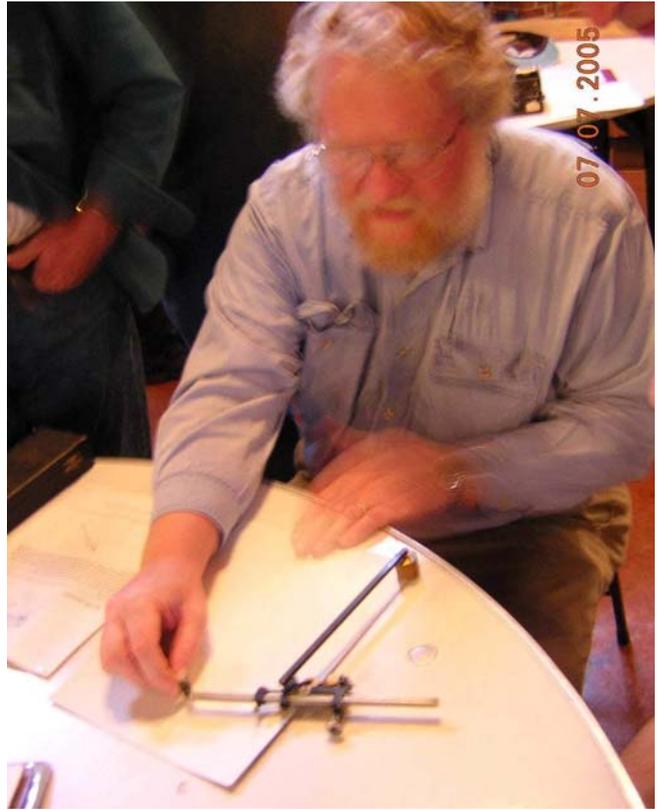
Hal Holmy and his 4-stroke 4-cylinder water cooled gasoline engine, circa 1919, with Leslie Russell looking on:



Bill Brackett brought his rolling ball clock:



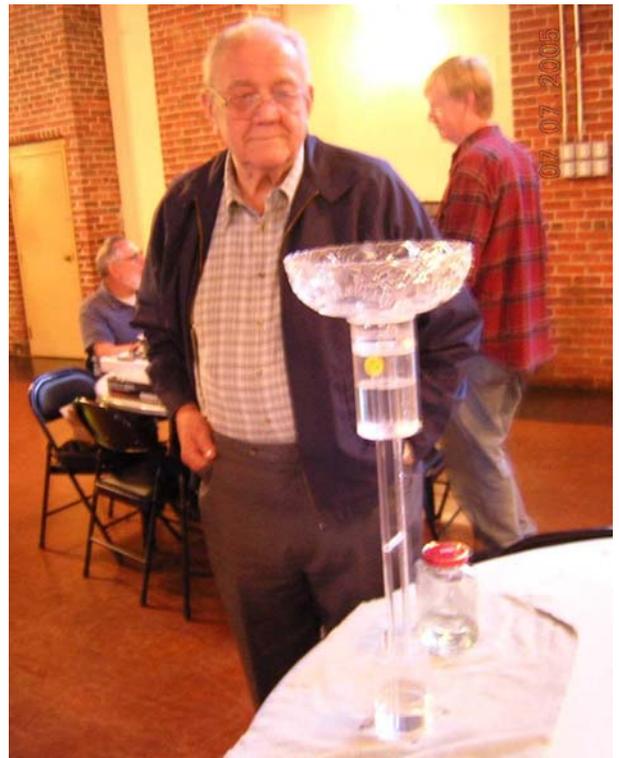
Ed Borgeson demonstrates his polar planimeter. They used to be a necessity for determining the area in steam-engine indicator diagrams.



Leslie Russell is making a scaled up (1 1/3x) 'Robin' engine and showed his progress:



Ed Wlodyka and his version of Hero's Fountain:



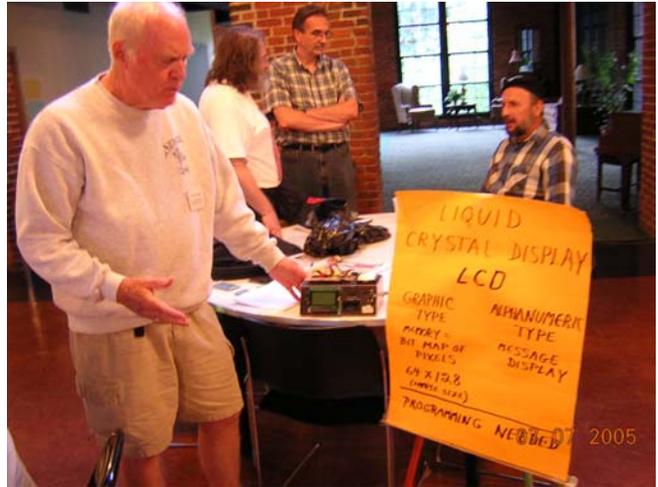
Patterns for an oscillating steam engine:



Gene Martha is looking for a way to build up the pin on this lawnmower crankshaft:



Larry Keegan demonstrating liquid crystal displays:



Steve Earl started making guns as a hobby. Now, with a bit of luck, it may be morphing into a business. Here are some of the parts he made on a Haas CNC mill:



Joe Donahue brought an attachment he made for his press brake:



The product: Good luck, Steve!



John Cosby brought the key part of a money feeder for a counting machine which also sorts the different denominations. Guess how the pattern was made:



Alan Bugbee brought a 'Tall man's walking staff' to have Henry Szostek check it out.



Ray Oehrtmann brought a little 'Elbow engine' and a beautifully-detailed Stuart 10

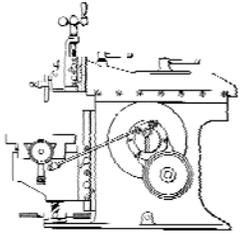


Henry Szostek brought a half-hull for a model yacht. *(Unfortunately, the photo can't be shown because it was infected by the out of focus virus - Ed.)*

Vern Eshbaugh's Clausing mill was missing a belt guard so he made a 'buck' and used it to cast a belt-guard out of fiberglass. When painted, it looks quite authentic



Max



Shaper Column

Kay Fisher

Collecting Shapers

How many shapers is enough? It is certainly not a frequently asked question. At one time I had 5: a Lewis 10-inch, a Logan 7-inch, a Rhodes 7-inch, a Pootatuck shaper casting kit, and one of those little PM research $\frac{1}{12}$ -scale kits. The last two don't hardly count and I have since sold off the Logan and Rhodes, but I recently acquired a Logan 8-inch that I am currently rebuilding – and it needs it.

But Shane Carr from Port Moody, British Columbia, Canada has been collecting shapers in a BIG way. A few months ago, when he had three large shapers, he sent me some pictures. Just recently he updated me with more pictures of all 5 of his shapers.



24 inch Elliot

Photo by Shane Carr

Shane's second shaper is an Elliot, 24-inch shaper, built in 1968. It came from the Wiser Lock Tool and Die shop, in Vancouver, British Columbia. He has the original bill of sale for \$7,500.00 in 1968.



36 inch Norton by G & E

Photo by Shane Carr

His third shaper is a 36-inch heavy duty Norton. Also built in 1968, it came from the United States Navy. The original cost stamped on the machine plate was \$20,500.00. It was made by the Norton Company in Worchester Massachusetts for Gould & Eberhart. The ram slide ways are chrome plated. It has Rapid Traverse in all directions. The setup above with the two vices is for making parts for window frames for a 1908 Interurban street car. The original parts were long rusted away. It makes the wavy part that holds up the window when placed at different heights. Shane made 80 new pieces from aluminum flat bar $\frac{3}{8}$ " x $\frac{1}{4}$ " x 30" long. He milled the wavy profile on both sides with a CNC milling machine. Next is splitting it in half to make two pieces. He made a fixture, put it in the two vices, and used an old parting tool. Shane says it worked



24 inch Cincinnati

Photo by Shane Carr

Shane's first shaper is a 24-inch heavy duty Cincinnati which came from Lansing, Michigan. It was originally from the Chrysler Junior Tool and Die plant. Built in 1968, it was one of the last shapers they built, serial number 3510.

great! He set the machine to 40 strokes per min. It took 20 strokes to split the parts. That was as fast as he could down feed the tool! Shane says he knew for sure this was faster than his CNC milling machine.



20 inch Smith and Mills Photo by Shane Carr

His fourth shaper is a 20 inch Smith and Mills.



28 inch Rockford Photo by Shane Carr

His fifth shaper is a 28 inch Rockford Hydraulic shaper which was built in 1979. He found it on E Bay. It came from a South Carolina, Power Plant. He had it picked up by a trucking company but when it arrived at his shop it had a 3 inch piece of cement stuck to the bottom of the machine base. Shane had to rent a jack hammer, block up the machine 2 feet and blast it for 6 hours to get flush with the base. He said it felt like he was carving faces in Mount Rushmore! The machine does not look like it was used at all. He ran it just to see how it works. It holds 45 gallons of oil and has an oil cooler on the side of the machine. Shane is looking for a manual for this machine.



Shaper Row Photo by Shane Carr

Shane now has them all set up in a row taking up 10 ft. x 40ft. of floor space!



Shaper Row view 2 Photo by Shane Carr

Shane says the machines are in new condition though he admits they need some chrome and paint work.



Shane and Daughters Photo by Shane Carr

You might ask what Shane does with a shop so large that he can devote 400 square feet to shapers. The above picture is Shane and his daughters on

Shane's steam locomotive #2816. For a very inspiring look at professional 7½" gauge model locomotive building - check out his web site:

<http://www.carrslocomotives.com>

Thank you Shane for that shaper story.

Keep sending me email with questions and interesting shaper stories.

My email address is:

KayPatFisher@Yahoo.com

Kay



***NEMES Gazette
Editorial Schedule
2005-2006***

Here are the closing dates for Gazette written contributions in the coming months:

<u>Issue</u>	<u>closing date for contributions</u>
September	8/19
October	9/23
November	10/21
December	11/18
January	12/23
February	1/20



In the News

Think before you swallow

If you remember Henry's story about the ball-bearing, you'll appreciate this one. Machinists and fellow tradesmen have more than once come to the aid of people who put metal objects where they don't belong.

It involves two friends and a key to a pickup. Arthur, a friend of the truck's owner, Andrew, played a little joke and pretended to swallow

the key. Well, the joke and the key went a little too far. Arthur tried to bring the key up, but was unsuccessful. So they made a trip to the hospital and got an x-ray, showing the key in Arthur's stomach. The doctor said Arthur would be OK, and the key would reappear in about two days.

Well, Andrew wanted to drive his truck now! So the pair took Arthur's x-ray to Al's Lock and Key of Denver, Nebraska. The locksmith had used all kind of ways to make a key before, but never an x-ray. However, the image showed the key in perfect profile. So the locksmith, always up for a challenge, took a blank intended for the model year of the truck, took measurements off the x-ray, and proceeded to cut a pair of keys. Andrew grinned as he put the key in the ignition and started the pickup. "I can drive my truck," he said, gleefully. Arthur said he learned a lesson from the ordeal; "Never put a key in your mouth."



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. \$5.00 shipping included.

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

Lathe for sale

Grizzly 8"x18" model 1550. Vee ways. Low mileage. Comes with 3 jaw, 4 jaw, face plate, steady rest, follow rest and other tooling. Mounted on really nice, solid, approx. 3' x 4', stainless steel table. \$400 Located in Nashua, NH Call 603-672-1223 between 8:00 AM & 10:00 AM or between 4:00 PM & 5:00 PM Monday - Friday Ask for Brent.

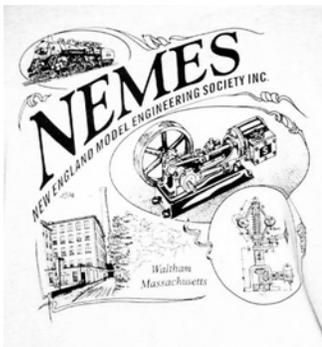


NEMES clothing

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

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



**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 or (508) 393-6290.

Bill

Aug 4 Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA
781-893-5410

Aug 6-7 Scribner's Mill Show
Sebago-Long Lake Region Near Harrison, ME
207-583-6455

Aug 7 Owls Head Transportation Museum
Convertible Meet & Antique Aeroplane Show

Aug 12-14 Iron Fever Expo
Model Engineering show and auction
Gary Schoenly 800-789-5068

Aug 13-14 Straw Hollow Show
Boylston, MA J.A. Resseguie 508-869-2089

Aug 17-20 Rough & Tumble Show
Kinser, PA 717-367-4970

Aug 20 Owls Head Transportation Museum
28th Annual New England Auto Auction

Aug 21 MIT Flea Market
Albany Street Garage, Cambridge MA

Sept 1 Thursday 7PM
NEMES Monthly club meeting
Charles River Museum of Industry
Waltham, MA
781-893-5410

Sept 9-18 Lee's Mills Steamboat Meet
603-476-5617
Lake Winnepesaukee, Moultonboro, NH
<http://www.steamboating.net/page87.html>

Sept 4 Owls Head Transportation Museum
Vintage Motorcycle Meet & Antique Aeroplane Show

Sept 10-11 Dublin Show
RT 101, Dublin, NH 603-495-3640

Sept 18 Owls Head Transportation Museum
"Made in the USA" Car Meet & Antique Aeroplane Show

Sept 18th MIT Flea Market
Albany Street Garage, Cambridge MA

Sept 24-25 Carnberry Flywheelers Meet
Edaville RXR S. Carver, MA
David Moore 508-697-5445



Web Sites of Interest

Sign up for the NEMES mailing list at:
<http://groups.yahoo.com/group/nemes>

Thinking of building a jet powered go-cart? Someone beat you to it.

<http://www.big-boys.com/articles/jetcart.html>

Gunsmithing with CNC tools. Scroll to the bottom of the page to see some neat solid model animations.

<http://cncgunsmithing.com/projects/1911a1frame.html>

This is a fascinatingly simple project. *Anyone* can make an electric motor using just a battery, a magnet, two paper clips, a piece of wire, a piece of sandpaper, and a rubber band. To prove it, we gave this design to 80 children, ages 4 to 14. With more or less help, each child was able to make a working motor in 20 minutes.

<http://fly.hiwaay.net/~palmer/motor.html>