July–August 2011

The PLS GAZETTE

A newsletter of the Pennsylvania Live Steamers, Inc.

Along the Main Line

I hope this message finds all of you enjoying the summer.

Last month at the PLS picnic we enjoyed a fine afternoon that involved great food (including homemade ice cream) and a wonderful afternoon run. Among the other things the membership meeting consisted of a review of the accomplishments over the past year that included a review of the 5 year plan and the new paved walkway to the clubhouse.

Our attention then turned to the "East Rahns" plan. After some discussion a vote was taken that approved Stages 1 and 2 that allows for construction of the 1½" passing track and yard tracks outside the tunnel towards Mercer Bridge. This raises the possibility of winter work for track panel construction, right of way preparation, and signal upgrades all designed to enhance the enjoyment of our railroad. For those of you looking for a project to help out on over the winter, here is your chance.

As of this writing we still await the return of Henry Blanco-White to the track. Several weeks ago Henry fell off of a ladder at the club and broke his shoulder. He has been recovering with intensive care. We have been keeping tabs on Henry's recovery and wish him well.

The same goes to Pete Heberer (aka "Little Pete"), who is still recovering from a stroke several months ago. We also wish Pete well in his recovery.

Last week, my son Colin and I enjoyed a few days in Michigan at the White Creek Railroad with my 7½" ten wheeler steamer. Russ Eldridge's track, at 5 miles and hundreds of switches contains some of the most fun one can imagine on the large layout format. Upon my return back home I was saddened to learn of the sudden passing of our member John Lukeasavge Sr. I got to know John and his son John Jr over the past few years and recall the great fun we all had together both at PLS and the Adirondack tracks. I know everyone at PLS respected the prolific amount of accomplishment for the short amount of John was active. John actively supported our club and assisted in our Steam bay roof project. John will be missed. See John's obituary on page 3 of this *Gazette*.

Finally let's look forward to the upcoming **Fall Meet** this September 2, 3, 4. As always this is the best time to come out and enjoy the many steam-

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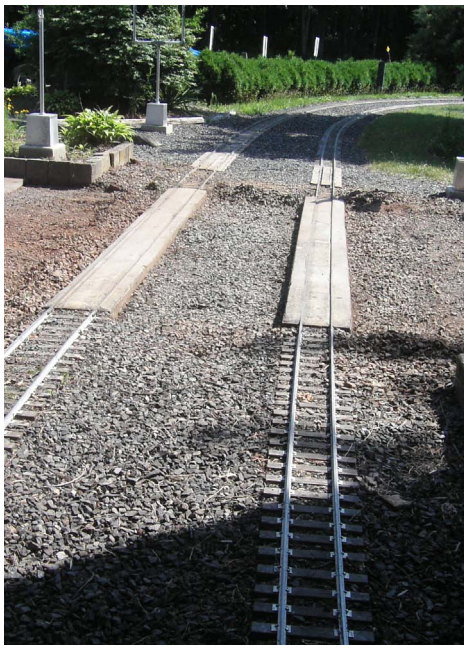
Drive and Walk-ways Repaved to Improve Access for Disabled

New asphalt was applied to carefully prepared areas on July 5th in order to make club access easier and smoother for everyone — especially those with disabilities. We are grateful to the crew including John Bortz Jr., Ron Shupard and Jim Rich who put in long hours on this.

— Walt Mensch,
Photos by Ron Shupard



Along the Main Line

(Continued from page 1)

ers and quality diesels in action. Your participation leading up the meet and during the meet is strongly encouraged. With run days still ahead on August 28th and September 25th (weather permitting), it is advisable for those who wish to visit only for rides on those days, to plan on between 11 AM-3 PM for the best opportunity. Otherwise any assistance from all members is appreciated.

See you at the track.

Pat Murphy, President, PLS

Successful July Picnic

Once again, John Geib and his family planned a wonderful PLS picnic. Great food, topped off with homemade ice cream, was enjoyed by over 125 people. Our thanks to you John.

Library Report

Several important developments have occurred to the PLS Library since we last reported in the gazette. These were largely initiated by the board and approved at a membership meeting.

- We now have a **library committee.**
- We are **adding** steam related **magazines.**
- We are storing them on new **shelving** in the **caboose.**
- We are converting our numerous train **VCRs to DVDs**
- We are offering some **free train books** with lots of pictures to young railfans.

To expand on these points, the **library committee** consists of Brian Delmonte, Lynn Hammond, Paul Rice and Ron Shupard. We have decided to **define relevant magazines** as those obviously covering—

a) live steam trains, i.e. *Model Engineer*,
b) miniature metalworking, i.e. *Home Shop Machinist,*
c) publications devoted to Prototype Trains of the Greater Northeast, i.e. *Keystone.*

Magazines: So far we have **418** issues of *Model Engineer,* **188** of *Live Steam*, **40** of *Modeltec*, **73** of *Home Shop Machinist,* **30** of *Garden Railways* and a smattering of others. Please note, at present there are still a lot of gaps in our magazine coverage. We hope to build complete collections so that members can find an issue to borrow or an article to copy at need. If you have any of the magazines that meet our criterion of relevance (see above) and are willing to donate them please consider us. In a way you won't be losing a set of magazines; because as an associate or regular member you will still have access to "your" magazines, not to mention lots of others. Almost all of these magazines are now stored in the locked **caboose** on the new **shelving** in chronological order for easy access. Please see one of us on a Wed or Sat morning or on a run day.

Donation Credits: The committee members would like to thank the people who have contributed magazines, books, or shelving (besides themselves). In particular Bruce Saylor contributed a very large number of books and magazines. Please ignore the fact that his arm is canted at a rather odd angle these days. In addition to Bruce, we would like to thank Pat Heller, Dave Taylor, Walt Mensch, Jim Salmons, Carl Miller, and Bob Freer (if we have forgotten anyone please let us know).

Donations Requested: In addition to the Magazines, we have close to 1000 books, videos and relevant documents which any member (associate or regular) may borrow for one month. If you have train related books, tapes, or DVDs that you would be willing to give the club we would be very grateful. As has been noted on these pages before, we do not keep contributions of items which we already have and sell or even give away the duplicates. We have a catalog of all the items so that you may see beforehand what would not be kept.

Free: We have a small number of duplicates left—amongst them a number of popular books on trains in general which are loaded with pictures. They would be a great gift for the budding railfan of all ages. If you would like to encourage the development of train interest in someone you know. Please stop by and pick up one of these free books or some magazines.

— Lynn Hammond

PS: Anybody want to be on the library committee?

Pennsylvania Live Steamers, Inc.

President	Patrick J. Murphy	2439 Overlook Drive, Gilbertsville, PA 19525	PMurphy129@aol.com
Secretary	Robert Blackson	303 North Tulpehocken Road, Reading, PA 19601	PennsylvaniaLiveSteamer@comcast.net
Treasurer	Walter Mensch	1348 Sheep Hill Rd., Pottstown, PA 19465	
Gazette Editor	Allen Underkofler	Box 609, Kimberton, PA 19442-0609	pls@apunderkofler.com

Board of Directors: John Bortz Jr., jonyx@netzero.net; Sharon Connelly, connellywood@verizon.net; Bob Freer, W3YLT@Juno.com; John Geib, steamer38@comcast.net; Paul Rice, ricepaul@verizon.net; Ron Shupard, shusmoke@aol.com.

Safety Committee Members: John Geib, chairman; Buddy Borders; Pete Brown; Pat Murphy; Bruce Saylor.

Pennsylvania Live Steamers, Inc. • P.O. Box 26202, Collegeville, PA. 19426-0202 • 610-454-0477 • www.palivesteamers.org

2011 Fall Meet

As we prepare for our 2011 Fall Meet, it is again time to remind all members that we *depend* on you for donations of baked goods for Friday, Saturday, and Sunday of Labor Day Weekend. And, as always, please consider volunteering some time to staff the kitchen/snack areas—just sign up when you arrive on either Saturday or Sunday.

Reminder: During the meet, the clubhouse refrigerators are used for food and drinks sold by PLS throughout the weekend. Should you need refrigeration for either personal use or items brought for the potluck dinner, please use your own cooler.

Membership Gauge

As of July 31, PLS has:

100 Regular Members
285 Associate Members
8 Honorary Members

2011 PLS Calendar of Events

Saturday, August 20	Board of Directors Meeting - 9:30 AM Membership Meeting - 12:30 PM Afternoon/Evening Run
Sunday, August 28	Run Day - Members & Guests
Friday, Sept. 2	Fall Meet - Members & Guests
Saturday, Sept. 3	Fall Meet - Members & Guests
Sunday, Sept. 4	Fall Meet - Members & Guests
Saturday, Sept. 17	Board of Directors Meeting - 9:30 AM Membership Meeting - 12:30 PM Afternoon/Evening Run
Sunday, Sept. 25	Run Day - Members & Guests

Donation Acknowledgements

PLS wishes to thank the following members for donations received during June and July: Robert C. Bergey, Barry Shapin, and Duane Quenzel. Thanks also to the BCP Bicycle Club and the Jerusalem Lutheran Nursery School and Day Care.

Club Membership News

PLS welcomes new Associate members Robert B. Croston, Jay Desai, Joseph L. Marshall, Jeffrey Jacobsen, Deanna Schniers, William W. Kling, Sylvia G. Fulton, David Forte, and Jo Anne Raymond.

John George Lukasavage

John George Lukasavage, 63, of Shavertown, a well-respected local architect, passed away unexpectedly Friday, July 29, 2011, at his home. Born in Kingston, John was a son of the late John and Anna Yarmel Lukasavage. He was a graduate of Central Catholic High School, Kingston, and attended Penn State University, Lehman Campus. John was a self-employed architect running his architectural firm, JL Associates, Bennett Street, Luzerne. He was a Registered Architect in Pennsylvania, New York and New Jersey since 1979. He was also a local entertainer, well known as "Johnny Chrome." He loved karaoke and was the life of every party. An avid train enthusiast, he and his son, John, belonged to several live steam clubs in Pennsylvania, New York and surrounding areas. John enjoyed building trains with his son and "spending time in his garage." John was a loyal Phillies fan, never missing a game. He was not only the best of dads to his son, John, but his best friend as well. He loved spending time with his grandson, Jack, encouraging him in baseball and basketball. He will be sorely missed by all who knew him. Surviving are son John Lukasavage; grandson, Jack; sister, Irene June; brother, Dan Lukasavage; many nieces, nephews, cousins and a huge amount of friends.

— *Extracted from* The Times Leader, *Luzern County*

Tap Tips

By Bob Thomas

Successfully Tapping Small Holes

The most dreaded sound in model engineering is almost no sound at all. It is the muted, barely audible, **plink** made by a small tap as it breaks. If any of the broken tap is sticking outside the hole there is a good possibility of backing it out. However, if the end of the tap is down inside the hole and not easily accessible, the chances of extracting it range from difficult, to expensive, to impossible. The best way to avoid those dismal possibilities is to not break the tap in the first place, and there are several things that can be done to help accomplish that.

T-handle tap wrenches are fine for tapping larger threads, but for small threads, which are the subject of this article, something more controllable is required. One reason a T-wrench almost guarantees breaking a small tap is our natural inability to apply equal turning moments to each side of the T-handle. The resultant off-axis force tends to bend the tap, with possibly disastrous results. In addition to that, resisting torque of the tap is difficult to feel or estimate when it is being turned so remotely through a long handle that is physically isolated from the tap. And finally, any small involuntary twitch of the unsupported hand is magnified by the remoteness of the T-handle from the tap. One way or another, there's that **plink**.

Breakage of small taps can be virtually eliminated by utilizing simple shop-made knurled knobs to hold the taps. Photo 1 shows a conventional T-wrench with a 2-56 tap in comparison to a variety of these knobs holding taps in sizes of (left-to-right) 4-40, 2-56 and 00-90. In use, the knob is grasped between thumb and forefinger so it can be easily turned with the hand quite close to the workpiece, eliminating effects of arm and hand motions associated with T-wrenches. On-axis rotation is easily imparted through the knob directly to the tap by small, well-controlled finger movements that are quite sensitive to variations in the tap's resisting torque. Stability of the whole operation can usually be improved by resting the hand on a work surface or even the workpiece, if it is massive enough.

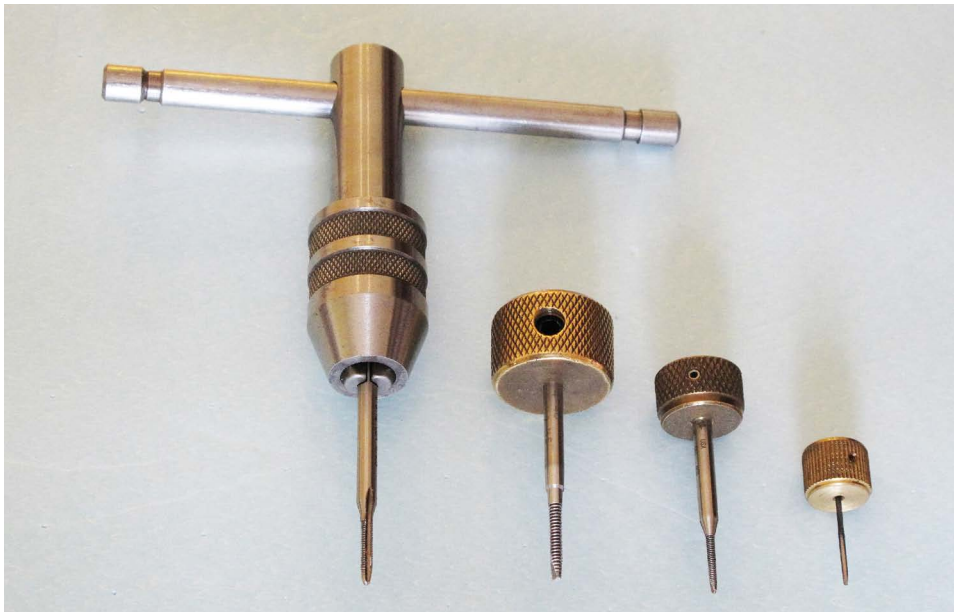


Photo 1. T-wrench with 2-56 tap along with knobs holding taps of 4-40, 2-56 and 00-90.

My knobs are made of brass in a variety of diameters, depending upon tap size. The 4-40 knob is ⅞" diameter, ⅝" seems about right for 0-80 to 2-56 taps, and the smallest is ⅜" diameter. A set screw holds the tap in place. Although most of my knobs have a diamond knurl, I have found that a straight knurl is better for aligning the tap correctly. Make several knobs at once so you don't have to keep changing them for each size of tap.

Commercial tooling is available that simplifies tapping while reducing the possibility of breakage. The tap holder at the top of Photo 2 is used for threading axial holes in a lathe with minimal danger of over-stressing the tap. It consists of a polished shaft held in the tailstock chuck, and a knurled sleeve with integral tap chuck that can slide back and forth and rotate smoothly on the protruding shaft. The tap is started by manually turning the knurled sleeve with the lathe spindle stationary. Tapping can then proceed by continuing to turn the sleeve, or the lathe can be started at low speed while penetration of the tap is controlled by appropriately holding and releasing the sleeve. This method can be tricky until skill is acquired, but it speeds-up the operation, particularly if the lathe can be reversed rapidly for backing-out the tap. If the tap seems to be resisting too much, just let go of the sleeve which will freely rotate with the spindle until steps can be taken to free the tap. The tap chuck on the unit shown leaves a lot to be desired, but overall, this is a useful addition to the shop and is well worth its price of about $15.

The tool shown at bottom of Photo 2 is very helpful to align the tap exactly at right angles to the surface of the workpiece, whether it is flat or round. The tap is held in a long cylindrical body that can slide up and down in a machined base. Cutouts in the sides of the base permit observation of the

Photo 2. (Top) Tap holder for use in a lathe. (Bottom) Tap for right angle cuts.

threading process. A V-groove in the bottom of the base facilitates tapping cross-holes in round material. It is used by pressing the base against the surface of the material being threaded, then simply turning the cross handle, being especially careful not to apply excessive torque with small taps. At around $15 from most tool suppliers, it is a valuable asset in the shop.

So much for tap wrenches; how about the taps themselves? One important consideration is the number of longitudinal flutes in the tap. Flutes distribute lubricant and act as an escape route for small chips that accumulate as the tap cuts the thread. Two-flute taps provide the largest pathway for those functions, but they also result in a tap with the least cross-sectional area. Two-flute taps, therefore, are the most efficient but also the weakest. Three- and four-flute taps are stronger but their flutes might have to be cleared by backing the tap out several times while tapping a hole. For average model work, 3-flute taps are a good compromise for 4-40 and smaller threads.

Another variation in taps is the way threads build up from nothing to full thread at the end of the tap where the threading process begins. Standard taps are available in three broad types:

1) ***Taper:*** There is a long section where threads increase in diameter from root diameter of the thread to full thread. Used for starting the thread in tough material.
2) ***Plug:*** Only the first few threads are tapered from root- to full-diameter to give the tap a start for average threading in all but the most difficult situations.
3) ***Bottoming:*** Full threads are cut almost right up to the end for making threads to the very bottom of blind holes. Amateurs usually make bottoming taps by grinding the ends square with a slight chamfer on of taps they have broken (ahem!)

In addition to those three variations, "Gun Taps" are available with a complex point shape that greatly eases resistance when tapping through-holes, i.e., non-blind holes. They obtain their desirable properties by generating curly chips that are forced ahead of the tap, so the flutes don't become clogged. That means they should not be used for tapping blind holes, where chip accumulation in front of the tap will eventually jam it as it approaches the bottom of the hole, making it very difficult to back out. Gun taps make threading like cutting through butter when they are sharp, so it pays to have one for each size thread commonly used. Most taps have a conical point on the end left over from machining the blank during manufacture. The cone is useless after the tap has been made and be ground off to permit threading deeper into blind holes. Use a fine grinding wheel and hold the tap by the threads close to the wheel, not the shank, otherwise the tip might catch and break off the whole threaded part.

Tool catalogs often list taps with an "H" designation, e.g., H2 or H3. The number is the number of thousandths of an inch the tap will cut oversize. When there is a choice, H2 is the best way to go. Other choices commonly offered at extra cost are various kinds of hard coatings, such as Titanium Nitride (TiN). While such coatings have an undisputed advantage in commercial applications, their value is indefinite for home shops where normal use can wear off the coatings prematurely, so I avoid their significant price supplement.

Taps are available from a number of sources such as MSC, Travers Tool, McMaster-Carr, Harbor Freight, and numerous Asian internet stores. However, when it comes to a tool as delicate and as crucial to success as a small tap that will be used in a part where many hours have been invested, it is uneconomical to take a chance with dubious quality. It is worthwhile to pay more and "Buy American." Even though an 'American' tap might be made overseas these days, it is subject to domestic quality standards and backing of the vendor's reputation. Stick with Cleveland or Greenfield and sleep at night.

Lubrication is important when tapping. Low viscosity cutting fluid, like Tap Magic, should be used with small taps. A grade specially intended for aluminum is also available. A four ounce can of either type with a plastic spout for convenient application and lasts a long time. In a pinch use WD-40 or kerosene.

There need not be any trepidation about tapping small threads. Just relax, pay attention to the tips described here, and *have patience.* Although smaller live steam locomotives, of necessity, use numerous small threaded parts, even 1.5" scale locomotives benefit from a proliferation of small exact-scale fasteners – see Dave Sclavi's 1361 for proof!

Shop Tips

If you are a small shop owner like me and you don't have all the machines you want you will always have from time to time a part you need to repair or make from scratch and your machines are too large or too small to do the job.

One solution I use to drill those small holes when your large drill press won't hold a drill under 3/64" is a small drill chuck salvaged from a defunct power drill. Often the only quality part in these tools is the chuck, sometimes it is even a Jacobs brand chuck. If one of your small drill motors is smoking you have a prime candidate for a small chuck. I use such a chuck in my large drill press and can drill holes down to 1/32" without breaking many. I can't see anything smaller than that anyway.

The photo at right shows the set up. A second way I make use of these chucks is to hold them in a three jaw chuck on my lathe. This allows me to hold small stock for things like hand rail posts, greatly reducing the amount of wasted material. See photo below, right. You're lucky if you have collets. They are hard to find for the machines I have. I hope this helps someone as much as it has me. The photo below shows one of the chucks after removal from the drive. And, yes, it was still smoking.

— Ron Shupard

Carl and Barbara Miller enjoy the homemade ice cream at the annual club picnic on July 16th.

Bashin' It

Another Gauge 1 Kit Bash by Harry Quirk

Prior to 1975 Aster LLC built mechanical business machines and cash registers but were facing new competition in the electronic field which they did not want to enter.

Antonio Coluzzi, founder and owner of Fulgurex, an importer of Tenshodo brass electric powered locomotives in O and HO gauges, was looking for someone to build and market a live steam locomotive in Gauge 1 for the European market. He had the money and was willing to back the venture. With help from John vanRiemsdyk he made a proposal to Tenshodo, who passed it on to Aster who, wonder of wonders had two live steamers on their staff. The result was a British 4-4-0 Schools-class alcohol-fired locomotive. Coluzzi kept backing Aster. The result was more British, French, German or Swiss engines, all of which I decided I could not kit bash and make into American outlines.

Aster's 1979 catalog listed a French 2-4-2 mikado. These mikados were built for the French railways in the U.S. and Canada after WWII because so many of their engines were destroyed by the Allies and Germans. They were a combination of American and French designs.

I knew that was the engine I wanted. As you can see by the pictures it did not take much to convert it, a new pilot, headlight, bell and some additional piping after removing the buffers, smoke deflectors etc.

My brother, Paul did me one better. He installed a Wooten firebox and a Reading cab on his.

Except for a Reno and a Baldwin 0-4-2 Aster did not offer a locomotive for the American market until 1983 when John Gummo financed a NYC Hudson, and also a PRR K-4.

— Harry E. Quirk

The original Aster Mikado is shown below. Next, Paul Quirk's version with Wooten firebox and Reading cab alongside Harry's version. Below right, front view of Paul's engine. Bottom: side shot of Harry's finished project.

The
PLS GAZETTE
P.O. Box 26202
Collegeville, PA 19426-0202

FIRST CLASS