STACK TALK

JUNE 2015

The Official News Letter of the Adobe Mountain Railroad
Phoenix Arizona, Operated by the Maricopa Live Steamers
Railroad Heritage Preservation Society,

This year is already half over, where has the time gone?

There is a lot of work that has been done on the track that was washed out, and a long way to go. There is room for a lot of help, so if anyone feels like they want to work on track, I guess the club could use your the help.

Pete has been overseeing the work in Friend Ship park and it looks like there has been a great deal of conduit installed; it will make the lighting for Christmas lights a lot better, easier and safer. I am told that the computer program is a thing to behold, can't wait.

Fire ban is in effect, we will let everyone know when it is lifted. Please heed the alert thank you. To go along with the fire ban the heat is here as well, please make sure that you have the water you need when you are out on the track and a cell phone is also a good idea. Think safety at all times.

For the ones that are going out of town on vacation, we would like to see you back so drive carefully, remember it is the other guy that will get you.

Weeds are still a problem, keep in mind it is your club and no one else's, please help take care of the weeds.

There are some of con x boxes that still need covered, and some others that need repair. The boardwalks are not safe, nails sticking up, keep in mind that it is yours to take care of. For safety and looks please get them done.

Time to get off my soap box, I believe that I have said more than I should have. Have a great summer.

Cliff Fought

Facebook

I know, to most of us that is a bad word. Many of our members don't even realize we have a Facebook page (www.facebook.com/trainrides). We have heard the terrible things that happen on FB. Such horror stories from our friends great-aunts whose second cousin knew someone that might have gotten a computer virus from FB. Yes, bad things can happen anywhere on the internet. If we pay attention to what we click on and set time limits on how long we will sit in front of the screen surfing we can probably come away unscathed.

Why do we browse FB? See what friends and family are up to. Look at other clubs to see their latest endeavors. And support our train club. John Bergt and I started a FB page for MLS public runs over 4 years ago and some of our photos and videos receive in excess of 2,500 views. Our Holiday Lights entries are very popular bringing more guests to the park to join the fun. Our Sunday run photos showing crews, birthday parties and Junior Engineer School promote the club as well as any advertising could do. We can advise guests if we are closing due to weather, or have special guests such as Mr. and Mrs. Clause for the Christmas runs. I post photos of almost every Junior Engineer that takes student training. And then those photos are shared by the families so their out of town relatives can enjoy them as well. One of the most popular posts are our crew photos, gathering many views week after week. even our guests post some of their photos.

How do we browse FB? It does require providing your email and creating a password. I have never gotten any spam mail that can be traced to FB. A smart move is to create a disposable email address just to use on the internet for any page you visit that requires an email address. Go to gmail, yahoo, outlook.com or many others and create an email address and password. Use this one for everything other than emailing friends. Head over to facebook.com and sign up with your new email address. Create a strong password using special symbols for letters to make it impossible to guess. Use ! for I or @ for A. You can choose to use your real name or an alias. Enter some of the information like what city you live in or leave it blank. Then visit our maricopa live steamer public runs page and start browsing 4 years of photos, videos and articles. If you see something you enjoy, click LIKE below the item. If we see more likes on one item over another, we'll try to do more of what people LIKE. John and I watch every post on the site to prevent any malicious links or negative comments from being posted. In 4 years we have yet to have any of those posted.

But we already have an MLS web site? The web site provides information about the club, rules, engineers tests and such items. But it takes time to design and build all the pages for a web site, so it doesn't get updated as quickly as FB. Being a public, interactive site allows FB to be fresh everyday while maintaining a history of all the posts. People visit frequently to see what is new and read about upcoming events. Last month I was given a birthday invitation to Silas' fourth birthday using a photo I took at Junior Engineer School and posted on FB. And then I was able to post that invitation on FB the same night helping Silas celebrate.

So what are you waiting for? Sign up and see what we have been doing....

hank gallo

Railroading

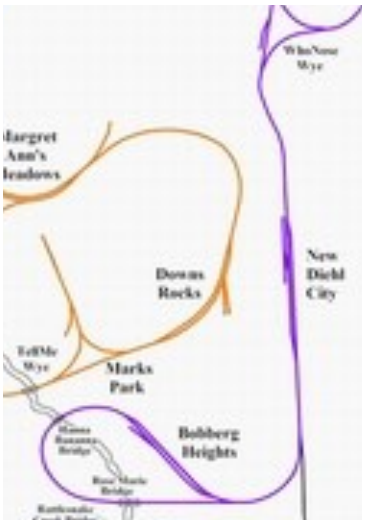
Absolute Block Signaling (ABS)

Modern control of train traffic is nothing short of a miracle. The advanced automatic signaling systems and the amazing use of detection systems, such as automatic speed and signaling monitoring, has surely made the railroad an extremely safe transportation medium. However, all modern signaling systems, even the one used here, follows the same basic principle as the Absolute Block Signaling system used throughout England in the late 19th and early 20th century.

Before the ABS system, railroads utilized a time table scheme, in which trains were kept separated by schedule. This proved, however, problematic for several reasons. For instance, if a train fell behind schedule, it could throw the entire system off, or worse, cause an accident. It also did not allow for flexibility; changes such as an addition or subtraction of a train, or a time change could not be made. Although the advent of the telegraph allowed for some flexibility in the system, It was not the most ideal system for controlling traffic. (By the time the telegraph was invented Absolute Block Signaling was already being implemented in the United Kingdom, however, the United States still had the time table operations.)

Early block signaling had watchmen, originally called policemen, placed at each section of the railroad with stopwatches and they would time the distance between the last train to pass and the oncoming train, and then used hand signals to tell the engineers if they should slow down or speed up. The problem with this was that the watchman had no idea if the section was actually clear of the previous train, so many accidents had occurred because of this early block signaling.

When the telegraph was invented, it allowed for the creation of Absolute Block Signaling. The ABS system can be separated into two parts: the basic scheme of the blocks, or sections, of the railroad, and the system of communication used to function the ABS system.



Each sub-division of the railroad would be separated into sections, each one called a block. The ultimate goal was to keep only one train on each line in a block. If the block has only one rail line, then only one train could be let into the block at a time. Our railroad signaling works in much the same way. In each block there are several signals to give you an indication on whether to proceed, slow down, or stop. If a train where to be heading, for example, past Bobberg Heights to New Diehl City and a train occupied the single section track west of New Diehl was occupied by another train, then the train heading west would not be allowed to enter the block in between New Diehl and WhoNose Why. Of course, unlike in England, it is a bit more simplified and it is automatic.

In England, each block had a dedicated signalman and signalman tower. A bell and telegraph system were used to communicate with the previous block signal tower and the next signal tower. Each communication device had two telegraph arrows on the front. The top telegraph was for the departing train in your block and was used to communicate with the next block, likewise, the bottom was for receiving communications from the previous signal tower. Much like air traffic control today, the signalman must acknowledge commands or requests. To communi-

cate with the previous and next towers a bell system was designed where specific requests could be given and acknowledged. A certain amount of bell rings indicated to signalman the type and status of the train.

If you wish to learn more about modern railroad signaling, I encourage you to read *Railroad Signaling* by Brian Solomon. I hope you enjoyed this article and learned something new. **If you have questions, comments, requests, or concerns, please email me at Gabezorbas@gmail.com**

Article submitted by Gabe Zorbas

SAHUARO CENTRAL UPDATE

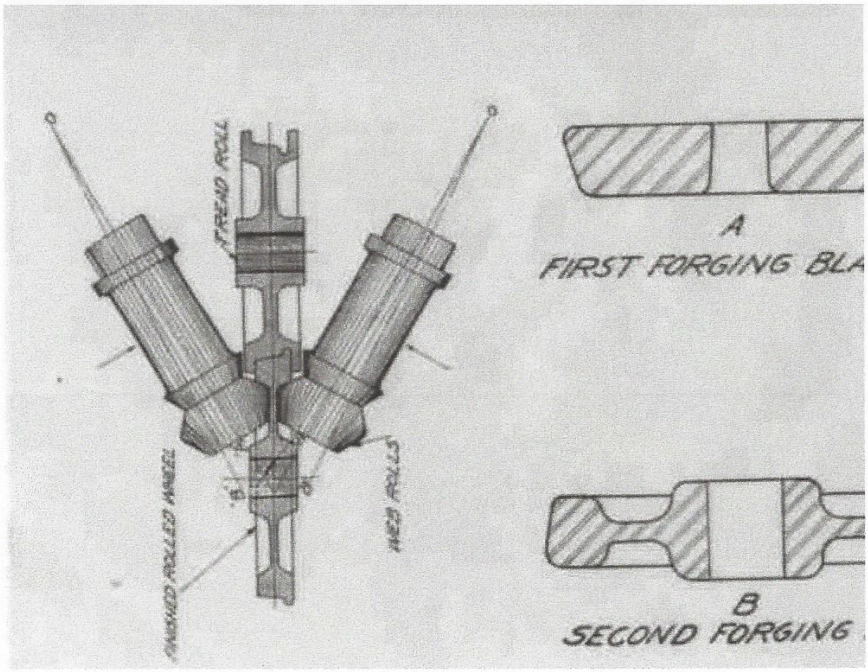
Now that the 14" guage Engine has been rebuilt, it needs a place to run. Plans have been drawn more used track has been acquired and grading has begun on the route.

STEAM LOCOMOTIVES
DRIVING WHEEL TIRES

This time we'll take a look at driving wheel (and sometimes truck wheel) tires.
The very early engines used wooden wheels with a flat band of iron shrunk on its circumference, then another piece of iron formed in a circle was bolted to the back of the wheel to provide the flange. Didn't take long for this method to be found wanting!!

In order to incorporate the flange into the tire the use of cast iron became prominent. This lasting up to about 1870, when steel began to make its appearance.

A steel tire is made by rolling a hot, round,slab that has been pierced in the center between rolls that gradually form a ring. This ring is then again put through another set of rolls that forms the profile of the tire. We now have a rough tire, only needing to be machined for a final fit on the wheel center.



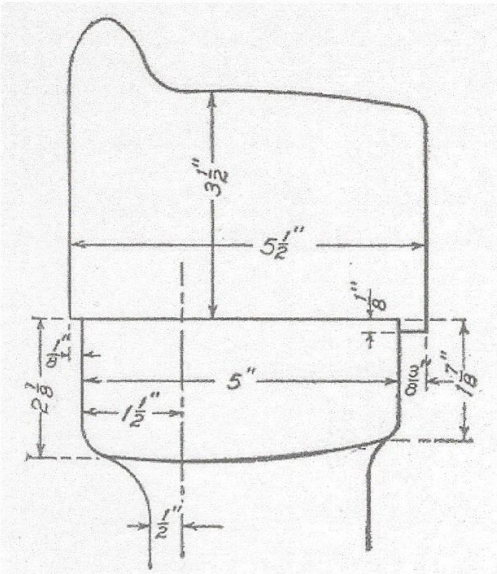


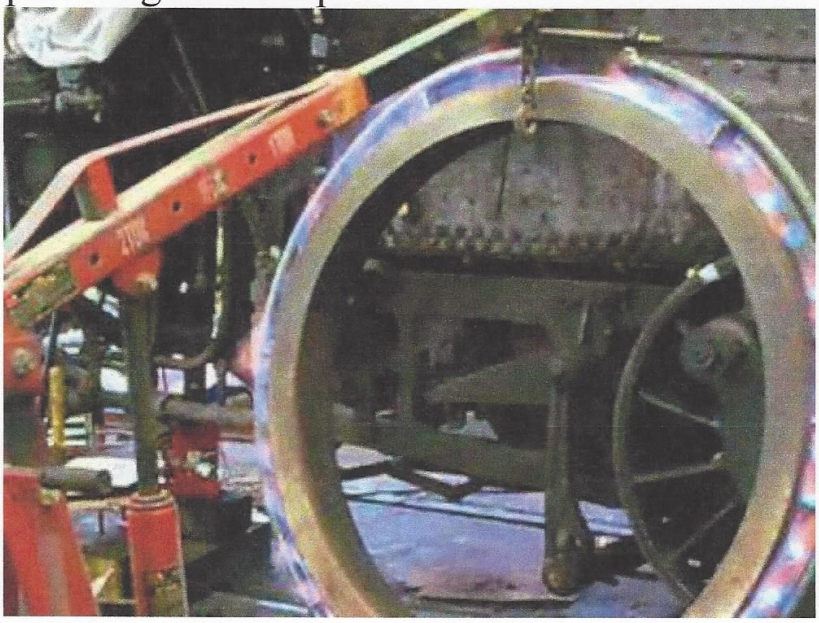
Fig. 73. Section of Rim of Driving Wheel.

It can be seen in the drawing above, that the tire has a lip on the outside that provides proper location of the tire on the wheel, specifically to maintain the proper back to back distance of the flange dimensions.

Here is a picture of the tire being bored to a dimension SMALLER than the diameter of the wheel center in order to provide the interference necessary for a shrink fit on the wheel center.

Tires are heated from 400 to 600 degrees F, then set on the wheel center

and allowed to cool. This is called a shrink (or expansion) fit. The term "sweating" is not correct when it comes to tire work, rather, when doing soldering in plumbing for example!



Here is a tire being heated using a tire heating ring, it wil bring the tire up to temperature in a very short time. The wheel center is in the back ground ready to receive the tire.

This is Brad Robinson running the wheel lathe at The Strasburg Railroad,

takes a bit of courage to stand between the rotating wheels to get the job done, but that's the way it was done, and still is!! You really have to pay strict attention to what you're doing here, notice what he has to stand on, very difficult work. When the tire has been fit to the wheel it is many times sent to the wheel lathe for final truing of the tread profile and to have them run truly round.

Again, there is much more about tire work, this being just scratching the surface!!

Take care,
Dave

DAVE GRINER

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Engineer cards expired on May 31st Now is the time to take your test. It can be taken online at:

Maricopalivesteamers.com

I want to thank John Bergt for all his assistance as Public Run Coordinator for the last 4 years. He has gotten so busy starting his new business and he is also Chairman of the Long Range Planning Committee so he is turning over the position. Please welcome John Broughman as the new Public Run Coordinator. You will be hearing from him over the summer as he sets up our Sunday and December run crew schedules. Please do your best to sign up for one or more shifts each month. We continue to gain ridership and need assistance in all positions from run crews, gift shop and gate keepers. My Thanks go to John Draftz for his assistance over the last 7 years as well.

Hank gallo

Does this building look out of place? Well it is the concession stand from Adobe Station. It has been moved temporarily while the Station is being rebuilt to move the concession stand and provide a separate exit walk way, needed to provide a smoother flow of people during the Christmas runs