THE FLATWHEEL

The Official Monthly Publication of the Central Florida Railway Historical Society, Inc.

August 2013

August Meeting

Monday, August 12th at 7:00 PM
Central Florida RR Museum
101 S. Boyd St., Winter Garden, FL

Program: White Pass & Yukon RR Video
By: Clarence Hurt
Refreshments: Ken Murdock

September Meeting

Monday, September 9th at 7:00 PM
Central Florida RR Museum
101 S. Boyd St., Winter Garden, FL

Program: Colorado Scenic Train Rides
By: Clarence Hurt
Refreshments: Irv Lipscomb

Central Florida Railway Historical Society, Inc.
Central Florida RR Museum Host Duty Schedule — August 2013

DAY	DATE	HOURS	MUSEUM HOST
Saturday	8/3/13	1 P.M. – 5 P.M.	Jarrod Reynolds
Sunday	8/4/13	1 P.M. – 5 P.M.	Jerry & Ginger Honetor
Saturday	8/10/13	1 P.M. – 5 P.M.	Chuck Ansell
Sunday	8/11/13	1 P.M. – 5 P.M.	Richard Bazzo
Saturday	8/17/13	1 P.M. – 5 P.M.	Allen Quinn
Sunday	8/18/13	1 P.M. – 5 P.M.	Mike Kelly
Saturday	8/24/13	1 P.M. – 5 P.M.	Irv Lipscomb
Sunday	8/25/13	1 P.M. – 5 P.M.	Phil Baker
Saturday	8/31/13	1 P.M. – 5 P.M.	Dan Crusie
Sunday	N/A	1 P.M. – 5 P.M.	N/A

Dates To Remember

October 4-6 — Annual Music Fest Event in downtown Winter Garden. The CFRR Museum will be open during most show hours all 3 days. There will displays in the Museum by the LEGO group and telegraphers group.

November 23, 2013 — Winter Garden, FL — The 100th Anniversary Celebration for the Tavares & Gulf Railroad's Depot. The CFRR Museum will be open from 10:00 AM to 5:00 PM with special displays all day. The recognition ceremony begins at 2:00 PM.

December 7, 2013 — The CFRHS Annual Meeting is scheduled to be held at the 801 City Grille, Corner of Eighth & Montrose Streets in downtown Clermont, beginning with a social hour at 6 PM, followed by dinner at 7 PM and installation of the 2014 officers at 8 PM. There will not be any program. Entertainment will be Armando Valesquez on the piano.

Please Note:

There Will Be No Museum Work Session In August.

August Birthdays

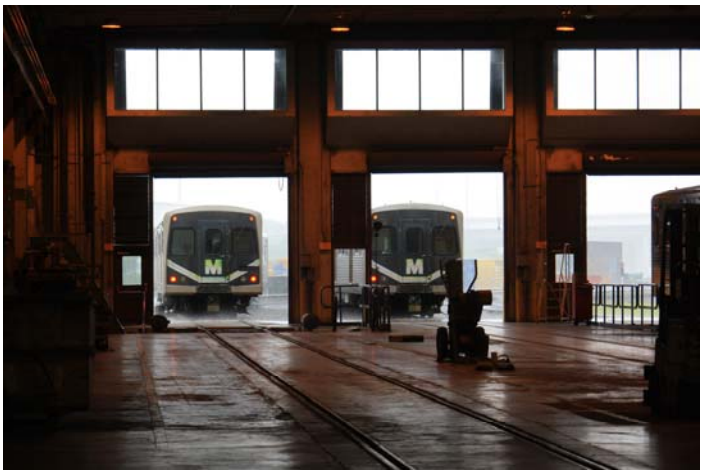
Debby Dusenbury 8/1
Jim Benson 8/8
Carole White 8/12
Clayton Bishop 8/25
Les Westlake 8/26

Al Pfeiffer's Photo Corner

This feature focuses on photos taken by former Society Friend Al Pfeiffer. Over the years, Al has taken thousands of photos related to our favorite hobby and he would like to share some of them with us. Each month, three of Al's photos are featured.

Cemex #661, an Ex-FEC GP9,at Medley FL, 9/23/11.

Cemex #25138, a SW-8 switcher, at Medley FL, 9/23/11.



Looking out from inside the Miami- Dade Metro Shops at Hialeah FL, 9/23/11

This Is The Way It Was

This monthly photo column by Ken Murdock features railroad scenes of the past, a look back into railroading's history.

This April 1, 1914 scene is of Seaboard Air Line's depot on the north side of W. Central Ave. in Orlando. The depot was built to identical plans of SAL's Ocala depot. SAL 4-4-0 #506 had a full load of wood as it tended to its local switching duties. - *Donated by Claude Hunter, SAL's freight agent*.

A combine is spotted at the platform of SAL's Orlando depot in this circa 1950 scene. The combine provided passenger service to Wildwood on mixed train #608 where a connection was made with SAL's main line named trains. Passenger service on the Orlando branch would be terminated by the end of 1954. – *CFRHS collection*

This circa 1954 scene of SAL's Orlando depot near the end of passenger service finds RS3 #1651 ready to depart for Wildwood with train #608. As it left town, it would stop at Modello Yard along U.S. 441 and pick up its freight cars. Sadly, the depot was razed in 1955 to make way for a city parking lot. – *ACL & SAL HS collection*

Upcoming Events

August 12, 2013 — Winter Garden, FL — Monthly Meeting of the Central Florida Railway Historical Society at 7:00 PM in the Central Florida Railroad Museum, 101 South Boyd Street.

August 17-18, 2013 — The Villages, FL — The Villages Summer Train Expo, at the Savannah Center, 9 am – 4 pm Saturday, 10 am – 3 pm Sunday. Contact: Alan Goldberg, 352-205-4322, amgold15@hotmail.com, Website: http://villagerailclubs.blogspot.com.

September 9, 2013 — Winter Garden, FL — Monthly Meeting of the Central Florida Railway Historical Society at 7:00 PM in the Central Florida Railroad Museum, 101 South Boyd Street.

October 5, 2013, DeLand, FL — Florida Rail Fair Model Train & Railroad Artifacts Show & Sale, Lawrence Arena, Volusia County Fairgrounds, 9 to 4. Details: Charlie Miller, (703) 536-2954 or rrshows@aol.com, www.gserr.com/.

October 4-6, 2013 — Annual Music Fest Event in downtown Winter Garden. The CFRR Museum will be open during most show hours all 3 days. There will displays in the Museum by the LEGO group and telegraphers group.

October 9-13, 2013 — The Friends of the Railroad Museum of Pennsylvania is hosting a Catskills & Saratoga Springs Ramble to New York State during the colorful, fall foliage season are train rides on the Rip Van Winkle Dinner Train of the Delaware & Ulster Railroad, Catskill Railroad, Saratoga & North Creek Railway and Cooperstown & Charlotte Valley Railroad, as well as two trolley rides. Also featured are visits to the Kingston, New York Trolley Museum, Empire State Railway Museum, National Museum of Racing & Hall of Fame in Saratoga Springs, Train Station Museum, Adirondack Museum, Baseball Hall of Fame in Cooperstown, Electric City Trolley Museum and Steamtown National Historic Site. Four nights' hotel accommodations, four breakfasts, four lunches and five dinners are included. Register at http://www.rrmuseumpa.org/membership/rambles/Catskills-Saratoga-Springs-Ramble-2013.pdf.

October 12-13, 2013 — Sunshine Region NMRA's Florida Railroad Expo, Bradenton Area Convention Center, 1 Haben Blvd., Palmetto, FL, 10 am—4 pm Saturday and 10 am to 3 pm Sunday, Admission $6. More info: e-mail SunshineRegionTrainShows@SunshineRegion.org.

October 14, 2013 — Winter Garden, FL — Monthly Meeting of the Central Florida Railway Historical Society at 7:00 PM in the Central Florida Railroad Museum, 101 South Boyd Street.

November 11, 2013 — Winter Garden, FL — Monthly Meeting of the Central Florida Railway Historical Society at 7:00 PM in the Central Florida Railroad Museum, 101 South Boyd Street.

November 23, 2013 — Winter Garden, FL — The 100th Anniversary Celebration for the Tavares & Gulf Railroad's Depot. The CFRR Museum will be open from 10:00 AM to 5:00 PM with special displays all day. The recognition ceremony begins at 2:00 PM.

December 7, 2013 — The CFRHS's Annual Meeting – Scheduled to be held at the 801 City Grille, Corner of Eighth & Montrose Streets in downtown Clermont, beginning with a social hour at 6 PM, followed by dinner at 7 PM and installation of the 2014 officers at 8 PM. There will not be any program. Entertainment will be Armando Valesquez on the piano.

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July 2013 Museum Report

By Ken Murdock, Museum Curator

On Thursday, July 11th, Irv Lipscomb and I scheduled an inventory workday so that I could meet with a group from the University of Central Florida concerning an internet project that they are developing. I worked on the inventory and Irv photographed the objects in the morning. At 1:30 pm the UCF group arrived at the museum. The group of four was led by Connie Lester, PH.D. Dr. Lester is an Associate Professor and Editor of the *Florida Historical Quarterly* and Director of RICHES. RICHES is an acronym for "Regional Initiative for Collecting the History, Experiences and Stories of Central Florida". They have a map overlay website called RICHES Mosaic Interface which Is still being developed but is accessible while being constructed. You can check it out at http://riches.cah.ucf.edu/mosaic.php. Part of the mosaic interface will be to show all of railroads in Central Florida, both past and present along with photos and their history. They are presently working on Seminole County railroads but will eventually cover all Central Florida counties.

Their map, which will be a Google Map with overlays, will have tabs or buttons that you can click on which will take you to history narratives and photos of the rail line that you pick. You can select the time frame that you are interested in and it will only show the railroads in that time period. This is where they will need our help. We will provide the photos and history details. I gave them one of our Outline History Booklets today which they felt would be very useful. Their web site will also have a link to our museum's web site.

This is an enormous undertaking and a real chance for our organization to develop a good working relationship with UCF. I told them about our 100th anniversary celebration in November and they want to be a part of it and have a table in the museum where they can demonstrate their web site. I know we're running short on space but this was too good to turn down, so we will have to work them in somehow. They are also going to put our 100th celebration on Facebook to help us promote it.

On Saturday, July 13th, we had our monthly museum workday. We had a good turnout with 7 members participating. Phil was there taking care of the outside and inside housekeeping chores. Joe Lehmann brought in the speakers for our new PA system and installed everything and checked it out. He brought it in well under our budget and it works very well. It is portable so that we can move it outside for our 100th anniversary ceremony. Joe had to go to Sky Craft in Winter Park to get several extension cables for the system. He also checked out a couple of computer issues.

Jarrod Reynolds worked on the HO layout and finally got the upper level working. David Rhea donated several very nice 0-6-0 steam locomotives with tenders and they are work well on the layout. We had some concerns as to if six drivers would negotiate the tight curves, but they work fine. Six wheels plus a tender provides much better electrical pickup over the turnouts than the 0-4-0s, so we should see a noticeable improvement in operations. Thank you David for the locomotives!

Allen Quinn worked on a number of things. He helped Phil with the house cleaning, cleaned glass on the show cases, installed new brass door knobs on the front door and the door to the meeting room and installed a new timer for the signal with Jarrod's help. The signal is now fixed! All aspects should be red when you come to the next meeting. I picked up the brass knobs in at a flea market in Murphy, NC while visiting Al & Jan Sharp.

I worked on a number of things as well including cleaning cob webs from the highest point in the meeting room, filing photos and documents, moving more VHS cassettes and DVDs to storage and moving all railroad shop tools to a single showcase. I even found time to work on inventory, finishing the T&G Room.

Jerry Honetor continued plugging away on the inventory in the library and is making excellent progress. Frank Milmore had museum duty in the afternoon and the flow of visitors was fairly heavy most of the time. Ginger Honetor assisted Frank in greeting visitors. We had a great time of fellowship at lunch. Thanks to each of you who made this another outstanding workday!

On Wednesday, July 17th, Jerry and Ginger Honetor and I had another inventory workday. To start the day I had an interview with Frank (Chip) Ford with the Florida Historical Society. The subject of the interview was the Orange Belt Railway and the interview was recorded and will be used in the fall on a radio program that the society produces. The interview lasted about 15 minutes but Mr. Ford expects about five minutes of it will actually be aired. After the interview, I started on inventory in the last room, the operator's room adjacent to the docent's desk. Jerry continued his inventory work in the library and Ginger polished on our dining car silver. She has volunteered to work on our silver each time when she comes with Jerry. This will be a big help in keeping our displays looking good!

On Friday, July 26th, Phil Cross and I returned to the Lakeland Public Library to continue scanning the Sanborn photo collection. We thought that we would finish on this trip but the librarian brought out one more box of prints that we hadn't seen before. Consequently, we will need one more trip to complete this project.

On Wednesday, July 31, Irv Lipscomb, Jarrod Reynolds and I put in another day working on inventory. Irv and Jarrod photographed the objects and I entered the objects into the Past Perfect inventory system. Irv finished photographing the T&G room. July has been a busy month with many things being accomplished!

Thanks again to all who have made this another very productive month! Please remember to log in your volunteer hours. If you forget, please e-mail them to Greg Fox at gfox@wghf.org and he will do it for you.

Central Florida Railway Historical Society, Inc.
Combined Board & Regular Meeting Minutes
Central Florida RR Museum
July 8, 2013

Call to Order – Phil Cross called the meeting to order at 7:02 pm. 26 people were present. Board members in attendance included Phil Cross, Jerry Honetor, Irv Lipscomb, Joe Lehmann, Ken Murdock, David Rhea, and Les Westlake.

Meeting Prayer and Pledge of Allegiance – David Rhea led the prayer and pledge.

Recognition of Visitors – Visitors included Roger Sell from Winter Park and Roger Wilson's friend, Bob Stanley.

Recognition of Members/Friends Concerns –

- Bob Montgomery – Irv Lipscomb spoke to Laura (Bob's wife) on Saturday. The prognosis is not good. Phil Cross sent two email updates from Bob's son, David, this past weekend.
- Sylvia Brown – Ken Murdock stated that Sylvia Brown has been diagnosed with stomach cancer and will begin radiation and chemo.

Approval of June 1, 2013 Quarterly Board of Directors Meeting Minutes – David Rhea made a motion for approval of the minutes as published in the Flatwheel which was seconded by Irv Lipscomb. The vote to approve was unanimous.

Approval of June 10, 2013 Combined Board & Regular Meeting Minutes – Jerry Honetor made a motion for approval of the minutes which was seconded by David Rhea. The vote to approve was unanimous.

June 2013 Treasurer's Report – David Rhea presented the treasurer's report. A copy is available to the membership upon request.

Vice President of Membership & Programs – Jerry Honetor

- Membership Report
  Society Members = 35
  Society Century Members = 8
  Society Family Members = 13
  Society Friends = 8
  Corporate Members = 1
  Total Members = 65

- Society Events and Field Trips for 2013:
  - A trip to Colorado to ride the Cumbres & Toltec Scenic RR, the Durango & Silverton RR & the Rio Grande Scenic RR. Roger Wilson & Phil Cross are the coordinators. Rescheduled to the spring of 2014.
  - A field trip to the Folkston Funnel – Bill Dusenbury is the coordinator. Fall of 2013.
  - A tour of the Florida Central Railroad – Bill Dusenbury is the coordinator. Scheduled for after the rebuild.
  - An Amtrak trip – To Miami and Pigeon Key and the Gold Coast Railroad Museum. Irv Lipscomb is the coordinator.
  - A field trip to Green Cove Springs, FL/Bostwick, FL. Need a coordinator. Phil Cross is contacting Jim Garner to work on a possible date.

- Membership Activities:
  - Displays at Local RR Shows and Events in Downtown Winter Garden:
    - July 13 – Model Train and Railroad Artifact Show and Sale at the Volusia County Fair Grounds in DeLand, 9 am to 4 pm, Cost is $7.http://findlocal.orlandosentinel.com/listings/model-train-and-railroad-artifact-show-and-sale-deland
    - October 4-6, 2013 — Annual Music Fest Event in downtown Winter Garden.
    - October 5, 2013, DeLand, FL — Florida Rail Fair Model Train & Railroad Artifacts Show & Sale, Lawrence Arena, Volusia County Fairgrounds, 9 to 4.
    - November 23, 2013 – 100th Anniversary Celebration for the Winter Garden T&G RR Depot.
    - November 23-24, 2013 – Annual Winter Garden Merchants' Association Downtown Art Festival.
  - Distribution of Society and Museum Brochures.

- 2013 Annual Meeting – Scheduled for Saturday, December 7th, 801 City Grille, corner of Eighth & Montrose Streets in downtown Clermont, beginning with a social hour at 6 PM, followed by dinner at 7 PM and installation of the 2014 officers at 8 PM. There will not be any program. Entertainment will be Armando Valesquez on the piano. The restaurant has been reserved.

Museum Curator – Ken Murdock

- June 2013 CFRR Museum Report – 537 visitors for June and 2,633 visitors for 2013 to date. 197.0 volunteer hours donated by the membership during June and 1,359.25 hours donated for 2013 to date.
- Library Committee Update – The Library Committee continues to work on the cataloging of the books, periodicals and videos in the library.
- Technology Committee Update – The committee has purchased a PA system for the meeting room.
- Website Committee Update – The committee is working on completing the last two pages still under construction.
- There is a work day on July 11 to review railroad maps with a visiting professor from UCF.
- Mike Ryan has been scanning many slides at home.
- Phil Cross and Ken Murdock have been traveling to the Lakeland library to scan photos from the Sanborn collection for the museum.
- The regular museum work session is scheduled for July 13.
- Recent Acquisitions & Donations – Terry Baker with the Winter Garden Heritage Foundation has found a few T&G articles from newspapers as far back as 1913 to 1915.

Museum Host Schedule for July 2013 – Irv Lipscomb is coordinating the schedule.

100th Birthday Celebration for the Former T&G Depot in Winter Garden – Irv Lipscomb

- Saturday, November 23rd, 10:00 AM to 5:00 PM, Recognition Ceremony at 2:00 PM.
- Ceremony with Mayor, City Commissioners, City Manager and President and Executive Director of the WGHF. David Rhea has booked Congressman Daniel Webster to attend, www.**webster**.house.gov.
- Address Museum Highlights (brief presentation) – Ken Murdock and Phil Cross to handle.
- Birthday Cake – Phil Cross to contact Sharon Joiner.
- Large format T&G photo display (WG) – Ken Murdock and Phil Cross to coordinate with Todd Nichols.
- Lego Display – Phil Cross confirmed with GFLUG for both days.
- Joy Dickinson article the Sunday before the event – Irv Lipscomb to coordinate.
- T&G DVD playing during the event.
- Dan Crusie depot painting on display and copies for sale.
- Unveiling of the bronze plaque at the 2 PM ceremony.
- Promote event on TV and in newspapers – Irv Lipscomb to coordinate with the various media.
- Have FCRR bring a locomotive and the Sam Pinsly for display beside the depot – Phil Cross to coordinate with Bill Dusenbury.
- Have computers with train simulators available for guests to operate – Ken Murdock confirmed there will be 2 simulators coordinated by Conner Murdock.
- Operating Telegraph Display – Ken Murdock confirmed with Warren McFarland for both days.
- Irv Lipscomb to contact the Merchant's Association.
- Have banner displayed – Jerry Honetor to arrange for banner.
- Displays to remain up for Sunday. Will plan to be open during show hours on Sunday – Possibly 11 AM to 4:00 PM.

President's Report – Phil Cross

- Winter Garden Heritage Foundation Board of Directors Activities for June – Activities for June focused on continued fundraising for the new History & Education Center and preparations to break ground on construction in August.
- October 4-6, 2013 — Annual Music Fest Event in downtown Winter Garden. The date has been moved back to the first weekend in October. The CFRR Museum will be open during most show hours all 3 days. There will displays in the Museum by the LEGO group (OLUG – Orlando Lego Users Group) and telegraphers group. http://www.wintergardenmusicfest.com/#
- Upgrading of Tremain Street – The City is upgrading the utilities and paving the street.
- 3rd Quarter 2013 Board of Directors Meeting – Scheduled for August 24, 2013 at 8:30 AM at the CFRR Museum.

FCRR, FMRR, FNRR & SunRail Update (Including FCRR Track Upgrade Update) – Phil Cross provided a FCRR and FMRR update in Bill Dusenbury's absence. Clem White is looking for a map of the FCRR track upgrades.

Tourist Train Operations on the Florida Central RR – Mike Ryan reported that two coaches and the gondola went to York, PA. Roger Wilson stated that when he tried to ride, the engine was broken. Engine #4, a 2-6-2, is possibly coming to Tavares in September in place of #2. This past weekend, their new 45-ton switch engine was found to have a short. Pinsly leased them an engine and that engine broke near the Dora Canal bridge.

Items from the Board of Directors – None

Items from the Membership –

- Greg Fox reminded the membership that the Dan Crusie prints are for sale.
- Patrick Smith rescued employee time tables dating back to 1911 and donated them to the museum. He also donated a GE/CSX A6000 CW operator's familiarization program VHS tape.
- Roger Wilson gave a report on his five-week trip. He took our museum's conductor case to the Conway museum in New Hampshire, http://conwayscenic.com. The four conductor reports were pure gold to the museum's docents. Roger received a free parlor car ride for his efforts. Connecticut Eastern Railroad Museum received 16 trays of slides and photo albums from our museum. http://www.cteastrrmuseum.org. Roger visited his friend, Robert MacDonald, and received MacDonald's book on the Boston and Maine Railroads. He donated this to our museum. Coming south, he stopped at the Winston Link Museum in Roanoke, Virginia, www.linkmuseum.org. *He then went to the Virginia Museum of Transportation,* www.vmt.org*, and gushed about the Greyhound Bus exhibit. Next was a behind-the-scenes tour at the Steamtown Museum,* www.nps.gov/stea*. He ended with a visit to the Scranton Coal Museum where he descended 330 feet,* http://www.visitpa.com/pa-caverns/lackawanna-coal-mine-tour.

Tonight's program: Part 2 – The Movie *Unstoppable* by Frank Milmore. Greg Fox made the presentation in Frank Milmore's absence.

Tonight's refreshments were provided by Jerry & Ginger Honetor.

Meeting Adjournment – The meeting was adjourned at 7:58 pm.

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Thanks to Society Member Warren McFarland for the following story.

The Great Train Wreck of 1918

Brooks Hays
July 09, 2013

Early on a humid summer morning in Tennessee in 1918 — July 9, to be exact — a passenger train, the No. 4, headed out from Union Station in Nashville, destined for Memphis. Believing that the tracks were all clear, the No. 4 picked up speed as it transitioned from the double to the single tracks and prepared to round the first bend. Usually at around this time, the No. 4's conductor, David Kennedy, would see the No. 1 train arriving from Memphis pulling in. Today, Kennedy thought he saw the No. 1 pass him by, but he had in fact seen a stray switch engine hauling empty cars. The No. 1 train from Nashville was running behind schedule. As the No. 4 pulled out, around the bend known as Dutchman's Curve, the No. 1 train was barreling ahead at about 50 mph. The No. 4 was travelling at about the same speed — on the same track.

Neither train had time to break, and the two locomotives converged head on. The sound of the exploding engines could be heard for miles. Locals who came to find out about the loud noise found a smoldering pile of twisted steel, and dead and bloodied passengers strewn about the nearby corn fields, while others were trapped beneath the mangled rail cars. Hundreds of spectators showed up throughout the day to watch the dead and injured carted away. In all, 101 people were killed; 171 more were injured. It remains the worst train wreck in American history.

Known as the Great Train Wreck of 1918 or the Great Nashville Train Wreck, and referred to locally as the Dutchman's Curve Train Wreck, the accident was off the front pages of the national newspapers after only three days. Some historians say the rush of World War I headlines flooding in from front lines of Europe quickly pushed the wreck out of the news. Others say racism was at least partially to blame for the story's rapid disappearance, since the majority of the casualties on the No. 1 train were African Americans -- black men and women from Arkansas and Memphis on their way to work at the government-run gunpowder factory in Old Hickory outside of Nashville. But also lost in the wreckage were the lives of young military recruits who had been riding the eastbound train. The casualties also included many Nashville businessmen, train employees, and local women and children who were headed out of town on the westbound No. 4.

The Interstate Commerce Commission (ICC), the federal agency then in charge of regulating America's railroads, investigated the horrendous accident. It concluded that the blame lay with the conductor of the local train, No. 4, who should have been waiting for the No. 1 to pass before setting out. But some historians have since pointed to a series of small mistakes and miscommunications between the conductor and those manning the signal towers –- the railroad equivalent of an air traffic control tower. **Continued on Page 12.**

Thanks to Society Member Roger Wilson for passing along these Photos of the Day.

General Electric 2504 was part of a set of four red-and-white U25B demonstrators the builder fielded in 1961–62. GE 2501 had a low nose, while 2502–2504 had high noses, which were passing from favor at the time. J. David Ingles photo.

Three Baltimore & Ohio box-cab electric locomotives help a Mikado-powered freight on the Baltimore Belt Line. Four of these ungainly motors replaced the Belt Line's original steeple-cabs in 1903. Unusually, the box-cabs' four powered axles were rigidly mounted in the frame, giving them an 0-D-0 wheel arrangement. B&O photo.

A July 1947 aerial view shows the Pennsylvania Railroad's big roundhouse at Crestline, Ohio. The long engine at middle left is No. 6100, the 6-4-4-6 duplex of 1939. *Classic Trains coll.*

Thanks to Society Member Clem White for passing along the following story.

Sarasota Man to Restore Historic Railcar

Behind a storage facility on Fruitville Road an old dilapidated railcar is rusting away after years of exposure to the harsh southern climate.

Luxury and opulence don't always stand the test of time.

But to Bob Horne, this railcar is a thing of beauty and a historical landmark worth saving. The car's name is 'Jomar'. It stands for John and Mable Ringling, its former owners.

John was a member of the famous circus family- the Ringling brothers, and 'Jomar' was the couple's private railcar.

Bob Horne is restoring it. He said, "it was almost lost, they were getting ready to cut it up for scrap metal when I got it."

Bob Horne says Jomar was built in 1916 and ferried Ringling and his family members across the country until 1967.

Horne said, "It cost John Ringling $100,000 a year to operate that one railroad car in 1930. 1930 dollars. That was a very expensive way to travel. It's like travelling on a 747 jet today."

Years of neglect have taken its toll on the railcar.

There's rust and corrosion throughout and insulation is exposed.

But if you look closely there are still hints of its splendor- the bunks are still there, there are buzzers for the waiters, and Horne even recovered an original stained glass window.

There's also a small bathtub that was used by famous guests like Army General John Pershing and President Warren G. Harding.

Horne plans to bring 'Jomar' back to its former glory.

"I've given my own self my word that I'll do it, and I'll do it," said Horne.

It's going to take a lot of work. He has a team of volunteers that come to help him on Saturdays, and he hopes to turn it into a museum.

He's been able to identify the paint colors used in the interior, and he's also located original artifacts from the train, like John Ringling's voice recorder.

Horne took out old dusty cylinders that stored John Ringling's voice as he used the device. He'll soon start working with the Smithsonian to extract audio from the cylinders.

He wants to save 'Jomar' for all posterity.

"Once it's saved, it'll never get lost again. 100 years from now, people aren't going to let an old railroad car disappear," said Horne.

It's an old private railcar that will return for the whole public to see.

Horne's ultimate goal is to ride this beautifully restored railcar as it travels around the country on its 100th anniversary.

He wants to take it on a nationwide tour and then provide nightly dinner rides between Sarasota and Tampa.

Thanks to Society Member Warren McFarland for the following story from the April 1914 *Signal Engineer*. The article by the eminent Dr. Wm. Churchill of Corning Glass, who did so much to help the railroad signal industry. It is a reprint of a paper read by Dr. Churchill at the Railroad Signal Club of New York in February 1914. Cr. Churchill touches on the problem of perfecting a yellow for railroad signaling, with which the optical houses struggled for years.

Glass for Use In Railway Signaling

A Description of the Manufacture and a Discussion of Lenses, Standard Colors and Lantern Globes

One might easily spend several weeks, instead of only an hour. if he were to go into the subject with full technical detail, and before reaching the end of the discussion, we should have to draw on the sciences of Chemistry, Physics, Physiology and Psychology for liberal contributions of facts. I have taken the liberty of assuming that you may prefer to listen to-night to some reminiscent remarks on the progress of the art of signal glass manufacture in the past with a brief mention of recent developments.

Most of you are probably interested, more or less directly, in the use of signal glass. Although the total amount spent by all the railroads of the country for signal glass in one year is hardly more than an infinitesimal fraction of the total budget, we all realize that no other single item of expenditure is half as important from the standpoint of safety of operation and efficiency of service. We all know that for at least half of every twenty-four hours the strength of the whole chain of operation depends on a little link of glass. The full recognition of this fact imposes a grave moral responsibility on the manufacturer of signal glass. It imposes just as heavy a responsibility on the whole body of railroad officials to co-operate with the glass manufacturer in his effort to meet his responsibility to the very utmost of human endeavor. My real object to-night is to tell you, briefly, how one glass works has, with the co-operation of the railroads, tried to live up to the rule of 'safety first' for nearly 50 years, and to help you to realize even more definitely than you have before, how essential *your* co-operation, as railroad officials, is in *our* task.

One of the most obvious facts in our modern civilization is that progress in any manufacturing art depends chiefly on the results of patient, prolonged scientific investigation and experiment. Nor can the manufacturer wait for the developments of pure science to overcome his difficulties. He must work out his own technical problems with all the assistance that he can derive from collateral arts and sciences. In any large branch of industry the possibility of big financial return is fortunately sufficient to warrant large expenditures for technical research. In any small specialized branch of industry progress is always seriously retarded unless the business is sufficiently concentrated in and made auxiliary to some large manufacturing plant so that the heavy costs of technical research may be kept relatively low. Happily for the art of signal glass manufacture, most of the output for the entire world comes from one factory, and from a plant having a large volume of business along other lines the two essential conditions which have made technical investigation and progress in such a minor industry possible.

About 45 years ago, when the Corning Glass Works commenced the manufacture of lenses and globes for railroad service, the only lens used was of the so-called "bullseye" or plano convex type. During the next 10 years were developed in difficulties which glass makers experienced in trying to maintain succession the flat corrugated, outside corrugated and "smooth face" lenses. The last mentioned type, being a strong design mechanically, approximately uniform in thickness and color, and of much higher intensity than previous designs, remained the standard for over 25 years. During this period semaphore signals were introduced from England and adapted to the needs of American service, the spectacles being fitted with colored sheet glass, red or green, cut to the proper size. There was considerable variation, to put it mildly, in the shades of color used by different roads, and even in the glass to be found in service on the same road. This condition was due, in part, to the great difficulties which glass makers experienced in trying to maintain uniform color without the help of modern furnaces and pyrometers — in part to the fact that nearly every road in the country was calling for a different shade of red or green or blue, and liable to change its standards at any moment. In short, to state the case briefly, there were no real specifications of any description governing purchases of signal glass.

But two factors which were brought into the situation about 15 years ago, soon made it apparent to all concerned that the time had come when the manufacture and selection of signal glass must be put on a strictly scientific basis. I refer to the development of the so-called long-time burner, and the introduction of yellow as a *cautionary* signal indication, supplanting green, which was, in turn, made the *clear* indication. There used to be a tale to the effect that the first long-time -burner was the invention of a negro lamp tender down South whose laziness proved a spur to his ingenuity. I .cannot vouch for the truth of the story. As regards the use of yellow, it is generally understood that the initial credit belongs to C. Peter Clark, who was, at the time, superintendent of the eastern district of the New York, New Haven and Hartford and a former member of this club.

With the introduction of yellow as a signal indication it was soon discovered that confusion could be avoided only by getting a red which would never look orange and a green which would never appear yellowish. In other words exact color values with definite limits had to be established. In addition, it was found that the long-time burner, which at that time showed an average of only about one-third of a candle power, needed a more powerful lens to bring the range of the average lamp up to that possible with the ordinary flat flame signal burner (0/8-inch wick) and measuring about I *y,* candle power. There was plainly need for active co-operation between the glass manufacturer and the railroads. . The time had come to attack the problem of signal glass by laboratory methods and as fast as progress could be made submit the results for trial under actual service conditions.

TECHNICAL SUPERVISION OF MANUFACTURE.

There are probably few lines of manufacturing where the chances of loss, of accidental mishap or failure, are as great as in the making of high grade glass, and this is above all true as regards colored glass. A thousand different contingencies may arise to spoil the result between the time the raw materials enter the mixing room and the last inspection of the finished product. Only a minor fraction, at best, of the glass in each melt ever finds its way to market. Obviously, therefore, if signal glass is to be produced to narrow limits of color, precise technical supervision is essential at every step. To give you some idea of what this really means I can hardly do better than to outline the successive stages in the production of a colored lens.

Some of those not familiar with the art may take it for granted that making a signal lens is about as difficult as. Producing a pickle jar or a jelly tumbler, and that colored glass is more expensive than clear glass simply because some costly ingredients must be added to the batch. Unfortunately for us all, the trick is not nearly so simple. By way of illustration, let us follow

an ordinary ruby lens through its evolution. In the first place, one must work out the design of the lens on the drafting board. We must determine approximately the refractive index of the glass to be used, provided that information is not already given, and then, by a series of mathematical calculations and graphic constructions, we must plot out the exact curvatures required on each step to produce the correct focal length. Often it happens that a large number of different constructions must be worked out before a thoroughly satisfactory one is found, for a design may be entirely correct theoretically and yet not suitable to manufacture. Then the blue print goes to the machine shop, where, with special tools and appliances, the design is reproduced with almost absolute accuracy in metal best suited to the purpose.

Sometimes special alloys are used; in many cases a very pure grade of cast iron gives the best results. When the mould has been completed and polished to a mirror-like finish, it is placed in a kiln and raised to a du1! heat preparatory to service. While the mould has been in the making, glass has been melting with which to work it. According to the size and thickness of the lens desired, the proper amount of color to be added to the batch must be calculated exactly. In the mixing room the correct amounts of sand, fluxes and color are weighed out and thoroughly mixed. It is most essential that no foreign substances be introduced accidentally. A very small amount of iron or of lead, for example, in some batches would entirely spoil the melt. All of you are doubtless aware that glass is generally produced by melting sand with alkalies and various other bases. The number of different glasses which it is possible to produce is obviously very large and the chemical and physical properties of a glass can be varied to a great extent by change of composition.

Just as the last 20 years has witnessed a tremendous development of the iron and steel industry by study of new alloys with characteristics heretofore unknown, so in the glass industry a similar process of evolution has been taking place. Formerly, nearly all the. glass manufactured was of only two kinds, either the very cheap so-called lime glass made by melting sand with lime and alkali, or the more expensive lead glass in which lead in some form took the place of lime. To-day, thanks to the laboratory research of recent years, we know how to produce a great variety of special glasses, and we have determined just what requirements each is best adapted to meet. This means, of course, that a careful technical study of the exact conditions under which any article of glass is used should determine the composition employed. In other words, exact laboratory methods must take the place of guess work and tradition.

In manufacturing colored glass the color depends almost as much on the composition of the glass as it does on the particular metallic oxide introduced to produce ·color. For instance, copper oxide when used in one batch produces a fairly good shade of red-in a different batch it wiI color the glass green or blue. The metals which have been found to color glass to any decided degree are comparatively few. This means, accordingly, that the glass maker is sometimes unable to produce exactly the effect he may desire. For instance, no glass has yet been found which wiI absorb all of the spectrum except yellow and at the same time transmit yellow without any appreciable diminution. Owing to the great variation in the proportions of color and the many different batches necessary, it is not possible to melt signal glass in tanks. The batch and cullet are therefore placed in crucibles containing 2,000 to 3,000 pounds each and subjected to the melting heat of the furnace for 30 to 60 hours.

Since the color of almost any glass depends quite largely upon the precise temperature of the melt and the length of the run, it is necessary to keep an exact record of furnace heat by means of pyrometers. Progress in the art of glass making during the past 15 years is due, to a considerable extent, to the invention of accurate high-temperature pyrometers. According to the character of the glass being melted the furnace temperatures run between 2,000 degrees and 2,500 degrees Fahrenheit. When the glass is ready to be worked the mould is brought from the kiln and set up on the press. In the case of large lenses the complete mould may weigh over 1,000 pounds and require special appliances to handle it conveniently. When any article, such as a lens, is' being made and the slightest mistake in operating the mould might ruin the ware, it is customary to run the press by hand instead of by power. A few samples are turned out from the mould and sent to the optical laboratory. There the samples are carefully tested to determine their optical efficiency' and also to decide whether the color is of the proper hue and photometric value. The hue is determined by direct comparison with certain standards, by spectroscopic analysis, and by measurements with a colorimeter. The photometric value expresses the total percentage of light transmitted by the glass in question compared with a standard kept for the purpose. If the samples fail to come within the required limits, the entire melt must be rejected, ladled out and sent to the cullet pile.

If the samples pass the tests, word is sent to the furnace that the glass may be used, and the work proceeds. As fast as the ware is made, it is carried to the annealing oven-leer is the term used in a glass house for the most common form of oven -and there subjected to a gradually lowering temperature for a period of several hours. The subsequent strength of the ware depends chiefly on the skill with which this annealing process is carried out. Poorly annealed glass will usually break sooner or later in service without any apparent cause. The glass succumbs to a molecular strain which could have been avoided by proper annealing. To insure effective annealing, the temperature of the leers must be recorded by pyrometers and constantly watched. Too high a temperature is just as bad as too low, for it is very easy to spoil a lens by warping it out of shape. When the lenses finally come out at the cool end of the leer, they are carried to the inspection room, where each piece is thoroughly examined for all minor defects. There are 35 different headings on the list of faults which the inspection cards. carry, and any lens which fails on account of anyone of them must be rejected, while notation of the cause is made on the record. Such a system may seem unnecessarily elaborate, but in actual practice it has proven of the greatest value in tracing back all the various defects to their respective sources. Finally, the lenses which have passed the first inspection are taken to the photometer room, where each one is tested against the proper standard, and those which pass within the standard limits are labeled accordingly.

Such, in brief, is the process of production, and without going into further detail, enough has perhaps been said to make it plain that from beginning to end, no means or method for insuring the most accurate results has been intentionally overlooked.

LENSES

As noted above, the introduction of the long-time burner created a demand for a more accurate, more powerful lens, than any then available. We, therefore, made a careful study of all the conditions determining the efficiency of pressed lenses. and in the fall of 1904, developed an improved type of the so-called 'smooth face' design; which was named the 'Optical' lens on account of its high optical efficiency. This lens immediately supplanted previous designs, and has for nearly 10 years been the accepted standard for practically all types of signal lamps. Where maximum intensity of beam is the main consideration a lens of this type is generally preferred. In the ordinary semaphore lamp sizes five inches and 5:li inches diameter, it gives with the present types of long-time burner a beam of 55 to 7aequivalent candle power. By this we mean that although the actual intensity

of the naked source is only about one candlepower, the light is concentrated by the lens into a beam which equals in intensity the illumination from a naked source of very much higher value.

This statement brings us directly to the consideration of possible modifications of the standard type, and how far these are likely to be useful in railroad service. The: real function of a signal lens is, of course, to control the distribution of light from a given source. It concentrates the rays and thus increases the range of the signal within the actual limits of the beam. Now there are often conditions where it is desirable to be able to see a signal over a considerable angle-for instance, when a semaphore of switch-stand must he located facing a sharp curve. It is entirely possible, although not practical to provide a different lens to meet any special set of conditions, and how this might be accomplished will be understood from the statements which follow regarding different new types of lenses. We have worked out in the laboratory a series of designs which are now available for use, as may be required, but the actual decision as to their effectiveness and practicability in service necessarily rests with the railroads. Here is the point where co-operation between manufacturer and user becomes of the utmost importance. During the past few years the question of increased 'spread' has been raised in a variety of ways. Can we not all get together and reach some definite conclusions which will ultimately establish standard practice? As regards signal colors, we now have definite standards and when improvement arises in the future, through the agency of the Railway Signal Association, whose services in this connection have already been of marked benefit. modification can be brought about in the standard specification if necessary.

But the question of lens standardization calls for different action. and just what it really means is worth a few moments' consideration. At the present time there are available over a hundred different designs of signal lenses in the respective sizes, foci and types. The number of different types of lamps, grouped according to service, is comparatively small-the principal divisions being, of course, semaphore lamps, train order lamps, switch lamps, marker lamps and classification lamps. Is it not possible to determine whether the requirements in these several classes of service call for lenses of special type, and if so, to decide just what the requirements are?

Signal lenses may be divided broadly into two groups: First, lenses of the familiar round form with concentric rings, usually of spherical curvature disposed on one face. Such lenses owe their wide popularity chiefly to two reasons. They are by far the most powerful and their use permits of lamps of relatively simple strong construction. Second, lenses of the so-called 'Fresnel' type, commonly used in ship lights, with corrugations disposed horizontally to produce a wide-spreading fan of light. This type possesses two disadvantages for certain kinds of service. It cannot produce high modification of candle power and it requires a lamp of rather expensive construction when properly mounted.

The problem which arises when one desires to select a lens for any particular purpose, is how to distribute the light at one's disposal so it will do the most good. Bearing in mind the fad that the intensity of the beam varies directly in proportion to the diameter of the lens, and that the "spread" of the beam varies approximately in proportion to the focal length of the lens as well as the size of the illuminants, we may choose between a large range of possibilities. This amounts to saying that we can vary the power and spread of our beam by varying the size or focus of the lens, or by changing the dimensions of the source. But practical considerations generally restrict one to lenses of comparatively small size, say not over five or six inches diameter; the design of the lamp body must largely determine the focal length and the dimensions of the illuminant, when oil is used, are not easily altered. Hence we must investigate the possibilities of different modifications of design.

Taking up the several types in the order of their evolution from the standard "optical" lens described above, the first to be mentioned is what is known as the "wide angle" design. This lens spreads the beam over an area more than six times that covered by the optical lens and thus necessarily its intensity is reduced to about one-sixth that of the more powerful type. The same amount of light is utilized but its distribution is entirely different. (The beams projected by this and the other types of lenses discussed will be demonstrated if .:m:UInstances permit.) Such a lens has both horizontal and vertical spread of approximately 25 degrees. It is entirely suitable for a short range signal, but not to be recommended for use in a general way.

"Conditions may arise where increase of spread is desirable without diminution of intensity. The "Inverted" type of lens was dew loped for precisely this purpose. By making the inner face of the lens convex and placing the corrugations on the outer face, we are able to utilize virtually all of the light transmitted by the lens. This means that the rays which in a smooth face lens are deflected by the risers of each step sharply away from the main beam are in the inverted type part of the main beam, and by this gain the lens affords approximately 30 per cent more spread without any diminution of intensity. By the addition of a convex glass in front, the corrugations are thoroughly protected from dirt or snow, and at the same time sweating of the lens in cold weather is rendered impossible.

The range of a signal light varies approximately as the square root of its beam candle power-hence the range of a wide angle lens would be only about 40 per cent that of the standard type.

Finally we come to the latest modification in the series, a design which affords a compromise between the high candle power of the standard or inverted lenses and the relatively low candle power of !he wide angle type. By means of corrugations disposed on the convex face we are able to produce an elongated spread resembling the effect of a Fresnel lens, but much more powerful on the axis than any cylindrical lens of corresponding size. This design, which has been christened the 'Spreadlite,' produces a beam with an axial intensity nearly half that of the optical type, and even with a long-time burner has an extreme spread of nearly 35 degrees-in other words, sufficient to cover a three degree curve at nearly 2,500 feet.

From the original Fresnel or cylindrical lens have been developed another series of types. First came the 'Plano' type with a succession of panels on the inner face designed to project the light in a series of relatively concentrated beams and thus producing at times more or less the effect of a flashlight. Then there arose the request for a lens of the Fresnel order, but with smooth outer face, to afford additional protection on curves at the rear of a train. To meet this condition we produced the 'smooth face Fresnel: which was first tried out on the Burlington in 1906. Recently, lenses of this type have been ingeniously combined in a lamp of special design for switch and marker service. There are several other special Fresnel types which are also of interest in this connection, notably the 'Duplex' and 'Compound: The 'Duplex' is the most powerful type of Fresnel produced, having approximately double the intensity of the plain cylindrical design. The 'Compound' Fresnel is mainly intended for classification lamp service and projects four separate beams within an angle of go degrees.

To sum the situation up in the shortest terms, it is now possible to provide a lens with any type of distribution which circumstances may require. Their various properties have all been determined in the laboratory. That increase of practical efficiency

they may afford must be determined in actual service by the railroads.

STANDARD COLORS

Any colored glass is frequently, and properly, called a light filter. It transmits light of certain wave lengths; to other wave lengths it is more or less impervious. All the light not transmitted or reflected, and usually spoken of as 'absorbed' by the glass, is transformed into heat. The color of the glass when placed in front of any ordinary whitish light is obviously complementary to the portion of the spectrum absorbed. Without attempting to go into the theory of color in any detail, the selection of the best hues for signal purposes requires that we determine precisely which colors are most distinct, i. e., most unlike, and at the same time sufficiently bright, with the usual sources of illumination, to afford adequate range. Now, although the normal eye is able at close range to distinguish by comparison a great many thousand different hues, tints and shades, the number of possible signal colors is very small. The entire list embraces only red, yellow, green and blue (sometimes spoken of as cardinal colors), together with purple (a color lying midway between red and blue) and white considered as a neutral color. With the usual illuminants (oil or incandescent lamps) purple and blue must be eliminated except for short range signals on account of their low intensity.

The color most unlike red is. of course, its complementary-a bluish green. Between the two lies white, somewhat further removed from red because spectral green is to the eye a less 'saturated color.' It is of the utmost importance never to overlook the fact that atmospheric absorption and reflection always tend to shift the apparent color of any signal light more or less toward the red end of the spectrum. This effect is, of course, most apparent in fog, haze or smoke, just as the sun or moon rising or setting and seen through a long stratum of atmosphere always appears more or less reddish. The problem is further complicated by the circumstance that all the principal semaphore indications should be nearly equal in range. But the sources of illumination used (oil or incandescent lamps) are far stronger in yellow light than in either red or green. Although we frequently hear the light from the clear lens referred to as 'white,' it is actually a pale yellow.

The almost universal rule in signaling until about 15 years ago was to make green a cautionary indication and use the clear light as a safe indication, but 'white' lights of all description are too numerous and the danger of a broken glass too real to make this combination satisfactory. Hence the proposal to make use of yellow. Yellow, at best, is hardly an ideal signal color. It can be seen as a light considerably further than red or green, but does not show its color distinctly until comparatively near (perhaps one quarter its range as a light). Atmospheric conditions tend to make it appear quite reddish at times. It is necessarily similar in color to a kerosene or incandescent electric lamp. However, experience on many railroads has proven during recent years that the red-yellow-green combination is distinctly preferable to the previous system, red-green-'white,' provided standard colors are used throughout.

The purpose of a signal light being to afford the most distinctive indication possible at the maximum range required our object was, of course, to secure colors combining the most distinct hues with the highest compatible transmission. By spectrophotometric analysis, photometric tests, actual range tests under different conditions, and other methods, we covered all available glasses and narrowed the selection down to one 'definite medium shade in each of the several colors. When we undertook the task, the reds in service were distinctly yellowish; the greens were various in hue, but nearly all low in intensity; yellow was still in the experimental stage.

To tell a long story in a few words, we developed a red possessing high transmission without appearing orange; a green of slightly bluish tint entirely distinct from yellow and nearly 50 per cent higher in transmission than the previous average; a yellow lying midway between the red and green in hue and purposely of somewhat diminished intensity. A full statement of the work that had been done was presented to the members of the Railway Signal Association at their annual meeting, in October, 1905, in a paper entitled 'The Roundel Problem,' and the proposed standards were submitted for their consideration. Three years later, after a thorough trial under all sorts of conditions, the association adopted a standard specification embodying the new colors exactly as our laboratory investigations had worked them out. Thanks to the influence of that association most of the signal glass now in service conforms to their specification and hence practically the same colors are now found right across the continent.

While studying the problem of how to render the yellow signal more effective, I was led to the conclusion that a bluish white about equal to green in intensity could be made useful as a fourth indication and would be in some respects preferable to yellow. This new possibility we called lunar white. It has come into use as a clear indication for switches on a number of roads.

Do not imagine that the present standard colors of the Signal Association specification are in any sense final. It is literally true, however, that they were in every case the best of which the art of glass making was capable at the time. We are all aware that there is still room for improvement and our laboratory is constantly trying out new possibilities which look in any degree promising. As a matter of fact we have already found it feasible to increase the transmission of the green glass by about 35 per cent without sacrificing any distinctness of color, and this new development is now under consideration by the Railway Signal Association.

LANTERN GLOBES

No discussion of signal glass, however brief, would be complete without mention of the lantern globe. Although its service may be an humble one, the hand lantern forms a very vital part of the signal system on every railroad, and a lantern minus its globe at the critical moment might be responsible for most serious consequences.

About eight years ago we determined to find out what laboratory investigation applied to the lantern globe could do to produce a more durable, more reliable piece of glass. We were well aware that sudden change of temperature was responsible for a large proportion of the globe breakage. Rain, hail, or snow striking the heated glass was always liable to produce fracture. This condition of things was brought home to us very forcibly in any severe winter, when the demand for globes would be correspondingly heavy. 'We knew it was important that every colored globe should be of standard hue, but in addition to that, we believed that lantern globes ought to be made strong enough to withstand all ordinary service conditions without breakage. We made a careful study of all that was then known regarding the manufacture of low expansion (heat-resisting) glass and then conducted a long series of different melts to determine exactly what composition was most effective.

In carrying out this' investigation we were obliged to devise wholly new methods of test and testing apparatus, for the new glass possessed properties which had never been developed previously. We found, for example, that it could be baked in an electric oven at a temperature of over 500 degrees Fahrenheit and then sprayed with ice cold water without fracture. We found that even when the flame of a lantern, tilted at 45 degrees, had been in contact with the glass for five minutes, an ice cold

spray or dipping the entire globe in ice water scarcely ever produced fracture. We also discovered that some glasses of high resistance were entirely unsuitable because subject to slow decomposition in moist atmosphere. Finally, we were able to produce a clear globe which could withstand any reasonable chilling test and at the same time was thoroughly stable chemically. Our next test was to secure similar results in the various colors. Owing to the presence of the coloring oxides and necessary modifications of composition. it has not yet been possible to produce colors with quite the resistance of clear glass, but their relative superiority over ordinary glass of the same color is fully as marked.

Just five years ago we commenced to supply the railroads with 'Nonex' (heat-resisting) globes. The records of globe consumption during the past 10 years now prove conclusively that the new glass has reduced globe breakage by at least 60 per cent, with a resultant saving, in the aggregate, to the railroads of hundreds of thousands of dollars. Every lantern globe that goes into service now can be depended on to last; each one is inspected and tested before it leaves the factory with the same care that a lens or roundel receives. In fact, in order to insure absolute uniformity of product, we ha\'e established a lantern globe specification, fixing rigid limits for chilling and photometric tests analogous to the standard signal lens and rounde1 specifications.

COLLATERAL RESULTS

Our optical laboratory makes no boast to cover a broad field of investigation. We believe that more can be accomplished by confining our work mainly to problems involving color and light projection. It may be of interest to note that as an incident to our study of signal yellow, we recently developed a special pale yellow glass of unusual properties which, by absorbing the violet end of the spectrum, largely eliminates the glare from a high power headlight without impairing its usual range, and in fog or smoke actually increases the range by reducing back-glare. Improvement in the art of manufacturing pressed lenses has rendered possible the use of relatively large sizes for headlight service, both with and without auxiliary reflectors. Such applications in connection with electric headlights of different types have become quite numerous. Thus the study of the signal glass problem by laboratory methods has led to a wider range of results than we foresaw at the start, and the future doubtless has others in store.

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Continued from Page 6—The Great Train Wreck of 1918.

Others say that part of the confusion can be blamed on the federal government. Until 1917, all railroad schedules and safety monitoring had been the responsibility of the privately-owned railroads. But at the beginning of World War I, the federal government nationalized the railroad industry, assuming control of most railroad operations, bolstering infrastructure improvements, augmenting track schedules and setting price controls — all in the name of moving goods and services for the war effort more efficiently. Quick to blame the accident on a single human error, the ICC may have been aiming to quell doubts about the United States Railroad Administration's (USRA) ability to run the railroads.

At the end of the war, the USRA was disbanded, and operation of the railroads was returned to their corporate owners. But the federal ICC continued to exert immense authority over the railroad industry for several more decades, setting maximum and minimum freight rates, evaluating consolidations and mergers, controlling infrastructure investments, issuing loans, and intervening in labor disputes. Beginning in the 1970s, and continuing in the 1980s, the authority of the ICC was slowly diminished by deregulation legislation such as the Railroad Revitalization and Regulatory Reform Act. The agency was finally closed in 1995, replaced by the Surface Transportation Board under the umbrella of the Department of Transportation.

The Great Train Wreck had little effect on the involvement of the federal government into the operations of rail industry, but it did move more and more railroad companies to abandon wooden rail cars. W.P. Borland, chief of the Interstate Commerce Commission's Bureau of Safety, concluded in his report of the accident: "Had steel cars been used in these trains, the toll of human lives taken in this accident would have undoubtedly been much less."

Though the Dutchman's Curve Train Wreck has been relegated to the dusty back pages of history, it is still remembered each year by Tennessee history buffs and descendants of the accident's victims, many of whom gather on the anniversary of the tragedy at nearby Mount Olivet Cemetery. Only a few years ago, local historical] societies were finally able raise enough money to install a permanent plaque at the site of accident, memorializing the "Over 100 [who] died, including many African Americans journeying to work at the munitions plant."

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Thanks to Society Member Roger Wilson for the following information.

NMRA Board Selects Sunshine Region to Host NMRA 2017 Convention in Orlando, FL

On Saturday July 13, 2013, Dan Cioffi and Gil Thomas presented the bid for Sunshine Region's Western Division to host the NMRA National Convention in 2017. The presentation lasted about an hour. They showed the proposal video, went through a quick PowerPoint presentation and then the Board met in a closed session to discuss the proposal.

They waited, thinking it would be a short discussion. 10 minutes went by, then 20, then 30, then Dan started having chest pains, an anxiety attack and heart palpitations. Gil got him a brown paper bag to breath into, tossed it to him and said, "Here, don't even think you're getting out of this one, this was all your idea." Dan recovered, quickly reminded Gil that no, he was the one who asked that hypothetical question nearly 2 years "Gee, what would it take to bring the NMRA Convention back to Florida?".

So after 40 minutes or so, Let's Make a Deal started, Door #1 opened, and condolences were shared as the Board announced the Sunshine Region was the proud parents, er, hosts of the ***2017 NMRA National Convention, The Orange Blossom Special***.

More information will be coming soon. They will be scheduling a series of orientation meetings to provided information about their next steps. So stay tuned, this is going to be a wild train ride on the Orange Blossom Special.

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Please Note:

There Will Be No Museum Work Session In August.

Thanks to Society Member Jerry Hardwich for the following photographs and story.

This is how they were shipped.

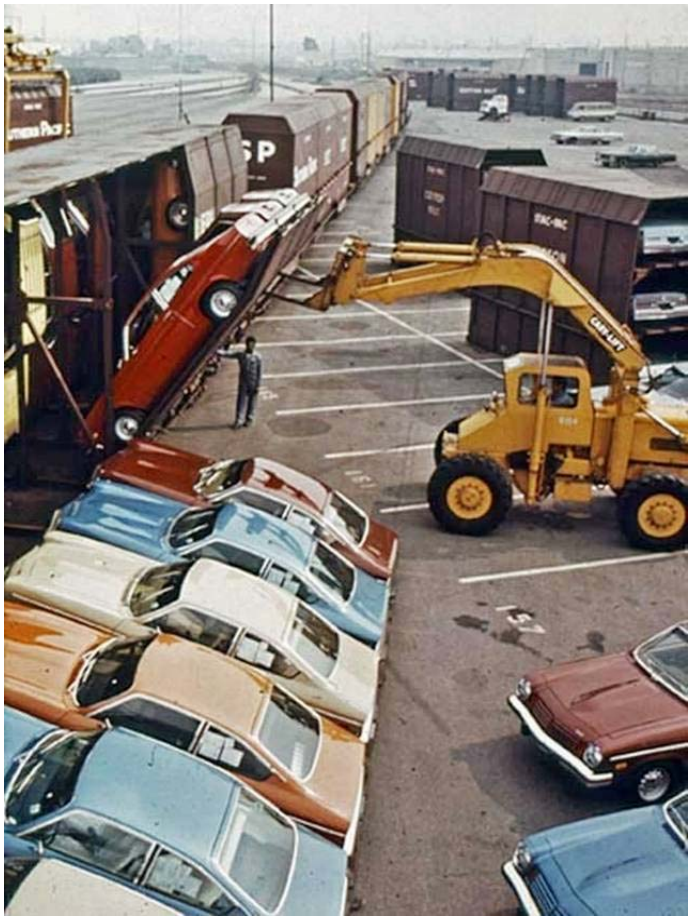
The engineers at GM and Southern Pacific Railroad came up with a clever solution. Instead of loading the cars horizontally, the Vegas were to be placed vertically on a specially designed auto-rack called the Vert-A-Pac. Within the same volume of an 89-foot flatcar, the Vert-A-Pac system could hold as many as 30 automobiles instead of 18.

Chevrolet's goal was to deliver Vegas topped with fluids and ready to drive to the dealership. In order to be able to travel nose-down without leaking fluids all over the railroad, Vega engineers had to design a special engine oil baffle to prevent oil from entering the No. 1 cylinder. Batteries had filler caps located high up on the rear edge of the case to prevent acid spilling, the carburetor float bowl had a special tube that drained gasoline into the vapor canister during shipment, and the windshield washer bottle stood at a 45 degree angle. Plastic spacers were wedged in beside the powertrain to prevent damage to engine and transmission mounts. The wedges were removed when cars were unloaded.

The Vega was hugely popular when it was introduced in 1970, however it quickly earned a reputation for unreliability, rust and terrible engine durability. When the Vega was discontinued in 1977, the Ver-A-Pac cars had to be retired as they were too specialized to be used with anything else. The Vert-A-Pac racks were scrapped, and the underlying flatcars went on to other uses.

Until the early 1960s, automobiles moved by rail were carried in boxcars. These were 50 feet long with double-wide doors. Inside was room for four full-sized sedans on a two-tier rack - two raised up off the floor on a steel rack and two others tucked in underneath them. This protected the cars during transport but wasn't very efficient, as the weight of four vehicles was far less than the maximum weight a boxcar that size could carry. When 85-foot and 89-foot flatcars came into service, it was possible to pack a total of fifteen automobiles in one car on tri-level auto racks. But it still didn't approach the maximum allowable weight for each flatcar.

When Chevrolet started designing Vega during the late 1960s, one of the main objectives was to keep the cost of the car down around $2,000 in circa-1970 dollars. At the time, the freight charge for moving a loaded railroad car from the Lordstown, OH assembly plant to the Pacific coast - the longest distance cars produced at Lordstown would need to travel - was around $4,800. Since the Vega was a subcompact, it was possible to squeeze three more cars on a railroad car for a total of eighteen, instead of the usual fifteen. But that still worked out to around $300 per car – a substantial surcharge for a $2000 car. If only Chevrolet could get more Vegas on a railroad car, the cost per unit of hauling them would go down.



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Thanks to Al & Mary Lee Langley for the following photograph of the Alaska Railroad at Talketna, AK. They took this while on their vacation in Alaska.

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Here's the Latest from Michael Huffman with the LEGO Users Group

We've gone through some changes; our group is no longer a part of GFLUG. We have split off and formed an Orlando regional based LEGO group called OrangeLUG (orangelug.org).

CFRHS Membership Statistics

Society Members	35
Society Century Members	8
Ward Britt	
Phil Cross	
Bill Dusenbury	
Chuck Hanus	
Jerry Honetor	
Frank Milmore	
Ken Murdock	
Jim Shoemaker	
Society Corporate Members	1
Andy Healy	
Society Friends	8
Society Family Members	13
Society Student Members	0
Total Members	**65**

Limited Edition Prints are now available at the Central Florida Railroad Museum. Numbered and signed by the artist, Dan Crusie. $25.00 each. Be sure to get yours soon!!

The Flatwheel is the official monthly publication of the Central Florida Railway Historical Society. Opinions and views expressed in this publication are those of the editor and contributors and do not necessarily reflect those of the members, officers or directors of the Society.

Material for the Flatwheel (including exchange newsletters) should be sent to the editor via e-mail at: Crossrails@earthlink.net.

Please Note: Material from The Flatwheel may be reprinted in other publications provided credit is given as to the source.

The Central Florida Railroad Museum is located at 101 South Boyd Street, Winter Garden, FL, 34787 (downtown Winter Garden, immediately north of the water tower).

The Museum is open daily from 1:00 PM to 5:00 PM (excluding selected holidays) or by special arrangements. Large groups are encouraged to contact the Museum at 407-656-0559 to arrange for their tour in advance.

The Central Florida Railroad Museum is operated under a cooperative agreement between the City of Winter Garden, the Winter Garden Heritage Foundation and the Central Florida Railway Historical Society, Inc..

The Central Florida Railway Historical Society, Inc. meets on the 2nd Monday of each month at 7:00 PM at the **Central Florida Railroad Museum**. The Museum is located at 101 South Boyd Street in downtown Winter Garden immediately north of the water tower. Guests and visitors are welcome and encouraged to attend.

All correspondence and other materials for the Society should be mailed to:

Central Florida Railway Historical Society, Inc.
PO Box 770567
Winter Garden, FL 34777-0567

Or e-mailed to the Society at: info@cfrhs.org

Web page: www.cfrhs.org

Mission: The mission of the Central Florida Railway Historical Society, Inc. is to Promoting railway heritage and preservation; educating members and the public about rail transportation, its history and impact, with a focus on Central Florida.

Purpose: The purpose for which this Society is formed and the business or objects to be carried on and promoted by it are mainly historical, educational and not-for-profit. The more particular objects are:

- Preserve the historical materials of rail transportation of all kinds and issue publications relative to the subject.
- Acquire by donation, purchase, lease or otherwise, real or personal property, and to maintain, sell, lease, deed or otherwise manage in a manner appropriate for the Central Florida Railroad Museum and the above mentioned purposes.
- Plan and run a series of programs and events for Society members' education and participation.
- Work and support the activities of the Winter Garden Heritage Foundation. Assist in any and all group projects which benefit the goals and activities of the Society and the Winter Garden Heritage Foundation.

President: Phil Cross
president@cfrhs.org 407-509-4572

Vice President - Membership & Programs: Jerry Honetor
vpmembership@cfrhs.org 407-957-8788

Vice President - Education & Public Relations: Irv Lipscomb
vpeducation@cfrhs.org 407-895-4749

Secretary: Les Westlake
secretary@cfrhs.org 352-434-6160

Assistant Secretary: Joseph Lehmann, Jr.
asstsecretary@cfrhs.org 856-912-8628

Treasurer: David Rhea
treasurer@cfrhs.org 407-656-8749

Assistant Treasurer: Frank Milmore
asttreasurer@cfrhs.org 407-366-8941

Museum Curator: Ken Murdock
curator@cfrhs.org 407-277-5719

Historian: Phil Cross
historian@cfrhs.org 407-509-4572

Immediate Past President: Bill Dusenbury
pastpresident@cfrhs.org 352-360-0136

Flatwheel Editor: Phil Cross
editor@cfrhs.org 407-509-4572

Webmaster: Joseph Lehmann, Jr.
webmaster@cfrhs.org 856-912-8628