



March 2020

THE MID-SOUTH FLYER



Entering a New Decade of Service

A Publication of the Mid-South Chapter of the Railway & Locomotive Historical Society, Inc

IN THIS ISSUE:

March Program

Rail Passenger Service in the U.S.

Robert (Bob) Stewart

Saturday, March 21, 2020

2:00 pm

Historic Leeds Depot

Chapter News

March Update

Return from Antarctica

James Lowery, President

Heart of Dixie Railroad Museum

Member Moment

John Browning

Alabama Rail Archives

David Coombs

The Art of the Locomotive

The Crampton-Type Locomotive

Ken Boyd

Common American Steam Locomotive Wheel Arrangements

MARCH PROGRAM

RAIL PASSENGER SERVICE IN THE U.S.

Robert (Bob) Stewart

At the March Mid-South Chapter meeting, Robert (Bob) Stewart will present a program on rail passenger service in the United States. The main focus of his presentation will be on what is happening today with Congress, Amtrak and the American public. He will also provide a historic background on this very interesting and fascinating topic.

Bob had a 30-year career with the chemical division of Atlantic Richfield Oil Company in sales and marketing positions. He also served in the United States Marine Corps.

He is past President of the Tennessee Association of Railroad Passengers and also served on the board of the Florida Coalition of Railway Passengers. He was on a Tennessee State Rail Committee that developed a state-wide intercity passenger plan.

He is a member of The Rail Passengers Association (formerly National Association of Rail Passengers or NARP) and has served as a director and vice president of the Association. In 2010 he was elected chairman and retired as chairman in April of 2016. He continues to serve on the board.

Bob currently resides in Bentwood, Tennessee.



Bob Stewart



Amtrak Midwest No. 4618, Siemens SC-44 Charger, at Union Station in Kansas City.
Photo by Ken Boyd.

CHAPTER NEWS

MARCH UPDATE

- ◆ RENEW your membership in the Mid-South Chapter and in the national Railway & Locomotive Historical Society, or join if you are not already a member.
- ◆ Annual Convention of the Railway & Locomotive Historical Society May 28-31 in central Texas.
- ◆ DONATE to the Historic Birmingham Mineral Railroad Signs Project.
- ◆ LOCATE photographs (hard copy, slides, digital, etc.) that you have taken through the years of trains and railroads in Alabama, and loan or donate them to the Alabama Railroad Archives for scanning and making available through the online archives. See page 7 of this newsletter.

I-20X HIGH-SPEED INTERCITY PASSENGER RAIL CONFERENCE

Location: Birmingham Jefferson Convention Center (BJCC), Forum Rooms G-I
 Date: March 19, 2020
 Time: 9:00 a.m. – noon
 Continental Breakfast Will Be Served.
 Please RSVP to clinton.woods@birminghamal.gov by March 17.

VISUAL PRESERVATION EXHIBIT Gadsden Museum of Art and History

During March and April, the Gadsden Museum of Art and History will host an exhibit of historic and nostalgic photographic images by artist Ken Boyd, Mid-South Chapter member. This show has been in development by the museum for more than two years and will feature locomotive and other vintage transportation and technology images. A reception is planned in the main gallery for Friday evening, April 3, from 5:00—7:00 pm

2020 CHAPTER PROGRAM MEETINGS 2:00 PM AT HISTORIC LEEDS DEPOT

March 21 -- Rail Passengers Association by Robert Stewart, Past President

May 9

July 25 -- PICNIC

September 19 (Possible John Henry Festival)

November 7

Member Moment

The Member Moment this month features John Browning. If you would like to be featured and tell your story, please contact Warren Jones.

The story should total 400 words or less and ideally include a photo or drawing.

MID-SOUTH FLYER

The *MID-SOUTH FLYER* is published bi-monthly by the Mid-South Chapter of the Railway & Locomotive Historical Society (R&LHS), Inc. The R&LHS is a non-profit educational organization dedicated to the study and preservation of railroad history. National and chapter dues are \$50 annually and include subscriptions to the Society's twice-yearly magazine *Railroad History*, quarterly newsletter, and the chapter's e-newsletter, the *MID-SOUTH FLYER*. Contributions, article ideas and reader comments are welcome.

Ken Boyd, Editor
kenboydphotography@yahoo.com



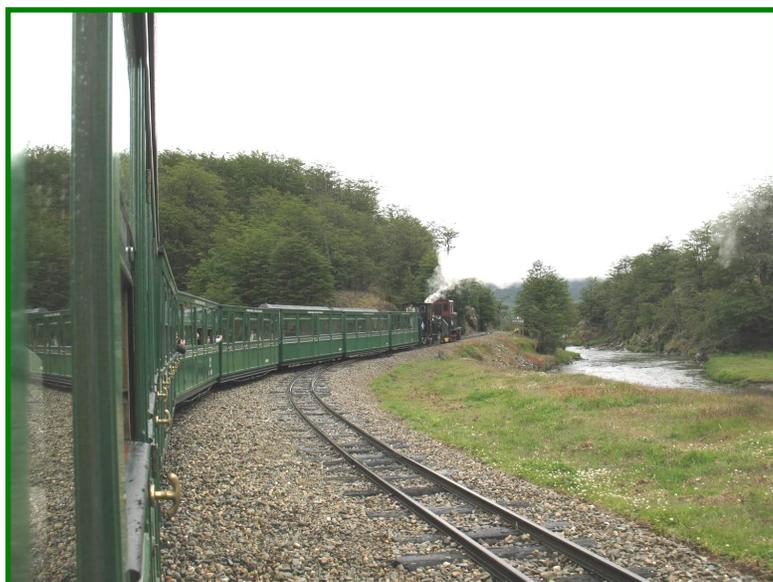
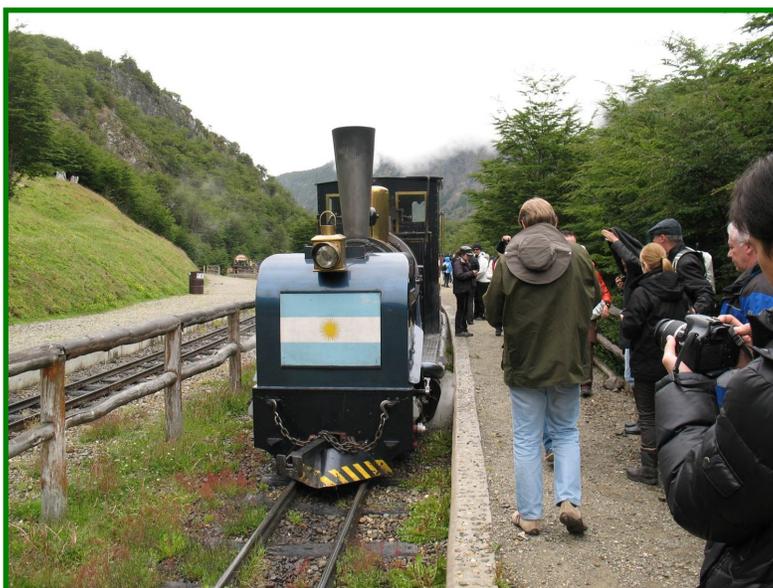
MARCH UPDATE

James Lowery, President

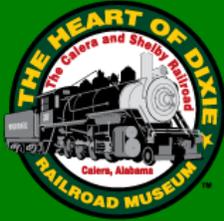
Return from Antarctica

Your chapter president was on a trip to Antarctica most of February, so he does not have a Chapter Update for this issue of the Flyer. Instead, he offers the following images from a previous trip to Ushuaia at the southern tip of South America. These images are of the southern-most train in the world called *Tren del Fin del Mundo* that he road on while in Ushuaia.

This narrow-gauge train originally was a logging train running between Ushuaia and the surrounding forest composed mostly of Southern Beech trees. More recently, the train was reborn as a tourist excursion train with newly built locomotives and tiny passenger cars holding only four people each. The train uses some of the original rails and trackage.



Photos by James Lowery.



HEART OF DIXIE RAILROAD MUSEUM

OFFICIAL RAILROAD MUSEUM FOR THE STATE OF ALABAMA

New and exciting times are in store for 2020 as we look to revamp some of our events and add new ones. This year, Cottontail Express has been reduced to only one Saturday, but updates are being planned. A couple new events are still in planning: a Summer Fun Special in May, Steam Days in June, Stars & Stripes Special in July, and maybe a Halloween ride in October? We have also changed our regular train ride departure times; they will now depart at 10:00 am and 1:00 pm. We are still working to have the Shelby & Southern Narrow Gauge Train running by April, but time is getting short for us. We are excited to see this little steam train returning. We also have a new website that is now available for viewing. Our spring schedule listed below. Please promote our train rides to your friends as this is our museum's main revenue stream. Thanks and hope to see all of you at HoD!



Current Restoration Projects

- ◆ 1926 L&N RR Tavern/Lounge Car "Alabama Club" will soon receive interior painting! Grant applied for HVAC system.
- ◆ Shelby & Southern narrow gauge RR has track work nearly complete (see photo) with work continuing on the locomotive.
- ◆ 1952 CB&Q RR dining car "Silver Cuisine" repairs & cleaning ongoing.

Volunteers Always Needed

As with all non-profits, we rely heavily upon our volunteers to staff our trains, restore equipment, sell tickets, oversee the library, and maintain tracks and equipment.

Historic Tidbit

Our 1910 Frisco passenger car still operates in regular passenger service; even at a young age of 110!

Upcoming 2020 Spring Train Rides

Saturday Train Rides

Saturdays March 21—September 26th

- ◆ *Departure Times:* 10:00 am & 1:00 pm
Except during special events

Cottontail Express

Saturday April 11

- ◆ *Departure Times:* 10:00 am, 1:00 pm & 3:00 pm

Day out with Thomas

Friday April 17

Saturdays April 18 & 25

Sundays April 19 & 26

- ◆ *Departure Start Times:* Fri & Sun-9:45 am;
Sat-9:00 am. Train departs every 45 min

Cancelled.

Mother's Day Special

Saturday May 9

- ◆ *Departure Times:* 10:00 am & 1:00 pm

Summer Fun Special

Saturday May 30 (still in planning stage)

- ◆ *Departure Times:* 10:00 am & 1:00 pm

Visit www.hodrrm.org to learn more about our events.

MEMBER MOMENT

John Browning

On June 17, 2016, I fulfilled one of my so called “bucket list” items. I got to operate the Norfolk Western No. 611. The North Carolina Transportation Museum in Spencer, North Carolina, offered a limited number of “At the Throttle” experiences with the 611, and I immediately purchased a time slot (with my wife’s blessing!). Having anxiously watched the original restoration and the maiden trip with this locomotive out of Birmingham in 1982, as well as chasing and riding many trips that she pulled during the days of the Norfolk Southern Steam Excursions, I have always been fascinated by this engine.

When we arrived at Spencer on the day of the event, I signed the necessary paperwork and walked out to the area where the locomotive was operating. There sat the 611 with a caboose coupled to it and ready to go. I watched a couple of other participants take their turns at operating this great locomotive, then my time arrived.

I boarded the engine and my training engineer, Sandy Alexander, showed me around the cab and pointed out the controls that I would be using. I had operated several diesel locomotives and several smaller steam engines (Flagg Coal Company 75 and Lehigh Valley Coal Company 126 from Gramling Locomotive Works) at other events, but never an engine as large or complex as 611.

After the initial orientation, Sandy said we were ready to go! I gave two short blasts on the whistle, moved the reversing control lever fully forward, released the brakes and eased back on the throttle. The giant came to life! I got the engine rolling at 10 miles per hour and kept it at that speed until we reached the designated stopping point. After applying the brakes and easing to a stop, I moved the power reverse lever backwards and started my backup move. We went past our starting point and backed to the end of a long yard track. Then we started forward again and went all the way back to the assigned stopping point. We did this a couple more times and then my experience was over.

It was well worth the \$611.00 charge to create this memory. Yes, I did have my wife’s blessing, but she said that she was glad it was the 611 rather than the 1218, because \$1218.00 would be way out of my budget!



Photo by John Browning.

ALABAMA RAIL ARCHIVES

David Coombs

The Heart of Dixie Railroad Museum (HODRRM) in cooperation with the Mid-South Chapter (MSC) of the Railway & Locomotive Historical Society (R&LHS), has established a permanent historical archive and educational resource center at the William A. Boone Memorial Library of the HODRRM. The “Alabama Rail Archives” (ARA) has begun collecting, documenting, and preserving rail-related photos, slides, videos, CDs, maps, print media, and documents. Photos and slides are now available to the public via “Alabama Rail Archives” on Flickr. The ARA will be a resource for research and education related to railroads that serve, or have served, the Birmingham District, the State of Alabama, and the American South. Selected photos and slides from elsewhere will also be archived.

The ARA specifically offers:

- A professionally archived collection of railroad images (photos, slides, videos, CDs), maps, timetables, documents and other media focused on the Birmingham District, the State of Alabama, and the American South.
- Images are accessible to railfans, scholars, and the public via the ARA Flickr site. Print and other media will be available to the public at the HODRRM Boone Library. In special cases, these materials may be checked out.
- Hard copies of rail maps are stored in HODRRM map/blueprint file drawers. The map copies will be digitized and their images added to the ARA.

Audiences for the archives are students, teachers, amateur and professional researchers, railfans, libraries, historians, academics and anyone with an interest in railroads.

Acquisitions

The ARA will solicit donations of images (photographs, slides, videos, CDs), books, manuscripts, documents, maps, and other rail-related materials. The Boone Library is already a repository for such items.

Donations and loans of archival materials will be received at the Boone Library at pre-arranged times and held for scanning and uploading to the archive’s Flickr site. Two “accession” forms have been developed; one for persons donating their collection outright to the ARA; the other for persons loaning their collection for scanning into the ARA and expecting return of the con-

tents. To properly process—e.g., scan, digitize, upload to the Flickr site—holdings and future contributions an EPSON-V-600 high-speed scanner is being used along with an ACER 27” monitor and specialized computer software.

ARA’s theme is “Building a Digital Archive of Alabama and Southern Railroads.” Images are digitized on Flickr, a storage site that allows cross-classification of labels and categories. Digitized holdings can be cross-referenced many ways to make them accessible for persons with specific interests. This can include, for example, basic category headings like Alabama, railroad, time-period, rolling stock, locale, as well as “finer” categories like steam locomotive wheel arrangement, standard weight Pullman cars, named passenger trains, logging railroads, etc.

Operation

The archive is currently managed by David Coombs (DC) with the assistance of other volunteers. The library is open most Saturdays. Donations or loans to the ARA for accession can also be sent via email to dwcoombs2002@yahoo.com or to Marvin Clemons (mclemons@bhamrails.com), or James Lowery (jlowery2@gmail.com).

Ongoing operational tasks include: accepting and processing donations, soliciting new contributions, keeping the archive in good condition, and responding to inquiries especially those related to archival donations or loans or to questions re. ARA holdings.

Solicitation of Archival Items

Members of the HODRRM, R&LHS, and Alabama Rails will be asked for contributions of images (photos, slides, videos, CDs, negatives) and other items pertinent to Alabama and Southern railroads. When judged relevant, they will be scanned and the originals either stored at the library or returned to the contributor. Rail-fans from elsewhere can also contribute images, collections, etc.

It is understood that the ARA is a joint venture between the HODRRM and the Mid-South Chapter of the R & LHS. Questions about ARA operations and donations may be directed to David Coombs, Director, William A Boone Memorial Library, Heart of Dixie Railroad Museum, Calera, AL 35040, Email: dwcoombs2002@yahoo.com.

THE ART OF THE LOCOMOTIVE

THE CRAMPTON-TYPE LOCOMOTIVE

Ken Boyd

By the mid-19th century, railroads were emerging all across the eastern United States and Canada, Britain and western Europe. Earlier wagonways and short industrial lines were connecting to form networks, serve cities, and reach ports and key infrastructure. The railroads were providing not only transport for heavy freight but passenger service never before possible or imagined as the lines pushed from town to town and further and further into wilderness and other remote regions.

To support this rapid expansion, locomotive technology was advancing rapidly. Engines grew larger and more powerful each year. This was an exciting era for locomotive development as many designs were tested. Although some of the ideas were harebrained and fanatical, others proved sound and were implemented across the railroading world. A creative mechanic or inventor could change the state of the art and move the entire industry to a new level of performance.

The drive to create ever faster passenger and express locomotives was relentless. Travelers demanded better service and speedier transport, and the public followed every development in locomotive design. Locomotive builders and the railroads competed over major routes for the fastest travel times and best creature comforts.

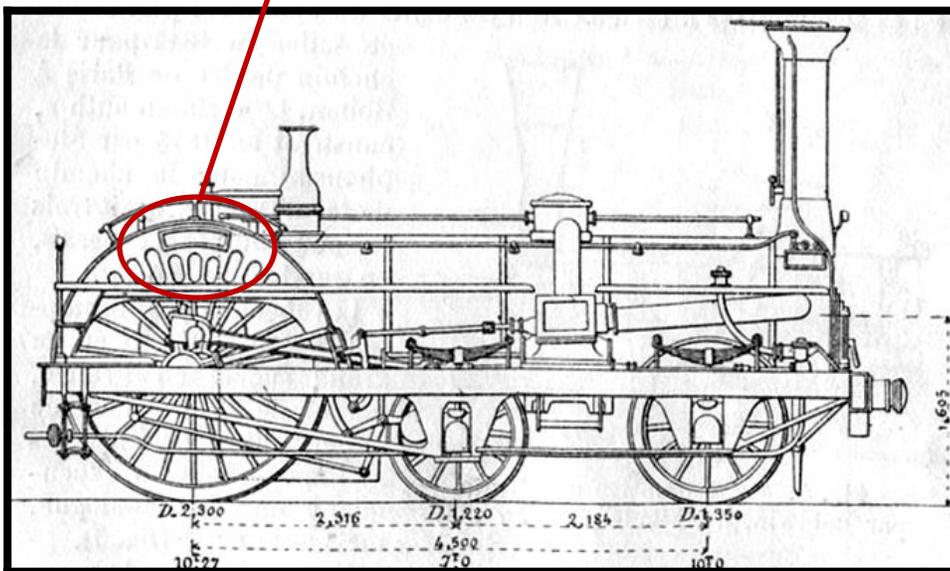
To produce a faster locomotive, railroad men worked tirelessly at the drawing board and in the locomotive shop. They understood that larger diameter drivers and a low center of gravity were essential considerations for speed.

Larger drivers could provide higher speed without over-revving the drive linkage and damaging the metallurgy available in the 1850s. Along with larger drivers, faster locomotives needed more powerful boilers, higher operating pressures, and massive cylinders to provide the necessary steam to turn the wheels.

In addition, a low center of gravity was essential for stability at speed down the



Crampton Driver Plate. A Crampton looked something like a sternwheel steam boat but on rails. Photo by Ken Boyd.



Generic Crampton 4-2-0 Locomotive Design, 1852. (Drawing licensed to and used courtesy of Creative Commons Attribution-Share Alike 3.0 Unported. The Image can be freely shared, copied and distributed.)

rails. Tall locomotives were inherently unstable and tended to derail more often than lower designs.

Unfortunately, large drivers and a low center of gravity were engineering contradictions in this era. Boilers were mounted above the drive axles. Tall drivers meant high axles and boilers above the axles. This resulted in a clumsy and top-heavy locomotive. What could be done?

Beginning the 1840s, Thomas Crampton began work to design a solution and produce a high-speed locomotive with a low center of gravity. His solution was to put a set of almost absurdly tall drivers behind the boiler and firebox at the rear of the locomotive and just outside the operating platform or cab. Drivers as large as 8 or 9 feet in diameter were fitted, and he provided a large and deep boiler to deliver plenty of steam. The cylinders were also piped and moved further back and near the drivers.

His design was primarily limited to a single set of drivers with two or three sets of smaller leading wheels to support much of the weight of the engine. As an enlightened designer, he designed the engines to place most of the flange wear on the leading wheels, saving the more costly drivers at the rear.

Although a fairly short locomotive could be designed with this arrangement, Crampton realized that a somewhat longer design

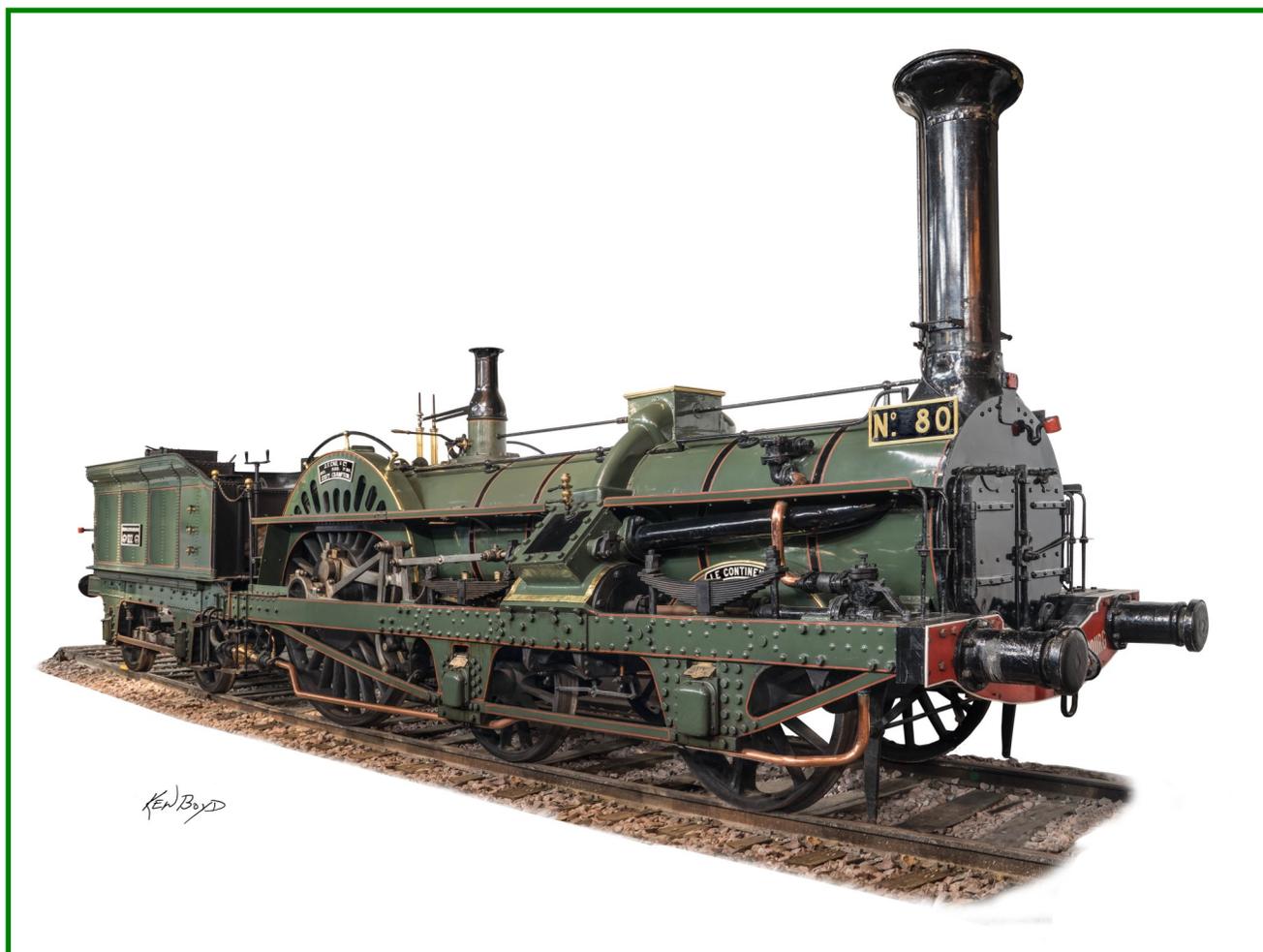
was more stable with less pitching. His most popular wheel arrangement was the 4-2-0.

As a landmark in locomotive development, it came to be known as the “Crampton-type” locomotive, a fitting tribute, and it proved to be extremely successful and popular in continental Europe. The Crampton looked something like a sternwheel river steam boat but on rails. The design was sleek with minimal protrusions above the boiler. These locomotives looked fast and they were fast. Most could achieve speeds approaching 90 miles per hours on good track, remarkable speed at the time.

Crampton did his early work in England, but the British railways were not receptive to his ideas and considered the locomotives rough running and damaging to the rail lines. His first models were delivered to a Belgium railway where he continued fabrication and testing.

Over the next few decades, several locomotive builders produced their own versions of the Crampton under license and more than 300 were ultimately erected. The greatest popularity was achieved in France and Germany. The public loved the way they looked and the reliable express service they provided.

In France, “Crampton” literally came to mean “train,” much like the name “Xerox” has come to be used for any photocopy.



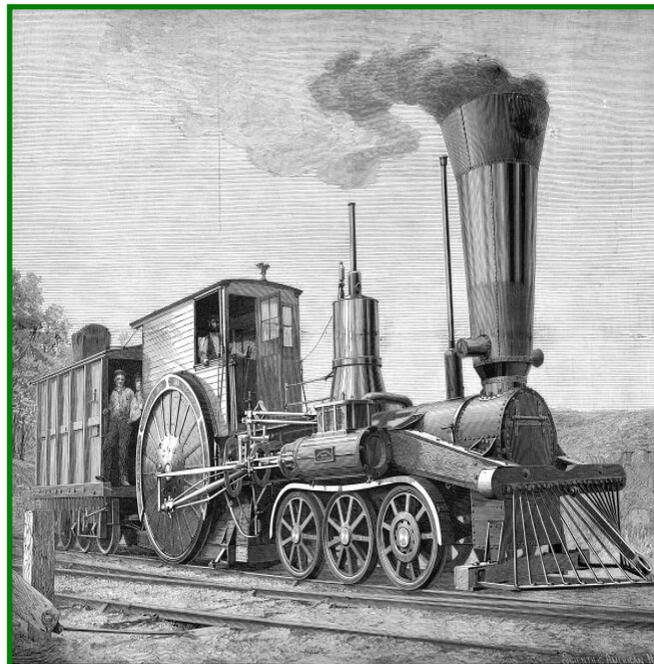
No. 80, *Le Continent*, 1852, at the French National Railway Museum. Note the massive double frame. The open driver platform was common in Europe through the mid-1800s. Photo by Ken Boyd.

The design was so popular that more people rode the train just to experience a Crampton. All this popularity would prove to be the downfall of the design. With just one set of drivers, the adhesive weight was limited. A Crampton could only pull relatively lightweight trains. Ultimately, the passenger demand exceeded engine capacity and the limit was reached. Other engine designs were necessary to meet passenger demand.

The Crampton did not go away without leaving a mark on history. The last train to leave Paris when the Germans lay siege to the city in 1870 was pulled by a Crampton. In 1890, a Crampton set a new official world speed record of 89.5 miles per hour on the Paris to Laroche mainline. Retired Crampton equipment was later brought back into service for World War I.

The performance and popularity of the Crampton in Europe did not go unnoticed in the United States. Robert Stevens, the president of the Camden & Amboy Railroad (a forerunner of Pennsylvania Railroad), visited Europe and observed the Cramptons in operation. He returned to the States and ordered a series of eight Cramptons to be built with 8-foot 2 3/4-inch driving wheels and a 6-2-0 wheel configuration. As shown in the accompanying illustrations, the design was awkward and almost comical, and the performance proved unsatisfactory. The American rails at the time were poor and not well suited to such large drivers. Plus, the firebox and boiler designs did not provide adequate steam, and the linkage was bizarre. All eight were ultimately rebuilt as 4-4-0 American-type engines.

In 1888, Thomas Crampton died and his patents expired. His drive mechanism designs were subsequently applied to early electric locomotives. His legacy was considerable and he is credited with one of the world's most significant steam locomotive designs. The 1852 *Le Continent*, No. 80, has been fully rebuilt and today stands operational and completely restored at the French National Railway Museum in Mulhouse. A second Crampton, *Die Pfalz*, is housed at the Nurnberg Transport Museum in Germany.



Crampton Engine, Camden and Amboy Railroad. The driver sat high and above the massive drivers and firebox, while the fireman worked at a lower level to shovel anthracite coal. About 1847.

Sources:

Boyd, Ken, French Locomotives, Self Published, 2016.

Greggio, Luciano, Steam Locomotives, Crescent Books, New York, New York, 1985.

Hollingsworth, Brian and Arthur Cook, The Great Book of Trains, Salamander Books, Ltd., New York, New York, 1987.

Riley, C.J., The Encyclopedia of Trains & Locomotives, Metrobooks, New York, New York, 1995.

COMMON AMERICAN STEAM LOCOMOTIVE WHEEL ARRANGEMENTS

Prepared by Ken Boyd

Wheel Arrangement	Notation	Nicknames*
OO	0-4-0	
OOo	0-4-2	
oOO	2-4-0	
oOOo	2-4-2	Colombia
ooOO	4-4-0	American
ooOOo	4-4-2	Atlantic
ooOOoo	4-4-4	Reading
oOOO	2-6-0	Mogul
oOOOo	2-6-2	Prairie
oOOOoo	2-6-4	Adriatic
ooOOO	4-6-0	Ten-wheeler
ooOOOo	4-6-2	Pacific
ooOOOoo	4-6-4	Hudson
OOOO	0-8-0	Switcher
oOOOO	2-8-0	Consolidation
oOOOOo	2-8-2	Mikado
oOOOOoo	2-8-4	Berkshire
ooOOOO	4-8-0	Mastodon
ooOOOOo	4-8-2	Mountain
ooOOOOoo	4-8-4	Northern and Other Regional Names
OOOOOo	0-10-2	Union
oOOOOO	2-10-0	Decapod
oOOOOOo	2-10-2	Santa Fe
oOOOOOoo	2-10-4	Texas
ooOOOOO	4-10-0	Gobernador
ooOOOOOo	4-10-2	Overland
oOOOOOO	2-12-0	Centipede
ooOOOOOOo	4-12-2	Union Pacific
OOO+OOO	0-6-6-0	Erie
oOOO+OOOooo	2-6-6-6	Allegheny
ooOOO+OOOo	4-6-6-2	Cab Forward
ooOOO+OOOoo	4-6-6-4	Challenger
oOOOO+OOOOo	2-8-8-2	Mallet
oOOOO+OOOOoo	2-8-8-4	Yellowstone
ooOOOO+OOOOoo	4-8-8-4	Big-Boy

* Some of the most common and popular American nicknames are shown in bold.

THE MID-SOUTH FLYER



A portion of the historic Coosa River trestle in Gadsden, Alabama, March 2020.

Photo by Ken Boyd