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PENNSYLVANIA RAILROAD CHINA
SPECIAL HERITAGAE DISPLAY
BY ALLAN MORTON

The amount of dining car china the Pennsylvania Railroad owned over the years was tremendous, like anything else the PRR was involved in. There were thousands of pieces of china in use, with several different patterns being used at the same time on different trains. Today, you would be hard-pressed to find any of that china other than in the hands of collectors. Anything found at a garage sale or antique store would be a rare find.

The food on early dining cars was prepared at stations or restaurants near stations and loaded on the train prior to departure. It wasn't until the late 1800's that food was prepared in on-board kitchens. About the same time, the Pennsylvania

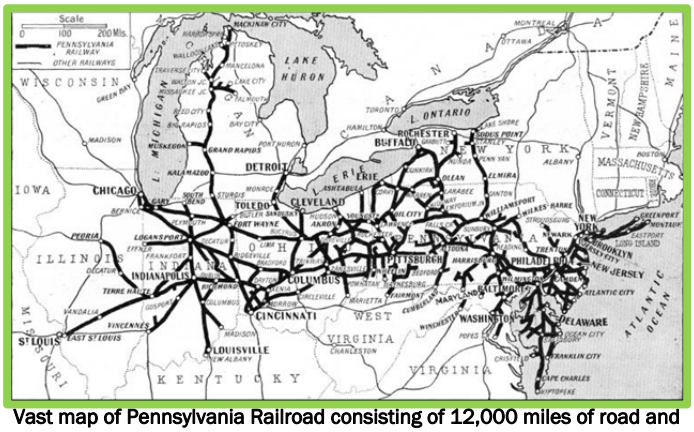
Railroad had standard patterns of china produced for dining car and café car service.

Since I model the Pennsylvania Railroad and collect PRR railroadiana, it was on natural that I started to collect Pennsylvania Railroad china in the early 1980's. At that time, you could find a wide variety of patterns and pieces. The first known pattern was introduced about 1898. There is only one known piece in the "Altoona" pattern – a square butter pat with the initials "PRR" in brown, along with two sets of double brown pinstripes around the outer edge of the piece. I have never found this piece and have only ever seen it one time in the hands of an avid collector. Next came the "Congressional" and the "Gold Congressional" patterns around 1900. They were used on early dining cars and the "Gold" pattern was probably used on the PRR business cars.

The following years produced several patterns with "PRR" inside a "Keystone." Each pattern had their own color and design, but they all had the distinctive keystone and PRR initials.The "Allegheny" pattern was not the same institutional-grade china as most other dining car china, but a much more delicate grade equivalent to a piece of fine china. I believe that the pattern was used in the late teens and early twenties as an afternoon tea set. Currently, an example of this pattern, along with others, can be seen on display at the George L. Carter Railroad Museum. Additional patterns were produced from 1920 thru 1950 and ending with the "Mountain Laurel" pattern replacing the "Broadway" pattern around the mid-fifties.

THE PENNSYLVANIA RAILROAD
STANDARD RAILROAD OF THE WORLD
A Giant System that Operated 30,000 Miles of Track

THE Pennsylvania Railroad claims to handle a greater volume of traffic, measured in tons of freight and passengers carried per mile, than any other transportation system. It has in hand one of the largest railway electrification projects and owns and operates the largest private telephone and telegraph plant in the world. The territory which it covers comprises the great central belt of the United States, extending from the Great Lakes and the Canadian border into the Southern States, and from the Mississippi River to the Atlantic seaboard. This is by far the most intensively developed area of its size in America. Within its limits, it includes approximately fifty per cent of the entire population of the United States, and a much larger proportion of the country's industrial, commercial, and mining enterprises. The railroad owns and operates some 12,000 miles of road and 30,000 miles of track, its lines traversing the District of Columbia and thirteen States—New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Ohio, Indiana, Michigan, Illinois, Kentucky, and Missouri.



Vast map of Pennsylvania Railroad consisting of 12,000 miles of road and 30,000 miles of track

Although the first cars were pulled by horses, this pioneer line was one of the first in the country to use a steam locomotive. The

engine "John Bull," built in England, carried the first passengers by steam in the State of New Jersey over the Camden and Amboy, a short distance out of Bordentown, on November 12, 1831. This locomotive, still in existence, comprises a miniature engine and boiler with a tall chimney, mounted on four small driving wheels, and having a long, protruding "leading truck" and a curious tank-like firebox. The weight is eleven tons. A large party braved the uncertainties of the new means of transport, including many members of the New Jersey Legislature, prominent business men, and others. During the first few years of its operation passengers over this route were carried in steamboats between Philadelphia and Bordentown, and between South Amboy and New York. With the completion of the line early in 1834, however, the through rail route across New Jersey was opened.

In 1893, sixty-two years after it was built, the locomotive left New York under its own steam and hauled a "train" consisting of two small trucks. It reached Chicago, 912 miles away, in five days without mishap. This early locomotive embodied three basic principles of design—the use of exhaust steam for forced draught, a boiler arranged to produce much steam in a small space, and horizontal cylinders to drive the wheels. And as the sixty-two years old "John Bull" puffed along to Chicago, the "Pennsylvania Limited"—then one of the most famous trains in the world—sped past it at thirty-five miles an hour, using these same basic principles for an enormously greater production of power.

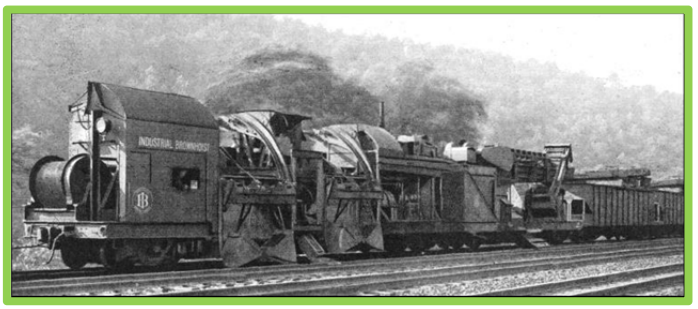
By 1880 the northern lines had in general come to a uniform standard of 4 ft. 8-1/2 in., or an interchangeable standard of 4 ft. 9 in., which facilitated the convenient interchange of coaches and traffic. Sir John Aspinall a well-known British railway authority, records that when in America in 1872 he noted that freight cars were labeled "broad tread" and "narrow tread." When he asked the reason for this, he was told that the treads of the wheel flanges were sufficiently near to one another to allow safe running on a 4 ft. 8-1/2 in. gauge, and the tread of the tyre wide enough to prevent it dropping in between the rails on a wide track of 4 ft. 10 in.

In 1892 the Pennsylvania Railroad adopted a 4 ft. 8-1/2 in. gauge as standard for passenger tracks, and 4 ft. 9 in. for freight tracks. The present gauge for all Pennsylvania tracks is 4 ft. 8-1/2 in.

Another important development, and one which has greatly influenced the speed of trains, is the use of water troughs on the permanent way, enabling locomotives to take in a supply of water while in motion. This idea is due to John Ramsbottom, The idea appealed to American railwaymen, and Ramsbottom troughs appeared on the Pennsylvania Railroad at an early date.

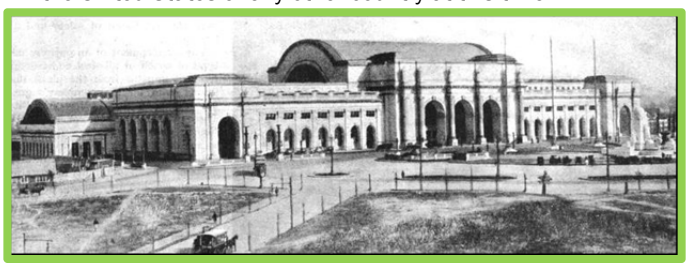
In 1928 the management decided upon the momentous step of electrifying the lines all the way from New York to Washington, for both passenger and freight traffic, affording an electrified service all the way from New Haven, Conn., to Washington, a distance of over 300 miles. For this route the alternating current, single-phase system with overhead conductors is used.

Meanwhile, extensive progress was made in the electrification of suburban lines for passenger traffic in the Philadelphia area. In spite of the general business depression during recent years, further projects have been planned and put in hand, the Pennsylvania Railroad thereby contributing materially to the recovery and re-employment program of the Federal Government.

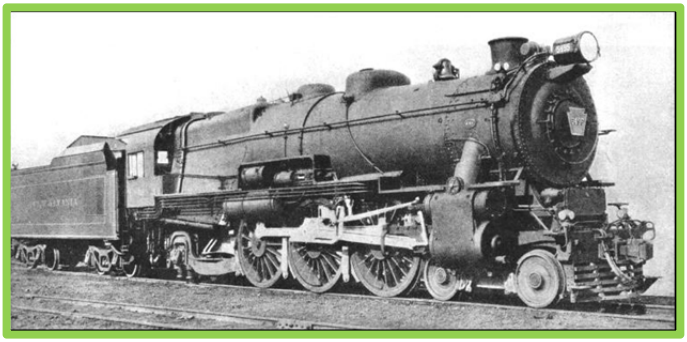


Track maintenance machine in action renewing ballast on the Pennsylvania Railroad.

This is the largest single railway electrification project yet undertaken in any country. On the basis of normal business conditions, it involves an annual freight train gross ton mileage of over 10,000,000.000; a passenger coach mileage of 133,000,000 ; and an electric locomotive mileage of more than 17,000,000. The normal daily passenger movement consists of about 830 trains. The stretch between New York and Philadelphia carries a volume of passenger traffic unequalled elsewhere, either in the United States or any other country at this time.



Of the various Pennsylvania terminals, one of the finest and most impressive is Union Station, Washington. It stands at the intersection of Massachusetts and Delaware Avenues, close to the Capitol. There are thirty-three tracks in the station, twenty of which terminate at the level of the waiting-rooms. The remaining thirteen are carried 20 ft. below that level, and nine of these continue under the station building into a tunnel which runs beneath a portion of Capitol Hill and leads to the through line southward.



Standard 4-6-2 "K" Class used for heavy passenger service. Often pulling all steel coaches weighing over 1000 tons. The pennsy owned around 5300 locomotives of various sizes and classes.

IN THE DISPLAY CASES AT MEMRR

THE PENNSYLVANIA RAILROAD

THE STANDARD RAILROAD OF THE WORLD

PHOTOS FROM ABROAD

Jim & Charlotte Pahris' 2010 European Vacation

Mallet Locomotives E164 & E206
September 28,2010 Chemins de Fer du Jura

LOCOMOTIVES #E164 AND #E206 OF 'LA TRACTION S.A.' , PRE-PETITJEAN, SWITZERLAND.

DESCRIPTION AND COMPARATIVE DIMENSIONS

These two locomotives were both built by Henschel, in Kassel, Germany. They have over 100 years been substantially modified, but in their essentials they are typical examples of German railroad engineering practice and quality of their time.

Both locomotives are coal-burning hand-fired Mallet compounds, built to metre track gauge (39.3"). This gauge was common for secondary and mountain railroads in Switzerland, Austria, France, Italy, Spain and elsewhere. Much metre-gauge is still in operation, often greatly modernized. Mallet locomotives, to the patent of the Swiss, Anatole Mallet, are articulated locomotives with a single boiler on a fixed frame, in which a rear set of driving wheels is driven by live steam direct from the throttle (regulator) valve. The exhaust from this high-pressure engine is led forward through a flexible jointed steam pipe to be used again in a low-pressure engine with driving wheels under the front end of the locomotive. This is set in a separate pivoted frame, free to turn and displace sideways. From the low-pressure engine the exhaust is led through the blast pipe to the atmosphere. The articulation allows sharp bends to be negotiated, and longer locomotives with higher power.

True Mallet locomotives are compound engines as described, with two stages of use ofthe steam; the much better-known giant locomotives of later US practice often called Mallets were high power articulated machines, in which front and rear engines were both directly fed with live superheated steam. Many early US 'true' Mallets were rebuilt to non-compound working. Large compound engines, in principle more economical in operation, were complex, and, although strong, often too slow and had other problems. For secondary railroads with steep grades, sharp curves and low speeds they remained very effective, but required careful maintenance and special driving skills. Compound locomotives are usually readily identifiable by sight, as the leading cylinders, in the lowpressure engine, are bigger, offsetting the lower pressure

of the incoming steam, already once used. #164 and #206 do not have superheaters; they run on 'saturated' steam.

The two locomotives of La Traction ran their earlier lives in north Portugal, on the CP, the state railroad, in the Douro valley; #E206 was built in 1913 by Henschel, works no. 12281, one of 16 in its class, and ran until 1978 in regular service. #E164 was built in 1905, works no. 7022, one of a class of 10, and also ran until

1978. Both were recovered from Portugal by 'La Traction' in 1992,

Leading Dimensions, CP E206 and CP E164, as running with 'La Traction S.A.'

	# E206	#E164
Built	1913	1905
Weight in service	132,300 lbs	92,600 lbs
Adhesive weight	115,700 lbs	92,600 lbs
Max. axle load	23,800 lbs	23,600 lbs
Driving Wheels dia.	3'7"	3'7"
Coal (approx.)	2.3 tons	1.5 tons
Water	1070 imp Gall	990 imp Gall
Heating surface (total)	1426 sq. ft.	1023 sq. ft.
Grate area	20.7 sq.ft.	14.7 sq.ft.
Boiler pressure	200 lb/sq.in.	170 lb/sq.in.
Cylinders diameter, high pressure	13.8"	12.6"
Low pressure	19.7"	18.9"
Cylinders, stroke	21.7"	21.7"
HP (Swiss formula)	725 h.p.	585 h.p.
Tractive effort (at 12 m.p.h.)	18,740 lbs	14,550 lbs
Max speed	25 m.p.h.	25 m.p.h.
Length overall	39'10"	35'7"
Wheelbase	33'5"	17'7"

after years of storage in the open air, and were sent for major overhaul in the former Deutsche Reichsbahn (Germany) locomotive workshop in Meiningen. Both received new steel boilers, and many other details, including installation of air brakes in place of the Portuguese standard vacuum brake.

#164 is an orthodox 0-4-4-0T compound Mallet tank engine of a general configuration found earlier on many European loca l railways, including on one constituent of the Chemins de Fer du Jura CJ #206 is unusual, obviously so in wheel arrangement as a 2-4-6-0T, so that with no increase in axle load a substantial increase in power could be transmitted first by the 3-axle high-pressure engine. By all standards, #206 is within its limits of weight and curvature a large locomotive, and correspondingly powerful. It also has a starting valve to admit live high pressure steam, on starting direct to the low-pressure cylinders, to assist in moving a heavy train before the low-pressure engine becomes effective, but also to reduce the risk of losing adhesion of the rear engine.