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APRIL 2022

VOLUME V, ISSUE 2

***Halcyon Days:
Railroads in
the Gilded
Age 1880's***

**Written by
Jill O'Neill**

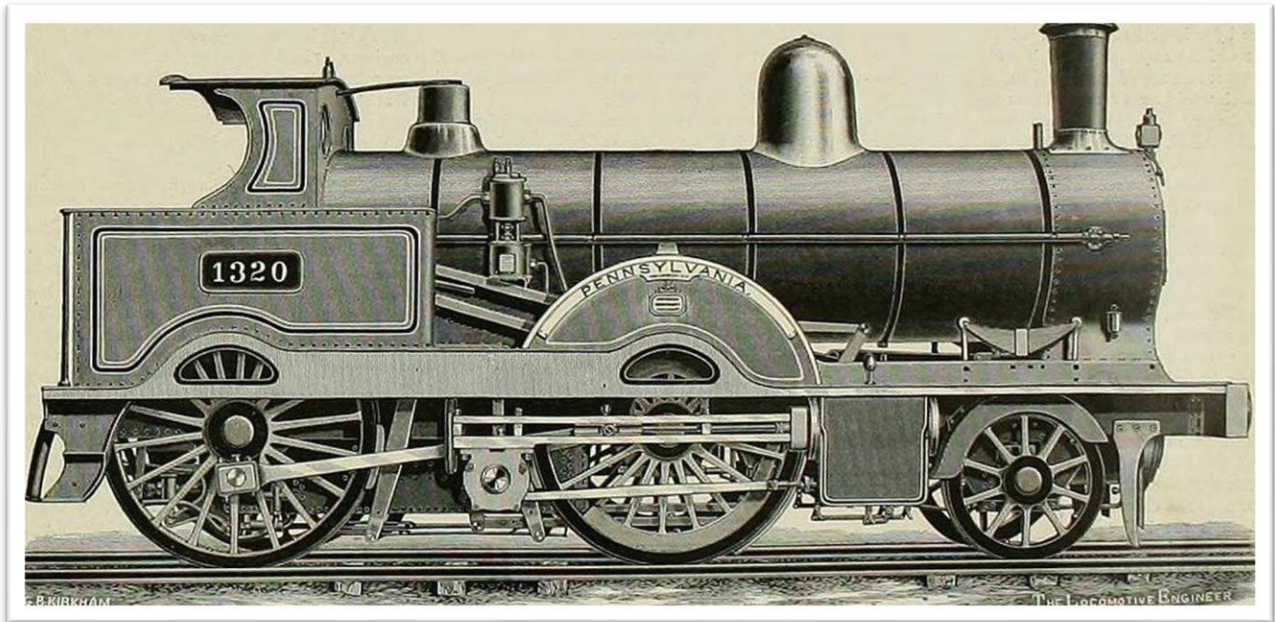


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Halcyon Days: Railroads in the Gilded Age 1880's



The Locomotive Engineer by John A. Hill and Angus Sinclair. New York
(American Machinist Pub. Co, 1888)

Early in 1880, an article in the publication, **American Inventor**, noted proudly the praises of a well-heeled visitor to the United States:

“Mr. George Augustus Sala, the distinguished English author and traveler, now on a visit to the United States, in speaking of the railroads of the country declares, “The railway service of America is to-day more perfect than that of any other country on the globe.” “One can now,” continues the eminent writer, “engage a berth on a Pullman Car, and have all the luxuries as well as all the necessities of life, served to him without being obliged to quit the apartment.”

Although America can truthfully boast of many railways, far surpassing those of Europe in solidity of construction and grandeur of equipment, the particular one, recognized as the representative railroad of this virgin continent, is the Pennsylvania Railway, whose main line is the Grand Trunk and Mail Route of the United States, the connecting link, as it were, between the East and West, while its auxiliary branches and leased lines form the main avenues of travel between the North and South. This wonderful road traverses the most interesting portions of the North

American continent, sections of which present to the eye of the traveler a sublimity of scenery that no description can do justice to, or even bring to the mind of the reader a faint picture of its manifold wonders.

The Pennsylvania Railroad unites, by unbroken tracks, all the principal cities on the Atlantic coast, on the great lakes of the North and in the Mississippi Valley. Through trains are run over its lines between New York, Philadelphia, Baltimore and Washington, in the East, and Buffalo, Rochester, Erie, Cleveland, Detroit, Chicago, St. Louis, Louisville and Cincinnati, in the North, West and Southwest. This road is pronounced by the most eminent engineers of the age to be the best constructed railway in the country. Its main lines are laid with a double track of steel rails, secured on oak ties, imbedded in broken-stone ballast, which renders them impervious to the action of frost or rain and prevents annoyance from dust.” [1]

Later in that same year, **American Inventor** again presented to its readers with conviction the idea that “*The halcyon days of our railroads are just before us.*”

“The truth in this matter is that American railways are the best property in the world . In proportion to their magnitude, they cost less, mile for mile, than any others in the world. As a system they have a better alignment, easier grades, lighter curvature, and with our superior machinery may be worked more cheaply than any others, and when we consider the possibility of an extended business by combining lines, so that we may sweep from ocean to ocean and from the great lakes of the North to the Gulf of Mexico, and also of the enormous traffic which the vast and varied resources of the country will give these enterprises, we stand far ahead of the rest of mankind.

Let it be remembered that we now have upwards of 80,000 miles of living road, and that within the past six months 285 new lines, containing 20,200 miles, have been started. Nor are all, or the majority of these, in the new States as might naturally be expected, as, for instance, eleven of these lines are in Ohio; five are in Illinois; seven in Indiana; seven in Iowa; six in New York; six in Pennsylvania; four in Maine and three in Michigan.” [2]

Yet there was significant division of opinion in the early 1880's as to how much economic power the railroads should be allowed to wield. As others praised the

expansion that the railways brought, the magazine, *The Atlantic*, raised concerns regarding the issue of monopolies in a cover story in March of 1881:

“When Commodore Vanderbilt began the world he had nothing, and there were no steamboats or railroads. He was thirty-five years old when the first locomotive was put into use in America. When he died, railroads had become the greatest force in modern industry, and Vanderbilt was the richest man in Europe or America, and the largest owner of railroads in the world. He used the finest business brain of his day and the franchise of the state to build up a kingdom within the republic, and like a king he bequeathed his wealth and power to his eldest son. Bancroft's History of the United States and our railroad system were begun at the same time.

The history is not yet finished, but the railroads owe on stocks and bonds \$4,600,000,000, more than twice our national debt of \$2,220,000,000, and tax the people annually \$490,000,000, one and a half times more than the government's revenue last year of \$274,000,000. More than any other class, our railroad men have developed the country, and tried its institutions. The evasion of almost all taxes by the New York Central Railroad has thrown upon the people of New York State more than a fair share of the cost of government and illustrates some of the methods by which the rich are making the poor poorer.” [3]



ca. 1893 map of the New York Central

Further on in the article was this:

“Mr. Vanderbilt assured the public over his own signature that the New York Central made no special rates. Mr. Sterne’s examination of the officers and books of the road proved the existence of 6,000 special contracts. The Northern Pacific, which has been built by grants of land from the people, and which is now an applicant before the people’s Congress for the extension of its lands grant, gives special rates to the Dalrymples, the Casses, the Grandins, with their 30,000 and 40,000 acre farms, and charges the poor farmers full rates. The St. Paul and Sioux City Railroad furnishes the large farmers along its route with rates one half those charged the small farmers.” [4]

Almost exactly one year later, **Frank Leslie’s Weekly** echoed those worries with regard to the corporate financial power held by the Pennsylvania Railroad:

“THE report of the Pennsylvania Railroad Company for the year 1881 presents a striking exhibit of the colossal proportions which the business of that great corporation has reached. The net earnings of the road and its leased lines for the year were \$28,939,696, and the total amount, carried to profit and loss was \$10,344,080. The managers announce that, after mature consideration, they have come to the conclusion that it is wise to permit the use of the company’s lines by other companies, even though their traffic may be to a large extent competitive, believing that the advantage to be obtained by the commercial interests of the country will more than compensate for any loss that may occur through a division of traffic. If this policy should be honestly carried out, benefit would undoubtedly accrue to the public; but the risk is that companies using any line in common will so combine as to rates as to practically stifle competition.” [5]



Pennsylvania Railroad system map, 1893

How Had The Railways Grown So?

In the decades immediately before and after the Civil War, the railroads (as well as those various industries that supported the needs of those companies) promised a burgeoning economy. The greater ease of bringing goods and materials to existing markets as well as the emergence of new markets – those in the western states, further from Eastern urban areas – changed the quality of daily life as many needs could be met more swiftly. As so many published county histories published during this period make clear, those states and cities possessed of a railway enthusiastically trumpeted the commercial growth that they were experiencing.

The 1881 publication, *History of Sangamon County, Illinois*, recounted the 30-year development of what would become the Wabash, St. Louis & Pacific Railway Company and the importance that the railroad represented to the commerce conducted and employed population:

“In May 1844, in the Springfield newspapers. appeared the following advertisement of the road:

The subscribers, having leased the Illinois Northern Cross Railway, are prepared to transport produce, merchandise, furniture, etc., to and from the above mentioned places, on terms as reasonable as can be desired,

and by the employment of faithful and experienced agents, and the occupancy of safe and commodious depots, can ensure all requisite care and attention to whatever may be entrusted to their commission.

WM. D. BAXTER & CO.,

Receiving, Forwarding and Commission Merchants.

After becoming quite dilapidated, a law was enacted authorizing the sale of the entire road. The sale was completed for a mere trifle, with the stipulation that the parties coming in possession of it, should put it in running order, for the accommodation of the public. The road was sold in 1847 and was afterwards known as the Sangamon & Morgan Railroad. Other changes followed until it became part of the Toledo, Wabash & Western Railroad, and as such, many improvements were made by the company in the operation of the road. In 1858 the company located their repair shops in Springfield, thus giving employment to a large number of employees, who made here their home, and consequently added much to the trade of the city. In 1869 new buildings were erected for their rapidly increasing machine works at a cost of \$75,000.

In 1870 a fine passenger depot was erected in Springfield, at a cost of \$36,000. In this building are the offices of the Division Superintendent and other officers of the road located here. A freight house was also erected the same year.

In 1879, the Toledo, Wabash & Western, the Toledo, Peoria & Warsaw and several other roads were consolidated under the name of the Wabash, St. Louis & Pacific Railway Company. Although the details of the consolidation were agreed upon by the stockholders in November, 1879, the business of the new company did not begin until January 1, 1880. The company now owns, in 1881, 3,000 miles of railway, and expects to secure other roads, having entered into contracts by which they will soon come into their possession." [6]

The History of Edgar County, Illinois, published two years earlier, notes the impact of expansion of the number of lines through the area alongside the rise in valuation to the company stock:

“Our latest new road is the Chicago and Lake Huron, formed of three lines, and entering the city from Valparaiso on the Pittsburgh, Fort Wayne and Chicago track. The trunk lines being mainly in operation, the progress made in the way of shortening tracks, making air-line branches, and running extensions does not show to the advantage it deserves, as this process is constantly adding new facilities to the established order of things. The panic reduced the price of steel to a point where the railways could hardly afford to use iron rails, and all our northwestern lines report large relays of Bessemer track. The immense crops now being moved have given a great rise to the value of railway stocks, and their transportation must result in heavy pecuniary advantages.” [7]

The contemporary **History of Philadelphia, 1609 - 1884 (Vol. 3)** commemorates the first legislative authorization to lay a railroad between that city to the city of Columbia in 1823:

“The first proposition for the incorporation of a company to build a railroad was made by John Stevens, of New Jersey, in 1822. In his petition to the General Assembly of Pennsylvania, presented in that year, he stated that he had invented a mode of transportation by railroad, and asked for a charter to himself and associates as a corporation to build a railroad from Harrisburg to Pittsburgh. Nothing was done in regard to the matter that year, but in 1823 an act was passed, on the 31st of March, to incorporate “The President, Directors, and Company of the Pennsylvania Railroad Company,” with authority to lay out a railroad from Philadelphia to Columbia, in Lancaster County. This was the first railroad act passed in the State.”

Although the Pennsylvania and Reading Railroad company was in receivership through poor management at the time of the source’s publication, the history reports:

“The Philadelphia and Reading Railroad Company’s system of cheap tickets has been of vast service to the company, and one of the branches— the Germantown and Norristown Railroad— has the largest local travel per mile and runs the largest number of passenger trains of any single road in the United States. The company also owns a fleet of iron steamships, which it employs in carrying coal from Port Richmond to cities along the coast. The united length of all the railroads under control of the

company is 846.3 miles, all of which lie within the borders of Pennsylvania, and have Philadelphia for their commercial entrepot and business terminus."

A different railroad line operating in the area around Philadelphia was more successful:

"In consequence of movements in the city and districts in 1851 and 1852, considerable interest was taken in the construction of a railroad to connect Philadelphia with the Lehigh coal region. The benefit of the trade of Bucks and Northampton Counties and upon the upper Delaware was duly set forth, and resulted in the incorporation, April 8, 1852, of the Philadelphia, Easton and Water Gap Railroad Company. The title of the company was changed by act of April 18, 1853, to the North Pennsylvania Railroad Company. Subscriptions by the city and district corporation and citizens were obtained with energetic effort, and the construction of the road entered upon. It was finished as far as Gwynedd, in Bucks County, in the early part of 1855, and formally opened for travel on Monday, the 2d of July, 1855, by an excursion from the Cohoquinoque Station, at Front and Willow Streets, to Fort Washington. From that time the road has been in operation, the distance traveled being gradually extended as new sections were finished. Travel was opened through to Bethlehem in 1857, and subsequently connection has been had with the Lehigh Valley Railroad and extension of lines in Northern Pennsylvania, together with the line known as the Bound Brook route to New York. The passenger depot remained at Front and Willow Streets until about 1864, when it was removed to Germantown Avenue and Thompson Street. This was not a very convenient place, and was subsequently abandoned, a very large and commodious depot having been erected at Berks and American Streets, from which the locomotives could be run without interference upon the unobstructed tracks northward. Soon after the company was established a lot of ground on the north side of Walnut Street, west of Fourth, was obtained for the purposes of a main office, and a fine large building with a brown stone front erected there." [8]

The ***History of Richmond County, (Staten Island) New York, From Its Discovery to the Present Time*** describes in detail the success of the Island's native son, Cornelius "Commodore" Vanderbilt as well as William H. Vanderbilt who would



Cornelius "Commodore" Vanderbilt, Source: Buttre, Lillian C., 1877, American Portrait Gallery, New York

inherit Vanderbilt's money and power in 1877. Vanderbilt had initially built his fortune through investment in the steamship industry that carried so many of the goods needed in the various regions of the United States:

"In the winter of 1862-63, Mr. Vanderbilt made his first investments in railroad stock, a move which at the time was considered by his friends to be impolitic. He was then in his 69th year, and it was

thought that the intricate methods of Wall Street would be too much for his declining days. But the fact that in the next fourteen years he succeeded in withdrawing his immense fortune entirely from its maritime investment, doubling it four times over, and obtaining for it the most solid of all security then known to the American financier, shows the mental power which he possessed and the clearness of his judgment.

The acquisition of the Hudson River Railroad by the commodore gave him great power over the transit of the state, which was, however, hampered to a certain extent by the arbitrary conduct of the New York Central, under the control of Dean Richmond and Peter Cagger. These gentlemen adopted a course with Mr. Vanderbilt which was from the first calculated to excite his displeasure. They refused to unite with him in any measure for the better accommodation of either passengers or freight, and caused him to retaliate by a bold movement, which finally gained him possession of the New York Central road. Richmond and Cagger had been in the habit of using Drew's river boats as an outlet for their freight in New York city during the summer months, but in the winter they were obliged to send it over the Hudson River road. Mr. Vanderbilt took advantage of this fact and refused to run any trains to Albany during the winter, thus reducing the stock of the Central more than fifteen per cent., after which

he bought large amounts of it, and gained the management. Three years later. November 1, 1869, he secured its consolidation with the Hudson River road under the name of the New York Central and Hudson River Railroad Company.” [9]

With a certain amount of awe in speaking of Vanderbilt's death and the charge left to William Henry Vanderbilt, the author notes “On examination of the will it was found that the commodore had left the bulk of his fortune, amounting to nearly \$90,000,000” in William's care. The chapter goes on to provide a sketch of the life and business acumen of the new head of the New York Central and Hudson River Railroad.

Rolling Stock and the Stock Markets

The cover story on **Frank Leslie's Weekly** for the last week of August 1879 shows William H. Vanderbilt in the middle of a small crowd of men on a hotel porch in Saratoga Springs, the favored summer resort of the wealthy at that time. A reporter noted the confidential discussion of the men centered around the stock price of a particular railroad:



Frank Leslie's Weekly, August 30, 1879

“In one corner of the piazza of the United States Hotel a knot of lynx-eyed gentlemen daily congregate. They seat themselves on rude wooden chairs, speak in that low tone dramatists relegate to conspirators; ever and anon consult telegraphic slips or pocket-memoranda, whiffing the while cigars that would have made the mouth of that arch scamp, the ex-Khédive, water from envy. This El Dorado is known as

“Vanderbilt's Corner,” and in the center of the railroad magnates sits their monarch, Mr. William H. Vanderbilt, a word from whose lips makes or mars

millions...One morning during the past week the sovereigns of the railroad world met as usual to hold council and to discuss the propriety of relieving

poor embarrassed Europe through the medium of express-trains and grain-elevators. The stock-operator, apparently by accident, planted his chair close to that of Mr. Vanderbilt's but as he immediately buried himself in the folds of his newspaper, no further notice was taken of him. It so happened that the august ones were deciding the propriety of the Lake Shore's acquiring the control of the Canada Southern, and the moment that their chief, Mr. Vanderbilt, announced his decision in favor of the arrangement, the stock-operator, still buried in his paper, shuffled hastily away. Whither? To the telegraph-office, and a message instantly flashed to his partner in Wall Street securely "nobbled" several thousands of dollars. Those railroad magnates meet daily at Vanderbilt's Corner, and during "a long hour by Shrewsbury's clock" the great game is as quietly played as a rubber at whist, the stakes being only millions." [10]

The opportunities for expansion in the railroad industry as well as in an investor's personal wealth was observed across a range of publications. Business periodicals such as the **American Inventor** provided updates on the number of miles of laid tracks as well as specifications of heavy machine technology:

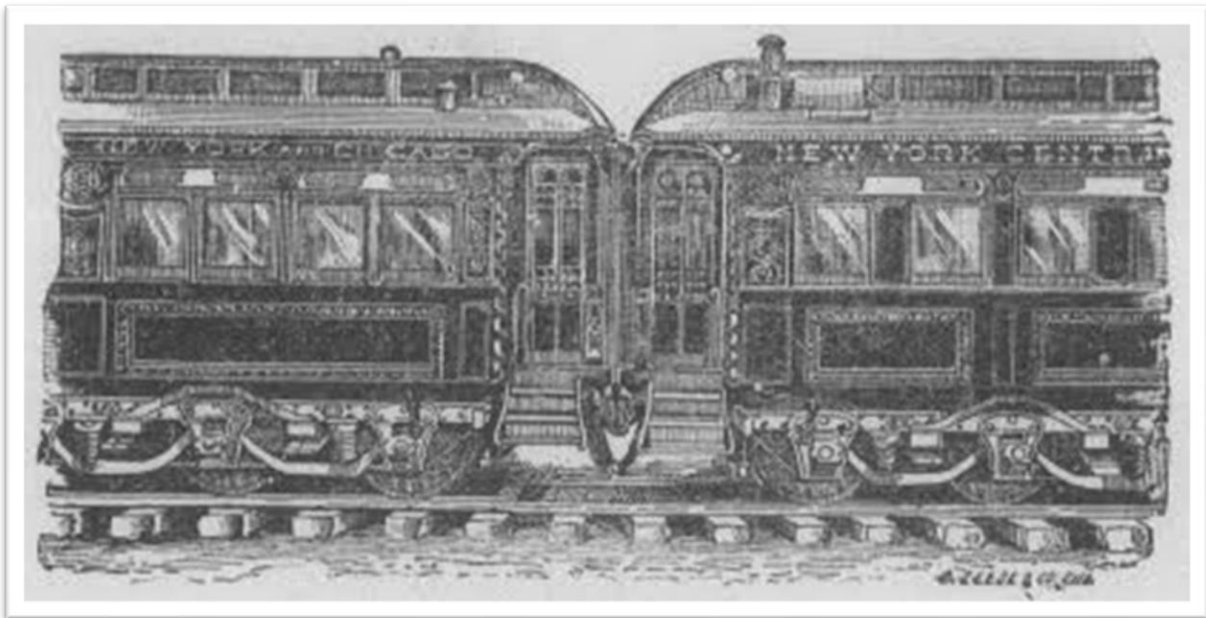
"LOCOMOTIVES PRODUCED THE PAST YEAR.— The production of locomotives in 1886 was large compared to that of the previous year, but it was not equal to the natural increase of railroad rolling stock. The Railway Age reports record more than 7,000 miles of new railroad built during the year, which would call for 700 locomotives, nearly half of the whole number built. The railroads in the United States use at present 27,900 locomotives and those in Canada 1,376 locomotives to do the work of transportation.

THE LARGEST AND FASTEST LOCOMOTIVE.—A telegram from Providence, R. I., January 30, says: The largest and fastest engine ever built will be turned out of the Rhode Island Locomotive Works to-morrow for the New York, Providence and Boston Railroad. She will burn hard coal, and her fires will give an enormous increase of heating surface compared with the largest engines now in use. The main driving wheels are six feet in diameter and are seven feet six inches apart. The fire box is of steel, 125 inches long and forty-three wide. There will be a depth of fire under all the tubes of about twenty-two inches, The cylinders are eighteen inches in diameter with twenty-four inch stroke. The effort has been made to secure extraordinary steam facilities with only moderate sized cylinders. The boiler is fifty-four

inches in diameter at the smoke stack, it extends to the end of the cab, and necessitates the elevation of the engineer's seat to a height far above the fire door. The tank holds 4,000 gallons, and the total weight of the monster is 195,000 pounds. The weight of the driving wheels will be 66,000 pounds. Everything about the engine is of the best steel, and not a particle of brass can be seen. She is expected to make the run from providence to Groton, Conn., 62.5 miles, including a dead stop at Mystic drawbridge, in 62.5 minutes, pulling at the same time eight cars, four of which will be Pullmans." [11]

The African American newspaper, ***The Christian Recorder***, commented on the export value of manufactured locomotives:

"During the last fiscal year nearly three hundred locomotives were sent abroad, nearly all to Central and South American and Mexico, though six were sent to Spain, three to Sweden, and one to England. IT is needless to say that Philadelphia furnishes the large share of these exportations. Ever since the days of Mr. Harrison's and Mr. Eastwick's Russian enterprises. Philadelphia has had a world-wide fame for the excellence of its work in this branch of manufactures. –Ledger." [12]



Wagner's Palace Cars, Frank Leslie's Weekly, May 11, 1889

The Risks of Riding The Railroad

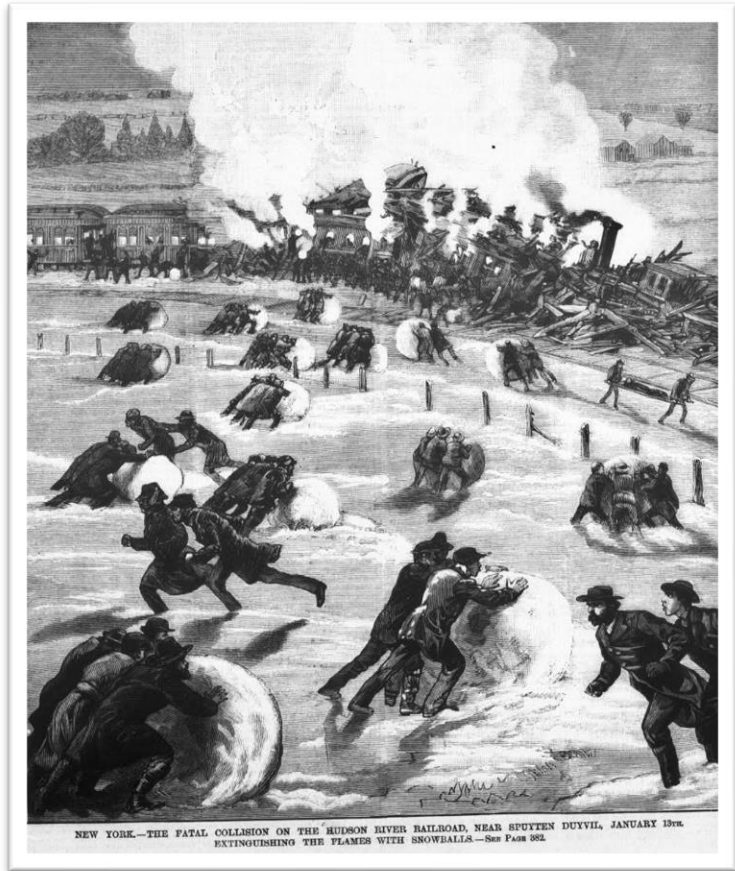
Fortunes were made and lost by those who held ownership in the railroads, but there were different risks assumed by those who traveled on them. Even in the early years of the Gilded Age, there were alarms raised about the lack of safety features and the likelihood of disaster.

One dreadful instance, recalled even now, took place in January of 1882 when two trains collided, raising alarm over safety measures. **Frank Leslie's Weekly** reported:

“A TERRIBLE accident occurred on the Hudson River Railroad near Spuyten Duyvil early in the evening of January 13th, by which a number of lives were lost, several passengers were more or less severely injured, and two palace-cars wrecked and burned. The Atlantic Express, which was due in New York City at seven o'clock in the evening, was thirty-five minutes late on leaving Albany. It ran at a high rate of speed and had nearly made up its lost time before reaching Spuyten Duyvil. There were thirteen cars on the train. Six were parlor cars. These were the Red Jacket, Vanderbilt, Sharon, Minnehaha, Empire and Idlewild. There were four passenger coaches, two mail cars and one express car. The train had passed Spuyten Duyvil and had gone about a third of a mile, when one of the air-brakes gave out and the train was brought to a stop about two hundred yards from Spuyten Duyvil curve. This curve is one of the sharpest on the road, and an approaching train could not be seen beyond the turn. The train was delayed five or six minutes while workmen were examining and repairing the brake. A local train for passengers left Tarrytown about 6:35, shortly after the express train had passed, and left Spuyten Duyvil at 7:07, being due at the Grand Central Depot at 7:30. While the express train was standing on the track the local train from Tarrytown, running at apparently full speed, crashed into the rear of the standing train. The two rear drawing-room cars were telescoped. They then caught fire and were burned. It is believed that all of the ten or twelve persons in the rear car perished. Senator Webster Wagner was last seen, a moment before the accident, going from the second car from the rear to the rear car, and there is no doubt that he is among the victims. The number of those who perished in the second car from the rear is not known, but there seems to be reason for believing that all of the passengers were not rescued. Among the dead are a young couple, Mr. and Mrs. Park Valentine, who

were on their bridal tour. The cause of the accident is not clear, but it seems that there was an almost total absence of attempt to flag the approaching train. The number of dead bodies taken from the wreck at midnight was ten. Several persons are injured, one at least fatally.

On the train were ten State Senators and twenty-six Assemblymen returning from the capital, but of these only Senator Wagner is known to have been lost. The engine of the Tarrytown train ran under the platform into the car and drove the Idlewild into the Empire with such terrific force as to render it necessary to cut it out. The stoves and lamps in the parlor cars were upset and ignited the woodwork and upholstery. The passengers were jammed between the seats and sides of the car and held while the flames rolled around and enveloped them. Of the twelve passengers in the Idlewild, nine are dead..." [13]



Frank Leslie's Illustrated Newspaper, January 13, 1882

That night, the most effective means of extinguishing the fire was by rolling and pushing large snowballs down the hill onto the flaming railcars as the front page of **Frank Leslie's Weekly** documented for its readers. The Senator Wagner referenced in the extract above was an important supplier to the New York Central Railroad, the man who had secured Andrew Carnegie's investment in the Wagner Palace Car Company. As that same article in **Frank Leslie's** notes:

"Through his connection with railroads he perceived the necessity of sleeping-cars. He secured the cooperation of other men, and four cars were built, which began running on the New York Central Railroad in 1858.

As soon as the sleeping-coaches proved an assured success, Mr. Wagner turned his attention to the drawing-room car. In 1867 his first palace-car was invented. These cars became very popular and made the fortune of their inventor. They are used on many of the principal railroads in the United States." [14]

The failure of signaling in tracking the location of trains on the move would continue to be an issue. Newspapers kept the pressure on, particularly as there was a perception that there might be greater concern in keeping costs down than with adequate training and staffing of certain roles. Following another collision, this time in the tunnel into Grand Central Depot, **Frank Leslie's Weekly** drew attention to human error and exhaustion as a potential cause:

"A block signal system is employed, with stations about half a mile apart, and the telegraph-operator at each station is expected to stop a train in case that which precedes it has not been reported as passing the next station and hold it until he is notified that the track is clear. Obviously, the position of telegraph-operator at each of these stations is a most responsible one, requiring quickness, coolness and experience in the highest degree. Yet it appears that the operator whose negligence caused the recent collision was a mere boy of eighteen, never employed in any other office, receiving only \$45 a month, and required to be on duty daily ten hours on a stretch in the weeks when he did day-work, and fourteen hours without relief in the weeks when he was employed at night. During these long periods he was left without any assistance, and no matter how fast the trains followed each other, or how great a tangle a smash-up on one of the tracks might precipitate, he must keep the run of everything himself. He seems to have been a bright and clever boy, but he was only a boy in a place where the exacting duty and heavy responsibility required the constant employment of two competent and experienced men." [15]

The **American Inventor** in 1885 drew attention to the solution of pneumatic signaling devices, sensibly noting:

"The applications of pneumatic forces and mechanism have of late become so numerous and of such eminent utility that we look for every development of this branch of invention with keenest interest. To bring them into service as a prevention of railroad accidents is certainly a most humane idea, and we can readily afford to congratulate Messrs. Sexton &

Reiser, of Aurora, Ill., for the pneumatic time signal they have patented in this connection.

It is well understood that the majority of our railroad accidents depend on the collision of trains, and result from the broad fact that the engineer of a train cannot usually tell with precision "where the other fellow is." If we could effectually and promptly supply an engineer with this item of information and do so at relatively safe intervals of distance or time, we should certainly be doing much to avert the sacrifice of human life which is now a regular feature of our annual railroad statistics.

In the signal under notice, and of which we present a striking illustration, a means is provided whereby the engineer or other officer of a train approaching it may discover, by glancing his eye at the dial of the apparatus, just how many minutes since the next preceding train left the place where such signal is placed, and which may be anywhere along the road, and even miles distant from a station, thus giving him accurate information as to whether it was behind or ahead of its time, and consequently governing him in the running of his own train slower or faster as need be to insure safety and avoid running into the train ahead." [16]

In 1887, after another deadly accident took place on the Vermont Central Railway, **Frank Leslie's Weekly** would chide the corporate ownership for not immediately adopting proposed improvements to passenger cars:

"Our own view is that it is quite possible to construct fire-proof passenger, drawing-room and sleeping coaches, and that the heating-apparatus can be so made and adjusted that in any violent shake-up the fuel will be automatically discharged from the car...it is certain that the body of the car and all its interior fittings could as well be of cast iron or of steel as of wood, and could be merely polished instead of being painted, oiled and varnished, as the woodwork now is. Such a change in construction would, in view of the present low prices of iron and steel, scarcely involve any appreciable increase in the cost of building sleeping coaches, or other cars, and such increase as it would involve would be partly compensated by the immediate increase of traffic on the lines adopting the new style of coaches, and the remainder would be more than made up in the increased durability of the coaches themselves.

This would leave no combustible materials in the cars except the bedding, which if of woolen would be very imperfectly combustible, and if arrangements were perfected for wetting it, even within a few moments after an accident, it would become rather an extinguisher of flames than a promoter of them. Polished iron and steel sleeping-coaches, with fires held in stoves opening through to the track, so that a violent shock would discharge the fuel from the car altogether and furnished with all-wool bedding and steel-spring mattresses made to be free from combustible matter, would amount to absolutely fireproof or incombustible sleeping-coaches, and these are all that the railroads or the public ought to tolerate.” [17]

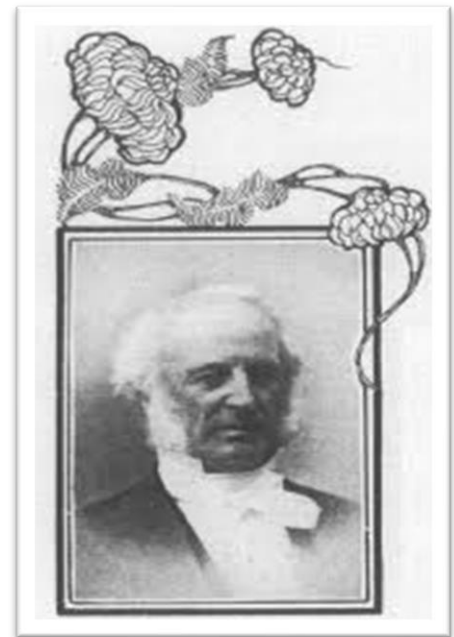
The earnest report seems not to have factored in the amount of power necessary in a steam engine to pull such heavy carriages on the tracks nor did it choose to highlight the fact that these protective measures would only apply to that elite set of passengers able to afford travel in first class accommodations.

Over time, conditions would improve with regard to the comfort and safety of all travelers, but the introduction of new technology and materials would fall more to twentieth century innovators.

Entering into the Progressive Era

In 1903, merely 16 years later, the New York Central Railroad would celebrate its fiftieth anniversary. Sharing the importance of the impact of the railroad with its readers, **Frank Leslie's Weekly** would feature a celebratory account of the critical contribution of that railroad in the United States:

“In 1831 the total length of the first nucleus of the New York Central lines was only seventeen miles, and its total equipment comprised merely the little primitive locomotive De Witt Clinton and three passenger cars that were like old-fashioned stage-coaches. The highest speed of this slender outfit was only fifteen miles an hour. In remarkable contrast stands the system of



Cornelius Vanderbilt, Founder of the Vanderbilt System of Railways, Frank Leslie's Weekly, October 22, 1903

to-day, with its more than eleven thousand miles of railway and its equipment of 15,000 freight and 3,600 passenger cars, and 3,600 locomotives, some of which, drawing heavy trains, have attained a speed exceeding a mile a

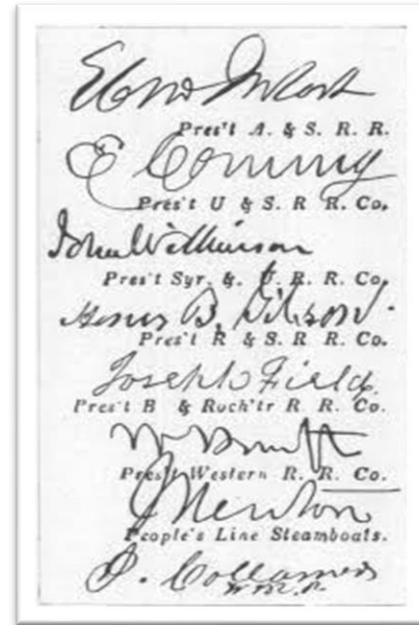
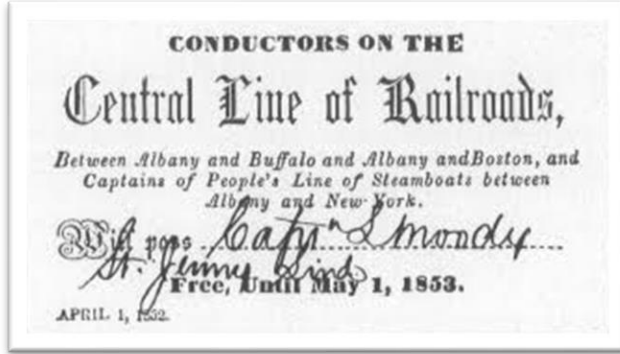
minute. Hundreds of splendid passenger trains now pass over the lines every day, while a tremendous amount of freight is carried between the big cities of the East and the West. Some of the freight trains consist of eighty to a hundred cars, each carrying from 60,000 to 100,000 pounds of merchandise, aggregating nearly ten million pounds to a train...

But it is in the celebrated Empire State express that the progress of this grand railway system is most strikingly typified. This is the fastest long-distance train in the world, running from New York to Buffalo, 440 miles, in eight hours and fifteen minutes, at an average speed of fifty-three and one-third miles per hour. For more than two hundred and sixteen miles the express averages sixty miles an hour, and on the nine-mile stretch between Rochester and Fairport it flies along at the rate of 66.33 miles per hour. The locomotive of this train weighs 144 tons, and hauls five cars whose combined weight is 261 tons. The train is furnished with every modern improvement, and, in spite of its wonderful swiftness, is one of the safest means of travel in the world.

Fifty years in the life of a mountain, a continent, or a star is an infinitesimal and insignificant segment of recorded time, but in the expansive, diversified, many-sided, and ever-changing life of the greatest of modern business enterprises, a great railroad system, fifty years sums up a marvelous amount of history.

That consolidation in 1853, as has been pointed out by General Passenger Agent George H. Daniels, was the first railroad merger in the United States. It was a small affair compared with the big combinations which have come since, but it was the path-breaker for all the rest of them, was a very important consolidation for that time, and was, of course, the application to the railroad business of that principle of concentration which has been made necessary in all sorts of activities, and which is especially prominent in 1903. The act of 1853 opened the way for the consolidation of the New York Central Company with the Hudson River Railroad in 1869, which event presaged an era of wonderful progress in the undeveloped West,

for it created a direct line from the ocean to the great lakes and brought distant territories into close connection with the seaboard." [18]



1853 Conductors Pass, Front and Back, Frank Leslie's Weekly, October 22, 1903



The fastest time on record Photo'd by A. P. Yates, Syracuse, N.Y., when Engine 999 drawing the Empire State Express train, made the record of 112 1/2 miles an hour. 1893 May 10. Photograph. Library of Congress.

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Accessible Archives Collections Used in Preparing This White Paper

Accessible Archives provides diverse primary source materials reflecting broad views across American history and culture have been assembled into comprehensive databases. The following collections were utilized in composing this white paper.

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Frank Leslie's Weekly, 1855-1922

Full run of issues and includes articles on: slavery and abolition; politics, elections, and political parties; the Civil War; industrialization and technology development; business, commerce, and commodities; society and culture; women's rights and suffrage; African American society and economics; immigration; the world in conflict; labor and radicalism; religion; and featured columns on music, the stage, fashion, fine arts, sports, and literature.

Invention and Technology in America: American Inventor, 1878-1877

Combines the history of American invention and the interaction of technology with social, economic, and cultural change throughout the course of the late 19th and early 20th century. The *American Inventor* was one of the most prominent of the late 19th Century illustrated mechanical journals. Under publisher and proprietor, J.S. Zerbe and published in Cincinnati, Ohio from 1878 to 1887, the *American Inventor* grew to a large nationwide circulation. In its advertising, it claimed "contains in a year reading matter equal to 800 book pages and 300 illustrations of everything new in the field of mechanical thought."

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