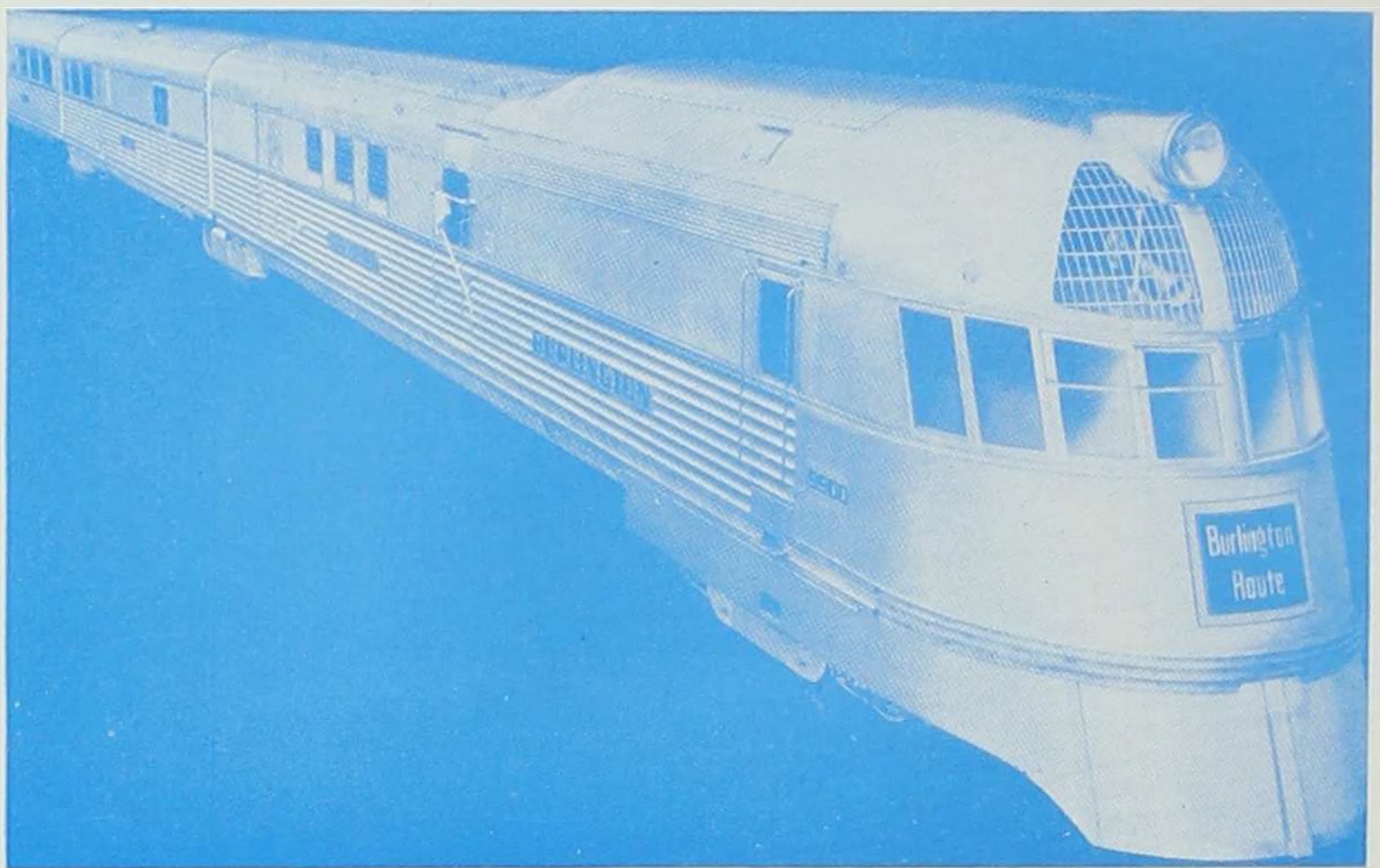


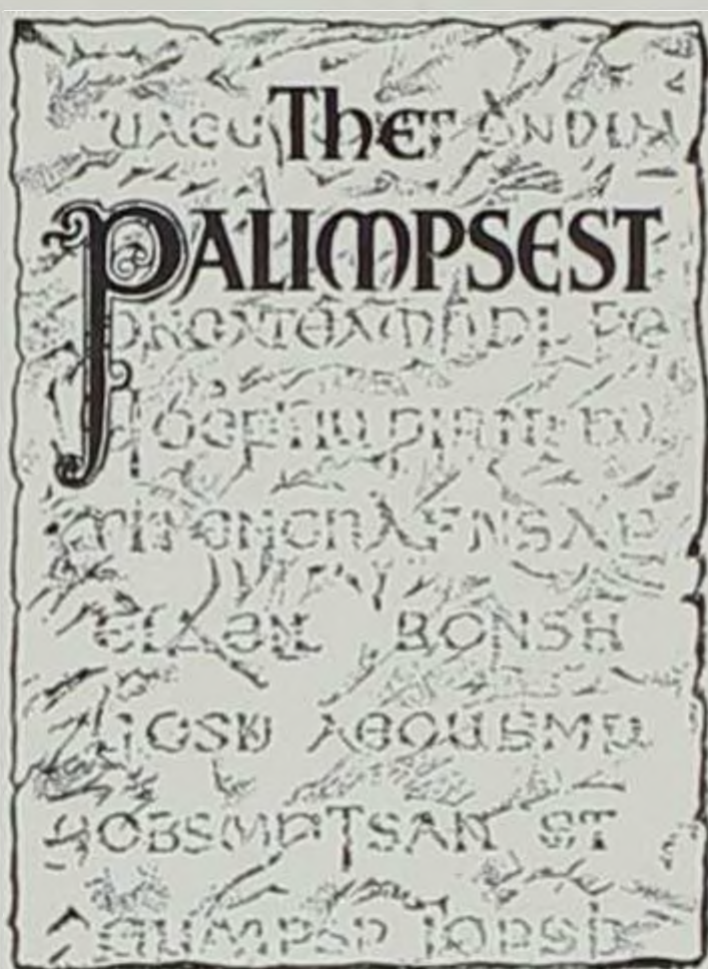
The
PALIMPSEST



STREAMLINERS IN IOWA

Published Monthly by
The State Historical Society of Iowa
Iowa City Iowa

JUNE 1951



The Meaning of Palimpsest

In early times a palimpsest was a parchment or other material from which one or more writings had been erased to give room for later records. But the erasures were not always complete; and so it became the fascinating task of scholars not only to translate the later records but also to reconstruct the original writings by deciphering the dim fragments of letters partly erased and partly covered by subsequent texts.

The history of Iowa may be likened to a palimpsest which holds the records of successive generations. To decipher these records of the past, reconstruct them, and tell the stories which they contain is the task of those who write history.

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Back — Inside: Map of the Routes of Iowa Streamliners with some of stops indicated.

Outside: Iowa Streamliners leaving Chicago.

Top: Rock Island *Golden State*.

Center: Milwaukee *Midwest Hiawatha*.

Bottom: North Western *City of Portland*.

PICTURE CREDITS

The pictures used in this issue have been furnished by the following railroads: Rock Island; Burlington; North Western; Milwaukee; and Illinois Central.

ENTERED AS SECOND CLASS MATTER JULY 28 1920 AT THE POST OFFICE AT
IOWA CITY IOWA UNDER THE ACT OF AUGUST 24 1912

PRICE — 15 cents per copy; \$1.50 per year; free to Members

MEMBERSHIP — By application. Annual Dues \$3.00

ADDRESS — The State Historical Society, Iowa City, Iowa

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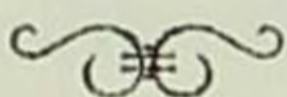
EDITED BY WILLIAM J. PETERSEN

VOL. XXXII

ISSUED IN JUNE 1951

No. 6

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The First Streamliner

At four minutes after six on a May morning in 1934 a small silver train, powered with a 660 horsepower Diesel locomotive, "zoomed out of the Colorado dawn" with a full complement of 72 passengers. The Burlington Railroad was about to test a new "speed king of the rails" — the *Zephyr*.

The start had been delayed over an hour by a broken bearing. Then, only a few miles outside Denver, another mishap almost ended the trial run. A wire in the air condenser broke. Favored by a downgrade, the *Zephyr's* power was cut and she coasted for about 25 miles, slowing down to a mere 40 miles an hour, while the damage was repaired. From there on, nothing hindered the amazing, roaring dash of the streamliner.

Across the plains of Colorado and Nebraska, across the prairies of Iowa and Illinois, the small train sped. All passenger trains on the Burlington lines were sidetracked — went "into the hole" in railroad parlance — forty-five minutes before the

Zephyr was due to pass, while freight trains were stopped two hours in advance. At every grade crossing, for the entire thousand miles to Chicago, one or two employees of the Burlington lines were stationed; in the towns, street crossings were roped off. And all across the country people gathered to wait and watch for the "bullet train."

The *Zephyr* entered Iowa at Council Bluffs about 1 o'clock in the afternoon. Three hours and thirty-two minutes later it passed through Burlington, 274 miles away. It had averaged 73.3 miles per hour across the state; between Villisca and Corning it hit 92 miles an hour; from Corning to Creston, 83.2, arriving at Creston at 2:11. From Creston to Osceola the speed was 82.5 miles an hour; while from Osceola to Melrose it dropped to 72 for that 41-mile distance.

The watchers, especially those in the towns along the way, could see but little of the flashing train. As the time approached, and excitement mounted, a distant rumble could be heard; then an increasing roar, a shrill whistle, a flash of silver — and the *Zephyr* had passed. Those in the countryside, farther away from the tracks, could watch the train for a few miles in its headlong dash — could view for a longer moment a new and revolutionary development in railroading.

At nine minutes after seven that evening the *Zephyr* — a "silver gleam in the dusk" — reached Chicago, where it was switched onto the track of

the transportation pageant on the lake front grounds of Chicago's Century of Progress Exposition — a new climax in the long history of man's efforts to move from place to place on wheels.

The previous world's nonstop record for a locomotive had been made by England's *Royal Scot* — a record of 56 miles per hour on a 401-mile run. The Burlington *Zephyr* ran the 1,015.4 miles from Denver to Chicago at an average of 77.6 miles per hour — varying from 70 to 112.5 miles.

Weighing about 95 tons — almost as much as a standard Pullman car — the little three-car, all-metal *Zephyr* had been introduced to the public on April 9, 1934, and had been on exhibition at various points throughout the country since that date. The entire train was but 197 feet long. Built of lightweight stainless steel, the three cars had only sixteen wheels, in contrast to the usual thirty-six on a similar conventional type train. The three cars (the combined locomotive and mail car; the baggage, buffet, and smoking car; and the chair car with a miniature "parlor car" or lounge at the rear) were "articulated" — that is, the rear of one car and the front of the next rested on the same truck. The *Zephyr* had been built at the Philadelphia works of the Edward G. Budd Manufacturing Company; the interior had been decorated by Paul Cret of Philadelphia; and the overall styling planned by Holabird and Root, architects of Chicago.

This was the first "streamliner." Many trains have been dieselized since 1934, but not all of them are, technically, streamliners. In railroad vocabulary, a "streamliner" is a train planned and designed, inside and out, to form "one integral unit." The interior decoration follows one color scheme, while all hand rails or other protruding fixtures have been removed from the outside, giving the entire train a "sleek appearance with a uniform height from locomotive to the very last car."

As the *Zephyr* pulled into Chicago on May 26, 1934, a new era in railroading began. The first of the streamliners had inaugurated the Diesel age of train travel.

Woodburner to Streamliner

One hundred and four years before the *Zephyr* made its spectacular nonstop run from Denver to Chicago, Peter Cooper's *Tom Thumb* inaugurated passenger traffic on the Baltimore & Ohio Railroad. Even before that date — August 28, 1830 — there were railroads and railroad "trains" in operation in the United States. Their motivating horsepower was just that — horses pulled several stagecoaches linked together and running on primitive wooden rails.

The Baltimore & Ohio had experimented with several means of motive power to move cars on its track which was being built between Baltimore and Ellicott's Mills, a distance of thirteen miles. Horses had been tried, but a cow on the track wrecked this venture and spilled angry passengers down an embankment. Sails were rigged on a boat-shaped vehicle made of basketry in which the passengers sat. This sailing car — named the *Meteor* — proved pleasant and cheap; its disadvantage was that it could only make eastbound trips, and even then required a "stiff breeze" to keep in motion.

Meanwhile, Peter Cooper was working on his diminutive locomotive, made from a small boiler

and aptly named the *Tom Thumb*. His second try was successful. The *Tom Thumb* pushed — not pulled — a car loaded with twenty-four passengers the thirteen miles of the Baltimore & Ohio track in one hour and fifteen minutes. This event, a landmark in American railroading, received but a 14-line notice in a New York newspaper. Americans were still skeptical. A few days after this first trip, Cooper accepted the challenge of a horse-drawn car. This famous race, lost by the *Tom Thumb* because of a broken leather wheel band, seemed to end the hopes of steam railroading.

But earlier in the same year another American-made steam locomotive had operated successfully on the Charleston & Hamburg Railroad in South Carolina. Horatio Allen's engine — named the *Best Friend of Charleston* — had pulled a train of cars over a six-mile track. Neither Allen nor Cooper were by any means inventors of the "steam carriage," however. Men in England and America had been working on the principle for many years, usually amidst the amused laughter and jibes of their neighbors. As early as 1786 Oliver Evans of Philadelphia had petitioned the Pennsylvania legislature for the right to build wagons to be "propelled by steam on the highways. . . ." He was summarily repulsed, but never gave up his efforts, although he met with no success. In 1812 Evans made the startling predic-

tion that he did "verily believe that the time will come when carriages propelled by steam will be in general use, as well for the transportation of passengers as goods, traveling at the rate of fifteen miles an hour, or 300 miles per day." This was written two years before the famous English inventor, George Stephenson, had built his first locomotive, which made but four miles an hour. Little wonder that Evans was considered a crazy visionary.

Others had followed in Evans' footsteps, however. John Stevens of Hoboken, in 1812, wrote what is probably the first American printed work on railroads: *Documents Tending to Prove the Superior Advantages of Railways and Steam Carriages over Canal Navigation*. He urged Congress to undertake the construction and control of railroads, but Congress "considered the subject unimportant." In 1820, when seventy-six years old, the irrepressible Stevens built a steam locomotive and ran it on a circular track built in his own back yard.

Evans, Stevens, and many others were prophets without honor in their own country and time, but those who followed them reaped the reward of their preliminary work. When, after experiments with cars run on inclined planes, with horse-drawn stagecoaches on tracks, and with sailing cars, Americans were ready to try out the steam locomotives, they went to England, where the pioneer-

ing work of George Stephenson had brought development far ahead of that of American engineers. In 1831 the first English locomotive, the *John Bull No. 1*, was brought to America and put into service on the Camden & Amboy Railroad. Shortly, another *John Bull* was bought by the Mohawk & Hudson, which was also using the American-built *DeWitt Clinton*. English engineers arrived to operate the "steam carriages" and to try, fruitlessly, to keep the secrets of their management and construction from the Americans. By "sharp observation and even spying methods," the mysteries of English locomotives were soon learned and incorporated into American-made engines.

The principle of operation — a method whereby power could be transmitted from fuel to the wheels of the engine — has remained the same, whether the fuel was wood, as in the 1830's, or oil, as in the 1930's. In steam engines, the fuel is burnt to heat water into steam which works in a cylinder. In the Diesel engine (invented by a German, Rudolph Diesel), air is compressed in a cylinder, into which oil is sprayed and ignited by the heat of compression. The great advantage of the Diesel is that it gets four times as much work from a pound of fuel as does a steam engine.

The first fuel for American locomotives was naturally wood. Steamboats used wood, and were supplied by woodyards along the rivers. In the same manner, woodyards along the tracks sup-

plied the first primitive engines on the railroads. The boilers, filled with water heated by wood or coal, were at first either vertical or horizontal. Later the horizontal boiler came into general use, and locomotives began to resemble, in a primitive fashion, the modern steam engine. The smokestacks, which sent clouds of smoke and cinders over the countryside, and over the hapless passengers in the open cars, grew taller and larger — springing up, funnel-shaped, from a small opening on the boiler to a huge “balloon” opening at the top. This type of stack was used on the first locomotives in Iowa, and was popular until the 1880's.

The earliest locomotives, imported from England, had two large driving wheels, and a stationary front axle with a single pair of small wheels. John B. Jervis of the Mohawk & Hudson line hit upon the idea of removing the front axle, which was too rigid, and replacing it with two axles and four wheels, thus obtaining a better distribution of the weight of the engine and permitting smoother operation on the many curves in American tracks. A further development, which gave the engine its distinctly American appearance, was the addition, by Henry R. Campbell and James Brooks, of four instead of two driving wheels, when they built the *Blackhawk*.

Modern locomotives are now classified according to the wheel arrangement as originally used on the *Blackhawk*. A “4-4-0” engine indicates

that it has a four-wheel leading truck, four driving wheels, and no wheels behind the drivers. As trains grew heavier, and larger engines were needed, a greater number of driving wheels was added, together with trailer trucks to support the firebox, usually with but two wheels. By the twentieth century, steam locomotives had evolved through the Mogul (2-6-0), the Prairie (2-6-2), the Mikado (2-8-2), the Atlantic (4-4-2), the Pacific (4-6-2), and the Hudson (4-6-4), and climaxed in the huge Mountain (4-8-2).

All these locomotives, whether large or small, carried another distinctive American feature — the cowcatcher. Straying cattle had continued to block rail traffic ever since the day that a cow upset the Baltimore & Ohio's horse-operated train. Isaac Dripps of the Camden & Amboy Railroad at last came forward with an idea — horizontal bars of iron, with pointed tips, attached to the front of the engine. The object was to push the cattle out of the way, but the first bull which met this new contrivance was impaled and had to be removed with a block and tackle. Learning from experience, Dripps removed the pointed prongs, put in an iron bar at right angles to the track, and the modern "cowcatcher" was a reality.

Night travel was not a feature of the earliest roads, since their lines were so short that they could easily be covered during daylight. As the tracks extended, however, travel after dark be-

came a problem. Always ingenious, Horatio Allen, who had built the *Best Friend of Charleston* in 1830, conceived the idea of a portable bonfire for illumination. A flatcar, thickly bedded with sand upon which the bonfire was built, was pushed ahead of the engine, lighting the track for at least a short distance. This, however, was but an emergency measure. Very soon lanterns were hung on the front of the engine, later reflectors were added, and the ancestor of the oscillating headlights of the modern Diesels came into general use.

One of the distinctive features of the modern streamliners is their color. Travelers long used to the unadorned black of the steam trains were at once attracted by the silver, yellow, green, and red locomotives which flashed across the country in ever-growing numbers during the 1940's. But in the 1840's colored locomotives were in great vogue, and railroads vied with each other in reproducing the colors of the rainbow, all on the same engine if possible. Perhaps the brightest of these locomotives was one built in the 1850's by Matthias William Baldwin and named the *Tiger*.

Although the stack, firebox, and part of the steam dome are painted black, the rest of the engine exhausts the rainbow. Wheels and pilot are not only red but vermilion red. The boiler is eggshell blue. The tender is a delicate rose, with the railroad's title done on a flowing ribbon and surrounded by curlicues in gold. The outside of the cab is gorgeous, with scrollwork in gold and underneath the

window a painting in natural colors showing a Bengal tiger obviously stalking some unseen prey in a jungle as green as emerald. The name plate, set well forward on the boiler, is in great Barnum-type letters, TIGER; another jungle painting appears on the side of the headlight, and to top everything off an American flag flies from a special bronze socket atop the pilot.

Thus the *Tiger* appears in the only memento of this Baldwin locomotive — a colored lithograph in a modern book, E. P. Alexander's *Iron Horses*.

Traveling on "the cars" was an adventure one hundred years ago. By the early twentieth century, however, railroad travel was a commonplace thing, and by the 1930's was fast losing ground to the automobile and the bus. To combat this decline in passenger business, coupled with the additional losses of the great business depression of those years, Diesel streamliners were developed and introduced with much fanfare. Train travel again became an adventure, but now it was an adventure of speed and luxury.

Iowa's Streamliners

Iowa railroads were eighty years old when the Diesel era began. First to be built was the Mississippi & Missouri, predecessor to the present-day Rock Island. Service began out of Davenport on August 25, 1855, when Iowa's first passenger train ran the twelve miles to Walcott. Made up of two coaches, borrowed from the Rock Island lines, and five flatcars decked out with chairs and settees protected by temporary railings, the train carried "some five hundred people, including . . . seventy-five ladies and a brass band" to the newly-platted town of Walcott, where an auction of townlots was in progress. The road reached Iowa City at midnight on December 31, 1855, after an exciting race against time to fulfill a contract; on January 3, 1856, a train of six cars ran from Davenport to Iowa City, a distance at that time of sixty-seven miles.

To the south, at Burlington, another race was in progress. The Burlington & Missouri River Rail Road, forerunner of the Chicago, Burlington & Quincy in Iowa, was building rapidly westward over the route of the old plank road to Mount Pleasant. On January 1, 1856, "the first locomotive, a wood-burning, brass-trimmed engine with

funnel stack, chuffed out of Burlington a few miles and returned." By April the first passenger train had arrived, in May the track had reached Danville, on June 17 "the cars" ran as far as New London, and in the following month reached Mount Pleasant. Iowa now had two railroads, both pointing westward to Council Bluffs.

In May of 1857 two important events took place in Iowa railroading. The Dubuque & Pacific Railroad, later to become a part of the Illinois Central System, ran from Dubuque to Dyersville. The train, "pulling a strange assortment of passenger and freight cars, filled to capacity with men, women, and children," took three hours to cover the twenty-nine miles between the two towns. Today, the Illinois Central's *Land O'Corn* makes this same trip in forty-one minutes. South of Dubuque, at Clinton, the Chicago, Iowa & Nebraska Railroad, during the same month of May, 1857, ran from Clinton to DeWitt. In 1864 this road became a part of the great North Western System.

Thus, within two years, four of Iowa's major east-west lines (which now operate streamliners across the state) were begun. The last to be built was the Dubuque & Southwestern — later the Milwaukee Road. Operation of passenger trains on this line started in May of 1859, from Dubuque to Sand Springs.

All these east-west lines, begun in the 1850's,

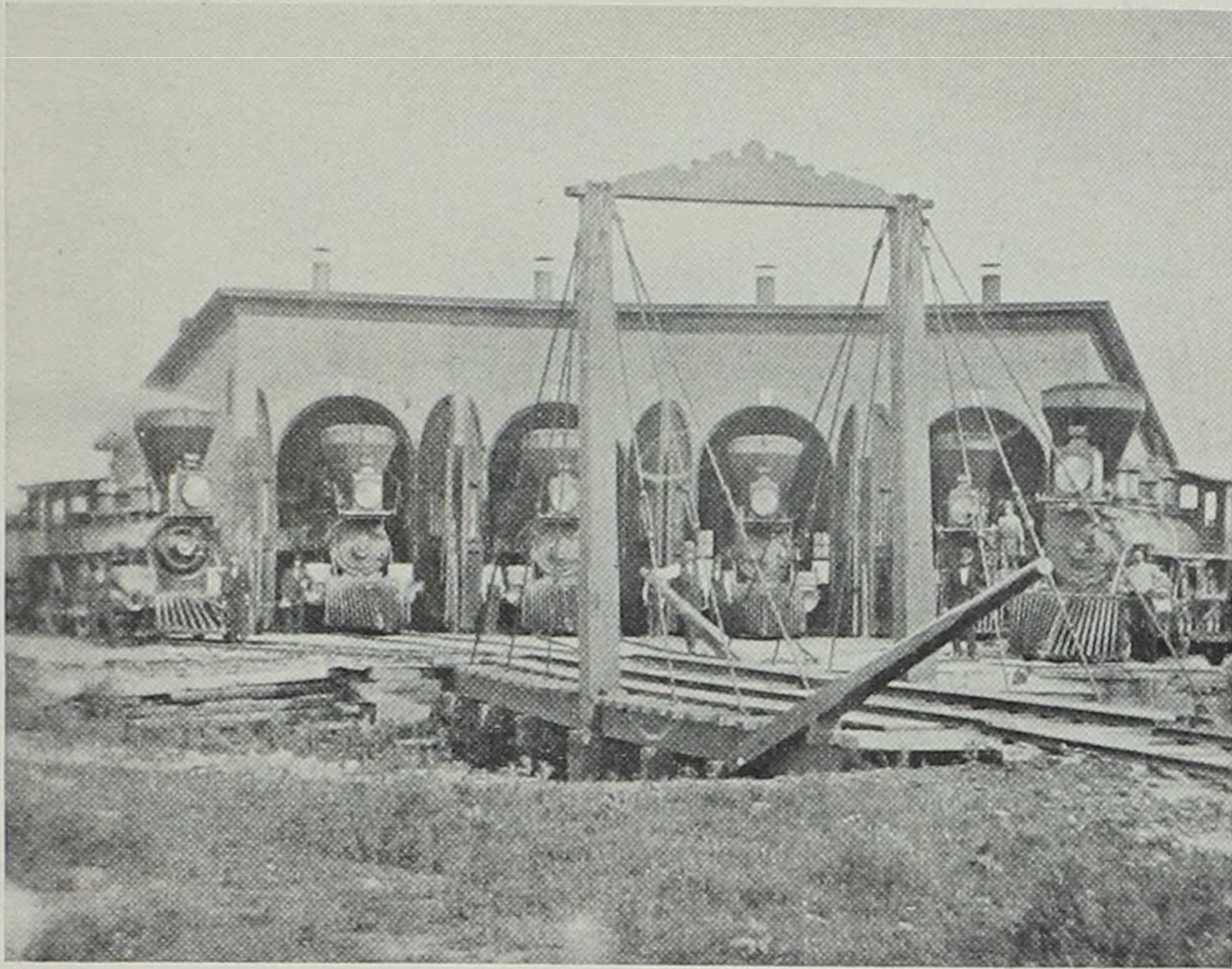
were pushing toward the Missouri River. But depression and war intervened, and it was not until the late 1860's that their objective was reached. Council Bluffs was the main "end of track" for Iowa roads. The North Western won the race, reaching Council Bluffs late in 1867. Two years later, in May of 1869, the Rock Island reached that Missouri River city. On January 1, 1870, the Burlington, building across southern Iowa, arrived at East Plattsburgh; two days later their train ran into Council Bluffs on the tracks of the Council Bluffs & St. Joseph Rail Road. The Illinois Central, across north-central Iowa, arrived at its Missouri River outlet at Sioux City in 1870. Not until the decade of the eighties did the Milwaukee reach the Missouri from the east, with outlets at both Council Bluffs and Sioux City.

Many other lines were built in Iowa during the nineteenth century — east and west lines, north and south lines, and lines which angled in every direction. Gradually these little roads were gathered under the control of a few large railroad corporations. Today the main roads for passenger traffic are still the "big five" of the 1850's — the North Western, the Rock Island, the Burlington, the Milwaukee, and the Illinois Central. In 1887, a sixth line, the Santa Fe, traveled some twenty miles across Lee County on its way from Kansas City to Chicago. Today these six roads have some 7,500 miles of track in Iowa. Streamlined

passenger trains travel on almost one-third of this trackage — a total of 2,218 miles.

In the early years of the twentieth century railroads prospered or suffered, along with the rest of the country. The prolonged business depression in the 1930's almost proved fatal. Passenger and freight traffic declined rapidly and disastrously. Buses, private automobiles, trucks, waterways, pipe lines, and airways — all were contributing to the troubles of the railroads. Buses were cheaper, private automobiles or public airplanes were faster, and trucks were taking large amounts of freight traffic away from the nation's railways. Something had to be done.

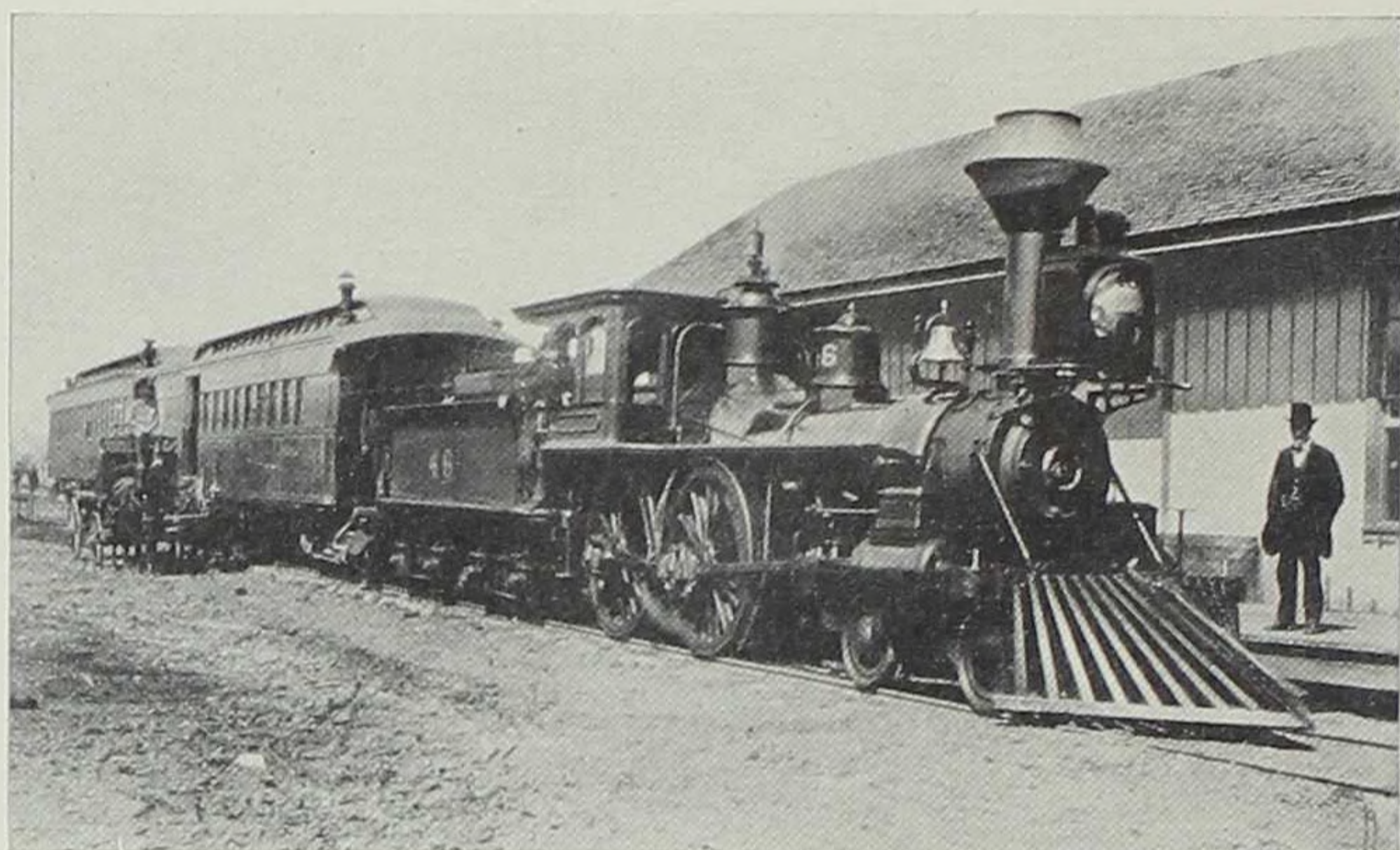
The reduction in passenger fares on Middle Western lines on December 1, 1933, from 3.6c to 2c per mile, helped somewhat, resulting in an increase in passenger traffic but a continued loss in revenue. The North Western lines had reported, in 1932, a decline of 73 per cent in passenger revenue during the period 1920 to 1932, while the Burlington, in 1932, showed a 34.75 per cent decrease. The Century of Progress Exposition in Chicago in 1933 and 1934 increased passenger traffic considerably, but the roads were still operating at a loss. Since reduced fares did not solve their financial problems, another expedient was tried — the dieselization program was instituted. If cheaper travel was not the answer, perhaps faster and more luxurious travel would be. The



A North Western Roundhouse in 1881



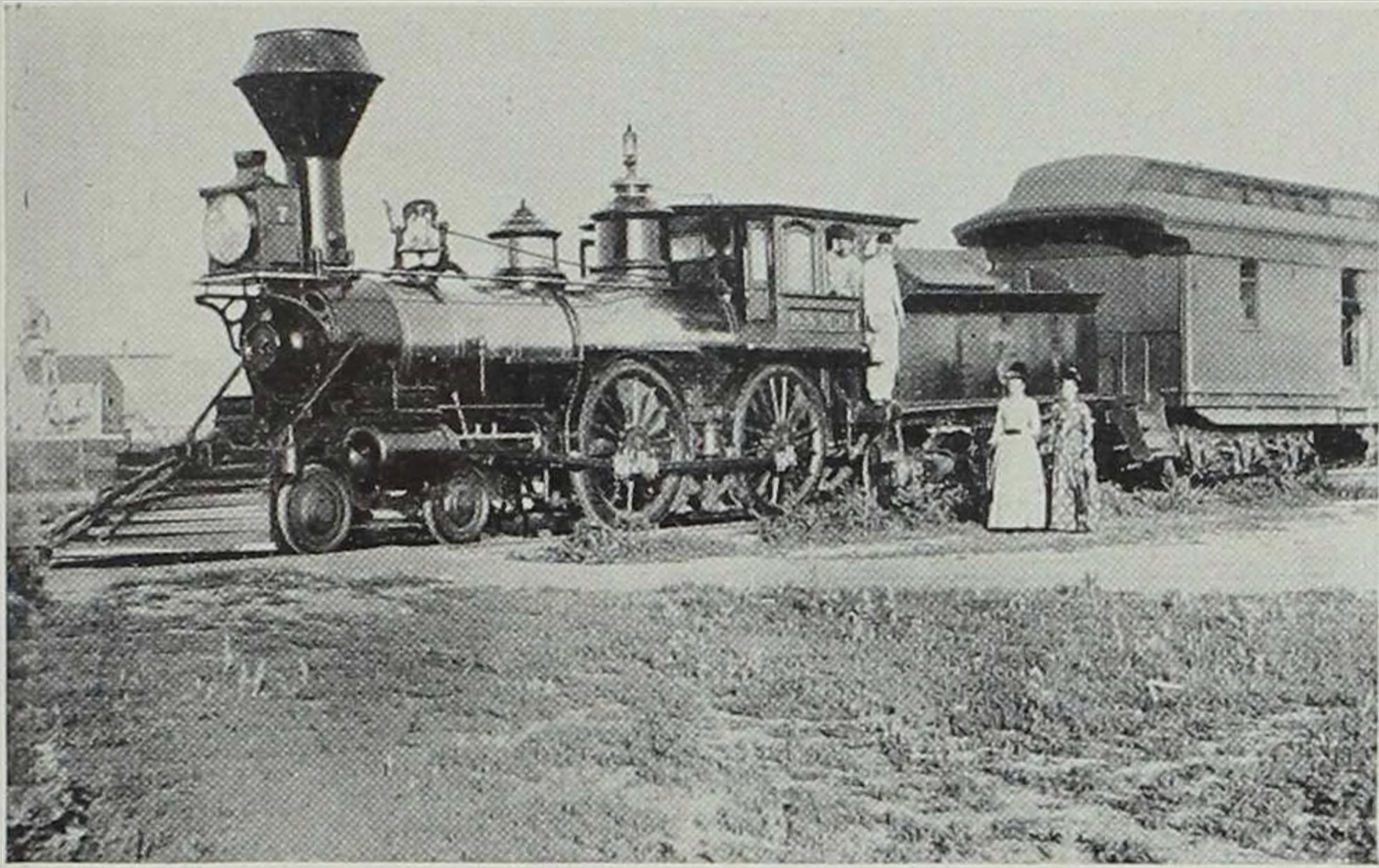
\$10,000,000 worth of North Western streamliners in Chicago yards



Rock Island Train at Indianola in 1881



Rock Island Rocket Crossing Iowa



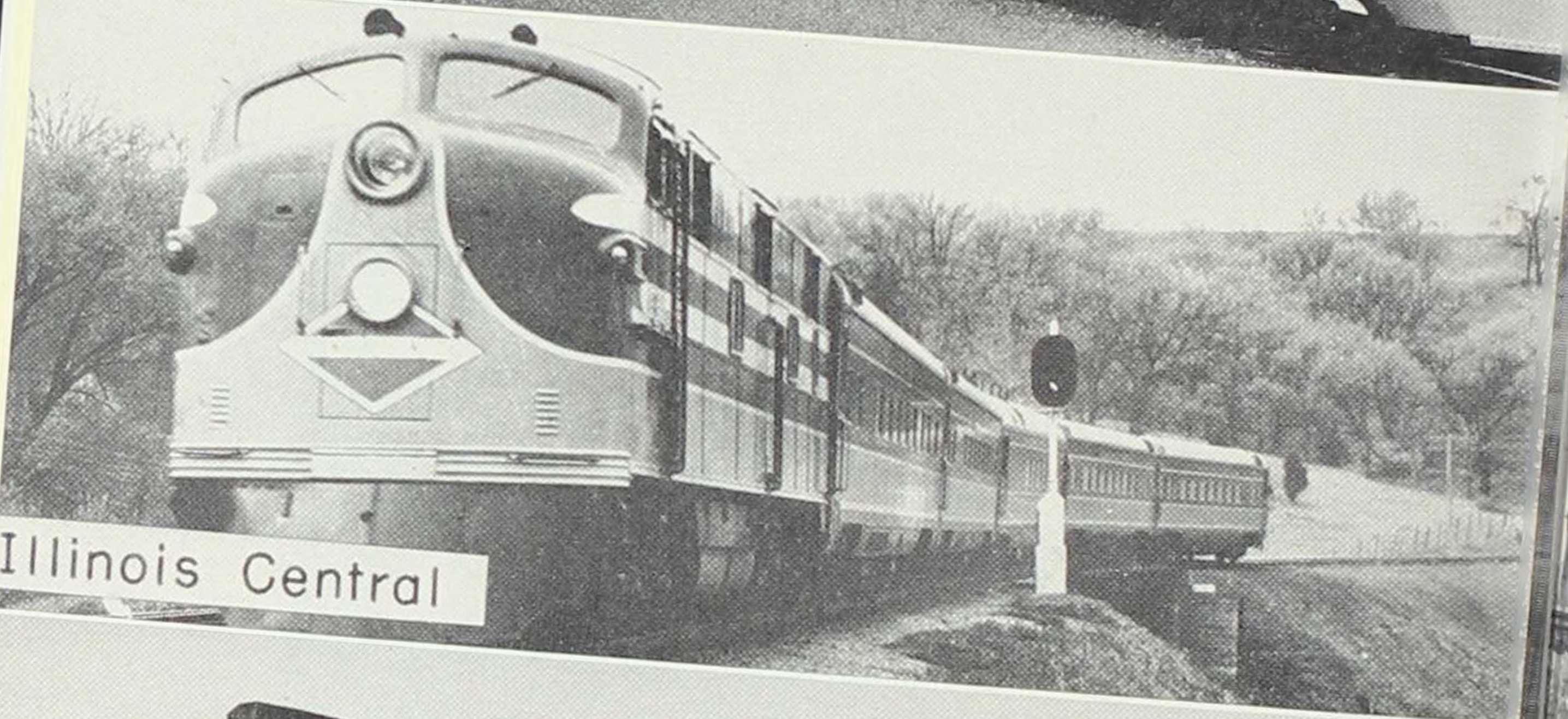
The "Wahoo" of the Burlington & Missouri River lines in 1870



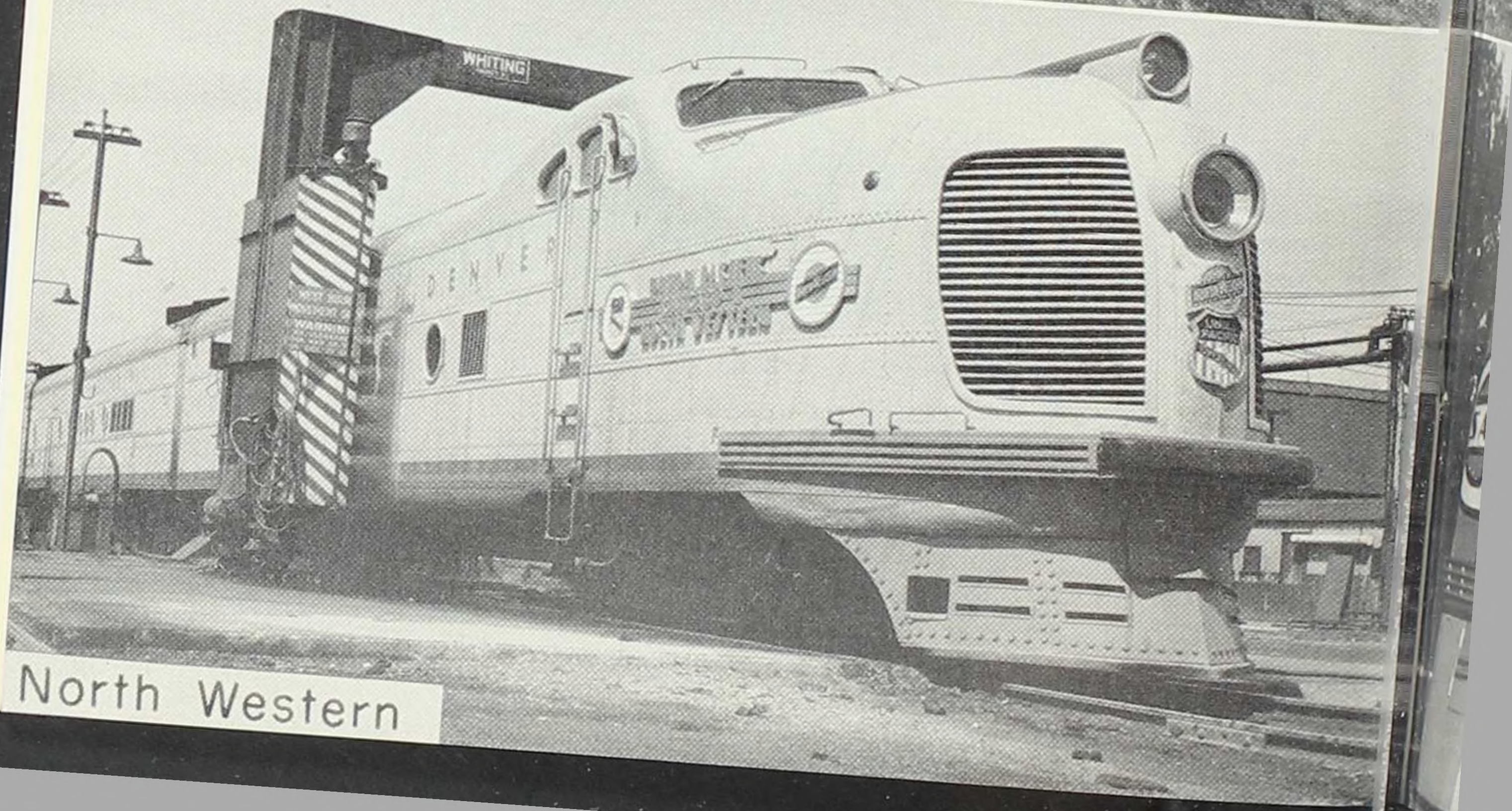
The Denver Zephyr



Rock Island



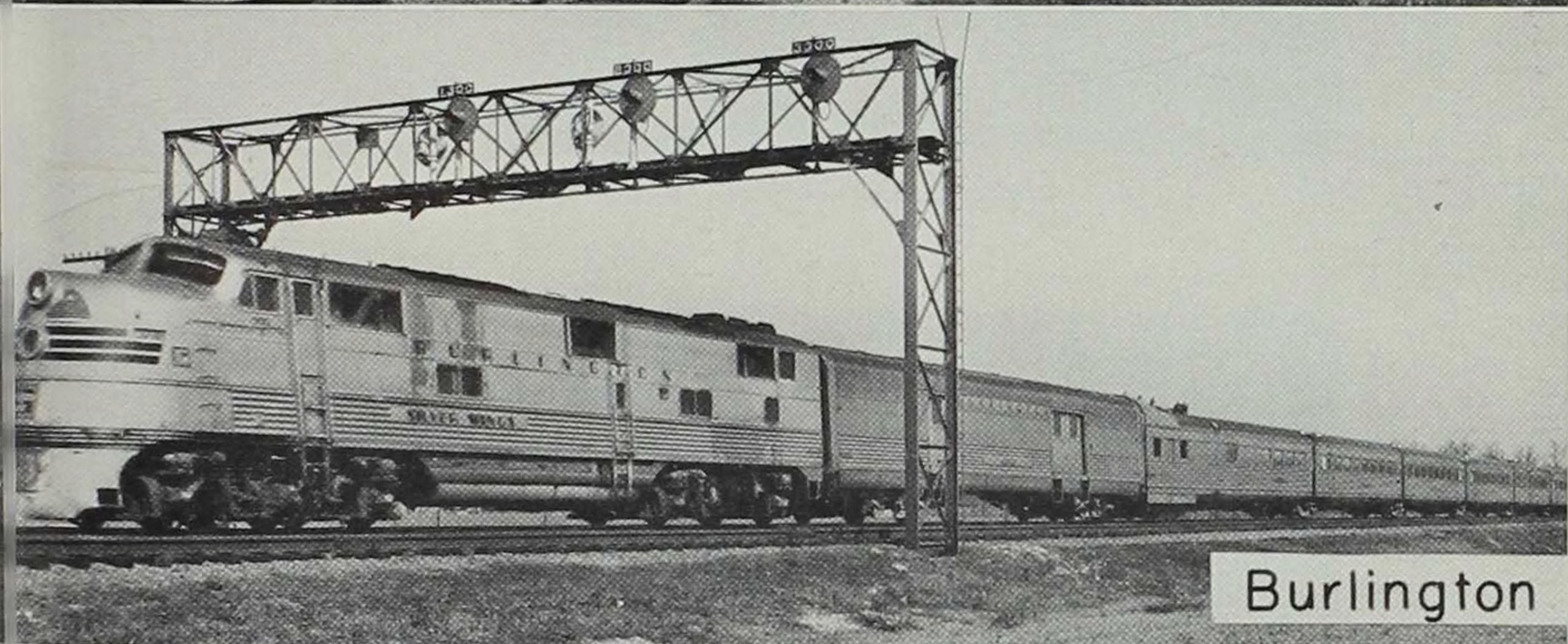
Illinois Central



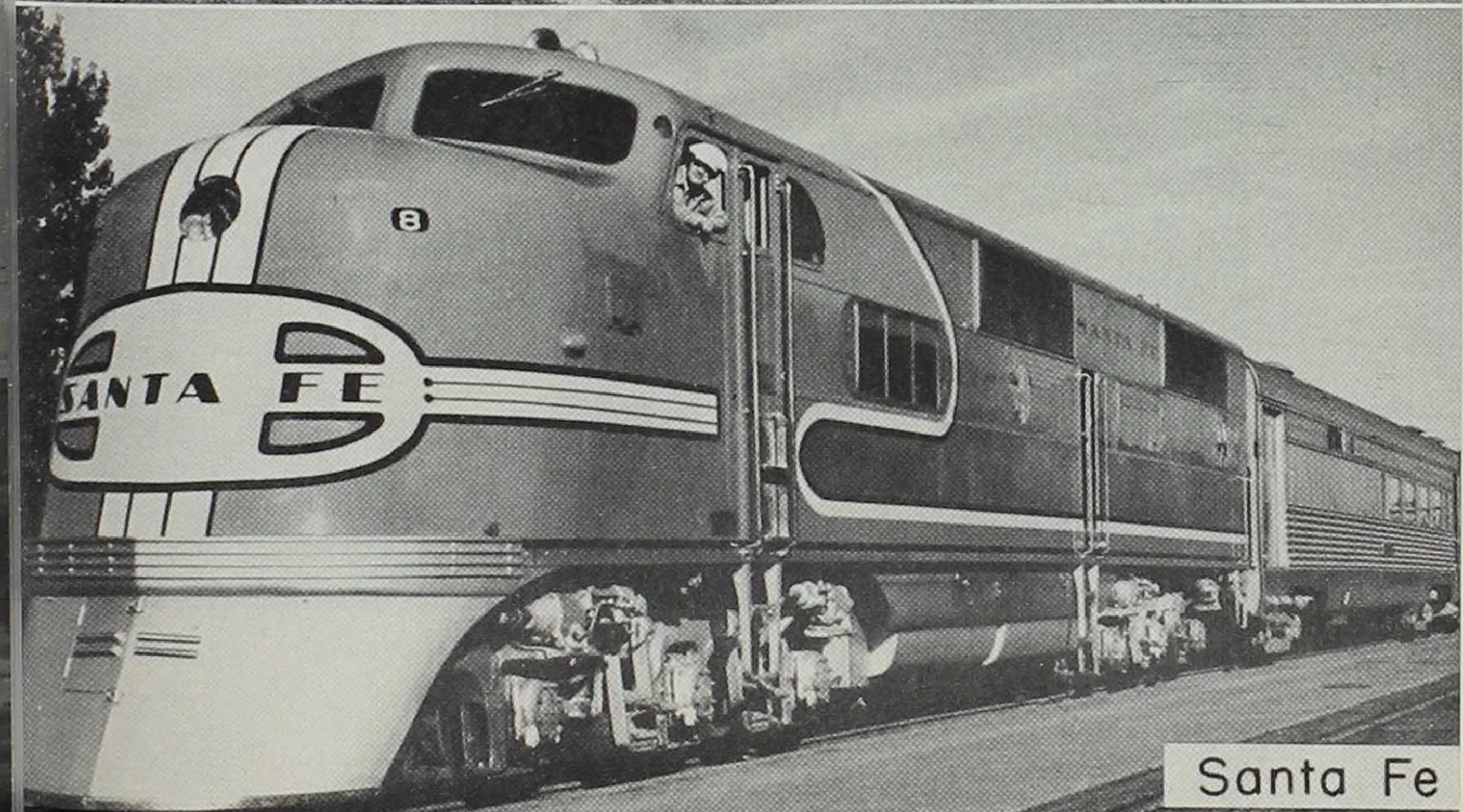
North Western



Milwaukee



Burlington



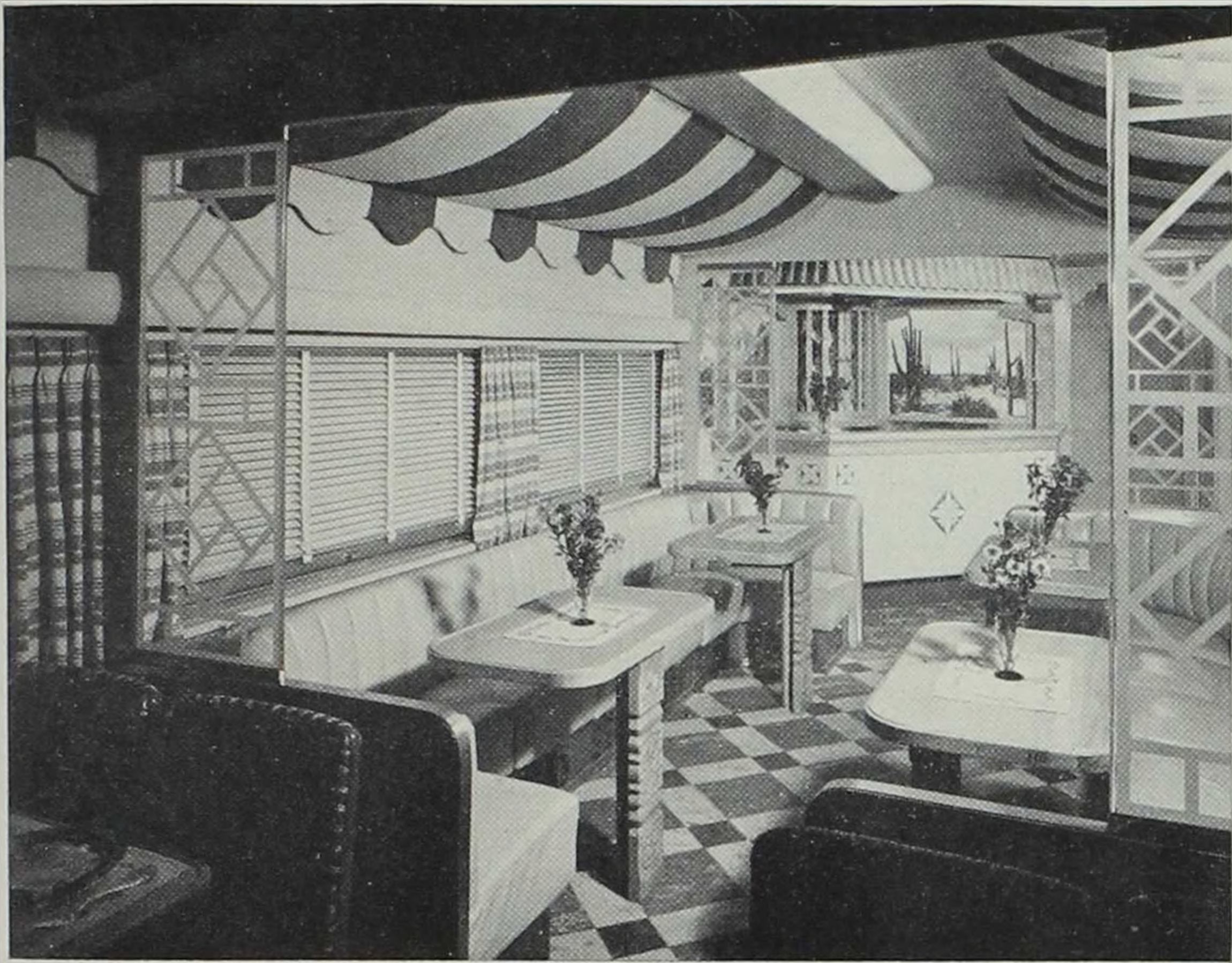
Santa Fe



"Little Nugget" Car — North Western *City of Los Angeles*



Buffet Car — Burlington *California Zephyr*



"Fiesta Car" — Rock Island *Golden State*



Observation Car — North Western *City of San Francisco*



Burlington California Zephyr



The Vista Dome



New Burlington Station at Burlington, Iowa

Zephyr's famous nonstop run in 1934 was more than a trial of speed; it signaled the beginning of a solution to the problems besetting the railroads.

In 1935 two Iowa roads began operation of streamliners on regular schedules: the North Western and the Burlington. Almost at once increases in both passenger traffic and revenue were noticeable. The Burlington reported a rise of 12.5 per cent in the number of passengers carried in 1935; while the North Western's increase in passenger revenue was 22 per cent in 1936. Meanwhile, the other roads were planning and building streamliners. Within a decade, six railroads had Diesel passenger trains running in Iowa: the North Western, the Burlington, the Rock Island, the Milwaukee, the Illinois Central, and the Santa Fe.

The North Western

First to run a complete coach-Pullman streamliner in Iowa was the North Western. On June 8, 1935, the *City of Portland* made its pioneer run from Chicago to Portland, Oregon. Entering Iowa at Clinton, the main line of the North Western crosses central Iowa through Cedar Rapids, Tama, Marshalltown, Ames, Boone, Carroll, Denison, and Council Bluffs, a distance of 347 miles.

A local train, making all 54 stops on this line, takes 13 hours and 10 minutes; the *City of Portland*, making but 6 stops, covers the same distance in 5 hours and 45 minutes. Painted a brilliant yel-

low, with scarlet red stripes, the 13-car *Portland* cost \$1,600,000 to build.

Such was the success of the *Portland* that the North Western added three other streamliners to its line in 1936: the *City of San Francisco*, on January 11; the *City of Los Angeles*, on May 18; and the *City of Denver*, on June 18. The first two were 15-car trains, costing respectively \$1,614,000 and \$1,700,000 each. The two *Denvers*, with 13 cars each, cost a total of \$2,029,000.

The *Portland*, the *San Francisco*, and the *Los Angeles* were operated at first only every third day, but by 1947 it was necessary to institute daily service on each. To do this, three new trains were added to each run, making a total of twelve. The *Denver* had been a daily from its inauguration. Thus, today, the North Western's fleet of streamliners in Iowa constitutes 14 trains, at a total cost of about \$24,000,000.

Every evening, between 7:03 and 9:24, four giant Diesels pass through Clinton, heading for the Pacific Coast; every morning, between 7:10 and 9:00, four more race eastward to Chicago. "The Streamliner 'City of Denver' has one of the most spectacular records of any train in history. Each night it departs from both Denver and Chicago on a 1,048 mile run and arrives at its destination in the early morning."

Keeping these luxury trains clean and in good running order is a task accomplished daily in Chi-

cago. When, for instance, the *City of San Francisco* arrives in Chicago at 10:45 in the morning, it is run onto a special streamliner ramp. Four and one-half hours later it comes off this ramp, clean and shining from "the front coupling on the diesel to the tail sign on the observation car." A special machine, using 3,500 gallons of water, has washed the exterior of the train. Inside, an army of workers has cleaned the cars, replenished the linen supplies, loaded the diner with some 145 items of food, and performed a hundred other "house cleaning" tasks. A final touch is a thorough chemical spraying of the entire interior, to remove all trace of tobacco, cooking, or other odors. Gone are the days when a passenger, boarding a train, was met with the old familiar smell of plush seats permeated by years of acrid coal smoke, with the lingering odors of box lunches seemingly always filled with oranges and bananas, and with the inevitable gritty dust seeping in through the window frames. Traveling on the new trains arouses no nostalgia for the old.

The Burlington

Four months after the *City of Portland* went into service on the North Western lines, the Burlington's *Mark Twain Zephyr* began operating from St. Louis to Burlington. This was a small train, of four coaches, costing \$332,000. Its route in Iowa, up the Mississippi shore through Lee and

Des Moines counties to Burlington, is but 45 miles. Although it was the first north-south streamliner in daily operation in Iowa, it was by no means as spectacular as the *Denver Zephyr*, which began daily runs between Chicago and Denver over the Burlington's main east-west line through Iowa on November 8, 1936. Before that date, however, to pave the way for the coming of the big train, two small streamliners of the type used on the nonstop run were put into service and called the "Advance Denver Zephyrs." They operated from May until November, thus instituting regular Diesel service one month before the *City of Portland* was inaugurated.

The *Denver Zephyr*, a 12-car, coach-Pullman train, cost some \$1,183,000. Like the North Western streamliners, there are actually two *Denvers*, one running each way daily. Leaving Chicago each evening at 5:00, this fast streamliner reaches Denver at 8:30 the following morning. The 287 miles of the Burlington line across Iowa are covered in 4 hours and 57 minutes, the train entering Iowa at Burlington, and making stops only at Ottumwa and Creston before reaching Council Bluffs. In contrast, a local train making all the stops on the main line takes 8 hours and 35 minutes. In 1937 the Burlington showed an increase of 19.9 per cent in passenger revenue, in part attributable to improved business conditions, in part to the popularity of the *Zephyrs*.

In western Iowa a Burlington line runs from Kansas City north along the Missouri River to Council Bluffs. On this route, on April 15, 1940, the *Silver Streak Zephyr*, a 5-car train costing \$600,000, was put into daily operation, cutting some two hours off the regular local service on that line.

World War II prevented further Burlington expansion until 1947, when the *Zephyr 9902*, a 4-car train, was inaugurated on the Hannibal to Burlington route along the Mississippi River, serving Keokuk and Fort Madison in Iowa. This is the same route followed by the *Mark Twain Zephyr*. The Burlington also introduced, on November 16, 1947, the *Nebraska Zephyr*, an 8-car, all-coach train which runs daily from Chicago to Omaha and Lincoln in Nebraska.

In 1945 the Burlington exhibited a new pioneering venture in streamlining — the Vista Dome. First used on the *Zephyrs* operating from Chicago to the Twin Cities in Minnesota, the Vista Dome was later incorporated as standard equipment in the Burlington's largest streamliner, the *California Zephyr*, which was put into service on March 20, 1949. Costing almost \$2,000,000, this 12-car, coach-Pullman train operates daily from Chicago to Denver over the Burlington lines, and from Denver to San Francisco over the lines of the Denver & Rio Grande Western and the Western Pacific. "Basically it is of caboose architecture,

with a dome of double-laminated safety glass. A short stairway leads up to the dome compartment in which some twenty passengers have a 180-degree view of the countryside."

From the 660 horsepower, 3-car *Zephyr* of 1934 to the 4,000 horsepower, 12-car *California Zephyr* of 1949, lie fifteen years of amazing development in passenger travel.

The Rock Island

The third road to introduce streamlined service to Iowans was the Rock Island. On September 26, 1937, the *Des Moines Rocket* made its first run; two years later, Diesel travel was extended to Denver with the *Rocky Mountain Rocket*, which began operation on November 12, 1939. A third *Rocket*, on the east-west line of the Rock Island through central Iowa, is the *Corn Belt*, introduced on November 23, 1947. This line enters Iowa at Davenport and passes through Iowa City, Des Moines, Atlantic, and Council Bluffs.

The Rock Island differs from the other "streamliner" roads in Iowa in that it has a north-south line crossing the entire state from Northwood to Lineville. On this line, the *Twin Star Rocket* appeared on January 14, 1945. Originating in Minneapolis, the *Twin Star* runs through the American Southwest to Houston, Texas. It makes but three stops in Iowa: at Manly, Mason City, and Des Moines. A fourth line of the Rock Island is the route of the *Zephyr-Rocket* from Burlington

northwest to the state line at Northwood. This train, in combination with the *Mark Twain Zephyr* of the Burlington, gives service from St. Louis to Minneapolis.

Still another Rock Island line in Iowa is the route of the *Golden State* and the *Imperial*, two long-distance trains which were dieselized during this period. These West Coast trains enter Iowa at Davenport and travel southwest, leaving the state at Lineville on the Iowa-Missouri border. The combined mileage of this fleet of streamliners in Iowa is the largest of any of the roads — 897 miles.

The Milwaukee

Travel on the Milwaukee's *Midwest Hiawatha* began on December 11, 1940. The line enters Iowa at Green Island in Jackson County and passes through Marion, Tama, and Perry. At Manilla in Crawford County the train divides, part going northwest to Sioux City, and to Sioux Falls in South Dakota, the balance southwest to Council Bluffs, and to Omaha in Nebraska. Two *Hiawathas* give daily service on this route which covers 477 miles within the state. It is normally a 9-car train, with a 4,000 horsepower Diesel locomotive. The two trains cost a total of \$1,979,000; the operation cost per year in Iowa is \$863,000.

The Illinois Central

The *Land O'Corn*, inaugurated in 1947, leaves

Chicago each evening at 5:30, enters Iowa at Dubuque at 9:00, and reaches Waterloo, 93 miles away, at 10:55. Although the Illinois Central's main line across Iowa continues on to Sioux City, Diesel service is available now only to Waterloo. The *Land O'Corn* is a 9-car, all-coach train and offers all the speed and comfort of the traditional streamliner.

The Santa Fe

The route of the famous *Chief* and *Super Chief* crosses Iowa in Lee County, and gives streamliner service through the Southwest to the residents of Fort Madison. The *Chiefs* enter Iowa over the Des Moines River near Vincennes, angle northeast to Fort Madison, cross the Mississippi there, and continue on their way to Chicago, the focal point of all of Iowa's railroads.

Such is the story, to date, of streamliners in Iowa. Because of her geographical position, Iowa is served by almost all of the famous new trains operating west of the Mississippi. Daily, from Dubuque south to Burlington, these spectacular "speed kings of the rails" cross the Mississippi from Chicago and flash across some three hundred miles of track in four or five hours — a distance which, but a hundred years ago, took the covered wagons and plodding oxen of the pioneers many weeks.

Traveling in Luxury

Speed is not the only attractive feature of the modern streamliner. Inside the trains, the passenger is greeted with the newest and best in travel luxury. Today's traveler, riding in air-conditioned comfort in seats made soft with foam-rubber cushioning, should give a thought to great-grandfather, who rode in a renovated stagecoach; or to grandfather, sitting on a hard, narrow wooden bench in a car hot and dusty in summer, cold and drafty in winter; or even to father, enjoying the comparative luxury of dusty red or green plush seats. The unrelieved mahogany and plush interiors of the Pullman cars of yesterday have given place to the soft-colored and well-lighted sleeping cars of today.

The first innovation in railroad coaches, after the miscellaneous early use of converted stagecoaches or boxcars had proved unsatisfactory, was on the Germantown & Norristown Railroad in Pennsylvania. In 1837 two cars of "startlingly different" design were built and named the *Victoria* and the *President*. With doors at each end, instead of in the middle, these cars had rows of benches lengthwise down each side, and narrow aisles between. At each end a tiny 5-foot-square

room was set off, one for "such feminine passengers as might wish to make changes in their apparel under conditions of privacy"; the other, "an out-and-out barroom where thirsty males, who were greatly in a majority in that day of comparative masculinity, could wet their whistles as the cars rolled along." From such simple beginnings have come the elaborate lounges of today's streamliners, with hot and cold running water, plenty of soap and soft towels, and even with shower baths.

Other innovations in railroad coaches followed. Double seats replaced the long sidewise benches — seats at first "so narrow that two adults could only with great politeness sit side by side." Measuring about 35 to 40 feet in length, 8 feet in width, and a little over 6 feet high, the cars were lighted in the daytime by small windows, "which of course were nailed shut," and by candles or lard-oil lamps during the night. In winter, heat was furnished by small stoves, a definite fire hazard in case of the frequent and disastrous wrecks which soon became more prevalent than steamboat explosions.

Fitted out with such "improved" coaches, the train of the 1840's was ready for its journey. The start of the trip, heralded by a blast from the engineer's steam whistle, was likely to tumble all the passengers out of their seats, and sure to topple every stovepipe hat on the train, unless the occupants were braced for the "take off." Sudden

stops could be just as upsetting, as each car in turn rammed into the next in line. Linked together with about three feet of chain, the cars moved forward with many a jolt and jar when the engineer "opened up fast and took up the slack in the coupling chains with gusto and a bang." The link-and-pin coupling which replaced the chains produced a comparative degree of comfort for the passengers. The modern articulated streamliner, which starts and stops as a unit, would have been a revelation to the travelers of the 1850's.

These early passenger coaches, which seated from fifty to sixty people, cost about \$2,000 to build; a modern streamlined coach on the *Midwest Hiawatha* was built at a cost of \$75,000. Night travel in these \$2,000 coaches with their wooden seats was an ordeal. "The male traveler hung his coat on one of the wall hooks, put his feet up on the seat in front, if there was room, and lay back and went to sleep — if he could." Women, more decorous, could only sit bolt upright and try to doze.

George Pullman added a word to the English language when, in the 1860's, he developed the first practical sleeping car. Others had toyed with the idea before that, however. In 1858 Webster Wagner had built a car with a single tier of berths at one end. Pullman's original contribution was the "upper berth" which could be closed during the daytime. His first "uppers" were attached to

iron bars, and were pulled up to the roof by ropes. In 1864 he patented his next improvement — a hinged upper berth and hinged seat cushions which could be pulled down to form a bed. The first car built on this principle was completed in 1865 at a cost of about \$20,000, and named, appropriately, the *Pioneer*. Its first journey was not a happy one: it was in the *Pioneer* that the body of Abraham Lincoln was carried home to Springfield for burial.

Modern Pullmans on the streamliners are still built on the same principle developed in 1864, but the ornate Victorian decoration of the mid-nineteenth century has given way to the simple, streamlined decor of the mid-twentieth.

George Pullman's sleeping cars were a success; but he did not stop there. In 1867 he developed a "Hotel Car" which combined sleeping quarters with the cooking and serving of meals. He built a complete train in 1870 — the *Pullman Hotel Express* — which made the first transcontinental railroad journey in America (from Boston to San Francisco in seven days) just one year after the Union Pacific and the Central Pacific had been united by a golden spike at Promontory Point, Utah.

The *Express* was the marvel of the age, and crowds greeted it at every stop, just as they did the first Diesel streamliners of today. Eight "carriages" made up the train, the first being a bag-

gage car which contained, among other things, five "ice closets" and a refrigerator. Next was a "handsome" smoking car, divided into four rooms. Card tables were available and even a "hair-dressing and shaving saloon" — forerunner of the modern barber shops on today's streamliners. Two "hotel cars," two "Palace Sleeping and Drawing-Room Cars," and two "commissary and dining cars" completed the luxury train of the 1870's, which crossed Iowa on the line of the Chicago & North Western Railroad.

Compare the *Pullman Hotel Express* with a modern streamliner — the *City of Los Angeles*, for instance. The fifteen cars are spacious, colorful, and comfortable. An observation car at the rear provides lounge chairs and davenports, card and writing tables, and dozens of current magazines. Broad windows are fitted with Venetian blinds and drapes, while air conditioning does away with the old-time problem of opening and closing windows, and the resulting drafts and clouds of cinder-laden smoke. The *Los Angeles* has two club cars — one, "The Little Nugget," done in the style of the gay nineties; the other, "The Hollywood Car," decorated with modern plastics and synthetics. Every type of sleeping arrangement, for every type of purse, is provided: upper and lower berths, compartments, drawing rooms, roomettes, single and double bedrooms. Dressing rooms with shower baths are added lux-

uries. In two dining cars the passengers are served meals on canary-yellow tablecloths, a modern note, and the "first call for dinner" is given by chimes sounding throughout the train. As on all modern streamliners, radios provide music and entertainment.

Similar equipment is found on every Diesel passenger train. The Vista Dome, inaugurated by the Burlington and now used on many trains, has added a new feature. Travelers, as they enjoy the expanded view of prairie and mountain from the top of the train, would probably be surprised to know that the idea of the Vista Dome was first conceived by a Canadian, T. J. McBride, in the 1890's, but never built. The General Motors "Train of Tomorrow," first exhibited in Iowa in May, 1948, features an "Astra Dome" on each car, "through which passengers can study sky and clouds in the daytime and the moon and stars at night."

Other roads fit the decor of their trains to the localities through which they pass. On the Rock Island's *Golden State* the "Fiesta Car" lays claim to being "the most beautiful piece of railroad equipment ever built." Its design was "inspired by the brilliant coloring found in the serapes, patios and pottery of Old Mexico. The entire ceiling is formed by a striped red and yellow canopy, with adobe walls adorned with full-color murals. The bar at one end of the car is a duplication of a

quaint Mexican fountain done in adobe also. The chairs and tables in the coffee shop section are done in hand carved oak, with leather upholstery held in place by raw hide lacing, a design distinctive of the Southwest."

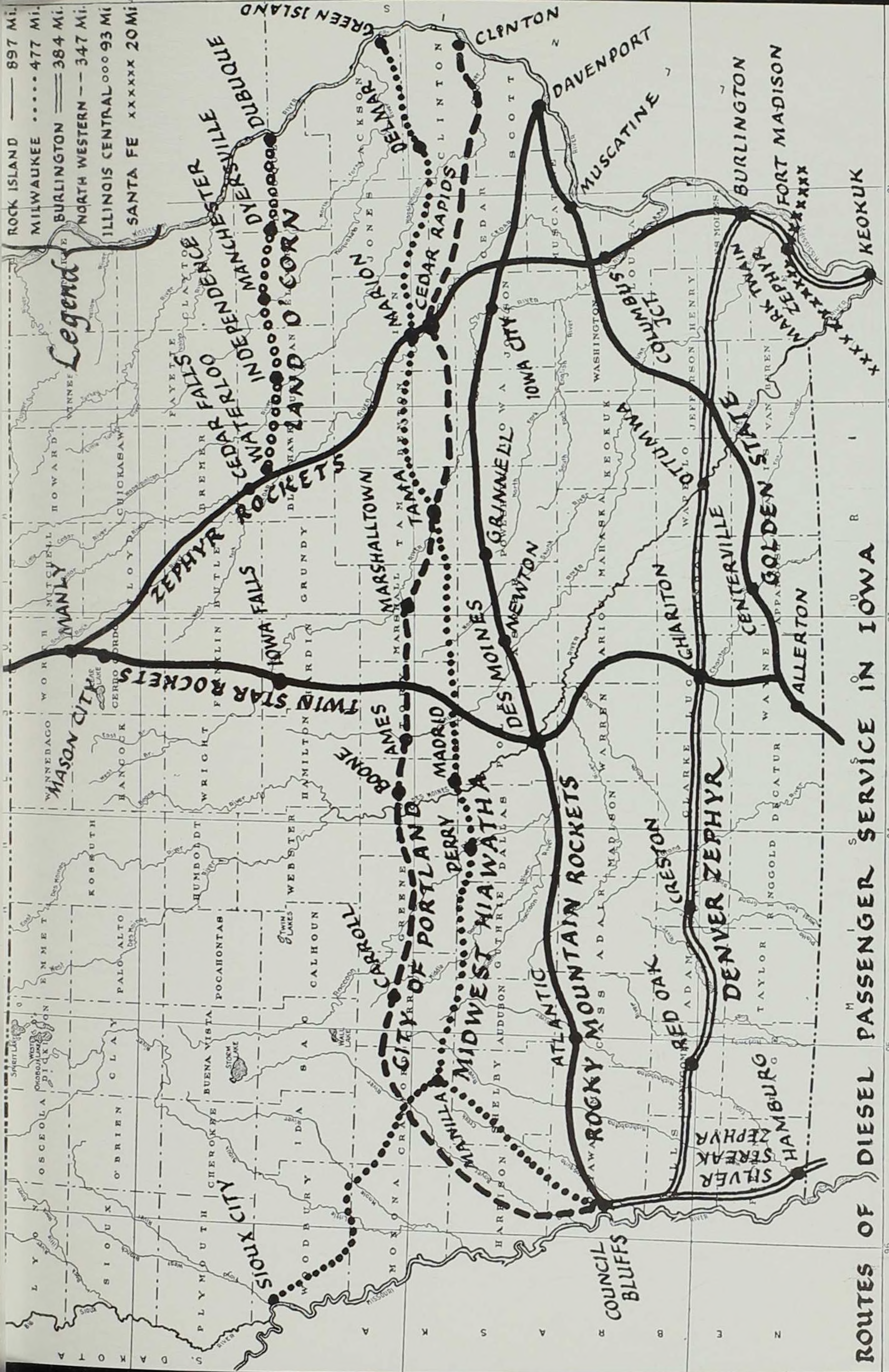
Speed and luxury have come to railroad travelers with the streamliners, and prosperity has come to the railroad operators. Year by year, since 1935, the roads operating in Iowa have shown a steady increase in passenger traffic on the Diesels, and, conversely, a steady decrease on the steam trains.

Yet the speed of the Diesels caused apprehension at first. What would happen to an automobile if hit by a streamliner, asked the *Des Moines Register* editorially, a few days after the *Zephyr's* nonstop run in 1934. For that matter, continued the writer, what would happen to a lightweight train, traveling at 90 miles an hour, if it hit that same car? Fortunately, events have not borne out these fears. Improved signaling, allowing for the higher speeds of the streamliners, has helped prevent accidents. Also there is the distinctive whistle of the Diesels, piercingly warning of the train's approach. Persons traveling on the highways by car at night can see, sometimes for miles, the beam from the huge oscillating headlights, first introduced in 1936 by the North Western. Thus, not only speed and luxury have come with the streamliners, but safety as well.

Residents of eastern Iowa can now go to Chicago on shopping or business trips and return on the same day. Even from Council Bluffs a journey to Chicago, a few hours shopping or business, and a return home can be accomplished between early morning and midnight of the same day. The streamliner has accelerated the linking — and the shrinking — of the continent, which began when Peter Cooper's *Tom Thumb* huffed and puffed thirteen miles in one hour and fifteen minutes.

ROCK ISLAND — 897 MI.
 MILWAUKEE 477 MI.
 BURLINGTON — 384 MI.
 NORTH WESTERN — 347 MI.
 ILLINOIS CENTRAL.....93 MI
 SANTA FE xxxxxx 20 MI

Legend



ROUTES OF DIESEL PASSENGER SERVICE IN IOWA

