

CHAPTER XI

A DREAM FULFILLED

ON the 24th of January, 1887, the stock markets of Boston, New York, and London announced for sale \$15,000,000 first mortgage 5% gold bonds of the Chicago, Santa Fe and California Railway Company. These bonds, which were to run 50 years, were guaranteed by the Atchison, Topeka & Santa Fe Railroad Company, and were secured by a first mortgage on the entire new road as projected, excepting about 100 miles of existing road on which there was a prior lien of \$1,500,000. As a consideration for this guarantee, the Atchison was to receive the entire \$30,000,000 stock issue of the Chicago, Santa Fe & California, thereby gaining control through a direct ownership of two-thirds of its authorized capital.

At the beginning of the year 1887 the Santa Fe system included through direct ownership, joint interest or control about 5,350 miles of railway with the Missouri River as an eastern terminus. Having obtained an outlet to the Pacific Coast and the Gulf of Mexico, the securing of a satisfactory eastern terminal soon became a fixed problem, which President Strong was not long in solving. Over its extensive mileage the Santa Fe Company was creating and handling an enormous traffic, which justly demanded an eastern outlet beyond the Missouri. Toward the close of the year 1886 the directors unanimously decided that the interests of their Company required the absolute control of an independent

line to Chicago. The natural growth of the road had been west and south and so long as the lines of competing railroads had ended on the Missouri River, the management were content to accept that river as the dividing line for traffic between the Santa Fe and Eastern roads. But now some of the lines east of the Missouri had become aggressive and had invaded or were about to invade Santa Fe territory in spite of that Company's efforts to solidify its system of lines in Kansas. Building across northeastern Kansas, the Burlington had extended its main line to Denver. The Missouri Pacific and the Rock Island had started operations in Kansas and besides building extensive branches, both these companies were soon to cross the state and enter Colorado. All this activity was lawful competition, yet such an unprecedented invasion of Santa Fe territory by eastern lines to whom the Santa Fe hitherto had delivered its east-bound traffic at the Missouri River simply meant a division of the Atchison's business, which business that Company had sought through the construction of an elaborate system of extensions and feeder lines to protect. In view of its vast interests and far-reaching mileage such an invasion would simply place the Santa Fe in an inferior position as to the making of rates. And since the Company had a number of new lines as yet unproductive, it must safeguard its business to meet its heavy interest obligations.

Vigorous action was necessary. The easiest method for solving these potential difficulties was to make traffic agreements with the invading companies. But the directors believed that a traffic agreement was at best uncertain and unsatisfactory. Such an agreement, it was held, generally fell into neglect or became odious, and only so long as each party had equal powers to enforce it, was a traffic arrangement safe. A temporary makeshift arrangement was worse

than useless. And traffic agreements to protect the interests of the Atchison Company must be permanent; yet no amount of experience or skill could provide for future contingencies that were likely to arise. The history of such contracts showed that they were effective only so long as it was the interest of the parties concerned to make them so; and they were generally broken as soon as they became burdensome to either party. Moreover, it was extremely doubtful that a traffic agreement, however drawn, could be enforced against the member breaking it, since the law looked with disfavor upon such contracts, holding them contrary to the public interest, which interest naturally demanded the utmost freedom of action on the part of transportation companies.

Not to mention these important considerations the extensive Santa Fe mileage with its heavy and increasing traffic converging on the Missouri would make a Chicago line one of much value. The great traffic center of the Middle West, Chicago, then as now, was the great central market; it was the natural source of supply and the natural market for the territory served by the Santa Fe. It was justly held that for all Santa Fe patrons west of the Missouri River, Chicago offered attractions to shipper and to traveler, superior to those of any other western city. For Chicago was not merely the leading central market; it was the great central point of concentration and distribution for all the West, the Great Lakes, Canada and the East. And in view of the wonderful growth of the Santa Fe railroad, President Strong declared, that "The people along our whole system, above all other things, want direct, rapid, and unobstructed communication with Chicago, with only one carrier to deal with in the entire transaction; and they will patronize the road which furnishes it." In short, Chicago was the logical eastern terminus for the Santa Fe system. A Chicago

extension would relieve the Atchison Company of any further dependence upon connections at the Missouri River and make it independent in competing for all business to and from the East in so far as its own territory was concerned. Furthermore such an extension would enable the Santa Fe to make its rates over its own lines between Chicago and the Pacific Coast, and between the Great Lakes and the Gulf of Mexico, a position to which no other railroad has yet attained. To do full justice to its traffic requirements, to protect its interests by making itself independent of destructive competition, and to fulfill its ambition for a railroad that would extend from the Lakes to the Gulf and to the Pacific Coast, the Santa Fe must then strike directly from Kansas City to Lake Michigan, and under the indomitable leadership of William B. Strong, the dream of building to Chicago became a splendid reality in the year 1887.

To carry out this project the Chicago, Santa Fe and California Railway Company was incorporated under the laws of Illinois on December 3rd, 1886. During the previous year surveys had been made between Kansas City and Chicago under the nominal direction of C. F. Morse of the Kansas City stock yards. At the outset three propositions for getting to Chicago had presented themselves. One plan which was advocated by Chief Engineer Albert A. Robinson involved the immediate construction of an air line, substantially the same as the present route from Kansas City to the Mississippi River, and thence running into Chicago on a course nearly parallel with the Burlington railroad. Such a route would have been considerably shorter than the line actually in use to-day. Another plan proposed was to buy the Chicago & Alton Railway, which would have given the Santa Fe access to St. Louis as well as to Chicago. But the Alton Company, it is said, wanted \$38,000,000 for their

road and the dominant interests in the Santa Fe directorate thought this price too high, so the Alton plan was dropped.

A third proposition aimed to construct only as much of a direct line as was necessary and to purchase such minor lines as could be used to advantage. This was the plan which finally was adopted. With a compromise policy thus agreed upon, it was found possible to reduce the amount of main line about 100 miles through the purchase of a small road leading into Chicago from Pekin, Illinois. Shortly after its incorporation, in December, 1886, the Chicago, Santa Fe & California Railway Company acquired the road and other properties of the Chicago & St. Louis Railway Company, which extended from Chicago to Pekin, about 154 miles, including a short spur from Streator to Coulville. By the explicit terms of its charter the Chicago, Santa Fe & California was authorized to build an extension of the Chicago & St. Louis line from Streator, Illinois, to Fort Madison, Iowa, connecting at the latter place with the Chicago, Santa Fe & California Railway Company of Iowa, which in turn was to be joined to an extension of the Atchison, Topeka & Santa Fe from Kansas City. It was authorized, further, to construct a line from Pekin to Springfield, Illinois.

The Chicago & St. Louis Railway Company, which the Santa Fe absorbed, was known originally in railway circles as the "Hinckley road." This line was first chartered as the Chicago & Plainfield Railroad on February 24th, 1859. Nothing worth while seems to have been accomplished until about the year 1869 when Francis E. Hinckley, a Chicago promoter associated with Philip B. Shumway and Colonel Ralph Plumb, became interested in the enterprise. These gentlemen, with Hinckley as President, and some of their friends, organized the Chicago, Pekin & Southwestern Railway, and with the financial backing of Moses Taylor, Presi-

dent of the National City Bank of New York, started building in the early Seventies. In January, 1878, the road was completed from Pekin to Streator, about 64 miles northeast in the direction of Chicago; and in 1876 it was opened to Mazon Bridge near Coal City, Illinois, about 30 miles farther. Subsequently, the road got into financial troubles—the usual fate of small railroads—and in May, 1881, was sold under mortgage foreclosure.

On May 10th, 1882, the Chicago, St. Louis & Western Railroad Company was chartered to establish a line from Chicago to Pekin, a distance of about 154 miles. Construction began shortly afterward and before the close of the following year this company had built a railroad between Coal City and Chicago. On the 1st day of January, 1882, the new corporation absorbed the Chicago, Pekin & Southwestern with all the latter's property and effects. A year later still another railway company, the Chicago & St. Louis, was formed, which in turn took over the property of the Chicago, St. Louis & Western on May 1st, 1885; and on the 21st of the following December the entire Chicago & St. Louis railroad was opened for traffic from Chicago to Pekin¹ only to pass to the Chicago, Santa Fe & California Railway Company within a year.

As was stated, the last mentioned company had \$1,500,000 outstanding against its securities in the form of a prior lien and this sum represented the bonded debt of the Chicago & St. Louis road, which obligation the Santa Fe naturally assumed when the final transfer took place. The Chicago & St. Louis was practically without terminal facilities in Chicago, since its tracks ended at an old frame depot on 23rd Street. Furthermore, having been strictly a pro-

¹The road was still under the presidency of F. E. Hinckley, its chief promoter—hence the "Hinckley road."

moter's road, this line was not in good condition. It had numerous heavy grades and was laid with inferior rails, which, together with a defective roadbed, made it wholly inadequate for the traffic of a transcontinental system.

At Kansas City the terminal situation was less difficult. Already as was pointed out, the Santa Fe had acquired an interest in the Kansas City Belt Line which extended east to Big Blue Junction, eight miles out. The final problem of getting into Chicago therefore was reduced to the construction of 350.6 miles of new line between Big Blue Junction, Missouri, and the town of Ancona, Illinois; the rebuilding of about 100 miles of the main line of the Chicago & St. Louis railroad; and the securing of terminal rights and facilities in Chicago. This plan of operation also necessitated the construction of numerous bridges, together with many overhead crossings. In the matter of bridge building, the Missouri and Mississippi rivers alone furnished a big undertaking, since both have wide channels, while the Missouri is one of the most treacherous and difficult of all streams in which to erect piers. No unusual problems in roadbed construction were presented except about 100 miles of glacial drift between Bucklin, Missouri, and Fort Madison, Iowa, which was to prove heavy work.

With the inception of the Chicago, Santa Fe & California Railway Company of Illinois, a company by the same name had been chartered in Iowa to construct a railroad from Fort Madison, about 16 miles across the southeast corner of Iowa and through northern Missouri to connect with the Atchison, Topeka & Santa Fe at or near Kansas City. On the 15th of July, 1887, this Iowa company was merged with the Chicago, Santa Fe & California Railway Company of Illinois and operations were carried to completion under the latter name.

To facilitate the work of bridging the Missouri and Mississippi Rivers, and for the privilege of collecting tolls when the structures were finished, the Sibley Bridge Company and the Mississippi Railroad & Toll Bridge Company, capitalized at \$1,000,000 and \$900,000, respectively, were organized under Federal charters. The actual capitalized indebtedness of the Sibley Bridge Company represented \$850,000 of first mortgage bonds; while that of the Mississippi River Railroad & Toll Bridge Company was \$650,000 in similar bonds. The securities of these companies were owned by the Chicago, Santa Fe & California Railway Company, which guaranteed the interest on the bonds as a rental of the bridges when finished.

Having organized for business, the task of putting a railroad into Chicago was thus reduced to field operations—to the execution of plans that had been so carefully laid. The president, directors and the attorneys for the corporation had perfected their organization. It was now left for the engineers to build bridges and make the dirt fly. And they did. In February, 1887, President Strong ordered Chief Engineer Robinson to go ahead, to push the line through and have it ready for operation by the end of the year. This order was carried literally into effect, and work started all along the line with tremendous energy.

The grading and bridge building were let to private contractors, and approximately five thousand men were employed along the entire route. This force was increased later by about two thousand railroad track and structural workers. The organization of the engineering staff and this body of workmen was not unlike that of an army. Over the entire enterprise with headquarters in Topeka, but almost continually in the field, was Albert A. Robinson, Chief Engineer. In charge of the Eastern Division from the

Mississippi to Chicago was P. F. Barr, with headquarters at Fort Madison. The so-called Western Division between Big Blue Junction and the Des Moines River was under B. F. Booker, whose offices were in Kansas City.

Complete harmony prevailed between the Santa Fe and the various competing lines, and this mutual good-will aided greatly in the construction work; for it thereby became possible to use the tracks of other lines for assembling supplies at crossing points. At Carrolton, Missouri, materials were received from the Wabash and Burlington roads. At Bucklin, Missouri, the Burlington tracks were again used, and similar services were obtained from the Northwest line of the Wabash at La Plata, 29 miles east. Still farther eastward, similar trackage facilities were obtained as follows: At Hurdland, with the Quincy, Missouri & Pacific; at Medill, with the Keokuk & Western; at Dallas City and Galesburg, Illinois, with the Burlington, and at Chillicothe, Illinois, with the Rock Island. These respective stations range from thirteen to forty-eight miles apart, and it was the policy of the Santa Fe engineers to converge at one place enough track materials and supplies with which to meet the construction gangs building from the next point, this scheme making it possible to hurry the work along the entire route at the same time. The whole course of operations was thus divided into so many construction divisions at the ends of which the various gangs of men were continually working toward each other to close the intervening space. Splendid progress was made, the track being put down at the rate of four miles a day. The last gap was closed at a point not far from Medill, Missouri, on December 31st, 1887, at 6 o'clock in the evening. But as winter had now set in, it was decided not to open the line for regular through traffic until spring.

Coincident with the general work of construction and in accordance with the plans adopted, the Chicago & St. Louis road was rebuilt. Not only was heavier steel put down, but the maximum grades were reduced from six-tenths to three-tenths per cent., or from thirty-two to sixteen feet per mile, thus making a railroad fit for heavy traffic.

Building the Santa Fe to Chicago required the construction of five large bridges; ² those spanning the Illinois, Mississippi, Des Moines, Grand, and Missouri Rivers. References will be made only to their general dimensions, together with a brief discussion of the Sibley bridge, the largest and most representative of the list. The Illinois River bridge had a total length of 14,175 feet, comprising a channel structure of 752 feet with three 150 foot spans and one of 302 feet. The approaches aggregated more than 200 yards. The Fort Madison bridge erected over the Mississippi River was authorized by Congress in an Act approved March 3rd, 1887. Commenced that same month, the bridge was practically completed December 7th, 1887, at a bare initial cost of over \$580,000. It had an extreme length of 2,963 feet, consisting of eight spans and an east approach of about 350 yards. The channel structure comprised four spans each 237½ feet, one of 275 and two of 150 feet, and one draw span 400 feet long. The approach had seventy-four 14-foot spans. The Des Moines River bridge was 900 feet in length, while the structure crossing the Grand River was 459 feet in the clear.

The Sibley bridge deserves special mention because the shifting course and peculiar geological conditions of the Missouri River bed presented serious engineering problems. This structure is probably the most imposing bridge of the Santa

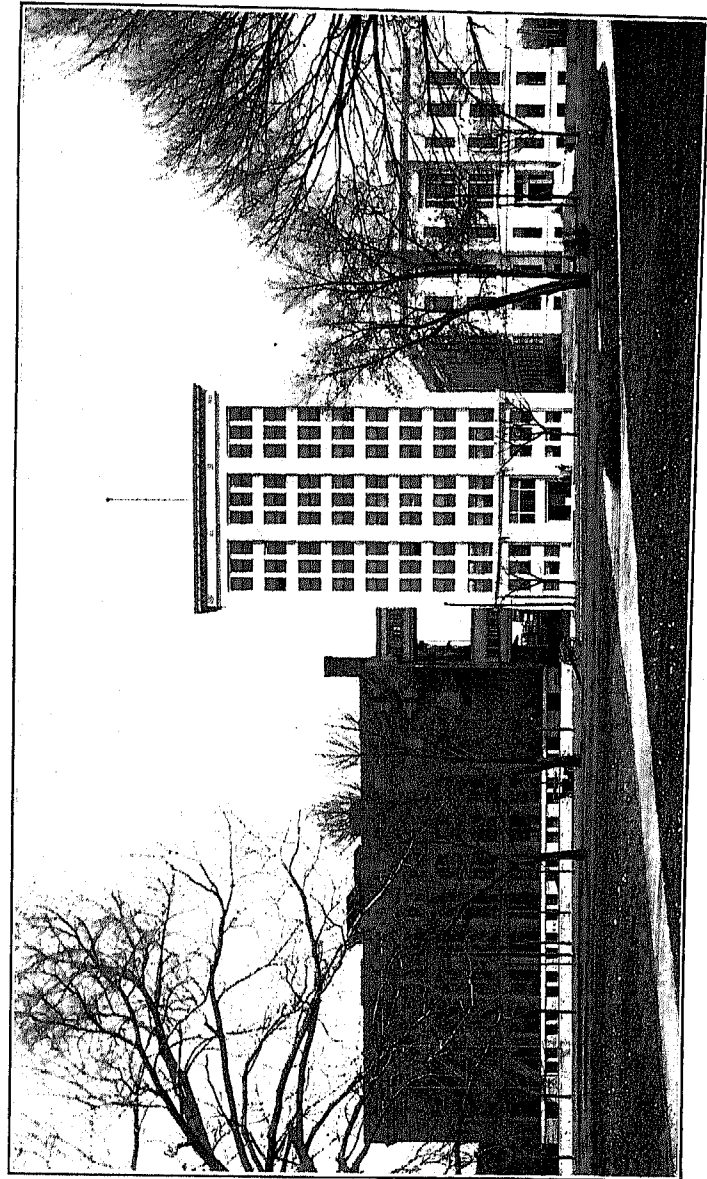
²Not to mention a large number of small structures and overhead crossings.

Fe system. It was built under an Act of Congress which became a law July 3rd, 1884, granting to the Kansas City, Topeka & Western Railroad Company,³ its assigns and successors the right to build and maintain a railroad bridge⁴ with approaches thereto over the Missouri River at or near Sibley in Jackson County, Missouri. The Company was given an alternative of building either a low bridge with spans not less than 160 feet in the clear, or a high bridge with spans at least 300 feet in the clear, the lowest part of the super-structure in the latter case to be at least 50 feet above high water mark. With the organization of the Chicago, Santa Fe & California Railway Company these rights were transferred to the Sibley Bridge Company, with Albert A. Robinson, chief engineer, and Octave Chanute as consulting engineer in charge of the enterprise. Associated with Mr. Chanute was John F. Wallace, resident engineer, assisted by W. G. Breithaupt. Although a low bridge had previously been favored, it was at last decided to build a high bridge. Through careful surveys it was learned that the river bed had shifted about 1,800 feet during the years 1878 to 1886. Under such circumstances a low structure not only would have caused heavy expenditures for controlling the channel, but it would have been unfavorable for navigation.

Two points of location, the upper, known as Sibley Point, and the lower, called Sibley Reef, were considered favorably as a site for the bridge. The upper point was in the general

³This will be remembered as the corporation whereby the Santa Fe secured entrance to Kansas City and the one in the name of which the Southern Kansas system was purchased.

⁴In addition, the builders were empowered to provide for the passage of vehicles and foot passengers at reasonable rates of toll. The act of 1887, authorizing the construction of the Fort Madison bridge over the Mississippi, was substantially the same in its main provisions.



GENERAL OFFICE, TOPEKA, KANSAS

direction of the railroad and it would have shortened the route about one mile, yet this point was rejected because it was located at the upper end of a curve in the river, where the channel was extremely unstable and much wider than at the point below. The lower point, or Sibley Reef, although requiring a more circuitous route, was chosen because the channel here was about 550 feet narrower than at Sibley Point. The location of the site selected furthermore offered bed-rock ranging from 42 to 47 feet beneath low water, as against a depth of but 30 to 40 feet at Sibley Point. Sibley Reef, where the bridge was located, derived its name from a reef of boulders stretching nearly half way across the river.

The bridge rested on eight piers of masonry, for the erection of which ground was first broken on March 23d, 1887. These substructures were finished December 15th of the same year. The work of building the iron superstructure was begun on the viaduct or east approach July 25th, 1887, and was completed, between piers No. 2 and No. 3, on the 11th of February, 1888. Both the masonry and the superstructure of the bridge were let to private contractors and in order to transport the necessary materials and supplies, a service or work track was connected with the Wabash railroad, three miles distant. Work proceeded rapidly from the beginning and the whole structure was finished in quicker time than any bridge of similar size that had as yet been put across the Missouri River.

The first carload of material for the superstructure reached the bridge site July 5th, 1887, and the first tower for the erection of the viaduct or east approach was raised on July 25th. Operations were hurried throughout the late summer and the autumn months, until December 19th, when a blizzard interrupted matters. For about four weeks, prog-

ress was impossible because of heavy storms which covered the structure with snow and ice while the thermometer ranged from 10 to 25 degrees below zero. Three lives were lost in attempting to carry on the work during this bad weather period.

In order to start traffic over the new road, false work strong enough to bear trains was erected between piers "2" and "3" and across a span still in construction. The first train crossed the bridge on January 26th, 1888. The work progressed without delaying traffic and on February 11th, 1888, the bridge was substantially completed at an outlay of more than \$770,000. As finished, the Sibley bridge⁶ contained the following specifications: An east viaduct approach of 1,900 feet and no west approach, while the total length of the bridge over the channel was 2,153 feet, consisting in the main of three 400-foot spans together with one of 200, one of 250 and two of 175 feet respectively.

Late in January, 1888, accommodation train service was started over the new line from Argentine, Kansas. The Kansas City terminals were not used until the 29th of the following April, when the entire road was taken over by the operating department of the Chicago, Santa Fe & California Company.

To secure terminals in Chicago, the Atchison, Topeka & Santa Fe Railroad in Chicago Company was organized with Norman Williams, a prominent attorney, as president. This company had a capital stock of \$5,000,000 with an authorized funded debt of \$10,000,000. Of the latter amount the sum of \$5,500,000 was actually raised and guaranteed by the Atchison Company as a separate obligation. The funds thus provided were used to build 2.12 miles of railroad

⁶ In 1912-13 the bridge was greatly enlarged, the better to accommodate heavy traffic.

in the city and to secure necessary trackage and terminal properties, such as station, yard, crossing and dock privileges, together with freight-houses and elevator facilities. This big undertaking, which was consummated in the summer of 1887, required many intricate plans and large expenditures of money. In carrying out their plans the Company followed a generous and fair policy. There was little or no occasion for condemnation proceedings in getting the desired properties, and about \$3,316,000 was expended for real estate before any construction work was started in the city. A full account of these matters is simply a record of humdrum real estate sales and transfers, the details of which are of no special interest or importance here. Numerous crossing privileges were obtained largely through common reciprocal agreements with other lines. The initial expenditures in Chicago aggregated about \$5,700,000, but the Santa Fe gained short and direct access to the heart of the city.

When viewed from a matter-of-fact standpoint the story of how the Santa Fe built its line to Chicago does not differ greatly from many of the enterprises conducted by this great company. Thus regarded, it is merely an account of thorough organization, careful planning, of mechanical skill, the efficient handling of men, of good bargaining, and tactful procedure. But as to the execution of this project, as to how 100 miles of railroad were rebuilt, and the two largest rivers of the continent successfully bridged; as to how 350 miles of main line, including 48,106 feet, or more than nine miles of bridges and trestles, were constructed, all within eleven months—this must rank with the great engineering achievements of the 19th century.

Yet building to Chicago, splendid performance as it was, did not absorb the expansive energies of the Atchison, Topeka & Santa Fe during the eventful year 1887. Entrance

to St. Joseph, Missouri, was obtained, first, by constructing a 19-mile extension of the original main line from Atchison. This work was done under the corporate name of the St. Joseph & Santa Fe Railroad Company. Next, a railroad about 76 miles long which connected St. Joseph with the new Chicago, Santa Fe & California main line at Lexington Junction, Missouri, was purchased from the Wabash Company for about \$800,000. These properties, which gave the Santa Fe access to St. Joseph from two directions, were then consolidated into the St. Joseph, St. Louis & Santa Fe Railroad Company and became a valuable auxiliary to the Santa Fe system.

The St. Louis, Kansas City & Colorado, a small railroad which extended from St. Louis, about 61 miles, to Union, Missouri, was likewise bought that year. This road was completely isolated from the Santa Fe system; but it had depot rights in St. Louis. It was considered a strategic property with which a main line might be connected from Kansas City and a foothold thereby secured in the metropolis as soon as the Santa Fe Company felt justified in building another road across the State of Missouri.

In Eastern Kansas a 46-mile branch—the Leavenworth, Northern & Southern—was built to connect Leavenworth with the main line at Wilder.

In Colorado some trouble arose once more, due, it is said, to the refusal of W. S. Jackson of the Denver & Rio Grande to extend certain trackage concessions north of Pueblo in accordance with the final settlement of the Grand Cañon troubles in 1880. Angered by this situation and determined once for all to have an independent road to the Colorado metropolis, Strong organized the Denver & Santa Fe Railway Company in March, 1887, and promptly built a new main line of 116 miles from Pueblo to Denver. Incidentally

he made his company secure in the capital by purchasing for \$800,000 the Denver Circle railroad, a terminal line about eight miles in extent.

Not to mention 300 miles of extensions in Indian Territory and the Texas Panhandle, which were started the preceding year, the Santa Fe in 1887 built 502 miles of sundry branch lines in Kansas. This was done under the name of the Chicago, Kansas & Western, thus giving that vigorous auxiliary a total of over 903 miles of railroad, practically all of which was constructed within two years.

In Colorado a 10-mile extension at last brought the Santa Fe to the town of Cañon City. And out in Southern California the Company was increasing its power by constructing about 185 miles of branch lines. To build and consolidate these California branches a new corporation, called the California Central, was formed, which was soon merged with the California Southern and the entire group then taken into the Santa Fe combination.

During 1887 the Atchison, Topeka & Santa Fe Company expended for real estate and the construction of new railroads \$40,775,000; it spent over \$4,180,000 for improving its older lines, and over \$800,000 for additions and improvements to collateral properties. At the close of this remarkable year the Company owned, operated and controlled 7,373 miles of railroad. The little 28-mile Kansas Railroad of 1869 had within eighteen years become one of the greatest railroad systems of the world—a system that extended from Lake Michigan to the Pacific Coast, from Denver to the Gulf of California, and from Kansas to the Gulf of Mexico.

The dream of Cyrus Holliday was at last fulfilled.