TRANS-MISSISSIPPI RAILROAD CONSTRUCTION TO 1900

A Thesis submitted to the Graduate School of the University of Wisconsin in partial fulfillment of the requirements for the degree of Doctor of Philosophy

by

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Explanation of Tables and Maps.

Tables showing the railroad construction year by year are given at the end of each chapter, and cover approximately the period treated in the text. The roads are arranged alphabetically, and when the name changes the change has been indicated, so that any particular road can be traced from chapter to chapter. The tables include only new mileage; old mileage that was acquired is indicated by giving the name of the road that was taken over. Acquired lines are only included in the larger system at the date when their operation was begun by the purchasing line. If such a line again became independent, the fact is ordinarily not stated unless there is a subsequent increase in mileage. The table proper shows four main things- (1) the location of the whole line upon which construction was taking place, (2) the location of the new road for each year, (3) the mileage of the entire line, and (4) the mileage that was built each year. For example-

1878	La Junta		Trinidad		80

indicates that in 1878 this line was constructed from La Junta to Trinidad, a distance of 80 miles, while

1879	La Junta	Trinidad	Las Vegas	218	138

indicates that La Junta was the original starting point of the line, that it had been built as far as Trinidad before 1879, and that it was completed to Las Vegas in that year. The first figure, 218, shows the mileage of the entire line from La Junta to Las Vegas, while the second figure, 138, shows the mileage between Trinidad and Las Vegas, or the new construction in 1879.

The maps at the end of the thesis show the new railroad construction year by year. The black lines show the old mileage, and the red lines show the new construction in the year indicated. The last map has been made to include the period of 1887-1890, because the paucity of construction has made individual maps seem barely necessary.

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Chapter I. Origins- Transcontinental and Local. (To 1857).

The possibility of the construction of a transcontinental railroad furnished an interesting subject for speculation at a very early period. At a later time these speculations were put upon paper and claims were advanced as to the priority of thought. It was then pointed out that Dr. Samuel B. Barlow of Granville, Massachusetts, had talked of a government railroad to the Columbia River as early as 1843, that Dr. Samuel Parker had made similar observations in the course of his western trip of 1835, that John Plumbe of Dubuque, Iowa, had called a meeting in 1836 with the same idea, that the American Railroad Journal had commented on the plan in the same year, that Dr. Hartwell Carver had made a similar proposition in 1837 and that the subject had been discussed in Congress in the early forties.[1] As nearly as may be estimated, these early discussions were based on little but imagination. The mere mechanical construction of such a line would would have taxed the ingenuity and resources of the engineers to

1. Accounts of early railraod ideas are extremely numerous, as for example, F. G. Young, "The History of Railroad Transportation in the Pacific Northwest," in The Quarterly of Oregon Historical Society, Vol. 12 (1911), pp. 186-8; L. H. Haney, Congressional History of Railway in the United States (Madison, 1910), pp. 402; R. S. Cotterill, "Early Agitation for a Pacific Railroad 1845-50," in Missouri Valley Historical Review, Vol. 4 (1918), pp. 396-404; Col. E. M. Poe, Report on Transcontinental Railways, 1883, in 48th Congress, 1st Sess., House Ex. Doc. 1, part 2, pp. 255-260. J. King, "John Plumbe, Originator of the Pacific Railroad," in the Annals of Iowa, Vol. 6 (1903-5), pp. 289-296 is an enthusiastic support of one claimant.

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the utmost, while the revenue which could have been earned would have been negligible.[2]

The second phase of the agitation for a Pacific railroad opened with the conclusion of the treary of July 3, 1844, between China and the United States.[3] This treaty, drawn by Caleb Cushing, gave the United States the same commercial rights in China that had been given to Great Britian by the treaty at the end of the Opium War. With this treaty new vistas were opened to the practical business man who had a touch of adventure and romance in his character. This was the situation of Asa Whitney, a New York merchant doing business in China. Combined with his business experience was a hopeful belief in the possibility of railroad construction and the desirability of Chinese trade, and when he returned to the United States he started to push his ideas actively.[4] For the next ten years Whitney untiringly kept his plan before the country, and the story of the development of the Pacific railroad idea is connected inextricably with the story of Whitney's life.

During the forties the various possible routes to the Pacific, and the methods of financing such a line gradually took

2. James Robertson, A Few Months in America (London, 1855), pp. 113, considered the project impossible at that date.
3. Compilation of Treaties in Force (Washington, 1898), pp. 93-95.
4. Whitney's earliest memorial to Congress was presented early in 1845.
5. For a list of the memorials which Whitney either presented or inspired see Whitney's Railroad to the Pacific, in 31st Cong. 1st Sess., House Rpt. 140.

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definite shape, so that by 1840 De Bow's Review could list eight well defined routes, ranging from a line across Panama to a road from Lake Michigan to Oregon, and accredit each of these routes to the advocacy of some particular man.[6] The method of finance proposed was usually some form of government aid because very few people even considered the possibility of construction through entirely private effort. The usual proposals were that either the line should be built entirely by the government, or that it should at least be given a liberal subsidy in land or bonds, or both.

A second factor in the development of the transcontinental railroad idea in the forties was the territorial expansion of the United States. When Asa Whitney first proposed his plan in 1844 the hold of the United States on the Pacific coast was very limited, so that he was forced by circumstances to advocate a central terminus. By 1849 continental United States had expanded to approximately its present boundaries, thus greatly increasing the variety of possibilities of the western terminus of a railroad line.

The principal routes along which the trancontinental lines were later built were nearly all suggested during the forties. Professor Forshey (Louisiana), writing in De Bow's Review in 1847,[7] advocated the southern route and credited his idea to

6. De Bow's Review, July 1849, pp. 1-39.
7. De Bow's Review, July 1847, pp. 475-495. The Chief advantages claimed were a better climate, a shorter route, and more population.

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Robert Patterson and Colonel Gadsden, while Calhoun in an open letter dated March 1848[8] supported substantially the same idea. Tennessee and Arkansas enthusiasts very naturally supported the thirty-fifth parallel route.[9] T. H. Benton was the most prominent exponent of the central route and introduced a measure for its construction in Congress as early as 1849.[10] In the north, General Wilkes proposed a road to Oregon to be built entirely by the government,[11] while Asa Whitney continued his advocacy of a line to be built be a private company aided by a grant of land from the federal government. Throughtout the forties Whitney presented innumerable petitions to Congress, and found time to visit scores of public meetings and legislative sessions in order to persuade them to the soundness of his views and to have them petition Congress in behalf of his plan. He also was willing to write elaborate articles for any magazine that was willing to print them.[12] When he went to England in 1851 it was rumored that he had a proposal to make to the English government on the subject of a transcontinental railroad across Canada.[13]

Some of the plans of the forties sought a compromise in

8. Published in De Bow's Review, Sept. 1848, pp. 205-214 and advocates Memphis as a terminus.

9. For example take any local paper such as the Arkansas State Gazette and Democrat.

10. P. O. Ray, The Repeal of the Missouri Compromise (Cleveland, 1909), gives the best discussion of the attitude of Benton.

11. George Wilkes, Project of a National Railroad from the Atlantic to the Pacific Ocean (New York, 1845).

12. See footnote 5, and De Bow's Review Oct. 1847, pp. 164-176.

13. Prairie Herald (Chicago) Apr. 15, 1881 and June 24, 1851.

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order to avoid sectional antagonisms, although this attitude is more characteristic of a later period. Dr. Hartwell Carver was willing to start his road anywhere that Congress might determine upon, and proposed brances to both California and Oregon.[14] Albert Pike proposed two roads - one from Memphis and one from St. Louis, both to be built by a rather elaborate arrangement whereby the public land was to be used as a source of credit, and the eventual control of the road was to be in the hands of the state.[15]

Beginning approximately about 1849, the idea of a Pacific railroad reached a third stage of development in which there was a general agreement that such a road would some day be built, and in which the opposition changed from a general objection to the plan as a whole to an opposition to particular phases of individual plans, and particularly the opposition of sectional interests. While the territory of the United States continued to expand during the forties the frontier continued to advance, thus creating more and more western population. This western population increased the difficulty of formulating a railroad plan which would be acceptable to the majority of interests, because each settlement considered itself the future metropolis of the west, and bitterly opposed any effort to have the terminus of the road elsewhere. One plan that was proposed to obviate some of the effects of local prejudice was to have the road built with a minimum of government

14. A Memorial for a private Charter, asked for by Hartwell Carver and his associates (Washington, 1849).
15. National Plan of an Atlantic and Pacific Railroad and Remarks of Albert Pike (Little Rock, 1849).

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aid, and possibly with none at all. This idea was first advanced by such men as T. D. Judah[16] and Josiah Perham,[17] who proposed paying the cost of construction by the subscriptions of a large number of small stock holders.

It was during the period beginning in 1849 that the first attempts were made to collect usable data on the subject of the topographical conditions of the western country in relation to railroad construction; earlier surveying and exploring expeditions[18] had not had this end in view. The surveys of 1848-9, as placed before Congress by Senate Resolution of July 8, 1850, were made in the most part with the thought of a wagon road, but could be used for railroad purposes; in 1851 Brevet Major J. G. Bernard went over the Tehuantepec route with the avowed purpose of determining[19] its availability for railroad construction. The biggest piece of work done was the surveys made under Jefferson Davis as Secretary of War, which went over the various routes proposed for a transcontinental railroad in order to determine their comparative availability. Authorized in 1853, the final report was made in 1855 and filled ten large size volumes. The route favored[20] was the one along the thirty-second parallel.

16. T. D. Judah, A Practical Plan for Building the Pacific Railroad (Washington, 1857).

17. People's Pacific Railroad Company. Charter, Organization, Address of the President, Josiah Perham, with the By-Laws of the Board of Commissioners (Boston, 1860).

18. Printed as 31st Cong., 1st Sess. Ex. Doc. 64 and 31.

19. De Bow's Review (Nov. 1851), pp. 515-517.

20. Reports of the Explorations and Surveys to Ascertain the most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, in 33rd Cong. 2nd Sess., House Ex. Doc. 91, 10 vols. The conclusions are in Vol. I, p. 29.

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The interest of the central government in the idea of a Pacific railroad is quite evident during the forties, and the surveying of the possible routes was only one of the ways in which that interest was manifested. In 1850 the first of the state railroad land grants was passed[21] and in 1852 provision was made for a hundred foot right of way for all railroads running through the public domain.[22] The Gadsden purchase of 1854 was consumated primarily in order to make possible the construction of a railroad along the southern route and the man whose name the purchase bears was greatly interested in railroad plans.

The question of a Pacific railroad was very closely linked with the territorial problem. Practically all western politicians were interested both in the question of a transcontinental railroad and in organizing the territories of the United States in order to provide for a further expansion of population. The relation between the two factors has excited a considerable amount of discussion recently, particularly in connection with the work of Benton and Douglas and their relation to the repeal of the Missouri Compromise.[23] No matter who was the real originator of the measure, it is evident that the territory question

21. See Chapter II for a discusssion of the land grants.
22. Congressional Globe (1851-2) Vol. 24, Part 3, p. 9.
23. Ray, Repeal and F. H. Hodder, "Genesis of the Kansas-Nebraska Act", in Proceedings of the State Historical Society of Wis. 1912, are the two chief works on the subject. Hodder places the emphasis on railroad agitation and the attitude of Douglas, while Ray emphasizes the factional dispute in Missouri and the place of David Atchison.

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and the route for a Pacific railroad were closely connected in the minds of men who were appealing for western support. R. S. Cotterill[24] has minimized this connection, basing his conclusions on the fact that the conventions which were called for the promotion of western railroads made practically no reference to the territorial problem. While there is considerable force to the idea, it would seem that the average westerner was satisfied that the route would be made available if it were really wanted, and was willing to let the actual mechanics of the proposition be dealt with entirely by Congress. The primary factor was to get a railroad, and to get it in the right place - the rest was only a question of details. The probability of this point of view is emphasized by the fact that such men as Asa Whitney continued to petition Congress for aid for a railroad to the Pacific without touching the subject of territorial government, and that in 1850 his plans were reported favorably in both Senate and House, again with no mention of the territorial question.[25]

Probably the most outstanding feature of the transcontinental railroad agitation in the period after 1849 was the numerous large railroad conventions held all over the country. These conventions showed the increasing support which the idea

24. Cotterill, Early Agitation, p. 413.
25. Whitney's Railroad to the Pacific, in 31st Cong. 1st Sess., House Rpt. 140.
Report of the Committee on Roads and Canals, in 31st Cong. 1st Sess., Sen. Rpt. 194.

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was attaining, particularly in the west, and emphasized the sectional disagreement as to termini and route. This sectional disagreement over termini and route was the one big difficulty that it was found impossible to solve before the outbreak of the war. The generally accepted fundamental consideration were that only one line could be built and that such a line had to have government aid. This feeling placed the center of interest in Congress and as long as the sections were at all evenly balanced no action was possible.

The first of the large railroad conventions occurred at Memphis in October, 1845,[26] and was interested only secondarily in a railroad to the Pacific.[27] J. C. Calhoun was president and in his opening address gave the keynote for the convention. He emphasized the improvement of southern transportation of all kinds, but spoke only briefly on a railroad for the far west, not because he was not interested in the project, but because he knew nothing about it. De Bow was probably the only prominent man there who was very keenly interested in western railroads, and the convention devoted but very little time to the subject.

The Chicago convention of 1847 provided a very close

26. Arkansas Gazette and Democrat (Little Rock) Mar. 4, 1853; De Bow's Review (Jan. 1846) p. 15; St. George S. Sioussat, "Memphis as a Gateway to the West," in Tennessee Historical Magazine, Vol. 3 (1917-18), pp. 84-107 gives the best secondary account of the convention.

27. Sioussat, p. 107.

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parallel to the Memphis convention.[28] Having been called because of Polk's veto of the River and Harbor Bill of 1846, it was interested primarily in the internal improvements of the northwest. A number of men were present, such as Thomas Allen and William Ogden, who later were very much interested in railroad construction, but little was said upon that phase of internal improvement. When the convention proper had adjourned Horace Greeley took the chair and resolutions were passed favoring the Wilkes plan of a government constructed railroad from the Missouri River via South Pass to the coast. The convention was particularly fortunate because of the publicity which it attained. Horace Greeley, who was strongly in favor of the Pacific railroad idea, reported it for the New York Semi-Weekly Tribune, while Thurlow Weed did the same for the Albany Evening Journal, and in both cases extensive accounts of the proceedings were published.

On October 15, 1849 the first of the big Pacific railroad conventions met at St. Louis.[29] Of the 900 delegates pres-

28. Chicago River and Harbor Convention July 5, 6, and 7, 1847 (Chicago, 1882) includes the more important work of the convention, its preliminaries, and the leading newspaper accounts. There is no adequate secondary account.

29. R. S. Cotterill, "The National Railroad Convention in St. Louis, 1849," in Missouri Historical Review, Vol. 12(1918) pp. 203-215 is the best account. See also J. T. Scharp, History of St. Louis City and County (2 vols., Phila., 1883), Vol. 2, pp. 1143; Western Eagle(Cape Girardeau), June 8, 1849, and Oct. 26, 1849. J. Longhborough, The Pacific Railroad and Telegraph (St. Louis, 1849) gives the ieads which the convention hoped to advance.

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sent, seven hundred were from Missouri and Illinois, while ten other states had some slight representation. The composition of the convention turned into a personal contest between Benton and Douglas for control. Benton, who was just in the heat of the internal struggle in which he finally lost his senatorship, was beaten, and Douglas was elected president. The final resolutions adopted by the convention were rather ambiguous as to route, except that it should be from the Missouri River via South Pass to the coast, and that it should have three eastern termini - Chicago, St. Louis and Memphis. While Douglas expressed himself as being entirely in favor of the northern route the selection of termini was obviously a compromise. It proved, however, to be a compromise that pleased no one.

To counteract the influence of the St. Louis Convention a similar one was held a week later at Memphis.[30] A delegation from the St. Louis convention was present, being headed by J. Loughborough, a St. Louis lawyer who had been in charge of the publicity work for the earlier group. Lieutenant Maury, who laid claim to having originated the idea of a southern road, was

30. R. S. Cotterill, "Memphis Railroad Convention, 1849" in Tennessee Historical Magazine, Vol. 4 (1918) pp. 83-94 is the best secondary account; De Bow's Review, Dec. 1849, pp. 550-2; Arkansas Gazette and Democrat (Little Rock) Mar. 4, 1853. Railroad to the Pacific. Report of the Committee on Naval Affairs, in 31st Cong., 1st Sess., House Rpt. 439, includes the memorial of the Memphis convention and discusses the route proposed.

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elected president, Asa Whitney was present as a visitor, and Jefferson Davis looked in for a while. The first action of the convention was to reject the St. Louis plan as presented by Loughborough. Just as the St. Louis convention had been divided between the Missouri and Illinois members, the Memphis convention was divided between the Tennessee and Mississippi delegations. In this case, however, there was no local dissension, and Tennessee won an easy victory, securing resolutions in favor of the southern route with Memphis as its terminus. Here for the first time the question of the territorial organization of the far west was raised and was included in a constitutional argument which looked forward to statehood for the whole area.

An interesting solution for the sectional issue as it was re-emphasized in the St. Louis and Memphis conventions was presented by Albert Pike shortly after the Memphis convention adjourned.[31] He regretted that the Memphis convention had not been more diplomatic in its action and wished that instead of entirely rejecting the St. Louis idea it had presented an alternate compromise plan. He argued that neither section had the right to construct a transcontinental railroad entirely within its own limits and that the St.Louis convention was not fair, insomuch that it gave two branches to the north and only one to the south. As an alternate plan he proposed two com-

31. National Plan of an Atlantic and Pacific Railroad and Remarks by Albert Pike (Little Rock, 1849).

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plete lines, one from St. Louis and one from Memphis. Pike's plan was open to many serious objections, but it at least had the merit of stating the sectional issue frankly and trying to meet it equitably.

During the succeeding years numerous conventions were held at various places throughout the country,[32] all advocating some particular plan for the construction of a transcontinental railroad. Probably the most notable of these was the convention at Philadelphia April 1-3, 1850,[33] which included most of the regular railroad enthusiasts - Ogden, Loughborough, Degrand, Whitney, etc., resolutions were adopted favoring the plan of the St. Louis convention. All these conventions indicated a growing public sentiment, particularly in the west, and served to emphasize the sectional difficulty of route. Practical difficulties of other kinds were being overcome during the fifties, but the question of terminus was found impossible of solution prior to the Civil War. By that time the concept of a trans-

32. Some of these conventions were held at New Orleans in 1851 - Arkansas Gazette and Democrat (Little Rock) Aug. 8, 1851; at New Orleans in 1852- American Railroad Journal (New York),Vol. 25,p. 33, Gazette and Democrat Jan. 30,1852, De Bow's Review Vol. 12, pp.305-332; at Memphis in 1853- De Bow's Review Vol. 15 pp. 254-274, at Little Rock in 1853 - Gazette and Dem. June 17, 1853; at Charleston in 1854 - Am. R.R. Jour., Vol. 10, p.259. A similar but smaller meeting was held at Boston in 1849- Proceedings of the friends of a railroad to San Francisco at their public meeting, held at theU.S. Hotel in Boston. Apr. 19,1849, (Boston, 1849).

33. Proceedings of the Convention in favor of a National Railroad to the Pacific Ocean (Phila., 1850) gives a complete report. See also J. Y. Scammon, William B. Ogden (Chicago,1882); Western Eagle Apr. 5, 1850; Am. R.R. Journ. Vol. 23, pp. 228-231; Prairie Herald Apr. 24, 1850.

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continental railroad was familiar and most of the obstructions to its building had been removed.

Although the western railroad conventions of 1849 and following did not immediately accomplish their specific purpose, they had a very appreciable indirect effect in stimulating the construction of local roads. Very naturally the first state to be able to undertake railroad construction was the oldest and most populous - Missouri. As early as April, 1836, a convention had been called at St. Louis for the purpose of furthering the movement for internal improvements;[34] among other things, railroads were discussed and various routes proposed. The project was continued during the following winter, when the legislature chartered eighteen railroads, all short lines projected to connect the large county towns and river ports.[35] In 1838 a Board of Internal Improvements was created as a supervisory body, but it was abolished in 1845 before it had any railroads to supervise.[36] It should be noted that this early agitation was distinctly premature and local in its character. The roads were not advocated as a complete system of communication in themselves but as an adjunct to water transportation.

34. Scharf, St. Louis II p. 1140; E. M. Violette, Some Chapters in the Story of Missouri (Kirksville, 1914), p. 78; J. W. Million, State Aid to Railways in Missouri (Chicago, 1896), pp. 3-4; The Commonwealth of Missouri, ed. by C. R. Barnes (St. Louis, 1878), p. 289.

35. Commonwealth of Missouri p. 289.

36. Violette, p. 79.

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The eastern railroad development during the fifties, when the western roads were getting their first start, had certain very definite characteristics. It was during this period that the future eastern trunk lines were consolidating the eastern links of their roads, and standardizing the gauge. Prior to the Civil War no gauge had been accepted as standard and at least seven different widths, ranging from three feet six inches to six feet, were in common use.[37] The Pacific Railroad of Missouri was built with a five feet six inches gauge and changed to standard(four feet eight and a half inches) after the war. In 1850 no rialroad had as yet reached the Mississippi, and no bridge crossed the stream below St. Paul. The Chicago and Rock Island (later C. R. I. and P.) reached the Mississippi in 1854, the Galena and Chicago Union (later C.and N. W.) and the Chicago and Alton in 1855, and C. B. and Q. and the I. C. in 1856, the Milwaukee and Mississippi and the Ohio and Mississippi in 1857, and the La Crosse and Milwaukee (later C. M. and St. P.) in 1858.[38]

37. Am. R.R. Jour. Vol. 9, p. 405, listed some of the more important gauges and showed where they were used.

38. Poor's Manual of the Railroads of the United States (New York) 1876-9, pp. IX-X; W. Larrabee, The Railroad Question (Chicago, 1893), pp. 79-80; W. F. Williams, "A History of the City of St. Paul and the County of Ransey", in Collections of the Minnesota Historical Society, Vol. 4 (1876) p. 253, describes the opening of the P. & R.L.; E. D. Neill, The History of Minnesota from the Earliest French Exploration to the Present Time (Phila., 1858) pp. 595-607, describes the same; Weekly Minnesotian (St. Paul)Apr. 25, 1857 - Milwaukee and Mississippi; F. R. Holmes, Minnesota in Three Centuries (4 vols., Mankato, 1408)- the La Crosse & Milwaukee; S. H. Smith, The Book of the Great Railway Celebration of 1857 (N.Y., 1858) describes the opening of the line to St. Louis.

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The first bridge across the river was built in the middle fifties and the second one came a decade later. Consequently, when the first lines were begun in Missouri they made no connection with eastern lines. Not until after the Civil War was it possible to avoid re-shipment across the Mississippi River.

Early in 1849 Benton introduced his resolution for a Pacific railroad in Congress, and about a month later (March 12, 1849) the Pacific Railroad of Missouri was chartered by the state.[39] In October the St. Louis convention met, and in the following January the company was organized with Col. John O'Fallon as president (succeeded later in the year by Thomas Allen).[40] Books were opened, Kirkwood, formerly of the New York and Erie, was hired as chief engineer, and surveys were started.[41] From the very beginning the financial outlook was unpromising. Lucas, O'Fallon, and Page subscribed one hundred thousand dollars between themselves,[42] St. Louis added another one hundred thousand dollars,[43] and other individual and county subscriptions raised the total to one million one hundred and fifty-eight thousand dollars by 1851.[44] This amount was not all immediately avail-

39. Laws of Missouri 1848-9, p. 219.
40. Scharf, St. Louis II p. 1149; Am. R.R. Jour., Vol. 23, p. 103; T. P. Broadhead, "Early Railroads in Missouri," in Missouri Historical Review, Vol. 7 (1913), p. 149; Gazette and Democrat Feb. 15, 1850.
41. Scharf, St. Louis II p. 1151; Gazette and Democrat, May 31, 1850.
42. Scharf, St. Louis II 1149.
43. De Bow's Review Vol.9, p. 554; Am. R. R. Jour. Vol. 23, p. 567.
44. Am. R. R. Jour., Vol. 24, p. 265.

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able, and in all probability a good share of it could never be collected. In view of these circumstances Thomas Allen, who was both president of the railroad and chairman of the Senate Committee on Internal Improvements, appealed to the legislature in January, 1851, for state aid.[45] No serious opposition developed and during the following month the legislature loaned the company two million dollars of state bonds on the security of a first mortgage.[46] The company immediately let contracts for the first part of the road,[47] and actual construction started July 4, 1851, when Mayor Kennett of St. Louis broke the first ground.[48]

In the mean time petitions had been sent to Congress as early as 1849 for aid from the federal government, and on June 10, 1852, the law giving a land grant to the Pacific Railroad and to the Hannibal and St. Joseph was signed by the president.[49] In the fall of the same year the first iron arrived from England and the first engine from Taunton, Massachusetts,[50] and on December 23, 1852, the first trans-Mississippi railroad was put into operation as far as Cheltenham - five miles - with a tremendous

45. Ibid., p. 75.
46. Violette, p. 84; Am. R.R. Jour., Vol. 25, p. 659.
47. Am. R. R. Jour., Vol. 24, pp. 505-506.
48. Ibid., p. 451.
49. Session Laws, 32nd Cong., 1st Sess., Chap. 45, pp. 8 - 10.
50. Scharf, St. Louis II, p. 1158.

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celebration.[51] On the same day the legislature voted another one million dollars for the furtherence of the project.[52]

During 1853 the road was opened to Franklin (later Pacific),[53] but during the remainder of 1853-4 no new line was finished, although the second division was put under contract. In 1855 the line was opened to Hermann,[54] and an additional loan of two million dollars was voted by the legislature.[55] Due to this aid the road was opened to Jefferson City early in 1856.[56] In March 1857, came the last of the state aid,[57] but in spite of this assistance the financial condition of the road was so poor that no additional line was opened in the next three years.

The Northern Missouri was the second Missouri railroad to start construction. Chartered March 3, 1851, it was projected to run from St. Louis to St. Charles, and from there along the dividing ridge between the Mississippi and Missouri Rivers to the Iowa state line.[58] Granted aid by the legislature to the extent of two million dollars on December 23, 1852, two million

51. W. B. Stevens, St. Louis the Fourth City (4 vols. St. Louis, 1911) I p. 345; Broadhead, p. 150; Violette, p. 85; Am. R.R. Jour., Vol. 11, p. 115; Commonwealth of Mo., p. 291.

52. Violette, p. 85; Am. R.R. Jour., Vol. 12, p. 465.

53. S. B. Harding, Life of George B. Smith Founder of Sedalia, Missouri (Sedalia, 1904)opp. p. 156; Stevens, p. 346; Am. R. R. Jour., Vol. 9, p. 511.

54. Am. R. R. Jour. Vol. 11, p. 509.

55. Ibid., p. 465.

56. Harding, Smith, opp. p. 156; W. M. Paxton, Annals of Platte County Missouri (Kan. Cy., 1897), p. 225, History of Monroe and Shelby Counties, Missouri (St. Louis, 1884) p. 251.

57. Violette, p. 88.

58. History of Caldwell and Livingstone Counties, Missouri (St. Louis, 1886) p. 854; Harding, Smith, p. 155; Millon, p. 67.

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dollars on December 10, 1855, and one million five hundred thou-
sand dollars on March 3, 1857,[59] and securing individual and county stock subscriptions it was able to start work, and by August 25, 1855 was opened from St. Louis to St. Charles - twenty-four miles.[60] No additional line was opened until the fall of 1857, when the road reached Montgomery.[61]

The Hannibal and St. Joseph had been chartered as early as February 16, 1847, to connect Hannibal on the Mississippi River with St. Joseph on the Missouri River.[62] Together with the Pacific Railroad it participated in the state aid of 1851[63] and the Congressional land grant of 1852.[64] Surveys were made, county and individual subscriptions were taken, and work was started in 1853.[65] The first section, from Hannibal to Palmyra, was opened in June, 1856.[66] By 1857 the eastern end had been completed to

59. F. H. Stow, The Capitalists Guide and Railway Annual for 1859, p. 516, gives a complete list of the state aid given to all roads.

60. Special Report of Board of Directors and the North Missouri Railroad Company to the Governor and Legislators of the State of Missouri (St. Louis, 1865) p. 27; History of Audrian County, Missouri (St. Louis, 1884)p. 291. Am. R.R. Jour., Vol. 11, p. 533; Harding, Smith, opp. p. 156.

61. Special Report, p. 27; Audrian County, p. 291; Am. R.R. Jour., Vol. 13, p. 506.

62. Laws of Missouri 1847, p. 156.

63. See references under Pacific Railroad.

64. See references under Pacific Railroad.

65. Annual Report of Railroad Commissioners of the State of Missouri (1879 and 1880) p. 10; Harding, Smith, opp. p. 156.

66. History of Monroe and Shelby Counties, Missouri (St. Louis, 1884), p. 801.

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Shelbina, and three miles had been built east from St. Jo.[67] The Platte County Railroad was chartered February 24, 1853, to continue the western end of the line north from St. Joseph,[68] but nothing was done before the panic of 1857.

The St. Louis and Iron Mountain was chartered March 2, 1851 to build south from St. Louis as part of a projected St. Paul-New Orleans line.[69] It was aided by three million six hundred thousand dollars in state bonds, the first of which came in 1853 and enabled the company to start construction in the fall of that year.[70] In 1855 rolling stock and rails were secured[71] and in 1856 two miles of track were laid.[72] By the end of 1857 the road had reached Bismarck, a distance of seventy-nine miles.[73]

The South West Branch of the Pacific Railroad was chartered December 25, 1952, as a part of the original line of the Pacific Railroad, and was to extend from Pacific Junction on the main line southwest toward the Missouri boundary, with the hope

67. Caldwell and Livingstone Counties, p. 852; Am. R.R. Jour., Vol. 13, p. 667 and Vol. 13,p. 602;Monroe and Shelby Counties, p. 801; Stow, Cap. Guide 1859, p. 119.

68. Mo. R.R. Commission 1879-80, p. 20; Paxton, Annals, p. 168; Harding, Smith, p. 155; History of Clay and Platte Counties, Missouri (St. Louis,1885), p. 794.

69. History of Randolph and Macon Counties, Missouri (St. Louis,1884), p. 295; Harding, Smith, p. 155; Million, p. 67; Mo. R.R. Comm. 1879 and 1880, p. 30.

70. Randolph and Macon, p. 295; Mo. R.R. Comm.1879 and 80, p. 30; Harding, Smith, p. 156.

71. Am. R.R. Jour., Vol. 11, p. 407.

72. Ibid., Vol. 12, p. 393; Mo. R.R. Comm.,1879 & 80,p.30.

73. Am. R.R. Jour., Vol. 13, p. 722; History of Franklin, Jefferson, Washington, Crawford and Gasunde Counties, Missouri (Chi., 1888), p. 480.

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of eventual transcontinental connections.[74] Aid was received from the state in 1852 and 1857,[75] contracts were let in 1854,[76] and in 1855 the work was started at Pacific.[77] Progress was very slow and none of the road was open for traffic by the end of 1857.

When the panic of 1857 occurred Missouri was well started on a comprehensive system of railroad construction. Four lines had been partially built and construction was under way on a fifth. Three of the roads formed possible links in future transcontinental systems, while the other two were projected essentially as feeders, and ran north and south.

In Texas, the next state to possess railroads, the early history was somewhat different. The earliest railroad agitation in Missouri had been on the basis of supplementing the system of waterways, but when it was revived in the latter forties the idea had been changed to that of an entirely independent and complete system in itself. Texas, on the other hand, continued throughout the fifties to hold the idea of railroads as an auxiliary to water transportation. The idea was to build lines on a tangent from the coast so as to tap as much of the country and as much of the river traffic as possible, collecting the products at some central Gulf port for shipment. While the transcontinental idea was present it played but little part

74. Mo. R.R. Comm. 1879 & 80, p. 34; Harding, Smith, p. 155; Million, p. 68.
75. Stow, Cap. Guide, 1859, p. 516.
76. Am. R.R. Jour., Vol. 10, p. 204.
77. Harding, Smith, Opp. p. 156.

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in the actual construction.

As far back as December 16, 1836, the Republic of Texas had chartered the Texas Railroad, Navigation, and Banking Company, with banking privileges and the right to construct a road or canal from the Rio Grande to the Sabine River.[78] Nothing was done on the project, and in 1838 the scheme was greatly reduced by the chartering of the Galveston and Brazos, with the right to build a railroad or turnpike from Galveston to the Brazos River.[79] No aid was given, no banking privileges allowed, and the Republic was to have the right to fix the rates. In 1840 the charter was amended to allow the construction of canals instead of turnpikes,[80] but the privilege ran out before any action was taken.

The project that eventually materialized was begun with the charter (January 26, 1839), of the Houston and Brazos, which allowed that road a free right-of-way through the public domain.[81] No work was done under this incorporation, but in February,1840, A. Briscoe started work on the line without a charter, as the Harrisburg and Brazos Railroad Company.[82] A charter was secured January 9, 1841, under the name of the Harrisburg Railroad and

78. Laws of the Republic of Texas, Vol. 1, part 1, pp. 128-132.
79. Ibid., Vol. 1, part 3, pp. 37-40.
80. Ibid., Vol. 2, part 2, pp. 218-219.
81. Ibid., Vol. 2, part 1, pp. 130-134.
82. P. Biscoe, "The First Texas Railroad," in The Quarterly of the Texas State Historical Association, Vol. 7 (1904), p. 279; B. H. Carroll, Jr., Standard History of Houston Texas (Knoxville, 1912) p. 226.

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Trading Company,[83] but work was soon discontinued because of the fear of Mexican raids.[84] When conditions were again near normal all the property was bought by Sidney Sherman and his associates (1847), and re-chartered February 11, 1850, as the Buffalo Bayou, Brazos, and Colorado.[85] Work was started in 1851[86] and the first rails were laid in 1852,[87] although the road was not opened for traffic until August, 1853, when operation was begun between Harrisburg and Stafford's Point, a distance of twenty miles.[88] In 1854 Texas passed a general land grant act[89] and by December, 1855,[90] the road had arrived at the Brazos River, at which point it remained until after the panic.

The Galveston and Red River was organized in 1848,[91] but nothing was done until January 1, 1853, when Paul Bremond threw the first shovelful of dirt at Houston.[92] The road was really a Houston project, and in 1856 the name was changed to the Houston and Texas Central.[93] The contractors soon got disgusted and threw

83. Laws of the Republic of Texas, Vol. 3, part 3, pp. 24-27.
84. Briscoe, p. 279.
85. Ibid., p. 282.
86. Am. R.R. Jour., Vol. 24, p. 471.
87. Gazette and Dem., Apr. 16, 1852.
88. Briscoe, p. 282.
89. Laws of Texas 1854, pp. 11-15.
90. Briscoe, p. 283.
91. Carroll, Houston, p. 228.
92. Ibid.,p. 228;D. C. Wooten, "The Land System of Texas" in A Comprehensive History of Texas, ed. by D. C. Wooten (2 vols. Dallas, 1898), Vol. 2, p. 767.
93. Carroll, Houston, p. 228.

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up the job, whereupon Bremond took over the work himself, and was able to complete twenty-six miles during 1856 and twenty more during 1857.[94]

The Galveston, Houston, and Henderson was chartered February 7, 1853, to connect Galveston and Houston, and proved to be the only railroad to reach Galveston before the seventies.[95] Twenty miles were completed in 1857, while the whole road was finished in 1858.[96] The bridge to Galveston was completed in 1859.[97] Another connecting road was the Houston Tap Railroad, chartered January 26, 1856, to connect Houston and Harrisburg, the termini of the Houston and Texas Central and the Buffalo Bayou, Brazos, and Colorado.[98] The road was built by a one per cent property tax levied by the city of Houston, and was completed (seven miles) in the same year that it was chartered.[99]

The transcontinental idea hardly got outside of the realm of theory in Texas. In 1853 the Mississippi and Pacific was given a land grant for the purpose of constructing a trunk line from the Arkansas border to El Paso, and this grant was secured by the reservation of a considerable area of land near El

94. Ibid., p. 228; Am. R.R. Jour., Vol. 13, p. 477.
95. D. N. Hardy and I. G. Roberts, Historical Review of South-East Texas (Chi., 1910), p. 195; Annual Report of the Railroad Commission of the State of Texas, 1897, p. 185.
96. Am. R.R. Jour., Vol. 13, p. 341.
97. Ibid., Vol. 14, p. 769; Carroll, Houston, p. 228.
98. Hardy and Roberts, p. 196; Am. R.R. Jour., Vol. 14, p. 769; Carroll, Houston, p. 228.
99. Carroll, Houston, p. 229; Hardy and Roberts, p. 194.
100. Hardy and Roberts, p. 193; Am. R.R. Jour., Vol. 16, p. 505.

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Paso.[101] Other roads were later given a chance at the proposition- the Memphis, El Paso and Pacific, the Southern Transcontinental, and the South Pacific, but none of them succeeded in getting the road built.[102]

By 1857 Texas had really only two lines of railroad, one nprth from Galveston and the other west from Houston. Railroad enthusiasm was widespread, but no very definite ideas had been developed either by individuals or by the state. Other roads had been chartered, but in every case except that of the road from Corpus Christi, the lines radiated from Houston and reflected the enthusiasm and energy of that city more than anything else. The greatest drawback was the lack of population in Texas, so that the railroads were valueless even if built. This condition continued to exist for a considerable length of time, and a great part of the Texas railroad mileage was built later by roads looking for either an outlet on the Pacific coast or on the Gulf.

In Arkansas there occurred during the fifties the spectacle of a population that was energetic and enthusiastic, but that lacked the resources to carry out its ideas. All the

101. Wooten, Vol. 1, p. 830.

102. The best summary is in Poor's Manual 1878, p. 859; the Memphis, El Paso and Pacific was discussed in the sub-committee of the Pacific Railroad Committee, and the committee report on the validity of the road's claims to its title and land may be found in 41st Cong., 2nd Sess., Senate Rpt. 212; the minority report is in 41st Cong., 2nd Sess., Sen. Mis. Doc. 121. The correspondence concerning the French advertising claims of the road may be found in 41st Con., 2nd Sess., Sen. Ex. Doc. 59. The other roads were not as active.

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southern railroad conventions were liberally supplied with members from Arkansas,[103] and every Arkansas newspaper was filled with railroad aspirations and hopes.[104] Unfortunately Arkansas had a rather meagre population and was burdened by a large debt contracted in the banking enthusiasm of the thirties. Consequently there was little capital, either private or public, to be invested in railroads, and there was very little hope that a railroad could be made self-supporting after it had been built.

The principal routes suggested for railroads centered at Little Rock - lines between Little Rock and individual river towns, north and south as part of a through line, and west to Fort Smith. The best possibility was that of a line from Memphis to Little Rock, connecting two good-sized cities, and with the possibility of eventually becoming part of a transcontinental road. Various roads were chartered separately until 1851, when a general incorporation law was passed.[105] Congress aided Arkansas railraods in 1853 by a land grant which provided for a line from Cairo, Missouri, via Little Rock to a point on the southern boundary of Arkansas in the direction of Fulton, Texas, and a line from Memphis via Little Rock to Fort Smith.[106] In spite

103. See Cotterill's accounts of the St. Louis and Memphis conventions.

104. For example, see the Arkansas State Gazette and Democrat (Little Rock), Dec. 13, 1850; Aug. 26, 1851; Sept. 12, 1851; Nov. 28, 1851; Dec. 5, 1851; Dec. 26, 1851; Jan. 2, 1852; Feb. 20, 1852; Apr. 9, 1852; May 28, 1852, etc.

105. Public Acts of the Eighth Session of the General Assembly of Arkansas, pp. 85-86.

106. Session Laws, 32 nd Cong., 2nd Sess., Chap. 59, pp. 155-156.

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of this aid no road was put into operation before 1858. The Memphis and Little Rock had started work by that time, but none of the road was open for traffic.[107]

Iowa was the only state in the first trans-Mississippi tier that did not at any time afford state aid to its railroads. The tendency was rather in the other direction, and even local bond issues were restricted. Iowa was able to adhere to this policy in large part because of its geographical position;lying directly west of the territory tributary to Chicago, the principal railraods centering at Chicago all pushed west through Iowa, and this tendency was later emphasized by the building of the Union Pacific with its eastern terminus at Omaha.

Shortly after the St. Louis convention, Iowa held a rival convention at Iowa City.[108] Ex-Governor Lucas of Ohio presided, and resolutions were adopted asking for a land grant for a road along the river from Dubuque to Keokuk, and also for one from Davenport to Council Bluffs, to form a link in a future transcontinental route. Although no action was taken by Congress until 1856,[109] the convention crystallized sentiment and gave an impetus to the chartering and building of local roads. The

107. Gazette and Democrat June 30, 1854 and Nov. 10, 1854; Am. R.R. Jour., Vol. 14, p. 405.

108. J. Bringham, De Moines together with the History of Polk County, Iowa (Chi., 1911), pp. 106-8; Prairie Herald (Chi.), Nov. 4, 1851; Gazette and Democrat Feb. 6, 1852; Am. R.R. Jour., Vol. 24, p. 710.

109. Session Laws, 34th Cong., 1st Sess., Chap. 28, pp. 9-10.

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principal routes suggested were those running directly west across the state from various river towns; several north and south roads, such as from Keokuk to Des Moines and Davenport were also proposed.

The first road to be built was the Davenport and Iowa City, chartered October 14, 1850, to run along the general route proposed by the convention of 1849.[110] In 1853 the franchise was bought by the Mississippi and Missouri, which was a Chicago and Rock Island company, chartered to continue the main line across Iowa.[111] Surveys were made under the direction of Peter Dey and G. M. Dodge,[112] and books were opened. No bonds were issued, the company claiming that they were not a legitimate source of income.[113] In the fall of 1853 actual construction was started,[114] an agreement was made with the C. and R. I. for the construction of a bridge across the Mississippi,[115] and branches north and south from Davenport were authorized.[116] In 1855 the road was finished

110. C. Cole, A History of the People of Iowa (Cedar Rapids, 1921), p. 280; "The Pioneer Railroad of Iowa", in Iowa Historical Record, Vol. 13 (1899), p. 124.

111. R. S. Preston, "The Lyons and Iowa Central Railroad," in Annals of Iowa, Vol. 9 (1910), p. 285; Pioneer Railroad, p. 124; Cole, Iowa, p. 280.

112. Circular Statement of the Mississippi and Missouri Railroad Company (New York, 1854), p. 8; G. W. Dodge, How We Built the Union Pacific Railway, in 61st Cong., 2nd Sess., Sen. Doc. 447, p. 5.

113. Circular Statement, p. 7.

114. F. B. Wilkie, Davenport Past and Present (Davenport, 1858), p. 109.

115. Pioneer Railroad, p. 129; Annual Report of the Railroad Comissioners (Iowa) 1879, pp. 88-89; Wilkie, Davenport, p.118.

116. Circular Statement, p. 12; Pioneer Railroad, p. 129.

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from Davenport to Muscatine and in 1856 from Davenport to Iowa City, which remained the western terminus of the main line until 1860.[117][118]

The bridge across the Mississippi was built by agreement between the Chicago and Rock Island, the Mississippi and Missouri, and the Railroad Bridge Company of Illinois; consequently it had no authorization either by Iowa or by the United States.[119] The work was finished in 1856 and constituted the first bridge across the Mississippi below St. Paul, and being comparable in an engineering way to the Niagara Suspension Bridge which was finished by Roebling in 1854.[120] Immediately upon the completion of the bridge one of the spans was destroyed by fire caused by a steamboat collision. This accident was the starting point of an almost interminable amount of litigation, to determine whether any line of railroad had the right to obstruct river traffic in such a fashion, and whether this particular road had sufficient authorization. Although the railroad eventually won its case as to the damages accruing because of the loss of the boat, a Unit-

117. Stow, Capitalists' Guide, 1859, p. 197.

118. Ibid.,p. 197; Cole, Iowa, p. 281; A History of Dallas County, Iowa (Des Moines, 1879), p. 384;Ia. R.R. Comm. 1879, pp. 92-93; Appleton's Guide 1856.

119. Ia. R.R. Comm., 1879, p. 88.

120. Accounts of the building of the bridge, its importance, and the ensueing litigation may be found in J. L. Ringwalt, Development of Transportation Systems in the United States (Phila., 1888), p. 158; Pioneer Railroad, pp. 129-131; Ia. R.R. Comm., 1879, pp. 89-91; Wilkie, Davenport, p. 126; History of Scott County, Iowa (Chi., 1882), p. 479; 10 Wallace 453.

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ed States law was required to end the trouble completely, and the extended litigation was an important factor in the later bankruptcy of the road.

Another of the transcontinental projects was the Burlington and Missouri River, organized in 1853, to run from Burlington to the Missouri river opposite the Platte.[121] Being one of the recipients of the land grant of 1856 it started construction in that year,[122] but was met by the panic before it had any track open for operation.[123] The C. B. and Q. acquired an interest in 1857, and eventually made this a part of its main line across Iowa.

The Iowa Central Air-Line was projected (1853) as another possible transcontinental route, and had its terminus at Sabula on the Mississippi River.[124] This road was organized primarily to secure the benefits of a possible land grant;[125] no work was done, and the land grant that was received was finally transferred to the Cedar Rapids and Missouri River.[126]

The Chicago, Iowa, and Nebraska was organized as an out-

121. History of Lucas County, Iowa (Des Moines, 1881), p. 572.

122. Stow, Cap. Guide 1859, p. 111; The History of Des Moines County, Iowa (Chi cago, 1879, p. 521.

123. Am. R.R. Jour., Vol. 13, p. 485 - taken from Chicago Press.

124. The History of Marshall County, Iowa, (Chi.,1878), p. 197; Stow, Cap. Guide, 1859, p. 373.

125. Stow, Cap. Guide, 1859, p. 373 gives the statement of the president on this subject.

126. The History of Boone County, Iowa (Des Moines,1880), p. 407; W.H. Stennett, Yesterday and Today (Chi.,1910), p. 39; Statement Showing Land Grants made by Congress (Washington,1908), pp. 2-3; A.J. Barkley, "How Boonesboro Lost a Railroad Station," in Annals of Iowa, Vol. 12 (1921), p. 540.

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growth of the Lyons and Iowa Central;[127] it enlisted eastern capital,[128] and without the aid of any government subsidy had built from Clinton to near De Witt by the end of 1857.[129]

The Dubuque and Pacific was incorporated May 19, 1853,[130] and had transcontinental aspirations; it was aided very generously by Dubuque.[131] The Illinois Central had a very close interest in this road and construction was pushed as fast as possible.[132] Dunleith was reached in 1855,[133] and the line was opened as far as Nottingham (thirty-eight miles) before the end of 1857.[134]

The McGregor, St. Peters and Missouri River was organized in 1856 as part of a transcontinental line, and was in close connection with the Milwaukee and Mississippi.[135] Although it was unsuccessful in its effort to secure federal aid, and none of the

127. R. S. Preston, "The Lyons and Iowa Central Railroad," in Annals of Iowa, Vol.9? (1910), p. 287; Stennett, Yesterday and Today, p. 37.

128. Wolfe's History of Clinton County Iowa, ed. by P.B. Wolfe (2 vols., Indianapolis, 1911), p. 122; Stennett, Yesterday and Today, p. 38.

129. Wolfe's History, p. 122; Am. R.R. Jour., Vol. 13, p. 493; Ia. R.R. Comm., 1879, p. 86.

130. The History of Dubuque County, Iowa (Chi.,1880), p. 629; Am. R.R. Jour., Vol. 17, p. 222.

131. W. A. Goodspeed and K. C. Goodspeed, History of Dubuque County, Iowa (Chi.,1911), pp. 243-244; Report of the Dubuque and Pacific Railroad Company, Jan. 1, 1858 (Dubuque, 1858), p. 7; The Weekly Minnesotian (St. Paul), Sept. 7, 1855.

132. Report, 1858.

133. Goodspeed, Dubuque, p. 245.

134. Report, 1858, p. 4; Stow, Cap. Guide, 1859,p. 142; Am. R.R. Jour., Vol. 14, p. 45; The History of Delaware County, Iowa (Chi.,1878), p. 468.

135. The History of Floyd County, Iowa(Chi.,1882),p.553; First Annual Report of the McGregor, St. Peters and Missouri River 1858, p. 16.

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line was built before 1857, it eventually became a part of the main line of the C. M. and St. Paul.

One north and south road was able to start building by 1857. The Keokuk, Ft. Des Moines and Minnesota was organized in 1853 as the successor of the Des Moines River Improvement Company.[136] Grading was started in 1855;[137] the first rails were laid at Keokuk in 1856,[138] and by 1857 the line was in operation as far as Bentonsport (thirty-nine miles),[139] where it stayed until 1860.

Railroad enthusiasm was exceedingly strong in Minnesota during the early eighties; numerous lines were chartered, but the condition of the country was such that practical railroad construction was almost an impossibility. Minnesota was still a territory, with a rather small and scattered population; capital was hard to obtain. A railroad, even if built, would probably remain unproductive for a number of years. Several of the roads that were chartered actually started work before the end of 1857,[140] being encouraged by the federal land grant of that year. Unfortunately this help came just at the time of the panic, and

136. Ia. R.R. Comm. 1879, p. 110; The History of Lee County, Iowa (Chi.,1879), p. 510; The History of Marion County, Iowa (Des Moines,1881), p. 432; Bugham, De Moines, p. 605; Am. R.R. Jour., Vol. 11, p. 478.

137. Am. R.R Jour., Vol. 11, p. 478.

138. A History of Dallas County, Iowa (Chi.,1892), p.172.

139. Boone County, p. 417; T. Hussey, "How the Des Moines Valley Railroad came to Des Moines," in The Annals of Iowa,Vol. 8, 3rd Series (1907-8), p. 128; The History of Mahaska County, Iowa (Des Moines, 1878), p. 172.

140. See discussion in Chap. II.

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with the two influences acting in opposition nothing was accomplished. The principal routes suggested were those radiating from St. Paul and Minneapolis, and those running due west from such eastern points as Duluth, Winona, and La Crosse.

Of the states and territories further west only California was in a position to make railroad construction possible, and even here it was only in connection with the mining industry that such a line could be made profitable. The Sacramento Valley Railroad was organized August 4, 1852,[141] and after surveys by T. D. Judah,[142] started to build east from Sacramento in 1855.[143] On November 10, 1855, occurred the first excursion on the first far-western railroad; passengers were carried from Sacramento to Patterson[144] (ten miles) at a cost of ten dollars. Early in 1856 the road was completed to Folsom, which remained its terminus until 1860.[145] This was the only line to be built west of the Missouri river before 1857.

The early fifties was a period of great railroad enthu-

141. A Memorial and Biographical History of Northern California (Chi.,1891), p. 220; Annual Report of the Board of Railroad Commissioners of the State of California, 1877 and 1878, p. 357; Am. R.R. Jour., Vol. 11, p. 596.

142. H.H. Bancroft, History of California (Trvls., San Francisco, 1890), Vol. 7, p. 538; E. T. Waite, "California Overland Railways," in Overland Monthly, Vol. 14 (1875), p. 11.

143. Northern Cal., p. 220.

144. Bancroft, California, Vol. 7, p. 538.

145. Cal. R.R. Comm., 1877 and 1878, p. 360; O. P. Monnette, California Chronology (Los Angeles, 1915), p. 279; Bancroft, California, Vol. 7, p. 538.

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siasm in the west. As was generally true in the history of western railroads, the construction went in advance of the economic ability to pay for their building and support. The factors played a leading part in the situation, - (1) the geographical situation of the country, its resources, and the comparative need for better transportation, and (2) the activity of the government in encouraging construction. The railroads of Texas and Missouri received liberal government aid of various kinds, while the one in California and those in Iowa had reasonable expectations of paying dividends in the near future. The other states had neither of these hopes, and consequently railroads were not constructed.

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Railroad Construction 1850 - 1857.

Date	Origin	Old Terminus	New Terminus	Complete Mileage	New
	Buffalo Bayou, Brazos and Colorado.				
1853	Harrisburg		Stafford's Pt.		20
1855	Harrisburg	Stafford's Pt.	Brazos River	38	18
	Chicago, Iowa and Nebraska.				
1857	Clinton		near DeWitt		16
	Dubuque and Pacific.				
1857	Dubuque		Nottingham		38
	Galveston, Houston and Henderson.				
1857	Houston		south		20
	Hannibal and St. Joseph.				
1856	Hannibal		Palmyra		15
1857	Hannibal	Palmyra	Shelbina	47	32
	St. Joseph		east		3
	Houston and Texas Central- to 1856.		Galveston and Red River		
1856	Houston		Cyprus		28
1857	Houston	Cyprus	Waller	43	20
	Houston Tap-		Houston Tap and Brazoria from 1860.		
1856	Houston		Harrisburg		7
	Keokuk, Ft. Des Moines and Minnesota.				
1857	Keokuk		Pentonsport		39
	Mississippi and Missouri.				
1855	Davenport		Muscatine		28
	Davenport		Iowa City		54
	North Missouri.				
1855	St. Louis		St. Charles		24
1857	St. Louis	St. Charles	Montgomery	84	60

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Pacific Railroad of Missouri.

1852	St. Louis		Cheltenham		5
1853	St. Louis	Cheltenham	Pacific	37	32
1855	St. Louis	Pacific	Hermann	81	44
1856	St. Louis	Hermann	Jefferson City	125	44

Sacramento Valley.

1855	Sacramento		Patterson		10
1856	Sacramento	Patterson	Folsom	22	12

St. Louis and Iron Mountain.

1856	St. Louis		south		2
1857	St. Louis	terminus	Bismarck	79	77

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Chapter II. Government Aid - National, State and Local (1850-1876), and Railroad Construction, 1857-65.

The most outstanding difficulty of western railroad construction was financial. Very little capital existed west of the Mississippi, and consequently it was necessary to secure eastern or foreign help. Railroad stock and bonds were sold in the east, but usually the price was so low that the transaction proved unprofitable. The only other way of obtaining adequate funds was to get some kind of government aid - national, state, or local. Fundamentally, this was only an additional means of securing eastern capital; state or local bonds were sold in the east, and a land grant from Congress was either sold to settlers coming from the east or else mortgaged and the bonds sold in the east.[1]

The question of Congressional land grants has been adequately discussed elsewhere, and there is no necessity of going into detail on the subject.[2] After a rather desultory practice, Congress started a regular policy in 1850[3] of granting land from the public domain for the development of state railroad systems. The following list shows the grants made to the states west of

1. Stow, Cap. Guide 1859, pp. 9-10, gives a very good discussion of the usual methods of financing western railroads.
2. J.B. Sanborn, Congressional Grants of Land in Aid of Railroads (Madison,1899) is the best and most complete account; J.H. Haney, Congressional History of Railways in the United States 1850-1887 (Madison,1910) also deals with the subject.
3. The grant to Illinois for the Illinois Central.

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the Mississippi, and also shows the road which was the recipient,-
Missouri, June 10, 1852.[4]

Hannibal and St. Joseph - Hannibal to St. Joseph.

Pacific Railroad of Missouri - St. Louis to the western boundary of the state (at Kansas City).

Missouri and Arkansas, February 9, 1853.[5]

Cairo and Fulton - Mississippi River, opposite the mouth of the Ohio, to the Texas boundary near Fulton.

Memphis and Little Rock - Memphis to Little Rock.

Little Rock and Ft. Smith - Little Rock to Ft. Smith.

Minnesota, June 29, 1854.[6]

Minnesota and Northwestern - St. Paul to the eastern boundary of the state in the direction of Lake Superior.

Repealed August 4, 1854, for non-compliance with the terms.[7]

Iowa, May 15, 1856.[8]

Burlington and Missouri River - Burlington to the Missouri River near the mouth of the Platte.

Mississippi and Missouri - Davenport via Iowa City and Ft. Des Moines to Council Bluffs.

4. Session Laws, 32nd Cong., 1st Sess., Chap. 45, pp. 8-10.
5. Ibid., 32nd Cong., 2nd Sess., Chap. 59, pp. 155-156.
6. Statute at Large, Vol. 10, p. 302.
7. Statute at Large, Vol. 10, p. 575.
8. Session Laws, 34th Cong., 1st Sess., Chap. 28, pp. 9-10.

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Iowa Central Air-Line - Lyons City northwest to the Iowa Central Air-Line near Maquoketa and then along the forty-second parallel to the Missouri River.

Dubuque and Pacific-Dubuque to Missouri River, with a branch from Tet des Mortes directly to the main line.

Minnesota, March 3, 1857.[9]

Minnesota and Pacific - Stillwater via St. Paul and St. Anthony to a point between the foot of Big Stone Lake and the mouth of the Sioux Wood River, and a branch via St. Cloud and Crow Wing to a navigable point on the Red River.

Southern Minnesota and Minnesota Valley - St. Paul and St. Anthony via Minneapolis to a junction west of the Mississippi, and from there to the southern boundary of the territory in the direction of the mouth of the Big Sioux River.

Minneapolis and Cedar Valley - branch of the preceding road to run via Faribault to the northern boundary of Iowa est of range 16.

Transit - Winona via St. Peter to a point on the Big Sioux River south of the forty-fifth parallel.

9. Session Laws, 34the Cong., 3rd Sess., Chap. 99, pp. 195-197.

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Root River Valley and Southern Minnesota - La Crescent via Target Lake, up the valley of the Root River to a junction with the last named road east of range sixteen.

All these grants provided for alternate sections of land, six sections in width, with the privilege of indemnity selections within a radius of fifteen miles. Ten years was given to each company to construct its road, and at the end of that time the land was to revert to the public domain if the line was not finished. In practice the time limit was continually extended, and the Supreme Court finally held, in the case of Schulenburg v. Harriman, that a special act of Congress was necessary in order to restore the land to the public domain.[10]

This first group of western land grants took care of the first tier of trans-Mississippi states, and contained the basis for an adequate system of transportation for each one. In Texas the land was the property of the state, being retained upon its admission to the Union. Texas had a general land grant law, comparable to the Congressional grants, but the subject will be treated under the topic of state aid.

The fifties marked the peak of the confidence in railroads as the panacea for all economic ills. The panic of 1857 was due in great part to the over-speculation in railroad se-

10. 21 Wallace 44.
11. Banker's Magazine and Statistical Register (New York, Vol. 12 (1857), p. 390.

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curities, and furnishes an interesting parallel to the banking panic of 1837. The final crash sobered the people for the time being at least, and when Congress revived its land grant policy in 1862, it was no longer with the idea of furnishing every new state with a complete land-grant railway system. While the land that was granted did not lessen in amount, it was usually given for the aid of a specific, strategic line, and very often it was made directly to the company by name. Another phase of the later policy was the increased favoring of transcontinental lines. While the grants of the fifties made provision for possible transcontinental roads, the later grants had them specifically in mind, and several of the grants were made transcontinental in scope - running through several states and territories. The grants made after 1857 are as follows, -

Pacific Railroad Grant July 1, 1862.[12]

Union Pacific - From 100th meridian between the south margin of the Republican River Valley and the north margin of the Platte River Valley (Nebraska)to the western boundary of Nevada, Also from a point on the western boundary of Iowa to the first mentioned point.

Leavenworth, Pawnee, and Western - Missouri River, at the mouth of the Kansas to a connection with the Union Pacific at the 100th meridian.

Central Pacific - San Francisco via Sacramento to the

12. Statutes at Large, Vol. 12, Chap. 120, pp. 489-498.

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eastern boundary of California, with the right to continue its line to meet the Union Pacific.

Hannibal and St. Joseph - St. Joseph via Atchison to connect with the Union Pacific.

Sioux City to a connection with the Union Pacific; to be give to the first line reaching Sioux City. The Sioux City and Pacific fulfilled the terms and received the grant.

This act provided for the odd sections within ten miles of the road, with no indemnity. The amount was doubled by the act of July 2, 1864.

Kansas, March 3, 1863.[13]

Leavenworth, Lawrence and Galveston - Leavenworth via Lawrence and the Ohio City crossing of the Osage River to the southern boundary of the state in the direction of Galveston Bay; also a branch from Lawrence along the valley of the Wakarusa River to where the Atchison. Topeka and Santa Fe intersects the Neosho River.

Atchison, Topeka, and Santa Fe - Atchison via Topeka to the western boundary of the state in the direction of Ft. Union and Santa Fe.

Union Pacific, Southern Branch (later Missouri, Jansas, and Texas) - Branch of the above road from the

13. Statutes at Large, Vol. 12, pp. 772-774.

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Neosho River crossing down the Neosho Valley to a junction with the Leavenworth, Lawrence, and Galveston.

Minnesota, May 5, 1864.[14]

Lake Superior and Mississippi - St. Paul to the head of Lake Superior.

Iowa, May 12, 1864.[15]

Sioux City and St. Paul - Sioux City to the southern line of Minnesota.

McGregor to western boundary of state - built by McGregor Western - McGregor to Calmar.

McGregor and Sioux City - no construction.

McGregor and Missouri River - Calmar to Algona.

C. M. and St. Paul - Algona to Sheldon.

Nebraska, July 2, 1864 - amendment to act of 1856.[16]

Burlington and Missouri River - Nebraska line on Missouri River south to the mouth of the Platte, and to a connection with the Union Pacific not further west than the 100th meridian.

Northern Pacific, July 2, 1864.[17]

Lake Superior west by most eligible route to Portland.

14. Statutes at Large, Vol. 13, p. 64.
15. Statutes at Large, Vol. 13, p. 72.
16. Statutes at Large, Vol. 13, p. 356.
17. Statutes at Large, Vol. 13, pp. 365 - 372.

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Minnesota, March 3, 1865[18] - addition to grant of 1857,
St. Paul and Northern Pacific - point between St. Anthony and Crow Wing to Lake Superior.

Amended March 3, 1871, to run from St. Anthony via Crow Wing to Brainerd and from St. Cloud to St. Anthony.

Placerville and Sacramento, July 13, 1866.[19]

Folsom to Placerville.

Minnesota, July 4, 1866.[20]

Southern Minnesota - Houston, Minnesota to the western boundary of the state.

Hastings, Minnesota, and Red River of the North - Hastings to the western boundary of the state.

Kansas, July 23, 1866[21] - specifically for the use of St. Joseph and Denver City - Elwood via Marysville to a junction with the Union Pacific east of the 100th meridian.

California and Oregon Railroad Company, July 25, 1866.[22]

Junction with the Central Pacific in the Sacramento Valley to the northern boundary of the state.

Oregon, July 25, 1866.[23]

Oregon Central - Portland to a connection with the California and Oregon.

18. Statutes at Large, Vol. 13, p. 526.
19. Statutes at Large, Vol. 14, p. 94.
20. Statutes at Large, Vol. 14, p. 87.
21. Statutes at Large, Vol. 14, p. 210.
22. Session Laws, 39th Cong., 1st Sess., Chap. 242, pp.
23. Same as preceding references.
24. Statutes at Large, Vol. 14, pp. 292-299.

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This act is a part of the preceding one, but while the California and Oregon Railroad was designated by name, the part of the grant that lay in Oregon was given to the state to dispose of as it saw fit.

Atlantic and Pacific Railroad, July 27, 1866.[24]

Springifled, Missouri via Albuquerque and headwaters of the Colorado Chiquito along 35th parallel, and across the Colorado River at the most suitable point to the Pacific coast; a branch from the Canadian River to a point at or near Van Buren, Arkansas.

(The western part was taken up by the Southern Pacific).

Stockton and Copperopolis, March 2, 1867.[25]

Stockton to Copperopolis, California.

Oregon Central, May 4, 1870.[26]

Portland to Astoria, and from junction near Forest Grove to Yamkill River near McMinville.

Texas and Pacific, March 3, 1871.[27]

Marshall, Texas along 32nd parallel to El Paso and from there by the most eligible route to the Colorado River near the southeastern boundary of California, and from there to San Diego. (The western part was taken over by the Southern Pacific).

24. Statutes at Large, Vol. 14, pp. 292-299.
25. Statutes at Large, Vol. 14, p. 548.
26. Statutes at Large, Vol. 16, pp. 94-95.
27. Statutes at Large, Vol. 16, pp. 573-579.

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It may easily been seen that the land grant policy had changed from the earlier period. The only state to receive anything similar to the old land grants was Kansas, while other states such as Oregon and California received only desultory gifts. Four of the grants were in favor of transcontinental roads, and the remainder were mostly additions to grants already given. By 1871 the period of the land grants was over, and the agitation for the repeal of the former acts was getting into motion. In a general way this feeling corresponds to other local railroad agitation, and shows the passing of the locally owned and supported railroad. The financial method that was used generally meant that within from ten to twenty years the control of the road would pass to the east. The stock might be bought up, the road might be leased, or the eastern bondholders might foreclose and secure control of the stock through reorganization. Frequently the control of the road passed to an eastern construction company during the process of building. This seemingly inevitable tendency was a great factor in alienating local support and in encouraging local anti-railroad agitation. The western farmer or small business man had a very normal antipathy to the control of his means of transportation by a foreign corporation, particularly if that corporation had secured control through bankruptcy proceedings which had squeezed out his own holdings. It is a very evident fact that in most of the western states the anti-railroad feeling became particularly strong from fifteen to twenty years after the first railroads were built, thus probably

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showing more than anything else the normal working out of the financial system in use.

The second great source to which the railroad looked for aid was the state. In all of the first tier of trans-Mississippi states, with the exception of Iowa, there were experiments in state aid during the two decades of 1850 - 70. As has been pointed out before, these attempts were only a further way of securing eastern capaital. Aid was always given in the form of state bonds, and constituted a first mortage on the railraods aided. With the double backing of the railraod and the state government the bonds were sold in the east, and again it was eastern capital that was being used.

Missouri was the first of the western states to start a policy of state aid.[28] Backed by a fairly large and prosperous community, and with no other debt to act as a drawback, it was in the most favorable possible position for the experiment. Starting in 1851 state bonds, constituting a first mortage on railroads to which they were issued, were authorized -[29]

28. J. W. Million, State Aid to Railways in Missouri (Chicago, 1896) gives the standard account of the Missouri state aid experiment. The material is accurate, and the work generally satisfactory.

29. The amounts of state aid are given in Million (Appendix) pp. 232-243; Stow, Cap. Guide 1859, p. 516; Am. R.R. Jour., Vol. 15, p. 502.

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[30]

	2/22/51	12/23/52	2/53	3/55	12/10/55	3/3/57
Pacific	2,000,000	1,000,000			2,000,000	1,000,000
S.W. Branch		1,000,000				3,500,000
H. & St. J.	1,500,000				1,500,000	
No. Mo.		2,000,000			2,000,000	1,500,000
St. L. and I. M.			750,000	750,000	1,500,000	600,000
Platte Co.						700,000
Cairo and Fulton					250,000	400,000

Of the bonds authorized the following amounts were issued; the third column shows the amount of money realized by the rail-[31] road company.

	Granted	Received	Realized
Pacific	7,000,000	6,780,000	6,026,407
S. W. Branch	4,500,000	1,400,000	1,091,751
Han. and St. J.	3,000,000	3,000,000	2,432,698
No. Mo.	5,500,000	4,350,000	3,683,201
St. L. and I.M.	3,600,000	3,276,000	2,677,453
Cairo and Fulton	650,000	250,000	217,337
Platte County	700,000	-----	----

In March, 1857, Missouri state bonds were selling in New York at eighty-three, and by the end of the year had dropped to

30. This table is taken from Stow, Cap. Guide 1859, p.516.
31. Taken from Am. R. R. Jour., Vol. 15, p. 502, which in turn is taken from the Report of the Auditor of Missouri, and from Stow, p. 516. The discrepancy from the first table in the case of the Pacific Railroad is due to an additional grant after 1857.

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sixty-five;[32] even the most optimistic of railroad enthusiasts could hardly find warrant for securing capital on such terms. An attempt was made in 1860 to revive the Missouri policy of state aid, but the bill that was passed by the legislature was vetoed by Governor Stewart.[33]

With the possible exception of the Hannibal and St. Jo., the railroads of Missouri put their greatest reliance in state aid during the fifties. The Hannibal and St. Jo. used stock subscriptions more than bond issues, and managed to remain solvent throughout the war period. In spite of the panic of 1857 it continued to build rapidly during 1858, and in 1859 opened its whole line from Hannibal to St. Jo.[34] It was the first railroad to cross the first tier of trans-Mississippi states, and was also the first line to enter St. Jo. During 1861 connection was made with the Quincy and Palmyra at Quincy, and the two roads were operated together for military reasons.[35] Consolidation was effected in 1867.[36]

The remainder of the state aided roads tried to continue building after 1857, but soon found themselves in insuperable financial difficulties. The Pacific Railroad was forced to dis-

32. Million, p. 106.
33. Am. R. R. Jour., Vol. 16, p. 254; Million, p. 114.
34. Mo. R. R. Comm. 1879 and 1880, p. 16; Caldwell and Livingston Counties, p. 852; Monroe and Shelby Counties, p. 264; Harding, Smith, opp. p. 156; Am. R.R. Jour., Vol. 15, p. 359.
35. Monroe and Shelby Counties, p. 804.
36. Ibid., p. 804; Mo. R.R. Comm. 1879 and 1880, p. 16; Caldwell and Livingstone Counties, p. 853.

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continue operations during 1857, but resumed building the following year. Construction was continued throughout the period of the Civil War, but the amounts completed were only from five to twenty-fives miles per year.[37] In 1860 the road failed to pay interest on the state bonds.[38] The resulting depression in the affairs of the company was met in 1864, when the state reduced its bonds to the position of a second lien on the property, and allowed the road to issue its own first mortgage bonds.[39] With this assistance the road was able to finish the last sixty-five miles of its line so that by September, 1865, it could run trains from St. Louis to Kansas City.[40]

The North Missouri struggled along from 1857 to 1859 before it finally collapsed, and during this time managed to complete its road to a junction with the Hannibal and St. Jo. at Macon, one hundred and seventy-one miles from St. Louis.[41] In 1864 the road was given the same aid as the Pacific Railroad - allowed to issue first mortgage bonds, the state reducing its

37. Carroll County, pp. 104-106 gives a fairly accruate list of successive termini; also Am. R.R. Jour., Vol. 121, p. 233, Vol. 15, p. 523, Vol. 16, p. 300, and Scharf, St. Louis, Vol. 21, p. 1162.

38. Violette, p. 89; Million, p. 115.

39. Million, p. 129.

40. Scharf, St. Louis, Vol. 2, p. 1162; C. H. Hazelhigg, A New History of Kansas (Topeka, 1895), p. 161; Commonwealth of Mo., p. 291; Violette, p. 90; Poor's Manual 1870-1, p. 398.

41. Mo. R. R. Comm. 1879 and 1880, p. 38; Special Report, p. 28; Caldwell and Livingston Counties, p. 854; History of Andrian County, Missouri (St. Louis, 1884), p. 854; Harding, Smith opp. p. 156.

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own claim to the status of a second lien.[42] It was also allowed to include the Chariton and Randolph and the Missouri River Valley railroads. In spite of this concession no more work was done until after the reorganization of the company in 1867.[43]

The remainder of the Missouri lines may be disposed of very briefly. The St. Louis and Iron Mountain managed to get as far as Iron Mountain in 1858,[44] and in 1859 failed to meet the payments on its loan from the state.[45] Attempts at revival were unsuccessful until almost the end of the next decade. The Cairo and Fulton had been chartered in 1853[46] and had received both state and national aid, but in spite of this assistance was not able to open any of its line for operation before the close of the war.[47] The Southwest Branch reached Rolla by the end of 1860 and on January 1st of the following year defaulted its payment of interest on the state bonds.[48] No further construction took place until after the war. The Platte County Railroad secured the franchises of the Weston and Atchison and of the Atchison and St. Joseph in 1859,[49] and built as far as Weston by the early part of 1861.[50] It went bankdrupt in the same year, and although there

42. See footnote 39 on Pacific Railroad.
43. Poor's Manual 1868-9, p. 410.
44. Am. R. R. Jour., Vol. 14, p. 253; Stow, Cap. Guide, 1859, p. 342; Mo. R. R. Comm. 1879 and 1880, p. 30.
45. Violette, p. 89.
46. Jan. 12, 1853 in Arkansas - Laws of Arkansas 1853, pp. 176-180; Feb. 9, 1853 in Missouri - Am. R.R. Jour., Vol. 16, p. 177.
47. Harding, Smith, opp. p. 156; Mo. R.R. Comm. 1879 and 1880, p. 343.
48. Million, p. 116.
49. Paxton, Annals, p. 276; A History of Northwest Missouri, ed. by W. W. Williams(3 vols., Chi., 1915), Vol. 1, p. 366.
50. Hist. of N. W, Mo., p. 366; Paxton, Annals, p. 276.

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was an attempt to revive the project in 1863 under the name of the Platte Country Railroad,[51] nothing further was done until after its reorganization in 1867 as the Missouri Valley.[52]

The Missouri policy of state aid ended with the panic of 1857, and may be considered successful insomuch as it caused the building of a considerable amount of mileage that in all probability would not otherwise have been constructed until much later. On the other hand, the building was of course premature, and on this account produced a very unsatisfactory condition of railroad finance. When state aid was stopped construction gradually ceased and by 1861 every road except the Hannibal and St. Jo. had fallen.[53] The Pacific Railroad began to get on its feet again during the middle sixties, due in great part to the fact that it occupied a strategic position and filled a real need.

The remainder of the roads were foreclosed by the state, and sold with the provision that they complete their respective lines in a specified time.[54] The St. Louis and Iron Mountain and the Cairo and Fulton were sold together in 1866 for $900,000 to McKay, Read and Company; the original cost to the state was $4,250,000. An investigation of the transaction in 1867 showed

51. Hist. of N.W. Mo., p. 366; Paxton, Annals, p. 276; Mo. R.R. Comm., 1879 and 1880, p. 20.
52. Same references as footnote 51.
53. Million, pp. 115-118.
54. Commercial and Financial Chronicle (New York), Vol. 2, p. 408; Violette, p. 91.

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that there had been irregularities in the sale - the highest bid had not been taken, no effort had been made to determine the financial standing of the purchasing company, and the Cairo and Fulton property had been proportionately overhauled in order that it might soon be dropped and a large profit made on the other line. The conclusion that there was fraud and collusion in the sale was strengthened by the immediate transfer of both lines to Thomas Allen. In the ensuing investigation (1868) all the proceedings thus far were whitewashed, but not without numerous suspicions and rumors of undue influence exerted by the railroads on the committee. An act of March 17, 1868, confirmed Allen's title and provided that the unpaid portion of the purchase price ($664,300) should be released at the rate of $15,000 per mile as fast as the road was built.[55]

The Platte County Railroad, reorganized in 1863 as the Platte Country, and then in 1867 as the Missouri Valley, was released from the state lien in 1868 on condition that it pay 334,000 in state bonds, 324,000 in company bonds, and 100,000 in company stock, and that it finish its road to the Iowa line by December 1, 1869.[56]

The North Missouri was released from $2,000,000 of its debt to the state February 10, 1864, $6,000,000 more on February 10, 1865, and finally completely freed in 1868 by the payment of

55. The summary given here follows in the main the accounts given by Million, pp. 143-184, and Violette, p. 92.
56. Million, p. 159.

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$200,000, and the promise to complete its line to the northern boundary of the state in nine months and to the western boundary in eighteen months.[57]

The S. W. Branch was included in the act of February 19, 1866, and sold to J. C. Fremont for $1,300,000; after an unsuccessful attempt to make it pay, he re-sold it for the same amount. The company could not even meet this obligation and in 1867 was again foreclosed; this time the property was sold to the South Pacific Railroad Company, which deposited $1,500,000 as a guarantee for the completion of the road to the state boundary.[58]

The conclusion has been drawn from the foregoing experience that state aid failed because of imcompetency and corruption.[59] It would rather seem, however, that other factors played just as important a role. The state had neither the wealth to build railroads on a sound basis nor the business to make them profitable after they were constructed. The probability of financial trouble was made inevitable by the hard times attendant on the panic of 1857 and the confusion of the Civil War. Financially, the whole affair was a tremendous drain on the resources of the state, and the last of the debt that was incurred was not paid off until 1903. A re-occurrence of any similar incident was eliminated by the provisions of the Constitution of 1875.[60]

57. Ibid., pp. 160-167.
58. Ibid., pp. 168-172.
59. Ibid., p. 222.
60. Constitution of Missouri 1875, Article 4.

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The situation in Texas differed greatly from that in Missouri, and in general the laws were more conservative, thus providing better protection against miscarriage. The first aid was given in the form of a general land grant giving eight hundred odd sections for each twenty-five miles of the road put into running order - the surveying to be done by the company.[61] Several distinctive features of this law may be noted. It did not discriminate in favor of any particular lines, but left the affair to individual initiative. The amount of land granted was not quite as much as that of the usual Congressional land grant, and the government was saved the expense of surveying. The provision for the completion of the road before title to the land could be acquired, while not differing from the usual act of Congress, was carried on to all forms of state aid.

Direct financial assistance was given by the law of August 13, 1856, which made provision for a loan from the public school fund of $6,000 per mile to any railroad desiring aid.[62] The law was general, applying to any road; the money was to be paid only as fast as the road was completed, and was to constitute a first lien on the property. These provisions, and particularly the provision for making the loan only as fast as the railroad was completed, made the operation of the law much

61. Laws of the Fifth Legislature of the State of Texas, pp. 11-15.

62. Laws of Texas, Vol. 4, p. 523 - cited in C. W. Raines, Analytical Index of the Laws of Texas (Austin, 1906), p. 425; General Laws of the Sixth Legislature of Texas - Adjourned Session, pp. 31-37.

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more satisfactory than was the case in Missouri, particularly because the roads were not tempted to overbuild quite so rashly. The comparative success of the Texas law is best shown by the fact that the policy was continued throughout the sixties and early seventies,[63] and even additional aid was given to particular roads during the early seventies - as for example the grant of $10,000 per mile to the International in 1870.[64] As in Missouri the practice of lending state funds was finally stopped by Constitutional provision (1876).[65] The land grant policy was not repealed until 1882.[66] The comparative conservation of the Texan policy is demonstrated by the small amount of debt which accrued on this account. In 1872 it amounted to $2,173,878, and by 1874 to $4,822,000, which represents a maximum figure.[67]

The story of railroad construction in Texas from 1857 to 1865 is quite uniformly uneventful. Not stimulated by the promise of large amounts of government aid, the panic and the war had a complete opportunity to stop construction.

The Buffalo Bayou, Brazos, and Colorado arrived at Alleyton in 1860, and stayed there for the duration of the war.[68]

The San Antonia and Mexican Gulf, chartered September 5, 1850, to build from a point on the Gulf between Corpus Christi

63. Aid was permitted by a 2/3 vote of both houses, in the Constitution of Texas 1866, Art. 7, Sect. 8 and in the Constitution of Texas 1868 Art. 12, Sect. 6.

64. Laws of Texas, Vol. 6, p. 606 - cited in Raines, Index, p. 431.

65. Constitution of Texas 1876, Art. 3, Sects. 50 and 51.

66. J. Sayles and H. Sayles, Sayles' Annotated Civil Statutes of the State of Texas (2 vols., St. Louis, 1898), Vol. 1, p. 1970.

67. Million, p. 219.

68. Briscoe, p. 284.

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and Galveston to San Antonia, built five miles from Port Lavaca[69] by January 31, 1858, in order to save its charter,[70] and after being reorganized and re-invogorated with foreign capital, arrived at Victoria (27 miles) in 1861.[71] The road was destroyed in 1863 by the order of Maguider, and was rebuilt in 1865-6 by the federal forces.[72]

The most significant road to be begun during the period was the one projected to run from Houston to New Orleans. Chartered in 1856 as the Sabine and Galveston Bay Railroad and Lumber Company[73] construction was started at Houston in 1858.[74] In 1859 the name was changed to the Texas and New Orleans in order to get the benefit of a Louisiana charter and to make connections with the Louisiana road.[75] By the early part of 1861 the road was opened one hundred and five miles to Orange on the Sabine River,[76] but connection was not made with the Louisiana line until after 1865. During the latter part of the war the road was dismantled by the Confederates and went into bankruptcy, so that a complete reorganization and reconstruction was later necessary.[77].

The Houston and Texas Central continued to struggle under

69. Hardy and Roberts, p. 197; Am. R.R. Jour., Vol.9,p.40.
70. Hardy and Roberts, p. 197; Am. R.R. Jour., Vol.14,p.284
71. Hardy and Roberts, p. 197.
72. Ibid., p. 198; Poor's Mannual 1870-1, p. 376.
73. Carroll, Houston, p. 229; Tex. R.R. Comm. 1897,p. 234.
74. Carroll, Houston, p. 229; Am. R.R. Jour., Vol. 15, p. 379.
75. Carroll, Houston, p. 229; Tex. R.R. Comm. 1897,p.234.
76. Carroll, Houston, p. 229; Am. R.R. Jour.,Vol.16,p.442.
77. Hardy and Roberts, p. 198.

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an increasing financial pressure, and was completed as far as Millican in 1860.[78] The following year it succombed and was sold to its bondholders and creditors.[79] Nothing more was done until 1866.

The Washington County Railroad was chartered February 2, 1856, to run from a junction with the Houston and Texas Central to Brenham.[80] Work was started in 1858 and the whole line was put into operation in 1860.[81]

The Galveston, Houston and Henderson was put into operation from Houston to Virginia Point in 1858, and the bridge connecting it with Galveston was finished in 1859, whereupon the road became bankrupt, and was foreclosed the following year.[82]

The Houston Tap and Brazoria was chartered September 1, 1856, to continue the line of the Houston Tap Railroad.[83] In 1858 it bought the Houston Tap from the city of Houston;[84] financial depression delayed the work so that it was 1860 before the road was completed the fifty miles to Columbia, the point at which it stayed until after the war.[85]

State aid in Arkansas was hampered more by practical dif-

78. Carroll, Houston, p. 228.
79. Am. R. R. Jour., Vol. 17, p. 309.
80. Hardy and Roberts, p 196; Mrs. R. C. Pennington, The History of Brenham and Washington County (Houston, 1915),p.36.
81. Pennington, p. 36; Hardy and Roberts, p. 197.
82. Am. R.R. Jour., Vol. 16, p. 352; for other references see Chapter I.
83. Carroll, Houston, p. 229; Hardy and Roberts, p. 194.
84. Am. R. R. Jour., Vol. 16, p. 719.
85. Ibid., p. 719; Travelers' Official Railway Guide(Phila.) October, 1870, No. 336.

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ficulties than by the fear of consequences. Arkansas had invested heavily in a state bank just prior to the panic of 1837 and when the crash came the state found itself unable to meet its obligations,[86] so that it practically repudiated the debts. In consequence the credit of Arkansas was not particularly strong during the fifties, and any attempt to aid railroads by the use of state bonds would have been ridiculous in view of the fact that no market could be found for them.

Arkansas was without a single complete line of road when the war ended, and it was felt that something should be done about the matter. Consequently a law was passed over the governor's veto in 1867 to provide aid to the extent of $10,000 per mile.[87] Nothing was done to carry this law into effect until it could be seen what attitude the Constitutional Convention would take. The Constitution of 1868 provided for state or county aid upon vote by the people,[88] and in the same year a law providing for state aid to railraods was placed before the electorate and ratified.[89] Bonds of $10,000 per mile for land grant roads and 15,000 for non land grant roads were to be issued as a first lien on the property. Eight hundred and fifty miles were to be aided, said lines to be designated by a Board of Railroad Commissioners. The

86. Stow, Cap. Guide 1859, p. 500.
87. Acts of the General Assembly of the State of Arkansas 1866-7, pp. 428-432.
88. Constitution of Arkansas 1868, Art. 10, Sect. 6.
89. Acts of the General Assembly of Arkansas 1868, pp. 148-153. This act was ratified by the people by a large majority.

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money was to be paid as fast as the road was ready for the rails in ten mile strips, and after the capital stock had been sold in large enough quantities to pay for preparing one-third of the road for the rails.

The following lines were to be aided, -[90]

Little Rock and Ft. Smith -	150 miles.
Memphis and Little Rock -	130 miles.
Cairo and Fulton -	300 miles.
Little Rock, Pine Bluff and New Orleans -	150 miles.
Mississippi, Ouachita and Red River -	150 miles.

The Cairo and Fulton refused to accept the aid and consequently future readjustments were made.

By the close of 1870 the following amounts had been issued, -[91]

M. and L. R.	1,050,000.
L. R. and Ft. S.	900,000.
L. R., P. B. and N. O.	750,000.
M., O. and Red R.	450,000.

In 1872 the total amount was $4,350,000.

The operation of the law did not fulfill the optimistic expectations of its framers. The Memphis and Little Rock and the Little Rock and Ft. Smith were able to complete their lines.[92]

90. Poor's Manual 1871-2, p. 567.

91. Million, p. 217; P. Clayton, The aftermath of the Civil War in Arkansas (N.Y.,1915),p. 238, gives a table of the amounts authorized.

92. The Memphis and Little Rock was completed in 1871 and the Little Rock and Ft. Smith in 1876.

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The other two roads, for which state aid was expected to accomplish the most, were not able to open any line at all, while the greaest mileage that was built was opened by the Cairo and Fulton, which had refused the aid. The truth of the matter was that the railroads could sell their own bonds just as easily as those of the state, and consequently the aid accomplished but little.

The Constitution of 1874 provided that there should be no future loans of state credit, and that the amounts already loaned could not be reduced by the legislature but must be paid dollar for dollar.[93] The Constitution was amended in 1885 by the addition of Article 20 by a vote of 119,806 to 15,492; three sets of internal improvement bonds, among which were the railroad bonds, were repudiated.[94]

Minnesota in the fifties had the greatest railroad excitement and the least results. Numerous lines had been chartered by the territorial legislature before 1857, but the population and resources of Minnesota were hardly sufficient to produce successfully operating railroads. In this situation the roads looked almost entirely to the government for aid. The first bill passed by Congress (1854) was for a road from St. Paul to Duluth, but provided that the grant should not go to any rail-

93. Constitution of Arkansas 1874, Art. 5, Sect. 33, and Art. 12, Sect. 7, and Art. 16, Sect. 1.

94. W. F. Kirby, A Digest of the Statutes of Arkansas (Austin, Tex., 1904), p. 108.

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road already chartered. In violation of this provision it was given to the Minnesota and Northwestern, whereupon the act was repealed by Congress in the same year. The regular grant came May 3, 1857, and provided for a system of roads radiating from St. Paul, plus a line directly west from Winona. No provision was made for the old St. Paul - Duluth line until 1864.[95]

The grant of 1857 was received with a shout of joy by the Minnesotians,[96] and work was started with alacrity on the various lines. Unfortunately the panic intervened in the same year and construction was forced to stop. It was just at this time that Minnesota was getting ready for statehood and was adopting a new constitution. Linked with the interest in statehood was the enthusiasm for transportation, not at alll dampened by the depression of the panic.[97] As soon as the constitution was adopted it was amended almost unanimously in order to loan $5,000,000 to the railroads benefiting from the Congressional land grant.[98] The act provided that the bonds should be issued at the rate of $100,000 for every ten miles graded and an additional $100,000 for every ten

95. See footnotes 6,9, and 14 for the references for this paragraph.

96. For instance see the issue of the Weekly Minnesotian for Mch. 14, 1857.

97. Constitution of Minnesota 1857, Ar. 9, Sect. 10, prohibited state aid to any corporation.

98. General Laws of Minnesota 1858, Chap. 1, W.W. Folwell, "The Five Million Loan," in Collections of the Minnesota Historical Society, Vol. 15 (1915), pp. 189-214, is the most complete account of the whole affair. For favorable accounts see the Daily Pioneer and Democrat (St. Paul)Feb. 18, 1858, Mch. 4, 1858, Mch. 17, 1858, May 6, 1858, and April 5, 1859. The Weekly Minnesotian opposed the as being too large a debt on Minnesota - see issues of Feb. 27, 1858 and Apr. 24, 1858.

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miles opened for business. Construction was started immediately and was pushed vigorously for about a year, until the industrial depression again overtook it. The following table shows the amount granted, the total amount paid, by the state, and the work accomplished in 1858-9,[99] -

	Granted	Issued	Graded
Minnesota and Pacific	1,250,000	600,000	62.5
Minneapolis & Cedar Valley	1,250,000	600,000	69.25
Transit	1,250,000	500,000	50.
Southern Minnesota	1,350,000	575,000	37.5

It may be noticed that all the construction was done in the form of grading, since that was the easier and more economical way of securing the aid; by 1859 the bonds had reached such a low figure that any further sales were useless.[100] The people of the state felt that they had been tricked by the railroads into paying for a large amount of grading at more than its original cost, and consequently in 1860 the original amendment was repealed by a larger vote than had passed it two years before.[101] The sum total of work done was some two hundred miles of grading; about one thousand four hundred feet of track were laid by the Minnesota and Pacific before it collapsed, in order to run an engine into

99. Taken from Am. R.R. Jour., Vol. 15, p. 506, and F.R. Holmes, Minnesota in Three Centuries (4 vols., Mankato, 1908), Vol. 4, p. 347.
100. Folwell, p. 199.
101. Flandrau, p. 47.

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storage.

The results of the incident were regretable. Authorized by act of the legislature the governor foreclosed all the road in 1860 and bought them in at $1,000 apiece;[102] later they were regranted to other companies.[103] The payment of the bonds was a rather delicate question. Investigation revealed that Selah Chamberlain, who was the largest holder, had paid on an average about thirty-four per cent.[104] This condition, added to the fact that the people felt cheated in the whole transaction, created a feeling which made any settlement difficult. A law of 1870 provided for the exchange of the bonds at par for land at eight dollars and seventy cents per acre.[105] No provision was made for the payment of interest, and the law was to be effective only if ratified by the holders of two thousand of the bonds. With two thousand two hundred and seventy-five bonds outstanding, the holders of one thousand and eighty decided not to settle for less than twenty-five per cent.[106] Numerous efforts were made to repudiate the entire issue, and for a long time Poor's Manual considered them "practically repudiated," but in 1881 provision was made for a complete settlement of both principal and interest at

102. Folwell, p. 202; according to General Laws of Minnesota 1860, p. 269.
103. Folwell, p. 203.
104. Chronicle, Vol. 2, p. 408; Folwell, p. 204.
105. Folwell, p, 206.
106. Minnesota State Bonds. Memorial to the Legislature (N.Y., 1871) gives the argument of the N.Y. bond holders.

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fifty cents on the dollar.[107]

As indicated by the previous sketch, the history of all early Minnesota roads is practically the same. Consequently, the story of the individual lines will only be taken up for 1860.

The Minnesota and Pacific, chartered in 1857 to participate in the land grant,[108] also received part of the state loan, and did some grading before 1860.[109] In 1860 it was foreclosed and bought by the state.[110] Re-chartered in 1861, Edmund Rice made magnificent efforts to fulfill the requirements of the charter, but failed.[111] In 1862, the road was again foreclosed, being rechartered as the St. Paul and Pacific and opened from St. Paul to St. Anthony in June, 1862 - the first railroad in Minnesota.[112] With the aid of foreign capital and part of the state swamp land grant it was enabled to reach Elk River by 1864,[113] at which point it stayed for two years unti, Rice succeeded in interesting more foreign capital.[114] It is interesting to note that James J. Hill entered the employ of the road in 1865; years later this line was to become the foundation of his railroad power.[115]

107. Flandraw, p. 47; R.S. Saby, "Railroad Legislation in Minnesota 1849-1875," in Collection of the Minnesota Historical Society, Vol. 15 (1915) pp. 36 ff. gives a good account of the attempts to settle the question of the debt.

108. Minn. R.R. Comm. 1871, p.14; J.F. Williams, "A History of the City of St. Paul and of the County of Ramsey," in Collections of the Minnesota Historical Society, Vol. 4 (1876)p.403.

109. Am. R.R. Jour., Vol. 14, p. 408;Williams, St. Paul, p. 404.

110. Minn. R.R. Comm. 1872,p.6; Am.R.R.Jour., Vol.16,p.589.

111. Minn. R.R. Comm. 1872,p.6;Col. W. Crooker,"The First Railroad in Minnesota," in Collections of the Minnesota Historical Society, Vol. 10 (1905), p. 446.

112. Session Laws of Minnesota 1862,p. 247;Crooker, p. 448; Williams, St. Paul, p. 404; Minn. R.R. Comm. 1872, p. 7.

113. Am.R.R. Jour. 1862, p. 546;Minn.R.R. Comm. 1872,p.7.

114. Williams, St. Paul, p. 405; Minn.R.R. Comm. 1872,p.7.

115. Holmes, Minnesota, Vol. 4, p. 351.

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The Minnesota Valley was originally a part of the Root River Valley and Southern Minnesota, chartered May 22, 1855.[116] In 1857 the name was changed to the Southern Minnesota and the road given a part of the land grant.[117] Participating in the state aid, it failed in 1860 and was foreclosed.[118] Re-chartered March 8, 1861, March 10, 1862, and March 28, 1863, it failed to live up to the conditions of its charters and each time returned to the state.[119] In 1864 it was divided and the part from St. Paul southwest went to the Minnesota Valley, which was conrolled by F. Drake and his associates, who also had a charter from Iowa to allow them to continue their road to Sioux City.[120] Work was finally begun in earnest and by 1865 the road was opened twenty-eight miles to Shakopee,[121] from which point it continued to advance steadily.

When the Southern Minnesota Railroad was split in 1864 the line west from La Crescent, with a branch to Rochester, remained under the old name. In 1865 it was given part of the state swamp land grant,[122] and had opened ten miles of its line by the end of the year.[123]

The Minneapolis and Cedar Valley was chartered March 1,

116. Minn. R.R. Comm., 1871, Appendix, p. 3.
117. Am. R.R. Jour., Vol. 14, p. 636; Minn.R.R. Comm. 1872, p. 11.
118. Minn. R.R. Comm. 1872, p. 12.
119. Ibid., p. 12.
120. Ibid., p. 12; Saby, p. 55; Williams, St. Paul,p.414.
121. Williams, St. Paul, p. 414; Minn. R.R. Comm.1872, p. 13; Holmes, Minnesota, p. 353; History of Dakota County and the City of Hastings,(Minneapolis, 1881), p. 214.
122. Minn. R.R. Comm. 1872, p. 12.
123. Opening Celebration of the Southern Minnesota Railway (La Crosse, 1870), p. 4.

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1856, and received both national and state aid.[124] Foreclosed and bought by the state in 1860,[125] it was reorganized in 1863 as the Minnesota Central.[126] St. Paul gave the road a considerable amount of aid[127] and by the end of 1865 construction had been completed to Faribault - fifty-six miles.[128]

The Transit Railroad was chartered March 3, 1855, and also received both national and state aid.[129] After doing some grading the road failed and was foreclosed and bought by the state in 1860.[130] It was re-chartered March 8, 1861, as the Winona, St. Peter and Missouri River, and March 10, 1862, as the Winona and St. Peter.[131] Under the latter name it completed seventeen miles in 1862[132] and by 1865 had been constructed to Kasson (sixty-four miles).[133]

Iowa was the only state in the first tier of trans-Mississippi states never to try the experiment of state aid.[134] The

124. Holmes, Minnesota, Vol. 4, p. 357; Minn. R.R. Comm., 1871, Appendix, p. 54. History of Rice County (Minneapolis, 1882), p. 306.

125. Am. R. R. Jour., Vol. 16, p. 805; Minn. R.R. Comm. 1872, p. 17.

126. Minn. R.R. Comm. 1871, Appendix, p. 54.

127. Saby, p. 55.

128. Chronicle, Vol. 1, p. 633; Holmes, Minnesota, Vol. 4, p. 357.

129. Minn. R.R. Comm. 1871, Appendix, p. 77.

130. Am. R.R. Jour., Vol. 16, p. 589; Minn. R.R. Comm. 1872, p. 10.

131. Minn. R.R. Comm. 1872, p. 10.

132. Ibid., p. 10.

133. Saby, p. 54; History of Winona and Olmsted Counties (Chi., 1883), p. 109.

134. Winona and Olmsted, p. 109; Minn. R.R. Comm. 1872, p. 10; History of Steele and Waseca Counties, Minnesota (Chi., 1887), p. 114.

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Constitution of 1846 limited the state debt to one hundred thousand dollars[135] and the Constitution of 1857 specifically prohibited any state aid.[136] As has previously been suggested the larger roads building from Chicago took a very active interest in particular Iowa lines in order to guarantee through connections to points on the Missouri river. The period from 1857 to 1865 continues to show the same characteristic, and emphasizes the fortunate position of Iowa as far as railroad construction was concerned.

The Mississippi and Missouri completed its main line to Marengo (eighty-four miles from Davenport) by 1860,[137] and a branch from Muscatine to Washington was completed in 1858.[138] In 1865 a definite agreement was made with the Chicago and Rock Island, which up to this time had only a tacit interest in the line.[139] The financial condition of the road had been very poor for a long time and in 1866 the line was foreclosed, being purchased by the Chicago and Rock Island, and completely losing its separate identity.[140]

135. Constitution of Iowa 1846, Art. 7, and Art. 8, Sect.2.
136. Constitution of Iowa 1857, Art. 7, Sect. 1 and Art. 8, Sect. 3.
137. Am. R.R. Jour., Vol. 16, p. 952.
138. Ibid., Vol. 10, p. 568; The History of Washington County, Iowa (Des Moines, 1880), pp. 401-4 - account of the opening celebration.
139. Poor's Manual 1868-9, p. 212. Chronicle, Vol. 2, p. 568.
140. Chronicle, Vol. 3, p. 120; Lyle's Manual 1870-1, p. 287.

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The Keokuk, Ft. Des Moines and Minnesota reached Bentonsport in 1858, and many of the members of the first legislature to meet in Des Moines took the opportunity of enjoying the novelty of riding on a railroad train on their way home.[141] The land grant which had been made in 1846 for the improvement of the Des Moines River was transferred to the road during 1858.[142] The work of construction progressed slowly until 1861 when it seased altogether; it was revived in 1865 and pushed on to Des Moines by the fall of 1866, where it was the first line to enter the city.[143]

The Burlington and Missouri River had started construction in 1856, and in 1858 opened for business for the first time - Burlington to Fairfield.[144] In 1859 it reached Ottumwa, where it stayed uhtil the end of the war.[145]

The Cedar Rapids and Missouri River was organized in 1859 to succeed the Iowa Central Air-Line, and had practically the same stockholders as the Chicago, Iowa, and Nebraska.[146] In 1860 it received the grant formerly given to the Iowa Central Air-Line on condition that it build from Clinton to Lyons, neither of which cities were on the main line.[147] Building progressed steadily

141. Stow, Cap. Guide 1859, p. 208; Hussey, p. 128.
142. Acts of the Seventh General Assembly of Iowa, Chap. 99, given in Ia. R.R. Comm. 1878, Appendix 8, 9 and 10.
143. Ia. R. R. Comm. 1878, p. 303; Brigham, Des Moines, p. 243.
144. Stow, Cap. Guide 1859, p. 112; Jefferson County, p.42.
145. Ia. R. R. Comm. 1878, p. 149.
146. Barkley, Booneshoro, p. 540; Stennet, Yesterday and Today, p. 193.
147. Ia. R. R. Comm. 1898, Appendix, pp, 14-16.

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throughout the war period and the road reached Boone by 1865.[148] In 1861 J. I. Blair of the Galena and Chicago Union secured an interest in the road, and the following year it was leased in perpetuity.[149] The lease was amended in 1864 owing to the formation of the Chicago and Northwestern by consolidation.[150]

The Chicago, Iowa, and Nebraska, with the same stockholders as the Cedar Rapids and Missouri River, was finished to Cedar Rapids in 1859,[151] and by means of a steam ferry at Clinton made through connections with the Galena and Chicago Union.[152] In 1861 Blair got control of this road also and in 1862 it was leased to the Galena and Chicago Union, or the Chicago and Northwestern after 1864.[153] In 1865 the second bridge across the Mississippi below St. Paul was completed at Clinton,[154] and the Chicago and Northwestern had a through line from Chicago to Boone (three hundred and forty miles).[155]

The Dubuque and Pacific was built largely on the basis of land speculation, the land grant being given as a bonus on the stocks and bonds of the company.[156] Steady progress was made up to

148. Ibid. 1879, p. 85; Boone County, p. 414; Stennet, p. 40.
149. Ibid., 1879, p. 85. Barkley, Boonesboro, p. 543.
150. Same reference as 149.
151. Ia. R.R. Comm. 1879, p. 86; Cole, Iowa, p. 283.
152. Stennet, p. 32.
153. Cole, Iowa, p. 400; Wole's History, p. 123; Ia. R.R. Comm. 1879, p. 86; The History of Cedar County, Iowa (Chi., 1878), p. 436.
154. Ringwalt, p. 203.
155. Chronicle, Vol. 1, p. 409.
156. Am. R.R. Jour., Vol. 14, p. 485 gives the financial plan.

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the outbreak of the war, at which time it had reached Cedar Falls.[157] Construction was resumed in 1865, during which year the road was completed to Ackley, one hundred and thirty-two miles from Dubuque.[158] An amicable foreclosure occurred in 1860 and the road was sold to the Dubuque and Sioux City, a company controlled by the Illinois Central.[159] The lease of the line to the Illinois Central occurred in 1867.[160]

The Cedar Falls and Minnesota was organized in 1857 as a subsidiary company to the Dubuque and Pacific, and planned to build north from Cedar Falls to meet the Minneapolis and Cedar Valley.[161] In 1864 it was opened fourteen miles to Waverly,[162] and in 1867 was leased to the Illinois Central.[163]

The McGregor, St. Peters and Missouri River planned to build through the aid of the Milwaukee and Mississippi, but was stopped by the war. In 1862 the McGregor Western was formed,[164] bought out the earlier line, and completed the work to Conover (forty-five miles) by the end of 1865.[165] In 1864 it was bought by the Chicago, Milwaukee and St. Paul,[166] and during 1865 was re-

157. History of Black Hawk County, p. 374.
158. The History of Dubuque County, Iowa (Chi., 1880), p. 630; The History of Franklin and Cerro Gordo Counties, Iowa (Springfield, 1883), p. 306.
159. Am. R.R. Jour., Vol. 17, p. 222; Dubuque County, p. 630.
160. Poor's Manual 1868-9, p. 74; Dubuque County, p.629.
161. The History of Floyd County, Iowa (Chi., 1882), p. 567.
162. Ibid., p. 573.
163. Poor's Manual 1868-9, p. 94.
164. Clayton County, p. 624.
165. Ibid., p. 177; Winneshiek and Alamakee Counties, p. 218.
166. Clayton County, p. 624.

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organized.[167]

The second tier of trans-Mississippi states never gave state aid for railroad construction,[168] but it was during this period that the first lines were begun. The Marysville or Palmetto and Roseport, incorporated in 1857, was to run from Marysville on the Nebraska line to Roseport opposite St. Jo., there to make connections with the Hannibal and St. Jo.[169] The name of Roseport was changed to Elwood,[170] and five miles of the line were opened in 1860.[171] In 1862 the name of the road was changed to St. Joseph and Denver City,[172] but no more work was done until after the war.

The Leavenworth, Pawnee and Western was organized in 1855[173] and was included in the Pacific land grant of 1862. In 1863 the Union Pacific acquired an interest through its purchase by J. C. Fremont and Samuel Hallett, and the name was changed to the Union Pacific, Eastern Division.[174] In the same year ground was broken at Kansas City,[175] and by 1865 it was opened to Perry (fifty-one miles), so named in honor of the president of the company. The enthusiasm that the line created may be judged by the fact that

167. Floyd County, p. 560.

168. Prohibited in the constitutions of Nebraska and Kansas.

169. Northwest Missouri, p. 366; Neb. R.R. Comm., 1888, p. 132.

170. O. C. Hull, "Railroads in Kansas," in Collections of the Kansas State Historical Society, Vol. 12 (1912), 38. P. T. Gray, "Gray's Domphan County History (Bendena, 1905) p. 132.

171.and 172. Hull, p. 38; Gray, p. 132.

173. Kan. R.R. Comm. 1883, p. 85.

174. Hull, p. 38; Andreas, Kansas, p. 245; J. D. Cruise, "Early Days on the Union Pacific," in Collections of the Kansas State Historical Society, Vol. 11 (1910), p. 535.

175. Cruise, Early Days, p. 536; Am. R.R. Jour., 1863, p. 112.

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the legislature adjourned late in January, 1865, to participate in an opening excursion.[176]

The Union Pacific also started building before 1865, but will be taken up more at detail in the next chapter.

In California the only direct state aid that was given was the guarantee of the payment of the interest on the United States bonds loaned to the Central Pacific. Road building started before 1857, however, and by 1865 the beginnings of the California railroad system had been made.

The California Central was organized in 1857 to continue the line of the Sacramento Valley Railroad from Folsom northwest.[177] Six miles were built in 1860; in 1863 the line was bought by the Central Pacific and its further extension discontinued in order to avoid competition with the main line.[178][179]

The Pacific and Atlantic was organized in 1851 as a transcontinental road with its terminus at San Francisco.[180] From the vantage point of a later time the project shows itself to have been impossible. After two reorganizations the road limited itself in 1859 to the construction of a line from San Francisco to San Jose, under the name of the San Francisco and San

176. Cruise, Early Days, p. 540.
177. Am. R.R. Jour., Vol. 16, p. 813. History of Places County, California (Oakland, 1882), p. 272.
178. Am. R.R. Jour., Vol. 17, p. 261.
179. Bancroft, California, Vol. 7, p. 586.
180. Ibid., p. 536.

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José, under the name of the San Francisco and San José.[181] Even the lessened scope of the plan, and the nine hundred thousand dollars aid given by the counties along the route proved insufficient,[182] and it was not until 1863 that real work started. San José[183] was reached early in 1864.

The Napa Valley Railroad was organized in 1864 as a branch of the California Pacific.[184] Aided by a heavy sbuscription from Napa County[185] it was able to build from Napa to about the present location of Napa Junction.[186]

The San Francisco and Oakland was chartered May 20, 1861,[187] and the line was opened in 1863.[188] This route furnished one of the few entrances to San Francisco.

The California Northern was begun in 1861 at Marysville on the Sacramento River, the proposed terminus of the California Pacific.[189] The war intervened and stopped construction until 1864, when the line was opened to Oroville (twenty-six miles).[190]

The Central Pacific was begun during the period, but is treated in the following chapter.

181. Ibid., p. 537.
182. Am. R.R. Jour., Vol. 16, p. 454.
183. Cal. R. R. Comm. 1877 and 1878, p. 385; Am. R.R. Jour., 1864, p. 703.
184. Cal. R. R. Comm. 1877 and 1878, p. 295.
185. History of Napa and Lake Counties, Califnornia (San Fran., 1881), p. 75.
186. Ibid., p, 76.
187. Bancroft, California, Vol. 7, p. 587; The Bay of San Francisco (2 vols.Chi., 1892), p. 372.
188. Travelers' Guide Jan. 1874, No. 318.
189. Cal. R.R. Comm. 1890, p. 16.
190. Ibid., p. 16; History of Sutter County, California (Oakland, 1879), p. 62; Bancroft, California, Vol. 7, p. 587.

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The third kind of government assistance to which every railroad looked was local aid, and in most cases they were not disappointed. The first tier of states passed the necessary legislation in the early fifties. At the time of the industrial collapse of 1857 all kinds of local aid were discredited and the three states that made constitutions during that year - Minnesota,[191] Iowa[192] and Oregon,[193] prohibited the practice; Nevada took the same action in 1864.[194] After the Civil War there was a reaction in favor of the railroads, and until the early seventies county aid was again favored, - Missouri, 1865,[195] Arkansas, 1868,[196] Nebraska 1869,[197] California 1870,[198] Minnesota, 1871,[199] and Texas 1871.[200] In these cases the old freedom was somewhat lost and the right was generally restricted by giving a maximum limitation or providing for a vote by the people, often requiring a two-thirds majority to pass. Possibly Kansas might also be included in this group, allowing county aid by the law of 1862.

191. Constitution of Minnesota 1857, Art. 9, Sect. 3.
192. Constitution of Iowa 1857 was silent; prohibition was made by law shortly after.
193. Constitution of Oregon 1857, Art. 11, Sect. 9.
194. Constitution of Nevada 1864, Art. 3, Sect. 90.
195. Constitution of Missouri 1865 Art. 11, Sect. 14, 2/3 vote necessary.
196. Constitution of Arkansas 1868, Art. 10, Sec. 6 - vote of electorate necessary.
197. Laws of Nebraska 1866-77 Vol. 2, pp. 439-440 - election necessary.
198. Statutes of California, 18th Sess. 1869-70, pp. 746-7 - maximum of 5% of value of taxable property. Repealed by laws of 1872 and 1874.
199. Minn. R.R. Comm. 1872, pp. 39-40 - maximum of 10% of taxable property.
200. General Laws of the 12th Legislature of the State of Texas, pp. 29-32 - on 2/3 vote of people; maximum of 10% of value of taxable property in aid of any one road, and 20% in aid of all roads.

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In the early seventies came the Granger anti-railroad agitation, and most of the states limited or stopped county and other local aid - California 1872 and 1874,[201] Arkansas 1873 and 1874,[202] Kansas 1874,[203] Missouri 1875,[204] Texas 1876,[205] and Colorado 1876.[206] Nebraska was the one exception to this tendency, permitting county aid by her constitution of 1875.[207] The prohibition of local aid continued as a uniform state policy; only two exceptions can be noted- North Dakota 1889,[208] and Utah 1895,[209] and in both of these cases the surrounding conditions were so strict as to amount almost to a prohibition. It may be noticed that the same general tendency is observable in the course of the history of both state and national aid.

County subscriptions were usually obtained by appealing to local pride and ambition. Very frequently, as for instance in the case of the Pacific Railroad of Missouri, the Hannibal and St. Jo., the Mississippi and Missouri, and numerous others, a

201. Statutes of Cal., 19th Sess. 1871-2, pp. 444-5, left certain exceptions; Statutes of Cal. 20th Sess. 1873-4, p. 26, make the prohibition complete.

202. Acts of Gen. Ass. of Ark. 1871, pp. 473-482 restricted the practice; Const. of Ark. 1874 Art. 12, Sect. 5, prohibited county aid of any description.

203. Laws of Kansas 1874, Cjap. 39, pp. 41-49, restricted to a 5% maximum and a 2/3 vote (Further restrictions in 1876).

204. Const. of Mo. 1875, Art. 4, Sect. 47 - complete prohibition.

205. Const. of Tex. 1876, Art. 3, Sect. 52. complete prohibition.

206. Const. of Col. 1876, Art. 11, Sects 1 and 2, complete prohibition.

207. Const. of Neb. 1875, Art. 12, Sect. 2, 2/3 vote and maximum of 10% of assessed property valuation.

208. Const. of N. D. 1889, Art. 15, Sects. 183 and 185, 2/3 vote and maximum of 8% of assessed property valuation.

209. Const. of Utah 1895, Art. 14, Sect. 4, limited to 2% of assessed valuation for counties and 4% for cities and towns.

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proper amount of aid was elicited by surveying the line over several different routes, and getting the various counties to compete in the amount of assistance to be offered. In the case of many smaller local roads such as the Washington County Railroad of Texas and the Napa Railroad of California, one or two towns or the county sponsored the road. Many of the more ambitious cities, such as St. Louis, Dubuque, Davenport, Galveston, Houston, San Francisco, etc., aided several roads as a means of local advancement.

Local aid proved to be eminently satisfactory until the particular county, city or town had to begin to pay. In the enthusiasm of the moment many local organizations had issued bonds for more than the value of the entire taxable property, while in some cases the bonds were issued with no guarantee of the building of the road, so that after all the bonds were issued nothing had been done in actual work but a few miles of grading. Of course there was some dishonesty on the part of certain railroad companies, but on the whole it seems that the trouble in which many of the counties later became involved was due in most part to their too great optimism and lack of caution.

The natural reaction of the counties upon finding themselves burdened with a debt which they could hardly meet, was to feel themselves agrieved and tricked by the railroad, and to try to avoid payment. Numerous cases of this kind might be shown; the outstanding one is the Yankton bond case, which attained a considerable amount of publicity because it happened to be drawn

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into national politics.[210] The details of the transaction are not particularly important. Yankton had issued bonds (200,000) in favor of the Dakota and Southern and the bonds had been approved by act of Congress. The first trouble came in 1873 when the railroad proposed to issue a first mortgage of $1,200,000 which would have made the holdings of Yankton County practically worthless. After getting an injunction against the mortgage the case was finally settled out of court. In 1875 a bill to repudiate the Yankton bonds was passed by the legislature but vetoed by the Governor. The following year a certain John Treadway of Yankton County began a test case by refusing to pay the railroad tax, although offering to pay the remainder of his assessment. The case was appealed to the Territorial Supreme Court, which decided that the legislature which authorized the bonds was not legal, and that Congress had no power to legalize the action.

In the same year the National Bank of Brunswick, Maine sued for the recovery of the interest on 10,000 of the bonds. Owing to the decision of the court in the former case, the suit was lost in both the District Court and the Territorial Supreme Court. It was carried to the United States Supreme Court, where Chief Justice Waite reversed the decisions of the lower courts

210. G. W. Kingsbuy, History of Dakota Territory (2 vols., Chicago, 1915) Vol. 1, pp. 623-647, gives the best and most complete account of the case. This account has in general been followed in the discussion in the text.

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and ordered the county to pay, on the ground that Congress had supreme power in the territories.

The remainder of the story becomes a farce. The bondholders tried to serve processes on the county officials, but the officials avoided the situation by conveniently resigning just before the process was served. After a good deal of this sort of thing, a compromise was effected and the bonds were eventually paid. The effect on national politics was that Dakota was not admitted to statehood until the end of the eighties. The attempted repudiation on the part of Yankton County produced an unfavorable reaction on New England, which was a creditor community and feared the possible outcome of statehood which would produce complete independence in the matter. The resulting sentiment was sufficient to control the balance of power and keep Dakota a territory for at least ten years longer than would normally have been the case.

The Yankton case has been discussed at considerable length because it was unusually prominent and is fairly representative. The county felt cheated and tried to avoid the payment of an obligation contracted in a moment of undue optimism. The western courts, appreciating the viewpoint, favored the county, but the Supreme Court had little sympathy with such a feeling and reversed the earlier decisions. Practically all the bond cases which reached the Supreme Court were

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decided in favor of the bondholders. Many of the debts that were incurred were not finally settled for as long as fifty years; for instance, the Mount Pleasant Township (Missouri) debt of 1870 was not completely paid until April, 1922.[211] Any examination of local histories must show the close connection between local railroad debts and anti-railroad feeling.[212]

211. S. W. Ridings, "Old Railroad Bond Debt Paid," in Missouri Historical Review, Vol. 16 (1921) pp. 170-171.

212. The Missouri county histories, for instance, are usually very bitter against the railroads.

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Railroad Construction 1857 - 1865.

Date	Origin	Old Terminus	New Terminus	Complete Mileage	New
	Buffalo Bayou, Brazos and Colorado.				
1859	Harrisburg	Brazos River	Eagle Lake	68	35
1860	Harrisburg	Eagle Lake	Alleyton	81	13
	Burlington and Missouri River.				
1858	Burlington		Fairfield		51
1859	Burlington	Fairfield	Ottumwa	75	24
	California Central.				
1860	Folsom		Lincoln		6
	California Northern.				
1864	Marysville		Oroville		26
	Southern Pacific.				
	Cedar Falls and Minnesota.				
1864	Cedar Falls		Waverly		14
	Cedar Rapids and Missouri River.				
1860	Cedar Rapids		Blairstown		27
1861	Cedar Rapids	Blairstown	Chelsea	41	14
1862	Cedar Rapids	Chelsea	Marshalltown	69	28
1863	Cedar Rapids	Marshalltown	State Center	84	15
1864	Cedar Rapids	State Center	Nevada	99	15
1865	Cedar Rapids	Nevada	Boone	122	23
	Chicago, Iowa and Nebraska.				
1858	Clinton		De Witt		19
1859	Clinton	De Witt	Cedar Rapids	81	62
1867	C. and N. W.				
	Dubuque and Pacific- Dubuque and Sioux City from 1860.				
1858	Dubuque	Nottingham	Manchester	47	9
1859	Dubuque	Manchester	Masonville	54	7
1860	Dubuque	Masonville	Jessup	78	24
1861	Dubuque	Jessup	Cedar Falls	99	21
1865	Dubuque	Cedar Falls	Ackley	132	33

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Dubuque Southwestern.

1865	Marion		Cedar Rapids		5

Galveston, Houston and Henderson.

1858	Houston	20 miles	Virginia Point	51	31
1859	Houston	Virginia Point	Galveston	58	7

Hannibal and St. Jo.

1858	Hannibal	Shelbina	Bucklin	94	47
1858	St. Joseph	3 miles	Hamilton	51	48
1859	Hannibal	completed to	St. Joseph	207	62
1861	Quincy		Palmyra		18

Houston and Texas Central.

1858	Houston	Waller	Hempstead	51	5
1859	Houston	Hempstead	Courtney	68	12
1860	Houston	Courtney	Millican	81	18

Houston Tap and Brazoria- includes Houston Tap.

1860	Houston	Harrisburg	Columbia		50

Keokuk, Ft. Des Moines and Minnesota- Des Moines Valley from 1864.

1859	Keokuk	Bentonsport	Ottumwa	75	36
1861	Keokuk	Ottumwa	Eddyville	92	17
1865	Keokuk	Eddyville	Monroe	133	41

Keokuk, Mt. Pleasant and Minnesota.

1856	Keokuk		Montrose		11
1857	Keokuk	Montrose	Viele	17	6

McGregor Western.

1863	N. McGregor		west		3
1864	N. McGregor	3 miles	Postville	24	21
1865	N. McGregor	Postville	Conover	45	21

Memphis and Little Rock.

1858	Memphis		Madison		41
1860	Little Rock		De Vall's Bluff		47

Minnesota Central- formerly Minneapolis and Cedar Valley.

1864	St. Paul		Mendota		6
1865	St. Paul	Mendota	Faribault	52	46

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	Minnesota Valley.				
1865	St. Paul		Shakopee		28
	Mississippi and Missouri- C. R. I. and P. from 1866.				
1858	Muscatine		Washington		38
1860	Davenport	Iowa City	Marengo	84	30
	North Missouri.				
1858	St. Louis	Montgomery	Moberly	148	64
1859	St. Louis	Moberly	Macon	171	23
	Pacific Railroad of Missouri.				
1858	St. Louis	Jefferson City	Tipton	163	38
1859	St. Louis	Tipton	Syracuse	168	5
1860	St. Louis	Syracuse	Smithton	181	13
1861	St. Louis	Smithton	Sedalia	188	7
1863	St. Louis	Sedalia	Dresden	195	7
1864	St. Louis	Dresden	Warrensburg	218	23
1865	St. Louis	Warrensburg	Kansas City	283	65
	Platte County.				
1861	St. Joseph		Weston		10
1872	Hannibal and St. Jo.				
	St. Joseph and Denver City.				
1860	Elwood		Wathena		5
	St. Paul and Pacific- formerly Minnesota and Pacific.				
1862	St. Paul		St. Anthony		10
1863	St. Paul	St. Anthony	Anoka	29	19
1864	St. Paul	Anoka	Elk River	41	12
	St. Louis and Iron Mountain.				
1858	St. Louis	Pismarck	Iron Mountain	81	2
	San Antonia and Mexican Gulf.				
1859	Port Lavaca		Terminus		5
1861	Port Lavaca	Terminus	Victoria	27	22
	San Francisco and Oakland.				
1863	San Francisco		Oakland		7
	Southern Pacific.				

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San Francisco and San Jose.

1863	San Francisco		Menlo Park		32
1864	San Francisco	Menlo Park	San Jose	50	18

Southern Pacific.

Southern Minnesota.

1865	La Crosse		Tokah		10

Southwest Branch of Pacific Railroad.

1858	Pacific		Moselle		12
1860	Pacific	Moselle	Rolla	77	65

Texas and New Orleans.

1860	Houston		Liberty		40
1861	Houston	Liberty	Orange	105	61

Union Pacific, Eastern Division.

1864	Kansas City		Lawrence		39
1865	Kansas City	Lawrence	Perry	51	12

Washington County (Tex.).

1859	Hempstead		Chappell Hill		11
1860	Hempstead	Chappell Hill	Brenham	21	10

Winona and St. Peter- formerly Transit.

1862	Winona		Stockton		17
1863	Winona	Stockton	St. Charles	38	11
1864	Winona	St. Charles	Rochester	50	22
1865	Winona	Rochester	Kasson	64	14

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Chapter III. The First Transcontinental Line.

From 1857 to the outbreak of the Civil War there was a lull in the movement for a Pacific railroad, due partly to the general depression following the panic and partly to political conditions. The latter fifties was a period of very marked political readjustment. The older parties were giving way to a newer split which divided the country entirely between the north and south, while the older statesmen who had depended on the compromise method for settling difficulties were giving way to a younger and more radical group. This new spirit produced important changes in the railroad field. It was felt that only one transcontinental line could be built, and the increasing division between the north and the south produced a practical deadlock. For this reason almost nothing was done after 1854-5 - not because its promoters had lost confidence in the enterprise, but because it was a practical impossibility until some change occurred in the political complexion of the country.

The political change that occurred was the withdrawal of the south from the Union, thus leaving the way open for legislation that had heretofor been blocked. The immediate results were the creation of a new group of states and territories, the chartering of a Pacific railroad, and the passing of a homestead law, all of which measures were closely linked together. The route of the first transcontinental line was dictated by practical considerations. It was to start from a point almost due west of Chicago and run directly west as near as practicable into Nevada,

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and from that there was to cut down to San Francisco. Branches were included in order to at least minimize local jealousies. This route furnished the most direct line possible, and tapped the most populous portions of the west.

The principal backers of the new project had organized a company in the spring of 1861 and T. D. Judah and Peter Dey had gone over much of the proposed route in 1861-2.[1] Congress got around to chartering the road in July, 1862, and the resulting act was acclaimed all over the North as epoch making.[2] In September the corporation had its first meeting at Chicago and W. B. Ogden (Illinois) was elected President, N. V. Poor (New York) Secretary, and T. W. ALcott (New York) Treasurer. Many prominent people were present at this first meeting, which resolved itself into a convention and devoted the majority of its time to speech-making and the rousing of enthusiasm.[3]

The act of July 1, 1862, which incorporated the road provided for a land grant of five sections per mile on each side of the road, and bond aid of $16,000 per mile except in the mountainous portion where it was increased to $48,000 - such aid to constitute a first mortgage on the property. It further provided for a capital stock of 100,000 $1000 shares, with a maximum holding limited to two hundred shares; Two thousand shares had

1. Am. R.R. Jour. 1862, p. 545; G.M. Dodge, How We Built the Union Pacific Railway, in 61st Cong., 2nd Sess., Sen. Doc. 447, p. 9.
2. For instance Am. R.R. Jour.,1862, p. 565 & 1863,p.498.
3. Am. R.R. Jour. 1862, p. 686, pp. 719-722.

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to be represented at the first stockholders meeting.[4] In accordance with this plan, books were opened and subscriptions were received in the winter of 1862-3; surveys were made, and preparations were gotten under way to start actual construction.[5] Then it was discovered that the $2,000,000 subscription which was necessary preliminary to the first meeting of the stockholders had not been taken up entirely, and consequently the effort came to a halt.[6]

The principal suggestions as to the fect of the original scheme were as to gauge, government aid, and financial organization. The original gauge of five feet was considered a serious handicap because it prevented connection with the eastern roads, which by this time were generally accepting standard gauge (four feet eight and a half inches). A more serious objection was in the case of government aid. It was also pointed out that $1000 shares were too expensive for the ordinary investor, and that a reduction of the amount would probably have the effect both of increasing the number of the subscriptions and of securing a more general interest in the project.

Only the most minor of these changes was made in 1863; on March 3, 1863, the guauge was made standard.[7] The remaining propositions were drawn up in the form of amendments to the original bill, but no action was taken upon them;[8] they were final-

4. Statutes at Large, Vol. 12, Chap. 120,pp.489-498.
5. Am. R.R. Jour. 1862, p. 865, and 1863, p. 289.
6. Ibid., 1863, p. 1.
7. Session Laws, 37th Cong., 3rd Sess., Chap.112,p.807.
8. Am. R.R. Jour, 1863, p. 217.

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ly all lincluded in the amendment of July 2, 1864. The land grant was doubled, the United States bonds were reduced to the rank of a second mortgage, and the shares were made one million at $100, with a fifty share maximum.[9]

In the fall of 1863 the road finally began to have the appearance of a going concern. By October the $2,000,000 had been subscribed, the first director's meeting had been held, and permanent officers had been chosen,[10] -

President -	Gen. John A. Dix.
Vice President -	T. C. Durant.
Treasurer -	J. J. Cisco.
Secretary -	H. V. Poor.

The first ground was broken on the eastern part of the main line at Omaha in December, 1863.

During 1864 and the first half of 1865 very little work was done on the road. The energies of the country were fully occupied in the final phases of the war and neither money nor labor could be found available, in spite of the additional Congressional aid. It was during this period, however, that the practical financial arrangements were made which enabled later construction to proceed.

The chief difficulties in the building of the Union Pacific were financial; the actual construction of the road presented

9. Session Laws, 38th Cong., 1st Sess., Chap. 216, pp. 356-365.

10. Am. R.R. Jour. 1863, p. 925, p. 1047, p. 1125.

11. Dodge, p. 11; Am. R.R. Jour. 1863, p. 1199; Poor's Manual 1869-70, p. 404.

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no engineering problems which the men in charge were not equipped for handling. On the other hand, the financing of a thousand miles of raod, mostly through an uninhabited section of the country, was no easy operation. Two fundamental difficulties had to be met; in the first place, the financial scheme to be used had to take into account the fact that in all probability the road could not be operated at a profit for a long time to come; in the second place, the original Union Pacific act provided that the stock and bonds should be sold only at par and for cash, and since it was almost impossible to secure capital on t his basis some way of avoiding the provision had to be devised.

Early in 1864 T. C. Durant, Vice-President of the Union Pacific, evolved a scheme for getting around all of these difficulties. To carry out this idea he bought the Fiscal Agency of Pennsylvania on March 16, and on March 26 had the charter amended so that the name of the company became the Credit Mobilier of America and so that a branch could be established in New York which could take over the majority of the business.[12] The plan to be followed was extremely simple. Union Pacific men also con-

12. C. M. Crawford, The Credit Mobilier of America its origin and history (Boston,1880) pp. 15-22. Crawford gives the most complete account of the Credit Mobilier but justifies the company. Credit Mobilier Investigation.Report of the Special Committee,in 42nd Cong.,3rd Sess., House Reports 77,78,81,82 & 95 gives one of the most complete surveys of the case. Report of the Special Committee on motion of 3rd-5, 1873, in 42nd Cong.,3rd. Sess, Sen. Rpt. 519 contains a more brief summary. Message of the President of the United States transmitting the report of the U.S. Pacific Railway Comn. and the testimony, in 5th Cong., 1st Sess., Sen. Doc. 51, 5 vols., is the most complete and valuable document in relation to the history of the Credit Mobilier.

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trolled the Credit Mobilier. Contracts were to be awarded to dummies and transferred to the Credit Mobilier. The contracts were to be paid for in cash (cheque), the cash immediately returned to the Union Pacific for stocks and bonds at part, and then the stocks and bonds could be sold by the Credit Mobilier for anything that they could bring. By this plan the drawbacks of the original bill were avoided, and by making the contracts high in amount, provision could be made for the discrepancy between the par value and selling price of the railroad securities. Added to these advantages, the stockholders of the Credit Mobilier were liable according to state law only to the value of their stock, and there was a great possibility that the inner controlling ring could make a greater profit on construction than it could ever make by the actual operation of the completed road.

Both sides of the Credit Mobilier story have been told with such completeness that it is unnecessary to repeat any but the salient factors.[13] During 1864 and 1865 the company was in a rather poor financial condition, and in the latter year Oakes Ames, a Massachusetts member of Congress, was induced to take hold. In doing so, he tried to get the aid of other members of Congress, but failed.[14] During 1866 conditions began to improve, construction was undertaken, and by the end of 1867 the Credit

13. See references of footnote 12 and also J.P. Davis, The Union Pacific Railway (Chi., 1894), and H.K. White, History of the Union Pacific Railway (Chi., 1895).

14. Crawford, pp. 91-92; Oakes Ames a Memoir (Cambridge, 1883), p. 7. This last account is frankly partisan.

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Mobilier declared its first dididend - $2,244,000 in Union Pacific bonds(then selling at thrity) on an original capital of $3,750,000, which had been gotten by giving a Union Pacific bond bonus on all stock subscriptions equal to the amount of the subscri tion.[15]

When Ames returned to Congress in 1867 the members whom he had previously asked for aid remembered his old offers and reminded him of his earlier promises.[16] Ames felt it advisable to hold to his earlier offers as much as possible, with the idea pf distributing his stock as widely as he could.[17] He at least felt that there was a considerable advantage in having a large number of prominent legislators as members of the Credit Mobilier. Whether the underlying purpose was limited purely to distinction, confidence and prestige, or whether there was a secondary, highly practical, and less commendable purpose, is still a question.

The first great publicity to the affairs of the Credit Mobilier was in 1872 when a number of Oakes Ames' letters were published, which seemed to give a basis to the charge that the company's stock had been used for the purpose of unduly influencing members of Congress.[18] The revived interest in the Credit

15. Crawford, p. 60.
16. Crawford, p. 94; Oakes Ames, p. 25.
17. Crawford, p. 94; 42nd Cong.,3rd Sess.,Sen. Rpt. 519 pp. 42-43; Oakes Ames, pp.25-27. Crawford prints some of the Ames letters, pp. 104-5.
18. House investigation, in 42nd Cong.,3rd Sess., House Reports 77,78,81,82 & 95. Senate investigation in 42nd Cong.,3rd Sess., Sen. Rpt. 519. The first is the Poland investigation, and the second is the Merrill investigation. The largest piece of work is that of the Pas. Rwy. Comm., in 50th Song.,1st Sess., Sen. Doc. 51, which includes over 4 vols. of testimony.

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Mobilier and its relation to the Union Pacific also brought other facts to light; it was charged that the Union Pacific had at least violated business ethics in giving contracts indirectly to its own stockholders, and that the Credit Mobilier had made exorbitant profits, thus limiting the ability of the Union Pacific to pay its debt to the United States. These last two charges were investigated several times in connection with Congressional legislation on the subject of the Comapny's debt to the government.

The charge of collusion in the making of the contracts seems not to be very serious. As explained before, an evasion of the law was necessary before any work could be done, and it seems irrefutable that the interested periods were not so much seeking to defraud anone, as to build the railroad in the only possible way. Such construction companies were very common at the time, and the idea of a violation of business ethics was the product of a later generation.

The question of bribery is more serious. Although Ames himself seemed to have no feeling of wrong-doing, the distribution of stock in Congress was at least open to question. Probably Ames had no direct idea of influencing legilation, but he certainly felt that the distribution would aid his cause by producing a favorable sentiment. The doubtfulness of the affair is emphasized by the fact that at the time when the stock was distributed the company did not need additional capital which could not have been secured more easily in other ways. Thus it

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seems that the vote of censure that was passed, while being extremely hard on Ames personally, was entirely justified.

As to exorbitant profits, it would certainly seem that the Credit Mobilier was run with the idea of making a profit on the construction which could not be made on the operation of the road.[19] The most conservative estimate of the profits would seem to indicate approximately 320 per cent before 1869, or over 60 per cent per year. This figure is based on the dividends declared by the Credit Mobilier translated into money values, estimating the Union Pacific stock as worth thirty and the bonds as worth eighty-five, on a total capital of $3,750,000. It does not take into account the original bonus in Union Pacific stock, the later increased value of the stock, or the fact that not all of the capital was invested for the full five years. Considering that this figure is an absolute minimum, it would seem that indirectly the lien of the government had been injured, and that excessive profits had been made,

Beginning in 1865, actual construction was begun and pushed.[21] Colonel Dodge was put in charge of the surveying in in 1865, and in 1866 was given complete charge of all the work, Under his leadership many of the discharged soldiers were employed and the work was organized on a military basis, which was rendered particularly necessary because of the trouble with the

21. C. G. Countant, The History of Wyoming (3 vol.Laramie, 1899), vol. 1, p. 675.

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Indians.[22] The lack of hardwood for ties was remedied by "Burnetizing" cotton-wood, that is, by dipping it in a solution of zinc chloride.[23] By December the first forty mile stretch was finished and on January 24, 1866, it was accepted by the President.[24][25] Construction was carried on in hundred mile stretches and supplies were hauled by wagon. All the bridge work was done in advance.[26]

During 1866 the road was completed a distance of three hundred and five miles from Omaha,[27] and on July 16 the first passenger tariff went into effect on the road to Ft. Kearney - ten cents per passenger per mile.[28] The Chicago and Northwestern was just completing the first railroad line to Omaha from the east, and in August 1866 the Union Pacific entered into an agreement for the hauling of supplies as soon as the road was completed.[29] Connection was made in January, 1867, and from that time on the Union Pacific had direct rail connection with Chicago and the east.

The Union Pacific had a considerable amount of trouble with the Indians west of Ft. Kearney in 1867, due to the Indian unrest which then prevaded the country.[31] By the end of the year the road had reached Cheyenne, where it made its winter headquar-

22. Dodge, pp. 12-14.
23. Am. R.R. Jour. 1865, p. 604.
24. Ibid., p. 1233.
25. Neb. R.R. Comm. 1888, p. 144.
26. Dodge, pp. 12-14.
27. Neb. R.R. Comm. 1888, p. 144.
28. J.N. Alger,"Neb. Politics and Neb. Railroads," in Proceedings and Col. of the Nebr. State Historical Society, Vol. 15 (1907), p. 38.
29. Am. R.R. Jour. 1866, p. 749.
30. Dodge, p. 14.
31. Ibid., p. 6: Contant, Wyoming, Vol. 1, p. 679.

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ters.[32] During 1868 and the early part of 1869 it was completed to Ogden, where it made connections with the Central Pacific. The Mormons tried to get the road to padd through Salt Lake City, but failed. The question of a point of junction occasioned some slight difficulty, because each road built as far as possible in order to get the maximum amount of government aid. Consierable friction occurred between the Irish labor on the Union Pacific and the Chinese labor on the Central Pacific.[34] The junction point was finally fixed by act of Congress at Promontory Point, near Ogden,[35] and on May 10, 1869, the connection was made, thus completing the first transcontinental railroad.[36]

The cost of the line was somewhere around $106,000,000, much of which had gone to the Credit Mobilier in the form of excessive profits.[37] A large amount of stocks and bonds were outstanding, most of which had been sold at considerably less than par. The results was that the road found itself burdened with an excessive debt. On the other hand, the country through which the line ran was sparsely settled and the traffic was light. Consequently the road found itself embarrased for funds, and for at least ten years its control and operation was purely a speculative venture. As early as 1865 the Pennsylvania Railroad had

32. Dodge, p. 10; Frank Hall, History of the State of Colorado (4 vols., Chi.,1889) gives an account of Cheyenne as a boom town.

33. Davis, "Union Pacific," in Annals, p. 53;Dodge, p.6 O.F. Whitney, Popular History of Utah(Salt Lake City,1916)p.217.

34. Dodge, p. 14.

35. Statutes at Large, Vol. 16, p. 56.

36. Poor's Manual 1870-1,p.417; Sidney Dillon,"Historic Moments:During the Last Spike of the Union Pacific,"in Scribner's Magazine, Vol. 12 (1892),pp. 253-259, gives the best account of the opening ceremony and also gives the only photograph extant.

37. See references for footnote 19,& Railroad Gazette (Chi.), Vol. 11, p. 389.

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secured an interest in the enterprise[38] and in 1871, when Ames retired from the Presidency, Thomas Scott, who was also vice-president of the Pennsylvania,[39] took charge. Unable to make the road pay,[40] he lost interest in it, and in 1873 Jay Gould bought control. No additional mileage was built before the panic of 1873 except for a branch from Kit Carson to Las Animas. This line was built to head off the Sante Fe[41] and was later removed.

The original inception of the Central Pacific, which built the western end of the line, may be ascribed to T. D. Judah, a railroad enthusiast and engineer. His own plan was for a railroad built by small individual subscriptions, but he was able to rouse very little support for it until about 1860-1.[42] At that time four of the leading merchants of Sacramento became identified with the project - Leland Standford, C. P. Huntington, Mark Hopkins, and Charles Crocker.[43] In June 1861 these men, together with Judah and a few others, organized the Central Pacific Railroad of California to build from Sacramento to the state line.[44] Surveys were made,[45] and in 1863 the first ground was broken at

38. Am. R.R. Jour. 1865, p. 805.
39. Railroad Gazette, Vol. 2, p. 467.
40. 50th Cong., 1st Sess., Sen. Ex. Doc. 51, p. 53.
41. G.W. Martin, "The College of Emperia, Andrew Carnegie and John Byars Anderson," in Transactions of the Kansas State Historical Society, Vol. 7 (1902), p. 508.
42. Judah, Practical Plan.
43. S. Daggett, Chapters on the History of the Union Pacific (N.Y., 1922) is an excellent account of the whole history of the C.P. and S.P.
44. Bancroft, California, Vol. 7,p. 544; Daggett,S.P.,
45. Am. R.R. Jour., 1862, p. 185.

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Sacramento.[46]

The financial condition of the backers of the road was not sufficiently strong to secure its completion on their own resources. Consequently, as with most western roads, government aid was solicited. The Pacific Railroad Act of 1862 (amended 1864) made the Central Pacific the recipient of the land grant for the western half of the transcontinental line and also gave it the same bond aid that was given to the Union Pacific.[47] The state of California guaranteed the interest on the company bonds,[48] while three counties and the cities of Sacramento and San Francisco subscribed to the capital stock.[49] Consequently, the Central Pacific received every possible kind of government aid. Leland Stanford, one of the four prime movers in the project, became Governor in 1862, and threw the entire weight of his influence in favor of the railroad.[50]

The difficulties of construction were much the same as those of the Union Pacific, and were met in a very similar way; the general motive was to make the greatest possible profit on the construction and government aid, with the feeling that only in this way was there a practical opportunity for a return on the investment. The first scheme tried was to award the con-

46. Poor's Manual 1870-1, p. 424; Bancroft, California Vol. 7, p. 550.
47. Statutes at Large, Vol. 12, Chap. 120, pp. 489-498.
48. Laws of Cal. 1864, Chap.320.
49. Bancroft, California, Vol. 7, p. 556, gives a list of the subscriptions; the citations of the laws may be found in J. T. Davis, Index to the Laws of California, pp. 607-608.
50. Daggett, Southern Pacific, p. 199.

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tracts to one of the members of the company, and for this purpose Charles Crocker resigned from the management of the Central Pacific and undertook the construction of the road under the name of Crocker and Company.[51] In 1867 the Contract and Finance Company was formed, ostensibly to attract outside capital.[52] The close parallel between this company and the Credit Mobilier, both as to organization and purpose, is so evident as hardly to require mention. The main distinction was that the Contract and Finance Company succeeded in getting its accounts into such a shape that later investigation encountered almost insuperable obstacles. Huntington, Stanford, Hopkins, and Crocker subscribed for the capital stock of the company, but paid for it with their personal notes rather than in cash. To secure the funds necessary for construction each of the men concerned loaned the required amounts from time to time as he was able, each keeping his own accounts. When any profits were made they were split equally. This method of finance was confusing enough in itself, but to add to the uncertainty the books of the company were "accidentally" destroyed in 1873; the result was that all future deductions became very uncertain.[53] Certain conclusions seem inescapable, however, - (1) that the Contract and Finance Company was organ-

51. 50th Cong., 1st Sess., Sen. Ex. Doc. 51, p. 70; Bancroft, California, Vol. 7, p. 567, footnote 27- based on Huntington N.SS., pp. 9-12.

52. Daggett, Southern Pacific, p. 76; 50th Cong., 1st Sess., Sen. Ex. Doc. 51, p. 72.

53. 50th Cong., 1st Sess., Sen. Ex. Doc. 51, pp. 73-74 and Daggett, Southern Pacific, pp. 76-78, certain good discussions.

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ized primarily to make a profit on construction which it was considered impossible to make on operation; (2) that the men who controlled the Central Pacific organized the Contract and Finance Company in order to secure a monopoly of all the profits that might be earned; (3) that the contracts were exorbitant in their terms;[54] and (4) that the members of the Contract and Finance Company made a profit totally out of proportion to their investment, thus eventually placing the burden on the people of the territory through which the road passed.[55]

The actual construction of the road presents a pleasing contrast to the method of finance. Obstacles were every where abundant and were overcome with a vigorous energy characteristic of the west. Climatic and engineering difficulties were numerous, and were surmounted only after consistent work; for instance, the Sierras had to be crossed very early in the process of construction, while the Union Pacific was able to construct two-thirds of its line before it encountered any very serious obstacles. Materials and supplies were expensive and hard to get, both in bringing them to Sacramento and in getting them to the scene of construction. Labor was scarce, and finally Chinese had to be used in large numbers, mainly because of the lack

54. The Pacific Railway Commission estimates (pp. 74-75) that the contracts called for about twice the amount that was used for construction.

55. Prof. Daggett, who has done the most intensive work in this subject, estimates (pp. 80-82) that the most conservative estimate possible shows that a profit of between 500 and 600% was made in 6 years, on a total investiment of $1,000,000.

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of any other supply. Money was hard to get, and no matter what conclusion is drawn concerning financial methods and excess profits, it must be remembered that the collection of actual cash to carry on the work was always a serious problem.[56] In spite of these difficulties, work was carried on continuously after 1865, and by 1869 the Central Pacific had also reached Ogden, to form the western link of the first transcontinental railroad.[57]

The natural result of railroad building carried on for the profit to be secured from construction contracts was that the owners of the road ordinarily desired to dispose of their holdings as soon as the line was finished. Having milked the company during the process of construction, there was very little hope that the road would be able to pay for itself at a later time. In the case of the Union Pacific the road changed hands twice within four years of its completion. In the case of the Central Pacific, local conditions produced a change from the normal procedure. During the last years of its building and even until as late as 1873 there are evidences that the as-

56. For accounts of the practical difficulties and how they were overcome, see Am. R.R. Jour. 1863, p. 1104; Bancroft, California, Vol. 7, p. 567; Am. R.R. Jour. 1865, p. 437, p. 341; Railroad Across the Continent with an Account of the Central Pacific Railroad of California (N.Y.,1868), pp. 15-20; J.S.McGroarty, California its History and Romance (Los Angeles, 1911), pp. 287-289; R.R. Gazette, Vol. 1, p. 462; Daggett, Southern Pacific, pp. 65-70.

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sociates desired to dispose of their holdings in the company;[58] the sale was made difficult, because other people also knew the condition of the road, and were not eager to buy. The deciding factor in the situation was the growing realization on the part of the associates of the possibility of securing a monoply of California railroad transportation. With such a control and the possibility of monoply prices, it was felt that even the Central Pacific, overburdened with debts as it was, could make a profit.

During 1868 the Central Pacific men were looking for available routes from Sacramento to the sea. Partly by luck, partly through railroad enthusiasm, and partly through the influence of Stanford, complete control was acquired over the Oakland water front - that is to say, the Central Pacific received half of the land in its own right, while it controlled a large block of the stock of the Oakland Waterfront Company, which controlled the remainder.[59] In the same year, again largely through the influence of Governor Stanford, it secured an entrance into San Francisco, and water front facilities which were almost a monopoly.[60]

The road from Sacramento to San Francisco was built by

58. Daggett, Southern Pacific, p. 105.

59. Accounts of the acquisition of the Oakland waterfront are given in History of California, ed. by Q. S. Eldredge, (5 vols., N.Y., 1915), pp. 299-301; Bancroft, California, Vol. 7, p. 580; Daggett, Southern Pacific, pp. 86-94.

60. Daggett, Southern Pacific, pp. 94-103.

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three companies; from Sacramento to San Jose it was built by the San Francisco and San Jose Railroad, which let its contracts to the Western Pacific. The Western Pacific assigned its contracts in turn to the Contract and Finance Company, and in this way the Central Pacific secured control of the road. The remainder of the line was secured in 1868 from the San Francisco and Oakland and the San Francisco and Alameda, and the entire line was completed in 1869.[61]

The Central Pacific as it appeared in 1873 was built up by a series of consolidations during the latter sixties and early seventies,[62] -

1868, January 16 -

Cal. and Ore. R.R. formed by consolidation.

Cal. and Ore. R.R. - organized May 30, 1865.

Marysville R.R. - organized November 29, 1867.

1869, December 18 -

Cal. and Ore. R.R. - formed by consolidation.

Cal. and Ore. R.R. - consolidation of January 16, 1868.

Yuba R.R. - organized November 18, 1862.

1868, October 15 -

San Fran. and Alameda - formed by consolidation.

San Fran. and Alameda - organized March 25, 1863.

San Fran., Alameda and Stockton - organized Dec. 8, 1863.

61. Ibid., pp. 83-103 gives the best connected account; see also Bancroft, California, p. 587; Bay of San Francisco, p.372; An Illustrated History of San Joaquin County, California (Chi.1890), p. 136.

62. California R.R. Commission 1877 and 1878, p. 305.

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1869, November 2 -

Western Pacific R.R. - formed by consolidation.

Western Pacific R.R. - organized December 12, 1862.

San Fran. Bay R.R. - organized September 25, 1868.

1870, June 23 -

Central Pacific Railroad - formed by consolidation.

Central Pacific R.R. of Cal. - organized Oct. 8, 1864.

Western Pacific R.R. - consolidation of November 2, 1869.

1870, June 29 -

San Fran., Oakland and Alameda - formed by consolidation.

San Fran. and Oakland - organized October 21, 1861.

San Fran. and Alameda - consolidation of October 15, 1868.

1870, August 22 -

Central Pacific R.R. - formed by consolidation.

Central Pacific R.R. - consolidation of June 23, 1870.

Cal. and Ore. R.R. - consolidation of December 18, 1869.

San Fran., Oakland and Alameda-consol. of June 29, 1870.

San Joaquin Valley R.R. - organized February 5, 1868.

Several other lines were either built or acquired before 1873. The California Pacific had a direct line from Sacramento to San Francisco, and by reason of this shorter line was able to get a large proportion of the local business.[63] By the threat of building a competing line, and by other more questionable means, the Central Pacific secured control in 1871.[64] By this trans-

63. R.R. Gazette, Vol. 1,p.199; finished in 1869.

64. A Memorial and Biographical History of Northern California(Chi.,1891), p. 220; Bancroft, California, Vol. 7, p. 383; R.R. Gazette, Vol. 3, p. 237.

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action the main line was included in the Central Pacific system, but the branches were not added until a formal lease took place in 1876.[65]

The California and Oregon Railroad was the California part of a line from Sacramento to Portland. Having received a government land grant, it was acquired by the men interested in the Central Pacific and consolidated with that line in 1870.[66] It was completed to Redding before the end of 1872.[67]

The Southern Pacific Railroad of California was projected in order to stop competition in southern California.[68] Between 1866 and 1871 Congress chartered several transcontinental railroads with termini on the Pacific coast, and the Southern Pacific of California was built in large part to prevent the completion of these lines. The Central Pacific and the Southern Pacific of California were united by a community of ownership, and furnished the basis of the later Southern Pacific system. By 1873 the main line of the Southern Pacific had been completed as far as Delano (one hundred and eighty-eight miles), and the coast division as far as Soledada (one hundred and forty-three miles).

By the control of these lines the Central Pacific had

65. Daggett, Southern Pacific, p. 117.
66. Lyles' Manual 1870-1, p. 278; Poor's Manual 1870-1, p. 403.
67. Cal. R.R. Comm. 1877 and 1878, p. 313.
68. Incorporated December 1863 - H.K. Norton, The Story of California (Chi.,1893), p. 280; Bancroft, California, Vol. 7, p. 597.

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secured a practical monopoly of California railraod business, and almost complete control of the entrances to San Francisco Bay. The next ten years were most notably characterized by a strong effort to retain control of the situation.

69. Cal. R. R. Comm. 1877 and 1878, p. 386.

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Railroad Construction- transcontinental lines- to 1873.

Date	Origin	Old Terminus	New Terminus	Complete	New
	California and Oregon.				
1867	Sacramento		Wheatland		40
1868	Sacramento	Wheatland	Yuba	44	4
1869	Sacramento	Yuba	Marysville	52	8
1870	Sacramento	Marysville	Chico	96	44
1871	Sacramento	Chico	Red Bluff	135	39
1872	Sacramento	Red Bluff	Redding	170	35
	California Pacific.				
1868	Vallejo		Washington		20
1869	Vallejo	Washington	Sacramento	61	41
	Napa Jct.		Calistoga		35
	Central Pacific.				
1863	Sacramento		Roseville		19
1865	Sacramento	Roseville	Colfax	55	36
1866	Sacramento	Colfax	Cisco	92	37
1867	Sacramento	Cisco	Summit	106	14
1868	Sacramento	Summit	Stone House	334	228
1869	Sacramento	Stone House	Ogden	744	280
	Sacramento		San Francisco		151
	Niles		San Jose		18
1870	Lathrop		Modesto		49
1872	Lathrop	Modesto	Goshen	147	98
	Napa Valley.				
1868	Napa Jct.		Calistoga		35
1869	California Pacific.				
	Union Pacific.				
1865	Omaha		near Valley		40
1866	Omaha	near Valley	North Platte	305	265
1867	Omaha	North Platte	Cheyenne	516	211
1868	Omaha	Cheyenne	Aspen	940	424
1869	Omaha	Aspen	Ogden	1031	89

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Chapter IV. The Granger Period (1865-1875).

The most noticeable characteristics of the period from the Civil War to the panic of 1873 were; the extension of trunk lines across the first tier of trans-Mississippi states, the rapid building of feeders to these lines, the completion of north and south roads, and the beginning of the transcontinental lines. The first transcontinental road was completed during the period, but is in no way typical. It was built almost entirely by the help of government aid, and is an exotic product.

The building of feeder lines may largely be taken for granted. The ordinary process of railroad advance was the building of trunk lines and then the subsequent construction of subsidiary raods in order to fill local transportation needs and to draw the business that would make the through line profitable. It may then be taken for granted that in productive sections of the country a larger number of feeder lines came into existence shortly after the completion of the through routes. Part of these were built by local inistiative and remained independent, part were built locally and then absorbed by some larger line, and part were built directly by the railroad which they served. Each road was usually chartered separately, due to the limitations of any particular incorporation, but as long as the work was undertaken by one of the larger companies, it is unnecessary to treat the smaller company separately.

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Minnesota's unfortunate experience of the latter fifties began to lose its effect in the early sixties, and from thattime on railroad construction continued to gather increasing momentum. The St. Paul and Pacific, eventually to become the Great Northern, was building north from St. Paul to a projected junction with the Northern Pacific at Brainerd, and northwest to form another transcontinental line. In 1866 the road was divided into two divisions in order to facilitate construction,[1] and by 1872 the northern line had been finished to Melrose, one hundred and eight miles,[2] while the western line had reached Breckenridge, almost on the Dakota boundary.[3] The two divisions were re-united in 1871 and from then on continued as integral parts of the road.[4] An attempt was made to make this line a part of the Northern Pacific system in order to be used as a feeder and to give an entrance to St. Paul; the plan fell through because of the panic, which forced both roads into the hands of receivers. Eventually the Northern Pacific had to build its own parallel line.

Another line which was destined to become transcontinental before 1900 was the Northern Pacific. The projected route was from Lake Superior directly west to the coast. This had been Asa Whitney's plan, and especially recommended itself because of the lack of serious engineering problems, and because its northern

1. Saby, p. 57.
2. History of Ramsey County and the City of St. Paul (Minneapolis,1881) p. 344; Holmes, Minnesota, p. 351; Minn.R.R. Comm. 1872, p. 41.
3. Finished in 1871. Kingsbury, Dakota, Vol.1,p.591; Minn. R.R. Comm. 1872, p. 8; Williams, St. Paul, p. 405.
4. Minn. R.R. Comm. 1872, p. 8.

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terminus made it advantageous in trade with the far east.[5] The principal objection that was raised in the early fifties was that of climate, since it was maintained that the road could not be used the year around. The Union Pacific route was adopted by the government in preference to the northern route largely because of sectional differences; the central route served a larger proportion of the population more directly than could the northern line.

The most prominent exponent of the northern route during the early sixties was Josiah Perham. Originating the excursion idea, he was a firm believer in advertising, and of the desirability of large participation with small individual outlay. These ideas he carried into the business of railroad construction, and advocated a road aided by a government land grant, but being built by a million subscriptions of one hundred dollars each. He had originally favored the central route because it affected more people, but when the Union Pacific was chartered without his participation, he transferred his allegiance to the northern plan. After trying several schemes he finally chartered the Peoples Pacific Railroad in Maine, but before he could accomplish anything definite,[7] the idea had developed beyond him.

5. E. V. Smalley, History of the Northern Pacific Railroad (N.Y.,1883),p. 186.

6. See references in Chap. I.

7. For an account of the history of the Perham movement see Smalley, Northern Pacific, pp. 94-110,Holmes, Minnesota, pp. 361 ff., and Compendium of History and Biography of North Dakota (Chi., 1900), pp. 133 ff.

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At the same time (1864) that the Union Pacific-Central Pacific road received an additional subsidy, the Northern Pacific was chartered by Congress and given a land grant.[8] The Perham people were included among the original incorporators, but were outnumbered and soon lost in the larger movement. Perham was the first president of the company,[9] but was unable to secure the funds to start work, thus necessitating other plans, In 1867 several of the leading railroad men of the country made subscriptions in order to get the route surveyed, and in the same year the Perham group sold out their interests and retired.[10]

The road having been surveyed in 1867 and 1868, it next became necessary to raise funds for its construction, and for this purpose an appeal was made to Jay Cooke to act as financial agent.[11] After considering this and several other offers for some time, he accepted, taking hold of the road in 1869. The firm of Jay Cooke and Company was the best known and most trusted of the financial houses of the period, and the participation of Cooke seemed to guarantee the road's early completion. Early in 1870

8. Statutes at Large, Vol. 13, p. 365. The best accounts of the history of the Northern Pacific is given in Smalley, Northern Pacific.

9. Am. R.R. Jour. 1864, p. 873.

10. Smalley, Northern Pacific, p. 144; Poor's Manual 1868-9, p. 62.

11. The connection of Jay Cooke with the Northern Pacific is best told in E.P. Oberholtzen, Jay Cooke Financeer of the Civil War (2 vols., Phila., 1907), Vol. 1, pp. 98-262; a good account is also given in Smalley, Northern Pacific, pp. 170 ff.

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the first dirt was thrown,[12] and by 1873 the line was complete to Bismarck, Dakota, a distance of four hundred and fity miles from Duluth.[13] The Lake Superior and Mississippi was leased in order to give the road a connection between Duluth and St. Paul,[14] while an agreement with the St. Paul and Pacific promised a more direct connection with St. Paul.

The method used for financing the road need not be given in detail.[15] The principal defect was that the securities of the company were disposed of at any price they would bring, no matter how low, in order to get the funds for the completion of the road. With this idea the bonds were sold at eighty-eight, and the stock was given as a bonus. Such a system was bound to produce a capitalization which in time would make the road topheavy. Attempts to sell the bonds in Europe were defeated by the outbreak of the war of 1870, and the home market was soon glutted. The inevitable result was the failure of the house of Jay Cooke, and the complete collapse of the Northern Pacific; construction stopped, and the connecting lines were lost.[16]

The Minnesota Valley Railroad was also connected with the

12. Compendium, p. 135; Gen. J.H. Baker, "History of Transportation in Minnesota," in Collections of the Minnesota Historical Society, Vol. 9, (1901), p. 29.

13. J. B. Power, "Bits of History connected with the Early Days of the Northern Pacific Railway and the Organization of its Land Department," in Collections of the State Historical Society of North Dakota, Vol. 3 (1910), p. 337; Holmes, Minnesota, p. 362; Traveller's Guide, Jan., 1874, No. 295.

14. Traveller's Guide Jan. 1874, No. 295.

15. It is well presented in Oberholtzen, Cooke, Vol. 1, pp. 158-163.

16. Minn. R.R. Comm., 1879, p. 33.

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Northern Pacific scheme. In 1869 it was divided into the St. Paul and Sioux City and the Sioux City and St. Paul, the first company to build the Minnesota part of the line, and the second company to build the Iowa part.[17] During 1870 a scheme was put on foot to lease the whole line to the Lake Superior and Mississippi, thus making a direct connection between the Northern Pacific and the Union Pacific.[18] The lease was made, bu the scheme fell through because of the panic.[19] The entire line from St. Paul to Sioux City was opened in 1872.[20] Technically the line was operated by two independent railroad companies, but actually both companies were controlled by the same men. This situation was relieved in 1878, when the two roads were consolidated under the name of the St. Paul and Sioux City.[22]

The Lake Superior and Mississippi has already been mentioned in connection with the Northern Pacific. Chartered in 1857 as the Nebraska and Lake Superior,[23] the name was changed in 1861,[24] and the road built between 1867 and 1870.[25] It was leased to the Northern Pacific, but the lease terminated in 1874 upon the failure of the leasing road to meet its obligations.[26] After

17. Ibid., 1872, p. 13.
18. Chronicle, Vol. 10, p. 428.
19. R.R. Gazette, Vol. 1, p. 35.
20. Williams, St. Paul, p. 414; Minn. R.R. Comm. 1872, p. 14.
21. Traveler's Guide Jan. 1874, No. 292 gives the combined timetable, as no succeeding Guides.
22. Ibid., July, 1878, No. 379.
23. Am. R.R. Jour., Vol. 17, p. 324; Ramsey Counties, p. 345; Williams, St. Paul, p. 421.
24. Special Laws of Minnesota 1861, Chap. I.
25. Minn. R.R. Comm. 1871, Appendix p. 39; Williams, St. Paul, p. 421; Ramsey County, p. 346; R. R. Gazette, Vol. 1.
26. Holmes, Minnesota, Vol. 4, p. 357; Minn. R.R. Comm. 1872, p. 121.

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struggling along for several years it was foreclosed in 1877, and reorganized as the St. Paul and Duluth.[27]

The roads which are ineradicably connected with the early seventies are the so-called "Granger" lines, particularly the Chicago and Northwestern, the Chicago, Milwaukee and St. Paul, the Chicago, Burlington and Quincy, the Missouri Pacific, the Chicago, Rock Island and Pacific, and the Wabash. These roads were nearly all Chicago concerns, and between themselves controlled the territory of southern Minnesota, Iowa, and Missouri. During the period under consideration these companies finished their main lines across the first tier of states, thus opening direct communication between the Missouri river towns and Chicago. In this process of expansion they absorbed many roads which had been begun previously by local capital. The ensuing change of conditions produced a corresponding change of point of view on the part of the population of the country which the roads traversed. The people began to view transportation as the product of a foreign corporation rather than of home energy, and this changing point of view is one of the most striking characteristics of the " Granger period."

Between 1865 and 1873 the Chicago and Northwestern completes two main lines, one in Minnesota and the other in Iowa. The Iowa line was composed of the Chicago, Iowa and Nebraska from Clinton to Cedar Rapids, and the Cedar Rapids and Missouri

27. Minn. R.R. Comm. 1886, p. 389; Ramsey County, p. 347; Holmes, Minnesota, Vol. 4, p. 357.

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River from Cedar Rapids to Omaha. The original acquisition of both lines took place in 1862, and by 1867 a junction was made with the Union Pacific at Omaha.[28] Des Moines was entered by means of the control of the Des Moines and Minnesota.[29] The road was extended westward by the Sioux City and Pacific, which built from Missouri Valley to Sioux City and Wisner before 1873.[30] This company was subsidiary to the Chicago and Northwestern through practically its entire history, although it was not included specifically in the system until the eighties.[31] The Minnesota line was built by the Winona and St. Peter, and ran almost due west from Winona. It became a part of the Northwestern system in the early seventies, and was completed to Lake Kampeska, Dakota, during 1873, being the only line to build in Minnesota during that year.[33]

The main line of the Chicago, Milwaukee and St. Paul in Iowa was built by the McGregor Western, and ran directly west from McGregor.[34] The road had been acquired in 1864, but was not built, and consequently its land grant was declared forfeited, and transferred to the McGregor and Sioux City, which in turn was bought by the C. M. and St. P..[35] By 1873 the line was complete

28. Poor's Manual 1868-9, p. 362; see also references in Chap. 2.
29. Acquired in 1874 and built in 1875.
30. Traveler's Guide Jan. 1870, No. 293.
31. Included under the C. & N.W. for the first time in 1888.
32. Minn. R.R. Comm. 1871, Appendix, p. 84. An interest was acquired as early as 1867.
33. Minn. R.R. Comm. 1873, p. 19; Traveler's Guide Jan. 1874, No. 321.
34. Clayton County, p. 624.
35. Floyd County, p. 561, Ia.R.R.Comm.1878,Ap. pp.43-44.

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to Algona, about two-thirds the way across the state.[36] The most important increase of mileage of the C. M. and St. P. before 1873 was the acquisition of north and south lines to furnish connections with St. Paul. The Minnesota Central was built directly south from St. Paul through Faribault and Austin, being completed to a junction with the McGregor Western in 1867, and furnishing the first all-rail route from St. Paul to Chicago.[37] In the same year that it was completed it was sold to the McGregor Western, which in turn was sold to the Milwaukee and St. Paul.[38] The second St. Paul connection was made through the St. Paul and Chicago, which was completed from St. Paul to Winona in 1871,[39] and acquired by the C. M. and St. Paul the same year.[40] The following year it was completed to La Crescent, thus making connections with the main line to Chicago.[41] The Southern Minnesota, running directly west from La Crosse, was the logical continuation of the "St. Paul" main line in southern Minnesota. By 1873 it had been built as far west as Winnebago (one hundred and seventy miles),[42] but it did not come under the control of the Chicago, Milwaukee and St. Paul until several years later.[43] In the same way the Davenport and

36. Traveler's Guide, Jan. 1874, No. 284.
37. Chronicle, Vol. 5, p. 469; Minn. R.R. Comm. 1872, p. 17.
38. Minn. R.R. Comm. 1873, p. 7.
39. Bishop, History, p. 402; History of Winona and Olmsted Counties (Chi., 1883), p. 111.
40. Minn. R.R. Comm. 1872, p. 9.
41. Ibid., p. 9.
42. Traveler's Guide Jan. 1874, No. 329.
43. History of Houston County (Minneapolis, 1882), p. 290; History of St. Paul, Minnesota, ed. by Gen. C.E. Andrews (Syracuse, 1890), p. 417.

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St. Paul built northwest from Davenport toward the Chicago, Milwaukee and St. Paul main line. The road was nearly completed by 1873,[44] but the panic stopped the final work until the latter seventies.[45]

The Chicago, Burlington and Quincy constructed its western line under the name of the Burlington and Missouri River, a road which was leased to the parent company. Burlington and Missouri River of Iowa was finished to Council Bluffs near the end of 1869, in time to reap the benefits of the newly opened Union Pacific.[46] In the following year a branch was opened to Nebraska City, and the Burlington and Missouri River Railroad of Nebraska started to build west from Pacific Junction.[47] By 1873 it had reached Ft. Kearney on the Union Pacific, four hundred and seventy miles from Burlington.[48]

James F. Joy of Detroit was the controlling genius of the Chicago, Burlington and Quincy during the latter sixties and early seventies, and was one of the first men to make a start at building up a western railroad empire. Starting with the C. B. and Q. main line, he continued it to Kearney under the name of the Burlington and Missouri River. Then he secured control of the Hannibal and St. Joseph, which had its eastern terminus on

44. The History of Fayette County, Iowa (Chi.,1878), p. 455; Traveler's Guide Jan. 1874, p. 400. The terminus was Fayette.

45. History of Scott County, Iowa (Chi.,1882),p.480.

46. Ia. R.R. Comm. 1878, p. 149; History of Montgomery County, Iowa (Des Moines,1881), p. 356; Lyles' Manual 1870-71, p. 208.

47. R.R. Gazette, Vol. 1, p. 415.

48. Traveler's Guide Jan. 1874, No. 335.

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the C. B. and Q. main line at Quincy.[49] To connect the western termini of the roads he completed the Kansas City, St. Joseph, and Council Bluffs by 1870,[50] also adding branches of the Hannibal and St. Joseph to Atchison and Kansas City.[51] Thus he had two connected through lines, completely controlling southern Iowa and Northern Missouri, and making transcontinential connections. Joy's further plan was to build south from Kansas City to the Gulf, and for this purpose he secured the Missouri River, Ft. Scott and Gulf,[52] completing it to Baxter Springs by 1870,[53] and the Leavenworth, Lawrence and Galveston,[54] which he completed to the southern boundary of Kansas by 1873.[55] The early seventies found the Joy roads greatly overbuilt, so that the panic and the resulting depression caused a complete breakdown of the system. In particular, the roads building toward the Gulf were lost, and the idea of a Gulf connection was never seriously revived by the "Burlington" lines.

The Chicago, Rock Island and Pacific main line was built across Iowa under the name of the Mississippi and Missouri, and was completed from Davenport to Omaha in 1869.[56] This subsidiary

49. Poor's Manual 1870-71, p. 368.
50. Traveler's Guide Sept. 1870, No. 229. This road was formed by the consolidation of the Missouri Valley and the St. Jo. and Council Bluffs.
51. Mo. R.R. Comm. 1879 and 1880, p. 17.
52. Andreas, Kansas, p. 247.
53. Poor's Manual 1870-1, p. 405; Kan. R.R. Comm. 1883, p. 149; D. W. Wilder, The Annals of Kansas (Topeka, 1875), p. 521; R.R. Gazette, Vol. 1, p. 127.
54. Wyandotte County and Kansas City, Kansas (Chi.,1890), p. 221; Poor's Manual 1870-1, p. 237.
55. Traveler's Guide, Jan. 1874, No. 384.
56. Ia. R.R. Comm. 1878, p. 215; The History of Polk County, Iowa (Des Moines, 1884), p. 701; Brigham, Des Moines, p.606.

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line had always been in close connection with the original Chicago and Rock Island Railroad, and in 1866 a new company - the Chicago, Rock Island and Pacific was formed in Iowa, and bought both roads, so that they lost their independent corporate existence.[57] Immediately after the completion of the main line across Iowa the Chicago and Southwestern was begun in order to furnish a direct line from Wilton (a little west of Davenport) to Leavenworth. By 1873 this line was complete, with a branch to Atchison, so that the Chicago, Rock Island and Pacific had in reality two main lines to tap the western territory.[58]

The building of the Des Moines Valley Railroad has already been described, August 29, 1866, it completed its main line from Keokuk to Des Moines, being the first railroad to enter the latter city.[59] Construction was continued northwest, and the road reached Ft. Dodge by 1873. The finances of the company had never been in a very satisfactory condition,[61] and when the panic came the road was foreclosed.[62] When it was reorganized it was divided into two separate companies - the Keokuk and Des Moines and the Des Moines and Ft. Dodge.[63] The first of these lines was leased to the Chicago, Rock Island and Pacific in 1878.[64]

57. Poor's Manual 1868-9, p. 215.
58. Traveler's Guide, Jan. 1874, No. 282.
59. See Chap. II for references.
60. Traveler's Guide, Jan. 1874, No. 352.
61. R. R. Gazette, Vol. 3, p. 150.
62. Ia. R. R. Comm. 1874, p. 110; Brigham, Des Moines, p. 606.
63. Polk County, p. 701; Goodspeed, Des Moines, p. 272.
64. Ia. R.R. Comm. 1878, p. 104.

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The future main line of the Illinois Central was started by the Dubuque and Sioux City; it was completed to Iowa Falls in 1867,[65] and leased to the Illinois Central the same year. Upon the failure to complete the line, its land grant was declared forfeited and regranted to the Iowa Falls and Sioux City.[66] This second line was immediately acquired by the Illinois Central,[67] and in 1870 was completed across the state.[68]

The Missouri Pacific was completed to Kansas City in 1865;[69] in 1866 it reached Leavenworth, and shortly later constructed a branch to Atchison.[70] At this point it became involved with the Southwest Branch, which had originally been projected as subsidiary to the main line. By 1860 the Southwest Branch had been built from Pacific Junction to Rolla (one hundred and eleven miles), where it remained until after the war. It was foreclosed by the state in 1860 and sold to J. C. Fremont, who in turn conveyed it to the South Pacific Railroad Company, chartered in the same year.[71] In July 1866 the Atlantic and Pacific was chartered by Congress, and given a land grant along the line of the former Southwest Branch and the thirty-fifth parallel to

65. Poor's Manual 1868-9, p. 94.
66. Ia. R.R. Comm. 1878, pp. 44-45.
67. The History of Dubuque County, Iowa (Chi.,1880), p. 631; Franklin and Cerro Gordo Counties, p. 307.
68. R.R. Gazette, Vol. 1, p. 370; Cole, Iowa,p. 400; Ia. R.R. Comm., 1879, p. 109.
69. Poor's Manual 1868-9, p. 180; Wyandotte County, p. 180.
70. Poor's Manual 1870-1, p. 398.
71. For references see Chap. II.

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the coast;[72] J. C. Fremont was president of this new company.[73] The South Pacific built as far as Little Piney,[74] and was then bought by the Atlantic and Pacific,[75] which completed the road to Vinita, Indian Territory, to a junction with the Missouri, Kansas and Texas.[76] The foundation of a large railroad system was laid when the Atlantic and Pacific leased the Missouri Pacific in 1872, - but the occurrence of the panic in the following year caused the two roads to again separate.[78]

The most southern project for making transcontinental connections with the Missouri Pacific was by means of the St. Louis and Iron Mountain. This road was foreclosed by the state in 1867 and bought by Thomas Allen, who had been the prime mover of the Pacific Railroad of Missouri. By 1872 the road had been finished to Moark,[79] on the state line. The southern connection lay through the Cairo and Fulton, also controlled by Allen, which was building through Arkansas to a connection with a proposed transcontinental line starting at Texarkana. The whole line to Texarkana was complete in 1873, and in 1874 the two roads were consolidated as the St. Louis, Iron Mountain and Southern.[80] Although much of the stock of the Missouri and the St. Louis, Iron

72, Statutes at Large, Vol. 14, p. 292.
73. Am. R.R. Jour., Sept. 6, 1866.
74. Poor's Manual 1870-1, p. 285.
75. History of Greene County, Missouri (St. Louis,1883), p. 524.
76. Mo. R.R. Comm. 1879 and 1880, p. 34.
77. Ibid., p. 35; Schauf, St. Louis, p. 1163.
78. Poor's Manual 1885, p. 803.
79. Mo. R.R. Comm. 1879 and 1880, p. 30.
80. Ibid., p. 30; History of Randolph and Macon Counties, Missouri (St. Louis,1884), p. 295. Traveler's Guide July 1874, No. 430.

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Mountain and Southern were held in common, the two roads were not formally made a part of the same system until the early eighties.[81]

During the period from 1865 to 1873 the lines which were later to become the Wabash took definite shape. The North Missouri was reorganized in 1867 and by 1869 had completed its line[82] from Moberly to Kansas City;[83] the following year its northern extension was completed to Ottumwa, Iowa.[84] The road went bankrupt in 1871[85] and was reorganized in 1872 as the St. Louis, Kansas City and Northern.[86] This company was one of the constituent parts of the Wabash, St. Louis and Pacific, formed by consolidation in 1879.[87]

These roads comprise what is generally termed the "Granger lines". All but the Missouri Pacific centered in Chicago. With practically no exceptions they had acquired and completed their trunk lines across the first tier of trans-Mississippi states between 1865 and 1873. The exceptions were the Chicago, Milwaukee and St. Paul, which had gotten only about half way across Iowa and Minnesota, and the Wabash, which was formed later, - although its future main line was constructed during the period under consideration. Probably the most active system was the Chicago, Bur-

81. Traveler's Guide June 1883, p. 320.
82. Poor's Manual 1868-9, p. 410.
83. History of Caldwell and Livingston Counties, Missouri (St. Louis, 1886), p. 854; Poor's Manual 1870-1, p. 439.
84. History of Davis County, Iowa (Des Moines,1882), p. 485; Traveler's Guide Sept. 1870, No. 239.
85. Andrian County, p. 291; Caldwell and Livingstone, p. 855.
86. Randolph and Macon Counties, p. 321; Mo. R.R. Comm. 1879 and 1880, p. 38.
87. Mo. R.R. Comm. 1879 and 1880, p. 39; Wyandotte County, p. 229.

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lington and Quincy, which under the leadership of Joy had pushed half way across Nebraska, and had acquired branches with projected lines to the Gulf.

A few of the independent roads to build before 1873 may be noted briefly. The Burlington, Cedar Rapids and Northern, a consolidation (1868) of the Cedar Rapids and Burlington and the Cedar Rapids and St. Paul,[88] was completed to Plymouth, two hundred and twenty miles north of Burlington.[89] The Central Railroad of Iowa, another north and south road, after having gone through numerous changes,[90] was finally completed from Albion to Northwood (three hundred and fourteen miles) by 1873.[91] In Arkansas, the Memphis and Little Rock was finally completed in 1871,[92] while its western extension, the Little Rock and Ft. Smith, was completed to Clarksville, a distance of one hundred miles.

The majority of Texas railroad construction before 1873 was toward the north to make through connections with the northern lines - particularly the Missouri, Kansas and Texas, and the St. Louis, Iron Mountain and Southern. The Houston and Texas Central was the first line to start a construction after the Civil

88. Poor's Manual 1869-70, pp. 227-228.
89. Ia. R.R. Comm. 1878, p. 112; Traveler's Guide Jan. 1874, No. 363.
90. Franklin and Cerro Gordo Counties, Iowa, pp. 308-309, as supplemented by Poor's Manual 1868-9, p. 240,1869-70, p.424 and Lyle's Manual 1869-70, p. 221 and 1870-1, p. 230, gives a fairly complete outline of the changes in the road.
91. Traveler's Guide Jan. 1874, No. 399.
92. R.R. Gazette, Vol. 3, p. 8, p. 69.
93. Traveler's Guide Jan. 1874, No. 508.

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War,[94] and built continuously from 1866 to 1873, during which time it reached Denison on the Red River, thus making connection with the Missouri, Kansas and Texas.[95] It also completed branches to Austin and Waco.

The International and Great Northern was the only other texas line to make north and south connections by 1873. The Houston and Great Northern was chartered in 1866 to run north from Houston.[96] It started building in 1871, and in the two succeeding years was completed to Palestine (one hundred and fifty-one miles),[97] and absorbed the Houston Tap and Brazoria. The International Railroad was chartered in 1870 to run from the Red River near Fulton southwest to San Antonio and Laredo,[98] and was given special aid by the legislature of Texas to the extent of $10,000 per mile.[99] Building was started in 1871 at Hearne, on the Houston and Texas Central,[100] and by 1872 the road had been completed through Palestine to Longview Junction on the Texas and Pacific.[101] In 1873 the Houston and Great Northern and the International were consolidated into the International and Great North-

94. Hardy and Roberts, p. 199.
95. Ibid., p. 200; Traveler's Guide Jan. 1874, No. 440.
96. Wooten, Land System, Vol. 1, p. 534; Tex. R.R. Comm. 1897, p. 206, G. A. Grow was president.
97. Hardy and Roberts, p. 201; Tex. R.R. Comm. 1897, p. 206.
98. Wooten, Land System, Vol. 1, p. 834; Tex. R.R. Comm. 1897, p. 206.
99. Laws of Texas, Vol. 6 (1870), p. 606 - cited in Raines Analytical Index, p. 431.
100. R R. Gazette, Vol. 3, p. 69. H. M. Hoxie, noted for his connection with the Union Pacific, was in charge.
101. Hardy and Roberts, p. 201.

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ern,[102] with Calusha A. Grow as president. The new line ran from Houston north to a junction with the Texas and Pacific, which in turn connected with the St. Louis, Iron Mountain and Southern, thus making a complete route directly to St. Louis; it also had a line from Palestine to Hearne, on the Houston and Texas Central.

The Texas and Pacific was the final form of the plan for building a transcontinental railraod along the thirty-third parallel. Various other companies had been chartered by the state of Texas for this purpose, and had been given extensive aid in land. The Mississippi and Pacific, chartered in 1853, was given the first chance,[103] but did nothing. The Memphis, El Paso and Pacific next succeeded to the grant, but after a vigorous campaign for funds,[104] found itself unable to build. The Southern Transcontinental[105] also had a chance and failed. The Southern Pacific of Texas actually built from Shreveport, Louisiana, to Marshall, Texas,[106] in 1866. In 1868 it added the Vicksburg, Shreveport and Texas,[107] and by 1870 was in operation to Longview, the terminus of the International Railroad.[108] At this point construction stopped,

102. Tex. R.R. Comm. 1897, p. 206; Traveler's Guide Jan. 1874, No. 517.

103. Wooten, Land System, Vol. 1, p. 830.

104. A good brief history of this road, including the important documents may be found in 41st Cong., 2nd Sess., Sen. Rpt. 212. See also R.R. Gazette, Vol. 1, p. 509.

105. R.R. Gazette, Vol. 2, p. 129. J.C. Fremont was president of this road, and such men as J.J. Astor and Don Cameron were connected with it.

106. Am.R.R. Jour. 1866, p. 795; Chronicle, Vol. 3,p.248.

107. Poor's Manual, 1878, p. 859.

108. Hardy and Roberts, p. 250.

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and apparently the effort had come to an end.

The federal government took a hand in 1871, and chartered the Texas and Pacific to run from Marshall, Texas, via El Paso to the Pacific Coast at San Diego. The land grant given by the United States was supplemented by an additional grant from the state of Texas. Under the leadership of Thomas Scott, the Texas and Pacific immediately purchased its possible rivals - the Southern Pacific, the Southern Transcontinental, and the Memphis, El Paso and Pacific. The old line of the Southern Pacific was completed to Dallas in 1873 and to Ft. Worth in 1876. The Marshall-Texarkana line was completed in 1873, thus furnishing the final link of the through route from St. Louis to Houston via the St. Louis, Iron Mountain and Southern and the International and Great Northern.[109]

The only other Texas road to begin any significant railroad construction before 1873 was the old Buffalo Bayou, Brazos and Colorado. The original company was succeeded in 1870 by the Galveston, Harrisburg and San Antonio, incorporated to extend the scope of the charter and to allow construction via San Antonio to the Rio Grande.[110] Work was started in earnest in 1873 and from that time the road was pushed vigorously until it finally made connections with the Southern Pacific.[111]

109. These operations are summarized very briefly and correctly in Poor's Manual 1878, p. 859; see also Tex. R.R. Comm. 1897, p. 237. The laws for state aid are given in Sayle's Tex. Civil Statutes, pp. 1939-1944.

110. Tex. R.R. Comm. 1897, p. 182.

111. Hardy and Roberts, p. 201.

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Two of the main north and south lines have already been mentioned- the St. Louis, Iron Mountain and Southern, which had been completed to Texarkana by 1873, and the Missouri River, Ft. Scott and Gulf, which had reached the southern boundary of Kansas by the same date. The Union Pacific- Southern Branch had been given a land grant in the Kansas Act of 1863 - running from a point on the Santa Fe where it crosses the Neosho river south to the boundary of the state to a junction with the Leavenworth, Lawrence and Galveston.[112] Provision was made that the first road to reach Indian Territory in the Neosho Valley should have the right of way to Texas. Construction was started in 1865 at Junction City,Kansas, on the Kansas Pacific,[113] and was pushed as fast as possible in order to get to the southern boundary of the state before the Missouri River, Ft. Scott and Gulf arrived there. The Missouri River, Ft. Scott and Gulf won the race, but it built so far west that it did not come under the terms of the grant, and consequently the Southern Branch got the right of way to Texas.[114] The Union Pacific - Southern Branch was consolidated and April, 1870, with three branch lines to form the Missouri, Kansas and Texas,[115] and in June was completed to the southern boundary

112. Statutes at Large, Vol. 12, p. 772.
113. Hardy and Roberts, p. 204.
114. Mo. R.R. Comm. 1879 and 1880, p. 24; J.B. Thoburn, A Standard History of Oklahoma(15 vols., Chi.,1916) vol. 5,p. 432; C.H. Hazelugg, A New History of Kansas (Topeka, 1895),p.161.
115. Mo. R.R. Comm. 1879 and 1880, p. 28; Andreas, Kansas, p. 251; Monroe and Shelby Counties, p. 252; History of Vernon County, Missouri (St. Louis, 1887), p. 358.

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of Kansas. Construction was continued, and late in 1872 the road reached the Red River, operating its first train to Denison on January 1, 1873.[116] The road was also completed during the early seventies from Hannibal, Missouri, to a junction with the main line at Parsons, Kansas.[117] This branch gave connections with the Missouri Pacific and the Hannibal and St. Jo.

The first great impetus toward the development of the railroad net in the second tier of trans-Mississippi states came in the latter sixties and early seventies. The St. Joseph and Denver City may be taken as a typical example. Starting as a local enterprise in the latter fifties, it built from opposite St. Joseph (as the terminal of the Hannibal and St. Jo.) to Wathena in 1860. In 1862 it became the St. Joseph and Denver City, and in 1866 received a Congressional land grant.[118] In the same year it was reorganized and consolidated with the Northern Kansas Railroad and Telegraph Company and started further construction, so that by 1872 it had been completed from St. Joseph to Hastings, Nebraska.[119][120]

116. Wilder, Kansas, p. 598; Thoburn, Okla., p.435; Hardy and Roberts, p. 204.

117. Andreas, Kansas, p. 251; Traveler's Guide Jan. 1874, No. 378.

118. See references in Chap. II.

119. Neb. R.R. Comm. 1888, p. 132; Compendium of History Reminiscence and Biography of Western Nebraska (Chi.,1909),p.109.

120. Neb. R.R. Comm. 1888, p. 133; Buchanan County, p.579; Gray's Dompbian County, p. 134; Western Nebraska, p. 109; Traveler's Guide Jan. 1874, p. 372.

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The Union Pacific act of 1862, besides providing for a main line, had also made provision for several branches. The ones from Sioux City and from St. Joseph have already been mentioned. A third was a line from Kansas City to a connection with the Union Pacific near the 100th meridian. This portion went to the Leavenworth, Pawnee and Western, chartered in 1855.[121] and which changed its name to the Union Pacific - Eastern Division at this time.[122] Construction was begun in 1863, and by 1864 the road was opened to Lawrence.[123] Work progressed slowly because of the war, and in 1866 the time for completion was extended and the route changed so that connection could be made with the Union Pacific at a point not more than fifty miles west of Denver.[124] Construction continued consistently from this time, and in January, 1867 a large excusrion party, headed by Simon Cameron, was taken over the line as far as Ft. Harker, Kansas.[125] By the statute of March 3, 1869, the name of the road was changed to the Kansas Pacific, and the western part of the line was assigned to the Denver Pacific Railway and Telegraph Company.[126] The entire Kansas

121. Cruise, Early Days, p. 534; Kan. R.R. Comm. 1883, p. 85; Hull, Railroads, p. 38.

122. Am. R.R. Jour. 1863, p. 112, p. 641; Cruise, Early Days, p. 536.

123. Cruise, Early Days, p. 540; Am. R.R. Jour. 1864, p. 536.

124. Statutes at Large, Vol. 14, p. 79, p. 355.

125. Cruise, Early Days, p.540; Kansas and the County on the Line of the Union Pacific Railway, Eastern Division (Phila., 1867), pp. 9-11 presents a very interesting account.

126. Statutes at Large, Vol. 15, p. 348.

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City-Denver line was opened in 1870.[127]

The Denver Pacific was chartered in 1867 to build from Denver to a junction with the Union Pacific. Arrangements were made with the Union Pacific to build the road, but the Union Pacific was unable to fulfill the terms because of its financial embarrassment, and the contract was turned over to the Kansas Pacific.[129] The Kansas Pacific completed its own line to Denver and the Denver Pacific to Cheyenne, securing control of the latter road.[130] Thus there was formed a parallel and competing line to the Union Pacific, which by the terms of the original Pacific railroad act had to be given fair treatment. This situation was later utilized by Gould in his attempt to control the Union Pacific.

The third line to build across the second tier of states was the Atchison, Topeka and Santa Fe, which in large part was the outgrowth of the dreams of Cyrus Holliday in the latter fifties.[131] The original project was embraced in the charter of the Atchison and Topeka (1859), which provided for a road from Atchison to Topeka and then west in the direction of Santa Fe, and a

127. R.R. Gazette, Vol. 1, p. 11, p. 586; Kan. R.R. Comm. 1883, p. 85; Cruise, Early Days, p. 540; J. E. Smiley, History of Denver with outlines of the Earlier History of the Rocky Mountain Country (Denver, 1903), p. 594.

128. Frank Hall, History of the State of Colorado (4 vols. Chi.,1889), Vol. 1, pp. 421-429; History of Clear Creek and Boulder Valleys, Colorado (Chi.,1880), p. 180.

129. Smiley, Denver, pp. 591-3; Hall, Colorado, I, pp. 430-435.

130. Smiley, Denver, p. 442; S.T. Sopies, "Denver's First Railroad," The Trail, Vol. 1 (1908), p. 5; Traveler's Guide Sept. 1870, p. 224.

131. G.D. Bradley, The Story of the Santa Fe (Boston,1920), p.5. This work is the most complete account of the Santa Fe to 1887, but tends to be biased in favor of the company.

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branch south toward the Gulf.[132] Both the main line and the branch were aided in 1863 in the Congressional land grant to Kansas. The main line was given to the Atchison and Topeka, reorganized as the Atchison, Topeka and Santa Fe, while the southern branch went to an independent company - the Leavenworth, Lawrence and Galveston (originally the Leavenworth, Lawrence and Ft. Gibson).[133] The branch was acquired by the Joy interests and was completed by them to the state boundary by 1873, although it was leter added to the main line.[134]

The Atchison, Topeka and Santa Fe itself did not immediately fulfill the great expectations which it had engendered. In 1864 it was aided by a state act allowing county subscriptions, and the same year Holliday went to New York to try to enlist eastern capital. The war prevented any effective assistance, and it was 1868 before it was possible to start construction. A contract to build the entire Kansas line had been made in 1867, but nothing was done.[136] In 1868 the contract was assigned to T. J. Peters of Cincinatti, who was also a heavy stockholder, and provision was made that part of the payment should be made in stock

132. Atchison, Topeka and Santa Fe Railroad Company - Embracing charter of company, congressional land grant, Kansas Legislative Land Grant (N.Y., 1864), pp. 3-9; C.H. Gleed, "The Atchison, Topeka and Santa Fe," in The Cosmopolitan, Vol. 14 (1893), p. 466; Kan. R.R. Comm. 1883, p. 47.

133. Statutes at Large, Vol. 12, p. 772.

134. Traveler's Guide July, 1874, No. 392. H.H. Hunnewell, who was closely identified with the Santa Fe, became president in 1874.

135. Atchison, Topeka and Santa Fe - pamphlet of 1878, p. 19.

136. Gleed, Santa Fe, p. 466; Bradley, Santa Fe, p. 74.

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and bonds.[137] Owing to this arrangement the control gradually passed from the hands of the western originators, and by 1869 had become centered in a group of New England financiers; Henry Keyes of Newbury, Vermont, became president in that year.[138]

Construction progressed steadily after 1868; by 1872 the road had reached the state line,[139] and in 1873 was completed to Granada, Colorado.[140] In the same year Henry Strong became president.[141] The Santa Fe was particularly fortunate in securing traffic; with good terminal facilities, it secured a large share of the cattle trade,[142] and was able to pay dividends as early as 1879. This cattle trade centered at Dodge City, five miles from Fort Dodge, and made that town one of the best known cattle centers of the west. The Santa Fe also was able to build a branch to Wichita by 1873,[143] and in sharp contrast to the vast majority of western roads, was able to continue construction in the years immediately after the panic of 1873.

Two other scenes of railroad endeavor must be noted before the picture is complete. The first of these was Colorado,

137. Ed. Blair, History of Johnson County, Kan.(Lawrence, 1915), p. 213; Hazelrigg, Kansas, p. 158.
138. Poor's Manual 1870-1, p. 236.
139. Kan. R.R. Comm. 1883, p. 47; Hazelrigg, Kansas, p.159.
140. History of Arkansas Valley, Colorado (Chi.,1881), p. 846; Traveler's Guide Jan. 1874, p. 377.
141. Gleed, Santa Fe, p. 467 gives a list of the presidents to 1889. Strong resigned in 1874 and did not start his real work until several years later (1877).
142. Bradley, Santa Fe, pp. 83-88; Annual Report 1875, p. 28.
143. Traveler's Guide, Jan. 1874, No. 377.

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which had been a very agressive community from the time of its first great increase of population in the late fifties. Denver in particular was very active. It failed to get the Union Pacific to build through the city, but succeeded in getting the Denver Pacific, and by means of the Kansas Pacific-Denver Pacific line had direct communication with the east as well as a connection with the main line of the Union Pacific. Then the Santa Fe started to build, and by 1870 it had become evident that the line would be completed through southern Colorado, entirely missing Denver. To at least minimize this misfortune, local enterprise started several railroad projects, all having a common center at Denver. The most important of these was the Denver and Rio Grande, organized in 1870 to build south from Denver toward Santa Fe to head off the Atchison road.[144] Gen. W. J. Palmer was the moving spirit, and construction was started immediately, mostly on the basis of Philadelphia capital.[145] By 1873 this narrow-gauge road had gotten as far south as Pueblo,[146] and the next year it started its western extension from that city.[147] Unfortunately, its financial backing was none too strong, and during the years of financial depression that followed, the Santa Fe was able to build more rapidly, and to secure control of the situation.

144. Hall, Colorado, Vol. 1, p. 498; Smiley, Denver, p. 604.

145. R.R. Gazette, Vol. 3, pp. 173,216,280; Clear Creek and Boulder Valleys, p. 182.

146. Arkansas Valley, p. 778; Smiley, Denver, p. 605; Hall, Colorado, Vol. 1, p. 507.

147. Traveler's Guide Jan. 1874, No. 346.

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The other center of railroad construction was the Mormon settlement in Utah. The Mormons had exerted every possible influence in order to have the Union Pacific built through Salt Lake City,but when it became certain that it would not strike that place the utah Central was organized,[148] being opened from Salt Lake City to Ogden early in 1870.[149] The Utah Northern and the Utah Southern were organized in 1871,[150] and the Utah and Nevada in 1872.[151] In all these enterprises, amounts varying from twenty to sixty miles were built by 1873. They were all backed by the Mormons, and headed by Brigham Young. The idea was not to make a railroad system complete in itself, or even to do any extensive building, but only to furnish the Mormon communities with transportation facilities.[152] This purpose being accomplished, the roads were all sold to the Union Pacific within ten years. The practical experience for their building was acquired through the Union Pacific. Brigham Young and other Mormons had sub-let numerous contracts on the union Pacific, and had thus secured the experience which later enabled them to build their own lines successfully.

148. Organized in 1869, E. W. Tullidge, The History of Salt Lake City and its Founders (Salt Lake City,1886), p. 711. O. F. Whitney, History of Utah (4 vols., Salt Lake City, 1893), Vol. 2, p. 261.

149. Whitney, Utah, Vol. 2, pp. 262-268, and Tullidge, Salt Lake City, pp. 712p717 give description of the opening.

150. Tullidge, Salt Lake City, p. 720; Whitney, Utah, Vol. 2, p. 269.

151. Bancroft, Utah, p. 758.

152. Whitney. Utah, Vol. 2, p. 260.

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The immediate result of the railroad building just subsequent to the Civil War was unrestricted and ruinous competition, particularly in the case of the through lines from Chicago to the Missouri River towns. As yet there was little competition for local traffic, but the through business from Chicago to Omaha was the occasion of much rivalry. By the end of the sixties conditions had become so bad that a change was absolutely necessary, and consequently the three through lines between these points - the Chicago, Burlington and Quincy, the Chicago and Northwestern, and the Chicago, Rock Island and Pacific came to an understanding known as the "Iowa Pool". By this agreement the rates between Chicago and Omaha on the three lines were made the same, forty-five per cent of the passenger and fifty per cent of the freight earnings were allowed for operating expenses, and the remaining receipts were divided evenly between the companies concerned.[154] The division worked equitably to the roads, was generally supported by the sentiment of the country at the time, and continued in operation for over fifteen years.

Another phase of the Chicago-Missouri River trouble was the cattle trade. In the latter sixties as this business increased in importance, the competition between the roads catering to it became more prevalent. To meet the situation, rep-

153. Tullidge, Salt Lake City, p. 711; Whitney, Utah, Vol. 2, p. 244; Bancroft, Utah, p. 754.

154. 57th Cong., 1st Sess., House Document 380, p.333; Ia. R.R. Comm., 1878, pp. 48-49.

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resentatives of the various interested roads met at St. Louis in 1871 and fixed the rates for cattle from various points in Missouri and Kansas. An attempt was made to put the roads on an equal footing, and various towns such as Seneca, Baxter Springs, Chetopa and Abilene were given a flat rate of one hundred and fifteen dollars per car to Chicago.[155]

During this period there was no standard time in use, and the necessity for some agreement as to train connections, etc., was an additional influence in bringing the railroads together. The first recorded meeting on the question of time was held at St. Louis in 1872, with twenty-three railroads represented.[156] After 1874 the meetings became regular, and eventually led to the adoption of a standard time for the entire country.

While the period to 1873 is characterized by the beginnings of western railroad cooperation, it is also strongly marked by a changed attitude on the part of the population of the west. The earlier generation that had supported railroads enthusiastically was giving place to a new generation raised under different conditions. The trunk line expansion had been carried forward by means of the acquisition of local roads, which could ordinarily be secured because local capital proved insufficient for their completion. This condition proved to be the opportunity for the

155. R.R. Gazette, Vol. 3, p. 70. Ringwalt, p. 273, describes the "cattle evener's pool" of 1875 to distribute this trade equitable over the eastern trunk lines. 57th Cong., 1st Sess., House Doc. 350, pp. 336-337, and Ringwalt, pp. 276-278, gives a list of pools that were formed.

156. Proceedings of the General Time Convention and its Successor the American Railway Association, Vol. 1, p. 681.

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larger Chicago roads to secure control, and instead of companies headed by local men, the people found themselves confronted more and more by foreign corporations. Most of these rapidly expanding roads were unable to pay dividends, and the lack of profits made local stock payments almost impossible to meet. Consequently many of the local holders sold their stock or bonds at a low figure. This process was hastened by numerous cases of reorganization and foreclosure, which ordinarily had the result of squeezing out the small stockholders. Consequently, instead of locally owned and operated roads, there was a change to foreign corporation control, and a corresponding change in viewpoint on the part of the people that lived in the territory through which the roads passed.

The changing control of the railroads brought into additional prominence the question of rates. Most western railroads were over-capitalized, because their securities had to be sold below par - very frequently the stock being given as a bonus on the bonds, Over-capitalization added to over-building made it necessary for them to have as large receipts as possible, and led to high rates, pools, and rate agreements. As a result the western farmer, instead of finding the railroads a panacea for all economics ills, was presented with high rates, railroad consolidation, and foreign control. The panic of 1873 and the ensuing depression was heightened by several years of bad crops, and the result was an entire change of viewpoint.

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The foregoing factors present only one possible outcome - anti-railroad feeling, with attending attempts at legislative regulation. The agitation had its center in Illinois, was particularly strong in Wisconsin, Minnesota, Iowa and Missouri, and reached all of the west in some form or other during the first half of the seventies. It is best marked by the railroad commission laws of Minnesota, 1871 and 1874, Missouri 1875, California 1876, and Iowa 1878, and by the anti-railroad provisions of the constitutions made during the period - Arkansas 1874, Missouri 1875, Nebraksa, 1875, Colorado 1876, Texas 1876, and California 1879. The California law of 1876 proved to be a farce. The Iowa law of 1878 was really only an addition to the law of 1874, which provided for maximum rates. These cases showed the first real series of attempts to control the railroads.

157. General Laws of Minnesota 1871, pp. 56-59.
158. General Laws of Minnesota 1874, pp. 140-156.
159. S. J. Buck, The Granger Movement (Cambridge,1913), p. 195; Mo. R.R. Comm. 1878, pp. 29-31.
160. Buck, Granger Movement, p. 197; Cal. R.R. Comm. 1877-8, pp. 1-3.
161. Gen. Laws of Iowa 1878, Chap. 77.
162. Constitution of Arkansas 1874, Art. 12.
163. Constitution of Missouri 1875, Art. 12.
164. Constitution of Nebraska 1875, Articles 11 and 12.
165. Constitution of Colorado 1876, Articles 11 and 15.
166. Constitution of Texas 1876, Articles 3 and 10.
167. Constitution of California 1879, Articles 4,12 & 16.
168. Buck, Granger Movement, p. 169.

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The details of the anti-railroad movement, with its attendent laws,[169] are not within the realms of this study. The results were negligible as far as railroad construction was concerned. Although the railroads pleaded that the rates established by comissions having such power (as in Minnesota and Missouri), were so low as to be confiscatory, no such result is observable. Quite generally the railroads continued building until about 1872 or 1873, and then found themselves in such financial straits that further work proved impossible for several years. Normal economic causes, rather than anti-railroad legislation, were back of the depression of the middle seventies.

The anti-railroad agitation came into contact with the central government in the legislative and judicial departments. The railroads appealed to the courts against this western state legislation, which they claimed was unconstitutional, and in 1876 the Supreme Court decided that the "Granger" laws were valid.[170] The matter of national regulation was brought before Congress in the Windom report of 1874 and in the Reagan report of 1878. The Windom report advocated the prohibition of the consolidation of competing lines, an advisory Bureau of Commerce, and the building by the United States of several trunk lines for

169. Buck, Granger Movement is the standard work on the subject, and presents an excellent detailed account of the agitation and its effect, particularly in Illinois, Wisconsin, Minnesota, Iowa and Missouri.

170. 94 U.S. 113 et seg.

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regulatory purposes.[171] The Reagan report advocated a prohibition of personal discrimination, rebates, combinations of any kind, and the adoption of a long and short haul clause.[172] The attitude of Congress during the period was that the states be allowed to take care of the matter themselves, and in this view it was supported by the decision of the Supreme Court.

171. Report of the Select Committee on Transportation Route to the Seaboard, in 43rd Cong., 1st Sess., Sen. Rpt. 307, (2 vols.).

172. Regulation of Inter-State Commerce. Report of Mr. Reagan, from the Committee on Commerce, 45th Cong., 2nd Sess., House Report 245.

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Railroad Construction 1865 - 1872.

Date	Origin	Old Terminus	New Terminus	Complete Mileage	New
	Arkansas Central- Arkansas Midland from 1892.				
1872	Helena		Clarendon		48
	Atchison and Nebraska.				
1871	Atchison		Table Rock		85
1872	Atchison	Table Rock	Tecumsen	99	14
1873	Atchison	Tecumseh	Lincoln	148	49
	Atlantic and Pacific- St. Louis and San Francisco from 1870.				
1867	merged with Southwest Branch of the Pacific Railroad.				
1870	acquired South Pacific.				
	St. Louis	Springfield	Peirce City	291	122
1871	St. Louis	Peirce City	Oseuma	352	61
1872	St. Louis	Oseuma	Vinita	369	17
	Boone County and Jefferson City.				
1867	Centralia		Columbia		22
1870	North Missouri.				
	Burlington and Missouri River (Ia.).				
1867	Burlington	Ottumwa	Chariton	131	56
1868	Burlington	Chariton	Afton	181	50
1869	Burlington	Afton	Council Bluffs	293	112
1870	Burlington	Council Bluffs	Omaha	294	1
	Red Oak		E. Neb. Cy.		50
	Plattsmouth		Lincoln		55
1871	Plattsmouth	Lincoln	Crete	75	20
	Chariton		Leon		15
	Villisca		Clarinda		16
1872-3	Plattsmouth	Crete	Kenesaw	116	41
	Kenesaw		Kearney		25
	Creston		Hopkins		44
	Omaha		Oreopolis		17
	Beatrice		Crete		20
1877	merged in C. B. and Q.				

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Burlington and Missouri River (Neb.).

1870	Plattsmouth		Lincoln		55
1871	Plattsmouth	Lincoln	Harvard	140	85
1872	Plattsmouth	Harvard	Kearney Jct.	191	51
1873	Omaha		Oreapolis		17
	Beatrice		Crete		31

Burlington and Southwestern.

1870	Burlington		Ft. Madison		19
1871	Burlington	Ft. Madison	Bloomfield	84	65
1872	Burlington	Bloomfield	Cincinatti	113	29
1873	Burlington	Cincinatti	Unionville	128	15

Burlington, Cedar Rapids and Minnesota- Burlington, Cedar Rapids and Northern after 1873.

1869	Burlington		Wapello		29
1870	Burlington	Wapello	W. Liberty	62	33
1871	Burlington	W. Liberty	Nora Jct.	210	148
1872	Burlington	Nora Jct.	Plymouth	219	9
	Postville		Oelwein		45
1873	Muscatine		Riverside		32
	Vinton		Traer		24

Cairo and Fulton.

1871	Little Rock		north		20
1872	Fulton		Beebe	159	159

includes preceding line

1873	Ozark		Texarkana	285	126

includes preceding line

1871 St. Louis, Iron Mountain and Southern.

California and Oregon.

1867	San Francisco		Wheatland		130
1868	San Francisco	Wheatland	Yuba	135	5
1869	San Francisco	Yuba	Marysville	142	7
1870	San Francisco	Marysville	Chico	186	44
	Central Pacific.				

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Cedar Rapids and Missouri River.

1866	Cedar Rapids	Poone	Woodbine	239	117
1867	Cedar Rapids	Woodbine	Omaha	273	34
	C. and N. W.				

Chicago and Alton.

1871	Louisiana		Mexico		51
1872	Mexico		Jefferson City		51

Chicago and Northwestern.

1871	Cedar Rapids and Missouri River.				
1872	Winona and St. Peter.				
1873	Winona	Gary	Kamneska	336	39
	Chariton		Anamosa		71

Chicago, Burlington and Quincy.

1870	Burlington		Keokuk		43

Chicago, Rock Island and Pacific- formerly Mississippi and Missouri.

1867	Davenport	Marengo	Des Moines	175	91
1868	Davenport	Des Moines	Middle River	227	52
1869	Davenport	Middle River	Council Bluffs	316	89
1871	Des Moines		Indianola		42
	Somerset		Winterset		6
1872	Washington		Sidney		28
1873	Wilton		Leavenworth		321
	Atchison Jct.		Atchison		30

Colorado Central.

1870	Denver		Golden		17
1872	Denver	Golden	Black Hawk	39	21
1873	Fork's Creek		Floyd Hill		1
	Golden		Longmont		41

Council Bluffs and St. Joseph.

1867	Council Bluffs		Hamburg		50
1868	Council Bluffs	Hamburg	St. Joseph	129	79
	Consolidated to form Kansas City, St. Jo. and Council Bluffs.				
1870	St. Joseph		Norway		61
1871-3	St. Joseph	Norway	Hopkins	70	9

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Dakota Southern- Sioux City and Dakota from 1879.

1873	Yankton	Elk River	Sioux City	62	22

Denver and Rio Grande.

1871	Denver		Colorado Springs		75
1872	Denver	Colorado Springs	Pueblo	120	45
	Pueblo		Coal Banks		35
1873	Denver	Pueblo	Canon City	160	25

Denver Pacific.

1869	Cheyenne		Evans		59
1870	Cheyenne	Evans	Denver	106	47

Des Moines Valley- formerly Keokuk, Ft. Des Moines and Minnesota.

1866	Keokuk	Monroe	Des Moines	167	34
1869	Keokuk	Des Moines	Grand Jct.	212	45
1870	Des Moines	Grand Jct.	Ft. Dodge	250	38

1874 Broken up; south of Des Moines to the C. R. I. and Pac. (1878), and north of Des Moines to the Minneapolis and St. Louis (1880).

Dubuque and Minnesota.

1871	Savanna		Turkey River		75
1872	Savanna	Turkey River	Lansing	123	53
1873	Savanna	Lansing	La Crosse	189	40
	Sabula		Clinton		16

C. M. and St. Paul.

Dubuque and Pacific.

1866	Dubuque	Ackley	Iowa Falls	143	11

1868 leased to I. C.

Davenport and St. Paul.

1870	Davenport		Maquoketa		43
1871	Davenport	Eldridge	Wyoming	52	41
1872	Davenport	Wyoming	Monticello	69	17
1873	Davenport	Monticello	Fayette	127	53
1879	C. M. and St. Paul.				

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Galveston, Harrisburg and San Antonio- formerly Buffalo Bayou, Prazos and Colorado.

1869	Harrisburg	Alleyton	Columbus	85	3
1873	Harrisburg	Columbus	Schulenburg	108	23

Hannibal and St. Joseph.

1867 Quincy and Palmyra.

1872 Platte County.

	St. Joseph	Weston	Atchison	30	10

1885 becomes part of C. B. and Q.

Hastings and Dakota.

1868	Hastings		Terminus		20
1869	Hastings	Terminus	Lakeville	30	10

1870-3 acquired by C. M. and St. P.

Houston and Great Northern.

1871 Houston Tap and Brazoria.

	Houston		Willis		47
1872	Houston	Willis	Palestine	151	104

1873 consolidated into International and Great Northern.

Houston Tap and Brazoria.

1871 sold to Houston and Great Northern.

Houston and Texas Central.

1867	Houston	Millican	Bryan	100	19
1868	Houston	Bryan	Calvert	103	22
1869	Houston	Calvert	Fremond	148	15
1870	Houston	Fremond	Crosscock	133	14

Washington County Railroad.

1871	Houston	Crosscock	Corsicana	210	41
	Hempstead	Brenham	Austin	115	100
1872	Houston	Corsicana	Denison	338	133
	Fremond		Waco		45

Illinois Central.

1870 Dubuque and Pacific.

Iowa Falls and Sioux City.

	Mona		Waterloo		73

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International.

1871	Hearne		Jewett		46
1872	Hearne	Jewett	Longview	171	125

1873 consolidated into International and Great Northern.

International and Great Northern.

1873 formed by consolidation of the International and the Houston and Great Northern.

	Troupe		Mineola	44
	Phelps		Huntsville	8

Iowa Falls and Sioux City.

1868	Iowa Falls		west		35

leased to I. C.

1869	Iowa Falls	25 miles	Ft. Dodge	49	24
1870	Iowa Falls	Ft. Dodge	Sioux City	184	135

Iowa Railroad Company- formerly Eldora Railroad; Central Railroad of Iowa from 1869.

1869	Ackley		Marshalltown		46
1870	Marshalltown	Ackley	Hampton	59	13
1871	Mason City		Albion	189	130

includes preceding line.

1873	Northwood		Albion		

abandoned shortly later.

Kansas Central.

1872	Leavenworth		Holton		56

Kansas City and Santa Fe.

1870	Ottawa		Olathe		23

Keokuk, Mt. Pleasant and Muscatine.

1869 control by C. B. and Q.

1870	Keokuk	Viele	Burlington		42

Lake Superior and Mississippi- St. Paul and Duluth from 1877.

1868	St. Paul		Wyoming		29
1869	St. Paul	Wyoming	Willow River	98	69
1870	St. Paul	Willow River	Duluth	152	54
	White Bear		Stillwater		12

1872-4 leased to N. P., and again in 1900.

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Leavenworth, Atchison and Northwestern.

1869	Leavenworth		Atchison		25
	Mo. Pac. secured control.				

Leavenworth, Lawrence and Galveston- Kansas City, Lawrence and Southern from 1879.

1867	Lawrence		Ottawa		27
1869	Lawrence	Ottawa	Garnett	52	25
1870	Lawrence	Garnett	Humboldt	86	34
1871	Lawrence	Humboldt	Coffeyville	142	56
1873	Kansas City and Sante Fe.				
	Ottawa	Olathe	Kansas City	59	35
	Cherryvale		Independence		10

Little Rock and Ft. Smith.

1870	Little Rock		Lewisburg		10
1873	Little Rock	Lewisburg	Clarksville	100	90

McGregor and Sioux City.

1869	McGregor	Charles City	St. Paul	212	112
1870	acquired by C. M. and St. P.				
1873	Sioux City		Yankton		53

McGregor Western.

1866	Calmar		Cresco		19
1867	Calmar	Cresco	Le Roy	43	24
1869	McGregor	Calmar	Charles City	89	47
	Concver		Decorah		5

Memphis and Little Rock.

1871	Memphis	completed to	Little Rock	134	46
1873	acquired by Choctaw and Memphis.				

Midland Pacific.

1873	Nebraska City		Seward		83

Milwaukee and St. Paul- later C. M. and St. P.

1870	McGregor and Sioux City.				
	McGregor Western.				
	Minnesota Central.				
	Calmar	Charles City	Clear Lake	84	37

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1871-3	Dubuque and Minnesota.				
	Hastings and Dakota.				
	St. Paul and Chicago.				
	Calmar		Decorah		12
	Calmar	Clear Lake	Algona	126	42
	Hastings		Glencoe		74
	Minneapolis and St. Louis.				
1871	Minneapolis		Carver		23
	Minnesota Central.				
1866	St. Paul	Faribault	Owatonna	67	15
1867	St. Paul	Owatonna	Austin	100	33
	sold to C. M. and St. P.				
	Minnesota Valley- St. Paul and Sioux City from 1869.				
1866	St. Paul	Shakopee	Belle Plaine	47	14
1867	St. Paul	Belle Plaine	Le Suer	62	15
1868	St. Paul	Le Suer	Mankato	86	16
1869	Minneapolis		St. Paul		10
	Minneapolis	Mankato	Lake Crystal	109	23
1870	Minneapolis	Lake Crystal	St. James	132	23
1871	Minneapolis	St. James	Worthington	188	56
1872	Minneapolis	Worthington	Sioux City	280	92
	Missouri, Iowa and Nebraska.				
1873	Alexandria		Centerville		85
	Missouri, Kansas and Texas.				
1870	Junction City		Chetopa		178
	Sedalia		Clinton		40
1871	Junction City	Chetopa	Muscogee	272	94
	Ft. Scott		Parsons		49
1872	Junction City	Muscogee	Red River	428	156
	Holden		Paola		54
1873	Junction City	Red River	Denison	429	1
	Parsons		Hannibal	387	333

includes parts built earlier.

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Missouri Pacific.

1866	Missouri River Railroad.				
1868	Tipton		Boonville		24
1869	Leavenworth, Atchison and Northwestern.				
	Lexington		Sedalia		54
1873	Pleasant Hill		Lawrence		61
	Carondelet		Kirkwood		12
	Missouri River, Ft. Scott and Gulf- formerly Kansas and Neosho Valley; later Kansas City, Ft. Scott and Gulf.				
1868	Kansas City		Olathe		21
1869	Kansas City	Olathe	Ft. Scott	99	78
1870	Kansas City	Ft. Scott	Baxter Springs	159	60
	Missouri Valley- Kansas City, St. Joseph and Council Bluffs from 1870.				
1869	Kansas City	Savannah	Hopkins		133
	controled by C. B. and Q.				
	Napa Valley.				
1865	Suisun		Napa City		14
1868	Napa Jct.		Calistoga		35
	Northern Pacific.				
1870	Duluth		Brainerd		119.
1871	Duluth	Brainerd	Moorhead	221	112
1872	Duluth	Moorhead	Jamestown	324	93
1873	Duluth	Jamestown	Bismarck	425	101
	Tacoma		Kalama		105
	North Missouri.				
1867	Moberly		Brunswick		39
1868	N. Lexington		Lexington Jct.		6
1869	Moulton		Bloomfield		14
	St. Louis	Brunswick	Kansas City	272	90
	Moberly	Macon	Moulton	96	73
1870	Boone County and Jefferson City.				
	Moberly	Moulton	Ottumwa	130	84
1873	Brunswick		Pattonsburg		80
	R. and S. Jct.		St. Jo.		72

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Omaha and Northwestern- Omaha and Northern Nebraska from 1878.

1870	Omaha		Terminus		10
1871	Omaha	Terminus	Herman	35	25
1872	Omaha	Herman	Wisner	105	70

Oregon Central (Ore. and Cal.).

1871	Portland		Albany		80
1872	Portland	Albany	Eugene	110	30
1873	Portland	Eugene	Roseberg	170	90

Pioche and Bullionville.

1873	Pioche		Bullionville		

closed when mines gave out.

Quincy, Missouri and Pacific.

1872	Quincy		Kirksville		70

1880 Wabash secured control.

St. Joseph and Council Bluffs.

1868	St. Jo.		Hamburg		78

St. Joseph and Denver City- St. Joseph and Western from 1875.

1869	St. Joseph		Troy		14
1870	St. Joseph	Troy	Seneca	77	63
1871	St. Joseph	Seneca	Herkimer	118	41
1872	St. Joseph	Herkimer	Hastings	227	109

St. Joseph and Topeka.

1872	Atchison		St. Joseph		25

1876 St. Joseph and Western used the route but built new road.

St. Louis and St. Joseph.

1870	W. Lexington		Lathrop		40

later acquired by Wabash.

St. Louis, Iron Mountain and Southern.- new name from 1874.

1868	Bismarck		Pilot Knob		10
	Mineral Point		Potosi		4
1869	St. Louis	Iron Mountain	Belmont	195	104
1872	St. Louis	Bismarck	Moark	296	215

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	St. Paul and Chicago				
1869	St. Paul		Hastings		22
1870	St. Paul	Hastings	Red Wing	41	19
	Minnesota City		Weaver		13
1871	St. Paul	Red Wing	Winona	103	49
	includes preceding line.				
1872	sold to Minnesota Central (C. M. and St. P.).				
1873	St. Paul	Winona	La Crosse	139	35
	St. Paul and Pacific.				
1866	St. Paul	Elk River	St. Cloud	77	36
1867	Minneapolis		Wayzata		13
1868	Minneapolis	Wayzata	Howard Lake	42	29
1869	Minneapolis	Howard Lake	Willmar	91	49
1870	Minneapolis	Willmar	Morris	146	55
1871	Minneapolis	Morris	Breckenridge	208	57
1872	St. Paul	St. Cloud	Melrose	111	34
	Crookston		Glyndon		64
	Sabula, Ackley and Dakota.				
1871	Sabula		Delmar		23
1872	Sabula	Delmar	Rome	54	21
1873	Sabula	Rome	Marion	87	33
	Sacramento Valley and Placerville.				
1869	Sacramento	Folsom	Shingle Sp.	42	20
	San Francisco and North Pacific.				
1872	San Francisco		Cloverdale		90
	Sante Fe.				
1870	Topeka		Emporia		61
1871	Topeka	Emporia	Newton	134	73
1872	Topeka	Newton	State bound.	418	294
	Topeka		Atchison		50
	Newton		Wichita		27
1873	Atchison	State bound.	Granada	490	68

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Sioux City and Pacific.

1867	Missouri Valley		Sloan		55
1868	Missouri Valley	Sloan	Sioux City	75	20
1869	California Jct.		Fremont		32
1870	Sioux City		Ft. Dodge		124
1872	Missouri Valley	Fremont	Wisner	89	56

Sioux City and Pembina- Sioux City and Dakota from 1872.

1872	Elk Point		Vermillion		13
1873	Elk Point	Vermillion	Yankton	40	25

Southern Minnesota.

1866	La Crosse	Tckan	Houston	22	13
1867	La Crosse	Houston	Rushford	35	13
1868	La Crosse	Rushford	Lanesboro	54	19
1869	Ramsey		Wells		42
1870	La Crosse	Completed to including present line.	Winnebago	172	73

Southern Pacific of California.

1871	San Francisco		Gilroy		80
	San Francisco	Gilroy	Pajaro	99	19
1872	San Francisco	Pajaro	Salinas	118	19
1873	San Francisco	Salinas	Soledad	143	25
	Hollister		Trespinos		6

Southern Pacific of Texas- Texas and Pacific from 1871.

1868	Shreveport		Marshall		42
1869	Marshall		Hallsville		15
1870	Marshall	Hallsville	Longview	24	9
1872	Marshall	Longview	Dallas	146	122

South Pacific (includes Southwest Branch).

1868	Pacific	Polla	Little Piney	89	12
1869	Pacific	Little Piney	Lebanon	132	93
1870	Pacific	Lebanon	Springfield	204	72

later under Atlantic and Pacific.

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Stockton and Copperopolis.

1870	Stockton		Terminus		10
1871	Stockton	Terminus	Oakdale	34	24
1875	acquired by Central Pacific.				

Texas and New Orleans

1870	Houston		W. Liberty		35
1876	Houston	W. Liberty	Orange	106	71
	acquired by S. P.				

Tyler Tap.

1871	Tyler		Ferguson		21
1879	acquired by Texas and Ft. Louis.				

Union Pacific, Central Branch- formerly Atchison and Pike's Peak.

1868	Atchison		Waterville		100

Union Pacific, Eastern Division- Kansas Pacific from 1868.

1865	Wyandotte		Perry		50
1866	Kansas City		Junction City	138	88
	includes preceding line.				
1867	Kansas City	Junction City	Hays	289	151
1868	Kansas City	Hays	Sheridan	405	116
	Leavenworth		Lawrence		33
1869	Kansas City	Sheridan	Kit Carson	486	81
1870	Kansas City	Kit Carson	Denver	638	152

Utah Central.

1870	Ogden		Salt Lake City		37

Utah Northern.

1872	Bingham		Franklin		61

Utah Southern.

1871	Salt Lake		Sandy		13
1872	Salt Lake	Sany	Lehi	31	15
1873	Salt Lake	Lehi	Provo City	48	17

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Virginia and Truckee.

1869	Reno		Carson		21
1871	Reno	Carson	Steamboat Sp.	33	2
1872	Reno	Steamboat Sp.	Virginia City	52	19

Western Pacific.

1866	San Jose		Vallejo		20
1869	Sacramento		San Francisco		90

1870 acquired by Central Pacific.

Winona and St. Peter.

1866	Winona	Kasson	Owatonna	90	26
1869	Winona	Owatonna	Waseca	105	15
1869	Winona	Waseca	Janesville	115	10
1870	Winona	Janesville	St. Peter	128	23
1871	Winona	St. Peter	New Ulm.	167	29
1872	Winona	New Ulm	Gary	287	120
1873	Winona	Gary	Kampeska	326	39

further information under C. and N. W.

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Chapter V. The Transcontinental Period (1873-1884).

The panic of 1873 brought railroad construction to almost a complete standstill, and for several years practically nothing was done. In the subsequent revival of the late seventies and early eighties the dominant note was the completion of the transcontinental lines. Three entirely new lines were opened, and several other roads were built to some connection that produced an almost entirely new line. By 1883-4 the railroad map of the western half of the United States had become recognizable, and future construction consisted almost entirely of filling in the gaps. The immediate result was the disappearance of the frontier, and in this work the new transcontinental roads were the greatest single factor.

The Central Pacific-Southern Pacific system was one of the most active during the period. The dominating motive back of the men who controlled it was to monopolize the transportation system of California. From the time the Central Pacific completed its main line, this is the force that appears throughout all operations. The early seventies saw the Southern Pacific of California building south to forestall any local competition, and to prevent the construction of any future independent transcontinental lines through southern California. Construction was continued in the years immediately following the panic of 1873,

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and by 1877 had reached Yuma, one of the two available crossings of the Colorado River.[1] At this point it came into conflict with the Texas and Pacific, under Colonel Scott, that had a charter from Congress for the whole distance from Marshall, Texas, via El Paso to the Pacific coast. The Yuma crossing was the only available route for the road if it hoped to finish a complete line, but at this time construction had reached only to Ft. Worth, Texas, and consequently the company was in no position to wage a successful contest with the Southern Pacific. The Texas and Pacific was given permission in October, 1876, to break ground for a bridge over the Colorado river, but in the following month the order was revoked. In 1877 both roads were given permission to cross temporarily the Indian reservation, and under this provisional order the Southern Pacific, that was on the spot, succeeded in completing a permanent bridge and track. When the permission was later withdrawn, the stopping of train service called forth such a large amount of protest that Congress gave the Southern Pacific possession of the desired right of way.[2]

This contest over the possession of the one available crossing of the Colorado river was really only an echo of the

1. Cal. R.R. Comm. 1877 and 1878, p. 314; Bancroft, Arizona and New Mexico, p. 604; Traveler's Guide July 1877, No. 342.

2. Location of Southern Pacific and Texas Pacific Railroads. Letter from the Secretary of War concerning the location of the Southern Pacific and Texas Pacific Railroads through Fort Yuma reservation and across the Colorado River, in 45th Cong., 2nd Sess., House Ex. Doc. 33 gives all the essential history of the case, including the order and correspondence of the War Department.

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larger fight in Washington. Scott was seeking a bond subsidy for the Texas and Pacific in order to make possible the completion of his road. The Southern Pacific people fought this measure, and offered to build the road without any subsidy. The chief argument that the Texas and Pacific group advanced was that the building of the Southern Pacific would produce a monoply of transcontinental communication in the hands of the Central Pacific men. To take away the appearance of monoply, the Southern Pacific was divorced from the Central Pacific as much as possible. Huntington resigned from the presidency of the Southern Pacific and D. D. Colton took his place. The Contract and Finance Company was dissolved because of its recognized connection with the Central Pacific, and the Western Development Company formed in its stead. Although the appearance of monoply was thus removed, actual conditions still remained the same - Colton was in close connection with the Central Pacific, the Western Development Company was composed of Stanford, Huntington, Crocker, Hopkins and Colton, and Huntington went east to buy supplies for both roads and to lobby at Washington. Huntington was able to block the effort of Scott to get aid from Congress, and at the same time the Southern Pacific secured a right of way from Arizona and New Mexico, and started building east. By this time Scott realized that his position was hopeless and sold out to Jay Cooke, who made an agreement with the Southern Pacific in 1881 which called for the completion of the Texas and Pacific to a junction at El Paso, and a future

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division of traffic.[3]

By 1880 the Southern Pacific had reached Deming, New Mexico,[4] and the following year the Santa Fe reached that point, thus producing the second transcontinental line.[5] The Texas and Pacific was constructed rapidly after Gould secured control, and in 1882 made connections with the Southern Pacific a short distance east of El Paso.[6] In the following year the Galveston, Harrisburg, and San Antonio, which had been building west steadily during the seventies, came to a junction with the Southern Pacific.[7] Added to the Texas and New Orleans, the Louisiana Western, and Morgan's Louisiana and Texas, these lines formed a complete route from New Orleans to San Francisco.[8] In 1883 all the lines composing this route were leased to the Southern Pacific of California.[9]

By the middle of the seventies the Central Pacific-Southern Pacific combination was in control of eighty-five per cent of the railroads of California, and held a monopoly of the state's transportation. From this time on the attempt was made either

3. Good accounts of this struggle are given in 48th Cong., 1st Sess., House Rpt. 62, in Bancroft, California, Vol.7 pp. 610-1, and in J. G. Dixon, The Construction of the Southern Pacific Railroad, (U. of Wis., 1921), an M. A. thesis.
4. Traveler's Guide Jan. 1881, pp. 197-199.
5. See account under the Santa Fe.
6. Poor's Manual 1887, p. 791.
7. Hardy and Roberts, p. 205; Traveler's Guide June 1883, p. 271.
8. The road from the Sabine river to New Orleans was not built until later, connection being made by steamers.
9. Poor's Manual 1887, p. 888.

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to forestall any railroad construction, or, if that failed, to drive the line out of business after it had been built. Most of the Central Pacific roads were held by stock ownership, supplemented by a lease; the Southern Pacific Company was formed in 1884 to coordinate the system. A Kentucky corporation, it had practically unlimited powers except in the state of its formation, and leased the whole group of lines - the Central Pacific, the Southern Pacific, the Houston, Harrisburg and San Antonio, etc.[10] The only significant California railroad that was not included in the Southern Pacific system was the San Francisco and North Pacific, which had been built some ninety miles north from San Francisco before 1883.[11]

Two transcontinental connections made by the Southern Pacific by 1883 have already been mentioned; the third was with the Atchison, Topeka, and Santa Fe. The Santa Fe was able to keep on building after the panic of 1873, and reached Pueblo in 1876.[12] In 1877 Strong became vice-president and general manager, and in 1881 president;[13] under his control the road was pushed vigorously, and had its greaest period of expansion. 1878 found

10. A. Sutro, The People of Kentucky Disgraced (1894) contains a reprint of the law, and is a bitter arraignment of the whole system. Cal. R.R. Comm. 1885, pp. 44-46 also contains the law.

11. Traveler's Guide Jan. 1874, No. 485. Bancroft, California, Vol. 7, pp. 583-584, contains an account of the origin and building of the road. It had been completed to Cloverdale in 1873, and remained there until the eighties.

12. Hall, Colorado, Vol. 2, p. 367; Traveler's Guide July 1876, No. 409.

13. Rehabiliation of the Santa Fe, p. 3.

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the Santa Fe occupying the only good route from Colorado to New Mexico (the Raton pass) in advance of the Denver and Rio Grande, and rapidly building south.[14] In 1880 it was opened to Albuquerque, with a branch to Santa Fe,[15] and in 1881 connection was made with the Southern Pacific at Deming, New Mexico, thus forming the second complete transcontinental line.[16] Early in the eighties almost the entire road had to be re-ballasted and steel rails substituted for iron because of the heavy traffic.[17]

The main Pacific connection of the Santa Fe was to be made over the Atlantic and Pacific. This line was a part of the St. Louis and San Francisco road, which was unable to build it. In order to aid both roads, an agreement was made in 1880 whereby the St. Louis and San Francisco was to use the tracks of the Santa Fe from Wichita (later Halstead) to Albuquerque, in return for which the Santa Fe was given half control of the Atlantic and Pacific; the Atlantic and Pacific was to be built west from Albuquerque to the coast, its bonds being disposed of in equal parts by the two interested roads.[18] Under this agreement work was started immediately. This situation threatened the Southern Pacific control of transcontinental traffic and its monopoly in California. Two

14. R. C. Twitchell, The Leading Facts of New Mexican History (2 vols., Cedar Rapids, 1912), Vol. 2,p. 425; Bradley, Santa Fe, pp. 150-154; R. Thomas, "The Railroads and the Square Deal. The Story of the Santa Fe," in World's Work, Vol. 10 (1905), p. 6618.

15. Twitchell, New Mexico, Vol. 2, p. 426; Bancroft, Arizona and New Mexico, p. 772.

16. Twitchell, New Mexico, Vol. 2, p. 426; Bancroft, Arizona and New Mexico, p. 772.

17. Circular No. 54, Jan. 3, 1881 and Annual Report 1889, p. 6.

18. Annual Report 1884, pp. 26-27 gives the details.

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plans were used to meet the difficulty - the Southern Pacific constructed a branch from Mojave to the Needles, the only good crossing of the Colorado river besides Yuma, and Huntington and Gould (controlling the Texas and Pacific) bought control of the St. Louis and San Francisco. In this way the Santa Fe was bothered on all sides, and in 1882 agreed to give up its plan of completing its own line to the coast.[19] A junction with the Southern Pacific was made in 1883.[20] Conditions changed in 1884 when the Atlantic and Pacific passed out of the hands of the Southern Pacific and was secured by the Santa Fe. With the threat of building its own line, the Santa Fe secured the purchase of the Mojave-Needles line, and trackage rights to San Francisco.[21]

The Santa Fe was never satisfied while dependent upon another road for through connections, and as early as 1879 the Sonora Railway Company was organized for a connection with the Gulf of California. In 1880 work was started at Guaymas on the Gulf of California and in 1881 at Benson, New Mexico, which was reached by a traffic agreement secured through a threat to build. Progress was made very leisurely, because the Santa Fe expected toto make more direct coast connections via the Atlantic and Pacific. The trouble in 1882 over the Atlantic and Pacific resulted in hastening the work, and through connections were made in Octo-

19. Bradley, Santa Fe, pp. 221-224.
20. Bancroft, Arizona and New Mexico, p. 604; Annual Report 1883, p. 18.
21. Annual Report 1885, p. 32; Bradley, Santa Fe, pp. 238-239.

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ber of that year. Connection to Mexico City was made over the Mexican Central, completed early in 1884. This line never did more than to threaten the Southern Pacific. What the Santa Fe really wanted was a direct line through California, and when it was acquired the Mexican line was sold.[22]

Several other connections which the Santa Fe made during the period must be noted; in 1875 the Kansas City, Topeka and Western was leased, giving a direct line from Topeka to Kansas City;[23] after the break-up of the Joy lines, and gave a road to the southern boundary of Kansas;[24] the Kansas City, Lawrence and Southern, formed by consolidation,[25] was acquired in 1880;[26] Denver was entered in 1882 under a traffic agreement with the Denver and Rio Grande;[27] and a connection with San Diego was projected through the California Southern, chartered 1880, and the California Southern Extension, chartered 1881.[28]

The road causing the Santa Fe the most trouble was the Denver and Rio Grande. Having been built as far as Pueblo before the panic of 1873, it was unable to carry on any very considerable construction until the latter seventies. In 1878 it

22. Bradley, Santa Fe, pp. 224-226.
23. Traveler's Guide Jan. 1876, No. 537; Blair, Johnson County, p. 213; Kan. R.R. Comm. 1883, p. 75.
24. Traveler's Guide July 1874, No. 392.
25. Kan. R.R. Comm. 1883, p. 75.
26. Ibid., p. 75; Blair, Johnson County, p. 214. It was bought by the Kan. Cy., Topeka and Western, a Santa Fe company.
27. Smiley, Denver, p. 615.
28. Cal. R.R. Comm. 1883, p. 214. They were consolidated in 1881.

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was beaten to Raton Pass by the Santa Fe, and started building west from Cuchara Junction, south of Pueblo. By 1880 the line had been constructed west and south to Espanola, a short distance north of Santa Fe.[29] During these same years of the latter seventies the Rio Grande and the Santa Fe came to bitter conflict over the route from Pueblo to Leadville. Leadville was booming as a mining center, and the only practical approach was through a canon which permitted but one railroad line. The fight for the control of this line was waged in the internal organization of the companies, in rates, in the courts, and in actual conflict of construction crews. The details of the contest have been discussed frequently at considerable length under the title of the "Rio Grande War". The eventual outcome was that the Rio Grande people were left in control of the pass, and consequently of the whole line.[30]

When the Denver and Rio Grande saw the probable outcome of its fight with the Santa Fe, it began to mature more ambitious plans. It was proposed to continue the Leadville line to the Utah border, and there to make a junction with a Utah line from Ogden and Salt Lake City. For this purpose the Denver and Rio Grande Western was organized in Utah in 1880 and immediately

29. Clear Creek and Boulder Valleys, p. 184; Hall, Colorado, Vol. 2, p. 391.

30. The most complete discussion is given in Bradley, Santa Fe pp. 155-203; see also Gleed, Santa Fe, p. 474, Hall, Colorado, Vol. 2, pp. 369-382, Vol. 3, p. 111, and Smiley, Denver, p. 608.

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started building.[31] The Colorado section of the line was completed to Grand Junction in December of 1882,[32] while the entire line was finished in March, 1883, thus producing a new and independent route from Ogden to Pueblo and Denver, with eastern connections via the Kansas Pacific or Santa Fe,[33] The western division was leased by the original line in 1882,[34] and although it was separated in 1884,[35] and changed its name to the Rio Grande Western in 1889,[36] it remained an integral part of the Rio Grande system through a community of ownership.

The Union Pacific began to revive during the latter seventies and may be spoken of in this connection because it also completed a new transcontinental link during the period. After Scott's attempt at control in the early seventies, Jay Gould became interested in the road, buying a large block of stock in 1873. The largest liability which the Union Pacific had was its debt to the government, and Gould turned his first attention to that,[37] trying to have a sinking fund established by law. The effort failed at this time, and not until 1878, under the Thurman

31. Tullidge, Salt Lake City, p. 722. The road was organized by consolidation.
32. Hall, Colorado, Vol. 2, p. 391; Traveler's Guide June 1883, p. 250.
33. Whitney, Utah, Vol. 3, p. 250; Traveler's Guide June 1883, p. 250.
34. Tullidge, Salt Lake City, p. 722.
35. Ibid., p. 722; Traveler's Guide Jan. 1885, p.277.
36. Whitney, Utah, Vol. 3, p. 250; Traveler's Guide Jan. 1890, p. 337.
37. Dodge, Union Pacific, p. 33.

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Act, was such was such provision made.[38] In the mean time, the road stopped trying to meet its obligations to the government, and turned toward a policy of vigorous consolidation and expansion.

The first attempt of the Union Pacific toward consolidation was very naturally in the direction of its most serious rival - the Denver Pacific - Kansas Pacific line. After a fruitless attempt to either consolidate or purchase,[39] the Union Pacific built a parallel road to Denver.[40] By this time Gould saw the practical significane of the Denver Pacific-Kansas Pacific system, and in 1878 sold out most of his Union Pacific stock and bought control of the Kansas Pacific and the Denver Pacific.[41] In 1879 there was an attempt to consolidate these three roads on the basis of an equal exchange of securities, but the Union Pacific people backed out because of a desire for better terms.[42] Gould immediately went west and bought a controlling interest in the Missouri Pacific, the Kansas Central (parallel to the Kansas Pacific), and the Central Branch of the Union Pacific. With the threat of completing another line to the coast, Gould was able to dictate his own terms, and to secure the consolidation of the Union Pacific, The Denver Pacific, and the Kansas Pacific in 1880.[43]

38. Statutes at Large, Vol. 20, p. 56.
39. Hall, Colorado, Vol. 2, p. 395.
40. Clear Creek and Boulder Valleys, p. 18.
41. 50th Cong., 1st Sess., Sen. Ex., Doc. 51, p. 58.
42. Ibid., p. 59.
43. Ibid., pp. 59-61; Smiley, Denver, p. 625; Cruise, Early Days, p. 540.

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With them went a controlling interest in the Colorado Central, the Oregon Railway and Navigation Company, and several other branch lines.[44] This consolidation meant the rapid rise in the value of the Denver Pacific stock, of which Gould held a considerable part. Within the next few years he disposed of it at a large profit.[45]

While the eastern lines of the Union Pacific were being built up by consolidation, western lines were also being acquired and built. Control was secured of the Utah Central, the Utah Southern, and the Utah Southern Extension, and in 1881 these lines were consolidated as the Utah Central Railway, with Sidney Dillon (president of the Union Pacific) as president. The northern extension was constructed by the Oregon Short Line, chartered in 1881.[47] By 1884 the line was completed to a junction with the Oregon Railway and Navigation Company at Huntington. These lines formed the Union Pacific connection with the northwest, and were able to afford competition to the Northern Pacific, which had been opened the preceding year.

The Oregon Steam Navigation Company was organized in the early sixties to afford communication along the Columbia River by a system of steamships, supplemented by railroads around the un-

44. T. W. Mitchell, "The Growth of the Union Pacific and its Financial Operations," in Quarterly Journal of Economics, Vol. 21 (1907), p. 570.
45. S. Daggett, Railway Reorganization (Cambridge,1908), p. 233.
46. Tullidge, Salt Lake City, p. 718; Traveler's Guide Jan. 1882, p. 217.
47. Poor's Manual 1885, p. 855.
48. Traveler's Guide, Jan. 1885, pp. 288-294.

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navigable portions of the river.[49] This plan was followed literally, and afforded practically a monopoly of transportation over the territory involved.[50] During the middle seventies a German, Henry Villard, came over in the interest of German bondholders of other small railroad concerns in Oregon.[51] Being able to come to no satisfactory arrangement, and becoming interested in railroad projects, he began to take an active part in railroad affairs and to assume the control of the companies in which he was interested.[52] He saw the strategic necessity of the line of the Oregon Steam Navigation Company for any company wishing to control the territory, and so went to Gould to get aid for his plans. An agreement was reached whereby Villard was to acquire the Oregon Steam Navigation Company and build to a connection with the Union Pacific by means of a construction company, half controlled by the Union Pacific. Gould eventually backed out, and the German bondholders requested to be relieved of their holdings.[53] To meet this situation, Villard formed his own corporation, bought out both the German bondholders and the Oregon Steam Navigation .

49. P. W. Gillette, "A Brief History of the Oregon Steam Navigation Company," in The Quarterly of the Oregon Historical Society, Vol. 5 (1904), p. 124; C. A. Snowden, History of Washington the Rise and Progress of an American State (4 vols., N.Y., 1909), Vol. 4, p. 211.

50. C. L. Poppleton, "Oregon's First Monopoly - the Oregon Steam Navigation Company," in The Quarterly of the Oregon Historical Society, Vol. 9 (1908) gives the most complete history of the antecedents and early history of the company; Gillette, Oregon, S. N. Co., pp. 124-126.

51. Memoirs of Henry Willard (2 vols., N.Y., 1904) Vol. 21, p. 270.

52. Ibid., pp. 271-278.

53. Ibid., p. 285.

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Company, which feared the possible building of a branch of the Union Pacific, and formed the Oregon Railway and Navigation Company to consolidate the property of the Oregon Steam Navigation Company and the Oregon Steamship Company.[55] The Union Pacific had an interest in the new company, and the two roads were eventually connected at Huntington in 1884.[56]

With Villard's new combination, and the beginning of his line to connect with the Oregon Short Line, it seemed for the moment that he had complete control of the northwest. Just at this time a new and disturbing factor entered the range of possibilities. The Northern Pacific, which had almost ceased to exist during the middle seventies, began to show signs of revival. After being reorganized, work was once more resumed in 1879 under president Billings,[57] and reached the Dakota-Montana line in 1880.[58] At this point Villard began to get alarmed, because if the road were completed, as seemed probable, it would entirely destroy his control. He suggested an agreement between the lines, but could get nothing from the Northern Pacific except a promise to use the Oregon Railway and Navigation Company's line until its own was completed.[59] Then he tried buying stock, but his own resources

55. Villard, vol. 2, p. 294; Ore. R.R. Comm., 2nd Annual Report, p. 205; Bancroft, Oregon, Vol. 2, p. 704.
56. Villard, Vol. 2, pp. 295-299; Poor's Manual 1885, p. 884.
57. Power, Bits of History, p. 337.
58. Traveler's Guide, Jan. 1881, p. 1910.
59. Smalley, Northern Pacific, p. 261.

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proved insufficient. In his extremity he formed a "blind pool" to meet his needs - the project taking this form in order to avoid publicity. Under his system of "blind contributions Villard secured funds sufficient to buy a controlling interest in the Northern Pacific.[60] A holding company was organized in 1881, under the name of the Oregon and Transcontinental Company, and it was vested with the control of both roads.[61] Under this control the Northern Pacific was finally completed in 1883, extending from Duluth to a junction with the Oregon Railway and Navigation Company at Wallula.[62] The St. Paul and Northern Pacific was acquired in order to give a direct line to St. Paul.[63]

The operations of Villard were more spectacular than sound, appealing particularly to the speculative interest of the day. When the financial depression came in the latter part of 1883 it was found that the organization which he had built up was top-heavy and not able to support its own weight. Consequently Villard was forced to resign, and the Oregon and Trancontinental Company was broken up.[64] Villard still retained some influence in the Northern Pacific, but no longer held an executive office. Control of the Oregon Railway and Navigation Company was secured

60. Villard, Vol. 2, p. 297; Smalley, Northern Pacific, p. 266.

61. Villard, Vol. 2, p. 299; Smalley, Northern Pacific, p. 269; Bancroft, Oregon, Vol. 2, p. 704; Poor's Manual 1885, p. 892.

62. Traveler's Guide Jan. 1884, pp. 254-256; Holmes, Minnesota, p. 362; Powers, Bits of History, p. 337; Villard, Vol. 2, p. 302.

63. Villard, Vol. 2, p. 306.

64. Villard, Vol. 2, p. 316.

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by the Union Pacific, eventually forcing the Northern Pacific to build its own line to the coast.[65]

A summary of the completion of transcontinental lines during the years of 1881 to 1884 shows the extent of their activity. The Southern Pacific had completed and consolidated its own line frwom San Francisco to New Orleans; the Texas and Pacific had been completed to a junction with the Southern Pacific at El Paso; teh Santa Fe and been completed to a junction with the Southern Pacific at the Needles, and to guaymas on the Gulf of California; the Denver and Rio Grande had been completed from Denver to Ogden; the Union Pacific had constructed a branch from Ogden to a connection with the Oregon Railway and Navigation Company, which in turn gave a route to the coast; the Northern Pacific had completed its main line.[66] The large majority of this mileage had been built in the latter seventies and early eighties, and all the lines were completed within a few years. At no other time in the history of western railroad construction has such a characteristic been evinced.

The most visible result of the foregoing construction is to be seen in its effect on the population of the west. Up to 1880 each succeeding census showed a fairly definite population

64. Villard, Vol. 2, p. 316.
65. Ibid., p. 316; Bancroft, Oregon, Vol. 2, p. 748.
66. During the same period the Canadian Pacific was being built. It was finished in 1885.

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frontier in the United States.[67] With the completion of this group of transcontinental roads and the rapid "spraying" of the population into the west, this condition began to change. Now one part of the west was almost as easily and quickly reached as any other. The result was that by 1890 the frontier was a thing of the past. The frontier, which had been continually moving west, absorbing nearly all of the land as it went, suddenly disappeared, and in its place came a diffusion of population over the entire west, with thickly populated communities occurring where mining or agriculture was particularly good, rather than in close connection with earlier settlements.

As an illustration of the influence of the railroads upon the west, and particularly upon the frontier, the history of the cattle business is excellent.[68] Up to the end of the Civil War practically all cattle to be used for food were raised, butchered, and sold locally. About that time it was found that the numerous herds of wild Texas cattle could be fattened into marketable form by driving them north over the public domain, allowing them to feed along the way and to winter in the north. After

67. The population charts in the Census reports present this frontier in a convenient, visible form.

68. F. L. Paxson, "The Cow Country," in American Historical Review, Vol. 22 (1917), pp. 65-83, is a very excellent account of the origin, growth, and disappearance of the "long drive" J. G. McCoy, Historic Sketches of the Cattle Trade of the West and Southwest (Kansas City, Missouri, 1874) is a rather diffuse account of the early history of the Texas cattle business, written by a a woman, and interspersed with much reminiscence.

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this fact was ascertained, continually increasing number were driven north every year, and throughout the seventies this business expanded rapidly.[69] During the seventies the western states of Kansas, Nebraska, Colorado, and Wyoming were very thinly peopled and the business inconvenienced no one. The newer railroads of the period - the Missouri Pacific, the Missouri, Kansas and Texas, the Union Pacific, and the Santa Fe tapped the trade and were thus given an added impetus, while also aiding the business.[70] At the same time settlers were coming in ever increasing numbers. The completion of the through lines in the early eighties produced a climax. The settlers, who filled up most of the land in the neighborhood of the railroads, objected strenuously to having the herds driven over their fields. Much of the ground was fenced, and the herders, who had been forced further and further west, found it almost impossible to secure grazing for their stock.

While the land was being settled at the expense of the cattle business, foreign nations were beginning to feel the pinch of American competition, and to meet it by the use of quarantine. It is doubtful whether the agitation against Texas fever and similar diseases was well founded, but at least it gave the states a basis for stopping the "long drive". During 1885 Kansas and Colorado both passed quarantine laws which were so strict as to amount

69. R. R. Gazette, Vol. 1, p. 323.
70. McCoy, Cattle Trade, pp. 405-423; R.R. Gazette, Vol. 1, p. 323.

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to a prohibition. Wyoming, Nebraska and New Mexico had similar laws, but the first two states, because of their location, put an effective stop to the "long drive".[71] The remainder of the story - the new development of the cattle business, the use of specialized equipment on the railroads, and the newer methods of preservation and storage belong to a later period. The cattle men tried to restore their old business by an appeal to Congress for a national cattle trail, but the project was never regarded very seriously.[72]

The lines centering at Chicago also continued to expand from 1873 to 1884. The dominant characteristic was the multiplication of branch lines between the Mississippi and Missouri Rivers in order to bring a larger amount of territory under the control of each company. This kind of railroad advance was just as necessary for the economic development of the country as the completion of the trunk lines, but it lacks the spectacular appeal, and can somewhat be taken for granted. A general tendency toward consolidation is also noticeable; this tendency should not be over-stated, because it was the very normal result of rapid expansion, and tended to produce more efficient service rather

71. J. Nimmo, Jr., Report in Regard to the Range and Ranch Cattle Business (Washington, 1885) gives the most detailed account of the business at its widest extent, and of the factors which led to its abolition.

72. The report of Nimmo, referred to above, was made by the Chief of the Bureau of Statistics of the Treasury Department, and favored such a trail (p. 31).

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than monopoly control. The cry of monopoly which was continually raised against the railroads was more an additional argument to support the economic panacea of regulation than anything else. A brief survey of the more important railroad lines during the period will suffice to show the general tendency.

The St. Paul and Pacific laid the basis for its future expansion during this period. It was at this stage that James J. Hill began to become an important figure, organizing a company for the purchase of the St. Paul and Pacific. The transaction was concluded in 1879, and the road became the St. Paul, Minneapolis and Manitoba, with George Stephens of Montreal as president and J. J. Hill as general manager.[73] Both the stock and bonds were acquired at a very low figure. In 1880 several local lines were bought,[74] and connections were made with Fargo and Grand Forks. By 1883 two lines had been completed to the Canadian border - one through western Minnesota to St. Vincent and the other through eastern Dakota to Neche, while the proposed transcontinental division had been completed to Devil's Lake, a little over one-third the way across Dakota.[75] During the same year J. J. Hill became president, and was placed in a position where he could carry out his plans for a transcontinental road within the next decade,[76]

73. Baker, Transportation, p. 29; Holmes, Minnesota, p. 352; Minn. R.R. Comm. 1886, p. 412.
74. Ramsey County, p. 345; Traveler's Guide Jan. 1881, pp. 186-187.
75. Traveler's Guide Jan. 1884, pp. 244-246.
76. Minn. R.R. Comm. 1883, p. 89.

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The Chicago, Milwaukee and St. Paul was at a standstill for the five years immediately succeeding the panic of 1873. Construction on the line west from Hastings, Minnesota was resumed in 1878, and the following year was completed to Ortonville, near the Dakota boundary.[77] During the same year the line from North McGregor was finished to Marion Junction, just north of Yankton, and the Davenport line to Fayette was added.[78] In 1880 the line from La Crescent along the river to Clinton, which had been built in the early seventies by two independent companies and united as the Chicago, Clinton, Dubuque and Minnesota, was added;[79] the McGregor-Marion Junction line was completed to Running Water and Mitchell; the Davenport-Fayette line was completed to a junction with the main line at Calmar; the La Crosse line was completed to Flandreau, Dakota.[80] The line west from North McGregor was completed to Chamberlain in 1881,[81] and the line from La Crosse to Woonsocket was finished in 1883;[82] the Sabula-Omaha line was also completed in 1883; this line had originated as the Sabula, Ackley and Dakota and had been aided by the Chicago, Milwaukee and St. Paul in order to make competition for the Chicago and Northwest-

77. Traveler's Guide Jan. 1880, pp. 163-165.
78. Ibid. The Davenport-Fayette line was built prior to 1873 by the Davenport and St. Paul.
79. Traveler's Guide Jan. 1881, p. 180. The two companies that were consolidated were the Chicago, Dubuque and Minnesota, and the Chicago, Clinton and Dubuque. The new name dates from 1873, although the two lines were operated together from 1871.
80. Traveler's Guide Jan. 1881, p. 179. The La Crosse-Flandreau line was built by the Southern Minnesota.
81. Ibid., Jan. 1882, pp. 186-191.
82. Ibid., June 1883, pp. 230-238.

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ern.[83] In 1873 it was completed to Marion, near Cedar Rapids, and operated by the Western Union Division of the St. Paul.[84] Work was begun again in 1881, and the road was completed to Omaha by 1883.[85] Thus by 1883 we have three main lines of the St. Paul pushed as far as they were to be constructed before 1900 - La Crosse to Woonsocket, North McGregor to Chamberlain and Running Water, with branches to Sioux Falls, Yankton, and Sioux City, and Sabula to Omaha. The Hastings line had been completed across Minnesota, and the Kansas City line was not as yet started. Two north and south lines had been completed - St. Paul via La Crescent, North McGregor, and Sabula to Clinton, and St. Paul via Austin and Calmar to Davenport.

The Chicago and Northwestern also did practically nothing from 1873 to 1879, when it acquired its line from Ames to Des Moines.[86] The year 1880 saw the real reopening of active operations; the Winona line was opened to Watertown, and a branch was built from Huron to Pierre, Dakota.[87] In 1881 this branch was continued from Huron north to Redfield,[88] and the following year the Watertown line was extended westward to that point.[89] By 1883 the line from Iriquois (on the Winona-Pierre line) via Hawarden

83. The History of Jones County, Iowa (Chi.,1879), p. 345; Chronicle, Vol. 10, p. 812; R.R. Gazette, Vol. 1, p. 271.
84. Traveler's Guide July 1874, No. 320.
85. Ibid., Jan. 1884, pp. 230-240.
86. This line had been built early in the seventies by the Des Moines and Minnesota.
87. Traveler's Guide Jan. 1881, pp. 208-215.
88. Ibid., Jan. 1882, pp. 222-229.
89. Ibid., June 1883, pp. 274-284.

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Eagle Grove had been completed to Ames and Des Moines.[90] The western extension of the Chicago and Northwestern was built by the Fremont, Elkhorn, and Missouri Valley, which was chartered in 1869 by J. I. Blair, who was then the chief figure in the Chicago and Northwestern.[91] Ten miles were built in 1869, and by 1871 it had been completed from Missouri Valley to Wisner.[92] Work was not resumed until 1879, and by 1882 the road was complete to Valentine, being operated in conjunction with the Sioux City and Pacific.[93] [94]

The largest single acquisition of the Chicago and Northwestern during the period was the former St. Paul and Sioux City. The Chicago, St. Paul, Minneapolis and Omaha was formed in 1880 by the consolidation of various lines, including the St. Paul and Sioux City, in order to produce a through line from Chicago via St. Paul to Sioux City.[95] Late in 1882 the Chicago and Northwestern secured control, Marvin Hughitt became president,[96] and the following year the line was made a part of the Northwestern system proper.[97]

The Joy roads, with the Chicago, Burlington and Quincy as

90. Ibid., Jan. 1884, pp. 272-284.
91. Guide, Gazetteer and Directory of Nebraska Railroads (Omaha, 1872), p. 78; Western Nebraska, p. 109; Buchanan, Railroad Migration, p. 27; Neb. R.R. Comm. 1888, p. 125.
92. Poor's Manual 1870-1, p. 99; R.R Gazette, Vol. 2, p. 129.
93. Buchanan, Railroad Migration, p. 28; Neb, R.R. Comm. 1888, p. 128.
94. Stennett, Yesterday and Today, p. 43; Neb. R.R. Comm. 1888, p. 128; Buchanan, Railroad Migration, p. 32; Traveler's Guide, Jan. 1884, p. 302.
95. Bishop, St. Paul and Sioux City Railroad, p. 413; Ramsey County, p. 351.
96. Holmes, Minnesota, p. 355; Traveler's Guide June, 1883, pp. 272-273.
97. Traveler's Guide Jan. 1884, pp. 272-284.

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a base, broke down completely in 1873, leaving only the Chicago, Burlington and Quincy and its main leased lines the Burlington and Missouri River and the Kansas City, St. Joseph and Council Bluffs. In 1876 Robert Harris of Chicago became president, and in the following year the first two roads were merged; the Kansas City, St. Joseph and Council Bluffs was sold outright to the C. B. and Q. in 1884. During the following year the line south from Burlington to Carrollton was added; this road had been built during the latter seventies and early eighties by the St. Louis, Keokuk and Northwestern and the Chicago, Burlington and Kansas City.[101] The western extension of the C. B. and Q. line in Nebraska was built by the Burlington and Missouri River of Nebraska. Having been built from Plattsmouth (on B. and M. R. of Iowa) to Kearney Junction (on Union Pacific) by 1873, it continued work on its main line in 1880. finishing it to Denver by 1883.[102] The line through southern Nebraksa was built as far as Red Cloud.[103] During the same year the Burlington and Missouri River Railroad of Nebraska was consolidated with the main C. B. and Q., and Perkins, who was president of the C. B. and Q., also became president of the Hannibal and St. Jo.[104] The Hannibal and St. Jo. was made

98. Ibid., July 1876, No. 352.
99.. Ibid., Jan. 1878, Nos. 398-400.
100. Northwest Missouri, p. 366; Traveler's Guide Jan. 1886, p. 336.
101. Finished to Carrollton in 1884.
102. Traveler's Guide June 1883, pp. 294-295.
103. Ibid., Jan. 1884, pp. 288-298.
104. Ibid., Jan. 1884, p. 303.

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a part of the Burlington system the following year, thus giving the C. B. and Q. a main line from Chicago through Burlington and Omaha to Denver, one from Chicago through Quincy to Kansas City and southern Kansas, and direct connections between Omaha and Kansas City, as well as the majority of a direct line from Burlington to St. Louis.[105]

The Chicago, Rock Island and Pacific was not very active during the period. In 1878 it acquired the line od the Keokuk and Des Moines between Keokuk and Des Moines, and a few branches were built in the early eighties, notably that from Cameron Junction to Kansas City.[106] From 1883 to 1887 there was no construction of any kind.

The Illinois Central was also inactive, and did not perform any construction west of the Mississippi from 1873 to 1886.

The growth of the Gould system in the southwest was possibly the most interesting development of the early eighties, As had before been mentioned, Gould first became interested in the Union Pacific, and through its consolidation in 1880 with the Kansas Pacific and Denver Pacific, had become heavily interested in all three. While this interest continued, Gould gradually transferred his activity to other roads which he had acquired incidentally in his fight in the Union Pacific - namely the Missouri

105. Ibid., Jan. k886, pp. 324 - 337.
106. Ia. R.R. Comm. 1879, p. 104; Traveler's Guide June 1883, pp. 220-223. The Kansas City branch was opened in 1884.

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Pacific, the Kansas Central and the Central Branch of the Union Pacific.

Gould was primarily a financier, and was interested more in the financial manipulation of the various roads than in their sound building and operation. He dreamed of a complete railroad empire in the southwest, which would have a practical monopoly of the whole region, and in the four years between 1879 and 1883 secured control of the lines which would make this dream possible.[107] Along with the Missouri Pacific he secured a half interest in the Atlantic and Pacific, which had a right of way and land grant from the Missouri boundary through Albuquerque to the coast; then he secured the Texas and Pacific, which had a right of way and land grant from Marshall, Texas through El Paso to the Pacific. North and south lines to make connection with the Gulf were secured in the Missouri, Kansas and Texas and the St. Louis, Iron Mountain and Southern, Eastern connections were made by means of the Wabash, St. Louis and Pacific, formed by consolidation in 1879 under Gould's direction.[108] All of these trunk lines, besides numerous branches, were acquired in the years between 1879 and 1883.

Two of the Gould lines have already been discussed. The Atlantic and Pacific was completed from Albuquerque to a junction

107. For references for his acquisition of the Atlantic and Pacific, the Texas and Pacific, and the St. Louis, Iron Mountain and Southern, see preceding discussions of these roads.

108. Mo. R. R. Comm. 1879 and 80, p. 39; Caldwell and Livingston Counties, p. 856; Wyandotte County, p. 229; Randolph and Macon Counties, p. 322.

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with the Southern Pacific at the Needles. The line was operated jointly with the Santa Fe, with which the Missouri Pacific made a junction at Witchita, Kansas. The Texas and Pacific was completed to El Paso to a junction with the Southern Pacific, and a traffic agreement between the two lines furnished an equitable distribution of business.

The old Northern Missouri Railroad had been foreclosed in 1871 and bought in 1872 by the St. Louis, Kansas City and Northern.[109] In 1879 it was bought by Gould and consolidated with the Wabash Railway of Ohio to form the Wabash, St. Louis and Pacific.[110] With the building of a line to Council Bluffs in 1880, this acquisition gave the Gould lines a second route via Moberly to Kansas City, with connections to Council Bluffs, and also a through line from Kansas City via Moberly and Ottumwa, Iowa to the east.[111] A branch to Des Moines was finished in 1883.[112]

The Missouri Pacific, around which the whole system was built, had been foreclosed in 1875, by which means its lease to the Atlantic and Pacific was dropped.[113] In 1876 it was sold to James Baker who conveyed it to the Missouri Pacific Railroad Company.[114] Control was secured by Gould in 1879, and in the following year the line was consolidated with half a dozen branches to form the Missouri Pacific Railway Company.[115] A considerable number of

109. See Chapter IV.
110. See footnote 108.
111. Official Traveler's Guide Jan. 1884, pp. 305-315.
112. Ibid., The road was formally leased to the St. Louis, Iron Mountain and Southern in 1883.
113. Traveler's Guide Jan. 1876, No. 410.
114. Mo. R.R. Comm. 1879 and 1880, p. 23.
115. Ibid., p. 23; Scharf, St. Louis, p. 1163; Monroe and Shelby Counties, p. 252.

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branches were built by 1883, two of which require particular mention. Up to 1881 the Gould lines did not enter Omaha, so in that year roads were organized in Kansas and Nebraska to build a line from Kansas City. The entire road was opened in 1882 and the companies consolidated.[116] The Atchison and Pike's Peak Railroad was incorporated in 1859 to succeed the Atchison and Ft. Riley (chartered 1857),[117] and to run almost due west from Atchison. Aided by the Pacific railroad land grant bill it became the Central Branch of the Union Pacific in 1866,[118] and by the end of 1868 was completed to Waterville, where it stayed until 1877.[119] It resumed building in 1877 and by 1879 it was open as far as Kirwin (247 miles),[120] and was bought by Gould, who included it in the Missouri Pacific system the following year.[121] By 1883 it had reached Lenora, 293 miles west of Atchison.[122]

The Missouri, Kansas and Texas was leased to Gould in 1880 and gave a line from Hannibal through Sedalia and Vinita to Denison, with a branch in Kansas from Parsons to Junction City, and branches in Texas from Denison to Gainesville and Greenville.[123] By 1883 it had been built to Dallas.

The St. Louis, Iron Mountain and Southern was formed in 1874 by a consolidation which included the St. Louis and Iron Moun-

116. Kan. R.R. Comm. 1883, p. 152.
117. Charter, Treaty and Contracts of the Atchison and Pike's Peak Railroad, Kansas (N.Y., 1863), pp. 1-6.
118. Kan. R.R. Comm. 1883, p. 171.
119. Ibid., p. 171; Lyle's Manual 1869-70, p. 433.
120. Traveler's Guide, Jan. 1880, p. 246.
121. Ibid., Jan. 1881, p. 252.
122. Ibid., Jan. 1884, pp. 316-327.
123. Wyandotte County, p. 232; Mo. R.R. Comm. 1879 & 80, p. 29; Monroe and Shelby Counties, p. 252; Traveler's Guide Jan. 1881, pp. 244-5.

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tain and the Cairo and Fulton, and gave a through line from St. Louis to Texarkana. The whole line was leased to the Missouri Pacific in 1883, by which time numerous branches had been aided, although not any that were particularly significant.[125]

Transcontinental communication via the St. Louis, Iron Mountain and Southern was made by a connection with the Texas and Pacific at Texarkana; connection with the Gulf was made over the International and Great Northern, acquired in 1883, which included a line from Longview (on the Texas and Pacific) to Houston, and from Palestine to Laredo.[126] Entrance to Galveston was made through the control of the Galveston, Houston, and Henderson, extending from Galveston to Houston.

Two or three other important lines might be mentioned at this point. When the Atlantic and Pacific went into bankruptcy in the early seventies its interest in the South Pacific was bought (1876) by the St. Louis and San Francisco.[127] This sale gave the St. Louis and San Francisco the portion of the line in Missouri (St. Louis to Vinita), that had been built by the Atlantic and Pacific. After Gould had used his hold on the Atlantic and Pacific to force the Santa Fe to give him a favorable traffic agreement, he disposed of his holdings to the St. Louis and San Francisco, which completed the road from Vinita to Red

124. Traveler's Guide. Jan. 1884, pp. 316-327.
125. Ibid. June 1883, p. 320.
126. Monroe and Shelby Counties, p. 253; Traveler's Guide June 1883, p. 321.
127. Poor's Manual 1885, p. 803.

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Forks, with branches from Peirce City to Halstead Kansas, and from Monett to Ft. Smith, Arkansas.[128]

The Chicago and Alton was built in most part by the Kansas City, St. Louis and Chicago, chartered in 1877, begun in 1878, and leased in perpetuity to the Chicago and Alton.[129] It was completed in 1879 to furnish a continuation of the main line of the C. and A. from Louisiana to Kansas City, with a branch to Jefferson City.[130]

The Little Rock and Fort Smith was reorganized in 1874[131] and completed in 1876.[132] The Fort Worth and Denver City, chartered in 1873,[133] was able to begin construction in 1881,[134] and by 1883 had reached Wichita Falls, 114 miles west of Fort Worth.[135] This road was responsible for practically all of the towns in northwest Texas along its route. The Gulf, Colorado, and Santa Fe, chartered in 1873 to furnish Galveston with a second railroad line,[136] was begun in 1876,[137] and by 1883 had reached Ft. Worth, with branches to Houston and Dallas.[138]

The result of the rapid railroad construction of the latter seventies and early eighties forms an interesting parallel to

128. Traveler's Guide, Jan. 1884, pp. 330-332.
129. Mo. R.R. Comm. 1879 and 1880, p. 14.
130. Ibid., p. 14; Wyandotte County, p. 227; Traveler's Guide Jan. 1880, pp. 214-217.
131. Poor's Manual 1878, p. 843; Ark. R.R. Comm. 1900, p. 403.
132. Ark. R.R. Comm. 1900, p. 432; Poor's Manual 1879, p. 858.
133. Smiley, Denver, p. 612; Tex. R.R. Comm. 1897, p. 174.
134. Hardy and Roberts, p. 207.
135. Traveler's Guide June 1883, p. 323.
136. Hardy and Roberts, p. 202; Bradley, Santa Fe, p. 248.
137. Ibid.
138. Traveler's Guide Jan. 1884, pp. 350-1.

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the conditions a decade earlier. Instead of constructing and consolidating their lines through the first tier of states, the roads did the same thing with their lines into the second tier of states, and with the lines making Gulf and Pacific connections. The process was similar, the effect on rates was about the same, and the reaction of the people was practically identical. Just as in the previous case, the period was ended by a financial stringency, and marked with local restrictive legislation. The first anti-railroad agitation had produced a considerable amount of regulation, but the second wave of feeling had probably even a wider effect. Briefly summarized, the results were as follows, - Minnesota added a Warehouse Commission to the Railroad Commission in 1885;[139] Iowa established a railroad commission in 1878;[140] Arkansas repudiated her railroad debt in 1885;[141] Texas repealed all her land grant laws in 1882;[142] Kansas passed her first railroad regulatory act in 1883;[143] Nebraska established a railroad commission in 1885;[144] Dakota did the same;[145] Colorado had an extensive investigation of railroad rates in 1885[146] and the same year passed her railroad commission law;[147] Oregon passed her first restrictive legislation in 1885;[148] California created a commission in 1880[149] ac-

139. Minn. R.R. Comm. 1885, p. 9.
140. Ia. R.R. Comm. 1878, pp. 54-55.
141. Kirby, Digest, p.108. This report was passed as a constitutional amendment.
142. Sayles' Tex. Civil Stat. Vol. I, p. 1970.
143. Kan. R.R. Comm. 1885, pp. 264-270 - law reprinted.
144. Neb. R.R. Comm. 1887.
145. Dak. R.R. Comm. 1885, p. 11.
146. Report of the Special Committee on Railroads to the House of Representatives of Col. (Denver,1885). The main objection found was that raw and finished products received the same rate.
147. Col. R.R. Comm. 1885,pp. 632-641.
148. Buck, Granger Movement, p. 198.
149. Cal. R.R. Comm. 1880, pp. 8-10 - law reprinted.

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cording to the restrictive constitution of 1879,[150] and during the years 1883 to 1885 the trouble between the commissioners was indicative of the general interest in the railroad question.[151] The majority of this legislation came toward the end of the period, and immediately after the peak of railroad construction, that is from 1882 to 1885, again paralleling the conditions of the seventies. No states made constitutions during these years, with the possible exception of California in 1879, which is almost too early to show the anti-railroad feeling at its height. Even here, the constitution provided for the very strict control of the railroads.[152]

An interesting development of the period was the growth of national cooperation among the state railroad commissioners. During the Granger agitation the new railroad commissioners were compelled to travel into neighboring states whenever possible in order to get some idea as to how their duties could best be performed. It is very easy to trace the relations between the laws passed in the various Granger states during the seventies, and it is also easy to find the same relations in the railroad com-

150. Constitution of California 1879, Art. 12, Sect. 18.

151. The fight was between W. W. Foote, who claimed the other commissioners were unduly influenced by the railroads, and Carpenter and Humphries. See Cal. R.R. Comm. 1883, pp. 99-150; 1884, pp. 3 ff.; 1885, pp. 9-11. Foote seems to have been in the right. They all lost their places in the next election.

152. Buck, Grange Movement, p. 198. The Kearneyite or Workingman's Party was in control, and strict regulation of railroad as well as provision for a railroad commission, was provided for in the constitution. The feeling at the time was very high, but did not last.

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missions and the way in which they carried on their work. By the latter seventies enough states had railroad commissions so that it was found profitable to hold annual national meetings in order to facilitate the exhcnage of ideas.[153] The Massachusetts commission, under the leadership of C. F. Adams Jr. was particularly active, and the influence of Adams' ideas can be discovered in the work and reports of most western railroad com issions.[154]

As at the time of the Granger movement there was also a reflection of popular agitation in Congress. The actual regulation of the railroads by some kind of government action was talked about, but not very seriously. It was felt that according to all precedent, the situation should be met by the states individually. This feeling changed rapidly in the several succeeding years, but seemed securely dominant in 1884. The main direction which national agitation took was toward the forfeiture of the unearned railroad land grants As has been shown, the frontier was beginning to disappear during the early eighties, while at the same time large amounts of land were reserved from settlement in order to fill land grants such as the Atlantic and Pacific and the Texas and Pacific, which in all probability would never be built. This situation was closely linked with the fear of the control of large portions of the public domain by feorign capitalists, and the agitation against big business and monopoly. The Anti-Monopoly party

153. One of the first meetings was at Columbus, Ohio in 1877.

154. The Interstate Commerce Commission took the lead after its establishment in 1887.

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was the first national party to take a definite stand for the forfeiture of the unearned land grants,[155] but it was soon followed by both the Republican and Democratic parties, which came out very definitely on the same ground in 1884.[156] No legislation had passed Congress prioer to 1884, but the increasing agitation made such action only a question of time.

When the financial stringency of 1884 occurred, the railroad system of the United States had the rough outline which it was to maintain. Nearly all the states that had a railroad problem had passed restrictive laws, and national agitation had come to the point of action. The stage was set for the last act of the history of extensive railroad construction and restrictive legislation, and the succeeding quarter of a century saw only a reacting of the same scene, with slightly different stage setting.

155. N.Y. Times Sept. 14, 1882. Report of convention at Saratoga.

156. Both parties demanded the forfeiture of unearned railroad grants and the reservation of the public domain for actual settlers.

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Railroad Construction 1873 - 1882.

Date	Origin	Old Terminus	New Terminus	Complete Mileage	New
	Arkansas and Louisiana.				
1882	Czar		Hope		10
	Atchison and Nebraska.				
1879	Atchison	Lincoln	Ulysses	189	41
1880	acquired by Burlington and Missouri River.				
	Atchison, Topeka and Sante Fe.				
1875	Kansas Midland.				
	Atchison	Granada	West Las Animas	535	55
	Kansas City	Lawrence	Topeka	66	99
1876	Atchison	W. Las Animas	Pueblo	618	83
1877	Pleasant Hill		De Soto		44
	Florence		El Dorado		89
1879	La Junta		Trinidad		80
1879	La Junta	Trinidad	Las Vegas	216	136
	Newton		Winfield		65
	Mulvane		Wellington		17
	Emporia		Salt Creek		63
	Florence	Eldorado	McPherson	47	18
1880	La Junta	Las Vegas	San Marcial	449	203
	Newton	Winfield	Arkansas City	78	18
	Mulvane	Wellington	Caldwell	38	21
	Florence	McPherson	Lyons	78	21
	Emporia	Salt Creek	Howard	76	18
	Lamy		Sante Fe		18
1881	Manhattan, Alma and Burlingame.				
	La Junta	San Marcial	Deming	578	189
	Florence		Douglas		54
	Florence	Lyons	Ellinwood	99	21
1882	Topeka		Leavenworth		47

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1883	Penson		Nogales		265
	Nogales		Guaymas		265
	Rincon		El Paso		77
	San Antonio		Carthage		8
	Mexican Central.				
	Atlantic and Pacific				
1881	Albuquerque		Winslow		286
1882	Albuquerque	Winslow	Yucca	540	254
1883	Albuquerque	Yucca	Needles	375	35
1891	passed formally to the Santa Fe.				
	Austin and Northwestern.				
1883	Austin		Burnet		60
	Batesville and Brinkley.				
1882	Brinkley		Colona		25
	Brunswick and Chillicothe.				
1876	Pattonsburg		Chillicothe		80
1879	acquired by the Wabash.				
	Burlington and Missouri River in Nebraska.				
1878	Nebraska Railway- formerly Midland Pacific.				
	Hastings		Red Cloud		41
1879	Hastings	Red Cloud	Bloomington	69	28
	Nebraska City		Aurora		181
	Nemaha City		Nebraska City		27
1880	Nebraska City	Aurora	Central City	150	19
	Hastings	Bloomington	Indianola	148	79
	Hubbell		Red Cloud		37
	Atchison	Ulysses	Columbia	317	38
1881	Nebraska City	Nemaha City	Calvert	37	10
	Hastings	Indianola	Culbertson	171	23
1882	Nebraska City		Tecumseh		59
	Table Rock		Wymore		38
1883	formally taken over by the C. B. and Q.				

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Burlington and Northwestern.

1876	Burlington		Winfield		34
1879	Burlington	Winfield	Crawforsville	42	8
1880	Burlington	Crawfordsville	Washington	52	10
1894	included in C. B. and Q.				

Burlington and Southwestern.

1876	Burlington	Unionville	Laclede	181	53
1879	Keokuk		St. Peter		139
1882	Burlington	Laclede	Sumner	191	10
	Keokuk		Mt. Pleasant		49

Burlington, Cedar Rapids and Northern- formerly Burlington, Cedar Rapids and Minnesota.

1877	Burlington	Plymouth	Albert Lea	253	94
	Vinton	Traer	Holland	49	25
1878	Elmira		Iowa City		10
1880	Muscatine	Riverside	What Cheer	76	44
	Vinton	Holland	Iowa Falls	74	25
1881	Thornburg		Montezuma		16
	Vinton	Iowa Falls	Livermore	129	55
1882	Vinton	Livermore	Worthington	220	101

Cairo, Arkansas, and Texas.

1873	Cairo		Poplar Bluffs		71
1874	consolidated into St. L., I. M. and S.				

California Southern.

1882	National City		Colton		127
1883	National City	Colton	San Bernardino	130	3

Carson and Colorado.

1881	Mound House		Hawthorne		100
1882	Mound House	Hawthorne	Candelaria	158	58
	Belleville		Bishop		94
1883	Belleville	Bishop	Hawley	143	49

Central Iowa- formerly Iowa Railroad; later Iowa Central.

1880	Grinnell		Montezuma		17

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1881	Hampton		Belmond		23
	Newbury		State Center		27
	Marshalltown		Story City		39
1882	Mason City	completed to	Ottumwa	171	50
	New Sharon		Newton		30
1883	Manly	Ottumwa	Peoria	344	197

Central Pacific- Southern Pacific from 1884.

1877	Los Angeles and Independence.				
	Monterey and Salinas Valley.				
	California Pacific.				
	San Francisco	Indian Wells	Yuma	731	119
	Stockton		Oakdale		34
	Waverly		Milton		8
	Los Angeles	Anaheim	Santa Anna	33	5
1878	Galt		Ione		27
	San Francisco		Berryman		12
1879	Yuma		Casa Grande		182
1880	Yuma	Casa Grande	Demin	477	295
	San Francisco		Tracy		83
	Niles		San Jose		18
	Peters		Milton		15
1881	Benicia		Suisun		50
	Goshen		Huron		40
	Demin		Camp Rice		142
1882-83	Galveston, Harrisburg and San Antonio.				
	Sacramento Valley and Placerville.				
	Texas and New Orleans.				
	Mojave		Needles		240
	Los Angeles		San Pedro		24
	Florence		Sante Anna		27
	Los Angeles		Sante Monica		17
	Northern Jct.	Chico	Tehama	101	27

Central Railroad of Minnesota.

1874	Mankato		Wells		40
1880	included in C. M. and St. P.				

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	Chicago and Alton.				
1878	Mexico		Marshall		80
1879	Louisiana	Marshall	Kansas City	214	93
	Chicago and Northwestern.				
1874	Dubuque		La Crosse		125
	California Jct.		Yankton		132
1878	Maple River Jct.		Mapleton		60
	Eyota		Plainview		16
	Rochester		Zumbrota		26
	Sleepy Eye Lake		Redwood Falls		26
	Midland Jct.		La Crescent		170
1879	Des Moines and Northwestern.				
	Eyota		Chatfield		12
	Tracy		Lake Benton		35
	Stanwood		Tipton		9
1880	Tracy		Watertown		93
	Tracy	Lake Benton	Pierre	255	221
	Tama		Stratford		83
	Jewell Jct.		Eagle Grove		29
	Wall Lake		Sac City		12
1881	Huron		Redfield		40
	Tama	Stratford	Gowie	104	21
	Jewell Jct.	Eagle Grove	Algona	63	34
	Carroll		Manning		17
1882	Huron	Redfield	Columbia	97	57
	Watertown Jct.		Castlewood		30
	Des Moines	Ames	Jewell Jct.	59	22
	Wall Lake	Sac City	Holstein	44	32
	Carroll	Manning	Audubon	35	13
	Manning		Kirkman		17
	Tama	Gowrie	Lake City	120	16
	Jewell Jct.	Eagle Grove	Elmore	95	65
	Jewell Jct.	Algona	Hawarden	145	82

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1883	Jewell Jct.	Hawarden	Iriquois	271	126
	Wall Lake	Holstein	Kingsley	71	27
	Lake Crystal		Elmore		44
	Sioux Falls Jct.		Salem		99
	Heron Lake		Woodstock		41
	Luverne		Doone		28
	Covington		Omaha		126
	Coburn Jct.		Ponca		16
	Emerson		Norfolk		47
	Wakefield		Hastings		84
	Chicago, Burlington, and Quincy.				
1877	Burlington and Missouri River		of Iowa.		
1879	Creston		Greenfield		33
	Hastings		Sidney		20
1879	Villisca	Clarinda	Burlington Jct.	36	20
	Creston		Fontanelle		30
	Chariton		Indianola		33
	Bethany		Mt. Ayre		72
	Creston	Greenfield	Hopkins	44	21
	Hastings		Bloomington		69
	Nebraska City		Aurora		101
	Nemaha City		Nebraska City		27
	Albion		Swan		49
1880	St. Joseph and Des Moines.				
	Albion	Swan	Des Moines	68	19
	Red Oak		Griswold		18
	Hastings		Carson		16
	Bethany	Mt. Ayre	Grant City	45	13
1881	Bethany	Grant City	Albany	66	21
1882	Villisca	Clarinda	Northboro	33	17
1882	Omaha	Wenesaw	Denver	530	372
	Crete		Wymore	42	12
	includes Beatrice-Crete line.				
	Beatrice		Nebraska City		94
	Burlington and Missouri River		of Nebraska.		

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Chicago, Iowa and Dakota.

1882	Elgora Jct.		Alden		27

Chicago, Milwaukee and St. Paul- formerly Milwaukee and St. Paul.

1878	Sabula, Ackley and Dakota.				
	Calmar	Algona	Pattersonville	225	99
	Hastings	Glencoe	Montevideo	157	83
1879	Davenport and St. Paul.				
	Calmar	Pattersonville	Marion Jct.	293	68
	Hastings	Montevideo	Ortonville	209	45
	Eldridge		Maquoketa		22
1880	Central Railroad of Minnesota.				
	Minnesota Midland.				
	Sioux City and Dakota.				
	Southern Minnesota.				
	Lisbon		Necedah		12
	Calmar	Marion Jct.	Running Water	349	61
	Marion Jct.		Mitchell		44
	Hastings	Ortonville	Milbank Jct.	214	12
	Caledonia Jct.		Preston		56
	Turkey River		Wadena		72
	Waukon Jct.		Waukon		23
	Bellevue		Cascade		36
	Sioux City		Iowa Falls		87
	Elk Point		Yankton		40
	Elden Jct.		Rock Valley		10
1881	Marion Jct.	Mitchell	Chamberlain	112	67
	La Crosse	Flandreau	Sioux Falls	249	58
	Elan		Howard City		46
	Minneapolis		Terminus		247
	Minneapolis		Benton		92
	Mason City		Austin		40
	Marion		Rhodes		93

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1882	Savanna		Omaha		349
	Spencer		Lake Okoboji		17
	Emmettsburg		Estherville		22
	Milbank Jct.		Ellendale		134
	Aberdeen		Ashton		38
1883	Iowa Eastern.				
	Minneapolis	Terminus	Ipswitch	314	67
	Milbank		Wilmot		16
	La Crosse	Elgan	Woonsocket	330	35
	Elk Point	Yankton	Scotland	69	29
	Elen		Rock Valley		10
	Chicago, Rock Island and Pacific.				
1876	Washington	Sigourney	Oskaloosa	53	25
1877	Washington	Oskaloosa	Knoxville	77	34
1878	Keokuk and Des Moines.				
	Atlantic		Audubon		25
	Marion Jct.		Marion		13
1879	Newton		Monroe		17
1880	Cameron		Kansas City		58
	Avoca		Carson		18
	Menlo		Guthrie Center		15
	Mt. Zion		Keosauqua		4
1881	Wilton		Muscatine		13
	Colorado Central.				
1877	Denver	Longmont	Cheyenne	131	73
	Fork's Creek		Georgetown		25
1878	Golden	Black Hawk	Central City	40	19
1879	acquired by U. P.				
	Columbia and Puget Sound.				
1879	Seattle		Newcastle		30
	Dakota Southern- later Sioux City and Dakota.				
1878	Davis Jct.		Portlandville		17
	Dallas and Wichita.				
1879	Dallas		Lewisville		22
1880	Dallas	Lewisville	Denton	34	17
1883	acquired by Mo., Kan. and Tex.				

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Denver and New Orleans.

1882	Denver		Pueblo		195
	Manitou Jct.		Colorado Sp.		9
1885	became part of Denver, Texas and Gulf.				
1888	became part of Texas Panhandle.				

Denver and Rio Grande.

1876	Denver	S. Pueblo	El Moro	208	86
1878	Denver	Cuchara	Alamosa	250	90
1880	Pueblo		Leadville		157
	S. Pueblo	Alamosa	Poydville	194	82
	Cuchara		El Moro		87
	San Antonio		Servillete		45
1881	Salida		Gunnison		74
	Salida		Iron Mine		88
	Nathrop		Alpine		13
	S. Pueblo	Poydsville	Durango	338	154
	Canon City		Westcliff		35
	Malta		Red Cliff		35
	Leadville		Wheeler's		35
	Antonito		Espanola		91
	Alamosa		Del Norte		30
1882	Alamosa	Durango	Silverton	248	43
	Alamosa	Del Norte	South Fork	46	13
	Leadville		Dillon		36
	Salida	Leadville	Grand Jct.	309	151
	Mears		Hot Springs		23
	Gunnison		Coal Mine		23
	P. V. Jct.		Coal Mine		13
	Bingham Jct.		Alta		18
	Bingham Jct.		Bingham		13
1889	Alamosa	South Fork	Wagon Wheel Gap	61	15

Denver Pacific.

1878	Denver	Boulder	46
1880	acquired by U. P.		

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Denver, South Park and Pacific.

1874	Denver		Morrison		16
1878	Denver		Slaght's		59
1879	Denver	Slaght's	Weston	108	49
1880	Denver	Weston	Leadville	172	64
	Buena Vista		Heywood Sp.		13

1881 acquired by U. P.

Denver, Utah and Pacific.

1881	Denver		Longmont		34

Des Moines and Minnesota- later Des Moines and Minneapolis.

1875	Des Moines		Ames		37
1877	Des Moines	Ames	Callanan	58	21

1879 leased by C. and N. W.

Des Moines, Adel and Western- Des Moines and Northwestern from 1880 later Des Moines Northern and Western.

1878	Waukee		Adel		7
1879	Waukee	Adel	Panora	22	15
1881	Waukee	Panora	Lohrville	35	3
1882	Waukee	Lohrville	Fonda	37	2

Dubuque and Dakota.

1879	Waverly		Hampton		41
1880	Hampton	Waverly	Sumner	64	23

1887 part of Chicago Great Western.

Duluth and Iron Range.

1882	Two Harbors		Section 8		12

Fast Line and Red River.

1878	Jefferson		Pittsburg		30
1879	Jefferson	Pittsburg	Sulphur Sp.	88	48
1881	Jefferson	Sulphur Sp.	Greenville	134	31
1882	Jefferson	Greenville	McKinney	165	31

acquired by Mo., Kan. and Tex.

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	Eureka and Palisade.				
1875	Eureka		Palisade		90
	Eureka Springs.				
1882	Eureka Springs		Seligman		19
	Ft. Madison and Northwestern.				
1879	Ft. Madison		West Point		13
1882	Ft. Madison	West Point	Birmingham	41	28
	Ft. Worth and Denver City.				
1882	Ft. Worth		Wichita Falls		113
	Galveston, Harrisburg and San Antonio.				
1874	Harrisburg	Columbus	Lulin,	157	49
1875	Harrisburg	Lulin,	Kingsbury	168	11
1876	Harrisburg	Kingsbury	Marion	191	18
1877	Harrisburg	Marion	San Antonio	214	32
1881	Houston	San Antonio	Uvalda	309	55
	Harris		Price Jct.		8
	Columbus		La Grange		31
1882-3	Sabine and East Texas.				
	Sabine River completed to		El Paso	944	531
	Spofford Jct.		Eagle Pass		33
1883	Harwood		Gonzales		12
	acquired by Southern Pacific.				
	Gulf, Colorado and Santa Fe.				
1877	Galveston		Arcola		43
1878	Galveston	Arcola	Richmond	63	20
1880	Galveston	Richmond	Cameron	188	125
1881	Galveston	Cameron	Clebourne	317	129
	Temple		Belton		8
1882	Temple	Belton	Lampassas	48	40
	Clebourne		Dallas		52
1882	Galveston	Clebourne	Ft. Worth	345	28
	Montgomery		Somerville		55
	Gulf, Western Texas and Pacific.				
1874	Indianola		Cuero		70
1885	became S. P. with N. Y., Texas and Mexican.				

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Houston and Texas Central.

1879	Fremont	Waco	Morgan	97	53
1881	Fremont	Morgan	Albany	231	134
	Garrett		Waxahachie		12
1883	Garrett	Waxahachie	Roberts	52	40

Houston East and West Texas.

1879	Houston		Goodrich		63
1880	Houston	Goodrich	Livingston	71	8
1881	Houston	Livingston	Moscow	87	16
1882	Houston	Moscow	Lewisville	135	48
1883	Houston	Lewisville	Waco Junction	139	3

Houston and Shenandoah.

1883	Houston		Shenandoah		113

1897 acquired by C. P. and S.

International and Great Northern.

1874	Palestine	Hearne	Rockdale	121	30
	Houston		Columbia		50
1876	Palestine	Rockdale	Austin	183	62
1877	Henderson		Overton		16
1881	Palestine	Austin	Laredo	415	232
	Round Rock		Georgetown		10

1882 acquired by Mo. Pac.

Iowa Eastern.

1875	Pedlar		Elkador		19

1883 acquired by C. M. and St. P.

Iron Mountain and Helena.

1879	Helena		Marianna		37
1881	Helena	Marianna	Forest City	43	16
1883	Helena	Forest City	Knobel	140	97

acquired by St. L., I. M. and S.

Joplin Railroad.

1879	Girard		Joplin		36

1886 acquired by St. L. and San Fran.

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Kansas Central.

1877	Leavenworth	Kolton	Circleville	65	9
1878	Leavenworth	Circleville	Onaga	84	19
1880	Leavenworth	Onaga	Garrison	119	35
1881	Leavenworth	Garrison	Clay Center	142	23
1882	Leavenworth	Clay Center	Miltonvale	169	27

acquired by U. P.

Kansas City, Burlington and Santa Fe.

1878	Burlington		Ottawa		46

1881 acquired by Kansas City, Lawrence and Southern Kansas.

Kansas City, Ft. Scott and Gulf- formerly Missouri River, Ft. Scott and Gulf.

1878	Junction		Findlay City		13
1879	Baxter's Sp.		Joplin		15
1880	Memphis, Kansas and Colorado.				
	Pleasanton		Carbon Center		29
	Ft. Scott		Golden City		42
	Ft, Scott		Coal Vale		19
1881	Junction	Findlay City	Springfield	99	82
	Kansas City		Carbon Center		108
	Weir City		Cherryvale		40
1882	Arcadia		Moreroi		10
	Springfield		West Plain		113
	Monroe		Cherryvale		11
1883	Springfield and Western Missouri.				
	Kansas City completed to		Memphis	437	285

Kansas City, Lawrence and Southern - formerly Leavenworth, Lawrence and Galveston; Kansas City, Lawrence and Southern Kansas from 1880.

1879	Lawrence	Coffeyville	Crenola	179	37
1880	sold to Kansa City, Topeka and Western (Santa Fe).				
	Kansas City	Crenola	Harper	239	23
	Wellington		Winnewell		13
1881	Kansas City, Burlington and Santa Fe.				
1883	Kansas City and Olathe.				
	Ottawa and Burlington.				

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Kansas City and Olathe.

1882	Holliday		Olathe		14
1883	acquired by the Southern Kansas.				
	Kansas City, St. Joseph and Council Bluffs.				
1881	Cornin,		Northboro		28
	Bigelow		Burlington Jct.		29
1884	Napier		Roswell		9
1885	taken over by C. B. and Q.				
	Kansas Midland.				
1874	Topeka		Lawrence		27
1875	taken over by Santa Fe.				
	Kansas Pacific- formerl Union Pacific, Eastern Division.				
1878	Junction City		Clyde		55
1879	Junction City	Clyde	Concordia	70	15
	Salina		Lindsburg		21
	Solomon		Beloit		57
	Lawrence		Carbondale		32
1880	taken over by Union Pacific.				
	Little Rock and Ft. Smith.				
1875	Little Rock	Clarksville	Altus	130	20
1876	Little Rock	Altus	Ft. Smith	185	45
1882	Little Rock, Mississippi River and Texas.				
1887	taken over by Mo. Pac.				
	Little Rock, Mississippi River and Texas.				
1876	Arkansas City		Pine Bluff		75
	Arkansas City	McGehee	Collins	85	12
1880	Pine Bluff	Collins	McGehee	59	41
1882	Arkansas City	Dermott	Warren	56	38
1883	taken over by the Little Rock and Ft. Smith.				
	Longview and Sabine Valley- Galveston, Sabine and St. Louis from 1894.				
1880	Longview		Camden		12
1882	Longview	Camden	Wilkin's Mill	15	3

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Los Angeles and Independence.

1875	Los Angeles		Santa Monica		18
1877	acquired by C. R.				

Manhattan, Alma and Burlingame.

1880	Burlingame		Manhattan		57

Memphis, Carthage and Northwestern- Missouri and Western from 1875.

1874	Peirce City		Brownsville		46
1877	Peirce City	Brownsville	Oswego	73	27
1878	Carthage		W. Joplin		2
1879	acquired by St. L. and San Fran.				

Memphis, Kansas and Colorado.

1879	Parsons		Messer		45
1880	acquired by Kansas City, Ft. Scott and Gulf.				

Midland Pacific- Nebraska Railway from 1875.

1875	Seward	Nebraska City	Brownsville	105	22
1877	Brownsville	Seward	York	132	27
1879	acquired by Burlington and Missouri River of Nebraska.				

Minneapolis and St. Louis.

1874	Minneapolis		White Bear Lake		19
1876	Minneapolis	Carver	New Prague	43	18
1877	Minneapolis	New Prague	Albert Lea	108	65
1879	Minneapolis	Albert Lea	Forest City	142	34
1880	Ft. Dodge and Ft. Ridgly.				
	Minneapolis	Forest City	Ft. Dodge	211	69
1881	Minneapolis		Excelsior		19
1882	Red Wing		Waterville		65
1883	Minneapolis	Ft. Dodge	Angus	259	48
	Hopkins		Morton		31

Minnesota Midland.

1877	Wabasha		Millville		29
1879	Wabasha	Millville	Zumbrota	29	30
1880	taken over by C. M. and St. P.				

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Missouri, Iowa and Nebraska (Ia.)- Keokuk and Western from 1886.

1879	Keokuk completed to		Corydon	118	33
1880	Keokuk	Corydon	Van Wert	143	30
	Centerville		Albia		26
1880-6 part of Wabash.					
	Missouri Pacific.				
1880	Missouri, Kansas and Texas.				
	Union Pacific, Central Branch.				
	St. Louis	Atchison	St. Joseph	351	21
	Versailles		Boonville		44
	Kansas City		Lexington		43
	Holden	Paola	Leroy	111	7
	Osawatomie		Ottawa		21
	Concordia	Scandia	Talmadge	34	15
	Hannibal		Denison		576
	Denison		Gainesville		41
	Denison		Greenville		52
1881	Pleasant Hill		Carthage		115
	Sedalia		Warsaw		43
	Parsons		Junction City		157
	Whitesboro		Ft. Worth		71
	Denison	Greenville	Mineola	100	51
	Jefferson City		Russelville		19
1882	International and Great Northern.				
	Atchison		Omaha		163
	Laclede Jct.		Greve Coeur		12
	Pleasant Hill	Carthage	Joplin	122	18
	Yuma		Warwick		30
	Jefferson City	Russelville	Cooper	40	21
	Atchison	Logan	Lenore	292	25
	Denton		Dallas		38
	Whitesboro	Ft. Worth	Taylor	258	187
	Miller		Belton		7

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1882	Dallas and Wichita.				
	East Line and Red River.				
	Iron Mountain and Helena.				
	St. Louis, Iron Mountain and Southern.				
	Texas and Pacific.				
	St. Louis		Columbus		1[illegible]
	Newport		Batesville		[illegible]
	Guide		Camden		34
	Neelyville		Doniphan		[illegible]
	Trinity		Colmesneil		66
	Monterey and Salinas Valley.				
1876	Monterey		Salinas City		[illegible]
	acquired by C. B.				
	Nebraska, Topeka, Iola and Memphis.				
1882	Girard		Walnut		1[illegible]
1883	Girard	Walnut	Chanute	41	25
	acquired by Southern Kansas.				
	Nevada and Oregon- later Nevada and California.				
1882	Reno		Oneida		30
	Nevada Central.				
1880	Battle Mountain		Austin		93
1881	acquired by Union Pacific.				
	Nevada County.				
1876	Colfax		Nevada City		[illegible]
	New York, Texas and Mexican.				
1882	Rosenberg		Victoria		[illegible]
1885	acquired by C. B.				
	Northern Pacific.				
1877	Sauk Rapids		[illegible]		[illegible]
	[illegible]	[illegible]	Wilkeson	197	[illegible]
1880	Duluth	Brainerd	Little Mo.	605	200
	Casselton		Blanchard		21
1881	Duluth	Little Missouri	Glendive	647	4[illegible]
	Burnett	Wilkeson	Carbonado		7

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1882	Duluth	Glendive	Bozeman	1013	366
	Wallula Jct.		BrdCrossing		360
	Superior		N. P. Jct.		24
	Little Falls		Morris		83
	Wadena		Wahpeton		78
	Fargo		Lisbon		56
	Jamestown		Carrington		43
1883	Duluth completed to Wallula Junction			1678	665
	Wadena	Wahpeton	Milnor	120	42
	Fargo	Lisbon	LeMoure	33	22
	Livingston		Cinnabar		51
	Sanborn		Cooperstown		26
	Sauk Rapids		Itasca		41
	North Pacific Coast.				
1875	San Francisco		Tomales		55
1877	San Francisco	Tomales	Duncan Mills	114	59
	Omaha and Northern Nebraska- formerly Omaha and Northwestern.				
1879	Omaha	Wisner	Stanton	122	17
1880	Omaha	Stanton	Oakdale	162	41
	acquired by Chi., St. P., Minneap., and Omaha.				
	Omaha and Republican Valley.				
1877	Valley		David City		31
1878	Valley	David City	County line	75	14
1879	Valley	County Line	Stromsburg	90	15
	acquired by U. P.				
	Oregon and California.				
1880	Western Oregon.				
1881	Albany Jct.		Lebanon		11
1882	Portland	Roseberg	Riddle's	220	26
1883	Portland	Riddle's	Grant's Pass	262	22

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Oregon Railway and Navigation Company.

1879	Walla Walla and Columbia River.		
1881	Dayles	Dayton	196
	Wallula Jct.	S. Ainsworth	8
	Whitman Jct.	Blue Mt.	14
	Portland	Brownsville	101
	Portland	Sheridan	31
	Sherman Jct.	Airlie	39
1888	Pendleton	Riparia	93
	Wallula Jct.	Pendleton	44
	Walla Walla	Blue Mt.	30
	Dayles Jct.	Dayton	9

Ottawa and Burlington.

1878	Burlington Jct.	Burlington	48
1888	acquired by the Southern Kansas.		

Pacific Coast.

1888	Port Hartford	Las Alamos	64

Rio Grande.

1876	Brownsville	Port Isabel	28

Rio Grande and Pecos,- Rio Grande and Eagle Pass from 1885.

1888	Laredo	Eagle Pass	27

St. Joseph and Des Moines.

1878	St. Joseph		Melena		30
1879	St. Joseph	Melena	Albany	RO	90
1880	acquired by C. B. and Q.				

St. Joseph and Western- formerly St. Joseph and Denver City.

1880	St. Joseph	Hastings	Grand Island	270	97

acquired by U. P.

St. Louis and San Francisco- formerly Atlantic and Pacific.

1879	Joplin Railroad.

Memphis, Carthage and Northwestern.

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1879	Peirce City	Oswego	Severy	152	79
	Cronogo		Joplin		10
1880	Peirce City	Severy	Wichita	218	66
	Plymouth		Seligman		31
1881	Plymouth	Seligman	Rentwood	89	57
1882	Peirce City	Wichita	Halstead	243	85
	Rentwood		Mt. Smith		153
	Springfield		Sparta		38
	Cronogo	Joplin	Galena	80	10
1883	Wichita		Red Fork		498
	Springfield	Sparta	Chadwick	85	7

St. Louis, Ft. Scott and Wichita.

1881	Ft. Scott		Yates Center		68
1882	Ft. Scott	Yates Center	Eldorado	108	38
1883	Ft. Scott	Eldorado	Wichita	158	80

St. Louis, Hannibal and Keokuk- later St. Louis and Hannibal.

1875	Hannibal		Frankfort		18
1876	Hannibal	Frankfort	Bowling Green	89	21
1879	Hannibal	Bowling Green	Franceville	49	10
1881	Hannibal	Franceville	Silex	59	10
1882	Hannibal	Silex	Gilmore	86	27

St. Louis, Iron Mountain and Southern- formerly St. Louis and Iron Mountain.

1874 formed by consolidation with the Cairo and Fulton and the Cairo, Arkansas and Texas.

1878	Malvern		Hot Springs		47

1883 taken over formally by Mo. Pac.

St. Louis, Kansas City and Northern- formerly North Missouri; later under Wabash.

1878	Salisbury		Glasgow		15
1879	Council Bluffs		Moberly		98
	St. Louis		Ferguson Jct.		

Digitized by Google

1880 Quincy, Missouri and Pacific.
Missouri, Iowa and Nebraska.

	Quincy	Kirksville	Milan	105
	Roseberry		Clarinda	
	Centerville		Albia	
	Pement		Altamont	
1881	Quincy	Milan	Trenton	121
	Shumin,		Effingham	
	W. Lebanon		Leroy	
	Attica		Covington	

St. Louis, Salem and Little Rock.

1880	Cuba		Salem	

1886 acquired by St. L. and San Fran.

St. Paul and Pacific- St. Paul, Minneapolis and Manitoba from 1879.

1879	Minneapolis	Breckenridge	St. Vincent	279

includes Crookston-Glyndon line.

	St. Paul	Melrose	Alexandria	144
1880	St. Paul	Alexandria	Moorhead	243
	Crookston		Grand Forks	
	Morris		Browns Valley	
1881	St. Paul	Moorhead	Rush River	289
1882	St. Paul	Rush River	Neche	419
	Breckenridge		Portland	
	St. Cloud		Hinckley	
	Pelican Rapids		Perjus Falls	
	Wilson		Hope	
	Casselton		Mayville	
1883	Oak Center		Eagle Bend	
	Crookston		Devils Lake	

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St. Paul and Sioux City- formerly Minnesota Valley; Chicago, St. Paul, Minneapolis and Omaha from 1880.

1876	Worthington		Luverne		33
1878	Worthington	Luverne	Sioux Falls	62	39
1879	Lake Crystal		Blue Earth		34
	Heron Lake		Woodstock		41

St. Paul, Stillwater and Taylor's Falls.

1880	Worthington	Sioux Falls	Hartford	77	15
	Luverne		Doon		20
	Lake Crystal	Blue Earth	Elmore	44	10
	Corinner		Oakdale		115
	Blair		Oakland		33

1881 Omaha and Northern Nebraska.

	Worthington	Hartford	Salem	102	25
	Omaha	Tekamah	Sioux City	124	77
	Coburn		Jackson		4
1882	Coburn	Jackson	Ponca	16	12
	Sioux City		Norfolk		76
1883	Wakefield		Hartington		24

formally taken over by C. and N. W.

St. Paul, Stillwater and Taylor's Falls.

1878	St. Paul		Stillwater		19

1879 acquired by St. Paul and Sioux City.

Sabine and East Texas.

1881	Beaumont		Village		33
1882	Sabine		Rockland		104

includes first line.

acquired by Galveston, Harrisburg and San Antonio.

Sabula, Ackley and Dakota (C. M. and St. P.).

1878	Sabula	Marion	Cedar Rapids	98	2
	Farley		Paralta		14

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Salt Lake and Western.

1875	Lehi		Tintic		57
1883	acquired by U. P.				
	San Pete Valley.				
1882	Chester		Nephi		30
	Santa Cruz.				
1878	Pajaro		Santa Cruz		22
1881	acquired by S. P.				
	Sedalia, Warsaw and Southern.				
1880	Sedalia		Warsaw		42
	Sioux City and Dakota- formerly Dakota Southern.				
1879	Davis Jct.	Portlandville	Beloit	58	95
1880	acquired by C. M. and St. P.				
	Sioux City and Pacific.				
1879	Missouri Valley	Fisher	Oakdale	147	59
1880	Mo. Valley	Oakdale	Neligh	152	6
1881	Norfolk Jct.		Creighton		42
	Mo. Valley	Neligh	Long Pine	251	98
1882	Mo. Valley	Long Pine	Valentine	307	56
	Southern Minnesota.				
1879	La Crosse	Winnebago	Fulton	281	109
1880	La Crosse	Fulton	Plankinton	310	29
	later under C. M. and St. P.				
	Southern Pacific of California.				
1875	Los Angeles		San Fernando		22
	Los Angeles		Anaheim		27
	Los Angeles		Wilmington		20
	Los Angeles		Colton		52
1878	most of branches transferred to S. P.- also main line.				
	South Pacific Coast.				
1877	San Francisco		Wrights		29
1878	San Francisco	Wrights	Santa Cruz	29	17
1883	acquired by S. P.				

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Springfield and Western Missouri.

1878	Springfield		Ash Grove		13
1881	Springfield	Ash Grove	Kansas City	214	93
1883	acquired by Kansas City, Ft. Scott and Gulf.				

Texas and Mexican.

1881	Corpus Christi		Laredo		150
	acquired by Mexican National.				

Texas and Pacific- includes Southern Pacific of Tex.

1874	Marshall	Dallas	Eagle Ford	297	3
1875	Marshall		Texarkana		73
	Sherman		Paris		61
1876	Marshall	Eagle Ford	Ft. Worth	253	30
	Sherman	Paris	Texarkana	154	33
1880	Marshall	Ft. Worth	Eastland City	305	52
1881	Marshall	Eastland City	Abilene	414	109
1882	Marshall	Abilene	El Paso	867	453
1883	formally passed to Mo. Pac.				

Texas and St. Louis- St. Louis, Arkansas and Texas from 1880.

1879	Tyler Tap.				
1880	Texarkana		Athens	125	125

includes preceding line.

1881	Texarkana	Athens	Waco	252	78
1882	Little River Valley and Trackman.				
	Cairo		Jonesboro		150
	Paw Paw Jct.		New Madrid		3
	Pot Boy		Garland City		103
	Waco		Statesville		43
	Texarkana		Garland City		88
1883	Cairo completed to		Texarkana	417	192
	McNeil		Magnolia		7

Texas Trunk.

1881	Dallas		Denison		92
1882	Dallas	Mansfield	Hemp	18	11

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Texas Western.

1878	Houston				
1882	Houston	Pattison	Pattison		41
			Sealey	53	8

Union Pacific.

1879	Colorado Central.				
	Omaha and Republican Valley.				
1880	Denver Pacific.				
	Kansas Pacific.				
	St. Jo. and Western.				
	Utah Northern.				
	Valley	Osceola	Stromsburg	90	5
	Valparaiso		Lincoln		20
	Columbus		Norfolk		43
	Columbus		Albia		41
	Marysville		Beatrice		38
	Grand Island		St. Paul		23
	Leavenworth		Lawrence		24
	Salina		McPherson		23
1881	Como		Kansas		10
	Buena Vista	Haywood	Hancock	29	13
	Park City		Toto		27
	Ogden	Dillon	Silver Bow Jct.	109	55
1882	Kansas Central.				
	Grand Island	St. Paul	N. Loup	19	27
	Denver Jct.		La Salle		151
	Ogden	Silver Bow	Deer Lodge	112	24
	Silver Bow		Butte		7
	Granger		Malley		273
1883	Salt Lake and Western.				
	Ogden	Deer Lodge	Garrison	454	9
	Granger	Shoshone	Caldwell	467	146

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Union Pacific, Central Branch.

1877	Atchison	Waterville	Washington	120	20
1878	Atchison	Washington	Concordia	155	35
1879	Atchison	Concordia	Kirwin	242	87
	Downs		Bull City		24
	Concordia		Scandia		19
1880	Atchison	Kirwin	Logan	263	23
	Greenleaf		Washington		7
	Jamestown		Burr Oak		23
	acquired by Mo. Pac.				

Utah Northern.

1875	Ogden		Franklin		30
1878	Ogden	Franklin	Oneida	127	47
1879	Ogden	Oneida	Beaver Canon	274	147
1880	Ogden	Beaver Canon	Dillon	250	84
	acquired by U. P.				

Utah Southern- Utah Central from 1881.

1874	Salt Lake	Provo	Terminus	75	27
1875	Salt Lake	Terminus	Nephi	87	1[illegible]
1[illegible]	Salt Lake	Nephi	Juab	10[illegible]	1[illegible]
1[illegible]	Salt Lake	Juab	Frisco	[illegible]	1[illegible]
1[illegible]	acquired by U. P.				

Utah Western- Utah and Nevada from 1[illegible].

1877	Salt Lake City		Terminus		[illegible]
1[illegible]	acquired by U. P.				

Wabash, St. Louis and Pacific.

1[illegible]	Des Moines	Albia	Corona	11[illegible]	[illegible]
1[illegible]	leased to Mo. Pac.				

Walla Walla and Columbia River.

1[illegible]	Walla Walla		Wallula		[illegible]
1[illegible]	acquired by Oregon Railway and Navigation Company.				

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Western Oregon.

1879	Portland		Independence		72
1880	Portland	Independence	Corvallis	97	91

Acquired by Oregon and California.

Wisconsin, Iowa and Nebraska.

1882	Marshalltown		Hudson		99

Wyandotte, Kansas City and Northwestern - Kansas City, Wyandotte and Northwestern from 1887.

1874	Kansas City		Independence		19
1876	Kansas City	Independence	Lexington	42	28
	Adams		Lake City		5

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