

California Historical Society Quarterly

A SKETCH OF THE LIFE OF THEODORE D. JUDAH

The career of Theodore D. Judah, projector and first Chief Engineer of the Central Pacific Railroad, has received but scant attention from the conventional historian. "Charlie" Crocker "roaring up and down the line like a mad bull"; Huntington, fighting for ships and whipping congressmen into line; Stanford keeping track of home politics, and Hopkins cannily watching over finances—these more or less dramatic figures have long monopolized the attention of most observers. It was no accident, however, that placed in their hands feasible engineering plans, or that presented them with an Act of Congress affording unprecedented and extraordinary facilities for putting these plans into execution. Indeed, now that they are gone, and now that the atmosphere of conflict in which they moved has at last partially cleared away, it becomes more and more evident that Judah, the young engineer (he died at thirty-seven), was the pivotal figure,—that without his years of study and exploration, without his skill, perseverance and foresight, the "Big Four" would never have been. They formed a remarkable quartet, each one peculiarly fitted for the particular phase of the work which he undertook; but without detracting a whit from their renown, it seems probable that the future historian, seeking for causal relations, will assign to Judah an important place in the development of California and in the transformation of the "Pacific Railroad" dream into actual rails and rolling stock.

EARLY LIFE (1826-1854)

Theodore Dehone Judah¹ was born in Bridgeport, Connecticut, on

¹ Bishop Theodore Dehone, of Virginia, was a close friend of his parents. For incidents of Judah's early life, see letter of Mrs. T. D. Judah, in *Themis*, December 14, 1889, hereinafter cited as "Mrs. Judah's letter." (This letter, in manuscript form and containing certain minor passages not included in the published letter, is filed in the Manuscript Division of the Bancroft Library, University of California.) See also the sketch of Judah's career by William E. Curtis, in the *Los Angeles Times*, Nov. 19, 1909, hereinafter cited as "Curtis Sketch."

Brigadier General Henry M. Judah, of Civil War fame, was a brother of Theodore, and was a graduate of West Point, while another brother, Charles D. Judah, came to California in 1849 and became junior partner of the well-known early law firm of Hackett and Judah. He was later associated in practice with John Nugent, and his son, H. R. Judah, was long connected with the passenger department of the Southern Pacific Company, his son in turn being a member of the well-known present day travel and information bureau of Peck-Judah Company.

March 4, 1826, the son of an Episcopal clergyman who removed to Troy, New York, while Theodore was still a boy. Although originally destined for the navy, the youth turned to engineering and was graduated from the Rensselaer Polytechnic Institute of Troy. Upon his father's death the rest of the family moved to New York City, but an opportunity for practical experience presented itself in Troy, and he therefore remained there and assisted in the construction of the pioneer Troy and Schenectady Railroad under the direction of the then noted engineer, S. W. Hall.

From this time until the day of his death, Judah was actively and continuously engaged in railroad planning and construction. It was a period of great railroad expansion, and he was connected at different times with the New Haven, Hartford and Springfield Railroad, the Connecticut River Railway, the Erie Canal—of which he superintended the construction of the section between Jordan and Seneca—and several other projects of moment. He also erected a large bridge at Vergennes, Vermont, and later planned and built the Niagara Gorge Railroad, then considered a remarkable engineering feat.

While in Greenfield, Massachusetts, in connection with the construction of the New Haven, Hartford and Springfield line, he met Miss Anna Feron Pierce, daughter of a local merchant, and on May 10, 1847, they were married in St. James Episcopal Church, at Greenfield. After residing for a time in the town of Niagara Falls,² the young couple moved to Buffalo, where Judah took charge of construction on the line of the Buffalo and New York Railway, now a part of the "Erie" system. It was from here that he was called to California in 1854.³

THE SACRAMENTO VALLEY RAILROAD (1854-1856)

It seems that in 1852 a group of optimistic Californians, including the young Captain William T. Sherman, had formulated plans for a key railroad from Sacramento east and north along the foothills to

² Says Mrs. Judah in her letter: "Our cottage on the banks of the river, between the falls and the suspension bridge, is still there, with the beautiful view of both falls and whirlpool rapids below the bridge. He selected the site, built the cottage, there had his railroad office and did his work for that, in those days, wonderful piece of engineering."

³ A fragment from Judah's pre-California career exists in the shape of a small cloth-bound booklet, $3\frac{3}{4} \times 5\frac{3}{4}$ inches in size, entitled *Judah's Tables of Land Areas*, printed at Niagara Falls, New York, in 1851. The Library of Congress copy is inscribed "Respects of T. D. Judah." It contains two large folding tables, one giving areas in acres, rods and decimals of rods, the other areas in acres and decimals of acres. The accompanying explanation declares that these tables "will be found of great use to the Engineer, Surveyor, Land Commissioner, Land Agent and Farmer." The price was fifty cents.

tap the rich placer mining regions of the lower Sierra slopes. Marysville was to be the first objective, with later branches to Coloma and Nevada City, and possible extensions north toward Shasta and south via Stockton to San Francisco. Such a railroad, it was believed, would control all the interior trade of California, and under the title "Sacramento Valley Railroad," a corporation was formed and a quantity of stock was sold.⁴

The need for a competent and thoroughly experienced railroad engineer soon manifested itself, and, after a reorganization of the company in 1853, Col. Charles L. Wilson, President of the road, and one of its most active promoters, was sent to New York to find such a man. On his arrival, early in 1854, Governor Horatio Seymour and his brother, Col. Silas Seymour, both of whom had known Judah and had followed his work, recommended the young man for the place and telegraphed him to come to New York for an interview. He went, and three days later Mrs. Judah received the following telegram, "Be home tonight; we sail for California April second."⁵

Three weeks later they were on their way, going by the Nicaragua Route.

Proceeding at once to Sacramento, Judah entered upon his new labors with a characteristic energy.⁶ While in the East, Colonel Wilson had made arrangements for the purchase of materials and rolling stock, and a preliminary survey was immediately begun. On May 30 Judah reported that he found the line to Mormon Island more favorable than any he had ever before run, with no deep cutting to be done nor any high embankments to be constructed, and that the grade was almost as

⁴ See *Articles of Association and Estimate of Receipts* on this road, published in New York, 1853, pp. 16 (Vol. VII, No. 6, of Pamphlets on California Railroads, Bancroft Library, University of California) and *Report of Committee of Board of Directors of the Sacramento Valley Railroad Company*, August 7, 1855 (Vol. 4, Railroad Pamphlets, No. 3, California State Library, Sacramento, and Vol. VII, No. 8, of Pamphlets on California Railroads, Bancroft Library, University of California). Any extended account of the building of this first California railroad is, of course, beyond the scope of this article, and this line will be dealt with only as it touches the career of Judah. For details regarding this and other early California Railroads see Bancroft, *Chronicles of the Builders*, Vol. VI, p. 116 et seq.

⁵ Mrs. Judah writes: "You can imagine my consternation on his arrival that night. It was all laid out in these words: 'Anna, I am going to California to be the pioneer railroad engineer of the Pacific coast. It is my opportunity, although I have so much here.' He had always talked, read and studied the problem of a continental railway and would say, 'It will be built, and I am going to have something to do with it.'"

⁶ The Sacramento City Directory of 1854 lists Judah as Chief Engineer of the Sacramento Valley Railroad with offices in the "Hastings Building, second floor." This building stood on the southwest corner of Second and J Streets.

regular and uniform as an inclined plane.⁷ He estimated the cost at \$33,000 per mile, including everything necessary to place the road in complete running order, with proper rolling stock,⁸ and stated that he calculated the cost of operating the road at about three times what it would be in the Atlantic States. Counts of freight and passengers actually moved by team or stage over certain selected routes during the week ending May 29 were included, such data being at the time considered a proper basis for estimating the probable earnings of a railroad project in this new country where no actual railroad experience was available,⁹ and the report concluded: "With such a Road and such a business, it is difficult to conceive of a more profitable undertaking," while the press declared:

Everything promises favorably, and the engineers are going forward immediately to determine the absolute locality of the line with the view of placing it in a short time in a position to advertize for the letting of contracts.¹⁰

The "location" was rapidly surveyed and staked. By June 20 the surveyors had reached Alder Creek, eighteen miles out,¹¹ and Judah proposed to cross the American River at a point just above Negro Bar, near certain large "leads" of the finest building granite. On November 24, 1854, the well-known eastern firm of railroad contractors, Robinson, Seymour & Company signed a contract to furnish all things necessary to put the initial project in proper running condition,¹² including rails, rolling stock and buildings, for the total sum of \$1,800,000, of which \$800,000 was to be paid in capital stock at par, and \$700,000 in ten per cent twenty-year bonds.¹³

⁷ *Report of the Chief Engineer on the Preliminary Surveys and Future Business of the Sacramento Valley Railroad*, by T. D. Judah, May 30, 1854, a pamphlet of 21 pages. (No. 7, Vol. 7, California Railroad Pamphlets, Bancroft Library, University of California.) These favorable conditions, said Judah, "establish some general facts usually regarded as important elements of success in the future prosperity of any Railroad enterprise." These were: "1st. Ability to run trains with rapidity; 2d. Capacity to carry heavy loads; 3d. Present economy in cost and time of construction; 4th. Ultimate economy in the cost of operating and maintenance, facts which bear with peculiar weight upon the future operations of your Road."

⁸ This estimate was much too low, as Judah himself soon discovered. See below for October re-estimate.

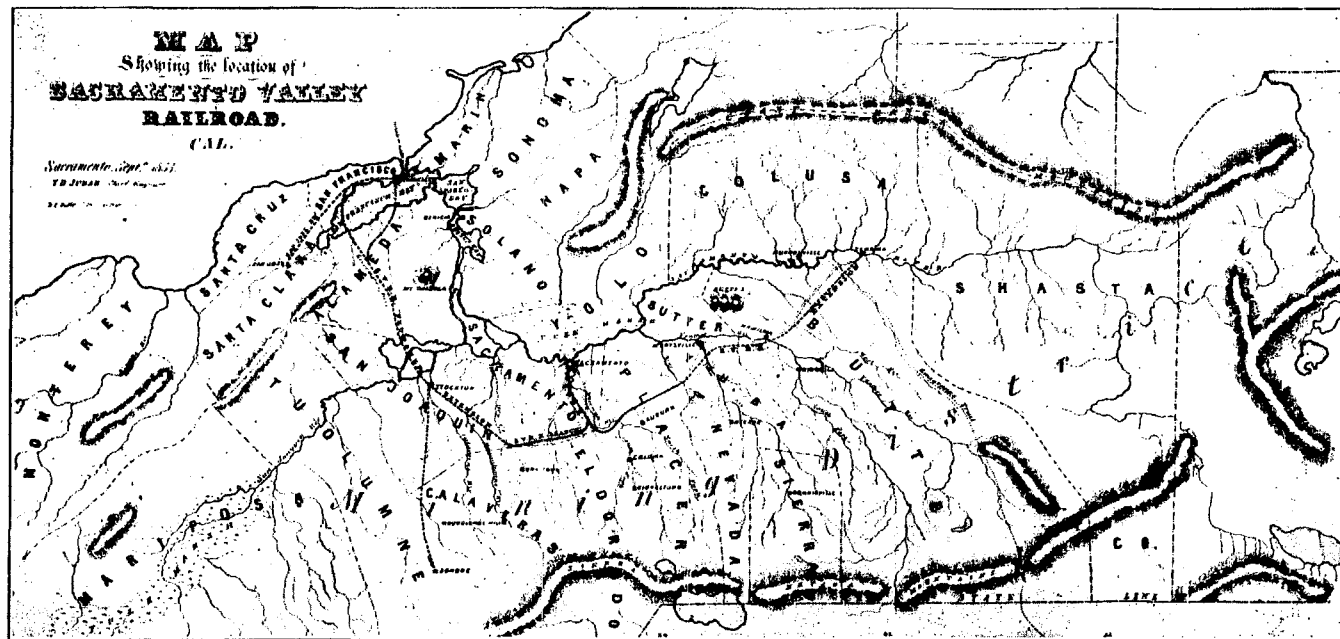
⁹ See Daggett, *History of the Southern Pacific*, page 17, for a criticism of this method. Speaking of Judah's later Central Pacific estimates, Daggett declares that Judah "had no greater facilities than other engineers of the time, and in his own estimates followed the prevailing custom."

¹⁰ *Daily Alta California*, June 5, 1854 (quoting from the *Sacramento Union*).

¹¹ *Sacramento Union*, June 20, 1854, the editor adding: "Mr. Judah is pushing the survey and location with as much rapidity and energy as is consistent with correctness."

¹² *Sacramento Union*, Oct. 28, 1854. See *Daily Alta California*, Sept. 9, 1854, for advertising notice for proposals for grading and superstructure construction. These were really proposals for subcontracts.

¹³ See *Report of Committee of Board of Directors of the Sacramento Valley Railroad Company*, August 7, 1855.



Photograph (largely reduced) of a map included in Judah's second Sacramento Valley Railroad Report (1854)

This meant a total final cost to the company of \$45,000 per mile, which tallied closely with Judah's re-estimate that the costs on the first division of twenty miles would total \$870,000 or \$43,500 per mile.¹⁴ As soon as the "location" was completed to Negro Bar, Judah proceeded to obtain the right of way. Actual grading commenced on February 12, 1855,¹⁵ and a week later a hundred men were at work, with the prospect of a force of five hundred within a short time.¹⁶ By the time of the arrival of the first consignment of rails and rolling stock on the clipper ship "Winged Racer," in June, the grading was half completed to Negro Bar,¹⁷ but the financial troubles of this disastrous year delayed the work considerably.¹⁸ On August 9, however, the first rail was laid, and two days later Judah, assisted by three other officials of the company, Messrs. Robinson, Morse and Carroll, carried a handcar to the tracks and took the first railroad ride in California—a distance of four hundred feet.¹⁹ Soon the locomotive *Sacramento* was landed on the levee, and on August 17 a trial trip to Seventeenth street was made,²⁰ while on the 19th a delegation from San Francisco was taken for a thrilling and dusty ride to the terminus of construction.²¹ By January 1, 1856, the line was complete and in operation to Alder Creek, eighteen miles from Sacramento²² and receipts were averaging "upwards of \$200 daily."²³ The bridge over the creek being soon completed, it took but a few more days to finish the line four miles farther to Folsom, which was reached early in February and was the scene of a grand opening excursion and ball on Washington's birthday.²⁴

¹⁴ *Sacramento Union*, Oct. 28, 1854.

¹⁵ *Sacramento Union*, Feb. 9, 1855.

¹⁶ *Daily Alta California*, Feb. 17, 1855. Re delay by rain see *ibid*, March 21, 1855.

¹⁷ *Sacramento Union*, June 6, 1855. Various minerals were encountered along the line, the editor of the *Sacramento Union* remarking, on March 28, 1855: "On yesterday was exhibited to us by Mr. Judah a handsome ring, manufactured from gold found on the direct line of the railroad now in process of construction between this city and Negro Bar." It bore the inscription "Sacramento Valley Railroad, March 4th, 1855, First gold ever taken from earth used in making Railroad bank" and was evidently a souvenir of Judah's twenty-ninth birthday.

¹⁸ A large amount of stock was forfeited for non-payment of assessments (*Daily Alta California*, July 30, 1855), and at one time the contractors, in order to protect their interests, filed suit for unpaid balances, and attached all the company's property (*Daily Alta California*, October 18 and 25, 1855).

¹⁹ *Sacramento Union*, Jan. 1, 1856. (In resumé of events of the preceding year.)

²⁰ *Ibid*.

²¹ *Daily Alta California*, August 20, 21, and 22, 1855.

²² *Sacramento Union*, Jan. 1, 1856.

²³ *Daily California Chronicle*, Jan. 17, 1856.

²⁴ *San Francisco Herald*, Feb. 24, 1856 (and other contemporary journals).

Had it not been for the monetary crises of 1855, this might have been but a beginning. As it was, the cost of these first twenty-two miles had averaged nearly \$60,000 a mile, and although for a time the line was fairly profitable,²⁵ the placer mines of the foothill region were deteriorating rapidly. It is probable that even as late as 1858 the company intended to extend its line,²⁶ but the time was not ripe, and Folsom remained the permanent terminus.²⁷

Considering the fact that every rail and car had to be brought by sailing vessel a distance of eighteen thousand miles, and also considering the high cost of materials and labor in California, and the near-panic which brought ruin to many enterprises in 1855, the construction of this first California railroad appears to have been a creditable performance. Its profits were largely eaten up, however, by high carrying charges in the form of interest, an error in financing which the "Big Four" took care to avoid on the Central Pacific, very probably owing to Judah's intimate knowledge of the difficulties encountered by the Sacramento Valley line.

FIRST STEPS TOWARD THE PACIFIC RAILROAD (1856-1859)

The details of Judah's career from the time he left the Sacramento Valley Railroad shortly before its completion to Folsom,²⁸ until the opening of the Pacific Railroad Convention in San Francisco in September, 1859, cannot be followed with complete accuracy. His first

²⁵ "The road was a very profitable one from the date of its completion. The effect was to move the terminus of the stage and freight lines running to the northern mines to Folsom, building up quite a town at that point. At one time twenty-one different stage lines were centered at Folsom, all leaving shortly after the arrival of trains from Sacramento." Davis, Hon. W. J., *History of Sacramento County*, p. 119.

²⁶ See article on this railroad in the *Sacramento Directory*, 1857, p. 8, also, article entitled "Correspondence from the Interior," in the *Daily Alta California*, May 23, 1858, in which it is declared that the road was then in a prosperous condition, and that a contract for construction from Folsom to the Yuba River had actually been let. As above stated, however, this plan was never carried into execution.

²⁷ For more general discussions of this railroad, see Davis, Hon. W. J., *History of Sacramento County*, Chicago, 1890; Bancroft, *History of California*, Vol. VII, pp. 537, et seq.; and Hittell, *History of California*, Vol. IV, pp. 452-3. The line was finally sold to the Central Pacific Railroad Company in 1865, and forms the first twenty miles of the present Placerville Branch of the Southern Pacific Railroad. See Report of President, Trustee and Superintendent of this railroad dated December 31, 1860, a pamphlet of thirty-one pages, recounting the difficulties already surmounted but breathing optimism as to the future. (Vol. VII, No. 9, of Pamphlets on California Railroads, Bancroft Library, University of California.)

²⁸ See evidence of L. L. Robinson (March 7, 1865) taken for the Railroad Committees of House and Senate of the First Nevada Legislature in pamphlet entitled *Evidence Concerning Projected Railways Across the Sierra Nevada Mountains from Pacific Tide Waters in California*, p. 205 (Vol. IV, No. 9 of Pamphlets on California Railroads, Bancroft Library, University of California).

task during this period, however, was the preliminary survey of the route selected for the "San Francisco and Sacramento Railroad," a project largely fathered by citizens of the then moribund venture in city building at Benicia, and of which Judah became Chief Engineer.²⁹ This proposed line was to run west from Washington (just across the river from Sacramento) to Putah Creek at Davis' ranch, thence to the Montezuma hills, and past the village of Cordelia to Benicia, very nearly the route later followed by the Southern Pacific Company's main line.³⁰ Arrangements were to be made for connection at Benicia with water transportation by vessel, and Judah characterized his survey in his report to the stockholders as "establishing not only its entire practicability, but developing many new features to be regarded as highly favorable in the construction of your Road."

The cost of this line was estimated at \$51,707 per mile, "fully built, equipped, graveled and fenced," with a total cost of approximately \$3,000,000. Estimates of revenue based, as in the case of the Sacramento Valley Railroad, on traffic counts over wagon routes and river boat lines, showed, according to Judah, a prospect of 200 through, and 50 way passengers, each way, per day, and 400 tons of through, and 100 tons of way freight per day. At Sacramento connection would be made with the Sacramento Valley line which, the report declared, proposed eventually to extend north "as far as Shasta," and which, it was thought, must soon extend to Marysville on account of the falling off of the river at that point and the consequent impediment to navigation. Of peculiar interest in view of Judah's later career is his statement that:

There is still another light in which your Road may be viewed, which adds additional importance to and argues still more favorably in favor of this enterprise. It is its connection with the great Pacific Railroad. This subject has been a fruitful source of discussion and has for a long time engaged the attention of many distinguished individuals, both here and at [sic] the East.

While the partizans of the various localities differ as to the merits of their respective routes, all concur in the great importance and absolute necessity of the early construction of this great work. The limits of this report will not admit of a discussion as to the relative merits of these routes, but if built upon any but the Southern route, your Road will be the grand avenue of approach to the metropolis of the Pacific. Viewed in this connection, it assumes an importance which will not fail to commend it to the attention of all clear thinking and sagacious men, and there is no doubt but if proper exertions were made in the

²⁹ The officers of this road were at this time: Richard Chenery of San Francisco, President; A. B. Forbes, of San Francisco, Vice President; Charles P. Stone, of Benicia, Treasurer and Secretary, and Theodore D. Judah, of Sacramento, Chief Engineer. At the head of the list of directors was General M. G. Vallejo, of Sonoma, and six of the others came from Benicia, with one listed from "Yolo County," four from San Francisco and one (Judah) from Sacramento.

³⁰ See *Report of the Chief Engineer upon the Preliminary Survey, Revenue and Cost of Construction of the San Francisco and Sacramento Railroad*, dated at San Francisco, Feb. 1856 (32 pages and 8 page appendix). (Vol. VII, No. 11 of Pamphlets on California Railroads, Bancroft Library, University of California.)

manner, everything deduced from actual calculation, and reduced to dollars and cents, that capitalists can be found who will invest in such a project, provided it can be satisfactorily shown that it will prove remunerative.⁵³

Such a survey, he thought, would require the expenditure of not over \$200,000, the cost of the completed railroad being estimated at about \$150,000,000, or an average of \$75,000 per mile for the 2,000 miles from the Missouri River to the Pacific. If the plan could be shown feasible, he believed that the stock would find a ready sale, and he pointed out that money enough was even then being spent on "superfluous luxuries" to build a Pacific railroad every year. Financing by stock sales in this way would eliminate the necessity of borrowing at "enormous rates of interest," of floating loans in Europe, or of sacrificing mortgage bonds at half their value.

By what other means can this object be accomplished? asks he. Can the United States Government do it? Have they done it? Have they tried? No, and they will not; and what is more, the people do not much care to have them, for they have little confidence in their ability to carry it out economically, or to protect themselves and the treasury from the rapacious clutches of the hungry speculators who would swarm around them like vultures round a dead carcass. Can a private company of moonshine speculators—individuals who come in and take forty millions of dollars of stock, who are not worth as many cents—do it? They may—that is, if they can induce simple-minded individuals to invest enough to give them a start, and then, upon the principle of putting in more to save what they have already invested, may drag its slow length along, and in thirty, or forty, or fifty years may build a railroad; but what a railroad! Say twenty millions of its cost has actually been paid in good faith by the stockholders, then we find a first mortgage, at eight per cent, of say fifty millions of dollars; a second mortgage of fifty millions, at say ten per cent; a third convertible mortgage of say fifty millions, at say ten per cent, and a floating debt of fifty millions besides. We will find that a few have become enormously wealthy, that English bondholders own the road, and that it takes all the earnings to pay the interest.

Many other matters of interest are contained in this pamphlet, such as the plan for a preliminary wagon road along the route, and discussions of the snow problem, of hostile Indians, of probable operating conditions and methods, of the development of locomotives, of probable rates and tariffs, and the like, but they cannot be discussed in detail in the present article. The conclusion is, however, of interest. Says Judah:

And be it remembered, that it is not the through lines to California alone upon which this road is to rely for through travel. There is Utah, Oregon, Washington, the Russian possessions, the Sandwich Islands, China and the East Indies—all of which are brought, more or less, within the influences of this road.

It is hoped and believed by many that Congress will, at this session, pass a bill donating alternate sections of land to aid in the construction of either this enterprise, the wagon road, or both. Should this be effected, it will obviate the necessity of adhering strictly to the plan as herein proposed; but whether or no this is done, it does not alter the justice of the conclusion as to the proper steps to be taken in making such a survey as is proposed, and locating the wagon road upon it.

⁵³ A sample letter of directions to the leader of one of the proposed surveying parties is included in the pamphlet.

right quarter, that the aid of government would be cheerfully extended to facilitate the construction of this, as of all other Railroads in California tending to hasten the completion of the great Pacific Railroad, by a donation of public lands for the public good.³¹

In addition to his connection with this Benicia project it has been declared that Judah, during this period, surveyed the lines for, or assisted in the construction of the California Central Railroad between Folsom and Marysville,³² and the Benicia and Sacramento Valley Railroad Company, projected from Marysville to Benicia;³³ that he laid out the line later followed by the Southern Pacific Railroad from San Francisco to San Jose,³⁴ and that at the time of the Pacific Railroad Convention of 1859 he was Chief Engineer of a line known as the "Sacramento Valley Central Railroad."³⁵

L. L. Robinson, in giving evidence to the first Legislature of Nevada on the question of aid to railroads from California, declared that after Judah had busied himself with these various projects, and "after all other employment failed him," the then Trustee³⁶ and Superintendent³⁷ of the Sacramento Valley Railroad hired him "to explore the Sierra Nevada Mountains for routes for wagon roads north of the South Fork of the American River, and at the same time to act as agent for the Sacramento Valley Railroad Company in soliciting freight."³⁸ This is perhaps true, for we know that Judah did make certain explorations in the mountains during this period,³⁹ but Robinson's statements regarding him should perhaps be taken *cum grano salis* in view of the later ill

³¹ *Ibid.* p. 31.

³² The California Central was organized by largely the same group that had built the Sacramento Valley Railroad, with C. L. Wilson at their head. (See regarding this railroad the report of its Chief Engineer, W. S. Watson, dated at Oroville, July 30, 1859, in Vol. VI of Railroad Pamphlets, California State Library, Sacramento. See also report of Chief Engineer of the San Francisco and Marysville Railroad Co., Marysville, May 10, 1860.) L. L. Robinson also mentions Judah's connection with the California Central. (See Nevada Pamphlet, cited *supra*, p. 205.) Bancroft (*Chronicles of the Builders*, Vol. VI, p. 121) declares that in 1858 Judah commenced a survey for a branch road from Auburn to some point on the California Central, but that the project had to be abandoned because of its high estimated cost.

³³ *San Francisco Chronicle*, March 7, 1856, perhaps a confusion with the San Francisco and Sacramento Railroad above mentioned.

³⁴ This is very doubtful, but see introduction to Mrs. Judah's letter.

³⁵ *Sacramento Union*, Sept. 24, 1859. Details as to this road have not been discovered.

³⁶ J. Mora Moss.

³⁷ J. P. Robinson.

³⁸ Nevada Pamphlet, *supra*, p. 205.

³⁹ See testimony of Dr. D. W. Strong of Dutch Flat, cited *infra*.

feeling between the two over the ownership of the discoveries made during Judah's railroad explorations in these regions.⁴⁰

Apart from his professional efforts in California, we know that during this period Judah attended three sessions of Congress in aid of the Pacific Railroad project and of a grant of land to California to assist in the construction of railroads in that state;⁴¹ that the first trip to the Atlantic states was in 1856;⁴² that he was in Washington in 1857⁴³, and that he was there again in the spring of 1859.⁴⁴ We also know that his youthful interest in the general subject of a Pacific Railroad developed during this period into almost an obsession.⁴⁵ That this should be true is perhaps but natural, for to an ambitious young man this vast problem and project offered exceptional opportunity for a

⁴⁰ Robinson says (Nevada pamphlet, *supra*, p. 205) that during Judah's exploring service for the Sacramento Valley Railroad, "he projected what is now known as the 'Dutch Flat Route' across the mountains, and made a report in regard to it which was printed in the newspapers without the consent or knowledge of the parties who were employing him. The Trustee of the Sacramento Valley Railroad Company, deeming this information acquired by Mr. Judah the property of that company, and that the report should have been made to that company, instructed the Superintendent to discharge Mr. Judah; which was done. Mr. Judah was very indignant at being dismissed. Mr. Judah, from that time exerted all his energies toward building a railroad across the mountains . . ." (See also discussion, *infra*, of Robinson's insinuations anent Judah after the latter's death.)

⁴¹ See Judah's *Report to the Executive Committee of the Pacific Railroad Convention of 1859*, reprinted in the *Sacramento Union*, July 25, 1860, in which he mentions having been in Washington on these errands during the three previous sessions of Congress. Mrs. Judah, in her letter, mentions "his four trips to Washington," evidently including that of 1861-2. Much light on Judah and the Pacific Railroad movement could, no doubt, be obtained from a scrutiny of the minutes and records of the House and Senate Committees on this and related subjects during these years. It has been impossible for the present writer to accomplish this.

⁴² See Mrs. Judah's letter.

⁴³ See later discussion of Judah's 1857 articles in Washington.

⁴⁴ Curtis declares that Judah spent the time from the spring of 1856 to the fall of 1859 in Washington "lobbying." This statement is, no doubt, erroneous, as he was unquestionably in California much of the time during this period.

⁴⁵ Says Mrs. Judah: "Everything he did from the time he went to California to the day of his death was for the great continental Pacific railway. Time, money, brains, strength, body and soul were absorbed. It was the burden of his thought day and night, largely of his conversation, till it used to be said 'Judah's Pacific Railroad crazy,' and I would say, 'Theodore, those people don't care,' or 'you give your thunder away.' He'd laugh and say, 'But we must keep the ball rolling.'"

In this connection, Mr. John A. McIntire, of Sacramento, a former associate of Newton Booth in the wholesale grocery business in that city, states in a letter to the present writer, dated May 9, 1925, that during an early visit to Sacramento in 1861 or 1862, he was standing on 7th Street with Booth, when the latter said, "There comes crazy Judah." Young McIntire had never seen an insane man, and was therefore much interested, and since Judah's conversation with them seemed particularly sane and lucid, he inquired the reason for Booth's remark, and was told that Judah was a skilled engineer, but was so persistent in his efforts in favor of a railroad across the mountains to connect with the eastern states that he had become almost a monomaniac upon the subject. Booth said he had been forced to tell Judah not to approach him on the subject again.

career. Everyone was talking Pacific Railroad and hoping for its early completion, and, as Bancroft expressed the situation:

The sunburnt immigrant, walking with his wife and little ones beside his gaunt and weary oxen in mid-continent; the sea-traveler pining on ship-board, tortured with *mal de mer*; the homesick bride, whose wedding trip had included a passage of the Isthmus; the merchant whose stock needed replenishing; the miner fortunate enough to be able to return home—everyone, except, of course, the men of the Pacific Mail Steamship Company, prayed for a Pacific railroad. And they did nothing else but pray, when it is a well-known maxim that the gods wait for a beginning before they lend their aid.⁴⁶

Judah made the beginning. If he was a dreamer, he was an exceptionally practical one, and if he was "Pacific Railroad crazy," his insanity had peculiarly sane results, for the gods had assuredly set their wheels in motion before he passed from the scene.⁴⁷ The Pacific Railroad problem was at just this time receiving a great deal of consideration in Washington because of the insistent and growing demand from all sections of the country that something definite be done.⁴⁸ In 1853 Congress had appropriated \$150,000 for use by the then Secretary of War, Jefferson Davis, in the exploration of certain routes from the Middle West to the Pacific Ocean. Later in that year, no less than five separate expeditions set forth on this important mission. The "Northern Trail," the "Mormon Trail," the "Buffalo Trail," which Senator Benton had oratorically advertised, the "Thirty-fifth Parallel Route," and the "Southern Trail,"—all these were carefully explored, and detailed reports of the expeditions were published—a total of thirteen large volumes. Barometric reconnoissances were made and estimates of the cost of construction were prepared, with numerous lithographic illustrations to embellish these reports, which include studies of weather, fauna, flora, geology and other phenomena encountered along the several routes.⁴⁹

⁴⁶ *History of California*, Vol. VII, p. 542.

⁴⁷ One of Judah's staunchest friends and supporters throughout his California career was Mr. Lauren Upson, Editor of the *Sacramento Union*. Mrs. Judah writes of Upson as Judah's "first friend and counselor, always ready to publish anything he wanted to say on railroads, etc."

⁴⁸ There will, of course, be no attempt to review the "Pacific Railroad Movement" in the present article, save as it affected Judah's career.

⁴⁹ See *Reports of Explorations and Surveys to ascertain the Most Practical and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, made under the Direction of the Secretary of War in 1853-56*, Washington, 1855-61, twelve volumes in thirteen.

Cowan says of these reports: "The title conveys but little idea of the value of this great work. These explorations were among the most extensive and elaborate conducted by the United States Government. The reports embody descriptions of every possible feature of the physical and natural history of the vast country traversed. Many of the numerous plates are beautifully colored, which feature adds greatly to the interest of the work."

See Albright, Geo. L., *Official Explorations for Pacific Railroad*, University of California Press, 1921, which contains an account of these explorations. Also, Sabin, Edward L., *Building the Pacific Railway*, (1919) pp. 24-26 incl.

Spectacular as were these explorations, and valuable as were these magnificent reports from the point of view of general interest, it is doubtful if an equal amount of energy was ever spent with so small a crop of positive results. It had been found that the southern route was the most adapted to economical construction, and Secretary of War Davis was bitterly accused of partiality. The charge was probably unfounded, for reasons not necessary to be considered here, but many sectional prejudices which had formerly been semi-quiescent were nevertheless thus brought into active and violent life. More than ever, it now seemed apparent that agreement upon any single route was impossible.

Moreover, it was not generally understood that these elaborate expeditions were but the introduction to a solution of the problem. Many otherwise well-informed persons appeared at the time to believe that with these reports as a basis a Pacific Railroad could now momentarily be expected to spring, Pallas-like, into existence. But to Judah, the reconnoissances appeared in their true light. He saw clearly that only a beginning had been made—that what had been done amounted to the first rather than the final step—and he recognized that which seems self-evident as we look back on the situation from the present point of vantage, i. e., that something far more definite and complete than these reports was requisite before the great project could be expected to obtain support more tangible than congressional oratory.

With this thought in mind, Judah proceeded to set forth what he considered the practical conditions precedent to success in a pamphlet which he published in Washington in 1857 and distributed to members of Congress and others during the session of that year.⁵⁰ In this pamphlet he stated that the project for the construction of the Pacific Railroad, which he characterized as "the most magnificent project ever conceived," had at that time been "in agitation for over fifteen years," and that

Our wisest statesmen, most experienced politicians, scientific engineers, and shrewdest speculators, have each and all discussed the subject in nearly every point of view, and given the results of their wisdom and experience to the world.

Yet—

Their projects have proved abortive. Their schemes have failed. The world has listened with attentive ears to the words of eloquence and wisdom, from the lips of great and wise men.

Yet—

This project has not been consummated. The road has not been finished. It has not been begun. Its practicability has not been established. A survey has not been made. It has simply been made the subject of reconnoissance.

⁵⁰ This pamphlet is entitled, *A Practical Plan for Building the Pacific Railroad*, By T. D. Judah, *Civil Engineer*, San Francisco, January 1, 1857. Washington, D. C., Henry Polkinborn, Printer, 1857. The only copy known to the present writer is that of the Library of Congress, bound with other contemporary railroad pamphlets in Vol. 29 of "Technology Pamphlets".

The reason for the failure to complete the project, in view of its importance, popularity, practicability and probable profits, thought Judah, was occasioned by the fact that all the plans as yet put forth had been speculative in their nature. "The people," said he, "are disposed to look with distrust upon grand speculations." Moreover, there had been jealousy between different interests and localities, "unwilling to make common cause upon a common route," and private capitalists had lacked confidence in the hazy schemes as yet proposed.

He then proceeded to unfold his plan to build the Pacific Railroad within ten years and to raise sufficient capital therefor from private sources. The problem, thought he, was to divest the project of its speculative features and to conquer sectional prejudices. Said he:

No one doubts that a liberal appropriation of money or of public lands by the General Government ought to insure construction of this railroad, but the proposition carries the elements of its destruction with it; it is the house divided against itself; it cannot be done until the route is defined; and, if defined, the opposing interest is powerful enough to defeat it.⁵¹

As for the proposal that three separate roads be constructed, Judah declared that three were not needed and that while "the time may come when three roads may be required," such construction would at that time be a mere waste of money. Since petty politicians could be placated only by some such measures, his proposal eliminated governmental aid as a condition precedent to success. Confidence, said Judah, was all that was needed to draw sufficient funds from private sources.⁵²

But how obtain this confidence in such an enormous project? By *facts*, declared the young engineer—*facts* based on solid foundations. The real reason that private money had not hitherto been obtainable was that no *survey* had yet been made upon which capitalists could base accurate cost calculations, for, says Judah with mild irony, as his mind turns to the beautiful volumes of the Pacific Railroad Exploration Reports:

When a Boston capitalist is invited to invest in a railroad project, it is not considered sufficient to tell him that somebody has rode over the ground on horseback and pronounced it practicable.

⁵¹ Regarding sectional jealousies, a further paragraph is of interest. Says Judah: "The same policy is observable on a minor scale, in the action of the State governments as, for instance, in the State of California an appropriation is badly needed for a survey of a wagon road across the Sierra Nevada mountains, but there are here also three routes, the northern, middle and southern, and each one believing its route the best, insists upon the survey being made, and the appropriation spent upon their route—unable to accomplish this, they defeat the whole."

⁵² He felt that any plan requiring action by Congress would be unsuccessful, since "any attempt at legislation, is for our project, the signal of defeat." He adds (p. 13), "We start with this uncontrovertible fact; we must build the road without legislation." (As will be seen, Judah soon reversed his ideas on this point.)

He does not care to be informed that there are 999 different varieties and species of plants and herbs, or that grass is abundant at this point; or Buffalo scarce at that; that the latitude or longitude of various points are calculated, to a surprising degree of accuracy, and the temperature of the atmosphere carefully noted for each day in the year.

His inquiries are somewhat more to the point. He wishes to know the length of your road. He says, let me see your map and profile, that I may judge of its alignment and grades. How many cubic yards of the various kinds of excavation and embankment have you, and upon what sections?

Have you any tunnels, and what are their circumstances?

How much masonry, and where are your stone?

How many bridges, river crossings, culverts, and what kind of foundations?

How about timber and fuel?

Where is the estimate of the cost of your road, and let me see its details?

What will be its effect on travel and trade? What its business and revenue?

All this I require to know, in order to judge if my investment is likely to prove a profitable one.

Only by preparing such data after, and based upon an "actual and reliable survey" could private capital, in his opinion, be expected to rally to the project; but, said he, "when the friends of the Pacific Railroad can approach a capitalist and answer all these questions, they may begin to hope for a realization of their wishes." As will be seen, this is just what Judah finally set himself out to do, his own success proving, in large measure, the validity of his theory. As to the Pacific Railroad explorations, he continues:

Some will say, how is it possible that a survey must be made, when Government has had half a dozen routes surveyed, and has spent so much money and time upon them?

This is the answer. It is because Government has spent *so much* money and time upon *so many routes* that we have as yet no proper survey of any one of them.

If Government had concentrated her engineering parties and spent her money in making a thorough survey of *some one* route, in a practical railroad fashion, we should now have some reliable data wherewith to answer these questions—but the dog in the manger policy required that the appropriation should not be spent upon any one route, but distributed over half a dozen; the result of which is an abundance of general information, vastly interesting, and of little use; but a dearth of that kind of practical knowledge, which capitalists require to induce them to invest in railroads. No disrespect is intended, or fault to be found with Government engineers, who are generally highly scientific as well as estimable gentlemen, and who obey orders to the letter.

If directed to ascertain distances by latitude and longitude, or with a rodometer instead of a goniometer, they do so; or, if directed to ascertain the altitudes with a barometer instead of a leveling instrument, they do so. If ordered to survey two thousand miles at the rate of 20 miles per day, they obey orders and ask no questions; but it is no less true that the former means give only general and interesting, while the latter give practical and useful results. The one tells us that the route abounds in obstacles and difficulties, or is inexpensive and easy of construction; while the latter determines *what* these obstacles and difficulties are, or *how easy* and inexpensive the character of the route is.

Judah's plan provided, therefore, for a preliminary survey by carefully planned and adequately financed parties, which should prepare definite estimates, profiles, curves, quantities, and other like data. And, says he:

Who can doubt that with all this information, obtained in a practicable

There are numerous points in the proposed plan, which will, no doubt, appear to many as bold, startling and apparently, impracticable; but if its boldness will have no other effect than to induce sensible men to read and reflect upon them, the desire of the writer will have been gratified.

Sensible as many of these proposals were, nothing came of them at this time, for although there was much talk, Congress was not yet ready to act. By the time the next session had convened, Judah was convinced that the problem should be attacked from the other end, and the first concrete result of this determination was the Pacific Railroad Convention of 1859.

THE PACIFIC RAILROAD CONVENTION OF 1859

The continued inaction of Congress in relation to the Pacific Railroad during the decade of the "fifties" quite naturally caused more and more disappointment to the people of California as the years rolled by. At every session a number of bills relating to the subject were filed, but as has been seen, sectional jealousies and the rivalries of ambitious "statesmen" had combined to defeat every such proposal, the only concrete result being those imposing volumes of "Pacific Railroad Reports," the essential futility of which had been demonstrated by Judah in his pamphlet of 1857. So unsuccessful had all efforts been, that by the spring of 1859 it seemed clear that if anything were to be accomplished the West must prepare to move of its own accord in the matter. On April 5 of that year the Legislature of California accordingly passed the following resolution:

RESOLVED, By the Assembly, the Senate concurring, that to promote the interest and insure the protection and security of the people of the States of California and Oregon, and the Territories of Washington and Arizona, and especially to consider the refusal of Congress to take efficient measures for the construction of a Railroad from the Atlantic States to the Pacific, and to adopt measures whereby the building of said Railroad can be accomplished, it is expedient that a Convention be held on the twentieth day of September, A.D., eighteen hundred and fifty-nine, at the City of San Francisco, in the State of California, composed of Delegates from said States and Territories.

RESOLVED, That the people of the several Counties of the said States and Territories are hereby especially requested to send to said Convention, Delegates equal to the number of the members of the Legislature of the said States and Territories, to which they are entitled, to represent them in said Convention.

RESOLVED, That His Excellency, the Governor of this State, be requested to send copies of the foregoing Resolutions to the Governors of the State of Oregon, and the Territories of Washington and Arizona, respectively.⁵⁴

⁵⁴ *Stats. 1859*, p. 391. The same Legislature passed a number of other resolutions relating to various phases of the Pacific Railroad controversy. See *Stats. 1859*, pp. 390 and 393, and the "Memorial" of the Legislature to Congress, *Stats. 1859*, p. 395. While beyond the scope of this article, it is apparent that much light on the Pacific Railroad situation may be obtained from a scrutiny of this annual crop of "Resolutions," commencing with the first legislative session held in San Jose in 1850.

It is probable that Judah was the real instigator of this resolution. At any rate, he returned to California after the adjournment of Congress in 1859 and became the prime mover in the convention itself.⁵⁵ This body met in the "Assembly Hall" at San Francisco on September 20, and the delegates to the number of a hundred elected John Bidwell, of Butte County, president.⁵⁶ Judah, as a delegate from Sacramento, took a prominent part from the outset.

The first bone of contention was the route to be favored, and the method of favoring it. On the opening day Col. J. B. Crockett, of San Francisco, introduced a resolution to the effect that, in the opinion of the convention "the western terminus of the Pacific Railroad should be at the city of San Francisco."⁵⁷ This gave rise to extended debate, and a number of changes were made, the final resolution reading:

RESOLVED, That, from all the information before the Convention, it should and hereby does declare its decided preference for the Central Railroad Route.⁵⁸

Judah regarded such action as premature and unwise. His experience with Congress had convinced him that the only way to obtain the passage of a Pacific Railroad Bill was to eliminate the question of route from debate by providing that the company undertaking the work should select its route for itself. He was still convinced that nothing could be expected from private capital until careful and proper surveys had been made and until costs could therefore be somewhat approximated,⁵⁹ but he had now come to believe that Congress should be asked to guarantee interest payments during at least the first twenty years in order that the experience of the Sacramento Valley line might

⁵⁵ This convention can be touched upon here but briefly, and only in so far as it affected Judah's career. For further material relating to it, see Hittell, *History of California*, Vol. IV, pp. 453-4; Bancroft, *History of California*, Vol. VII, pp. 452, et seq, also Curtis' article. This was the second Pacific Railroad Conference in California, the first having been held in San Francisco in August, 1852, with Thomas O. Larkin as president. (Bancroft, *Chronicles of the Builders*, Vol. VI, pp. 137-8.)

⁵⁶ The other officers were: Edward Lander, of Washington Territory, Alex. Pinkney, of Oregon, E. S. Holden, of San Joaquin, and Geo. W. Crane, of Monterey, Vice-Presidents; W. Rabe, of San Francisco, Secretary, and O. H. Thomas and Henry S. Wells, Assistant Secretaries. (*Sacramento Union*, Sept. 22, 1859.) In addition to eight delegates from Washington Territory, and twenty-four from Oregon, the thirty California counties were each represented by varying numbers of delegates, ranging from one to twelve. (*Sacramento Union*, Sept. 23, 1859.)

⁵⁷ *Sacramento Union*, Sept. 22, 1859.

⁵⁸ *Sacramento Union*, Sept. 26, 1859.

⁵⁹ Commenting on Judah's insistence on the necessity for an adequate and accurate survey as a condition precedent to any successful campaign for the railroad, the editor of the *Sacramento Union*, on Sept. 24, 1859, said: "Upon the practical point the remarks of T. D. Judah, Engineer of the Sacramento Valley Central Railroad, before the Convention, struck us as worthy of the special attention of delegates. He clearly demonstrates the first step to be taken."

be avoided. This point of view he earnestly put before the Convention, and in a letter to the editor of the *Sacramento Union*, he expressed his conviction in reference to the subject, saying, in part:

I went to that Convention impressed with the conviction that there were only two measures worthy of important consideration, and if the Convention would concur on them and unite harmoniously in recommending them as the proper measures to be adopted, they would have accomplished the main objects for which they were called together and to the accomplishment of this end we adhered through the mass of local and general business transacted by the Convention until successful, the Convention having sanctioned, indorsed and recommended them, I believe, unanimously. The first was with regard to a proper survey of the line or lines, so as to enable us to speak understandingly of the relative merits, length and cost of various routes, and upon this information to determine upon and adopt the proper route or line. The second was to decide upon the manner in which the Federal Government could properly extend her aid in the construction of the road, calling upon her emphatically to respect the views of the Convention on this subject, as an expression of the views and opinion of the people of the whole Pacific coast, not only of the State of California, but also of the sovereign State of Oregon and the Territory of Washington—the united voice of the whole people, expressed in a Convention convened for that purpose, controlled by no political, local or sectional considerations.⁶⁰

Of certain proposed resolutions asking from Congress a guarantee of not to exceed five per cent interest on actual cost, and the grant of right of way to parties willing to furnish capital, with authority to them to select the route, and declaring that California should construct that part of the route within her boundaries, Mr. Judah said in the same letter:

In supporting and endeavoring to procure the passage of these resolutions, I was enabled to present the following arguments, which are very simple.

1. The whole question as to routes is solved, leaving it to those capitalists who are willing to embark their money in the enterprise to select that which they deem to be for their interests, believing that the general principles governing this question will be more readily ascertained, will more properly apply, and the location thus ascertained give better general satisfaction than if formed by any other method.

This provision, then, relieves Congressional action of one of its most embarrassing features.

2. If Congress act favorably on this plan, private capital can be had wherewith to build the road for its stock will then be equivalent to Government five per cent scrip. With this guarantee of interest from Government for 20 years, or until the receipts of the road will enable it to meet its own interest, capital will seek it—it will not have to seek capital; and it is more than probable that, were proposals invited for taking the stock thus guaranteed, that bids would be received from responsible parties in the Atlantic States and Europe for the whole issue at a *premium*. If this be so, the road can be commenced immediately, the work paid for in cash as it progresses, insuring economical construction and early completion, and Government would even be relieved of the necessity of making a survey, which would be undertaken by private capital.

3. It relieves Government from the necessity of being a stockholder, or becoming interested in the road in any other manner than to provide (under such guards and restrictions as may be necessary to prevent fraud) for the payment of the interest upon its actual cost at the rate of five per cent per annum.

This provision entirely meets all the objections which have been heretofore urged against Government becoming an interested party. It shuts the door to fraud, corruption, or political dishonesty. It affords no hobby to ride, and presents no stepping stone to power, advancement or distinction. It creates no new

⁶⁰ *Sacramento Union*, Sept. 26, 1859.

appointments, or salaried and Government offices. Government has only to satisfy herself that the work is being built in an economical manner and provide for the interest on its actual cost as it progresses.

4. Although Government provide for and pay the interest for a time, it can be shown that it will not withdraw from or deplete the Treasury, but rather augment and increase the receipts of the same in the enhancement of the value of her public domain and the increased sales of lands contiguous to the line of the road. Estimating the actual cost of the road to be \$40,000 per mile, or a total of \$75,000,000, the interest on the same would, on completion of the road, amount to \$3,750,000 per year. In order to provide for and meet this amount, it is proposed that Congress set apart, not for speculators, but to be retained in her control, every alternate section of land for a proper distance on either side of the road, from the sales of which to create a fund to be applied to this special purpose; which, it is believed, will not only amply provide for the same, but, from the increased value of the remaining lands, so augment her revenue as to replenish and fill her wasted Treasury; provide for other works of internal improvement, in addition to opening up her desolated waste of wild lands to population providing homes for the thousand immigrants who are arriving daily on the quays and wharves of the Atlantic seaboard; preparing for herself facilities for transporting her troops, stores, munitions of war, and mails; cementing the bonds of union between the members of her own family, before their long separation produce estrangements, thereby entitling herself to the warm gratitude, respect and cordial support of the people of the Pacific.

With regard to the policy of invoking State aid, it is believed that an adherence to the same general features, in extending State aid to construct that portion of the Pacific Railroad within the borders of the State, would secure the end with less objection than by another method; it would relieve the State from the necessity of becoming a stockholder, and she might set apart her swamp and overflowed lands to create a fund to meet the interest on the cost of the road, as in the first instance; but that is a matter for the Legislature to decide upon, and the general declaration of the Convention, with their recommendations that the State of California will construct and complete the Pacific Railroad from the eastern boundary of the State, to San Francisco, effectually covers all the action they can well take as regards State policy, leaving the precise mode to the decision of that legislative body who have the power and exclusive control.⁶¹

The convention formally memorialized Congress to lend its aid by granting lands to California, by guaranteeing interest on the bonds of the road through the territories, and by remitting the duties on railroad iron for the entire distance. It was also the consensus of opinion, as expressed in the several resolutions finally passed, that California and Oregon or Washington Territory should at once commence the construction of two railroads, one from San Francisco and another from some point on the Columbia River or Puget Sound, to meet at a convenient point on the route to the Missouri River; that the State Legislature be asked to aid, and to devote swamp and overflowed lands

⁶¹ The next day the editor of the *Union* declared: "It is true the resolutions quoted yesterday by T. D. Judah, which were adopted by the convention, propose to leave the route absolutely to the selection of those who may undertake to furnish the money to build it, but this does not render the declaration of the convention any the less emphatic in favor of the Central route. If Judah's plan, as recommended by the convention, should be favorably acted upon by Congress, no legislation as to the route would be required; the line would be left solely to the selection of those who furnished the money to lay down the iron rails. They would, of course, consult their own interests, as well as those of the country, and the result would not be in the least doubtful. They would, by the considerations we have named, be forced to settle down upon the Central line as the one for the road."

to the project; and that in California the road should run from San Francisco around the south arm of the bay, thence through Stockton, and thence east over such route as the Legislature might direct, the Convention also recommending authorized state and county aid, relief from stockholders' individual liability, and an actual survey of the various passes through the mountains.⁶² Plans were made to reconvene in February, 1860, and a committee on an address to the people of the Pacific Coast was appointed. Said this Committee:

It has been well understood for several years past, by all the sincere and intelligent advocates and friends of the great work, that we must look primarily to the enterprise and resources of the Pacific Coast, for the construction of the western portion of the road. It has also been well understood that until the enterprise on the Pacific side should be organized, and acquire a positive and effective working position, so as to confederate and cooperate with enterprise in the Valley of the Mississippi and the Atlantic seaboard, the problems of route, and of when, where and how the Federal aid should be applied, must remain unsolved, and indeed that no complete working system for the enterprise could be even projected with any reasonable expectation of practical results without a complete and effective organization on this Coast.

Organization, definite plans, and the requisite capital are the conditions of success. The Committee is of the opinion that their propositions, if carried into effect, will meet and answer these conditions.⁶³

The Committee added that the road was "a thing demanded," and that it was California's business and duty "to meet her portion of the demand," concluding:

To the views presented and recommendations made, we ask the serious consideration of all of our fellow citizens, and particularly of those whose office it will be to act, or refuse action upon the matters submitted to the convention.

The question of the proper presentation of these recommendations to Congress was felt to be of great importance, and because of his grasp of the subject and his familiarity with the practical operation of politics, the Executive Committee, on October 11, 1859, formally appointed Judah as accredited agent of the Convention to convey its Memorial to Washington. The selection was universally applauded, and on October 20, less than a month after the Convention adjourned, and only nine days after his appointment, he sailed for Panama on the steamer *Sonora*.⁶⁴

⁶² Judah's hand is apparent throughout these resolutions. He was an active member of the Committee of ten on Resolutions, of which J. B. Crockett, of San Francisco, was Chairman.

⁶³ See *Address to the People of the States and Territories on the Pacific*, prepared by the "Committee on Address," of the 1859 Convention, San Francisco, 1859.

⁶⁴ *Daily Alta California*, Oct. 20, 1859, the editor adding: "In saying that no better selection could have been made for this responsible duty, we but reiterate what is well known to all who are acquainted with Mr. Judah. Few persons in California have a more thorough acquaintance with the question of the construction of the Pacific railroad in all its branches than has Mr. Judah, and his services in this capacity will be invaluable.

"We take occasion in this public manner to bespeak for him and his mission the aid and countenance of the Atlantic press."

His first task was to prepare a bill embodying the chief recommendations which had been agreed upon. Copies were sent back to California, and the bill was formally indorsed and approved by the Convention at a second session in Sacramento.⁶⁵ Meanwhile, the newly elected California Congressman, Mr. J. C. Burch, as well as General Lane, Senator from Oregon, both of whom were on the same boat with Judah en route east, went over the bill and approved it, Burch agreeing to sponsor it in the House.⁶⁶

Upon his arrival in Washington, Judah at once sought out California's Senators, and on December 6 interviewed the President, who, upon being presented with a copy of the Memorial, "expressed himself generally in favor of the Pacific Railroad." Then, since business must await the election of Speaker in the House, Judah decided upon a tour through "the West," in order, as he says, to "endeavor to awaken as much interest as possible in our efforts." Among the points visited on this trip were New York, Albany, Syracuse, Buffalo, Cleveland, Columbus, Chicago and Cincinnati.

The efforts of Mr. Burch's friends having failed to obtain for him a place on the Select Committee on the Pacific Railroad, his bill was manoeuvred into the friendly hands of the Committee on Post Offices and Post Roads. Later, a select committee was formed, with Scott of California as a member, and Judah went to work with the California delegates seeking an early report and a compromise measure, with the choice of route left open. In the House, sectional controversies over the route soon arose, however, and the House Bill, though it twice got out on the floor in varying forms, was at last put over for consideration at the next session, to begin in December, 1860. Meanwhile, in the Senate the larger questions of slavery and secession so filled the air that Senator Gwin could not even get his compromise bill "called up" for consideration.

Another bill which Judah considered important related to the granting of lands by the federal government to California in aid of the construction of railroads, but like the railroad bills, it could not be forced out on the floor of the House. In addition to following the course of legislation, Judah busied himself with obtaining useful material

⁶⁵ See in re this second meeting, the *Sacramento Union*, February 7-11, 1860.

⁶⁶ See *Report of Theodore D. Judah to the Executive Committee of the Pacific Railroad Convention*, reprinted in full in the *Sacramento Union*, July 25, 1860.

In an address before the Territorial Pioneers of California on April 13, 1875, Mr. Burch told of his meeting with Judah on the *Sonora* and of Judah's enthusiasm and zeal on the Pacific Railroad question, adding, "Never have I seen a more unselfish laborer for a public work, never knew a more self sacrificing spirit than his." (See *First Annual of the Territorial Pioneers*, San Francisco, 1877, pp. 30-43.)

of a general character, and of peculiar interest, in view of his later career, is his declaration that he collected "some reliable information with regard to the operating of engines on heavy grades, which becomes highly important in view of solving the question of crossing the Sierra Nevada mountains, as it establishes the fact that grades as high as three hundred and fifty feet per mile can be overcome and operated with perfect safety."

While in Washington, the former Vice-President's room in the Capitol was turned over to Judah, who converted it into a species of museum on the Pacific Railroad question, with quantities of maps, diagrams, reports and other data. In his report he mentions a testimonial from "Messrs. Latham, Gwin, Burch, Scott, Lane, Curtis, Phelps and E. B. Washburne," approving his course, and, after commending a number of members of Congress and others to the gratitude of the Convention, he concludes as follows:

I would also state that though the expenses of my mission, apart from my time, have cost me over \$2,500, the only bills I have to present are

For printing bill and circular in New York.....	\$20
For printing bill and circular in Washington.....	20
	<hr/>
	\$40

More convincing proof of Judah's whole-hearted and public spirited attitude on this subject could hardly be found, and although the work of the Pacific Railroad Convention of 1859 resulted in no further direct or formal action, nevertheless, it had an important effect upon public opinion, and the bill on which a compromise was "almost" had, became in many respects the progenitor of the Pacific Railroad Act which passed Congress in 1862.⁶⁷

⁶⁷ Judah's report closes with a list of attached documents showing the completeness of his work, as follows: "Accompanying this report will be found the following papers, copies of which are at the service of the Executive Committee: A—Debate in House on Pacific Railroad Bill; B—Bill printed in New York; C—Printed Circular accompanying; D—Bill printed in Washington; E—Circular accompanying; F—Full official report of proceedings Pacific Railroad Committee at each meeting; G—Communication of T. D. Judah to Pacific Railroad Committee; H—Letter of approval of delegation; I—Circular of Railroad Convention held at Louisville, March 21, 1860; J—Memorial of Edward Larned to Congress on Pacific Railroad; K—Letter of H. D. Whitcomb, Chief Engineer Virginia Central Railroad; L—Letter of Thomas Dodarnead, Superintendent Virginia Central Railroad; M—Letter of M. W. Baldwin & Co., locomotive builders, Philadelphia; N—Pamphlet by Charles E. Leet, Esq.; O—Three speeches of Hon. William M. Gwin on Pacific Railroad; P—Original bill of Hon. Mr. Curtis; Q—Bill of Select Committee; R—Bill introduced by Hon. Mr. Kennedy, United States Senate; S—Bill of Convention, introduced by Hon. Messrs. Wigall and Scott; V—Argument and bill of F. W. Lander, Esq.; W—Bill introduced by Hon. Mr. Stout; X—Bill introduced by Hon. Mr. Boteler; Y—Communication to delegation respecting survey of Eastern boundary; Z—Copy of map furnished Committee on Public Lands."

THE INCEPTION OF THE CENTRAL PACIFIC (1860-1862)

Far from being discouraged at the failure of Congress to act on the recommendations of the 1859 Convention, Judah now entered upon the task of actually laying out a railroad over the Sierra with renewed enthusiasm. As has been seen, it had for some time been dawning upon him that the plans hitherto submitted had proven unsuccessful before Congress because, while admirably adapted for senatorial eloquence, they were uniformly based upon hopes and hypotheses rather than upon demonstrated facts. He was therefore convinced that nothing definite could be expected in Washington until some more concrete action should be taken in California. The Pacific Railroad Convention, with its recommendation of the Central Route and its suggestions anent the financing of the project, had proved abortive and had received a rebuff at the hands of Congress which only served to demonstrate the growing bitterness of eastern sectional jealousies, and Judah was now determined that rather than again ask Congress to make an offer to some hypothetical company, which should later choose its own route, the company itself should first be organized, and should present to Congress accurate and definite surveys of some particular route, standing ready to accept any reasonable proposal and to commence actual construction immediately.

In his search for a possible route over the mountains, he was materially assisted by Dr. Daniel W. Strong, a druggist of Dutch Flat, then a prosperous mining village on the American River watershed east of Sacramento. Near here the earliest overland emigrants had passed after crossing the Sierra by way of Donner Lake and Donner Pass. At the time now under consideration, however, the main emigrant route ran through Placerville to the south, and thence over another pass, and shortly before this period, Strong had set out in search of a wagon road route over Donner Pass for the purpose of drawing travel back to its earlier course.⁶⁸

⁶⁸ Testifying before the United States Pacific Railroad Commission on August 4, 1887, (See Report of that Commission, Vol. V, p. 2838, et seq.) Strong declared:

"Before the road was commenced, I was living up at Dutch Flat, and knew the country very well. I thought there ought to be some way of getting over the Sierra Nevada Mountains and diverting a portion of the travel—of the emigrant travel—across the plains, so that it would come our way and to Sacramento. In 1859 I started out with a party of volunteers to make a reconnaissance for a road across the mountains." Strong also filed in evidence (*ibid*, p. 2959) a document dated at Dutch Flat, June 26, 1860, showing forty-seven subscriptions ranging from \$1.00 to \$10.00 to pay for a preliminary survey by an engineer to ascertain the practicability of this route for a wagon road. This document, said Strong, was prepared by Frank Moore, agent for Wells-Fargo & Company at Sacramento.

This, in itself, was no new idea. In addition to the emigrant business, the newly discovered "Washoe Mines" were beginning to draw men by the thousands over the Sierra, and the carriage of supplies and machinery to these mines soon became important, and was proving extremely lucrative. It was much sought after, and wagon roads to capture it had been projected over a number of passes.⁶⁹ As mentioned above, it has been said that Judah was sent into this region to search for just such a route by certain interests connected with the Sacramento Valley Railroad. Whatever may be the truth as to this statement, we know that the fall of 1860 found him in the mountains; that he made a preliminary examination and barometric reconnaissance of a route through El Dorado County via Georgetown, another via Nevada City and Henness Pass, and a third via Dutch Flat and Donner Pass.⁷⁰

Whether Strong or Judah first conceived of Donner Pass as the site for a railroad is perhaps a futile query. Many years later, after Judah's death, and after the railroad had been in actual and successful operation over this pass for a number of years, Strong testified that he had discovered the route and had brought it to Judah's attention.⁷¹ Judah, says Strong, came up to Dutch Flat by stage at his request, and it seems clear that during the fall of 1860 the two made a preliminary reconnaissance of the Donner Pass route, the story of which is graphically related by Mrs. Judah as follows:

In Washington he labored largely at his own expense, as from time to time he went on there, till he made up his mind that he would never go to Washington again till he had been over the Sierra Nevada Mountains, made a survey, and would go back with his maps, profiles, estimates, etc. for a railroad across them. In his own words, "That what I believe without it, I can intelligently show to Senators, members of Congress, etc. With facts and figures they cannot gainsay my honest convictions as now." Oh, how we used to talk it all over and over on the steamer en route to California in July, 1860. Three weeks from the time we arrived in California he was in the mountains, accompanied mostly by Dr. D. W. Strong, then of Dutch Flat, Cal., whose friendship was assured, and who was truly a mountaineer. Together they went over the different passes, Beckworth, etc.⁷² Last the Dutch Flat route, or Donner Pass. No one knew what they were doing; the "engineer" was in the mountains. I remained in San Francisco and Sacramento among friends.

It was in the drug store of Dr. Strong, at Dutch Flat, that the first profile was worked out from notes taken by them. Dr. Strong used to tell a thrilling

⁶⁹ See, for example, *Sacramento Union*, September 20, 1860, for article describing the advantages of the proposed road up the Yuba and over Henness Pass.

⁷⁰ Report of Chief Engineer of the Central Pacific Railroad Company of California, October 1, 1861.

⁷¹ Strong testified: "In making the reconnaissance for that route I discovered a place where a railroad could go through." Strong said that he was not then acquainted with Judah, but stated that he "knew that he was investigating the country trying to find a pass over the mountains a little further north than the thirty-second parallel. Shortly before this he had been at Tehachapi Pass and other points below there. He was then in Sacramento canvassing the subject." (Testimony, p. 2838.)

⁷² Probably an error, as there is no evidence that Strong ever accompanied Judah on any but the Donner Pass reconnaissance.

story of their last night in the mountains—came near being snowed in, obliged to get up in the middle of the night from their camp and start out in the darkness to find the trail, and none too soon were they. Judah could not rest or sleep after they were in town and the store till he had stretched his paper on the counter and made his figures thereon. Then, turning to Dr. Strong, said for the first time, "Doctor, I shall make my survey over the Donner (Judah) Pass, the Dutch Flat route, above every other."

Under the laws of California at that time it was necessary for a railroad corporation to have bona fide subscriptions to capital stock to the amount of \$1,000 for each mile of road projected, ten per cent of which was to be paid in before incorporation.⁷³ Being convinced that they had discovered a feasible route over the mountains, Judah and Strong at once set to work canvassing the field to obtain stock subscription agreements for a railroad across the Sierra to be known as the "Central Pacific Railroad."⁷⁴ Strong, who was well acquainted in the mountain settlements, met with a fair measure of success, while Judah prepared and published in pamphlet form a report detailing the results of their investigations and drawing attention to "some newly discovered facts with reference to the route of the Pacific Railroad through the State of California."⁷⁵

Said he:

Confident of the existence of a practicable line across the Sierra Nevada Mountains, nearer and more direct than the proposed line via Madelin Pass and the headwaters of the Sacramento I have devoted the past few months to an exploration of several routes and passes through Central California, resulting in the discovery of a practicable route from the city of Sacramento; upon the divide between Bear River and the north Fork of the American, via Illinoistown,⁷⁶ Dutch Flat, and Summit Valley to the Truckee river; which gives nearly a direct line to Washoe with maximum grades of one hundred feet per mile . . . The elevation of the Pass is 6,690 feet.

The saving by this route of one hundred and fifty miles over Lieutenant Beckwith's Feather River Canyon route, which had been

⁷³ See Act of April 22, 1853, (Compiled Laws, 1853, p. 255).

⁷⁴ Said Strong (Testimony, p. 2839): "The next morning Judah came into my place and he said to me, 'Give me some writing materials'—I produced some writing material he sat down and drew up what he called 'articles of association,' and he shoved them across the table to me and said 'sign for what you want.'"

The Sacramento Union, November 9, 1860, contains an article on the "Dutch Flat Route" quoting the *Dutch Flat Inquirer*, and dealing largely with the wagon road question. Judah's reconnaissance is mentioned, the article continuing: "From the reports made in relation thereto, it appears that this route is more favorable for a railroad over the Sierra Nevada than any one which has been examined by engineers. The line is short—only about eighty miles from the foothills to Truckee Lake. No serious engineering difficulties present themselves. If a Pacific Railroad is ever built, it is more than likely that it will cross the Sierra Nevada upon the Truckee route and through the Lake Pass.

"As remarked by the engineer, a good wagon road over this route would greatly benefit the county of Placer. It is, too, a subject well worthy their attention next Spring."

⁷⁵ This pamphlet (of eighteen pages) was entitled *Central Pacific Railroad Company of California*, and was published in San Francisco on Nov. 1, 1860. A short circular of similar tenor was also published on November 10, 1860, and distributed generally. (See Strong's Testimony, p. 2960.)

⁷⁶ Illinoistown was later renamed "Colfax."

described in the "Pacific Railroad Reports," was most important, said Judah, and of especial interest was its direct line to the Washoe country, which all agreed was one of the chief probable sources of business for such a railroad.⁷⁷ Local business could also be expected from settlements already in existence along the line. The Pacific Railroad Bill, to come up in December, provided for large assistance to a railroad to be constructed under its provisions,⁷⁸ and since according to that bill, the California construction must be effected by a California corporation, Judah proposed that such a corporation be formed at once "for the purpose of constructing a road through the state upon this route, in anticipation of the passage of this bill." Such a course would, he thought, secure recognition of this line as the recipient of the contemplated aid, and he proposed to insure such a result by inserting the name of the company in the bill itself, a plan which as will be seen, proved entirely successful.

Largely through Doctor Strong's efforts, bona fide subscriptions to the amount of \$46,500 had been procured in the towns of Dutch Flat, Illinoistown, Grass Valley and Nevada City, and as the distance to the state line was estimated at 115 miles, further subscriptions to the amount of about \$70,000 were planned to be obtained in San Francisco and Sacramento.

Armed with this pamphlet⁷⁹ and much data regarding the proposed

⁷⁷ In this pamphlet is included a copy of a letter to Judah from the firm of Ogden & Wilson, detailing the prospect for business on a railroad between Sacramento and the Washoe mining districts, and declaring that "no railroad was ever contemplated in California with such flattering prospects of a large and lucrative business, and which promises such universal benefit to the people of the state."

⁷⁸ \$18,000 per mile from the navigable waters of the Sacramento River to the base of the Sierra Nevada; thence \$24,000 per mile to the summit; thence an additional \$3,000 per mile for each degree of longitude crossed, until the one hundred and ninth was reached.

⁷⁹ The remaining portion of the pamphlet is given over to a discussion of financing methods and operating possibilities on the proposed route. Judah at this time advocated permanent grading wherever it was found to be "light and inexpensive," with temporarily located stretches of heavier grade to be used merely for speed of construction, in case Government aid were not soon forthcoming. This would put a reasonably good road into operation without delay and the more difficult permanent construction could come later. County and state aid was to be solicited, and in view of probable heavy operating costs the statutory rates of ten cents per passenger per mile and fifteen cents per ton for freight per mile were to be recommended to be raised to fifteen and thirty cents, respectively. On the basis of the then prevailing haulage business to the Washoe district he considered that this would yield a good profit, adding: "An estimate can scarcely be made of the profitableness of such a road, for no instance of a road with similar business exists. It is believed that its profitableness will exceed that of any known road in the world." It was estimated that per diem receipts would amount to at least \$6,250, or, at 313 days per year, a total of gross receipts for a year of \$1,956,250.

The statute referred to was *Stats. 1854*, p. 82, Section 9. (Amending Section 33 of *An Act for the Incorporation of Railroad Companies* approved April 22, 1853.) It is of interest to note that the Act of 1861 under which the Central Pacific Railroad Company was actually incorporated continued in force these older rate provisions. See *Statutes 1861*, p. 607, Section 51.

railroad, Judah proceeded to San Francisco. At first things seemed to be going well, and he wrote Strong on November 14: "I have struck a lucky streak, and shall fill up the list without further trouble. I have got one of the richest concerns in California into it."⁸⁰

This burst of optimism came too soon, however, for when it came to actual subscriptions nothing could have been cooler than his reception. The Sacramento Valley Railroad had been largely financed by San Francisco men, and they rued the experience. Judah did what he could, but was met on all sides with rebuffs. As one writer has put it:

He tried the rich men of San Francisco. They heard his story; smiled at his enthusiasm, but they secretly buttoned up their pockets and locked their safes and said wisely to each other that the man was an enthusiastic lunatic.⁸¹

At a meeting in the office of what Mrs. Judah terms "a leading law firm," the plan was laid before a group of representative capitalists of the Bay region, but skepticism prevailed, and nothing was accomplished.⁸² Judah at once returned to Sacramento and soon called together a few acquaintances in a meeting at the St. Charles Hotel in that city.⁸³ About thirty attended—men from various walks of life, who had become interested in the project.⁸⁴

⁸⁰ See Testimony of Strong, *op. cit.* p. 2961.

⁸¹ Goodwin, C. C., in *As I Remember Them*, Salt Lake City, 1913, p. 33. See also *Memoirs of Cornelius Cole*, pp. 148-9.

⁸² Mrs. Judah writes: "Mr. Judah left me at the *Russ House* where we were stopping, firm in the faith that the gentlemen he was to meet that evening would give him the aid he required to make his survey the following spring, in other words, would be his backers and form the Pacific Railroad Company. He left me in high hopes. (I could name the gentlemen; none of them were of the present company.) His 'high hopes' were doomed to disappointment; and why? Not because they did not believe in Judah, but they all had large interests in various ways. If Congress did not pass a Pacific Railroad bill, no road could be built, and even then it was generally thought it would take from twelve to twenty years to complete it, in spite of Mr. Judah's honest assertion 'seven years would build it, under the provisions of such a bill as he believed could and would be passed.' Suffice it to say, they did not give the encouragement he asked. Weary and disappointed that night on his return from the meeting his words to me were these: 'Anna, if you want to see your friends in the morning you must pack your bag and trot around to see them, for I am going up to Sacramento on the boat tomorrow afternoon. Remember what I say to you to-night, so you can tell me sometime; not two years will go over the heads of these gentlemen I have left tonight, but they would give all they hope to have from their present enterprises to have what they put away to-night. I shall never talk or labor any more with them. I am going to Sacramento and see what I can do with the citizens and local business men of that city.'"

⁸³ Mrs. Judah says it was the next day after their return to Sacramento.

⁸⁴ Statements as to the number of persons present at this meeting vary. It seems probable that quite a group was present, Strong saying "at least thirty, probably more" (Testimony, *op. cit.* p. 2841.) Cole (*Memoirs*, p. 148) declared, however, that: "Less than a dozen of us met in a small room over the store of Huntington & Hopkins on K Street." It is probable that there were a number of meetings.

Here, for the first time, appear the names of those later "Railroad Kings"—Leland Stanford, Collis P. Huntington, Mark Hopkins and Charles Crocker—then prominent Sacramento merchants. But there were others—Dr. Strong, Lucius A. Booth, James Bailey, a jeweler, Cornelius Cole, later Congressman and Senator from California (and at the time a Sacramento lawyer), B. F. Leete, one of Judah's surveyors, and several others.⁸⁵

At this meeting, Judah declared that in his explorations he had crossed the crest of the Sierra on no less than twenty-three separate occasions, that from his barometric reconnaissance, he had become convinced of the feasibility of the "Dutch Flat Route" (as it soon came to be termed), and that he desired financial backing for the purpose of making a careful instrumental survey of the proposed line.⁸⁶ The result was that nearly everyone present put his name down for something—there wasn't much to lose as yet—⁸⁷ and sufficient stock was soon subscribed to cover the statutory minimum for the formation of the company.⁸⁸

⁸⁵ See Fulton, Robert, *The Epic of the Overland*, p. 12. In this work it is declared that Leete told the author (in 1924) that the Robinson brothers of the "Sacramento Valley Railroad" were also present. This is possibly correct, since Judah had been in their employ on the Sacramento Valley Railroad and other projects. It was about this time, however, that the Robinsons quarreled with Judah over his new route which, as had been mentioned, they claimed on the ground that they had hired him to explore a wagon road over the mountains via Dutch Flat and that the railroad route had been discovered during that exploration. Whatever justice there may have been in this claim, it is clear that bad blood existed between the Robinsons and Judah henceforth until the latter's death. (See Nevada Legislature pamphlet of 1865, *supra*.)

⁸⁶ Mrs. Judah says: "The wires Mr. Judah could pull on these 'far seeing wise men' was this: 'It is purely local; you are tradesmen of Sacramento city; your property, your business is here; help me to make the survey; I will make you the company; and with the bill passed you will have the control of business interests that will make your fortunes in trade, if nothing more. Why, you can have a wagon road if not a railroad.' They grasped that and they were led to do what he then asked."

⁸⁷ Cole says (*Memoirs*, pp. 148-9), "After listening to the report of Mr. Judah, who was known to most of us, we agreed at that first meeting, upon the organization of a company, to build the railroad over the mountains, little dreaming of the real difficulties to be encountered in that great work. It was given the name of the Central Pacific Railroad Company of California, and the amount of capital stock was fixed at eight and one-half million dollars. I think every one present subscribed for, or agreed to take stock in the concern. Several subscribed for fifty shares each, but no one for more than that. I took fifteen shares at first and subsequently acquired ten more."

⁸⁸ The "Huntington manuscript" in the Bancroft Library, University of California, states that after Judah's call for funds, "Some gave one thing, some gave a barrel of flour, some a sack of potatoes—all sorts of stores, and some, money. I did not give anything. When the meeting was about to break up, one or two said to me, 'Huntington, you are the man to give to this enterprise.' I gave two or three hundred for a road, and five hundred dollars for the Overland Telegraph. I felt that I ought to subscribe towards those enterprises. I did not want any of the stock. This railroad was a thing so big there was not much use starting

On April 30, 1861, an organization meeting of stockholders was called by Mark Hopkins, as Treasurer, and on the 28th of June in that year, the "Central Pacific Railroad of California" was formally incorporated under the new general railroad incorporation law of California⁸⁹ with a capital of \$8,500,000 divided into 85,000 shares of a par value of \$100 each. Leland Stanford, who had just been nominated for Governor by the youthful Republican Party, was elected President, Collis P. Huntington was made Vice-President, Mark Hopkins (Huntington's partner) Secretary, and Theodore D. Judah, Chief Engineer. In addition to these, there were elected as directors, Lucius A. Booth, Charles Crocker and James Bailey, all of Sacramento; D. W. Strong, of Dutch Flat, and Charles Marsh of Nevada City. Huntington, Hopkins, Stanford, Crocker, Judah and Bailey had each subscribed for 150 shares each, and Marsh took 50 shares, others subscribing for lesser amounts, making a total of 1,245 shares subscribed, or more than sufficient to comply with the requirement of \$1,000 per mile of railroad projected.⁹⁰

More important than anything else was the fact that funds were now available for an actual instrumental survey of the line⁹¹ and as

out expecting to do much towards building it. I told Mr. Judah as I left—"if you want to come to my office some evening I will talk with you about this railroad." He came down next evening. He sat down and talked with me and we discussed the whole matter. I told him I would furnish six men that would pay for a thorough instrumental survey across the mountains. I would furnish the men myself to make this survey. He said it would cost \$35,000. I said all right I will pay that for a thorough survey across, but I will not agree to do anything after that, I will take a look ahead and see if its anything fair—I may go on, but I don't promise to do anything now but make a survey. I did not expect to do it myself altogether."

This story, which was repeated by Bancroft in the article on Huntington in his *Chronicles of the Builders*, is probably correct in the main, but the tale of the donation party—the flour and potato subscriptions—does not ring true, nor does it fit with other evidence regarding this transaction.

⁸⁹ *Stats. 1861*, p. 607.

⁹⁰ See the *Articles of Association of the Central Pacific Railroad of California*, giving above information and complete list of all stock subscriptions. The filed copy was sworn to as correct by Stanford, Hopkins and Huntington in Sacramento on June 27, 1861, for the purpose of incorporation (a copy of this document is attached as "Schedule A", to the complaint of Samuel Brannan against the Central Pacific Railroad, et al., Vol. VIII. No. 9 of Pamphlets on California Railroads, Bancroft Library, University of California).

⁹¹ Up to this time Judah had largely financed the explorations from his own funds, and Mrs. Judah says: "The first money they subscribed was \$50 each, to make some survey of the levee on Front Street and up the American River. Theodore said to me: 'If you want to see the first work done on the Pacific railroad, look out of your bed-room window (Vernon House); I am going to work there this forenoon, and I am going to have these men pay for it.' My reply was: 'I am glad, for it is about time somebody else helped.'"

soon as weather conditions permitted field parties were organized and the survey of the newly discovered route was begun in earnest.⁹²

As has been seen, the preliminary examination had demonstrated in Judah's mind the possibility of constructing a railroad with grades that would not constitute insurmountable obstacles and these field parties had as their main object the examination as to whether Judah was correct in his selection of the Donner Pass route. They also were to undertake the survey of an exact route with, if possible, lighter grades as well a shorter distances. A preliminary examination was therefore made, and barometrical observations were also taken upon two other possible routes, that up the Yuba via Downieville and Yuba Gap, and that via Oroville, "Bidwell's Bar," Middle Feather River canyon and "Beckwourth's Pass." The results obtained, however, demonstrated, according to Judah, that these routes, like those via Georgetown and that via Nevada City and Henness Pass, possessed certain grave disadvantages which made them less suitable for railroad purposes than the Donner Lake route.⁹³ That route proved upon careful examination to be entirely practicable and the actual survey showed, as Judah soon declared, that "the difficulties and formidable features of this range" could be "successfully overcome for railroad purposes."

The results of this survey were embodied in the report of the Chief Engineer, to "The President and Directors of the Central Pacific Railroad Company of California," dated at Sacramento, October 1, 1861. In this report—crucial, because upon the results of this survey the continued backing of the Sacramento merchants largely depended—Judah declared that the most objectionable features of railroad location over the Sierra Nevada range were: first, the great elevation to be overcome in crossing its summit and the want of uniformity in the western slopes; second, the impracticability of river crossings in the mountains on account of the deep gorges which had been cut by these

⁹² Strong (Testimony, *op. cit.* p. 2843) says the survey started in March, 1860 (meaning, no doubt, 1861), and that they worked up to Dutch Flat and there awaited better weather. He adds (p. 2844) that it took "pretty much all summer to make that survey to the State Line," and that they then went to work to procure stock subscriptions from various counties.

The "Crocker manuscript" in the Bancroft Library, University of California, after describing how Crocker and others offered to back Judah, states: "With that money we organized a corps of engineers in the spring, and sent them with Mr. Judah at the head, to run a line along the mountains to the Big Bend of the Truckee River. It was merely a trial line; what we called a base line—but from that we found that the grades which Judah had said could be obtained were actually practicable, and were obtained — — —."

⁹³ See Reports of Chief Engineer of Central Pacific Railroad Company, Oct. 1, 1861, and July, 1863.

rivers, and, third, the fact that the Sierra in this latitude possessed two distinct summit-ranges to be crossed.

The line run in this preliminary survey was eighty-one miles long from base to summit, with a rise of seven thousand feet, but because a ridge or spur of remarkable surface regularity had been discovered, the line as surveyed up it would have maximum grades of but 105 feet to the mile. This unbroken ridge route also avoided the necessity of crossing any of the major canyons, only one stream of importance (the Little Bear River) being encountered, and this requiring a bridge but fifty feet in height. As to the problem of the double summit the survey was particularly fortunate, for a route entirely avoiding the second range was discovered. This desirable result could be accomplished upon no other then known route, for the line of Lieutenant Beckwith over what was then known as "Madelin Pass" to the north, showed two distinct summits thirty-five miles apart, and the main wagon road from Placerville to the Washoe country crossed over Johnson's Pass, thence through the valley occupied by Lake Tahoe (then known as Lake Bigler), and over Daggett's Pass in the second main ridge. The avoidance of this second ridge was accomplished under Judah's plan by taking advantage of the canyon of the Truckee River, which leads first north from Lake Tahoe, thence east by an easy grade directly through the second ridge and then down to the Nevada plains at the "Big Bend" of the Truckee.

No detailed description of the route so surveyed is necessary here. In general, it was the route actually followed by the Central Pacific rails and differed from the suggested route of 1860 mainly by being carried through Lincoln rather than Folsom. As will be seen later, Judah's successors made certain changes, the most important of which was the shifting of the line to the American River side of the ridge, which they later found better suited for a railroad than the Bear River side, which Judah's first survey quite generally followed. Such changes were, however, relatively minor in effect—the present line being in every real aspect the line planned by Judah. In general, the line ran up the divide between the rivers "from gap to gap,"⁹⁴ in order to secure the best possible gradients.

This report bears upon its face ample evidence of the careful work that had been done since the publication of the report on the preliminary reconnaissance the year previous. After giving the details

⁹⁴ "Gaps": The lowest points along the ridge. Thus, there were "Clipper Gap," "Reservoir Gap," "New England Gap," "Secret Ravine Gap," "Dutchman's Gap," and the like, some of which, however, proved impracticable for the line.

of the route selected, Judah, in this 1861 report, showed the actual grades to be encountered, and compared them with the grades on selected eastern railroads. He also discussed the snow problem⁹⁵ and that of tunnels⁹⁶, and estimated the cost to the state line at an average of \$88,428 per mile, and thence to the Big Bend of the Truckee at an average of \$83,600 per mile.⁹⁷

The use of this line said he, would, however, produce a saving over the Beckwith route of 184 miles between Council Bluffs and the Pacific and of no less than \$13,500,000 on the total cost of the road. From the Big Bend of the Truckee, the Humboldt River might easily

⁹⁵ Concluding "that a Railroad Line, upon this route, can be kept open during the entire year," although admittedly the snow would constitute a not inconsiderable problem. Since the line was to be a "side-hill line" Judah disclaimed much apprehension, especially since the Placerville stage road was kept open continuously through the winter.

⁹⁶ The plan called for eighteen tunnels, the longest to be 1370 feet long.

⁹⁷ The "Prominent Features of the line" were summed up as follows:

1st. It crosses the Sierra Nevada Mountains, and reaches the Truckee River, in 123, and State line 140 miles from Sacramento.

2d. Big Bend of Truckee, or Humboldt Desert, is reached in 178 miles.

3d. It crosses the State at nearly its narrowest width.

4th. It pursues nearly a direct course from Sacramento to Big Bend of Truckee.

5th. It forms a local road for the counties of Sacramento, Placer and Nevada.

6th. It commands, and will perform, the entire business of Nevada Territory, Washoe and the Silver mineral region.

7th. It will also command the business of newly-discovered Humboldt mineral district, Pyramid Lake, Esmeralda, and Mono mineral districts.

8th. It crosses the Truckee Meadows at the head of Steamboat Valley, which, with Washoe Valley and Eagle Valley, connects with Carson Valley. enabling a branch road, with light grades, to be built to any point on Carson River.

9th. It reaches the summit (or an altitude of 7,000 feet above Sacramento), in 81 miles from the base of mountain.

10th. It reaches eastern base of Sierra Nevada in 11½ miles from Summit.

11th. It follows the valley of Truckee River, without obstacle, to Big Bend or Humboldt Desert.

12th. It entirely avoids the second summit of Sierra Nevada.

13th. Its maximum grade is 105 feet per mile, or less than those of the Baltimore and Ohio Railroad.

14th. The grades down the Truckee will not exceed 40 feet per mile.

15th. The elevation of line is maintained, continuously, to the summit—there being no down grade running easterly to Summit.

16th. An uniformly descending grade is maintained from the summit easterly to the Truckee, or eastern base.

17th. Encounters no elevated plateau or table-land at Summit.

18th. Running to and from summit with maximum grades, cannot have an extensive snow-line.

19th. Runs through extensive forests of Pitch and Sugar Pine, Fir, Cedar, and Tamarack, which latter two species of timber are abundant, and will furnish excellent cross-ties.

20th. Crosses no deep river canons or gorges.

21st. Its longest tunnel will not exceed 1,350 feet in length and no shafting will be required.

22d. Shortest radius of curvature, 573 feet.

23d. Navigable waters of the Sacramento River at all seasons of the year its western terminus; Washoe and the great Basin its eastern terminus.

24th. At Big Bend of Truckee, the line is in position to proceed *via* the Humboldt to Salt Lake, or follow the Simpson route to same point.

25th. Saving in distance over route *via* Madelin Pass and head-waters of Sacramento, as surveyed by Lieut. Beckwith, from Lassen's Meadows or Humboldt crossing, 184 miles.

26th. Saving in cost of Pacific Railroad line, taking Lieut. BECKWITH'S estimate from Lassen's Meadows or Humboldt crossing, as compared with cost of present proposed line, is thirteen and one-half millions of dollars.

27th. Reduces the time of passenger transit to and from Washoe to 8½ hours. Passengers leaving Virginia station at 5 A. M., will reach San Francisco the same evening.

28th. Saving in cost of transportation of freight to citizens of Washoe or Nevada Territory one million of dollars per year.

29th. Affords a market for low-class silver ore (now thrown aside), for shipment to Europe, from 3,000 mining claims.

30th. Is advantageously located for an extension to Oregon.

31st. Completes first western link of Pacific Railroad, overcoming its greatest difficulties.

be used, for the contemplated extension to the east, that route being considered by Judah preferable to the more southerly route to Salt Lake, which had been explored by Captain Simpson.⁹⁸

The printed report concludes with a list of the maps and profiles which were attached to the original copy, including complete data on the so-called Beckwith route, with which Judah is thus proven to have been thoroughly familiar at this early stage of the work. This fact has been mentioned before, and this evidence seems of particular value in view of the fact that Judah was hardly in his grave before it began to be said that he either did not know of or ignorantly disregarded this survey and this, admittedly easier, route. It now seems clear, however, that Judah was not only familiar with this route both from Beckwith's report and from personal reconnaissances, but that he deliberately, and for valid engineering reasons, excluded it from consideration.⁹⁹

One of the interesting features of Judah's 1861 survey is that it demonstrated that mere barometric observations were not always to be trusted, the levels run in this first survey showing, for example, that many of the passes of the Sierra Nevada were "much higher" than they had formerly been represented.¹⁰⁰

⁹⁸ This, said he, was because of: (1) its availability for a connection with Oregon and Washington; (2) the recent discoveries of silver on the Humboldt River near Lassen's Meadows, and (3) the feasibility of this as a railroad route, and the character of the soil encountered. Moreover, said he, "It will not be many years before the new State of *Humboldt* will apply for admission to the Union."

⁹⁹ Mr. William Hood, who came to the service of the Central Pacific in 1867, and who, for many years, was Chief Engineer of the Central and Southern Pacific systems, declared to the writer in an interview in San Francisco, May 13, 1923, that in his opinion these reasons are as valid today as when Judah wrote his 1861 report, and that, were there now no railroad over the Sierra, in his opinion the Donner Lake route would still be selected over all others as the best possible route over the range.

¹⁰⁰ While sufficiently accurate for the purposes for which they were made, Judah's "surveys" of the route were not surveys in the strict sense of that term as it is now used by railroad men, says Mr. Hood. They were more by way of reconnaissance—better than mere barometric examinations, for example,—but not true "location surveys" as such would now be made.

Mr. Judah concluded his report of 1861 as follows:

In conclusion I take this opportunity of expressing my obligations to Messrs. Edward Judah, Assistant in charge of Party; John R. Brown, in charge of Levels; H. T. Hall, Topographer; for the able and satisfactory manner in which they performed the arduous duties assigned them; also to Wm. S. Watson, Esq., Chief Engineer of California Northern Railroad, for valuable assistance in office; to Dr. D. W. Strong, of Dutch Flat, who accompanied me in my reconnaissance last fall, who was with me during the entire survey, and whose experience and knowledge of the mountains was of the greatest assistance, and contributed to the success of the survey; also, to S. B. Wyman, Esq., of Virginia; Mr. Neil of Neilsburgh; Mr. Applegate, of Empire Mills; Messrs. Egbert and Brickell of Illinoistown—who were with me on portions of the route; to Chas. Marsh, Esq., of Nevada, who accompanied me on the reconnaissance via Nevada and Henness Pass; also to Messrs. John Shaw, of Mormon Island, and D. W. McKinney, of Georgetown—who accompanied me on Georgetown reconnaissance; also, to Mr. Stout, of Stout's Crossing, Nevada Territory; F. Moore, Esq., of Dutch Flat; and R. P. Robinson, Esq., of Sacramento, for courtesies extended.

Everything was now ready for the campaign to secure the selection by Congress of this route and this company in the Pacific Railroad Bill which Judah now hoped to be able to push through as soon as he could place his new discoveries, maps, surveys and detailed figures before that body.¹⁰¹ August and September were devoted to mapping the surveys, making profiles and gathering information for use in Washington¹⁰² and on October 9, the directors, well pleased with the work that had been done, adopted the following resolution:

RESOLVED, That Mr. T. D. Judah, the Chief Engineer of this Company, proceed to Washington, on the steamer of the 11th Oct. inst., as the accredited agent of the Central Pacific Railroad Company of California, for the purpose of procuring appropriations of land and U. S. Bonds from Government, to aid in the construction of this Road.

The mission took ten months of hard work, but it was wholly successful, and when "Crazy Judah" returned to California in 1862, it was with the "Pacific Railroad Act" on the statute books and the "Central Pacific" named and accepted as the company to receive the proffered aid.

THE PACIFIC RAILROAD BILL OF 1862

The story of Judah's trip to the Atlantic Coast in October, 1861, has been told and retold by historians and others for more than half a century and it has lost nothing in the telling. Aaron A. Sargent, newly elected as one of the representatives from California, was on the same boat, and Judah himself says:

Our Congressional Representative, Mr. Sargent, being a fellow passenger, a good opportunity was afforded for explaining many features of our project not easily understood, without more than a cursory examination, which explanations were of great service to us in future operations.¹⁰³

Bancroft, charmed with the thought of the coincidence of Sargent's presence on the ship, waxes poetic and tells how the legislator:

Was thus afforded the best of opportunities during the sea voyage of more than three weeks, shut out from the world, with nothing to divert his attention while maps of routes were examined by day, and the whole subject talked over in the warm still nights, when the glory of the heavens was rivalled by the phosphorescent fire of the sea through which the steamer cleft her course.¹⁰⁴

¹⁰¹ On Sept. 2, Judah wrote Strong: "I think the next Congress will be a favorable one to procure lands from the Government, and perhaps it may be money; but of the latter I do not feel by any means so certain; but the lands do not create any debt, and the feeling towards California ought to be a good one." (Strong's Testimony, *op. cit.*, p. 2964.)

¹⁰² Judah wrote (Sept. 2): "Our office work is getting along rather slowly. I hope to get everything finished so as to be able to go on by 1st October, if they still desire me to go." He added that the election of Stanford as Governor, for which all his Sacramento associates were then laboring, would be of great assistance because of the prestige which would come from electing a Republican ticket. (See also Bancroft *History of California*, Vol. VII, p. 546.)

¹⁰³ *Report of the Chief Engineer of the Central Pacific Railroad Company of California on his operations in the Atlantic States*, Sept. 1, 1862, p. 3.

¹⁰⁴ Bancroft *History of California*, Vol. VII, p. 547.

Be this as it may, it is clear that Sargent was impressed.¹⁰⁵

Moreover, in addition to affording this favorable opportunity for conference, the voyage gave Judah time for the preparation of a report on the Sierra Surveys of which he published a thousand copies immediately upon his arrival in New York. He distributed these, as he himself says, "among railroad men, where likely to do us most good, sending copies to President Lincoln, the heads of Departments and to our Senators and Representatives in Congress." Railroad journals republished this report, and it had attained a wide circulation before Congress met.

The Civil War was now raging, and it is probably owing to this circumstance that the Pacific Railroad Bill passed at this session, for the southern senators and representatives, with their violent opposition to all save the Southern Route, were now absent, and the war had already demonstrated the necessity for better liaison between the various sections of the country under control of the Federal Government. Judah was by this time well known in Washington. He had been present during the three previous sessions of Congress, had actively "lobbied" for the passage of an Act to grant lands to the State of California for purposes of railroad aid, and, as has been seen, had also labored indefatigably for the adoption of some practicable Pacific Railroad scheme. The chief difficulty, as he clearly recognized, had been the nebulous character of these previous proposals. Now, however, he appeared with a new enthusiasm, for he brought with him detailed engineering plans and supporting data together with a corporation *in esse* ready to undertake the job from the California end.

Senator James A. McDougall of California, who was in New York at the time of Judah's arrival, assured him of a steadfast adherence to the Pacific Railroad cause and, the time appearing favorable for procuring definite action from the National body, McDougall requested the engineer to arrive in Washington a few days before the convening of Congress to assist in the preparation of a Bill for early introduction. This Judah did, and such a Bill was drafted, following in general outline the Curtis Bill of the preceding session. It now appeared advisable, however, to make the first attempt in the House, rather than in the Senate, and Sargent took active charge of the campaign. He had

¹⁰⁵ Some years later, and in another connection, to be adverted to later, Sargent, in a letter to Leland Stanford (published in the *Sacramento Union* for February 21, 1865), said:

You request of me a statement of what I know of the late T. D. Judah's views of the route adopted by the Central Pacific Railroad Company. Few persons had better means of knowing them than myself. Before my election to Congress we had been personal friends. Judah had completed his surveys and profiles just after that election, and proceeded to Washington to lay them before Congress, and urge the passage of a Pacific Railroad Bill. We chanced to take the same steamer. During the passage he exhibited to me the drawings and estimates and enlisted my hearty cooperation in his plan of securing, if possible, the passage of a railroad bill at the ensuing session.

not been assigned to any of the standing committees but merely to the Special Committee on Pacific Railroads, and while, as Hittell remarks, this action could hardly be considered "entirely complimentary"¹⁰⁶ to the new member, it left him free to devote his energies to the one subject.

It was difficult, in these early days of the war to attract the attention of Congress to the project, so Sargent took a bold step, and on January 31, 1862, in the midst of debate upon another subject he obtained the floor and spoke at length upon the Pacific Railroad as a military necessity to the nation. While the House appeared somewhat astonished at the temerity of the new member, the result proved the wisdom of his move, for it drew the attention of all to the subject.

In this speech, Sargent dwelt at length upon Judah's work, accomplishments and estimates, and called attention to the fact that Congress now for the first time had before it a true survey, comparing Judah's work with the former mere barometric reconnaissances of Beckwith and others, and showing the saving over the routes followed by them which would be afforded by using the newly discovered route over Donner Pass.¹⁰⁷

The immediate result of this action on Sargent's part was the appointment of a special sub-committee of the Pacific Railroad Committee to draw a Bill. Judah had meanwhile obtained the appointment as Secretary of the Senate Pacific Railroad Committee, the Chairman of which was Senator McDougall, and upon Sargent's motion he was now made clerk of the new House sub-committee. He later became Clerk of the main House Committee. The importance of these appointments and their bearing upon the fate of the Pacific Railroad movement can hardly be over-estimated, and it is probable that without such action, which thus gave Judah a semi-official standing before Congress, the Bill would not have gone through to enactment. He now had charge of all the committee papers and documents, as well as the privilege of the floor of both Senate and House. His was the key position, and although these appointments have been characterized as of "doubtful propriety"¹⁰⁸ there is no evidence that Judah ever thought of asking for anything either for himself or for those whom he represented, which he did not consider to be truly in the public interest.¹⁰⁹

¹⁰⁶ *History of California*, Vol. IV, p. 460.

¹⁰⁷ See pamphlet copy of this speech, Vol. II, No. 3, Railroad Pamphlets, State Library, Sacramento, or see *Congressional Globe* date mentioned.

¹⁰⁸ Daggett, *History of the Southern Pacific*, p. 47.

¹⁰⁹ Daggett (*op. cit.* p. 48), states that, upon the question whether improper methods could be imputed to the Central Pacific in securing the passage of the Bill, "the weight of the record is in the negative."

Careful examination of the situation soon disclosed that the greatest task confronting the protagonists of the Pacific Railroad was that of securing unanimity of action upon some single plan. No extended discussion of this phase of what followed is here necessary¹¹⁰ save to consider Judah's relation to the final accomplishment. The Bill, as written, followed quite closely the Curtis Bill of the previous session, and Judah declares that it was in reality, "Mr. Curtis' bill very greatly improved," and that as such, it "commended itself to the practical good sense of the members of Congress who have endorsed it."¹¹¹ As to the author of the new material Professor Daggett deems it probable that Judah was responsible for at least several of the important changes that were made in the Bill, among them particularly the retaining for the Central Pacific of timber on mineral lands which had formerly been excepted from the land granting clauses and the increase in subsidy for Sierra Nevada construction in place of construction on the section east of the California boundary.¹¹²

The debate in the House was warm, and at one time there was grave danger that consideration of the Bill would be put over until the next Session, during which time the organization of local hostility might well have developed to such an extent as effectually to defeat it. Much of the debate centered around the question of the percentage of payments on subscribed capital stock which should be required and how to insure the construction of the middle part of the line by the companies which were to start at either end. Certain committee amendments were added, but most of the proposed amendments on the part of the Bill's opponents were lost, and on May 6, 1862, the Pacific Railroad Bill was carried in the house by a vote of 79 to 49.

The scene now shifted to the Senate, Judah calling a meeting of the Pacific Railroad Committee for the 8th. At a later meeting some minor amendments and one major one relating to the Iowa branch were added to the Bill. This caused considerable trouble, but Judah, during a breathing spell given by the Senate's consideration of the tax bill, succeeded in effecting certain compromises that effectually put an end to this new opposition. This being accomplished, he wrote to the Editors of the *Sacramento Union* on May 23 that "The Pacific Railroad

¹¹⁰ It has been the subject of careful consideration by historians. See Bancroft *History of California* and *Chronicles of the Builders*, and Daggett, *op. cit.* pp. 47-48. The Judah Report of 1862 contains a very full account of the Bill and its passage.

¹¹¹ 1862 Report, p. 9.

¹¹² Daggett, *op. cit.* p. 47 — the author adding, however,—"These were important matters, and Judah should not have been permitted to urge them from the vantage point of an official position." Judah's Report of 1862 discusses these amendments at some length.

is a fixed fact, and you can govern yourselves accordingly," adding that the Bill would come up "in about ten days, at any rate, when, should our armies have met with no serious reverses, we may reasonably expect the passage of the Pacific Railroad Bill though the Senate."¹¹³

True to his prediction, on June 20, after four days of debate, the Bill passed the Senate by a vote of 35 to 5. The House at once concurred in the Senate amendments and President Lincoln affixed his signature on July 1, 1862.¹¹⁴

Judah had already filed with the Secretary of the Interior a map of the route projected by his company, the Act providing that upon such filing the lands for fifteen miles on either side thereof should be withdrawn from pre-emption, and having thus preliminarily clinched the bargain between the Central Pacific and the Federal Government, he proceeded to New York to look into the matter of contracts for materials and supplies.

It is not necessary to discuss the details of this Act of 1862.¹¹⁵ It has been the subject of careful consideration on the part of historians on numerous occasions.¹¹⁶ In brief, however, it provided for the incorporation of the Union Pacific Railroad Company to build west from the Missouri River, of the Leavenworth, Pawnee and Western Railroad Company to join the Union Pacific Route, and of the Central Pacific Railroad Company of California to construct a road east from the Pacific Coast at or near San Francisco or the navigable waters of the Sacramento River to the Eastern boundary of California, acceptances of all conditions to be filed by these companies within six months.¹¹⁷ A right of way two hundred feet wide on either side of the middle line of the road, together with necessary lands for stations and other buildings, was granted from the public lands, and in addition certain alternate sections of public land on either side of the line were granted wherever not as yet disposed of. Upon the completion of the first forty miles of road, six per cent thirty year bonds of the United States, to be a first mortgage upon all the road, were to be issued in the amount

¹¹³ *Sacramento Union*, June 18, 1862: In this letter Judah also warmly commends Campbell and Sargent in the House and McDougall in the Senate for their indefatigable efforts on behalf of the measure.

¹¹⁴ Hittell, *History of California*, Vol. IV, p. 461, calls attention to the fact that during this session the House and Senate thus for the first time acted in unison on the same Bill, and attributes "this important and significant occurrence" to "the excellent and efficient Judah." It is said that Judah telegraphed his California backers "We have drawn the elephant; now let us see if we can harness him up."

¹¹⁵ 12 Statutes 489 (1862).

¹¹⁶ See for example, Bancroft and Hittell, *History of California*; Daggett, *History of the Southern Pacific*, and Haney *A Congressional History of Railways*.

¹¹⁷ Such formal acceptance was filed by the Central Pacific Railroad Company, on Nov. 1, 1862. (Bancroft *History of California*, Vol. VII., says Dec. 1.)

of \$16,000 for the easily constructed sections, of \$48,000 for the Sierra Nevada and Rocky Mountain sections (150 miles each) and of \$32,000 for the intermediate country between these ranges. The track of all companies was to be of uniform gauge,¹¹⁸ and forfeiture for failure to construct certain mileage within a prescribed time was provided.

During the consideration of this Bill, Judah had been untiring in his efforts in aid of the project, and the value of his work was acknowledged by Congress in a most unusual and complimentary manner by the presentation to him of a written testimonial of appreciation signed by forty-four members of the House of Representatives, seventeen Senators and the Secretary of the Senate.¹¹⁹

After a few days in New York, Judah, having placed the matter of contracts for materials and supplies in the hands of Mr. G. T. M. Davis of that city, sailed, on July 21, for California. For more than twenty years the struggle for a Pacific Railroad in Congress had been well nigh continuous, but now the Federal Government had definitely enlisted its aid and support in favor of the construction of the road, and Judah, in the words of the historian Hittell, "had succeeded admirably; and, so far as seen, his success was due almost entirely to himself, and without soiling his hands or leaving a stain upon his name."¹²⁰

THE BEGINNING OF ACTUAL CONSTRUCTION (1863)

Shortly after his return from Washington, and after detailing to his backers the success of his efforts in aid of the Pacific Railroad Act,¹²¹

¹¹⁸ Later fixed at 4 feet 8½ inches.

¹¹⁹ This testimonial to Judah is perhaps worthy of rescue from the oblivion of his report, that of 1862, pp. 28 and 29. It reads as follows:

Washington, June 24, 1862.

"T. D. Judah, Esq., of California—

Dear Sir:

Learning of your anticipated speedy departure for California on Pacific Railroad business, we cannot let this opportunity pass without tendering to you our warmest thanks for your valuable assistance in aiding the passage of the Pacific Railroad bill through Congress.

Your explorations and surveys in the Sierra Nevada Mountains have settled the question of practicability of the line, and enabled many members to vote confidently on the great measure, while your indefatigable exertions and intelligent explanations of the practical features of the enterprise have gone very far to aid in its inauguration.

Very truly yours,

JAMES H. CAMPBELL,

Chairman Select Committee on Pacific Railroad.

A. A. SARGENT,

Of Sub-Committee of House.

Representatives: R. Franchot, Schuyler Colfax, Wm. D. Kelly, T. G. Phelps, Frank F. Blair, S. Edgerton, J. H. Goodwin, A. W. Clark, Burt Van Horn, Augustus Frank, H. G. Blake, John A. Bingham, W. H. Wallace, R. E. Fenton, I. N. Arnold, John B. Alley, William Watt, W. F. Kellogg, Erastus Corning, C. Vibbard, Thos. S. Price, E. Aug. Smith, John B. Steele, Thaddeus Stevens, Edward Haight, Edwin H. Webster, J. S. Watts, W. A. Wheeler, B. B. Van Valkenburgh, Alfred Ely, Jno. F. Potter, Wm. Windom, E. F. Lowe, Elihu B. Washburn, Saml. F. Worcester, Wm. T. Cutter, Cyrus Aldrich, George W. Julian, F. C. Beaman, Theo. M. Pomeroy, Alex. H. Rice, C. B. Sedgwick.

Senators: S. C. Pomeroy, J. H. Lane, A. Kennedy, Daniel Clark, H. B. Anthony, B. F. Wade, Jas. A. McDougall, Milton S. Latham, J. W. Nesmith, Edgar Cowan, O. H. Browning, J. B. Henderson, R. Wilson, L. M. Morrill, John A. Wright, Lyman Trumbull, John C. Ten Eyck, John W. Forney, Secy. U. S. Senate.

¹²⁰ *History of California*, Vol. IV, pp. 463-4. See the Act of 1864 (13 Statutes 356, 1864), for certain important changes and amendments to the Act of 1862.

¹²¹ In his report of Sept. 1, 1862, above mentioned.

Judah prepared and filed a further report dealing with the existing status of the project.¹²² This report contained a statement of the advantages which, in his opinion, would accrue to the company through the new statute, and urged early action to make certain the securing of the governmental aid therein proffered. After discussing the provisions regarding such aid, he mentioned the fact that the Central Pacific Railroad Company was given the privilege of constructing its line easterly from the California line until it should meet the Union Pacific's line building out from the east. This, thought he, was a fact of great importance, and he urged upon the Company the making of an immediate survey as far as Salt Lake in order to determine the probable cost of such an extension "and to ascertain if sufficient inducement exists for your Company to construct said road," adding "I am positive in the opinion, that it will be found advisable to undertake the construction of about 300 miles next easterly from the State line of California."¹²³

In his report the engineer also called attention to the fact that the Central Pacific Company was in a particularly advantageous position because of its assurance of the large and lucrative Washoe business, (as to which he declares over five million dollars was then being paid each year for the transportation of freight alone), in addition to the probable local business in the California communities through which the line would run and such transcontinental business as might be expected upon connection with the Union Pacific. Counts of travel on the main Washoe route through Strawberry Valley were included, and the estimated annual receipts of the road in California were placed at \$739,490, and from the Washoe trade at \$3,917,750, the probable total operating expenses, repairs and taxes being estimated at but \$1,000,000. Even the first fifty miles would prove profitable, thought Judah, and he declared that, while the figures of probable returns might appear large,

It is no less true that the conditions which produce these results are extraordinary, and unlike those which govern the business conditions of any other Railroad ever built, with one exception, viz: the Panama road.

Judah has been criticized for his optimism as shown in this report, and his figures were no doubt altogether too sanguine. As has been mentioned in connection with his estimates of probable business on the Sacramento Valley Railroad, and other similar lines, he followed the then prevailing mode of estimating probable business over a new line in territory such as this, which had never been served by a railroad,¹²⁴

¹²² Report of Oct. 22, 1862.

¹²³ *Ibid.*, p. 45.

¹²⁴ See Daggett, *History of the Southern Pacific*, pp. 16-17.

but both he and S. S. Montague, his successor as Chief Engineer of the Central Pacific, were inclined to be quite optimistic in this regard, and a recent observer has declared that if it had not been for the Central Pacific's remarkable operating ratio, which in 1866 and 1867 was but 23 per cent and did not equal 50 per cent until 1877, "the owners of this road could scarcely have kept it out of receivers' hands, so great was the miscalculation."¹²⁵

During the summer and fall of 1862 several parties of engineers were kept in the field, and in December contracts were let to Charles Crocker for grading the first thirty-one miles to Newcastle.¹²⁶ On January 8, 1863, Leland Stanford, then Governor of California, threw the first earth upon the embankment in Sacramento in the presence of a large concourse of people and thus formally celebrated the inauguration of construction of the Pacific Railroad. Speeches followed, and Crocker led the onlookers in nine rousing cheers.¹²⁷

Actual grading commenced in February, under the contract with Crocker, who subcontracted the road in sections to a number of outside contractors. The work was carried forward steadily thereafter, and on the first of July, Judah issued his last report. By that time the iron for the American River bridge had been delivered and some of the rails were en route, while six locomotives, six passenger cars, two baggage cars, twenty-five "platform freight cars" and fifteen "box freight cars" had been contracted for.¹²⁸

This report of July, 1863, dealt principally with the status of the surveys, and the progress of construction, and contained an "approximate estimate of cost" of the first division of fifty miles. It also explained in detail why the Central Pacific could not utilize the older Sacramento Valley Railroad and its Auburn extension as a part of the new location. There has been much misunderstanding upon this point, and the Central Pacific and its projectors have been roundly criticized for not using that already existing line. While the criticism has little basis of fact and probably originated in the fact that the owners of the

¹²⁵ *Ibid.*, p. 18.

¹²⁶ See Statement of the Central Pacific Company to the President and the Secretary of the Interior on the "Progress of the Work", dated October 10, 1865, p. 10.

¹²⁷ Daggett, *op. cit.* p. 65, says "It was fortunate that Mr. Crocker was enthusiastic, for the difficulties which the Central Pacific had to overcome were serious." He discusses these difficulties in detail. Regarding the ground breaking exercises see the *Sacramento Union*, January 8 and 9, 1863, and pamphlet giving the complete program and speeches (Vol. VII, No. 18, Railroad Pamphlets, California State Library; also in Hopkins Collection, Library of Stanford University).

¹²⁸ One of these original locomotives was named by the Company the "Theodore D. Judah".

older line were anxious to unload and were disappointed in not being able to do so, Judah's reasons for the action of the Central Pacific are not without interest. The new road could not utilize the Sacramento Valley line, says he, first, because the older line was eight miles longer than his location between the foot of K Street in Sacramento and Auburn; second, because the appropriations of the Pacific Railroad Bill did not apply to any **already** constructed road, and thus no Federal aid toward the purchase of the Sacramento Valley line could be expected; third, because the Act required the use of American iron, whereas the original Sacramento Valley line to Folsom was built of English iron which would therefore have to be replaced, while its extension to Auburn, though of American iron, was constructed with altogether too light rails; fourth, because the Federal aid bonds were to constitute a first lien on the road, the older line being already heavily mortgaged; fifth, because, in addition to relaying the line with American iron, a great deal of repair and rehabilitation work was already needed, and sixth, because the proposed Central Pacific location would secure the Marysville trade and prevent competition for this large business by some other line. There can now be little doubt but that the determination to run the new line as Judah proposed was a proper and business-like decision and cannot be harshly criticized.

Judah in this report also discussed the five barometrical reconnaissances that had been run; first, the route via Folsom, Greenwood and Georgetown; second, the finally selected route via Auburn, Illinoistown, Dutch Flat and Donner Pass; third, a route via Nevada City and Henness Pass; fourth, a route via Downieville and Yuba Gap, and fifth, the present Western Pacific route via Oroville, Bidwell's Bar, Middle Feather River and Beckwourth's (or Beckwith's) Pass. Although the last was rejected because of its added length of eighty miles and the longer time which would be required for construction, Judah declared that "this route is reluctantly placed among the list of those denominated unavailable for Pacific Railroad purposes, in the present position of railroad affairs."

On the selected route via Dutch Flat, Judah stated that no less than five trial surveys had been run between Sacramento and Clipper Gap before the route via "Antelope Ravine" was finally adopted.¹²⁹ The cost of the first division of fifty miles was estimated at \$3,221,496, and it was declared that Assistant Engineer S. S. Montague then (July,

¹²⁹ Such trial lines were later run over the whole route, in search of the line of easiest gradients and curves, and the result was a considerable variation in detail between the original Judah line and the location finally run, although, as has already been stated, when looked at in the large the changes were minor.

1863) had a party in the field ascertaining the permanent location for the second division of fifty miles, which would bring the road to a point but six miles short of the summit of the range.

THE BREAK WITH THE BIG FOUR (1863)

In spite of this outward appearance of progress, however, and of this evidence of seemingly successful effort on the part of the Central Pacific, **all was not well** within the organization. Money was needed and needed badly for actual construction, and business men apparently did not desire to invest in such an enterprise, particularly during the war stringency. Huntington went east in July and met with some little success in disposing of the company's bonds¹³⁰ and Hopkins became the watchdog over the finances at home. It has been said that Judah, schooled in the ways of eastern railroad engineers, desired to build "too well," i. e. in a manner more **expensive than** his financial backers desired. By this time all but the "Big Four" had virtually dropped out of the organization, (whether voluntarily or otherwise need not be discussed here) and the four quite naturally took the position that the less actual cash they had to put up the better. The State and various counties had been importuned for aid, and the stock subscriptions thus obtained had been not inconsiderable.¹³¹ Month after month had passed, however, with little actual railroad building accomplished, and Judah, in this report of July, 1863, urged the necessity of an early survey through the Territory of Nevada in order to hold the charter granted by that Territory, and invited attention to the fact that action by way of letting actual contracts for second and third division construction would have to be taken at once in order to insure completion within the time fixed by Congress.

Already it was being noised about by persons unfriendly to the enterprise that it was nothing but a huge swindle, and as the "Big Four" were now largely interested in the wagon road projected over the range by way of Dutch Flat, it began to be said that the new railroad's owners did not intend to lay any rails beyond Dutch Flat, but were merely concocting a trap for unwary stock subscribers.¹³² Whatever may have been the fact, or the cause of delay, Judah was plainly impatient.

Nor was Judah's own position enviable. California's historians

¹³⁰ See Bancroft *Chronicles of the Builders*, Vol. VI, p. 214.

¹³¹ For a discussion of such aid see Daggett, *op. cit.* p. 29, et seq.

¹³² This accusation became articulate in a pamphlet published in San Francisco the following year, entitled *The Great Dutch Flat Swindle—An Address to the Board of Supervisors, Officers and People of San Francisco*. This pamphlet, and the answer published by the Company, had at the time a wide circulation among all classes of the population. Stanford, in his testimony before the United States Pacific Railroad Commission, in 1887, declared that the wagon road proposition had looked good to take freight from the end of the rails to Virginia City, but that practically they only got about two seasons of teaming, because of the actual rapid construction of the railroad over the mountains (p. 2927).

have hardly mentioned the rift that was fast developing, although its importance is such that it would appear worthy of careful consideration. As early as May 13, 1863, Judah had written to Doctor Strong that with reference to certain matters of company business he had "as little to do" as though he were not a member of the Board of Directors at all, adding:

I cannot tell you in the brief space of a letter of all that is going on, or of all that has taken place; suffice it to say that I have had a pretty hard row to hoe—

I had a blow-out about two weeks ago and freed my mind, so much so that I looked for instant decapitation. I called things by their right name and invited war; but counsels of peace prevailed and my head is still on; my hands are tied, however. We have no meeting of the board nowadays, except the regular monthly meeting, which, however, was not had this month; but there have been any quantity of private conferences to which I have not been invited.¹³³

Moreover, Judah declared, he had always understood that his services previous to the final organization of the company were to be counted as his first payment of ten per cent upon his stock subscription, whereas Mr. Hopkins now informed him that he had no recollection of any such agreement or understanding. On July 10, Judah again wrote Strong telling of Huntington's return from the east and adding that he "seemed to possess more than usual influence," and that "Stanford, who I told you was all right, is as much under their influence as ever."¹³⁴ The wagon road was described as "the tie which united them," and Judah hinted that a rival wagon road under Strong might be a good venture. Of particular interest is the statement that:

I have had a big row and fight on the contract question, and although I had to fight alone, carried my point and prevented a certain gentleman from becoming a further contractor on the Central Pacific Railroad at present.

Mr. Crocker, who had resigned his directorship in 1862, had, as mentioned above, been given the contract for the first construction as far as Newcastle, and had subcontracted the same. The reference is therefore obviously intended for him,¹³⁵ and the records show that the directors at about this time, upon a "hue and cry" that he was a favored contractor, informed Crocker that he could build but two miles between sections eighteen and thirty.¹³⁶

¹³³ This letter was filed by Strong at the time of his testimony before the United States Pacific Railway Committee. See its Report Vol. V, p. 2965.

¹³⁴ Testimony of Strong, United States Pacific Railway Committee, Reports Vol. V., p. 2966.

¹³⁵ This is recognized by Professor Daggett, who thinks Judah's influence prevented Crocker from building sections 19 to 30, adding "This was probably only one of a number of differences of opinion between the Stanford-Huntington group and the original promoters of the Central Pacific, led by Judah. It was only after Judah's death that the first-named interests were able to dominate the situation completely" (*op. cit.* p. 71 n. 11).

¹³⁶ Testimony of Charles Crocker, United States Railway Committee, p. 3642. Later, of course, operating under the name of "Contract and Finance Company," Mr. Crocker was given a monopoly in the contracts, with the financial backing of Huntington, Hopkins and Stanford, they later testifying that this was done in order to keep control over the organization. (See United States Pacific Railway Reports, 1887.)

There is much evidence to the effect that Judah did not like certain methods which had been adopted, and considered that some of the sub-contractors had not been treated fairly.¹³⁷ There was also a difference of opinion as to where the "base of the mountains" was located. An affidavit had been prepared to the effect that it was at a certain point but Judah refused to sign it, saying, according to Doctor Strong: "We cannot sign it, because the foothills do not begin here according to our surveys."¹³⁸

While it is difficult to obtain definite information as to just what was happening between the now rival factions, matters soon seem to have come to a head and it appears that the "Big Four" finally bought Judah out for the sum of \$100,000,¹³⁹ and gave him an option to purchase their respective shares for a similar amount each. The "Elephant" was growing rather rapidly, was developing in fact, beyond all recognition,—and it is quite probable that during this early period each of the later "Railroad Kings" many times wished himself clean of the "gamble." At any rate, by September matters had become so acute that Judah set sail for the Atlantic States with the avowed intention of obtaining other backing for the project, and on the ninth of that month he wrote his last and perhaps his most illuminating letter to Strong. It was written from the Steamer *St. Louis*, and in it after some mention of the hurry of leaving, Judah declared:

I have a feeling of relief in being away from the scenes of contention and strife which it has been my lot to experience for the past year, and to know that the responsibilities of events, so far as regards Pacific Railroad, do not rest on my shoulders. If the parties who now manage hold to the same opinion three months hence that they do now, there will be a radical change in the management of the Pacific Railroad, and it will pass into the hands of men of experience and capital. If they do not, they may hold the reins for a while, but they will rue the day that they ever embarked in the Pacific Railroad.

If they treat me well they may expect similar treatment at my hands. If not; I am able to play my hand.

If I succeed in inducing the parties I expect to see to return with me to California, I shall likely return the latter part of December.

This development of strained relations between Judah, together with Strong, Marsh and his other original backers, on the one hand and the

¹³⁷ See testimony of Dr. Strong (p. 2862-3) in which Strong declares that he heard there had been some dispute and that he got his information from Judah.

¹³⁸ *Ibid.*, p. 2861. But see Stanford's testimony, United States Pacific Railway Committee for explanation of the "Big Four's" attitude on this point.

¹³⁹ See discussion, *infra*, of letter of S. S. Robinson to Nevada Legislature in 1865, and the various replies thereto. There is no denial on the part of anyone that Judah actually received the \$100,000 mentioned by Robinson, and ex-Congressman John C. Burch, Judah's erstwhile companion on the eastward voyage in 1859 and who knew him intimately, later made the definite statement that this transaction was as stated above. (See speech before the Territorial Pioneers of California, April 13, 1875, published in the *First Annual of the Territorial Pioneers*, 1877.)

future "Big Four" on the other is a fact of great historical interest and importance,¹⁴⁰ and it is quite possible that Judah even feared that a germ of truth lay in the charge of the "Dutch Flat Swindle" (though it is very probable that the wagon road was all along really thought of by the "Big Four" as a mere "anchor to windward"). Judah's chief aim was to complete the transcontinental road at the earliest possible moment. Had he lived, the course of western railroad history might and probably would have been far different from its actuality, for it was not until his sudden death that full control was obtained by the Sacramento group. There is little documentary evidence in relation to the possible eastern backing which Judah hoped to obtain, and his death occurred before he could even see his friends in New York. We know, however, that he had a wide acquaintance in eastern railroad and financial circles, and after his death, Mrs. Judah told his California relatives that the Vanderbilt group, whose interests on the Pacific were already very large, were the people whom the engineer was particularly expecting to be able to persuade to come to his assistance.¹⁴¹

That Judah feared the possibility of non-success under the existing conditions is incontestible, and that he would have succeeded in his plan for new backing is very probable. He sailed on the steamer *St. Louis* early in October, but contracted Panama fever while crossing the Isthmus and was in such a state of collapse upon his arrival in New

¹⁴⁰ Strong (Testimony, p. 2846-7) says that there was no one difficulty, but "a long list of grievances" covering the *modus operandi* of the company. And see article on Collis P. Huntington in Bancroft's *Chronicles of the Builders*, which gives an account of the difficulty from Huntington's standpoint. This account is, however, quite erroneous as to many statements of purported facts.

¹⁴¹ Statement of Mr. H. R. Judah, of Los Altos, California, (a nephew) to the writer, May 15, 1924. Mr. Judah was well acquainted with his aunt, and frequently discussed these matters with her. He was for more than forty years connected with the Passenger Department of the Southern Pacific Railroad. Burch (*op. cit.* p. 41) declares that when Judah sailed in 1863 his plans were "fully matured, his coadjutors selected and the meeting arranged," and that his aim was "to place his own with a much greater amount of capital held in the East and promised for the use wherewith, by purchase from his former associates, to place the charter and subsidies of the company, together with the management, in the hands of a new set of men of known public spirit, who would, without other designs to hinder or obstruct them, prosecute diligently the main work of completing the railway from ocean to ocean."

That the division of opinion had become known to the public is shown in a statement contained in a short article in the *San Francisco Daily Evening Bulletin* for Nov. 5, 1863, regarding Judah's death, in which it is said that:

"At the time of his departure the interior press stated that he went on business connected with the Central Pacific Railroad Company, but from a reliable source we are informed that his connection with the Company had then ceased."

Stanford, however, in his letter to the Nevada Legislature of February, 1865, replying to that of S. S. Robinson, of Sacramento, stated that Judah remained Chief Engineer until his death.

York on the 28th that no one was allowed to see him and a few days later, on November 2, 1863, he died.¹⁴²

The obituary notices were most flattering¹⁴³ and the Board of Directors of the Central Pacific passed resolutions of sympathy for his widow, mother and other relatives.¹⁴⁴ He was buried in Greenfield, Massachusetts, the girlhood home of his wife.

¹⁴² Mrs. Judah in her letter said:

It is a fact, even after the survey was made and the next winter's work done in Congress, that the bill was passed. It passed in the following July, the next year after the survey was made. It became a law, and Mr. Judah was back at his post; the work started. They could not take it in as an overland enterprise, nor could they comprehend the magnitude of what they had to do. Judah used to say, when he came home from the Directors' meetings, "I cannot make these men appreciate the elephant they have on their shoulders; they will not do what I want and must do; we shall just as sure have trouble in Congress as the sun rises in the east, if they go on this way: they will not see it as it is. Something must be done. I will not be stultified before Congress and the business world." They did not ratify the contracts made in the East for iron and equipment before he went out and had three months in which to have them ratified. Oh, how he struggled. He had brought them a franchise and laid it at their door; rightly used, giving them unlimited credit throughout the world, and they would beggar it. Oh: some of those days were terrible to us. He felt they were ungrateful to their trust and to him. Governor Stanford was a "Judah man," and so long as he lived he was loyal to him, I believe. Charles Marsh and Dr. Strong were his fast friends. Mr. Judah saw he must place himself differently, and he went to work to accomplish it. It is best shown by his words to me on the steamer, en route to New York in October, 1863. He had secured the right and had the power to buy out the men opposed to him and the true interests of the Pacific railroad at that time. Everything was arranged for a meeting in New York city on his arrival. Gentlemen from New York and Boston were ready to take their places. They could not see him. Two of the gentlemen came to see me in Greenfield, thinking I might be able to give them points for their interests. So you see they were in earnest. I have digressed. To go back to the steamer, Theodore said to me one day, lying in his berth, "What can I not do in New York? I have always had to set my brains and will against other men's money. Now, with money—equal—what can I not do?" He knew what he could do; it was all laid out, but God willed it otherwise and called him home. "Done with the Pacific railroad." "Going abroad with his wife to travel." These were the false stories circulated and printed. Oh, it was such a sin and shame—cruel as death: The truth is, that less than three months would have seen Mr. Judah back, had he lived. These men were satisfied, and new men in their places. His death made them realize the value of what they had in what he had brought them; for others, who appreciated it, made attempts to get it in various ways.

The unpublished portion of Mrs. Judah's letter on file in the Bancroft Library, University of California, contains a touching account of his last illness and death. She always felt a certain bitterness at the lack of recognition of Judah's important background and foundation work on the part of the "railroad kings" of the Central and Southern Pacific.

¹⁴³ See, for example, the *Sacramento Union*, for Nov. 5, 1863, article headed "Death of a Distinguished Engineer."

¹⁴⁴ These resolutions read as follows (quoted from the *San Francisco Daily Evening Bulletin*, December 15, 1863):

DEATH OF JUDAH RESOLUTION OF CENTRAL PACIFIC DIRECTORS.

IN MEMORIAM—At a meeting of the Board of Directors of the Central Pacific Railroad Company of California, held on 11th November, last, the following resolutions were passed by unanimous vote:

WHEREAS, By a dispensation of the Divine will, death has entered the circle of our association, and taken from us one of its late Directors; and whereas, by the sudden demise of Theodore D. Judah, late Chief Engineer of the Central Pacific Railroad Company, the public, as well as the Company, have met with a severe and untimely loss: therefore

RESOLVED, That the Directors of this Company have heard with unfeigned sorrow of the death of their late associate on the Board, a sorrow that is as deeply felt in consideration of his private and social relations as in the remembrance of his long and faithful services in the initiation of our great enterprise.

RESOLVED, That the death of Mr. Judah, in the prime of his manhood and in the full career of his usefulness, will be felt far beyond the immediate circle of his acquaintance. His ability as an engineer, his untiring energy of character, and the success with which he followed his profession, place him among those whose lives are a benefit to the State, and in whose death the public experiences an undoubted calamity.

RESOLVED, That the earnest sympathies of this Board be extended to her, who is left to mourn the loss of her life's protector, to the stricken mother whose home is made desolate by this unexpected affliction; and to the other members of that family who are called thus suddenly to mourn the loss of a beloved brother.

RESOLVED, That these resolutions be engrossed upon the minutes of the Board and that copies thereof be forwarded to the relatives of the deceased.

Leland Stanford, President,
Central Pacific Railroad Company.
E. H. Miller, Jr., Secretary,
Central Pacific Railroad Company.

THE AFTERMATH

As mentioned above, Judah was hardly in his grave before it began to be noised about that toward the last he had come to doubt the practicability of the Donner Pass route and the plan upon which he had labored so long and earnestly, and that the purchase of his interest in the Central Pacific by the now controlling quartet was in reality a purchase of silence in order to protect them in their alleged "Dutch Flat Swindle." There was probably no scintilla of truth in any of these accusations, but they were used rather effectively to discredit the project, and in 1865 they became the subject of acrimonious debate before the first Legislature of the newly admitted State of Nevada. No commentary on Judah's career would be complete without some mention of this incident.

It seems that the Central Pacific had a powerful rival for Nevada's subsidy and preferment in the so-called "San Francisco and Washoe Railroad" which was projected over the Sierra along the general route of the Placerville wagon road. This route, said its supporters, offered a much better and more feasible way across the range than did that by way of Dutch Flat and Donner Pass, and its chief proponent was none other than L. L. Robinson, with whom Judah had been connected in the construction of the Sacramento Valley Railroad.

We have already adverted to the fact that Robinson alleged that his company had hired Judah to explore various Sierra passes for a wagon road, that the Donner Pass route had been discovered during such explorations and that because of a dispute over the ownership of this discovery the engineer had been summarily discharged under rather unpleasant circumstances. Whatever may have been the truth of these statements, Robinson was a bitter critic of Judah during the last few years of his career, and he now penned a letter to the Nevada Legislature in which he commented caustically upon the dead engineer's work.¹⁴⁵

After declaring that Judah had never examined the Placerville Route, and that he had never made anything but the roughest preliminary examinations of that over Donner Pass, Robinson declared that the difficulties on the latter route were so great that he "could not con-

¹⁴⁵ This letter and the others here mentioned are contained in the pamphlet entitled *Evidence Concerning Projected Railways across the Sierra Nevada Mountains from Pacific Tide Waters in California* (No. 9, Vol. IV, Pamphlets on California Railways, Bancroft Library, University of California) which has been cited *supra*.

ceive any set of men would seriously undertake to construct a railway over such a country," adding:

The celebrated engineering work, built for the Austrian government—a railway across the Semmeling Alps, from Vienna to Trieste—is a *bagatelle*, as compared with the projected line via Dutch Flat. I can see no obstacles in the way to Illinoistown; but from there it is so heavy, reports and newspaper publications to the contrary, that even Mr. Judah became convinced that the route was a hopeless one, and on his return from Washington, after the franchise was granted, urged the advisability of *not fixing* the route of the road until he or the company could examine other routes; and he *opposed the location as it now exists*. The fixing the route of the road where it is was the cause of his leaving the service of the company; for when he went to New York the last time, he had left the service of the company, and never intended to re-enter it. They gave him \$100,000 of their first mortgage bonds (which he left in his will), in order that he should not state what his examinations led him to know was the fact; that the Dutch Flat route was a hopeless one.

Judah possessed no interest in the Wagon Road; the directors did; and the Wagon Road ruled the location, regardless entirely of the merits of the route for a railroad.

Robinson continued by charging that beyond Illinoistown (the present Colfax) Judah's surveyors "found the work so heavy they dare not make public the results of the location." He added that he was so much of an advocate of a Pacific Railroad that he "would gladly, advocate any route which could be built," but that he favored the examination of all routes. He urged the legislators to offer the Nevada bonus to "any railroad that first reaches your state line," which policy, said he, could "hurt no interest except the Central Pacific Railroad." As to Judah's estimates of cost, Robinson declared that if they were trebled they would "still be below the result," because his surveys "were not of a character to base any estimate of cost upon," and after giving statistics as to the cost of numerous other railroads, he concluded:

My firm conviction is, that the Central Pacific Railroad will cost \$250,000 to \$300,000 a mile before it is completed to the Truckee, stocked and equipped as a first-class railroad.

Bitter debate followed the receipt of this letter. The Central Pacific had already issued a pamphlet dealing generally with this subject¹⁴⁶ and Mr. Stanford now wrote an answering letter¹⁴⁷ in which he said that he had read that of Robinson and that:

Recently and since the death of T. D. Judah, Esq., the late Chief Engineer of this Company, I have heard rumors of a similar character, and emanating from the same and kindred sources, but this is the first time they have appeared in a tangible form, so that they could be fairly met. Lest your committees, who may not be aware of the true facts, should be misled by the numerous falsehoods in that letter, and especially as a matter of justice to the memory of Mr. Judah, it is proper that it should not be suffered to pass without notice.

¹⁴⁶ *Ibid*, p. 9. In this pamphlet, dated January 12, 1865, Judah is characterized as: "One of the most eminent and experienced railroad engineers of the time," and it is declared that in August, 1862, the Company advertized for eight weeks in the *Sacramento Union* for information as to better routes without result. Such delay as had been experienced was largely due to the war, the Company declaring that it was now in position to prosecute the work vigorously, and that two railroads over the mountains were out of the question.

¹⁴⁷ *Ibid*, p. 129.

Contrary to the impression which Robinson attempted to convey that he was intimately acquainted with Judah, the latter, says Stanford, "regarded Mr. Robinson as his bitterest enemy." Moreover, Judah had never opposed the route of the Central Pacific as located, but "always recommended it in the strongest terms," and it was on the strength of Judah's recommendation that the route was selected. Indeed, the directors had approved the selection unanimously after several of them had made a personal examination "of that and various other routes mentioned in Mr. Judah's report."

As to Robinson's implication that Judah's silence was bought, Stanford, after repeating the reasons for selecting the Donner Pass route which Judah had given in his report of October, 1861, declared that if Robinson's statement were true Judah in recommending that route "was guilty of a willful falsehood, and perpetrated a deliberate fraud upon this Company and the public" including the Federal Government.

Moreover, if Judah's silence had been bought, as charged, he would have made every effort to keep it a secret, particularly from "his deadliest enemy." Happily, however,

Mr. Judah's character as an engineer, respecting which he was particularly sensitive, and as a man of integrity, stands too high to be reached by such infamous assaults. His friends will read these charges with astonishment, if they can be astonished at anything coming from such a source. These charges were made after he had been laid in the silent tomb. They never would have been made if he was living.

Stanford also declared that the Central Pacific paid Judah "a liberal salary" in stocks, and that if he had any of the company's bonds they were obtained by private transactions from other persons. He branded the statement that Judah left the service of the Company as false, saying that "he continued its Chief Engineer up to his death." As to the Judah surveys, Stanford stated that the stockholders and eastern capitalists were satisfied, and he added as to the cost estimate which Robinson had so caustically criticized that the more recent surveys tended to confirm the accuracy of Judah's estimate of approximately \$90,000 a mile, while "any increase in the expense is accounted for in the increased cost of material and labor, caused by the war and other unanticipated events." Robinson's motive in his attack, thought Stanford, was wholly due to his pique at not having been able to unload the Sacramento Valley Railroad on the new company, and an emphatic denial is made to the charge that the wagon road ruled the location of the Central Pacific.

In making the charge [says Stanford] he again betrays his ignorance of facts, for the wagon road was not commenced, nor the wagon road company organized, until long after the railroad was located. It was constructed because it was necessary for the railroad. Without it the railroad, until completed, could only

have done a local business. With it, it is already fully prepared to compete successfully for the Washoe trade.

In a statement attached to this letter, Charles Crocker declared that Judah, before his death, had shown him a letter from Robinson demanding that the Central Pacific purchase the Sacramento Valley line and threatening opposition of every sort if his terms were not met. These letters were widely published and caused considerable of a furor at the time, and among the friends of Judah who now came to his defense was none other than former Congressman A. A. Sargent who had been so influential in assisting in the passage of the Pacific Railroad Bill. In a letter to Stanford dated February 18, 1865,¹⁴⁸ Sargent wrote that Judah had "repeatedly expressed his firm belief in the desirableness and practicability of the route across the mountains now in question," and that "however he might err in his conclusions as to the character of the route he selected, he was unconscious of such error." Moreover, "he never intimated to me that he had changed his views or seen any reason to do so."

Sargent added that he made these statements in justice to the memory of Judah, who had been one of his "dearest friends," and

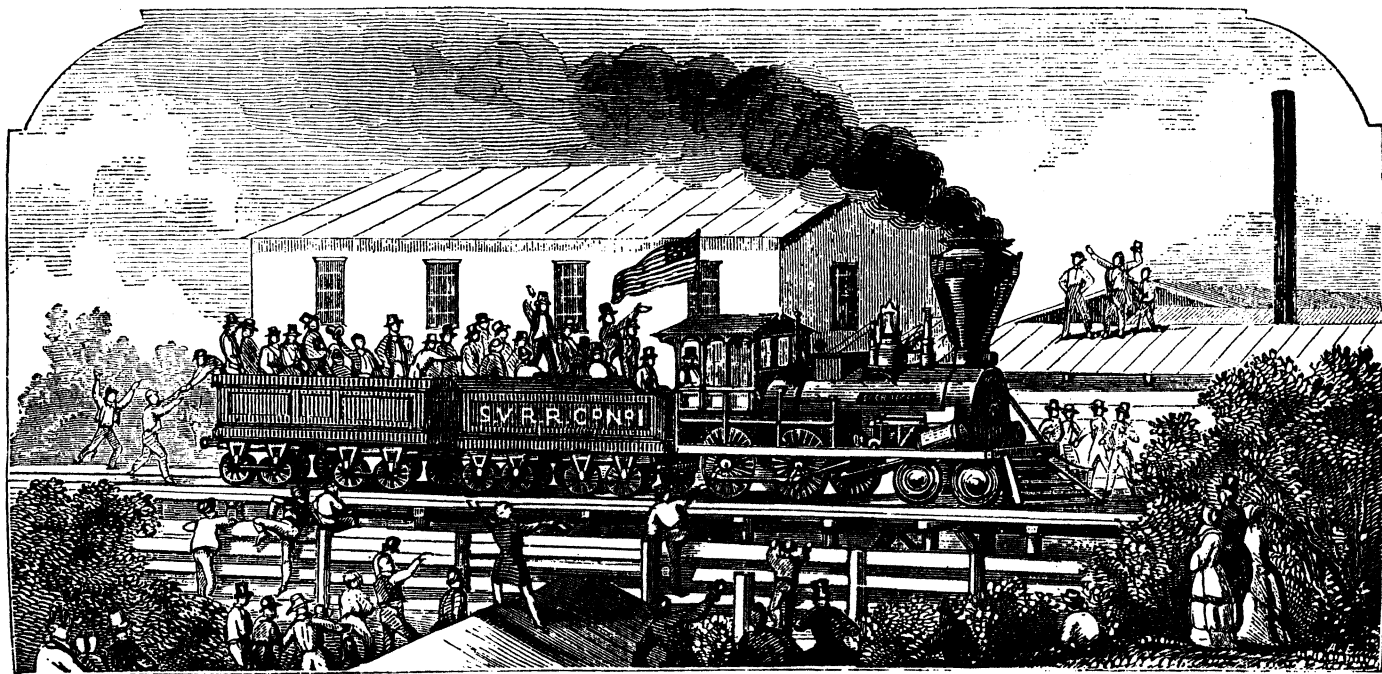
to avert the imputation that he countenanced and assisted what he must have known to be a gigantic swindle if Robinson's statements of his views are not erroneous. Whether or not Judah would not have preferred another route, I am not prepared to say. I only know that he firmly believed that the route he explored and recommended was feasible.

Robinson renewed his former allegations in a sarcastic and lengthy letter, dated a few days later,¹⁴⁹ in which, although declaring that he did not charge Judah with fraud or corruption, he stated that, in his opinion, "Mr. Judah simply protected himself" when he found that under the "wagon road management he could earn neither credit, money, nor fame." As to Stanford's declaration that Judah remained Chief Engineer until his death, Robinson stated that if this were correct Mr. Huntington would be placed in an unpleasant position, "as I saw his letters in New York stating just the reverse; and Mr. Holmes, Street Commissioner and Trustee of the City of Sacramento, told me but a short time since that Mr. Huntington had given him the same information."

Robinson reiterated that the Sacramento Valley Railroad paid for Judah's explorations, and again declared that the "Dutch Flat Route" was the worst route and "in fact impracticable," later adding that it would never be anything else than a "wagon road feeder," and that:

¹⁴⁸ Published in the *Sacramento Union*, February 21, 1865.

¹⁴⁹ Nevada Pamphlet, p. 142 *et seq.*



SACRAMENTO VALLEY RAILROAD, TRIAL TRIP OF AUGUST 17, 1855.

From an illustration in the *Pictorial Union*, Sacramento, January 1, 1856.

Words are cheap and easy to coin. I am frank to say, so far wonderful genius has been displayed in levying contributions upon all interests and everybody, and I only regret that the same genius has not been shown in selecting a route across the mountains instead of dwarfing such a great project to run it into a wagon road.

Moreover, said Robinson, Judah was, in fact, personally in favor of purchasing the Sacramento Valley Railroad,¹⁵⁰ and it was added that "several of the directors" of the Central Pacific, to whom Stanford had alluded, being such eminent engineers, probably knew all about the problems of locating railroads. But this irony availed him little as, apart from certain desultory opposition from Charles E. DeLong (formerly of California) and a few others, most of the Nevada legislators seemed to resent his imputations, and the Central Pacific soon became a reality, while the "San Francisco and Washoe" has long been forgotten. There can now be little doubt but that the charges against Judah, though circumstantial, were unfounded, and that the dead engineer had, in truth, given to the world a proposal the practicability of which he had never for a moment doubted.

JUDAH'S PLACE IN HISTORY

As noted above, although certain changes of a minor character were made in the line projected by Judah up the Bear-American River Ridge, the line of the Central Pacific as actually constructed over the Sierra Nevada range was—and remains to day—essentially the Judah line. The reports filed in later years by Mr. Montague, his successor as Chief Engineer, clearly demonstrate the debt owed him by the Company which he had fathered, and it is probable that had it not been for his sudden and untimely death his name would now be honored throughout California.

But he left the stage while the prologue was yet being recited. He had recently disagreed with his former associates (else they might have perpetuated his memory in the name of some town or mount), he had not yet had time to obtain the new backing which he was sincerely convinced he could and would secure in the East, and it is therefore to be expected that he is now quite generally forgotten. Had any of the others who later became the "Big Four" of the Central Pacific dropped out at as early a date they also would no doubt be unremembered. Who now knows anything of Bailey, the Sacramento jeweler, who, it is said, introduced Judah to Stanford and his friends? Yet he was the first Secretary of the Central Pacific Railroad.

¹⁵⁰ This is probably a misstatement. See above for Judah's own statement of his reasons for not advising this purchase.

Judah's was pathfinding work, and without his enthusiasm, his youthful vigor and his undoubtedly magnetic personality, it is extremely doubtful whether the Pacific Railroad dream would have become a reality at anything like the date it actually did. Like the discovery of America, it was bound to come sometime, but just as that fact cannot detract from the merit of Columbus' undertaking, it cannot from that of this youthful engineer. That the "Big Four" was a remarkable assemblage of men, each fitted for a particular task, cannot be gainsaid, but we can only surmise what turns events might have taken had Judah lived to join them in a "Big Five" or to bring out others from the Atlantic Coast. He was too energetic a man ever to remain an underling—he would always have been a leader in the enterprise, and through him there might well have come to the group that human and definitely public spirit which he always advocated and which many have felt that the four lacked.

Judah's friends have been universally warm in their praises of his character and his work. He was an idealist, a dreamer, but with it all he was an eminently practical man, and the accomplishments of his brief career evidence his abounding energy. Of him, his old companion John C. Burch, former Congressman and his fellow passenger on the eastern trip of 1859, once said:¹⁵¹

It is not fit that one who devoted his best days and all his powers, intellectual and physical, to a work which has added so much to the renown and distinction of his country and to his day and generation, should remain unremembered by the people who are enjoying the fruits of his life struggle. It is the purpose of this article—at least in some small degree—to do justice, bare and simple, to the genius, and honor to the name of T. D. Judah, who not only conceived the idea of the early and speedy construction of the Pacific Railway, but by unrepulsed and unwearied exertion and perseverance in the field, in the library and drafting room, before public meetings, in committees and with individuals, did more than any one man in the achievement of this one of the greatest works of civil engineering accomplished in this the Nineteenth century; ever memorable as it is destined to be in the world's history for its vast works of wonderful internal improvements.

Of him, Hon. D. H. Haskell, of Nevada, had said:¹⁵²

The late T. D. Judah, Esq., Chief Engineer of that Company, was a man well qualified for the work in which he was employed. Standing at the head of his profession as a railroad Engineer—the first to engage in these enterprises on the Pacific Coast, he acquired by practical experience and careful examination, an experience in California not equaled by any other engineer. To him are we indebted more than any other one man, for the practical determination whether a railroad could be built over the Sierra Nevadas. No better man could have been selected by the Company in determining the question which was the best route for a railroad over the mountains.

¹⁵¹ See address by Burch on *Theodore D. Judah*, delivered by him before the Association of Territorial Pioneers of California, April 13, 1875, cited *supra*.

¹⁵² See speech on the Pacific Railroad Resolutions before the First Nevada Legislature, 1865. (Vol. IV, No. 13, California Railroad Pamphlets, Bancroft Library, University of California, also Vol. I, No. 6, Central Pacific Railroad Pamphlets, Hopkins Library, Stanford University.)

Hittell, the historian, whose high opinion of Judah and his work was well known, said of the young man's death:¹⁵³

In him perished a genius—one of the greatest in his important line—without whom the way over the Sierra would not have been found perhaps for many years. Like many other men of genius his reward consisted chiefly in his own activity and the consciousness and satisfaction of doing noble work thoroughly and well. He made for others, or enabled others to make, uncounted wealth and to occupy places of first-class prominence in the world; but, for himself, he made in the way of money, comparatively nothing; and in name and recollection, as new and inferior men took his place and easily continued in the path he had found and so clearly pointed out, he was in a short time substantially forgotten. While the railroad in its completed state and its offspring and imitations, which now span the continent, have changed the face of the globe and engrossed to a greater or less extent the attention of courts and cabinets in almost every quarter of the earth, it is only in old records and reports that the name of Judah, the bright spirit that called them into being, is to be found. But whether remembered as recognized or not—and it is only to posterity and not to him that it can make any difference—his admirable work is his monument, and it must and will forever remain so.

We cannot more fittingly close than with some stanzas of one of California's own poets, Edward Robeson Taylor, unpublished so far as has been ascertained:¹⁵⁴

The great Sierras, reared their ramparts high,
With cañons stretching deep and dark between;
A roadless, towering steep whose vast demesne
The art of man had never dared defy.

When Judah looked with steady, piercing eye
Upon the abysmal wonders of the scene,
Until he saw with vision grandly keen
The certain path for him to glorify.

And now along the way his genius traced
The locomotive plies, all fears outfaced,
The world of commerce in its arms to bear;
And as its song of triumph man still hears,
All blent with it a paean thrills the air
In praise of him our Prince of Engineers.

CARL I. WHEAT.

¹⁵³ *History of California*, Vol. IV, p. 466.

¹⁵⁴ Sent to the present writer through the courtesy of Miss Eudora Garoutte of the State Library, Sacramento.